Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1071495

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 # 5316
Name: Falcon Exploration, Inc.
Address 1: 125 N MARKET STE 1252
Address 2:
City: WICHITA State: KS Zip: 67202 + 1719
Contact Person: CYNDE WOLF
Phone: (316) 262-1378
CONTRACTOR: License # 5142
Name: Sterling Drilling Company
Wellsite Geologist: KEITH REAVIS
Purchaser: NCRA

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 #:

09/23/2011 — Spud Date or Recompletion Date
10/06/2011 — Date Reached TD
11/29/2011 — Completion Date or Recompletion Date

API No. 15 - 15-069-20348-00-00
Spot Description:
N2 - NW - SW - NW Sec. 5 Twp. 28 S. R. 30 ☐ East ☑ West
1460 Feet from ☑ North / ☐ South Line of Section
330 Feet from ☐ East / ☑ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*

Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84

County: Gray
Lease Name: Smith Well #: #1-5 (NW)
Field Name:
Producing Formation: NA
Elevation: Ground: 2819 Kelly Bushing: 2832
Total Vertical Depth: 5550 Plug Back Total Depth: 5322
Amount of Surface Pipe Set and Cemented at: 1882 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: 2700 ppm Fluid volume: 850 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: HAYDEN OPERATING
Lease Name: LIZ SMITH License #: 33562
Quarter NE Sec. 26 Twp. 30 S. R. 34 ☐ East ☑ West
County: HASKELL Permit #: D26802

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: 01/12/2012
☑ **Confidential Release Date:** 01/11/2014
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 01/17/2012

[redacted] 1071495

Operator Name: Falcon Exploration, Inc. Lease Name: Smith Well #: #1-5 (NW)

Sec. 5 Twp. 28 S. R. 30 ☐ East ☑ West County: Gray

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:
Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ 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
SURFACE	12.25	8.625	24	1882	65/35;COMMON	825	GEL, CC
PRODUCTION	7.875	5.5	15.5	5340	AA2	175	FLA,SALT,GILS

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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 *(Amount and Kind of Material Used)*	Depth
4	5098-5104		

TUBING RECORD: Size: 2.375 Set At: 5127 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:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)*

PRODUCTION INTERVAL:
5098-5104

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Falcon Exploration, Inc.
Well Name	Smith #1-5 (NW)
Doc ID	1071495

All Electric Logs Run

MEL
DIL
BHCS
CNL/CDL

Form	ACO1 - Well Completion
Operator	Falcon Exploration, Inc.
Well Name	Smith #1-5 (NW)
Doc ID	1071495

Tops

Name	Top	Datum
LANSING	4236	-1404
PAWNEE	4822	-1990
CHEROKEE	4870	-2038
MORROW SH	5070	-2238
LWR MRW SS	5101	-2269
MISS ST GEN	5179	-2347
MISS ST LOU	5286	-2454
SALEM	5475	-2643

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

January 12, 2012

CYNDE WOLF
Falcon Exploration, Inc.
125 N MARKET STE 1252
WICHITA, KS 67202-1719

Re: ACO1
API 15-069-20348-00-00
Smith #1-5 (NW)
NW/4 Sec.05-28S-30W
Gray County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
CYNDE WOLF

ALLIED CEMENTING CO., LLC. 036541

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: LIBERAL KS

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
9-25-11	5	28S	30W			4:30pm	6:00pm

LEASE	WELL #	LOCATION	COUNTY	STATE
Smith	1-5	Copland K Na Rd 42 E into Rig	GRAY	KS

OLD OR (NEW) (Circle one)

CONTRACTOR STERLING #5
TYPE OF JOB 8 5/8 SURFACE
HOLE SIZE 12 1/4" T.D. 1887
CASING SIZE 8 5/8 DEPTH 1882
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX 1000 PSI MINIMUM 0
MEAS. LINE SHOE JOINT 42.19
CEMENT LEFT IN CSG. 42.19
PERFS.
DISPLACEMENT 117 BBL

OWNER SAME

EQUIPMENT

PUMP TRUCK # 372 CEMENTER BOB
HELPER CESAR
BULK TRUCK # 456 239 DRIVER ALAN
BULK TRUCK # 470 467 DRIVER

REMARKS:

THANK YOU
CIRC CMT TO SURFACE

CHARGE TO: FALCON EXP
STREET
CITY STATE ZIP

CEMENT

AMOUNT ORDERED 675 65/35 6% GEL 3% CC 1/4 # FLOSEAL
150 A 3% CC 2% GEL

COMMON	150 A	@16.25	2437.50
POZMIX		@	
GEL	3 SK GEL	@21.25	63.75
CHLORIDE	CC 2 SK	@58.00	1629.60
ASC		@	
		@	
65/35 LITE		@15.00	10125.00
		@	
		@	
FLOSEAL	1696	@2.70	456.30
		@	
		@	
		@	
HANDLING	863	@2.25	1941.75
MILEAGE	5¢/mi x 11		4746.50
		TOTAL	21400.40

SERVICE

DEPTH OF JOB	1882'		
PUMP TRUCK CHARGE			1925.00
EXTRA FOOTAGE		@	
MILEAGE	100mi	@7.00	700.00
MANIFOLD + HEAD		@	200.00
CT UEH mi		@4.00	400
		@	
		TOTAL	3225.00

PLUG & FLOAT EQUIPMENT

TOP PLUG		@	112.00
3 CENTRALIZERS		@64	192.00
3 BASKETS		@478.00	1434.00
1-GUIDE SHOE		@	394.00
1- AFU		@	382.00
		TOTAL	2514

SALES TAX (If Any)
TOTAL CHARGES 27139.40
DISCOUNT 5427.88 IF PAID IN 30 DAYS
21,711.52

To Allied Cementing Co., 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 CT

SIGNATURE

BASIC ENERGY SERVICES
Liberal, Kansas

Cement Report

Customer: Falcon Exploration	Lease No.	Date: 10-7-11	
Lease: Smith	Well #: 1-5	Service Receipt: 2144	
Casing: 5½ 15#	Depth: 5310	County: Gray	State: KS
Job Type: Z42 Long String	Formation	Legal Description: 5-28-30	

Pipe Data		Perforating Data		Cement Data
Casing size: 5½ 15.5#	Tubing Size	Shots/Ft		Lead: 505k 60-40 POZ Gel & Muse 1.54ft³/sk 13.5#
Depth: 5314	~~Depth~~: 55 18'	From	To	
Volume: 126 bls	Volume	From	To	
Max Press: 2000	Max Press	From	To	Tail in: 175sk AA2 1.51ft³/sk 6.46gal-sk @ 14.8#'s
Well Connection: 5½	Annulus Vol.	From	To	
Plug Depth: 5295	Packer Depth	From	To	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumbed	Rate	Service Log: Yard 830PM
1030					Arrive On Location
1130					Safety Meeting - Rig Up
300					Rig Running Casing
700					Circulate W/ Rig
740					Hook up To BES
750		2000	1.0	1.0	Pressure Test
800		300	5	2.0	Pump Water Spacer
805		250	12	3.5	Pump Super Flush
810		200	5	4.0	Pump Water Spacer
815		100	47	4.5	Pump cmt @ 14.8 #'s
830					Wash pump & Drop Plug
835		600	116	6.7	Displace
855		650	10	2.5	Slow Down-Displace
900		1300	.1	.1	Land Plug - Float Held
					Plug Rat & Mouse Holes
					Centralizers, 2, 3, 8, 22
					39, 53
					Job Complete
					Thanks For Using Basic Energy Services

Service Units	19820	27462	14354-19578			
Driver Names	I. Chavez	Adam	Juan			

Leon
Customer Representative

Tony Barton
Station Manager

Ismael Chavez
Cementer

Taylor Printing, Inc.

DRILL STEM TEST REPORT

Falcon Exploration Inc.

125 N Market street ste. 1252 Wichita Ks. 67202

ATTN: Keith R.

5/28/30

Smith #1-5 nw

Job Ticket: 42291 **DST#: 1**

Test Start: 2011.10.02 @ 10:45:00

GENERAL INFORMATION:

Formation: **Morrow**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:28:00
Time Test Ended: 10:40:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Harley Davidson
Unit No: 33

Interval: 5066.00 ft (KB) To 5140.00 ft (KB) (TVD)
Total Depth: 5140.00 ft (KB) (TVD)
Hole Diameter: 7.78 inches Hole Condition: Fair

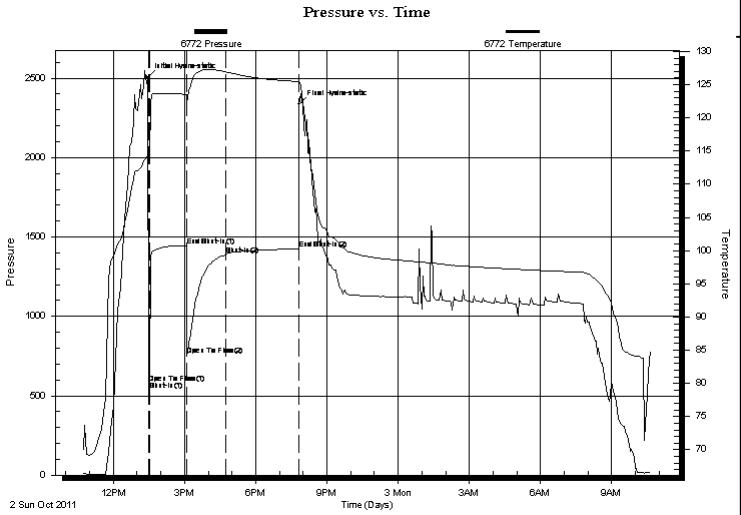
Reference Elevations: 2831.00 ft (KB)
2819.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 6772 **Outside**

Press@RunDepth: 1387.29 psig @ 5069.00 ft (KB)
Start Date: 2011.10.02 End Date: 2011.10.03
Start Time: 10:45:05 End Time: 10:40:44

Capacity: 8000.00 psig
Last Calib.: 2011.10.03
Time On Btm: 2011.10.02 @ 13:26:15
Time Off Btm: 2011.10.02 @ 19:50:15

TEST COMMENT: IF- Strong blow BOB, ASAO.
ISI- No blow back.
FF- Strong blow BOB, ASAO, GTS, 1 hour. TSTM.
FSI- Strong blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2504.81	114.22	Initial Hydro-static
2	577.75	113.97	Open To Flow (1)
7	594.04	114.15	Shut-In(1)
99	1445.22	123.53	End Shut-In(1)
100	755.99	122.24	Open To Flow (2)
199	1387.29	126.91	Shut-In(2)
383	1424.55	125.50	End Shut-In(2)
384	2334.32	125.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1008.00	trace w ater and mud 20%gas80%oil	11.39
1932.00	5%gas5%mud90%w ater trace oil <1%	27.10

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Falcon Exploration Inc.

125 N Market street ste. 1252 Wichita Ks. 67202

ATTN: Keith R.

5/28/30

Smith #1-5 nw

Job Ticket: 42291 **DST#: 1**

Test Start: 2011.10.02 @ 10:45:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	53.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1650.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1008.00	trace w ater and mud 20%gas80%oil	11.389
1932.00	5%gas5%mud90%w ater trace oil <1%	27.101

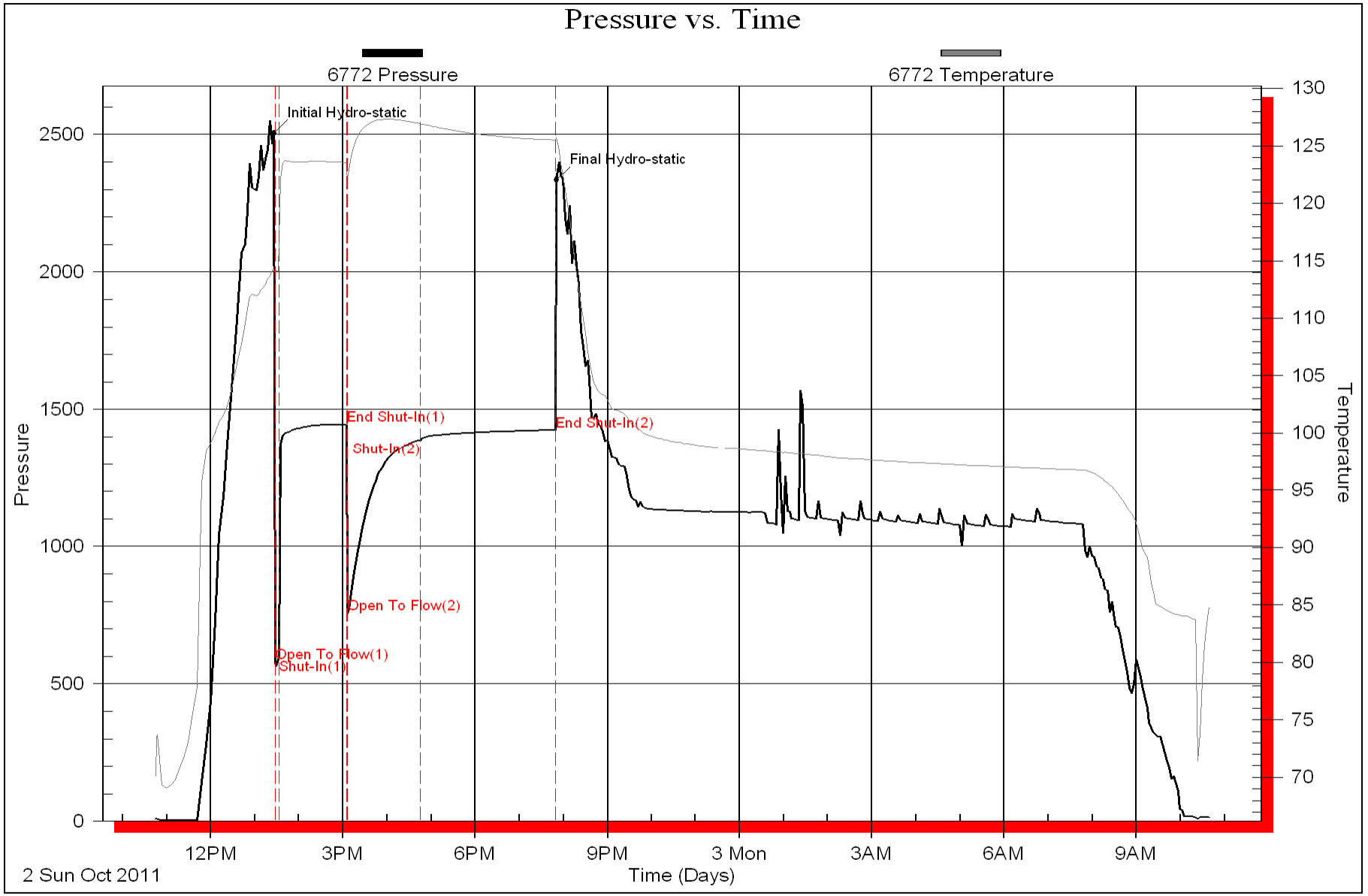
Total Length: 2940.00 ft Total Volume: 38.490 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 6772 **Outside** Falcon Exploration Inc. Smith #1-5 nw DST Test Number: 1



Trilobite Testing, Inc Ref. No: 42291 Printed: 2011.10.04 @ 13:21:25

DRILL STEM TEST REPORT

Falcon Exploration Inc.

125 N Market street ste. 1252 Wichita Ks. 67202

ATTN: Keith R.

5/28/30

Smith #1-5 nw

Job Ticket: 42292 **DST#: 2**

Test Start: 2011.10.03 @ 21:45:00

GENERAL INFORMATION:

Formation: **Morrow**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:13:50
Time Test Ended: 12:27:10

Test Type: Conventional Straddle (Initial)
Tester: Harley Davidson
Unit No: 33

Interval: 5064.00 ft (KB) To 5112.00 ft (KB) (TVD)
Total Depth: 5170.00 ft (KB) (TVD)
Hole Diameter: 7.78 inches Hole Condition: Fair

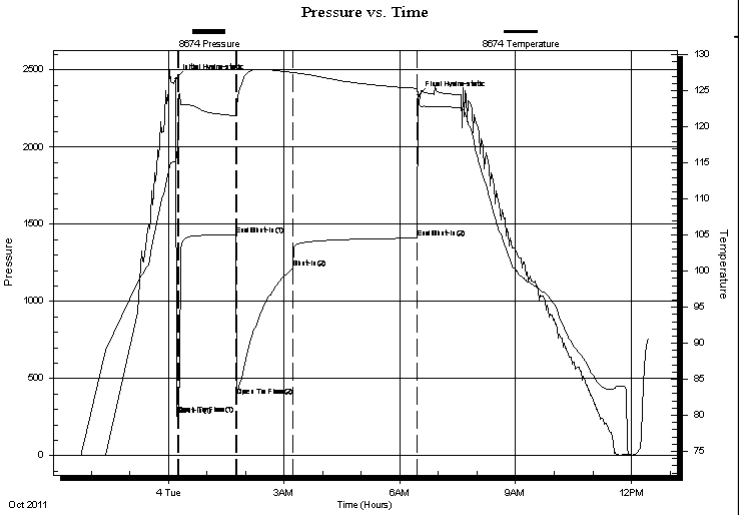
Reference Elevations: 2831.00 ft (KB)
2819.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8674

Press@RunDepth: 1216.97 psig @ ft (KB)
Start Date: 2011.10.03 End Date: 2011.10.04
Start Time: 21:45:05 End Time: 12:27:10

Capacity: 8000.00 psig
Last Calib.: 2011.10.04
Time On Btm: 2011.10.04 @ 00:11:50
Time Off Btm: 2011.10.04 @ 06:28:30

TEST COMMENT: IF- Strong blow BOB 1min.
ISI- No blow back.
FF- Strong blow BOB 1min, GTS 1hour 15min, TSTM.
FSI- Strong blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2442.41	115.32	Initial Hydro-static
2	271.21	117.19	Open To Flow (1)
5	322.42	124.38	Shut-In(1)
94	1434.41	121.53	End Shut-In(1)
95	389.00	122.56	Open To Flow (2)
182	1216.97	127.55	Shut-In(2)
375	1410.40	125.35	End Shut-In(2)
377	2335.79	124.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
992.00	80%oil20%gastrace of mud	11.16
558.00	20%gas 80%oil trace of mud and w ater	7.83
186.00	20%mud30%w ater50%oil	2.61
124.00	5%oil5%gas10%mud80%w ater	1.74
744.00	100%w ater trace of gas and oil	10.44

Gas Rates

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

DRILL STEM TEST REPORT

Falcon Exploration Inc.

125 N Market street ste. 1252 Wichita Ks. 67202

ATTN: Keith R.

5/28/30

Smith #1-5 nw

Job Ticket: 42292 **DST#: 2**

Test Start: 2011.10.03 @ 21:45:00

GENERAL INFORMATION:

Formation: **Morrow**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:13:50
Time Test Ended: 12:27:10

Test Type: Conventional Straddle (Initial)
Tester: Harley Davidson
Unit No: 33

Interval: 5064.00 ft (KB) To 5112.00 ft (KB) (TVD)
Total Depth: 5170.00 ft (KB) (TVD)
Hole Diameter: 7.78 inches Hole Condition: Fair

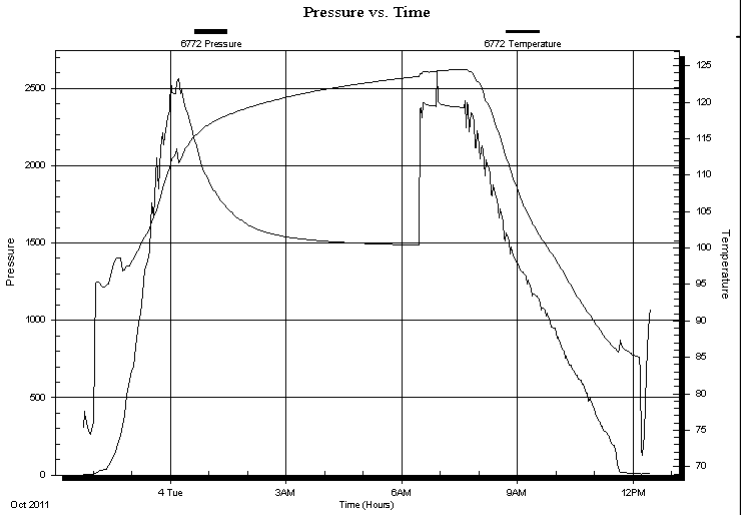
Reference Elevations: 2831.00 ft (KB)
2819.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 6772

Press@RunDepth: psig @ ft (KB)
Start Date: 2011.10.03 End Date: 2011.10.04
Start Time: 21:45:05 End Time: 12:27:45

Capacity: 8000.00 psig
Last Calib.: 2011.10.04
Time On Btm:
Time Off Btm:

TEST COMMENT: IF- Strong blow BOB 1min.
ISI- No blow back.
FF- Strong blow BOB 1min, GTS 1hour 15min, TSTM.
FSI- Strong blow .



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
992.00	80%oil20%gastrace of mud	11.16
558.00	20%gas 80%oil trace of mud and w ater	7.83
186.00	20%mud30%w ater50%oil	2.61
124.00	5%oil5%gas10%mud80%w ater	1.74
744.00	100%w ater trace of gas and oil	10.44

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Falcon Exploration Inc.

125 N Market street ste. 1252 Wichita Ks. 67202

ATTN: Keith R.

5/28/30

Smith #1-5 nw

Job Ticket: 42292 **DST#: 2**

Test Start: 2011.10.03 @ 21:45:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	76.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4200.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
992.00	80%oil20%gastrace of mud	11.164
558.00	20%gas 80%oil trace of mud and w ater	7.827
186.00	20%mud30%w ater50%oil	2.609
124.00	5%oil5%gas10%mud80%w ater	1.739
744.00	100%w ater trace of gas and oil	10.436

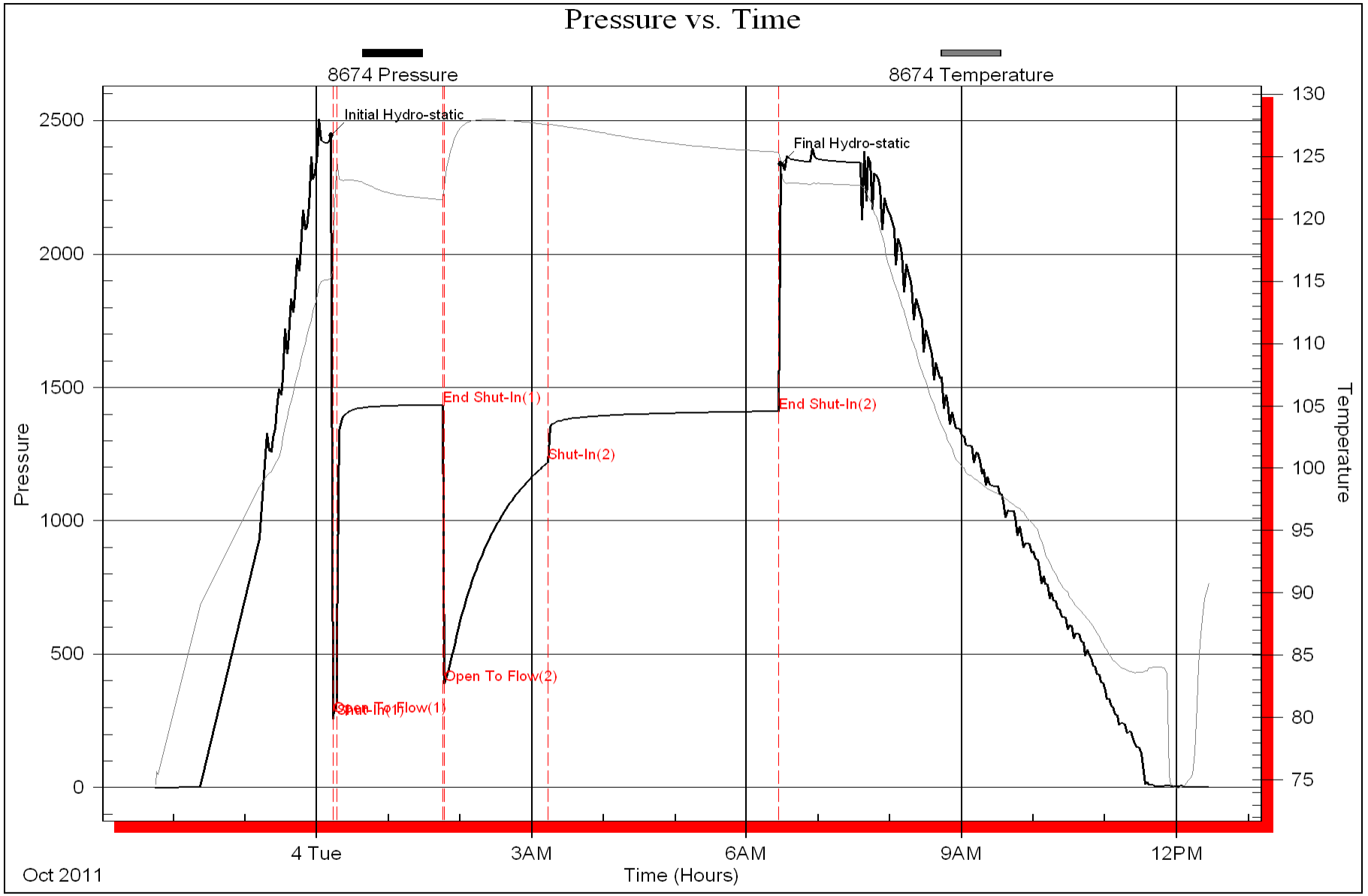
Total Length: 2604.00 ft Total Volume: 33.775 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

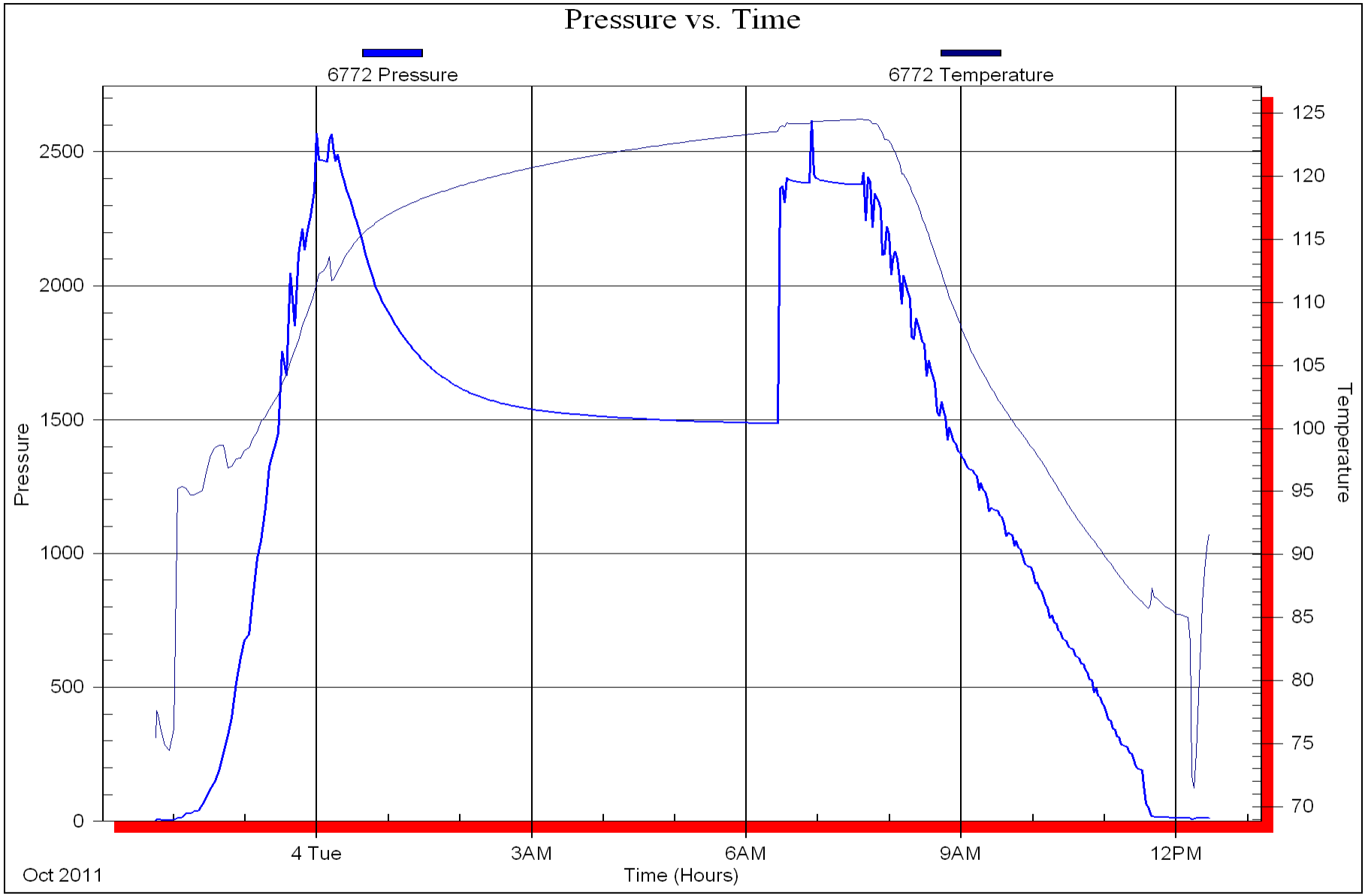
Recovery Comments: Oil gravity 29 Water chl. 120000.

Serial #: 8674 | Falcon Exploration Inc. | Smith #1-5 nw | DST Test Number: 2



Trilobite Testing, Inc | Ref. No: 42292 | Printed: 2011.10.04 @ 13:23:18

Serial #: 6772 | Falcon Exploration Inc. | Smith #1-5 nw | DST Test Number: 2



Trilobite Testing, Inc | Ref. No: 42292 | Printed: 2011.10.04 @ 13:23:18

OPERATOR

Company:	Falcon Exploration, Inc.		
Address:	125 N. Market Suite 1252 Wichita, KS 67202		
Contact Geologist:	Brian Fisher		
Contact Phone Nbr:	316-262-1378		
Well Name:	Smith #1-5 (NW)		
Location:	Sec 5 - T28S - R30W	API:	15-069-20348-0000
Pool:		Field:	Wildcat
State:	Kansas	Country:	USA

Scale 1:240 Imperial

Well Name:	Smith #1-5 (NW)		
Surface Location:	Sec 5 - T28S - R30W		
Bottom Location:			
API:	15-069-20348-0000		
License Number:	5316		
Spud Date:	9/23/2011	Time:	18:30
Region:	Gray County		
Drilling Completed:	10/6/2011	Time:	14:30
Surface Coordinates:	1460' FNL & 330' FWL		
Bottom Hole Coordinates:			
Ground Elevation:	2819.00ft		
K.B. Elevation:	2832.00ft		
Logged Interval:	3400.00ft	To:	5550.00ft
Total Depth:	5550.00ft		
Formation:	Mississippian		
Drilling Fluid Type:	Chemical/Fresh Water Gel		

SURFACE CO-ORDINATES

Well Type:	Vertical		
Longitude:		Latitude:	
N/S Co-ord:	1460' FNL		
E/W Co-ord:	330' FWL		

LOGGED BY

Keith Reavis
Consulting Geologist

Company:	Keith Reavis, Inc.		
Address:	3420 22nd Street Great Bend, KS 67530		
Phone Nbr:	620-617-4091		
Logged By:	KLG #136	Name:	Keith Reavis and Dan Fredlund

CONTRACTOR

Contractor:	Sterling Drilling Company		
Rig #:	5		
Rig Type:	mud rotary		
Spud Date:	9/23/2011	Time:	18:30
TD Date:	10/6/2011	Time:	14:30
Rig Release:		Time:	

ELEVATIONS

K.B. Elevation:	2832.00ft	Ground Elevation:	2819.00ft
K.B. to Ground:	13.00ft		

NOTES

A Sterling Tooke Daq Gas Detector was operational from surface casing down. The gas curve data was imported from said detector into this mudlog.

It was determined from electrical log analysis and the results of drill stem test #2, that 5 1/2" production casing be set and cemented and that the Smith #1-5 be further tested through perforations in the Morrow sands.

The samples were saved from this well and will be available for review at the Kansas Geological Survey Well Sample Library located in Wichita, KS.

Respectfully submitted,
Keith Reavis and Dan Fredlund

Falcon Exploration, Inc.

daily drilling report

DATE	7:00 AM DEPTH	REMARKS
09/28/2011	3536	Geologist Keith Reavis on location @ 0420 hrs, 3443 ft., drilling ahead Foraker, Stotler, Tarkio
09/29/2011	4167	Geologist Dan Fredlund on location @ 13:30 hrs, @ 3550 ft. Drilling ahead at 4176 for Toronto, Lansing, Swope
09/30/2011	4626	Drilling ahead at 4626 Hertha, Marmaton, Pawnee, Cherokee.
10/01/2011	4968	Drilling for the Morrow
10/02/2011	5140	show in Morrow warrants test, conducting DST #2, geologist Keith Reavis on location 1900 hrs to relieve Dan Fredlund
10/03/2011	5140	wait on truck, try to reverse oil out, circ shear pin did not break, wait till daylight, dump load, TIH, ctch, drill into Miss, TOH to run straddle test on middle and upper Morrow sands
10/04/2011	5170	conducting DST #2, successful test, back in w/bit, ctch, resume drilling Miss/St. Gen
10/05/2011	5324	Drilling ahead, St. Gen, St. Lo
10/06/2011	5550	Drilling ahead Salem, TD @ 5550 ft., conduct logging operations and complete, geologist off location @ 1530 hrs

Falcon Exploration, Inc.

well comparison sheet

	DRILLING WELL Smith #1-5 1460' FNL & 330' FWL Sec 5-T28S-R30W				COMPARISON WELL Josserand #1-5 380' FSL & 850' FEL Sec 5-T28S-R30W				COMPARISON WELL Lanterman #1-8 2030' FNL & 370' FEL Sec 8-T28S-R30W			
	2832 KB				2823 KB		Structural Relationship		2821 KB		Structural Relationship	
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Stotler	3530	-698	3530	-698	3542	-719	21	21	3532	-711	13	13
Tarkio	3604	-772	3602	-770	3616	-793	21	23	3603	-782	10	12
Bern	3700	-868	3700	-868	3712	-889	21	21	3700	-879	11	11
Topeka	3803	-971	3800	-968	3812	-989	18	21	3804	-983	12	15
Heebner	4142	-1310	4140	-1308	4151	-1328	18	20	4146	-1325	15	17
Lansing	4242	-1410	4236	-1404	4250	-1427	17	23	4249	-1428	18	24
Stark	4591	-1759	4590	-1758	4614	-1791	32	33	4606	-1785	26	27
Marmaton	4740	-1908	4738	-1906	4746	-1923	15	17	4753	-1932	24	26
Pawnee	4818	-1986	4822	-1990	4843	-2020	34	30	4836	-2015	29	25
Cherokee	4871	-2039	4870	-2038	4889	-2066	27	28	4881	-2060	21	22
Morrow	5071	-2239	5070	-2238	5098	-2275	36	37	5089	-2268	29	30
Morrow Sand	5076	-2244	5078	-2246	5103	-2280	36	34	5120	-2299	55	53
Mississippian	5146	-2314	5154	-2322	5139	-2316	2	-6	5146	-2325	11	3
Salem	5475	-2643	5474	-2642	5473	-2650	7	8	np			
Total Depth	5550	-2718	5552	-2720	5547	-2724	6	4	5406	-2585	-133	-135

Drill Stem Test #1

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Falcon Exploration Inc.

125 N Market street ste. 1252 Wichita Ks. 67202

ATTN: Keith R.

5/28/30

Smith #1-5 nw

Job Ticket: 42291 **DST#: 1**

Test Start: 2011.10.02 @ 10:45:00

GENERAL INFORMATION:

Formation: **Morrow**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:28:00
Time Test Ended: 10:40:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Harley Davidson
Unit No: 33

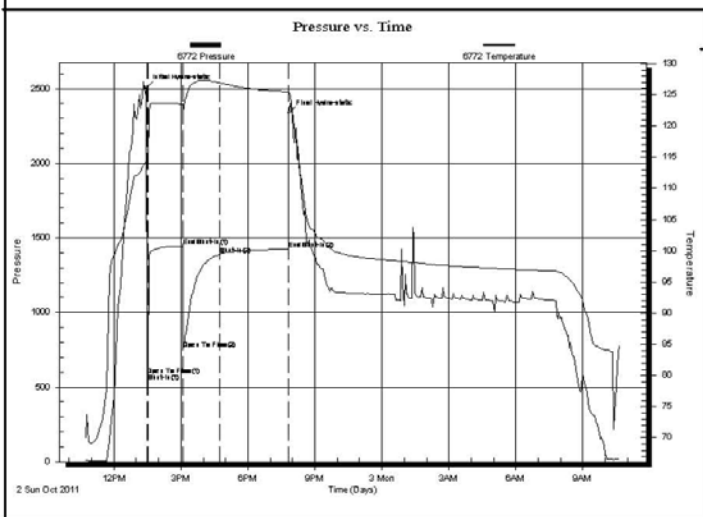
Interval: 5066.00 ft (KB) To 5140.00 ft (KB) (TVD)
Total Depth: 5140.00 ft (KB) (TVD)
Hole Diameter: 7.78 inches Hole Condition: Fair

Reference Elevations: 2831.00 ft (KB)
2819.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 6772 **Outside**
Press@RunDepth: 1387.29 psig @ 5069.00 ft (KB)
Start Date: 2011.10.02 End Date: 2011.10.03
Start Time: 10:45:05 End Time: 10:40:44

Capacity: 8000.00 psig
Last Calib.: 2011.10.03
Time On Btm: 2011.10.02 @ 13:26:15
Time Off Btm: 2011.10.02 @ 19:50:15

TEST COMMENT: IF- Strong blow BOB, ASAO.
ISI- No blow back.
FF- Strong blow BOB, ASAO, GTS, 1 hour. TSTM.
FSI- Strong blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2504.81	114.22	Initial Hydro-static
2	577.75	113.97	Open To Flow (1)
7	594.04	114.15	Shut-In(1)
99	1445.22	123.53	End Shut-In(1)
100	755.99	122.24	Open To Flow (2)
199	1387.29	126.91	Shut-In(2)
383	1424.55	125.50	End Shut-In(2)
384	2334.32	125.66	Final Hydro-static

Recovery

Gas Rates

Recovery

Length (ft)	Description	Volume (bbl)
1008.00	trace water and mud 20%gas80%oil	11.39
1932.00	5%gas5%mud90%water trace oil <1%	27.10

Gas Rates

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

Drill Stem Test #2

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Falcon Exploration Inc.

125 N Market street ste. 1252 Wichita Ks. 67202

ATTN: Keith R.

5/28/30

Smith #1-5 nw

Job Ticket: 42292 **DST#: 2**

Test Start: 2011.10.03 @ 21:45:00

GENERAL INFORMATION:

Formation: **Morrow**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:13:50
Time Test Ended: 12:27:10

Test Type: Conventional Straddle (Initial)
Tester: Harley Davidson
Unit No: 33

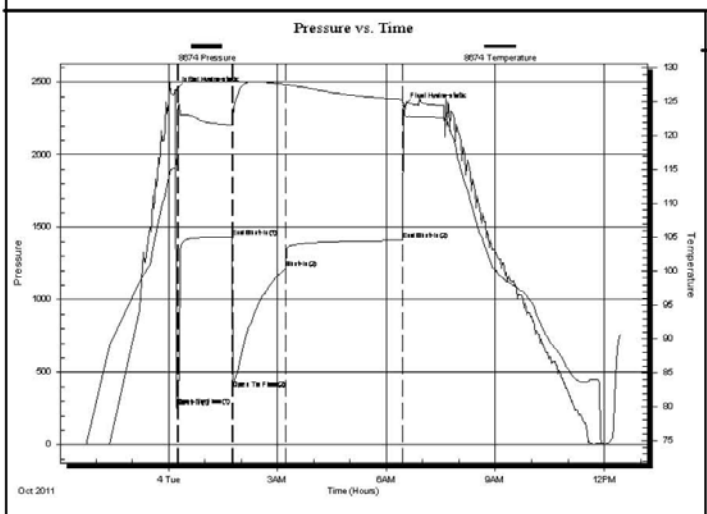
Interval: 5064.00 ft (KB) To 5112.00 ft (KB) (TVD)
Total Depth: 5170.00 ft (KB) (TVD)
Hole Diameter: 7.78 inches Hole Condition: Fair

Reference Elevations: 2831.00 ft (KB)
2819.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8674
Press@RunDepth: 1216.97 psig @ ft (KB)
Start Date: 2011.10.03 End Date: 2011.10.04
Start Time: 21:45:05 End Time: 12:27:10

Capacity: 8000.00 psig
Last Calib.: 2011.10.04
Time On Btm: 2011.10.04 @ 00:11:50
Time Off Btm: 2011.10.04 @ 06:28:30

TEST COMMENT: IF- Strong blow BOB 1min.
ISI- No blow back.
FF- Strong blow BOB 1min, GTS 1hour 15min, TSTM.
FSI- Strong blow.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2442.41	115.32	Initial Hydro-static
2	271.21	117.19	Open To Flow (1)
5	322.42	124.38	Shut-In(1)
94	1434.41	121.53	End Shut-In(1)
95	389.00	122.56	Open To Flow (2)
182	1216.97	127.55	Shut-In(2)
375	1410.40	125.35	End Shut-In(2)
377	2335.79	124.61	Final Hydro-static

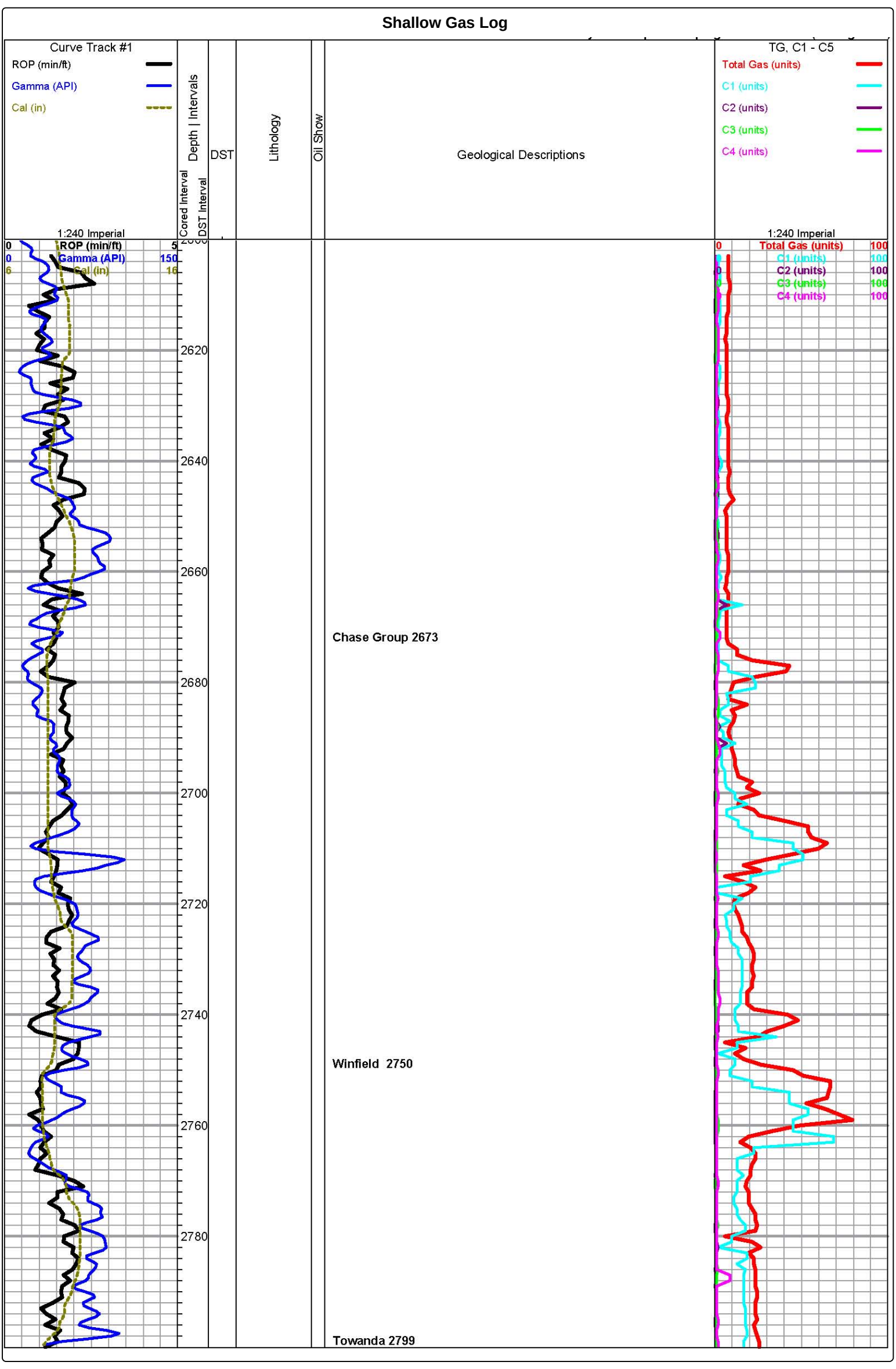
Recovery

Length (ft)	Description	Volume (bbl)
992.00	80%oil20%gastrace of mud	11.16
558.00	20%gas 80%oil trace of mud and water	7.83
186.00	20%mud30%water50%oil	2.61
124.00	5%oil5%gas10%mud80%water	1.74
744.00	100%water trace of gas and oil	10.44

Gas Rates

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

Shallow Gas Log



ROCK TYPES

Dolprim · Lmst fw7> · shale, gry · shale, red · Sltst
Lmst fw<7 · shale, grn · Carbon Sh · Ss

ACCESSORIES

MINERAL
- Chert, dark
- Dolomitic
- Glauconite
- Mineral Crystals
- Pyrite
- Sandy
- Chert White

FOSSIL
- Brachiopod
- Bryozoa
- Foraminifera
- Fossils < 20%
- Oolite
- Pellets
- Oomoldic

STRINGER
- Shale
- green shale
- red shale

TEXTURE
- C Chalky
- CX Cryptocrystalline
- L Lithogr

OTHER SYMBOLS

MISC
- Daily Report
- Digital Photo
- Document
- Folder
- Link
- Vertical Log File
- Horizontal Log File

DST
- DST Int
- DST alt
- Core
- tailpipe

Core Log File

Drill Cuttings Rpt

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)

Curve Track #1

ROP (min/ft)

Gamma (API)

Cal (in)

1:240 Imperial

0 ROP (min/ft) 5

0 Gamma (API) 150

6 Cal (in) 16

Depth | Intervals

Cored Interval

DST Interval

DST

Lithology

Oil Show

Geological Descriptions

TG, C1 - C5

Total Gas (units)

C1 (units)

C2 (units)

C3 (units)

C4 (units)

1:240 Imperial

0 Total Gas (units) 100

0 C1 (units) 100

0 C2 (units) 100

0 C3 (units) 100

0 C4 (units) 100

3400

limestone, gray, mottled, pelletal to very fossiliferous, grainy, chalky, with limestone, gray, gray/green, cryptocrystalline, dense, lithographic, no shows

3420

limestone, cream, oolitic to oomoldic, some bioclastic, scattered fair oomold porosity, no shows

mud displacement depth 3200'

KB Elevation 2832'

3440

limestone, cream, cryptocrystalline, slighty fossiliferous, very chalky, with limestone, gray to cream, cryptocrystalline, fossiliferous, grainy, some scattered vugs, no shows, abundant chalk in samples

3460

as above

limestone, gray to gray/green, cryptocrystalline, fossiliferous, some large clasts, poor visible porosity, dense, no shows

3480

3500

soft gray and red shales

3520

Drilling ahead @ 3525 at 700 hrs 9/28/2011

Stotler 3530 (-698)

limestone, tan to light brown, some gray, cryptocrystalline, oolitic, dense, no porosity, with some tan lithographic, limestone, gray to pale green, microcrystalline, dense, lithographic, some dense tan grainy bioclastic, no shows, poor fluoresence

3540

Shale medium to dark gray tr grn

Dan Fredlund Geologist starting @ 3550'

Limestone, tan-light brown, fossiliferous, oolitic dense w/ tr spar calcite, tr chalky Packstone no Vis Por, No Show.

3560

Limestone cream -tan dense fossiliferous Re-xl Packstone

3580

Shale dark gray; Limestone med gray f-xln Mudstone & Limestone med gry med xln fossiliiferous w/ spar calcite Wackstone

3600

Tarkio 3604 (-772)

Limestone, tan f-m xln fossiliferous (brac) Re-xln Packstone

3620

Limestone AA tr chky

3640

Limestone, tan-brn f-c xln, fossiliferous (brac) dense tr chky arg Re-xln Wackstone

3660

Mud-Co Mud Ck
@ 3663'
1150 hrs 9/28/11
vis 46 wt 8.95
pv 14 yp14
wl 9.2 cake 1/32
pH 9.5
chl 2700
cal 20
sol 4.8
lcm 2#
dmc $2096.75
cmc $13506.60

Limestone tan f xln dns fos (bry) Packstone

3680

Shale gn-gy. Limestone grn-gry f-xln Re-xln Mudstone

3700

Bern 3700 (-868)

Limestone grn-gry xln Re-xln Mudstone tr pyr

3720

Limestone AA

3740

Limestone, tan, f-m xln dense, fossiliferous Re-xln Packstone No vis por NS w/ tan bladed and blocky chert

3760

chert

3780

Limestone tan-lt brn fossiliferous Re-xln Wackstone-Packstone tr gry-wh fossiliferous chert

3800

Topeka 3803 (-971)

Limestone AA

3820

Limestone, tan fxln, fossiliferous Re-xln Packstone, tr tan-wh chert

3840

Limestone AA chalky & cherty; tr drk gry to black shale

3860

Rimestone, tan f-xln fossiliferous (fus) chalky w/ gry-wh fossiliferous chert, chalky Re-xln Packstone

3880

Limestone, tan f-xln fossiliferous (fuss-ool) Re-xln argillaceous Packstone

3900

3920

Limestone tan f-xln fossiliferous Re-xln Packstone

3940

Limestone, AA w/ tan-wh to gry-wh chert

Limestone gry-wh f-xln argillaceous Re-xln Wackstone/Packstone

Lecompton 3972 (-1140)

Limestone gry-wh f-xln fossiliferous Re-xln Packstone, tr med-drk gry shale

Limestone tan f-xln fossiliferous tr spar Re-xln Packstone

Limestone tan-brn f-xln mottled fossiliferous (fus) argillaceous tr chert Re-xln Packstone

Limestone AA very chalky

llmestone tan f-mxln fossiliferous spar calcite chalky cherty Re-xln Packstone

Limestone AA

Limestone m-gry f-xln drk cherty Re-xln Mudstone

Limestone lt gry f-xln slightly fossiliferous tr fossiliferous chert spar calcite Re-xln Mudstone/Packstone

Heebner 4142 (-1310)

Shale gry & blk; Limestone tan -lt brn f-cxln fossiliferous (crin fus) agrillaceous Re-xln Mudstone/Packstone

Toronto 4160 (-1328)

Limestone tan f-xln fossiliferous Re-xln Packstone no vis porosity no show

Limestone AA w/ pyr Shale grn, gry & blk

Limestone crm-lite gry-gry f-m xln fossiliferous tr gry chert Re-xln Mudstone/Wackestone/Packstone; Shale grn-lite -m gry w/ tr pyr; and tr Sltstone gry vf grained micacious

Shale med grn & gray

Lansing 4242 (-1410)

Limestone crm-tan f-m xln fossiliferous w/ clr-wh-lt gray mottled to fossiliferous chert Re-xln Packstone No vis por NS; Shale m-dk gray

Limestone AA

Limestone crm-lt gry, crypto-xln Re-xln Mudstone; Shale lt-med gry

Shale lit-med gry, Limestone crm-lt gry fxln fos Re-xln Packstone w/ drk colored chert (fossiliferous)

Shale very drk gry; Limestone tan f-m xln fossiliferous w/ spar calcite dense Rxln-Packstone, Limestone drk brn f-m xln argillaceous Wackstone

Limestone crm-tan fxln fossiliferous dense tr, spar calcite, agriliiaceous w/ drk gry fossiliferous and blk chert tr chalky Re-xln Packstone

Limestone gry-wh fxln fossiliferous tr pyr Re-xln Packstone. Limestone med-dark gry f-m xln fossiliferous v argillaceous Re-xln Wackstone. Shale med-drk gry/blk

Limestone cream-tan fxln chalky Re-xln Packstone

Limestonem drk brn mxln ool w/ ool moldic por Re-xln Packstone, high yellow fluorescence neg cut on own and after crushing no odor

Limestone AA

Limestone tan fxln fossiliferous (fus) Packstone tr spar calcite, pyr and gry wh molted chert

Ls AA ; Shale gn gry & blk w/ pyr

Limestone crm-lt brn f-mxln mottled mottled chalky Packstone w/ tr pyr & m-drk gry fossiliferous chert

Sh gn-gry, Limestone crm-tan fxln fossiliferous Re-xln Packstone

Drilling ahead @ 4160 feet at 700 hrs 9/29/2011

Mud-Co Mud Ck @ 4266 11:45 hrs 9/29/11 vis 48 wt.9.15 pv 16 yp 16 wl 9.2' cake 1/32 pH 10.5 chl 1800 cal 20 sol 5.6 lcm2# dmc $2374.15 cmc $15880.75

0 ROP (min/ft) 5
0 Gamma (API) 150
6 Cal (in) 16

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

Scale Change
SC
0 ROP (min/ft) 10
0 Gamma (API) 150
6 Cal (in) 16

Limestone AA

Limestone gry-lt brn-brn f-mxln mottled fossiliferous Re-xln Packstone

Gas Detector test and zero @ 4572'

Stark Shale 4591 (-1759)

Shale Gas Kick

Limestone gry-wh & tan f-mxln fossiliferous dense Re-xln Mudstone/Packstone tr gry-wh chert

Hushpuckney Shale 4634 (-1802)

Limestone brn f-m xln fossilliferous dense Re-xln Packstone tr pyr spar calcite. Shale blk

Limestone med brn f-m xln ool dense Re-xln Packstone, tr spar calcite oomoldic porosity mineral fluoresence No show oil

Limestone AA, Limestone med brn mxlnfossiliferous (ool fus) tr spar calcite Re-xln Packstone oomoldic por mineral fluoresence No show oil

Limestone blk crypto xln dense Re-xln Mudstone

Limestone AA Shale dk gry & blk tr pyr

Marmaton 4740 (-1908)

Limestone tan crypto xln -c xln dns fosilliferous (fus) tr spar Re-xln Mudstone/Packstone

Limestone tan f-m xln fos (brac) abd spar calcite Re-xln Packstone tan fossiliferous chert. Shale med gry & blk. Limestone crypto xln dense Re-xln Mudstone

Limestones AA

Limestone AA tr Shale grn gry

Pawnee 4818 (-1986)

Shale Gas Kick

Limestone crm-tan f-mxln fos tr spar calcite Re-xln Packstone & Limestone drk brn f-mxln dense fossiliferous Re-xln Wackstone Shale blk & grn gry

Skale Gas Kick

Limestone AA chalky & chert gry-wh fossiliferous

Limestone crm-tan crypto-f-mxln fossiliferous (fus brac) chert gry-wh fossiliferous tr spar calcite Re-xln Mudstone/Packstone

Cherokee Shale 4871 (-2039)

Shale Gas Kick

Limestone tan f-m xln fossiliferous Re-xln Packstone tr spar calcite lt-drk gry fossiliferous chert

Shale gn-gry & blk w/pyr Limestone lt gry crypto-f xln dns fossilliferous Re-Meudstone/Packstone

Shale grn-gry m gry/blkLS AA

Limestone lt gry crypto-f xln dns fossilliferous Re-Meudstone/Packstone w/ brn fossilliferous chert

Limestone tl-m brn crypto-mxln fossiliferous Re-xln Mudstone/Packstone tr spr calcite m-drk fossiliferous chert

Shale m-gry & blk

Limestone lt-m brn cryptoxln tr fossiliferous Re-xln Mudstone-Wackstone Shale AA

Shale m-drk gry & blk Ls AA

Shale Gas Kick

Limestone lt-m brn f-mxln fossiliferous Re-xln Mudstone/Packstone Shale gn-gry lt-m gry

Ls AA w/ m-drk fossiliferous chert

Shale gas kick

Shale m-drk gry

Limestone m brn f-m xln fossiliferous tr spar Re-xln Packstone Limestone gry-wh/tan/m brn cryptox-f xln Re-xln Mudstone

Limestone crm-gy-wh f-m-xln fossiliferous (brac) Re-xln Packstone

Shale m-dk gry LimestoneAA Limestone drk gry cryptoxln Re-xln Mudstone tr blk chert

Shale drk gry

Limestonem-drk brn f-m xln dense fossiliferous Wackstone/Packstone bubble w/ rainbow sheen of oil in samples No gas kick, No show oil No fluorensence Limestone crm-tan-brn-blk crypto-f-mxln fossiliferous Re-xln Mudstone/Wackstone

Sandstonewh-brn (spty stn) vf grained angular grns w-sort sl argil tr glau cal cmt dns Quartz arenite. no vis porspty oil stn (wet oil) no odor no gas kick milky wh fluoresence

Limestone drk brn fxln dense Re-xln Mudstone

Morrow Shale 5073 (-2241)

Morrow Sand 5076 (-2244)

Sandstone, wh-brn (spty stn), vf grained, sub round grns, w-sort, friable, pyr, tr glau, cal cmt, Quartz arenite. no vis por, oil stn spty live droplets of free oil, and dead oil stn, pos cut on own (milky wh) yel fluoresence faint odor, tr gas bubbles 34 unit gas kick

Shale lt brn

Falcon Smith 1-5NW dst 1.pdf

Sandstone, wh, vf grained, sub round grns, w-sort, friable, pyr, tr glau, cal cmt, Quartz arenite. no vis por, oil stn, live droplets of free oil, and dead oil stn, pos cut on own (milky wh) dull yel fluoresence no odor, tr gas bubbles tr plant remains(leaf?), good odor

SS AA tr Oil show increasing and oil change in color from lt brn - blk

Falcon Smith 1-5NW dst 2.pdf

Sandstone, wh, vf grained, sub round grns, w-sort, dense, pyr, tr glau, silica cmt, Quartz arenite. no vis por, dead oil stn (looks like pepper in pile of salt), rare tr live droplets of free oil on crushing clusters, positive cut on own (milky wh) no fluoresence faint odor, tr plant remains

5160 sample - blocky gray/green soft shale, light gray to blue/green cryptoxln, litho, soft ls, some coarse-med to fgr qtz ss, brown, fair rounding and sorting, pyritic, gilsonitic staining, with abun pyrite nodules containing sand grains and molds, sample milky, no odor

Mississippian 5146 (-2314)

Limestone m brn f-m xln fossiliferous tr spar Re-xln Packstone

Limestone gry-wh/tan/m brn cryptox-f xln Re-xln Mudstone

Limestone crm-gy-wh f-m-xln fossiliferous (brac) Re-xln Packstone

Shale m-dk gry LimestoneAA Limestone drk gry cryptoxln Re-xln Mudstone tr blk chert

Shale drk gry

Limestonem-drk brn f-m xln dense fossiliferous Wackstone/Packstone bubble w/ rainbow sheen of oil in samples No gas kick, No show oil No fluorensence Limestone crm-tan-brn-blk crypto-f-mxln fossiliferous Re-xln Mudstone/Wackstone

Sandstonewh-brn (spty stn) vf grained angular grns w-sort sl argil tr glau cal cmt dns Quartz arenite. no vis porspty oil stn (wet oil) no odor no gas kick milky wh fluoresence

Limestone drk brn fxln dense Re-xln Mudstone

Morrow Shale 5073 (-2241)

Morrow Sand 5076 (-2244)

Sandstone, wh-brn (spty stn), vf grained, sub round grns, w-sort, friable, pyr, tr glau, cal cmt, Quartz arenite. no vis por, oil stn spty live droplets of free oil, and dead oil stn, pos cut on own (milky wh) yel fluoresence faint odor, tr gas bubbles 34 unit gas kick

Shale lt brn

Falcon Smith 1-5NW dst 1.pdf

Sandstone, wh, vf grained, sub round grns, w-sort, friable, pyr, tr glau, cal cmt, Quartz arenite. no vis por, oil stn, live droplets of free oil, and dead oil stn, pos cut on own (milky wh) dull yel fluoresence no odor, tr gas bubbles tr plant remains(leaf?), good odor

SS AA tr Oil show increasing and oil change in color from lt brn - blk

Falcon Smith 1-5NW dst 2.pdf

Sandstone, wh, vf grained, sub round grns, w-sort, dense, pyr, tr glau, silica cmt, Quartz arenite. no vis por, dead oil stn (looks like pepper in pile of salt), rare tr live droplets of free oil on crushing clusters, positive cut on own (milky wh) no fluoresence faint odor, tr plant remains

5160 sample - blocky gray/green soft shale, light gray to blue/green cryptoxln, litho, soft ls, some coarse-med to fgr qtz ss, brown, fair rounding and sorting, pyritic, gilsonitic staining, with abun pyrite nodules containing sand grains and molds, sample milky, no odor

Mississippian 5146 (-2314)

4560 4580 4600 4620 4640 4660 4680 4700 4720 4740 4760 4780 4800 4820 4840 4860 4880 4900 4920 4940 4960 4980 5000 5020 5040 5060 5080 5100 5120 5140

0 ROP (min/ft) 10
0 Gamma (API) 150
6 Cal (in) 16

CFS @ 4607 30"

Drilling @ 4626 @ 700 hrs 9/30/11

@4634 34'high

@4691 22'H

Start 10' ssamples @ 4800

10/01/11 700 hrs @ 4968

DST #1

CFS/ST @ 5090 30-60

DST #2 STRADDLE

-CFS @ 5115 30-60

-CFS @ 5140 30-60 test at 700 hrs 10/02/2011

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

Re-cycle

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

Shale Gas Kick

Bit trip @ 5060 CFS
60 30-60-90
strap 0.41' long
survey 1-3/4 deg

re-zero gas @ 5061'

44 unit kick

85 units

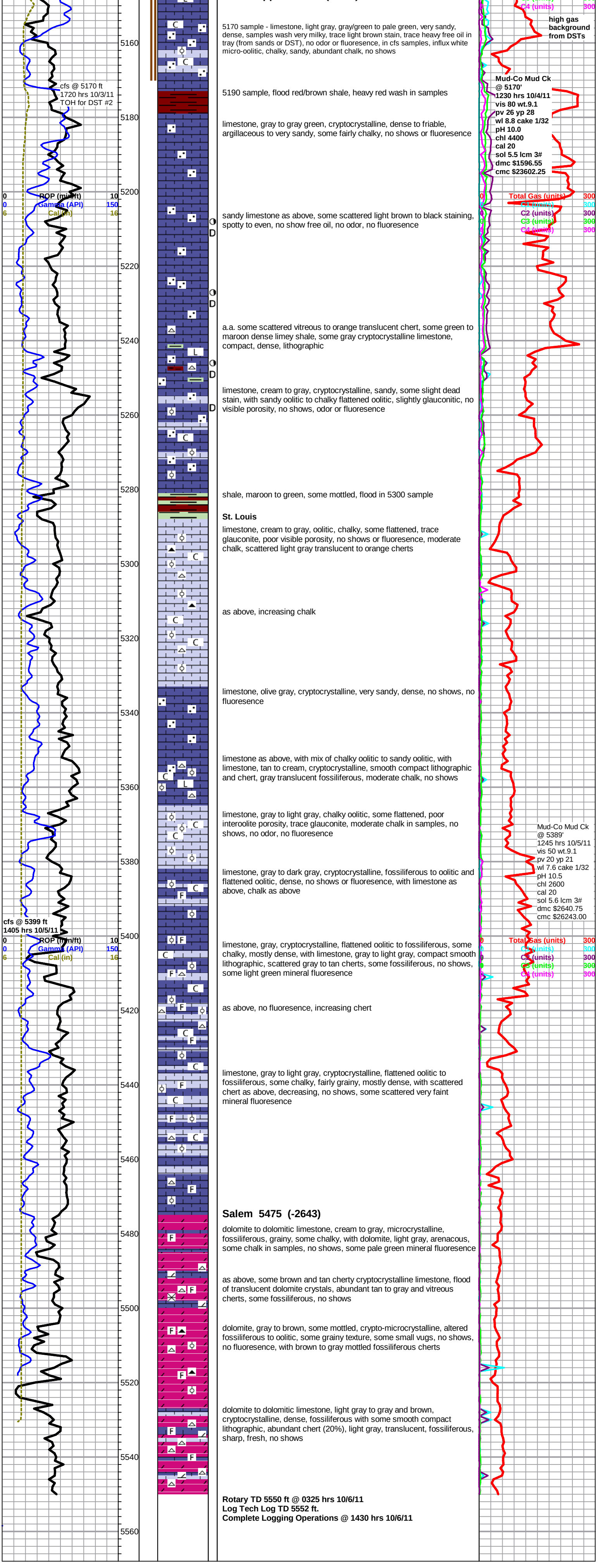
SC
Total Gas (units) 120
C1 (units) 120
C2 (units) 120
C3 (units) 120
C4 (units) 120

72 unit

100 units

geologist Keith Reavis relieve Dan Fredlund during DST #1

SC
Tot
C2 (units) 300
C3 (units) 300


cfs @ 5170 ft
1720 hrs 10/3/11
TOH for DST #2
0 ROP (min/ft) 10
0 Gamma (API) 150
6 Cal (in) 16
cfs @ 5399 ft
1405 hrs 10/5/11
0 ROP (min/ft) 10
0 Gamma (API) 150
6 Cal (in) 16
5160
5180
5200
5220
5240
5260
5280
5300
5320
5340
5360
5380
5400
5420
5440
5460
5480
5500
5520
5540
5560
5170 sample - limestone, light gray, gray/green to pale green, very sandy, dense, samples wash very milky, trace light brown stain, trace heavy free oil in tray (from sands or DST), no odor or fluoresence, in cfs samples, influx white micro-oolitic, chalky, sandy, abundant chalk, no shows
5190 sample, flood red/brown shale, heavy red wash in samples
limestone, gray to gray green, cryptocrystalline, dense to friable, argillaceous to very sandy, some fairly chalky, no shows or fluoresence
sandy limestone as above, some scattered light brown to black staining, spotty to even, no show free oil, no odor, no fluoresence
a.a. some scattered vitreous to orange translucent chert, some green to maroon dense limey shale, some gray cryptocrystalline limestone, compact, dense, lithographic
limestone, cream to gray, cryptocrystalline, sandy, some slight dead stain, with sandy oolitic to chalky flattened oolitic, slightly glauconitic, no visible porosity, no shows, odor or fluoresence
shale, maroon to green, some mottled, flood in 5300 sample
St. Louis
limestone, cream to gray, oolitic, chalky, some flattened, trace glauconite, poor visible porosity, no shows or fluoresence, moderate chalk, scattered light gray translucent to orange cherts
as above, increasing chalk
limestone, olive gray, cryptocrystalline, very sandy, dense, no shows, no fluoresence
limestone as above, with mix of chalky oolitic to sandy oolitic, with limestone, tan to cream, cryptocrystalline, smooth compact lithographic and chert, gray translucent fossiliferous, moderate chalk, no shows
limestone, gray to light gray, chalky oolitic, some flattened, poor interoolite porosity, trace glauconite, moderate chalk in samples, no shows, no odor, no fluoresence
limestone, gray to dark gray, cryptocrystalline, fossiliferous to oolitic and flattened oolitic, dense, no shows or fluoresence, with limestone as above, chalk as above
limestone, gray, cryptocrystalline, flattened oolitic to fossiliferous, some chalky, mostly dense, with limestone, gray to light gray, compact smooth lithographic, scattered gray to tan cherts, some fossiliferous, no shows, some light green mineral fluoresence
as above, no fluoresence, increasing chert
limestone, gray to light gray, cryptocrystalline, flattened oolitic to fossiliferous, some chalky, fairly grainy, mostly dense, with scattered chert as above, decreasing, no shows, some scattered very faint mineral fluoresence
Salem 5475 (-2643)
dolomite to dolomitic limestone, cream to gray, microcrystalline, fossiliferous, grainy, some chalky, with dolomite, light gray, arenacous, some chalk in samples, no shows, some pale green mineral fluoresence
as above, some brown and tan cherty cryptocrystalline limestone, flood of translucent dolomite crystals, abundant tan to gray and vitreous cherts, some fossiliferous, no shows
dolomite, gray to brown, some mottled, crypto-microcrystalline, altered fossiliferous to oolitic, some grainy texture, some small vugs, no shows, no fluoresence, with brown to gray mottled fossiliferous cherts
dolomite to dolomitic limestone, light gray to gray and brown, cryptocrystalline, dense, fossiliferous with some smooth compact lithographic, abundant chert (20%), light gray, translucent, fossiliferous, sharp, fresh, no shows
Rotary TD 5550 ft @ 0325 hrs 10/6/11
Log Tech Log TD 5552 ft.
Complete Logging Operations @ 1430 hrs 10/6/11
C4 (units) 300
high gas background from DSTs
Mud-Co Mud Ck
@ 5170'
1230 hrs 10/4/11
vis 80 wt.9.1
pv 26 yp 28
wl 8.8 cake 1/32
pH 10.0
chl 4400
cal 20
sol 5.5 lcm 3#
dmc $1596.55
cmc $23602.25
0 Total Gas (units) 300
0 C1 (units) 300
0 C2 (units) 300
0 C3 (units) 300
0 C4 (units) 300
Mud-Co Mud Ck
@ 5389'
1245 hrs 10/5/11
vis 50 wt.9.1
pv 20 yp 21
wl 7.6 cake 1/32
pH 10.5
chl 2600
cal 20
sol 5.6 lcm 3#
dmc $2640.75
cmc $26243.00
0 Total Gas (units) 300
0 C1 (units) 300
0 C2 (units) 300
0 C3 (units) 300
0 C4 (units) 300