



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1230804
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

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 SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- 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 ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

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
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1230804

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

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				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

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> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Commingled <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	Radnor-COG 1-14
Doc ID	1230804

All Electric Logs Run

Array Induction
Photo Density
Comp Neutron
Microlog
Sonic

Form	ACO1 - Well Completion
Operator	Shakespeare Oil Co., Inc.
Well Name	Radnor-COG 1-14
Doc ID	1230804

Tops

Name	Top	Datum
Base Anhydrite	2478	+648
Heebner	3985	-859
Lansing	4026	-900
Muncie Creek	4201	-1075
Stark Shale	4300	-1174
Hushpuckney	4348	-1222
Marmaton	4438	-1312
Pawnee	4513	-1387
L. Cherokee Shale	4596	-1470
Johnson	4638	-1512
Mississippian	4779	-1653



PO Box 93999
Southlake, TX 76092

Voice: (817) 546-7282
Fax: (817) 246-3361

INVOICE

Invoice Number: 146072
Invoice Date: Sep 23, 2014
Page: 1

Federal Tax I.D.#: 20-8651475

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

Customer ID	Field Ticket #	Payment Terms	
Shak	64241	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Sep 23, 2014	10/23/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Radner COG #1-14		
190.00	CEMENT MATERIALS	Class A Common	17.90	3,401.00
357.00	CEMENT MATERIALS	Gel	0.50	178.50
536.00	CEMENT MATERIALS	Chloride	1.10	589.60
205.45	CEMENT SERVICE	Cubic Feet Charge	2.48	509.52
422.10	CEMENT SERVICE	Ton Mileage Charge	2.75	1,160.78
1.00	CEMENT SERVICE	Surface ✓	1,512.25	1,512.25
45.00	CEMENT SERVICE	Pump Truck Mileage	7.70	346.50
1.00	CEMENT SERVICE	Swedge Manifold Rental	275.00	275.00
45.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	198.00
1.00	EQUIPMENT OPERATOR	Paul Beaver		
1.00	OPERATOR ASSISTANT	Brandon Wilkinson		

INT

ALL PRICES ARE NET, PAYABLE
30 DAYS FOLLOWING DATE OF
INVOICE. 1 1/2% CHARGED
THEREAFTER. IF ACCOUNT IS
CURRENT, TAKE DISCOUNT OF

\$ 2,042.78

ONLY IF PAID ON OR BEFORE
Oct 23, 2014

Subtotal	8,171.15
Sales Tax	339.78
Total Invoice Amount	8,510.93
Payment/Credit Applied	
TOTAL	8,510.93

10502-S DW

ALLIED OIL & GAS SERVICES, LLC 064241

Federal Tax I.D. # 20-3651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:
Oakley KS

DATE <u>9-23-14</u>	SEC. <u>14</u>	TWP. <u>16</u>	RANGE <u>34</u>	CALLED OUT	ON LOCATION <u>2:00 p.m.</u>	JOB START <u>3:30 p.m.</u>	JOB FINISH <u>4:00 p.m.</u>
LEASE <u>Radnor COG</u>		WELL # <u>1-14</u>		LOCATION <u>Pence (Church) 1 N, 1/2 W, Sinto</u>		COUNTY <u>Scott</u>	STATE <u>KS</u>
OLD OR <u>(NEW)</u> (Circle one)							

CONTRACTOR Southwind 70

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 265

CASING SIZE 8 5/8 DEPTH 265.89

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15'

PERFS.

DISPLACEMENT 15.5 bbl water

EQUIPMENT

PUMP TRUCK # 431 CEMENTER Paul Beaver

BULK TRUCK # 891/316 DRIVER Juan I (TWS)

BULK TRUCK # DRIVER

OWNER Same

CEMENT AMOUNT ORDERED 190 sks Com 3' CC

2' gel

COMMON	<u>190 sks</u>	@ <u>17.90</u>	<u>3401.00</u>
POZMIX		@	
GEL	<u>357 #</u>	@ <u>.50</u>	<u>178.50</u>
CHLORIDE	<u>536 #</u>	@ <u>1.10</u>	<u>589.60</u>
ASC		@	
		@	
Material total		@	<u>4169.10</u>
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>205.45-43</u>	@ <u>2.48</u>	<u>509.52</u>
MILEAGE	<u>9.38 tons x 45 mi x</u>	<u>2.75</u>	<u>1160.78</u>

REMARKS:

Mix 190 sks Com 3' CC 2' gel

Displace w/ water

cement did circulate

Thank You!
Paul + Crew

CHARGE TO: Shake speare

STREET _____

CITY _____ STATE _____ ZIP _____

TOTAL _____

SERVICE

DEPTH OF JOB	<u>265'</u>		
PUMP TRUCK CHARGE			<u>1512.25</u>
EXTRA FOOTAGE		@	
MILEAGE MILV	<u>45</u>	@ <u>7.70</u>	<u>346.50</u>
MANIFOLD	<u>swedge</u>	@	<u>275.00</u>
MILV	<u>45</u>	@ <u>4.40</u>	<u>198.00</u>
		@	

TOTAL 4000.05

To: Allied Oil & Gas Services, LLC.

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

PRINTED NAME SAM STAGER

SIGNATURE [Signature]

PLUG & FLOAT EQUIPMENT

	@		
	@		
	@		
	@		
	@		

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES 8171.15

DISCOUNT 2000.78 (25%) IF PAID IN 30 DAYS

6,170.37 Net



INVOICE

PO Box 93999
Southlake, TX 76092

Invoice Number: 146142

Invoice Date: Oct 3, 2014

Voice: (817) 546-7282

Page: 1

Fax: (817) 246-3361

Federal Tax I.D.#: 20-8651475

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

Customer ID	Field Ticket #	Payment Terms	
Shak	63765	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-02	Oakley	Oct 3, 2014	11/2/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	<u>Radnor COG #1-14</u>		
165.00	CEMENT MATERIALS	ASC	23.50	3,877.50
825.00	CEMENT MATERIALS	Gilsonite	0.98	808.50
842.00	CEMENT MATERIALS	Salt	0.68	572.56
116.00	CEMENT MATERIALS	CD-31	7.73	896.68
25.00	CEMENT MATERIALS	Defoamer	3.50	87.50
12.00	CEMENT MATERIALS	WFR-II	41.09	493.08
214.72	CEMENT SERVICE	Cubic Feet Charge	2.48	532.51
417.60	CEMENT SERVICE	Ton Mileage Charge	2.75	1,148.40
1.00	CEMENT SERVICE	<u>Production Casing</u> ✓	2,765.75	2,765.75
45.00	CEMENT SERVICE	Pump Truck Mileage	7.70	346.50
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
45.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	198.00
1.00	CEMENT SERVICE	Rotating Head	300.00	300.00
1.00	EQUIPMENT SALES	5-1/2 Latch Down Assembly	660.00	660.00
1.00	CEMENT SUPERVISOR	Alan Ryan		
1.00	EQUIPMENT OPERATOR	Kevin Ryan		
1.00	OPERATOR ASSISTANT	Wayne Messalle		



WT

10502-5

DW

ALL PRICES ARE NET, PAYABLE
30 DAYS FOLLOWING DATE OF
INVOICE. 1 1/2% CHARGED
THEREAFTER. IF ACCOUNT IS
CURRENT, TAKE DISCOUNT OF

\$ 3,075.49

ONLY IF PAID ON OR BEFORE

Nov 2, 2014

Subtotal	12,961.98
Sales Tax	602.76
Total Invoice Amount	13,564.74
Payment/Credit Applied	
TOTAL	13,564.74

ALLIED OIL & GAS SERVICES, LLC 063765

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Redleg 14

DATE <u>10/3/14</u>	SEC. <u>14</u>	TWP. <u>16</u>	RANGE <u>34</u>	CALLED OUT	ON LOCATION	JOB START <u>4:00</u>	JOB FINISH <u>5:00</u>
LEASE # <u>Redleg 14</u>		WELL # <u>1-14</u>		LOCATION <u>Range E to Eagle 1 1/2 W 5th 500 ft</u>		COUNTY	STATE <u>TX</u>
OLD OR NEW (Circle one)							

CONTRACTOR <u>Southwind 20</u>	OWNER <u>Same</u>
TYPE OF JOB <u>Prod.</u>	
HOLE SIZE <u>2 7/8</u>	T.D. <u>4860</u>
CASING SIZE <u>5 1/2</u>	DEPTH <u>4860</u>
TUBING SIZE	DEPTH
DRILL PIPE <u>4 1/2</u>	DEPTH
TOOL <u>Port collar</u>	DEPTH <u>2121 58</u>
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT <u>11</u>	<u>80L H₂O</u>
EQUIPMENT	
PUMP TRUCK CEMENTER <u>Alan Ryan</u>	
# <u>386-881</u> HELPER <u>Heidi Ryan</u>	
BULK TRUCK	
# <u>891</u> DRIVER <u>Wayne Messalle</u>	
BULK TRUCK	
#	DRIVER

CEMENT		
AMOUNT ORDERED <u>165 ASC 10705 270 gal</u>		
<u>5-15 Gilcrete 74-170 C021 .1576/11K 150 gal</u>		
COMMON	⊙	
POZMIX	⊙	
GEL	⊙	
CHLORIDE	⊙	
ASC <u>165 5th</u>	⊙	<u>23.50</u> <u>3877.50</u>
Gilcrete	⊙	<u>825.16</u> <u>.98</u> <u>800.50</u>
Sulf	⊙	<u>842.6</u> <u>.68</u> <u>572.88</u>
CA-31	⊙	<u>116.16</u> <u>.72</u> <u>876.60</u>
Admox	⊙	<u>25.6</u> <u>.30</u> <u>87.50</u>
WFA II	⊙	<u>1088.0</u> <u>.41</u> <u>493.50</u>
Material	⊙	<u>(60.32) (60.32)</u>
HANDLING <u>214 58 CT</u>	⊙	<u>2.50</u> <u>532.50</u>
MILEAGE <u>270 mile 9.28 hr</u>	⊙	<u>1148.40</u>
TOTAL		

REMARKS:
Analy. Concrete say 100% wet it 107305 270 gal
1135 1/2 ASC approx 5 hrs work truck
Displace by w/ 110 80L H₂O w/ 800 PSI W-T
work Plug @ 1800
Frank
Henry

CHARGE TO Shokigane
STREET _____
CITY _____ STATE _____ ZIP _____

SERVICE	
DEPTH OF JOB	
PUMP TRUCK CHARGE	<u>2765.25</u>
EXTRA FOOTAGE	⊙
MILEAGE <u>45</u>	⊙ <u>2.20</u> <u>346.50</u>
MANFOLD = Head	⊙
<u>1 1/2 Vehicle 45</u>	⊙ <u>4.40</u> <u>825.00</u>
<u>100 truck Head</u>	⊙ <u>3.00</u> <u>300.00</u>
(1371.59/25%)	TOTAL <u>5,566.16</u>

PLUG & FLOAT EQUIPMENT	
<u>Water/Oil Assembly</u>	⊙ <u>600.00</u>
	⊙
	⊙
	⊙
	⊙
TOTAL	<u>6,000.00</u>

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

PRINTED NAME Doug Roberts
SIGNATURE Doug Roberts

SALES TAX (If Any) _____
TOTAL CHARGES 12,961.98
DISCOUNT 3,075.79 (23%) IF PAID IN 30 DAYS
9,886.19 Net.



PO Box 93999
Southlake, TX 76092

Voice: (817) 546-7282
Fax: (817) 246-3361

INVOICE

Invoice Number: 146431
Invoice Date: Oct 16, 2014
Page: 1

Federal Tax I.D.#: 20-8651475

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

Customer ID	Field Ticket #	Payment Terms	
Shak	64288	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-04	Oakley	Oct 16, 2014	11/15/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Radnor 66 #1-114		
375.00	CEMENT MATERIALS	Class A Light Weight	19.88	7,455.00
94.00	CEMENT MATERIALS	Flo Seal	2.97	279.18
300.00	CEMENT MATERIALS	Cottonseed Hulls	0.99	297.00
599.66	CEMENT SERVICE	Cubic Feet Charge	2.48	1,487.16
1,071.00	CEMENT SERVICE	Ton Mileage Charge	2.75	2,945.25
1.00	CEMENT SERVICE	Port Collar ✓	2,483.59	2,483.59
45.00	CEMENT SERVICE	Pump Truck Mileage	7.70	346.50
45.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	198.00
1.00	EQUIPMENT OPERATOR	Paul Beaver		
1.00	EQUIPMENT OPERATOR	Tyler Flipse		

RADNOR-COG 1-14
INT



Subtotal	15,491.68
Sales Tax	654.54
Total Invoice Amount	16,146.22
Payment/Credit Applied	
TOTAL	16,146.22

ALL PRICES ARE NET, PAYABLE 30 DAYS FOLLOWING DATE OF INVOICE. 1 1/2% CHARGED THEREAFTER. IF ACCOUNT IS CURRENT, TAKE DISCOUNT OF

\$ 3,872.92

ONLY IF PAID ON OR BEFORE
Nov 15, 2014

DW
10502-5
KW

ALLIED OIL & GAS SERVICES, LLC 064288

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT:
Oakley KS

DATE <u>10-16-14</u>	SEC. <u>14</u>	TWP. <u>16</u>	RANGE <u>34</u>	CALLED OUT	ON LOCATION <u>8:30am</u>	JOB START <u>9:00am</u>	JOB FINISH <u>10:00am</u>
LEASE <u>Radnor Co</u>	WELL# <u>1-14</u>	LOCATION <u>Perce (church)</u>			COUNTY <u>Scott</u>	STATE <u>KS</u>	
OLD OR <input checked="" type="radio"/> NEW (Circle one)			<u>1 N, 1/2 W, Sinto</u>				

CONTRACTOR Wild west
 TYPE OF JOB Port Collar
 HOLE SIZE 7 7/8 T.D. 4860'
 CASING SIZE _____ DEPTH _____
 TUBING SIZE 2 3/8 DEPTH 2421'
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN C/S: 1 bbl
 PERFS. _____
 DISPLACEMENT 8 bbl

OWNER Same
 CEMENT AMOUNT ORDERED 500 sks 65/35
8% gel 1/4 # Flo-seal,
500 # cotton seed hulls
 COMMON _____ @ _____
 POZMIX _____ @ _____
 GEL _____ @ _____
 CHLORIDE _____ @ _____
 ASC _____ @ _____
class A lite 46/35/1075 sks @ 19.88 9455.00
Flo-seal 94 # @ 2.97 279.18
cotton seed hulls 300 # @ .99 297.00
 _____ @ _____
Material Total @ _____ 10531.18
 _____ @ _____
(2000.79/2000) @ _____
 _____ @ _____
 HANDLING 597.66 ft² @ 2.48 1487.16
 MILEAGE 23.80 hrs x 45 mi x 2.75 2945.25
 TOTAL _____

EQUIPMENT
 PUMP TRUCK CEMENTER Paul Beaver
 # 431 HELPER Tor Flipse / Juan
 BULK TRUCK # 818/287 DRIVER KIKO (TWS)
 BULK TRUCK # _____ DRIVER _____

REMARKS:
Test port collar, open, mix 375
sks lite, Displace w/ water
close port collar, test to 1200'
run 1/2 Rev clean w/ 30 bbl
water
Cement did circulate
Thank you Paul & Crew

CHARGE TO: Shakespeare
 STREET _____
 CITY _____ STATE _____ ZIP _____

SERVICE
 DEPTH OF JOB 2400'
 PUMP TRUCK CHARGE 2483.59
 EXTRA FOOTAGE _____ @ _____
 MILEAGE 45 @ 7.70 346.50
 MANIFOLD _____ @ _____
 MILV 45 @ 4.40 198.00
 _____ @ _____
(1865.13/058) TOTAL 11600.00

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

PLUG & FLOAT EQUIPMENT
 _____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____
 _____ @ _____
 TOTAL _____

PRINTED NAME _____
 SIGNATURE [Signature]

SALES TAX (if Any) _____
 TOTAL CHARGES 15,497.68
 DISCOUNT 3,812.90 (25%) IF PAID IN 30 DAYS
11,684.78 Net



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil CO

14-16-34 Scott, Ks

202 w Main st.
Salem, Il
62881
ATTN: Mac Armstrong

Radnor Cog 1-14

Job Ticket: 59082 **DST#: 1**
Test Start: 2014.09.29 @ 13:10:29

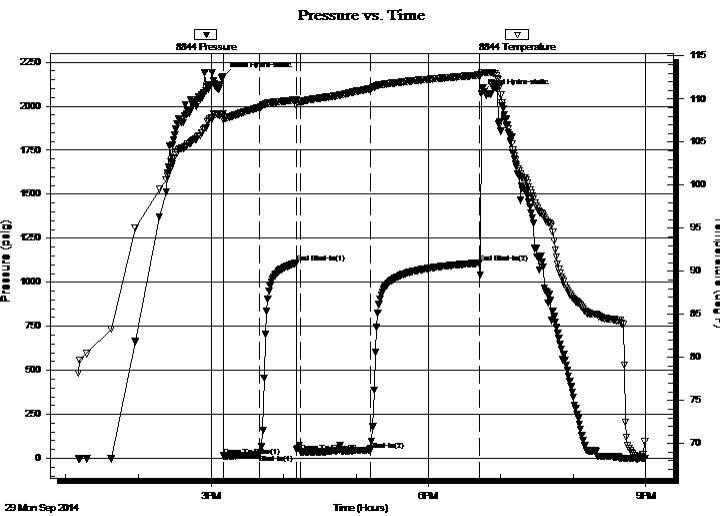
GENERAL INFORMATION:

Formation: **Marmaton a**
 Deviated: No Whipstock: 0.00 ft (KB)
 Time Tool Opened: 15:10:14
 Time Test Ended: 20:58:59
 Interval: **4406.00 ft (KB) To 4468.00 ft (KB) (TVD)**
 Total Depth: 4468.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 3126.00 ft (KB)
 3114.00 ft (CF)
 KB to GR/CF: 12.00 ft

Serial #: 8844 Outside

Press @ Run Depth: 47.75 psig @ 4407.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.09.29 End Date: 2014.09.29 Last Calib.: 2014.09.29
 Start Time: 13:10:29 End Time: 20:58:59 Time On Btm: 2014.09.29 @ 15:09:59
 Time Off Btm: 2014.09.29 @ 18:43:59

TEST COMMENT: 3/4" in blow
 No return
 2 1/4" in blow
 No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2167.98	108.29	Initial Hydro-static
1	14.43	107.54	Open To Flow (1)
31	21.05	109.04	Shut-In(1)
61	1109.23	109.91	End Shut-In(1)
64	36.20	109.69	Open To Flow (2)
122	47.75	111.20	Shut-In(2)
213	1109.26	112.78	End Shut-In(2)
214	2072.13	113.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
18.00	s m c o 10 % m 90 % o	0.25
60.00	c o 100 % o	0.84

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Shakespeare Oil CO

14-16-34 Scott, Ks

202 w Main st.
Salem, Il
62881

Radnor Cog 1-14

Job Ticket: 59082

DST#: 1

ATTN: Mac Armstrong

Test Start: 2014.09.29 @ 13:10:29

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

23 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
18.00	s m c o 10 % m 90 % o	0.252
60.00	c o 100 % o	0.842

Total Length: 78.00 ft Total Volume: 1.094 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

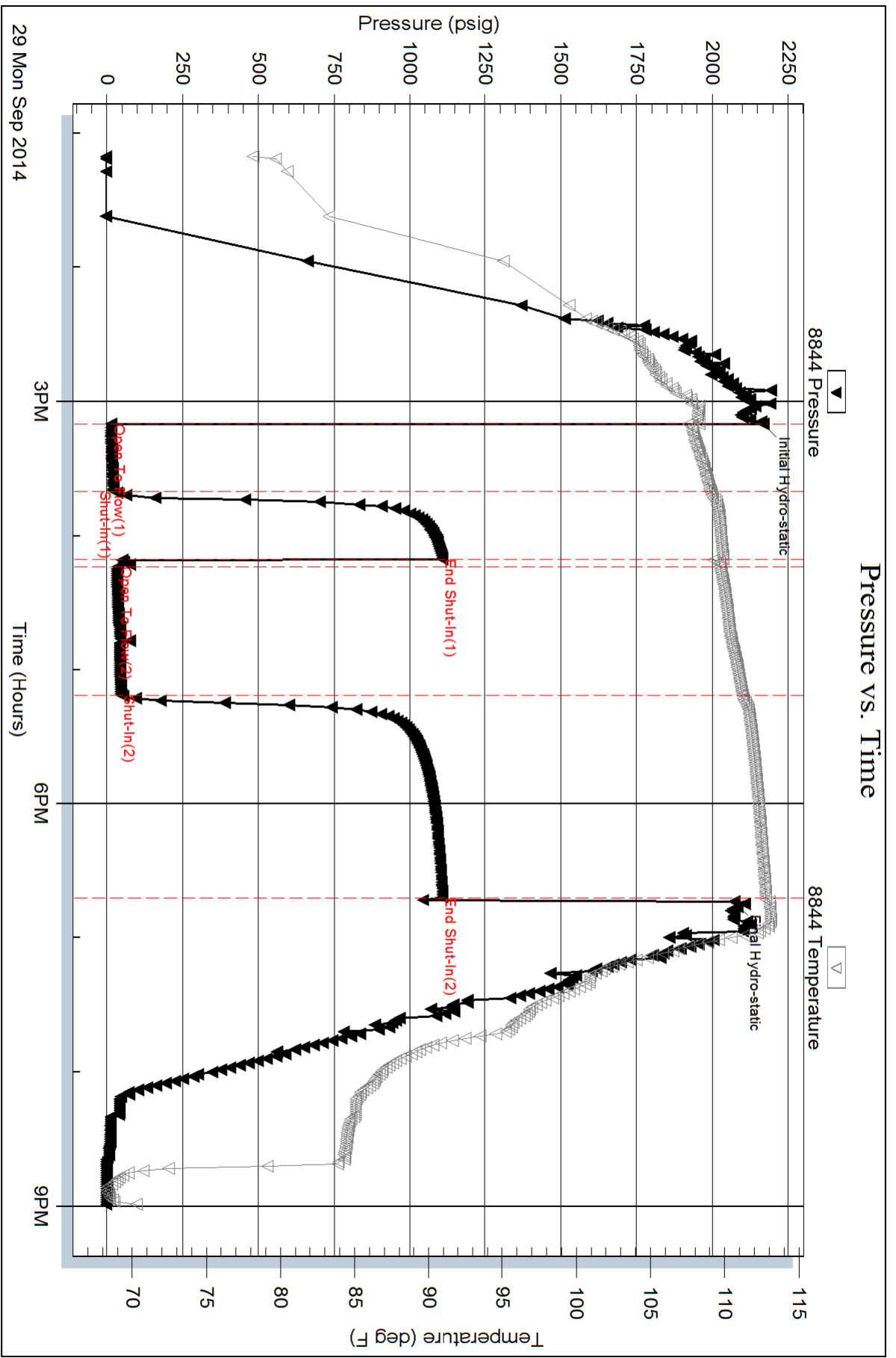
Recovery Comments:

Serial #: 8844

Outside Shakespeare Oil CO

Radnor Cog 1-14

DST Test Number: 1





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil CO

14-16-34 Scott, Ks

202 w Main st.
Salem, Il 62881

Radnor Cog 1-14

ATTN: Mac Armstrong

Job Ticket: 59083

DST#: 2

Test Start: 2014.09.30 @ 20:06:37

GENERAL INFORMATION:

Formation: **Myric Station / Ft.**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 22:40:07

Time Test Ended: 03:55:52

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

Interval: 4545.00 ft (KB) To 4599.00 ft (KB) (TVD)

Total Depth: 4599.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3126.00 ft (KB)

3114.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 6771

Inside

Press@RunDepth: 29.22 psig @ 4546.00 ft (KB)

Start Date: 2014.09.30

Start Time: 20:06:37

End Date:

End Time:

2014.10.01

03:55:52

Capacity: 8000.00 psig

Last Calib.: 2014.10.01

Time On Btm: 2014.09.30 @ 22:39:52

Time Off Btm: 2014.10.01 @ 01:44:52

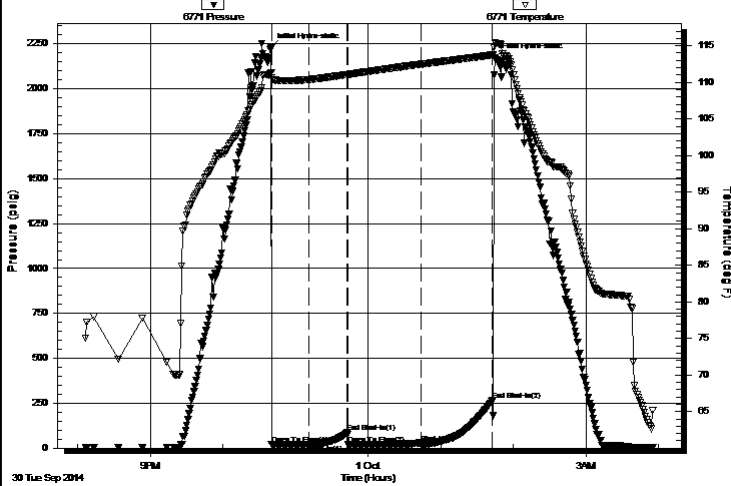
TEST COMMENT: 1/8" Blow / Died 20min.

No Return

No Blow

No Return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2229.96	111.33	Initial Hydro-static
1	20.40	110.61	Open To Flow (1)
31	20.80	110.38	Shut-In(1)
63	86.95	111.09	End Shut-In(1)
64	21.35	111.08	Open To Flow (2)
124	29.22	112.47	Shut-In(2)
183	265.42	113.75	End Shut-In(2)
185	2173.30	115.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	s o c m 10% o 90% m	0.03

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

14-16-34 Scott, Ks

202 w Main st.
Salem, Il 62881

Radnor Cog 1-14

Job Ticket: 59083

DST#: 2

ATTN: Mac Armstrong

Test Start: 2014.09.30 @ 20:06:37

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	s o c m 10% o 90% m	0.028

Total Length: 2.00 ft Total Volume: 0.028 bbl

Num Fluid Samples: 0

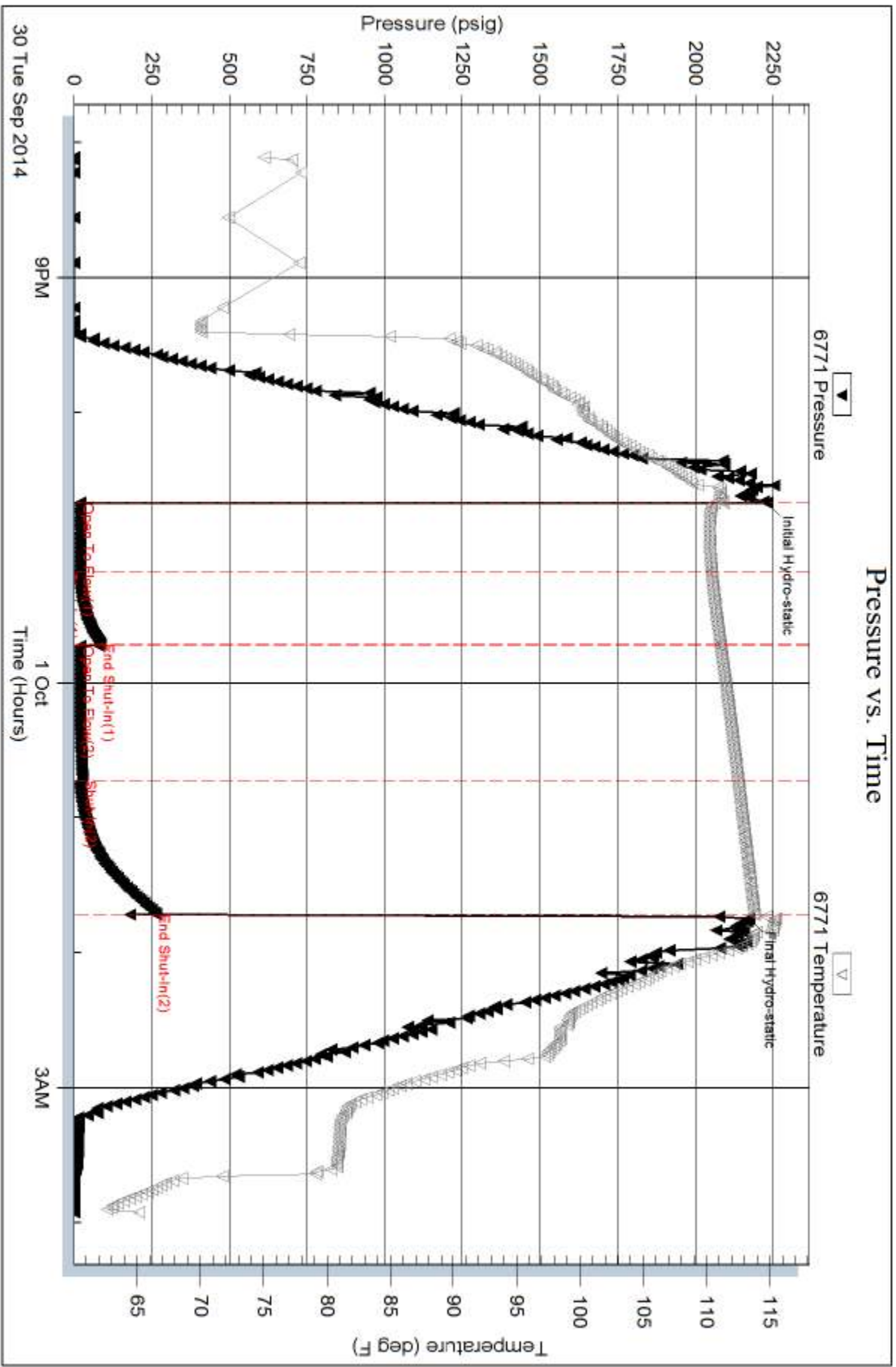
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Shakespeare Oil CO

14-16-34 Scott, Ks

202 w Main st.
Salem, Il
62881
ATTN: Mac Armstrong

Radnor Cog 1-14

Job Ticket: 59084 **DST#: 3**
Test Start: 2014.10.01 @ 18:50:52

GENERAL INFORMATION:

Formation: **Johnson Zone**
 Deviated: No Whipstock: 0.00 ft (KB)
 Time Tool Opened: 20:36:07
 Time Test Ended: 02:47:37
 Interval: **4616.00 ft (KB) To 4713.00 ft (KB) (TVD)**
 Total Depth: 4713.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 3126.00 ft (KB)
 3114.00 ft (CF)
 KB to GR/CF: 12.00 ft

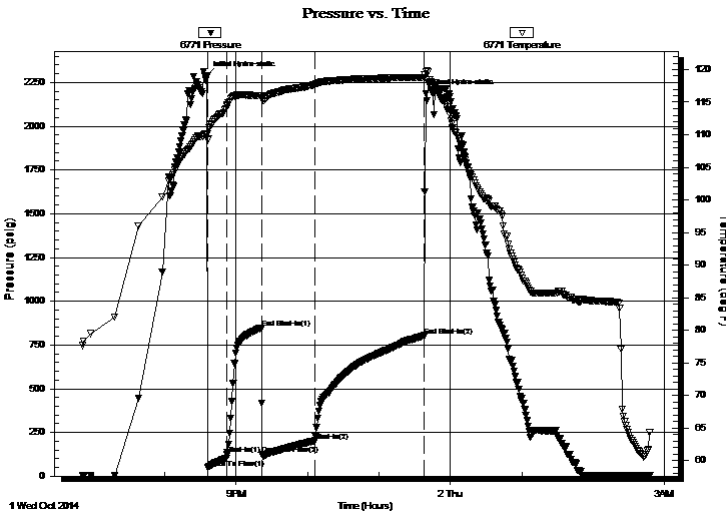
Serial #: 6771

Inside

Press@RunDepth: 201.13 psig @ 4617.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.01 End Date: 2014.10.02 Last Calib.: 2014.10.02
 Start Time: 18:50:52 End Time: 02:47:37 Time On Btm: 2014.10.01 @ 20:35:22
 Time Off Btm: 2014.10.01 @ 23:39:22

TEST COMMENT: BOB in 8 min.
 No Return
 BOB in 5 min.
 No Return / 15 min Shut in had Return / BOB in 30 min

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2291.02	110.13	Initial Hydro-static
1	47.57	109.17	Open To Flow (1)
17	126.72	114.39	Shut-In(1)
46	844.96	116.00	End Shut-In(1)
47	125.51	115.68	Open To Flow (2)
91	201.13	117.69	Shut-In(2)
183	803.17	118.81	End Shut-In(2)
184	2184.82	119.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
68.00	c g o 25% g 75% o	0.95
189.00	g s m c o 40% g 50% o 10% m	2.65
189.00	g m c o 30% g 50% o 20% m	2.65
126.00	g m c o 10%g 45% o 45% m	1.77
0.00	1444' GIP	0.00

* 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

14-16-34 Scott, Ks

202 w Main st.
Salem, Il
62881

Radnor Cog 1-14

Job Ticket: 59084

DST#: 3

ATTN: Mac Armstrong

Test Start: 2014.10.01 @ 18:50:52

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

24 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.16 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
68.00	c g o 25% g 75% o	0.954
189.00	g s m c o 40% g 50% o 10% m	2.651
189.00	g m c o 30% g 50% o 20% m	2.651
126.00	g m c o 10%g 45% o 45% m	1.767
0.00	1444' GIP	0.000

Total Length: 572.00 ft

Total Volume: 8.023 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

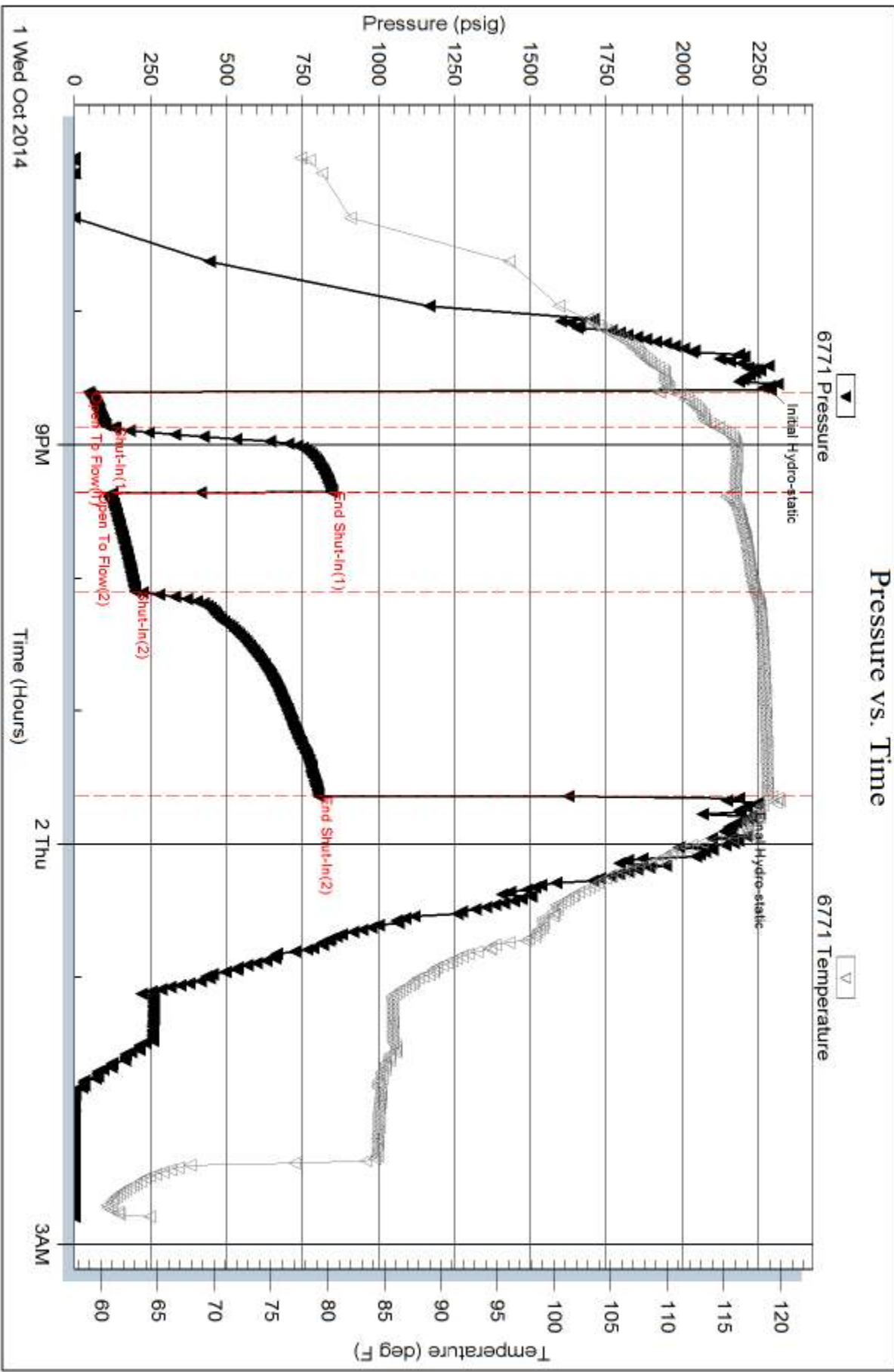
Serial #: 6771

Inside

Shakespeare Oil Co

Radnor Cog 1-14

DST Test Number: 3



**Shakespeare Oil Company, Inc.
Radnor-COG No.1-14
1000' FNL and 2500' FWL
SE SE NE NW
Sec 14 T16S R34W
Scott County, Kansas**

Geological Report
by

Macklin M. Armstrong, P.G.
License Number 743

Scale 1:240 Imperial

Well Name:	Radnor-COG No. 1-14	
Surface Location:	Sec 14 T16S R34W	
Bottom Location:	1000' FNL and 2500' FWL	
API:	15-171-21088	
License Number:	7311	
Spud Date:	9/23/2014	Time: 10:00 AM
Region:	Scott County, Kansas	
Drilling Completed:	10/2/2014	Time: 3:36 PM
Surface Coordinates:		
Bottom Hole Coordinates:		
Ground Elevation:	3114.00ft	
K.B. Elevation:	3126.00ft	
Logged Interval:	3800.00ft	To: 4856.00ft
Total Depth:	4860.00ft	
Formation:	Mississippi	
Drilling Fluid Type:	Chemical/Fresh Water Gel	

OPERATOR

Company:	Shakespeare Oil Company, Inc.	
Address:	202 West Main Street Salem, Illinois 62881	
Contact Geologist:	Don Williams	
Contact Phone Nbr:	618-548-1585	
Well Name:	Radnor-COG No. 1-14	
Location:	Sec 14 T16S R34W	API: 15-171-21088
Pool:	Oil	Field: Radnor
State:	Kansas	Country: USA

CONTRACTOR

Contractor: Southwind Drilling, Inc.
 Rig #: 70
 Rig Type: mud rotary
 Spud Date: 9/23/2014
 TD Date: 10/2/2014
 Rig Release: 10/3/2014

Time: 10:00 AM
 Time: 3:36 PM
 Time: 7:00 PM

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: 101.045743748
 N/S Co-ord:
 E/W Co-ord:

Latitude: 38.667877733

ELEVATIONS

K.B. Elevation: 3126.00ft
 K.B. to Ground: 12.00ft

Ground Elevation: 3114.00ft

NOTES

Date	Depth at 7 am	Activity
9-23-14	MIRU	Spud at 10 am
9-24-14	747	Drilling
9-25-14	2109	Drilling
9-26-14	3082	Drilling
9-27-14	3634	Drilling
9-28-14	4110	Drilling
9-29-14	4468	CFS
9-30-14	4492	CFS
10-01-14	4599	CTCH after DST No. 2
10-02-14	4720	Drilling
10-03-14	4860	Set 5 1/2"

Surface Casing: 8 5/8" 23# at 265'
 Production Casing: 5 1/2" 15.50# at 4858'

Deviation: 265' - 3/4°
 4468' - 1 1/2°
 4860' - 1°

Bit Record:	Make	Size	Type	Depth In	Depth Out	Hours
	Reed	12 1/4"	Tooth	Surface	265	2 1/2
	JZ	7 7/8"	HA25L	265	4860	127

Drill Stem Tests:

DST No. 1 4406 to 4468 Marmaton A Zone
 30-30-60-90
 Recovery: 60' CO (23 degree gravity corrected)
 18' SMCO (10%M, 90%O)

IHP 2168 FHP 2072
 IFP 14-21 FFP 36-48
 ISIP 1109 FSIP 1109
 Temp 113°

DST No. 2 4545 to 4599 Myrick Station, Fort Scott
 30-30-60-60
 Recovery: 2' SOCM (10%O, 90%M)
 IHP 2230 FHP 2173
 IFP 20-21 FFP 21-29
 ISIP 87 FSIP 265
 Temp 115°

DST No. 3 4616 to 4713 Johnson Zone

15-30-45-90

Recovery: 1444' GIP

68' CGO (25%G, 75%O - 24 degree gravity corrected)

189' GSMCO (40%G, 10%M, 50%O)

189' GMCO (30%G, 20%M, 50%O)

126' GMCO (10%G, 45%M, 45%O)

IHP 2291 FHP 2185

IFP 48-127 FFP 126-201

ISIP 845 FSIP 803

Temp 120°

Formation	Sample	E-Log	Datum	Well 1	Well 2
Anhydrite	2458	2459	+667	-4	-8
Base/Anhydrite	2480	2479	+647	-4	-10
Heebner	3988	3984	-858	+5	+4
Lansing	4030	4026	-900	+5	+3
Muncie Creek	4202	4200	-1074	+9	+11
Stark	4305	4300	-1174	+4	+5
Hushpuckney	4352	4350	-1224	-3	0
Marmaton	4442	4439	-1313	+1	+4
Pawnee	4515	4513	-1387	+1	+6
Fort Scott	4569	4567	-1441	+3	+7
Cherokee Shale	4598	4595	-1469	+2	+7
Johnson Zone	4641	4638	-1512	+4	+10
Mississippi	4780	4779	-1653	-19	+2
Total Depth	4860	4856	-1730		

Well 1: Shakespeare Oil Company, Inc. Radnor No. 2-14 800' FNL and 550' FWL Sec 14 T16S R34W

Well 2: Shakespeare Oil Company, Inc. Radnor No. 1-14 1550' FSL and 1850' FWL Sec 14 T16S R34W

Pipe was set to further test the Johnson zone.

Respectfully submitted,
Macklin M. Armstrong

ROCK TYPES



ACCESSORIES

MINERAL

- ▲ Chert, dark
- P Pyrite
- Sandy
- △ Chert White

FOSSIL

- ↑ Bryozoa
- F Fossils < 20%
- φ Oolite
- ⊕ Oomoldic
- ⊕ Fussilinid

STRINGER

- ▬ Dolomite

TEXTURE

- C Chalky

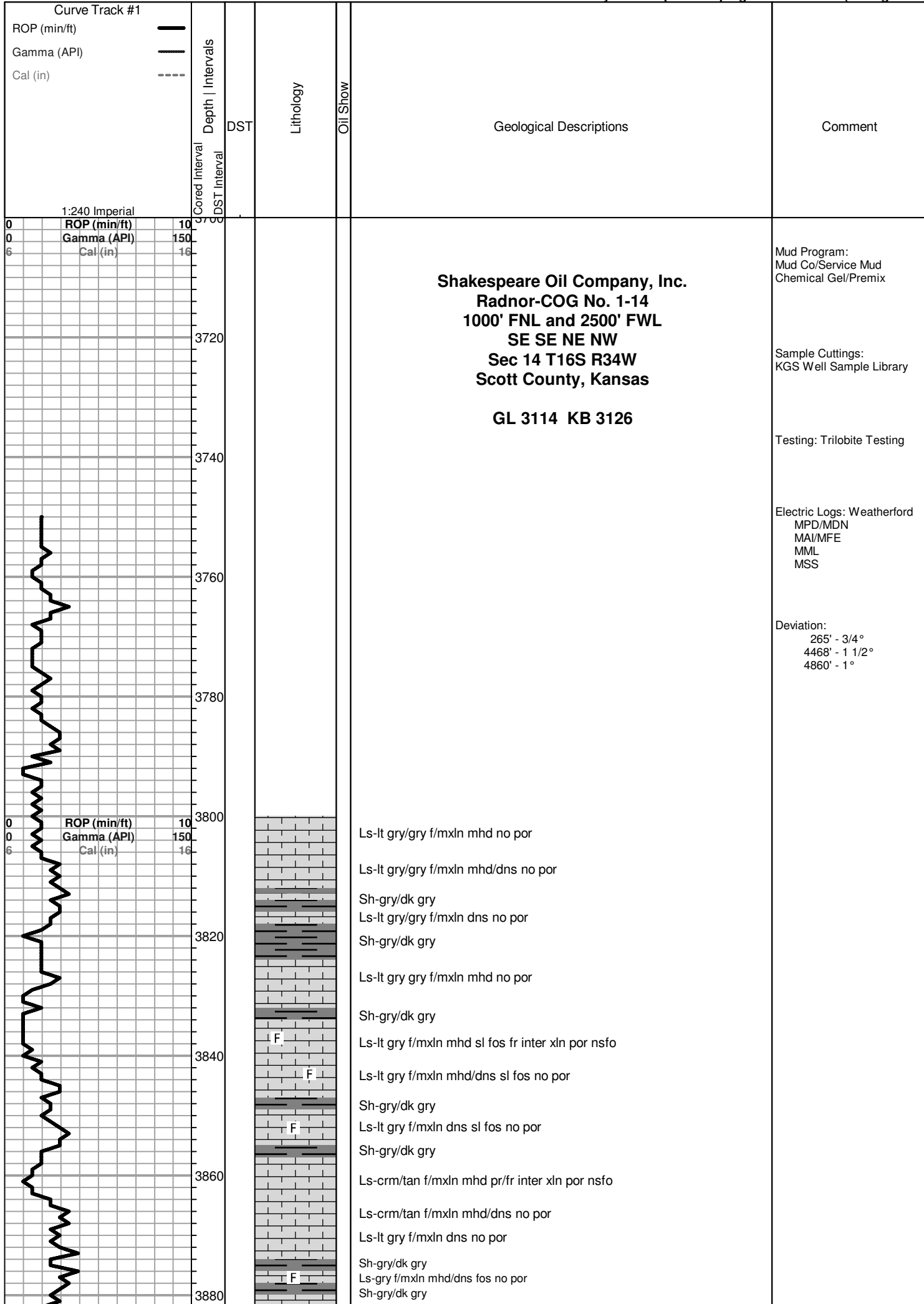
OTHER SYMBOLS

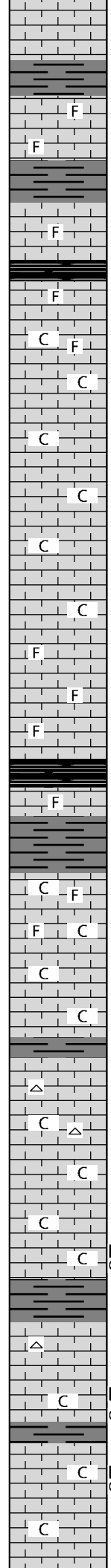
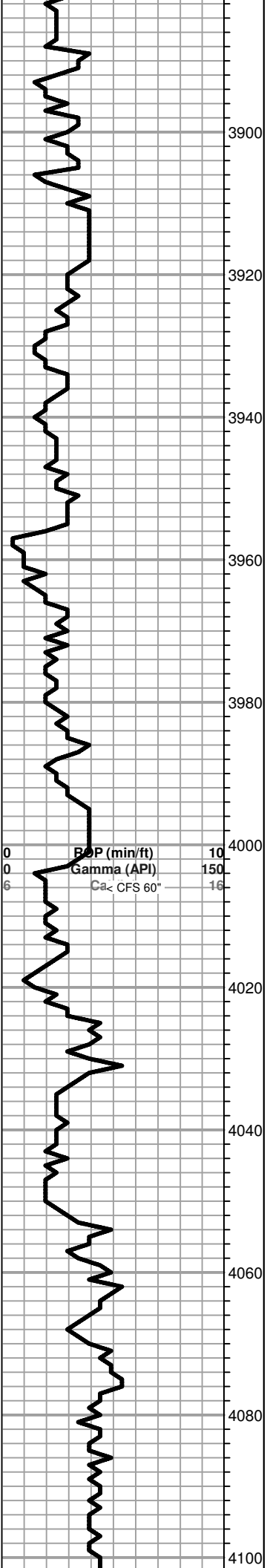
MISC

- Daily Report
- Digital Photo
- Document
- Folder
- Link
- Vertical Log File
- Horizontal Log File
- Core Log File
- Drill Cuttings Rpt

DST

- DST Int
- DST alt
- Core





Ls-lt gry/tan f/mxln mhd no por

Sh-gry/dk gry

F Ls-lt gry/tan f/mxln mhd fos no por

F Ls-lt gry/tan f/mxln mhd/dns sl fos no por

Sh-gry/dk gry

F Ls-tan f/mxln dns fos no por

Sh-blk carb

F Ls-tan f/mxln mhd/dns sl fos no por

C F Ls-tan/crm f/mxln mhd sl clky sl fos no por

C Ls-tan/crm f/mxln dns sl clky no por

C Ls-tan/crm fx/n mhd sl clky no por

C Ls-tan/crm fxln mhd/dns sl clky no por

C Ls-tan/crm fxln dns sl clky no por

C Ls-tan/crm fxln mhd sl clky fr inter xln por nsfo

C Ls-tan/crm fxln mhd sl clky no por

F Ls-lt gry/tan f/mxln mhd/dns sl fos no por

F Ls-AA

F Ls-lt gry/tan fxln dns sl fos no por

----- Heebner 3988 -862 -----

Sh-blk carb

F Ls-tan fxln mhd/dns fos with blk irregular shaped fos no por

Sh-gry/dk gry

C F Ls-crm/lt tan fxln mhd sl clky sl fos no por

F C Ls-AA

C Ls-crm/lt tan fxln mhd sl clky no por sm Ls-wt fxln soft clky no por

C Ls-crm/lt tan fxln dns sl clky no por

----- Lansing 4030 -904 -----

△ Ls-crm/tan f/mxln dns no por sm Cht-wt fsh opa

C △ Ls-crm/tan fxln mhd sl clky no por sm Cht-AA

C Ls-crm/lt tan fxln mhd sl clky no por sm Ls-wt fxln soft clky no por

C Ls-crm/lt tan fxln dns sl clky no por

C D Ls-AA with few pcs Ls-tan fxln mhd fos dk brn to blk dead oil stn

Sh-gry/dk gry

△ Ls-crm/tan fxln mhd no por sm Cht-wt fsh opa sl fos

Ls-crm/lt tan fxln dns no por

C D Ls-crm/lt tan fxln mhd sl clky no por few pcs Ls-tan fxln mhd dk brn to blk dead oil stn

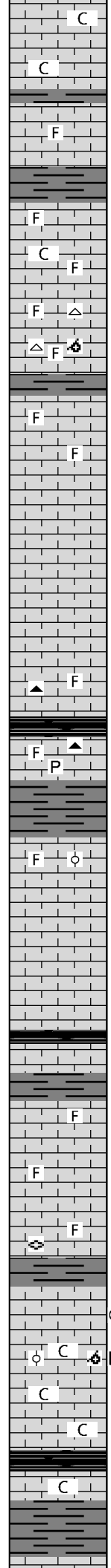
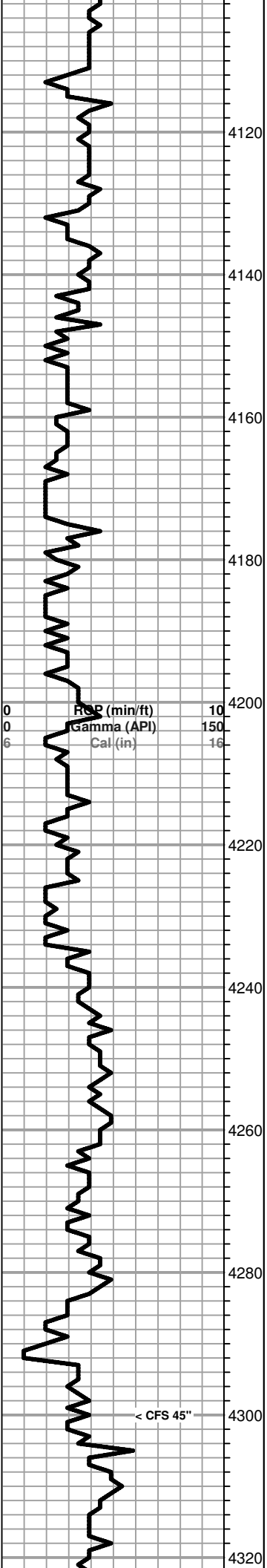
Sh-gry/dk gry

C D Ls-crm/lt tan fxln mhd sl clky no por with few Ls-tan fxln mhd dk brn to blk dead oil stn

C Ls-crm fxln mhd/dns sl clky no por

C Ls-crm/lt ary fxln dns sl clky no por

All formation tops on this geological log have been correlated back to the electric log



Ls-AA

Ls-crm/lt gry fxln mhd sl clky pr/fr inter xln por nsfo
Sh-gry/dk gry

Ls-lt gry fxln dns sl fos with blk irregular shapped fos no por

Sh-gry/dk gry

Ls-lt gry fxln dns sl fos with blk irregular shaped fos no por

Ls-tan/lt gry f/mxln mhd/dns no por sm Ls-lt gry f/mxln mhd
sl clky with small blk fos no por

Ls-tan mxln dns fos no por sm Cht-gry/gry wt fsh opa

Ls-tan f/mxln mhd/dns sl fos no por sm Ls-tan f/mxln mhd
fos oom and sm Cht-AA

Sh-gry/dk gry

Ls-tan f/mxln mhd/dns sl fos no por

Ls-AA

Ls-lt gry/crm fxln mhd no por

Ls-lt gry/crm fxln dns no por

Ls-lt gry/crm/lt tan fxln mhd/dns no por

Ls-lt gry/crm/lt tan fxln mhd no por

Ls-AA

Ls-lt gry/crm fxln dns sl fos no por sm Cht-gry/lt gry fsh opa

----- **Muncie Creek 4202 -1076** -----

Sh-blk carb
Ls-tan/gry f/mxln mhd/dns sl fos with sm blk ool no por sm Pyrite
and Cht-gry/lt gry fsh opa

Sh-gry/dk gry

Ls-tan/lt gry fxln mhd no por sm Ls-gry f/mxln mhd fos with sm blk
ool no por

Ls-tan/lt gry f/mxln mhd no por

Ls-AA

Ls-tan/lt gry f/mxln dns no por

Ls-AA

Sh-blk carb
Ls-tan/lt gry f/mxln dns no por

Sh-gry/dk gry

Ls-tan/gry/brn fxln dns sl fos no por

Ls-tan/gry f/mxln dns no por

Ls-tan/gry f/mxln dns sl fos no por

Ls-tan/gry dns sl fos no por sm free fuss

Sh-gry/dk gry

Ls-tan/gry f/mxln mhd no por with sm Ls-tan/crm (3 pcs) fxln mhd pr/fr vug por
dk brn sct stn vssfo sl cut no odor

Ls-crm/tan f/mxln mhd sl clky fos sl oom no por and sm Ls-crm/lt gry fxln
fos ool gd ooc por dk brn to blk dead oil stn nsfo

Ls-lt gry/crm/tan fxln dns sl clky no por

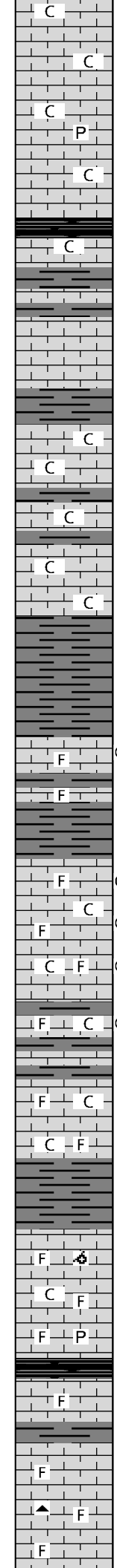
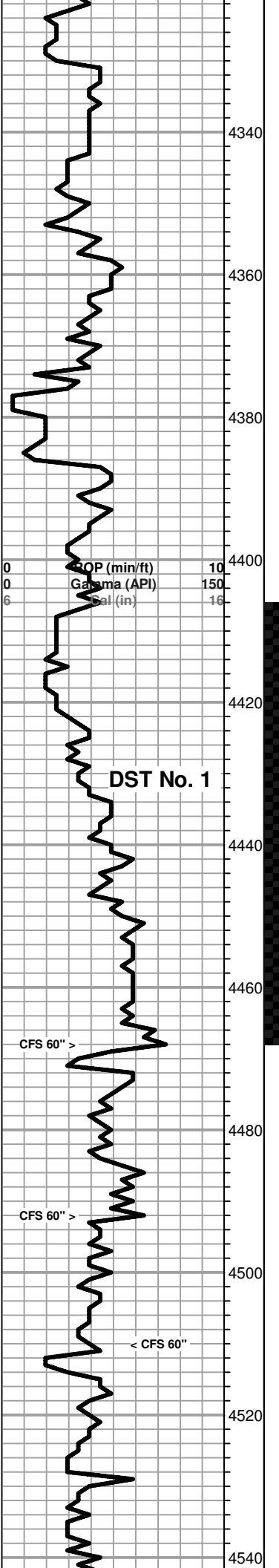
----- **Stark 4305 -1179** -----

Sh-blk carb
Ls-lt gry/tan fxln dns sl clky no por

Sh-gry/dk gry

Ls-lt gry/tan fxln dns sl clky no por

Mud Data at 4174'
10:30 am 9-28-14
Wt 9.2 Vis 62 WL 8.0
pH 11 Chl 5800 Sol 6.2%
YP 20 LCM 1#



Ls-lt gry/tan fxln dns sl clky no por

Ls-lt gry/crm fxln mhd sl clky no por

Ls-lt gry/crm fxln dns sl clky no por

Ls-AA sm Pyrite

Ls-crm/lt tan fxln mhd sl clky no por

----- **Hushpuckney 4352 -1226** -----

Sh-blk carb

Ls-crm/lt tan fxln mhd/dns sl clky no por

Sh-gry/dk gry

Ls-tan/gry fxln dns no por

Sh-gry/dk gry

Ls-tan/gry fxln mhd/dns no por

Ls-AA

Sh-gry/gry

Ls-tan/gry sm mott dk gry fxln mhd sub clky no por

Ls-tan/gry fxln dns sub clky no por

Sh-gry/dk gry

Ls-tan/gry fxln dns sub clky no por

Sh-gry/dk gry

Ls-tan/gry fxln mhd/dns sub clky no por

Ls-tan/gry fxln dns sub clky no por

Sh-gry/dk gry

Sh-AA

Sh-AA

Ls-tan/gry f/mxln mhd/dns sl fos no por sm Ls-lt gry (4 pcs) fxln mhd sl fos fr vug por dk brn to blk sct stn vssfo on brk sl cut

Sh-gry/dk gry

Ls-tan/gry f/mxln mhd/dns sl fos no por

Sh-gry/dk gry

----- **Marmaton 4442 -1316** -----

Ls-tan fxln mhd fos fr vug por brn sct stn ssfo on brk fr cut

Ls-tan/crm fxln mhd/dns sl clky sl fos no por with sm Ls-tan (3 pcs) fxln mhd pr vug por dk brn sct stn vssfo on brk sl cut

Ls-tan/crm/lt gry fxln mhd/dns sl clky sl fos no por with sm Ls-tan (4 pcs) fxln mhd pr vug por dk brn spt stn vssfo on brk sl cut

Sh-gry/dk gry

Ls-tan/crm/lt gry fxln mhd/dns sl clky no por with sm Ls-tan (6 pcs) fxln mhd sl fos pr vug por dk brn spt stn vssfo on brk sl cut

Ls-lt gry/gry fxln mhd no por

Sh-gry/dk gry

Ls-lt gry/crm f/mxln mhd/dns sl clky sl fos no por

Ls-crm/lt tan f/mxln dns sl clky sl fos no por

Sh-gry/dk gry/lt gry

Ls-lt gry f/mxln mhd/dns fos sl oom no por

Ls-lt gry/crm f/mxln mhd sl clky sl fos no por

Ls-lt gry/tan f/mxln dns sl fos no por sm Pyrite

----- **Pawnee 4515 -1389** -----

Ls-lt gry/gry f/mxln mhd/dns sl fos no por

Sh-gry/dk gry

Ls-tan/gry/brn f/mxln mhd/dns sl fos no por

Ls-tan/lt gry f/mxln mhd sl fos no por sm Cht-gry/brn fsh opa

Ls-AA

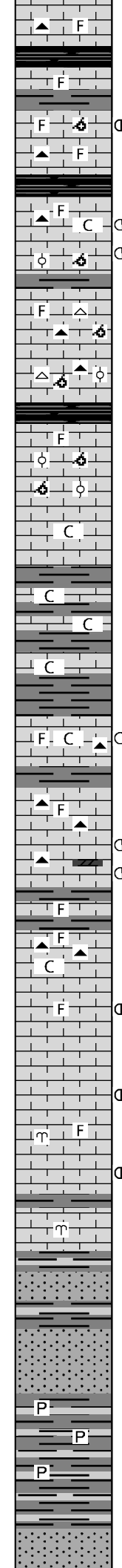
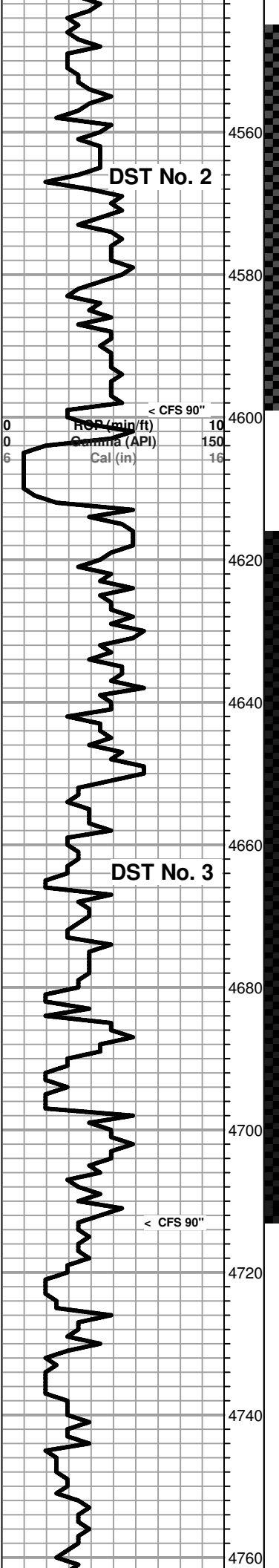
DST No. 1
 4406 to 4448
 30-30-60-90
 1st Open: Weak 3/4" blow
 2nd Open: Weak blow,
 building to 2 1/4"

Recovery:
 60' CO (23 deg grav)
 18' SMCO (10%M, 90%O)
 IHP 2168 FHP 2072
 IFP 14-21 FFP 36-48
 ISIP 1109 FSIP 1109
 Temp 113°

Pulled 25 stand short trip at 4468', then cir for test - 90"

Mud Data at 4468'
 8:50 am 9-29-14
 Wt 9.3 Vis 63 WL 8.0
 pH 11 Chl 6500 Sol 6.7%
 YP 24 LCM 2#

Mud Data at 4528'
 11:45 am 9-30-14
 Wt 9.2 Vis 60 WL 8.4
 pH 10.5 Chl 6700 Sol 6%
 YP 19 LCM 2#



Ls-tan/lt gry/gry f/mxln mhd sl fos no por sm Cht-gry fsh opa

Sh-blk carb

Ls-tan/gry f/mxln dns sl fos no por

Sh-gry/dk gry

Ls-tan f/mxln mhd fos sl oom fr pp/inter xln por lt brn sct stn fsfo and gas bub on brk fr cut trc odor

Ls-tan/gry mxln to frag mhd/dns sl fos no por sm Cht-gry fsh opa

Fort Scott 4569 -1443

Ls-tan/lt gry fxln mhd sl fos sub clky no por sm Cht-gry/brn fsh opa and sm Ls-tan (5 pcs) fxln mhd pr/fr vug/inter xln por brn spt stn ssfo on brk

Ls-tan/gry/brn mxln dns fos ool and oom no por with sm Ls-tan (3 pcs) mhd fos oom pr/fr inter fos/xln por lt brn spt stn ssfo on brk sl cut

Sh-gry/dk gry

Ls-tan/gry fxln mhd/dns no por sm Ls-tan/gry/brn f/mxln mhd/dns sl fos sl oom no por sm Cht-gry/brn fsh opa and Cht-wt fsh opa with brn ool

Ls-tan/gry fxln dns no por sm Ls-tan/brn mxln mhd fos ool and oom no por and Cht-AA

Cherokee Shale 4598 -1472

Sh-blk carb

Ls-lt gry fxln dns sl fos no por

Ls-lt gry/tan fxln mhd fos ool and oom pr/fr inter oom por nsfo

Ls-lt gry/crm fxln dns sl clky no por

Sh-gry/dk gry

Ls-lt gry/crm fxln dns sl clky no por

Sh-gry/dk gry

Ls-lt gry/crm fxln dns sl clky no por

Sh-gry/dk gry

Ls-tan/gry/brn f/mxln mhd/dns sub clky no por

Sh-gry/dk gry

Johnson Zone 4641 -1515

Ls-tan/gry/brn fxln mhd fos no por sm Cht-tan/brn fsh semi trans and sm Ls-tan (3 pcs) fxln mhd sl clky fr pp/inter xln por dk brn spt stn

Sh-gry/dk gry

Ls-tan/gry/brn fxln mhd fos no por sm Cht-tan/brn fsh opa

Ls-AA

Ls-lt gry/gry f/mxln mhd sl fos no por sm Cht-tan/gry fsh opa and Cht-brn fsh semi trans with sm Dolo-lt gry (2 pcs) blk mhd brn spt stn vssfo sl cut

Sh-gry/dk gry

Ls-lt gry/gry f/mxln mhd/dns sl fos no por

Sh-gry/dk gry

Ls-tan/gry/brn fxln mhd/dns sub clky sl fos no por sm Cht-tan/brn fsh opa

Ls-tan/gry/brn fxln mhd no por with sm Ls-tan/brn fxln mhd fr inter xln/vug por lt brn spt stn fsfo on brk fr cut fr odor

Ls-tan/gry/brn f/mxln dns no por

Ls-tan cxln to blk mhd fr inter xln por brn spt to sat stn fsfo and bleeding gas bub on brk fr cut sl odor

Ls-tan/gry f/mxln dns sl fos no por sm pcs of Bryozoa

Ls-tan/gry fxln mhd pr/fr vug por brn spt stn ssfo on brk faint odor

Sh-gry/dk gry

Ls-tan/gry/fxln mhd/dns no por sm pcs of Bryozoa

Sh-gry/grn

Ss-gry fgrn sub and sl gils tite cement to sl fri

Sh-gry/grn

Ss-lt gry/gry fgrn sub ang to sub rnd sl gils tite cement

Ss-lt gry/wt fgrn sub ang to sub rnd tite cement to sl fri sm Ss-gry fgrn sub ang to sub rnd tite cement to sl fri gils

Sh-gry/grn/dk gry sm Pyrite

Sh-AA sm Pyrite

Ss-AA

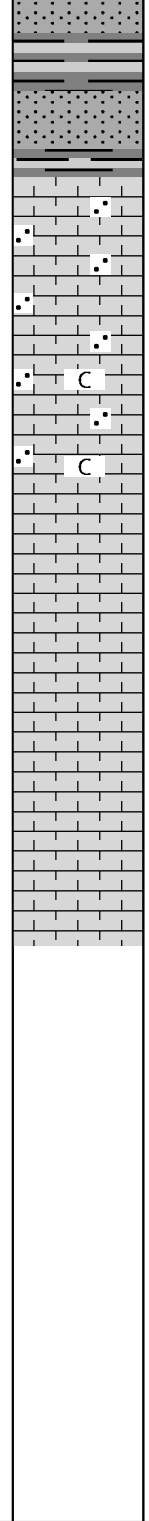
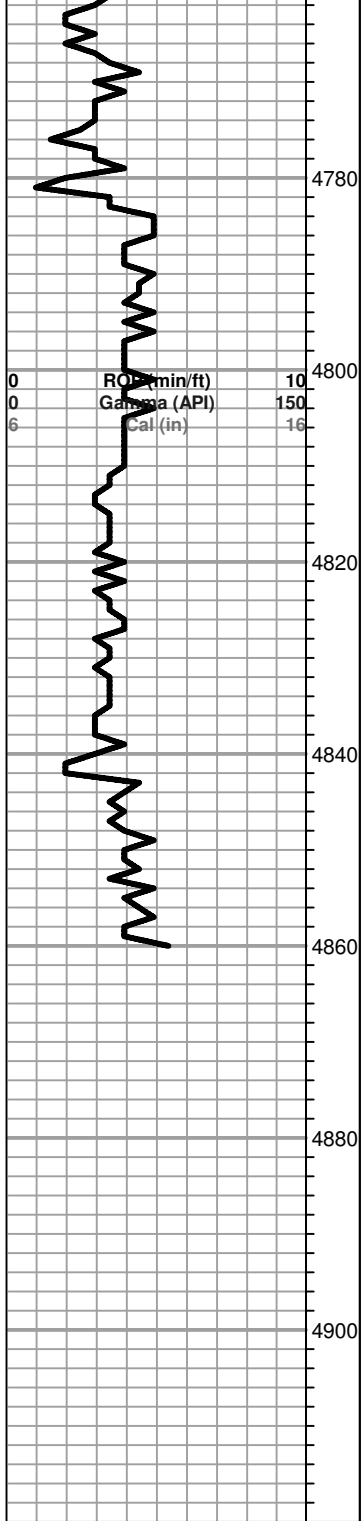
Ss-lt gry fgrn sub ang to sub rnd sl gils tite cement to sl fri

DST No. 2
4545 to 4599
30-30-60-60
1st Open: Weak 1/8" blow, died in 20"
2nd Open: No blow
Recovery:
2' SOCM (10%O, 90%M)
IHP 2230 FHP 2173
IFP 20-21 FFP 21-29
ISIP 87 FSIP 265
Temp 115°

Pipe strap at 4599'
Short 2.69'

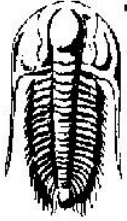
Mud Data at 4645'
10:45 am 10-01-14
Wt 9.15 Vis 54 WL 9.2
pH 10.5 Chl 6700 Sol 6%
YP 16 LCM 2#

DST No. 3
4616 to 4713
15-30-45-90
1st Open: BOB in 8"
2nd Open: BOB in 5"
Recovery:
1444' GIP
68' CGO (25%G, 75%O
24 deg grav)
189' GSMCO (40%G, 10%M
50%O)
189' GMCO (30%G, 20%M
50%O)
126' GMCO (10%G, 45%M
45%O)
IHP 2291 FHP 2185
IFP 48-127 FFP 126-201
ISIP 845 FSIP 803
Temp 120°



Ss-lt gry/wt fgrr sub rnd fri
 Sh-gry/grn/dk gry
 Ss-lt gry/wt fgrr sug ang to sub rnd tite cement to sl fri
 ----- **Mississippi 4780 -1654** -----
 Ls-wt/crm fxln to sl gran mhd/dns no por
 Ls-AA
 Ls-wt/crm fxln to gran mhd/dns sl clky no por
 Ls-AA
 Ls-wt/crm fxln to gran mhd/dns no por
 Ls-AA
 Ls-crm/tan f/mxln mhd/dns no por
 Ls-crm/tan f/mxln mhd no por
 Ls-tan f/mxln mhd/dns no por
 Ls-AA
 ----- **RTD 4860 -1734** -----
 Finished drilling at 3:36 pm on 10-02-14. Circulated for log 90 minutes.
 Finished logging at 11:55 pm on 10-02-14
 Shakespeare Radnor Cog 1-14 dst 1-1.jpg
 Shakespeare Radnor Cog 1-14 dst 2-1.jpg
 Shakespeare Radnor Cog 1-14 dst 3-1.jpg

Mud Data at 4789'
 10:45 am 10-02-14
 Wt 9.0 Vis 64 WL 9.4
 pH 10.5 Chl 6500 Sol 4.5%
 YP 22 LCM 2#

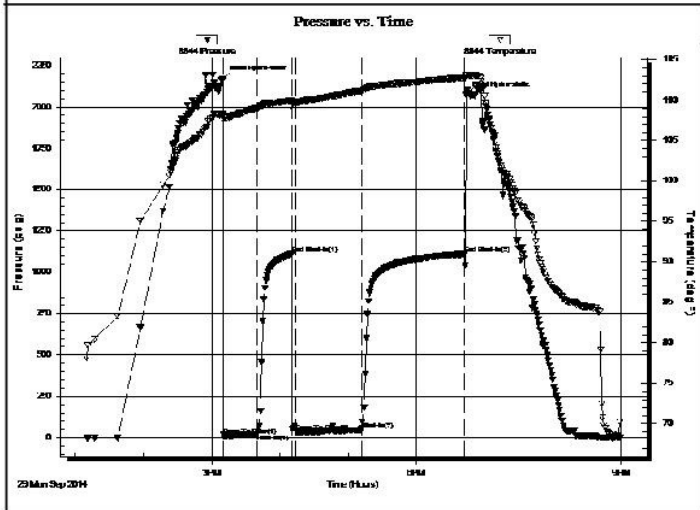
 <p style="font-size: 2em; font-weight: bold; margin: 0;">TRILOBITE TESTING, INC.</p>	DRILL STEM TEST REPORT	
	<table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"> Shakespeare Oil CO 202 w Main st. Salem, IL 62881 ATTN: Mac Armstrong </td> <td style="width:50%; border: none; text-align: right;"> 14-16-34 Scott, Ks Radnor Cog 1-14 Job Ticket: 59082 DST#:1 Test Start: 2014.09.29 @ 13:10:29 </td> </tr> </table>	Shakespeare Oil CO 202 w Main st. Salem, IL 62881 ATTN: Mac Armstrong
Shakespeare Oil CO 202 w Main st. Salem, IL 62881 ATTN: Mac Armstrong	14-16-34 Scott, Ks Radnor Cog 1-14 Job Ticket: 59082 DST#:1 Test Start: 2014.09.29 @ 13:10:29	

GENERAL INFORMATION:

Formation: Marmaton a Deviated: No Whipstock: 0.00 ft (KB) Time Tool Opened: 15:10:14 Time Test Ended: 20:58:59 Interval: 4406.00 ft (KB) To 4468.00 ft (KB) (TVD) Total Depth: 4468.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Fair	Test Type: Conventional Bottom Hole (Initial) Tester: Shane McBride Unit No: 55 Reference Elevations: 3126.00 ft (KB) 3114.00 ft (CF) KB to GR/CF: 12.00 ft
---	--

Serial #: 8844 Outside Press@RunDepth: 47.75 psig @ 4407.00 ft (KB) Start Date: 2014.09.29 End Date: 2014.09.29 Start Time: 13:10:29 End Time: 20:58:59	Capacity: 8000.00 psig Last Calib.: 2014.09.29 Time On Btm: 2014.09.29 @ 15:09:59 Time Off Btm: 2014.09.29 @ 18:43:59
--	--


TEST COMMENT: 3/4" in blow
 No return
 2 1/4" in blow
 No return



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2167.98	108.29	Initial Hydro-static
1	14.43	107.54	Open To Flow (1)
31	21.05	109.04	Shut-In(1)
61	1109.23	109.91	End Shut-In(1)
64	36.20	109.69	Open To Flow (2)
122	47.75	111.20	Shut-In(2)
213	1109.26	112.78	End Shut-In(2)
214	2072.13	113.01	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
18.00	s m c o 10 % m 90 % o	0.25
60.00	c o 100 % o	0.84

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

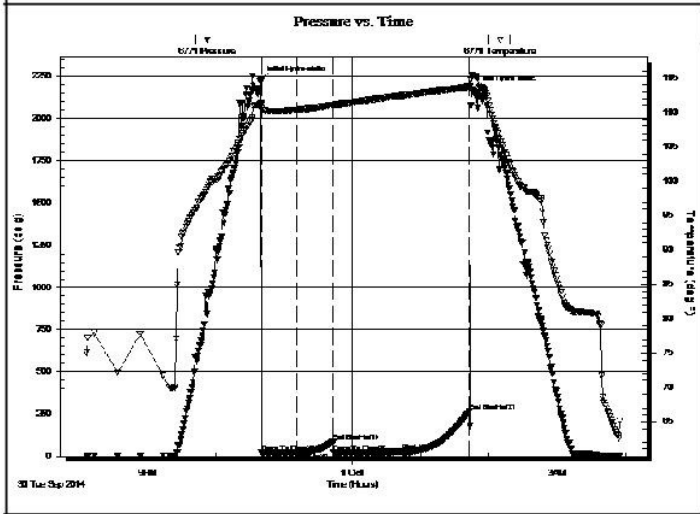
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	<table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"> Shakespeare Oil CO 202 w Main st. Salem, IL 62881 ATTN: Mac Armstrong </td> <td style="width:50%; border: none; vertical-align: top;"> 14-16-34 Scott, Ks Radnor Cog 1-14 Job Ticket: 59083 DST#: 2 Test Start: 2014.09.30 @ 20:06:37 </td> </tr> </table>	Shakespeare Oil CO 202 w Main st. Salem, IL 62881 ATTN: Mac Armstrong
Shakespeare Oil CO 202 w Main st. Salem, IL 62881 ATTN: Mac Armstrong	14-16-34 Scott, Ks Radnor Cog 1-14 Job Ticket: 59083 DST#: 2 Test Start: 2014.09.30 @ 20:06:37	

GENERAL INFORMATION:

Formation: Myric Station / Ft. Deviated: No Whipstock: 0.00 ft (KB) Time Tool Opened: 22:40:07 Time Test Ended: 03:55:52 Interval: 4545.00 ft (KB) To 4599.00 ft (KB) (TVD) Total Depth: 4599.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Fair	Test Type: Conventional Bottom Hole (Reset) Tester: Shane McBride Unit No: 55 Reference Elevations: 3126.00 ft (KB) 3114.00 ft (CF) KB to GR/CF: 12.00 ft
--	--

Serial #: 6771	Inside				
Press@RunDepth:	29.22 psig @	4546.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2014.09.30	End Date:	2014.10.01	Last Calib.:	2014.10.01
Start Time:	20:06:37	End Time:	03:55:52	Time On Btm:	2014.09.30 @ 22:39:52
				Time Off Btm:	2014.10.01 @ 01:44:52

TEST COMMENT: 1/8" Blow / Died 20min.
 No Return
 No Blow
 No Return



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2229.96	111.33	Initial Hydro-static
1	20.40	110.61	Open To Flow (1)
31	20.80	110.38	Shut-In(1)
63	86.95	111.09	End Shut-In(1)
64	21.35	111.08	Open To Flow (2)
124	29.22	112.47	Shut-In(2)
183	265.42	113.75	End Shut-In(2)
185	2173.30	115.47	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
2.00	s o c m 10% o 90% m	0.03

* Recovery from multiple tests

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Shakespeare Oil CO

14-16-34 Scott, Ks

202 w Main st.
Salem, Il
62881
ATTN: Mac Armstrong

Radnor Cog 1-14

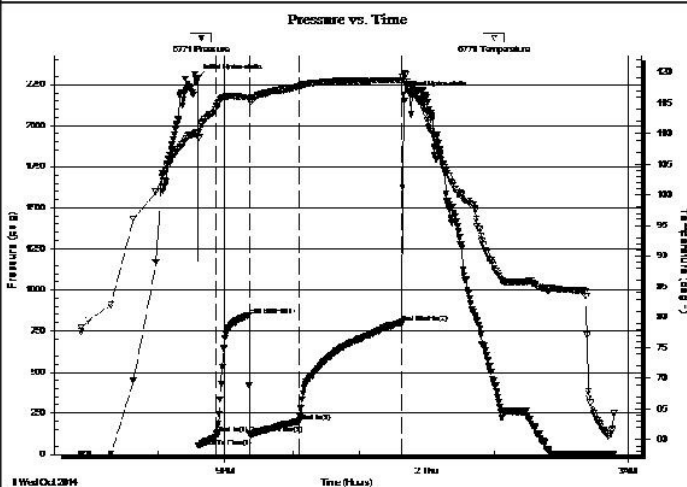
Job Ticket: 59084 **DST#:3**
Test Start: 2014.10.01 @ 18:50:52

GENERAL INFORMATION:

Formation: **Johnson Zone**
 Deviated: No Whipstock: 0.00 ft (KB)
 Time Tool Opened: 20:36:07
 Time Test Ended: 02:47:37
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Shane McBride
 Unit No: 55
Interval: 4616.00 ft (KB) To 4713.00 ft (KB) (TVD)
 Total Depth: 4713.00 ft (KB) (TVD)
 Reference Elevations: 3126.00 ft (KB)
 3114.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 12.00 ft

Serial #: 6771 Inside
 Press@RunDepth: 201.13 psig @ 4617.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.10.01 End Date: 2014.10.02 Last Calib.: 2014.10.02
 Start Time: 18:50:52 End Time: 02:47:37 Time On Btm: 2014.10.01 @ 20:35:22
 Time Off Btm: 2014.10.01 @ 23:39:22

TEST COMMENT: BOB in 8 min.
 No Return
 BOB in 5 min.
 No Return / 15 min Shut in had Return / BOB in 30 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2291.02	110.13	Initial Hydro-static
1	47.57	109.17	Open To Flow (1)
17	126.72	114.39	Shut-In(1)
46	844.96	116.00	End Shut-In(1)
47	125.51	115.68	Open To Flow (2)
91	201.13	117.69	Shut-In(2)
183	803.17	118.81	End Shut-In(2)
184	2184.82	119.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
68.00	c g o 25% g 75% o	0.95
189.00	g s m c o 40% g 50% o 10% m	2.65
189.00	g m c o 30% g 50% o 20% m	2.65
126.00	g m c o 10%g 45% o 45% m	1.77
0.00		0.00

Gas Rates

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

* Recovery from multiple tests