



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1227293  
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: \_\_\_\_\_



1227293

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  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				

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Hembree, Robert F
Well Name	Schwartzkopf A 2
Doc ID	1227293

Tops

Name	Top	Datum
Anhydrite	1570	+738
Base Anhydrite	1604	+704
Heebner	3690	-1382
Toronto	3710	-1402
Lansing	3737	-1429
BKC	4028	-1720
Marmaton	4068	-1760
Pawnee	4155	-1847
Ft. Scott	4224	-1916
Cherokee Sh.	4253	-1945
Miss	4329	-2021
RTD	4340	-2032

# ALLIED OIL & GAS SERVICES, LLC 063565

Federal Tax I.D. # 20-8651475

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

SERVICE POINT:  
Great Bend KS

DATE <u>08-02-14</u>	SEC. <u>34</u>	TWP. <u>18</u>	RANGE <u>24</u>	CALLED OUT <u>3:00 pm</u>	ON LOCATION <u>4:30 pm</u>	JOB START <u>6:30 pm</u>	JOB FINISH <u>7:00 pm</u>
LEASE <u>Schlartkop</u>		WELL # <u>2</u>	LOCATION <u>Ness City 2 miles 3/4 South</u>			COUNTY <u>Ness</u>	STATE <u>KS</u>
OLD OR <input checked="" type="checkbox"/> NEW (Circle one)							

CONTRACTOR Pickrell

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 221.53

CASING SIZE 8 5/8 23 CBS DEPTH 222.53

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. 15'

PERFS. \_\_\_\_\_

DISPLACEMENT 13.24 RBIs H2O

OWNER Robert Hembree

CEMENT AMOUNT ORDERED 150 SXS Class A 3% CC 2% Gel

EQUIPMENT

PUMP TRUCK CEMENTER Kevin Eddy

# 366 HELPER Brian Lang

BULK TRUCK # 609/239 DRIVER Kevin Wegmans

BULK TRUCK # \_\_\_\_\_ DRIVER \_\_\_\_\_

COMMON	<u>150</u>	@	<u>17.90</u>	<u>2685.00</u>
POZMIX		@		
GEL	<u>300</u>	@	<u>1.05</u>	<u>315.00</u>
CHLORIDE	<u>423</u>	@	<u>1.10</u>	<u>465.30</u>
ASC		@		
Materials Total @				<u>3465.30</u>
Disc @ 20%				<u>693.06</u>
Service @				
HANDLING	<u>162.50</u>	@	<u>2.48</u>	<u>403.00</u>
MILEAGE	<u>7.41 X 10</u>	@	<u>2.75</u>	<u>203.78</u>

**REMARKS:**

Ric ran 223 ft 8 5/8 casing broke  
circ with Ric mud Pump 5 RBIs H2O  
Mixed 150 SXS Class A 3% CC 2% Gel  
Displaced 13.24 H2O shut in cement  
Disc circ

DEPTH OF JOB	<u>221</u>		
PUMP TRUCK CHARGE			<u>1512.25</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>HVM 10</u>	@	<u>7.70</u> <u>77.00</u>
MANIFOLD		@	
	<u>LVM 10</u>	@	<u>4.40</u> <u>44.00</u>

CHARGE TO: Robert Hembree

STREET \_\_\_\_\_

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

TOTAL 2240.03  
Disc 20% 448.01

THANK YOU!

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**

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

0% TOTAL 0

PRINTED NAME Mike Kern

SIGNATURE Mike Kern

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES 5,705.33

DISCOUNT Disc 1,141.07 IF PAID IN 30 DAYS 2/20/0

\$ 4564.26



Services, Inc.

CHARGE TO: Robert E. Hernandez  
 ADDRESS: [blank]  
 CITY, STATE, ZIP CODE: [blank]

TICKET 26407

PAGE 1 OF 2

SERVICE LOCATIONS

1. Ness City

WELL/PROJECT NO. #2

LEASE Schwartz KFF #1

COUNTY/PARISH DeWitt

STATE KS

CITY Ness City

DATE 8/16/14

OWNER

TICKET TYPE  SERVICE  SALES

CONTRACTOR

RIG NAME/NO. 12

SHIPPED VIA CT

DELIVERED TO location

ORDER NO.

WELL TYPE oil

WELL CATEGORY Development

JOB PURPOSE cement bag string

WELL PERMIT NO.

WELL LOCATION 34-18-24

INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
575					TER 114	70 mi					6.00	600.00
578					Pump Charge	1 ea					1500.00	1500.00
402					Centralizer	1/2 in					6500.00	4550.00
403					Concrt Basket	1/2 in					2.00	2700.00
404					Port Collar	1/2 in					275.00	550.00
405					Packet shoe	1/2 in					1650.00	2700.00
406					Latch down Plug & Collet	1/2 in					285.00	285.00

**LEGAL TERMS:** Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

DATE SIGNED: [Signature]

TIME SIGNED: [Signature]

A.M.  P.M.

**REMIT PAYMENT TO:**

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

**SURVEY**

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?

WE UNDERSTOOD AND MET YOUR NEEDS?

OUR SERVICE WAS PERFORMED WITHOUT DELAY?

WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?

ARE YOU SATISFIED WITH OUR SERVICE?  YES  NO

PAGE TOTAL 1 \$140.00

TOTAL 12,681.00

TAX 6.15%

NESS TAX 609.56

SWIFT OPERATOR [Signature]

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES [Signature]

APPROVAL [Signature]

The customer hereby acknowledges receipt of the materials and services listed on this ticket.

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 8 AUG 13 PAGE NO. 1

CUSTOMER Robert F. Hembree WELL NO. #2 LEASE Schwartzkopf JOB TYPE Construct long string TICKET NO. 26407

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								175 sk SA-2 w/ 3/4" floccle
								4 1/2" x 10.5" casing 105 jts packer shoe
								TD = 4340 shoe jt 42.13'
								Port collar #67 1596' Bskt 267
								Con. Val. 2, 1, 3, 4, 5, 6, B, 66, 68
	0100							on loc TRK 114
	0330							start 4 1/2" x 10.5" casing in well
	0530							circulate well
	0635							Drop magic goldball
	0645	1/2	2			1100		set packer shoe
		4	12			200		Pump mud flush 500 gal
		4	20			200		Pump KCL flush 20 bbl
			7					Plug RH - 30 sk
	0655	4	35			200		Mix SA-2 cement 145 sk @ 15.3 ppg
								Drop latch down plug
								wash out pump & line
	0713	5 3/4				200		Displace plug
		5 3/4	60			650		
	0730	5 3/4	68			1400		Land plug
	0732							Release pressure to truck
	0735							wash truck
								Back up
	0800							job complete
								Yanks Flint, Blake & Gorman



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

TICKET CONTINUATION

TICKET No. 26487

CUSTOMER Robert F Henabee

WELL Schwabekup FA #2

DATE 8/14/14

PAGE 21 OF 22

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY		UNIT PRICE		AMOUNT
		LOC	ACCT	DF			QTY	UM	QTY	UM	
285		1				STANDARD Cement (50-8-2)	175	sk	19.50	2537.50	
284		1				Cal Seal	800	lb	35.00	28000	
283		1				SALT	920	lb	2.00	18000	
285		1				CFR-1	100	lb	4.50	4500	
276		1				Fluore	50	lb	2.50	1250	
281		1				Mudflush	500	gal	1.25	6250	
221		1				KCL Liquid	2	gal	2500	5000	
290		1				D-Air	2	gal	4200	8400	
582						Drivage (min)	1	ea	250	250	
581						SERVICE CHARGE	175		200	350	
MILEAGE CHARGE							TOTAL WEIGHT	LOADED MILES	CUBIC FEET	TON MILES	

CONTINUATION TOTAL 4931.50



TICKET 26414

CHARGE TO: Robert F. Phillips  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE, ZIP CODE: \_\_\_\_\_

PAGE 1 OF 1

1. SERVICE LOCATION: Well City KS WELL/PROJECT NO.: #2 LEASE: Schwartzkopf A COUNTY/PARISH: Now STATE: KS CITY: Well City DATE: 12/15/14 OWNER: \_\_\_\_\_  
 2. TICKET TYPE:  SERVICE  SALES CONTRACTOR: \_\_\_\_\_ RIG NAME/NO.: \_\_\_\_\_ SHIPPED/DELIVERED TO: location ORDER NO.: \_\_\_\_\_  
 3. WELL TYPE: DEV WEID/CATEGORY: PERMANENT JOB PURPOSE: Development cement part collar WELL PERMIT NO.: \_\_\_\_\_ WELL LOCATION: 34-18-24  
 4. REFERRAL LOCATION: \_\_\_\_\_ INVOICE INSTRUCTIONS: \_\_\_\_\_

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	MILEAGE	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF								
575					114	1	mi				60.00	60.00
576D					Pump Charge	1	sk				1500.00	1500.00
330					Spud cement	120	sk				18.50	3145.00
276					Flare	50	lb				2.50	125.00
290					D-ARR	2	gal				42.00	84.00
581					service charge	225	sk				2.00	450.00
582					Drayage (win)	100					2.50	250.00
104					Foot collar opening tool rental	1	ea				250.00	250.00

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MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

DATE SIGNED: [Signature] TIME SIGNED:  A.M.  P.M.

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

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?  YES  NO

WE UNDERSTOOD AND MET YOUR NEEDS?  YES  NO

OUR SERVICE WAS PERFORMED WITHOUT DELAY?  YES  NO

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

ARE YOU SATISFIED WITH OUR SERVICE?  YES  NO

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL: 5864.00

TOTAL: 6085.65

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

SWIFT OPERATOR: RDM APPROVAL: \_\_\_\_\_

Thank You!



JOB LOG

SWIFT Services, Inc.

DATE 7/4 AUG 14 PAGE NO. 1

CUSTOMER Robert F Hembree WELL NO. #2 LEASE Schatzkopf A JOB TYPE cement port collar TICKET NO. 26414

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								295 sk SMD cement w/ 1/4" floccs 2 3/8 x 4 1/2 port collar - 1496
	1330							on loc TRK 112
	1340					1000	1000	test to 1000psi - held open port collar
	1352	3 1/2	3			400		inj rate 3 1/2 bpm @ 400 psi
	1355	3 1/2				200		mix SMD cement @ 11.2 ppg
		3 1/2	19			200		fluid to surface
	1430	3 1/2	93			400		— cement to surface — 170 sk mixed 20 to surface
		3 1/2				400		5 bbl H <sub>2</sub> O flush close port collar
	1440					1000	1000	test to 1000psi - held Run 5 joints
	1450		20					Reverse hole clean - 2 cement plugs -
	1500							wash truck pull tool Pack up job complete Flunk Flint, Blaine, & Preston



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Robert F Hembree  
P. O. Box 542  
Ness City KS 67560-0542  
ATTN: Wyatt Urban

**34 18s 24w Ness**  
**Schwartzkopf A # 2**  
Job Ticket: 56129 **DST#: 1**  
Test Start: 2014.08.07 @ 10:04:00

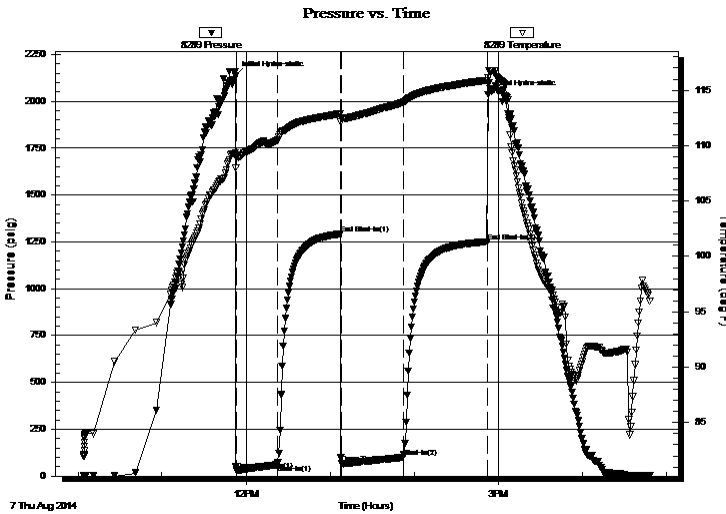
## GENERAL INFORMATION:

Formation: **Miss**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 11:53:00  
Time Test Ended: 16:48:00  
Interval: **4288.00 ft (KB) To 4340.00 ft (KB) (TVD)**  
Total Depth: 4340.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Jim Svaty  
Unit No: 76  
Reference Elevations: 2308.00 ft (KB)  
2301.00 ft (CF)  
KB to GR/CF: 7.00 ft

**Serial #: 8289 Outside**  
Press @ Run Depth: 100.11 psig @ 4300.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2014.08.07 End Date: 2014.08.07 Last Calib.: 2014.08.07  
Start Time: 10:04:02 End Time: 16:48:15 Time On Btm: 2014.08.07 @ 11:52:30  
Time Off Btm: 2014.08.07 @ 14:52:45

**TEST COMMENT:** 30-IFP- Surface Blow Building to 6 3/4in.  
45-ISIP- No Blow  
45-FFP- Surface Blow Building to 9 1/2in.  
60-FSIP- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2135.07	109.36	Initial Hydro-static
1	31.20	108.92	Open To Flow (1)
30	60.54	110.46	Shut-In(1)
75	1292.78	112.88	End Shut-In(1)
76	68.06	112.51	Open To Flow (2)
120	100.11	113.89	Shut-In(2)
180	1251.29	115.90	End Shut-In(2)
181	2035.70	116.16	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
193.00	WMCO 3%w 30%m 67%o	2.71
0.00	117 GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Robert F Hembree  
P. O. Box 542  
Ness City KS 67560-0542  
ATTN: Wyatt Urban

**34 18s 24w Ness**  
**Schwartzkopf A # 2**  
Job Ticket: 56129      **DST#: 1**  
Test Start: 2014.08.07 @ 10:04:00

## Mud and Cushion Information

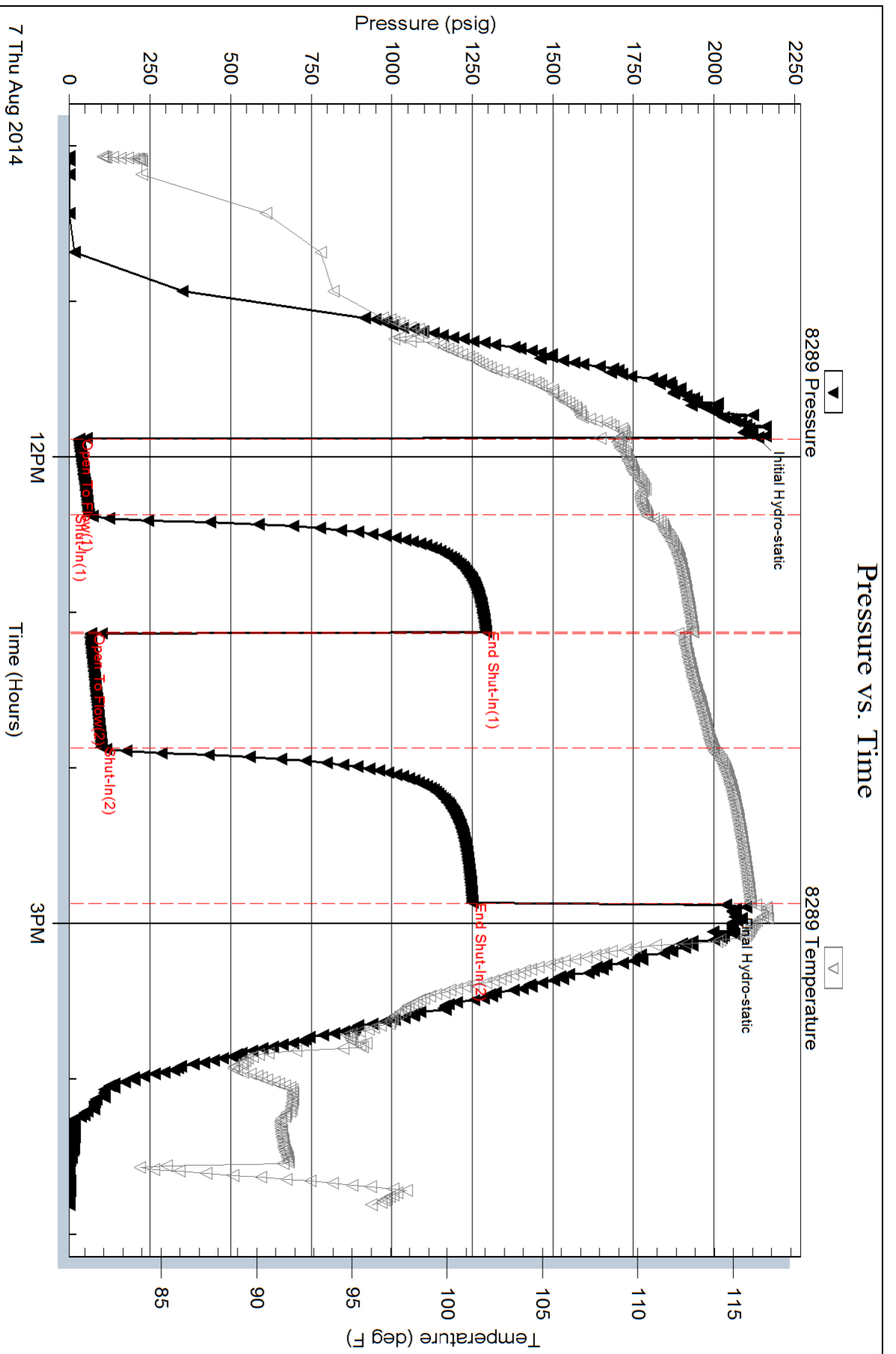
Mud Type: Gel Chem	Cushion Type:	Oil API: 32 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 46.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.97 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 3000.00 ppm		
Filter Cake: 0.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
193.00	WMCO 3%w 30%m 67%o	2.707
0.00	117 GIP	0.000

Total Length: 193.00 ft      Total Volume: 2.707 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:





# Mudgrove

**PETROLEUM CORPORATION**  
Clairlin, Kansas

## NOTES

Company: Robert F. Hembree

Lease: Schwartzkopf A #2

Field: McDonald Northeast

Location: NE-NE-SW-NE

Sec: 34 Twsp: 18S Rge: 24W

County: Ness State: Kansas

KB: 2308' GL: 2301'

API #: 15-135-25798-00-00

Contractor: Pickrell Drilling Co. Rig #10

Spud: 07/30/2014 Comp: 08/07/2014

RTD: 4340'

Mud Up: 3500' Type Mud: Chemical

Samples Saved From: 3600' to RTD

Drilling Time Kept From: 3600' to RTD

Samples Examined From: 3600' to RTD

Geological Supervision from: 3600' to RTD

Geologist on Well: Wyatt Urban

Surface Casing: 8 5/8@ 221'

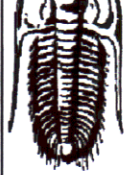
Electronic Surveys: None

## Robert F. Hembree well comparison sheet

DRILLING WELL					COMPARISON WELL				COMPARISON WELL			
Robert F. Hembree- Schwartzkopf A#2 NE-NE-SW-NE 34-18S-24W  2308 KB					Chief Drilling Co.- Spanier #1 SE-NW-NE 34-18S-24W  2312 KB				Robert F. Hembree- #1 Schwartzkopf A E2-SE-SW-NE 34-18S-24W  2336 KB			
					Structural Relationship				Structural Relationship			
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Heebner	3690	-1382			3688	-1376	-6		3713	-1377	-5	
Toronto	3710	-1402							3723	-1387	-15	
Lansing	3737	-1429			3727	-1415	-14		3757	-1421	-8	
BKC	4028	-1720							4047	-1711	-9	
Marmaton	4068	-1760			4061	-1749	-11		4086	-1750	-10	
Pawnee	4155	-1847			4146	-1834	-13		4171	-1835	-12	
Ft. Scott	4224	-1916			4229	-1917	1		4247	-1911	-5	
Cherokee Sh.	4253	-1945										
Miss	4329	-2021			4330	-2018	-3		4346	-2010	-11	
RTD	4340	-2032			4347	-2035	3		4358	-2022	-10	
LTD									4359	-2023	2023	



DRILL STEM TEST REPORT



**TRILLOBITE TESTING, INC**

Robert F Hembree  
P. O. Box 542  
Ness City KS 67560-0542  
ATTN: Wyatt Urban

**34 18s 24w Ness**

**Schwartzkopf A # 2**

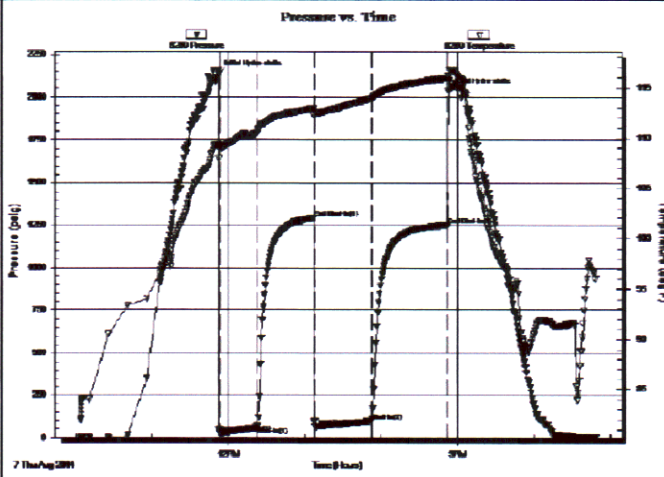
Job Ticket: 56129      **DST#:** 1  
Test Start: 2014.08.07 @ 10:04:00

**GENERAL INFORMATION:**

Formation: **Miss**  
Deviated: **No** Whipstock:                      ft (KB)                      Test Type: Conventional Bottom Hole (Initial)  
Time Tool Opened: 11:53:00                      Tester: Jim Svaty  
Time Test Ended: 16:48:00                      Unit No: 76  
**Interval: 4288.00 ft (KB) To 4340.00 ft (KB) (TVD)**                      Reference Elevations: 2308.00 ft (KB)  
Total Depth: 4340.00 ft (KB) (TVD)                      2301.00 ft (CF)  
Hole Diameter: 7.88 inches -hole Condition: Fair                      KB to GR/CF: 7.00 ft

**Serial #: 8289**      **Outside**  
Press@RunDepth: 100.11 psig @ 4300.00 ft (KB)                      Capacity: 8000.00 psig  
Start Date: 2014.08.07      End Date: 2014.08.07      Last Calib.: 2014.08.07  
Start Time: 10:04:02      End Time: 16:48:15      Time On Btm: 2014.08.07 @ 11:52:30  
Time Off Btm: 2014.08.07 @ 14:52:45

**TEST COMMENT:** 30-IFP- Surface Blow Building to 6 3/4in.  
45-ISIP- No Blow  
45-FFP- Surface Blow Building to 9 1/2in.  
60-FSP- No Blow



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2135.07	109.36	Initial Hydro-static
1	31.20	108.92	Open To Flow (1)
30	60.54	110.46	Shut-in(1)
75	1292.78	112.88	End Shut-in(1)
76	68.06	112.51	Open To Flow (2)
120	100.11	113.89	Shut-in(2)
180	1251.29	115.90	End Shut-in(2)
181	2035.70	116.16	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
193.00	WMCO 3%w 30%m 67%o	2.71
0.00	117 GP	0.00

**Gas Rates**

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

**ROCK TYPES**

- Cht vari
- Lmst fw<7
- shale, gry
- shale, red
- Dolprim
- shale, grn
- Carbon Sh

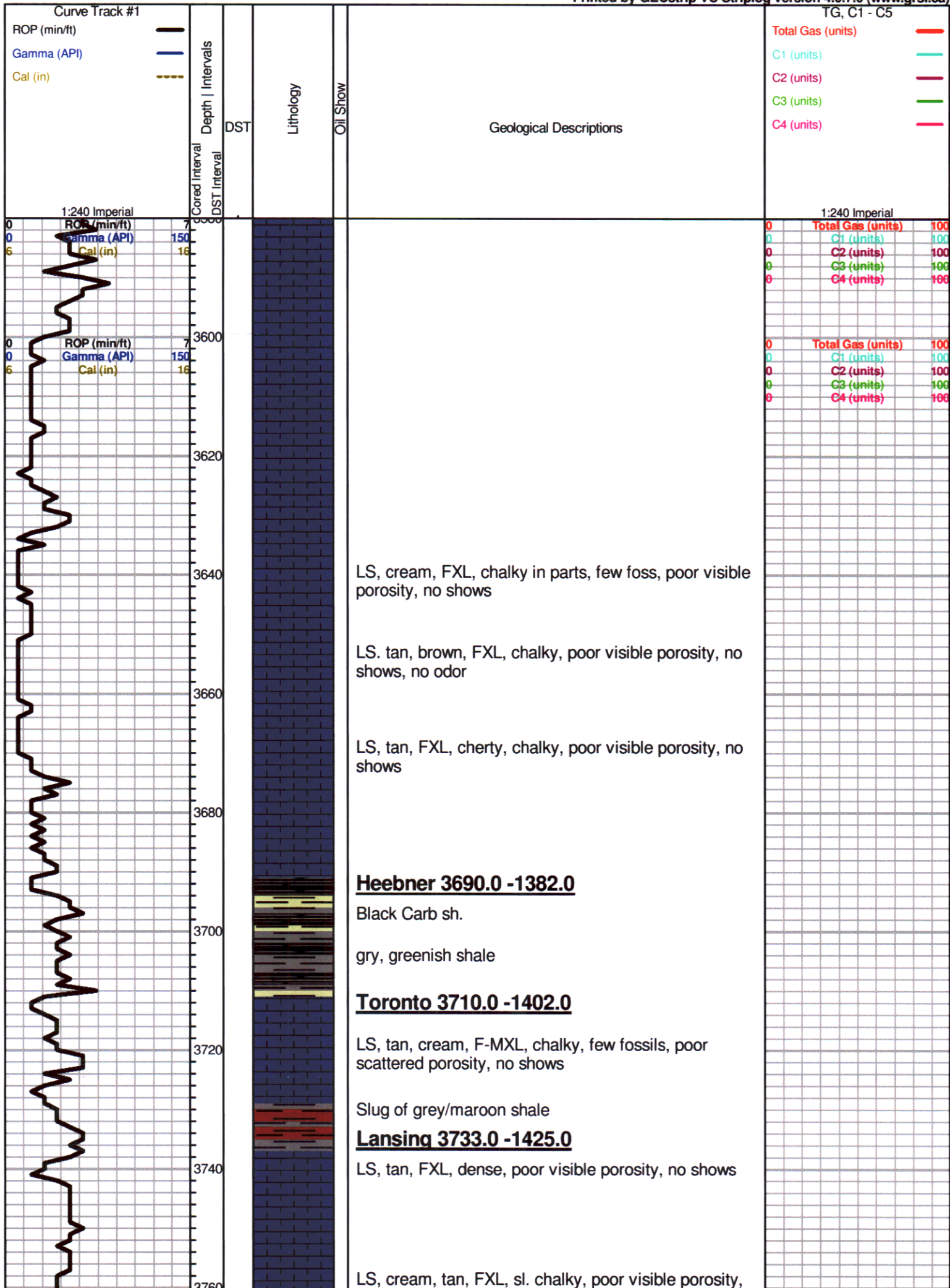
**OTHER SYMBOLS**

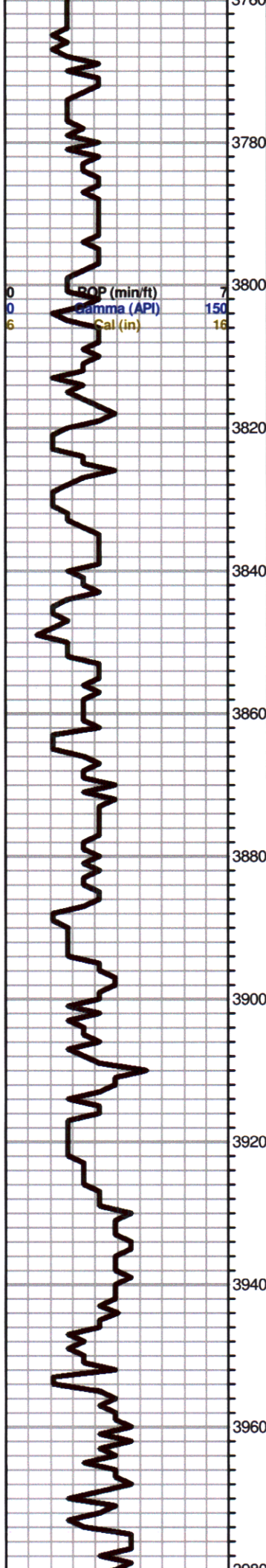
**Oil Show**

- Good Show
- Fair Show
- Poor Show
- Spotted or Trace
- Questionable Stn
- D Dead Oil Stn
- Fluorescence
- \* Gas

**DST**

- DST Int
- DST alt
- Core
- || tail pipe





no shows

LS, cream, FXL, chalky, poor visible porosity, no shows

LS, cream, tan, FXL, few ool, poor scattered porosity, no shows

LS, cream, tan, FXL, few ool, poor scattered porosity, no shows,

LS, cream, tan, FXL, dense, slightly chalky, few foss, poor visible porosity no shows

LS, white, tan, FXL, ool, poorly developed, poor visible porosity, no shows

LS, tan, gry, FXL, dense, slightly chalky, poor visible porosity, no shows, trc. boney, opaque cherts

LS, tan, brown, FXL, dense, poor scattered porosity, no shows

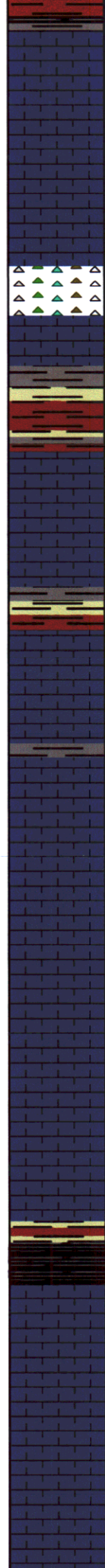
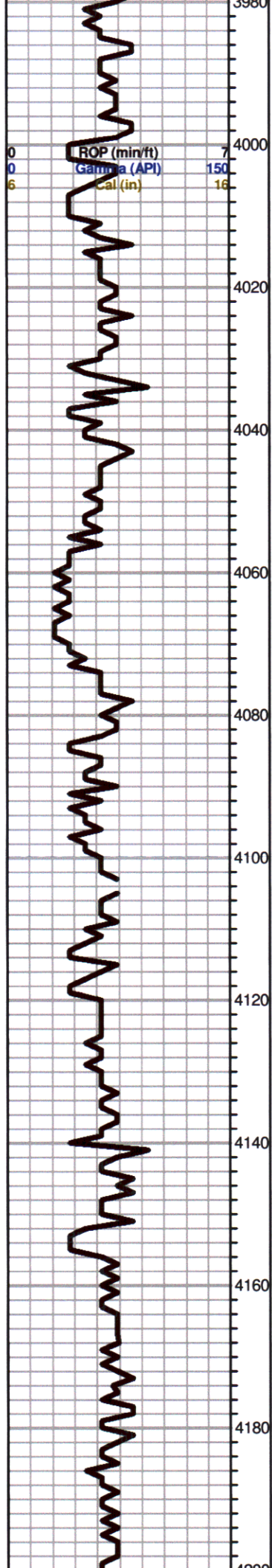
LS, cream tan, FXL, few ool, slightly cherty in parts, poor visible porosity, no shows, no odor

LS, cream, tan, FXL, dense, poor visible porosity, no shows

LS, cream, tan, FXL, chalky, (few foss) poor scattered porosity,

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100





Sh. black, gry, maroon, silty

LS, cream, tan, FXL, dense, poor visible porosity, no shows

LS, A/A, trc. chert, white, gry,

**BKC 4028.0 -1720.0**

Sh. gry, maroon, greenish, silty,

Sh. gry, maroon, greenish,  
Trc. LS, tan, brown, FXL, dense, poor visible porosity,  
no shows

**Marmaton 4068.0 -1760.0**

LS, tan, brown, FXL, dense, cherty, few foss, poor visible porosity, no shows

LS, A/A, trc. gry, silty shale

○ LS, cream, FXL, dense, poor scattered porosity, poor spotty trc. black stain, NSFO, no odor

LS, cream, tan, FXL, dense, slightly chalky in pts, poor visible porosity, no shows

○ LS, cream, brown, FXL, dense, poor visible porosity, Lt. spotty trc. stain, NSFO, no odor

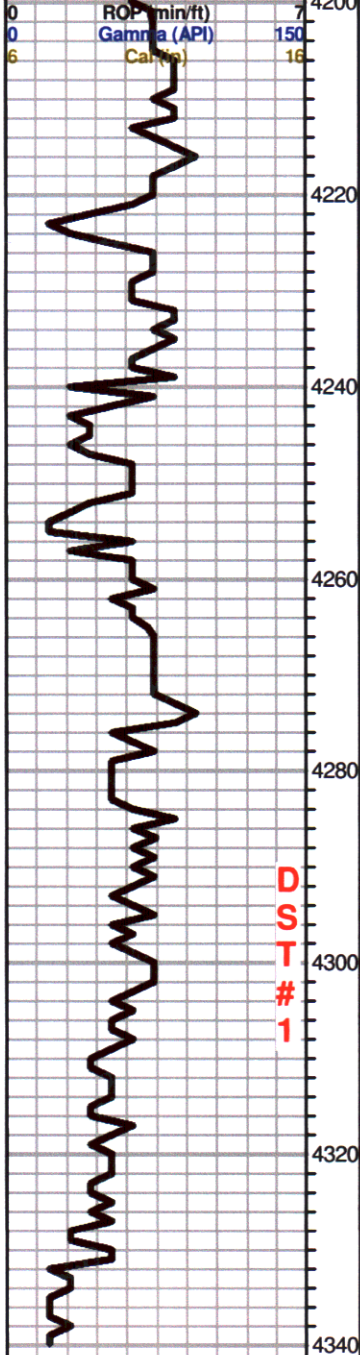
Black carb, greenish, maroon Sh.

**Pawnee 4155.0 -1847.0**

LS, white, cream, FXL, few foss, dense, poor scattered porosity, no shows

LS, tan, gry, FXL, dense, slightly chalky, poor visible porosity, no shows

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100



LS, cream, tan, FXL, dense, few chalky, dense, few chalky, dense, poor visible porosity, few chalky, Lt. black stain, NSFO, no odor

LS, A/A, trc. Sh. gry, maroon, silty, soft

**Ft. Scott 4224.0 -1916.0**

Sh. gry, greenish, black, trc. LS, tan, cream, FXL, few foss, poor visible porosity, no shows

LS, tan, brown, FXL, poor visible porosity, chalky, poor trc. SFO, no odor

**Cherokee Sh 4253.0 -1945.0**

Black carb Sh.

LS, tan, brown, FXL, few foss, poor visible porosity, chalky, trc. sppty SFO, ft. odor??? (caving?)

Trc. black, gry, silty sh.

LS, tan, FXL, dense, poor visible porosity, few cherts, white, opaque, no shows

LS, white, FXL, chalky, poor scattered porosity, no shows, trc. maroon, gry, shale, silty in pts

LS, white, gry, tan, FXL, dense, dol. poor scattered porosity, no shows

**Miss 4329.0 -2021.0**

Dol, tan, brown, FXL, poor to fair scattered vuggy porosity, golden brown stain, Lt. SFO, fair odor

**RTD 4340.0 -2032.0**

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100

**DST #1 4288-4340**

**30-45-45-60**

Blow: 6 3/4"

Recovery:

117' GIP

193' OCM  
(67% O, 3% W, 30% M)

Pressures:

ISIP 1292 psi  
FSIP 1251 psi  
IFP 31-60 psi  
FFP 68-100 psi  
HSH 2135-2035 psi