Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1081533

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: BRIAN FISHER;DAVE WILLIAMS
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 #:

01/31/2012	02/12/2012	03/03/2012
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-069-20362-00-00
Spot Description:
E2 - SW - SW - SW Sec. 33 Twp. 27 S. R. 30 ☐ East ☑ West
330 Feet from ☐ North / ☑ South Line of Section
490 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: DAVIS Well #: 2-33(SW)
Field Name:
Producing Formation: NA
Elevation: Ground: 2811 Kelly Bushing: 2824
Total Vertical Depth: 5475 Plug Back Total Depth: 5443
Amount of Surface Pipe Set and Cemented at: 1870 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: 3100 ppm Fluid volume: 125 bbls
Dewatering method used: Evaporated

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: 05/21/2012
☑ **Confidential Release Date:** 05/21/2014
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 05/21/2012

[redacted] 1081533

Operator Name: Falcon Exploration, Inc. Lease Name: DAVIS Well #: 2-33(SW)

Sec. 33 Twp. 27 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: Attached Top: Attached Datum: 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	1870	65/35;CLASS A	825	2% GEL, 3% CC
PRODUCTION	7.875	5.5	15.5	5465	AA-2	215	W60;10% SALT

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	5273-5278	7000 GAL 15% HCL ACID	5273-78

TUBING RECORD: Size: 2-3/8" Set At: 5333 Packer At:

Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. 03/09/2012

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Water	Bbls.	Gas-Oil Ratio	Gravity
	28		0		0			26

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:
5273-78

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

Form	ACO1 - Well Completion
Operator	Falcon Exploration, Inc.
Well Name	DAVIS 2-33(SW)
Doc ID	1081533

All Electric Logs Run

DIL
MEL
CNL/CDL
BHCS

Form	ACO1 - Well Completion
Operator	Falcon Exploration, Inc.
Well Name	DAVIS 2-33(SW)
Doc ID	1081533

Tops

Name	Top	Datum
STOTLER	3536	-712
TARKIO	3594	-770
LANSING	4245	-1421
STARK	4594	-1770
PAWNEE	4819	-1995
CHEROKEE	4865	-2041
MORROW SH	5056	-2232
MISS ST GEN	5178	-2354
ST LOUIS	5240	-2416
SALEM	5429	-2605

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/

May 21, 2012

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

Re: ACO1
API 15-069-20362-00-00
DAVIS 2-33(SW)
SW/4 Sec.33-27S-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 OIL & GAS SERVICES, LLC 053361

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
2-02-12	33	27s	30w			9:30Am	10:30Am

LEASE	WELL #	LOCATION	COUNTY	STATE
Davis	2-33	Ver Cooperland KS. N on CR#2 to Rd Y east to Rd E	Gray	KS.

OLD OR (NEW) (Circle one)

CONTRACTOR Sterling #5
TYPE OF JOB Surface.
HOLE SIZE 12¼ T.D. 1875
CASING SIZE 8⅝ 24# DEPTH 1875.18
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT 40.23
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT 116.886 BBL H_2O

OWNER

EQUIPMENT

PUMP TRUCK CEMENTER Kenny
372 HELPER Cesar
BULK TRUCK
456-239 DRIVER Lenny
BULK TRUCK
472-467 DRIVER Jon

CEMENT

AMOUNT ORDERED 675 sk 65/35/6% gel 3% CC ¼# Floseal 150 sk Class A 3% CC 2% Gel

COMMON	150	@16.25	2437.50
POZMIX		@	
GEL	3	@21.70	65.10
CHLORIDE	27	@58.20	1571.40
ASC		@	
Lightweight+	675	@15.00	10125.00
		@	
Floseal	169	@2.70	456.30
		@	
		@	
		@	
		@	
		@	
HANDLING	855	@2.25	1923.75
MILEAGE			4702.50
		TOTAL	21281.50

REMARKS:

THANK YOU!!!

SERVICE

DEPTH OF JOB			
PUMP TRUCK CHARGE			1925.00
EXTRA FOOTAGE		@	
MILEAGE	100	@7.00	700.00
MANIFOLD	1	@200.00	200.00
Light Vehicle Mileage	100	@4.00	400.00
		@	
		TOTAL	3225.00

CHARGE TO: FALCON EXPLORATION
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

Baskets	3	@314.00	942.00
Centralizers	3	@67.00	201.00
AFU Insert	1	@238.00	238.00
Guide Shoe	1	@404.00	404.00
Top Rubber Plug	1	@101.00	101.00
		TOTAL	1886.00

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.

SALES TAX (If Any)
TOTAL CHARGES $26392.55
DISCOUNT $19794.41 IF PAID IN 30 DAYS

PRINTED NAME
SIGNATURE

BASIC℠
ENERGY SERVICES
Liberal, Kansas

Cement Report

Customer	Falcon Exploration	Lease No.		Date	2-13-12
Lease	Davis	Well #	2-33	Service Receipt	1417 02614
Casing 5½	Depth 5415	County	Gray	State	Kansas
Job Type	Z42 5½ L.S.	Formation		Legal Description	33-27-30W

Pipe Data				Perforating Data		Cement Data
				Shots/Ft		
Casing size	5½ 15.5#	Tubing Size	JRB			Lead
Depth	5415 22.5-T	Depth		From	To	5-cent Hlcher
Volume		Volume		From	To	
Max Press		Max Press		From	To	Tail in
Well Connection		Annulus Vol.		From	To	
Plug Depth		Packer Depth		From	To	

Time	Casing Pressure	Tubing Pressure	Bbls. Pumbed	Rate	Service Log
06:00					on Loc. / Hold Safety Meeting
06:05					Spot + Rig up Equip.
11:00					Start Csg.
14:25					Csg on Bottom Circ w/ Rig
15:18	1000				Test Pump + Lines
15:20	200		5	4	Start Fresh H_2O
15:21	200		12	5	Start Super Flush II
15:24	200		5	4	Start Fresh H_2O
15:26	0				Shutdown + Break loose
15:32	100		5	3	Plug Mouse Hole w/20 sk @ 14.8#
15:44	100		8	3	Plug Rat Hole w/30 sk @ 14.8#
15:50	~~[illegible]~~				Hook up to Pipe
15:51	500		52	5.6	Start Cmt 215 sk @ 14.8#
16:03					Shutdown + Wash up
16:14					Drop L.D. Plug
16:16	200		0	7	Start Disp. w/ Fresh H_2O
16:34	700		110		Shutdown + Tighten Unions
16:38	1900		110	5	Continue w/ Disp.
16:41	1800		129	2.5	Slow Rate
16:43	2900		129	2.5	Bump Plug
16:44	0		129	0	Release / Plug Held Held
16:45					End Job
	1600				Pressure Before Plug Landed

Service Units	21755	38115 19842	14355 19284			
Driver Names	Cochran	Mendez	Swafford			

Leon
Customer Representative

J. Bennett
Station Manager

M. Cochran
Cementer

Taylor Printing, Inc.

DIAMOND TESTING

General Information Report

General Information

Company Name	FALCON EXPLORATION, INC.	**Representative**	TIM VENTERS
Contact	MIKE MITCHELL	**Well Operator**	FALCON EXPLORATION, INC.
Well Name	DAVIS #2-33 (SW)	**Report Date**	2012/02/09
Unique Well ID	DST #1, ST. LOUIS UPPER "B", 5246-5288	**Prepared By**	TIM VENTERS
Surface Location	SEC 33-27S-30W, GRAY CO. KS.		
Field	RENEGADE NW	**Qualified By**	BRIAN FISHER
Well Type	Vertical		
Test Type	CONVENTIONAL		
Formation	DST #1, ST. LOUIS UPPER "B", 4246-5288		
Well Fluid Type	01 Oil		
Start Test Date	2012/02/09	**Start Test Time**	08:48:00
Final Test Date	2012/02/09	**Final Test Time**	22:41:00

Test Recovery:

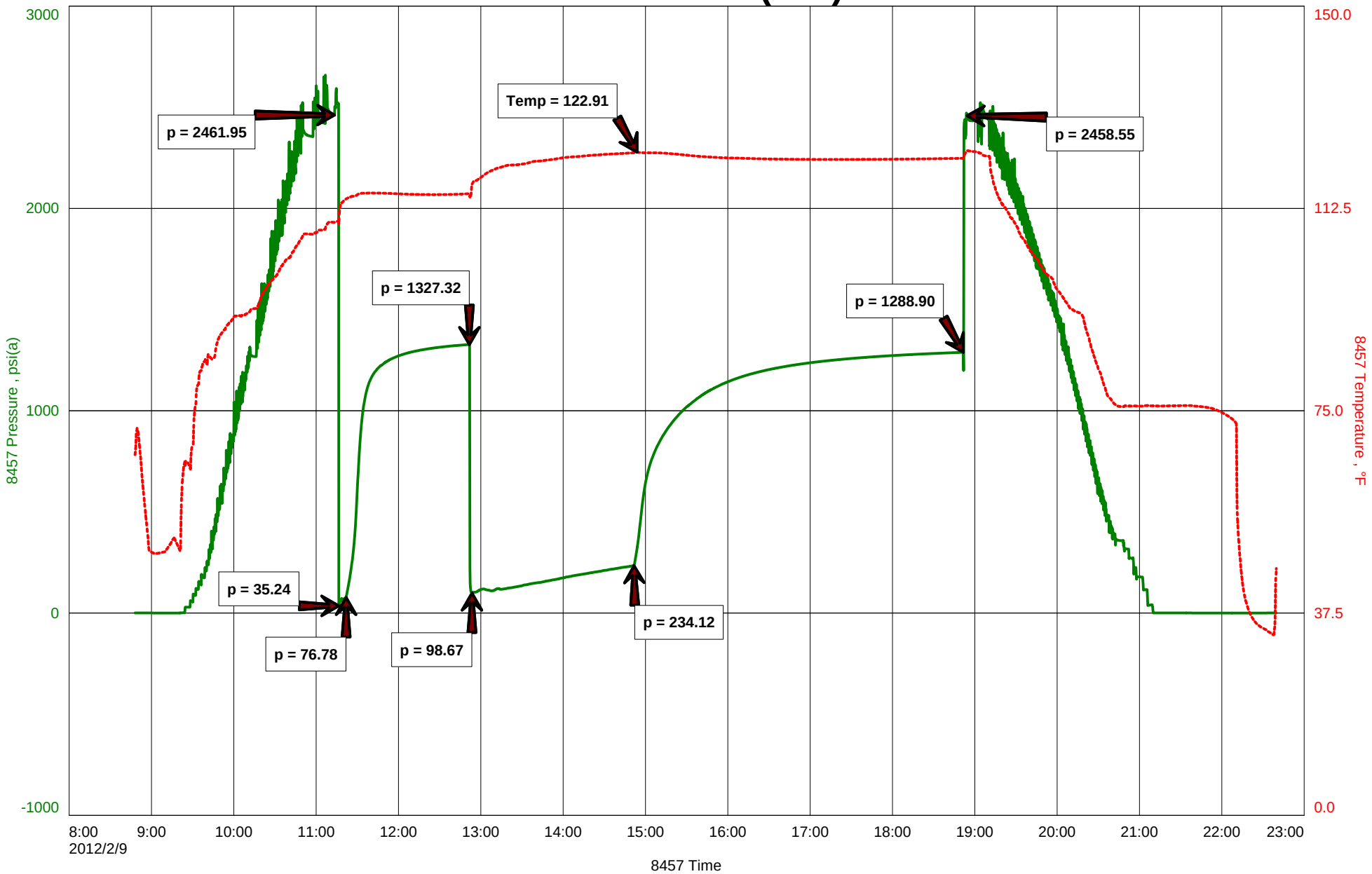
RECOVERED: 3845' GAS IN PIPE
400' GO, 3% GAS, 97% OIL, 26 GRAVITY
65' G,SLT MCO, 5% GAS, 90% OIL, 5% MUD
180' VG,VHMCO, 27% GAS, 37% OIL, 36% MUD
120' G,MCO, 2% GAS, 71% OIL, 27% MUD

TOOL SAMPLE: 72% OIL, 28% MUD

FALCON EXPLORATION, INC.
DST #1, ST. LOUIS UPPER "B", 5246-5288
Start Test Date: 2012/02/09
Final Test Date: 2012/02/09

DAVIS #2-33 (SW)
Formation: DST #1, ST. LOUIS UPPER "B", 4246-5288
Pool: RENEGADE NW
Job Number: T012

DAVIS #2-33 (SW)



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET
FILE: DAVIS233SWDST1

TIME ON: 08:48
TIME OFF: 22:41

Company FALCON EXPLORATION, INC. Lease & Well No. DAVIS #2-33 (SW)
Contractor STERLING DRILLING CO. RIG #5 Charge to FALCON EXPLORATION, INC.
Elevation 2824 KB Formation ST. LOUIS UPPER "B" Effective Pay ____ Ft. Ticket No. T012
Date 2-9-12 Sec. 33 Twp. 27 S Range 30 W County GRAY State KANSAS
Test Approved By BRIAN FISHER Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 1 Interval Tested from 5246 ft. to 5288 ft. Total Depth 5288 ft.
Packer Depth 5241 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.
Packer Depth 5246 ft. Size 6 3/4 in. Packer depth ____ ft. Size 6 3/4 in.
Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 5232 ft. Recorder Number 8457 Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 5285 ft. Recorder Number 11029 Cap. 5,025 P.S.I.
Below Straddle Recorder Depth ____ ft. Recorder Number ____ Cap. ____ P.S.I.

Mud Type CHEMICAL Viscosity 58 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.2 Water Loss 7.2 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in
Chlorides 1,900 P.P.M. Drill Pipe Length 4878 ft. I.D. 3 1/2 in
Jars: Make STERLING Serial Number #4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in
Did Well Flow? NO Reversed Out NO Anchor Length 42 ft. Size 4 1/2-FH in
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK 1/2 INCH BLOW, BUILDING REACHING BOB 4 1/2 MIN. (NOBB)
2nd Open: STRONG 3 1/2 INCH BLOW, BUILDING, REACHING BOB 1 1/2 MIN. (BOB BB)

Recovered 3845 ft. of GAS IN PIPE
Recovered 400 ft. of GO, 3% GAS, 97% OIL, 26 GRAVITY
Recovered 65 ft. of G, SLT MCO, 5% GAS, 90% OIL, 5% MUD
Recovered 180 ft. of VG, VHMCO 27% GAS, 37% OIL, 36% MUD
Recovered 120 ft. of GMCO, 2% GAS, 71% OIL, 27% MUD
Recovered ____ ft. of ____
Remarks:

TOOL SAMPLE: 72% OIL, 28% MUD

Price Job	
Other Charges	
Insurance	
Total	

Time Set Packer(s) 11:16 AM A.M. P.M. Time Started Off Bottom 6:51 PM A.M. P.M. Maximum Temperature 123 deg.

Initial Hydrostatic Pressure ..... (A) 2462 P.S.I.
Initial Flow Period ..... Minutes 5 (B) 25 P.S.I. to (C) 77 P.S.I.
Initial Closed In Period ..... Minutes 90 (D) 1327 P.S.I.
Final Flow Period ..... Minutes 120 (E) 99 P.S.I. to (F) 234 P.S.I.
Final Closed In Period ..... Minutes 240 (G) 1289 P.S.I.
Final Hydrostatic Pressure ..... (H) 2459 P.S.I.

DIAMOND TESTING

General Information Report

General Information

Company Name	FALCON EXPLORATION, INC.	**Representative**	TIM VENTERS
Contact	MIKE MITCHELL	**Well Operator**	FALCON EXPLORATION, INC.
Well Name	DAVIS #2-33 (SW)	**Report Date**	2012/02/11
Unique Well ID	DST #2, ST. LOUIS, 5296-5315	**Prepared By**	TIM VENTERS
Surface Location	SEC 33-27S-30W		
Field	RENEGADE	**Qualified By**	DAVE WILLIAMS
Well Type	Vertical		
Test Type	CONVENTIONAL		
Formation	DST #2, ST. LOUIS, 5296-5315		
Well Fluid Type	01 Oil		
Start Test Date	2012/02/10	**Start Test Time**	11:04:00
Final Test Date	2012/02/11	**Final Test Time**	00:08:00

Test Recovery:

RECOVERED: 370' SMCW W/TR. O, TRACE OIL, 94% WATER, 6% MUD
5' MUD

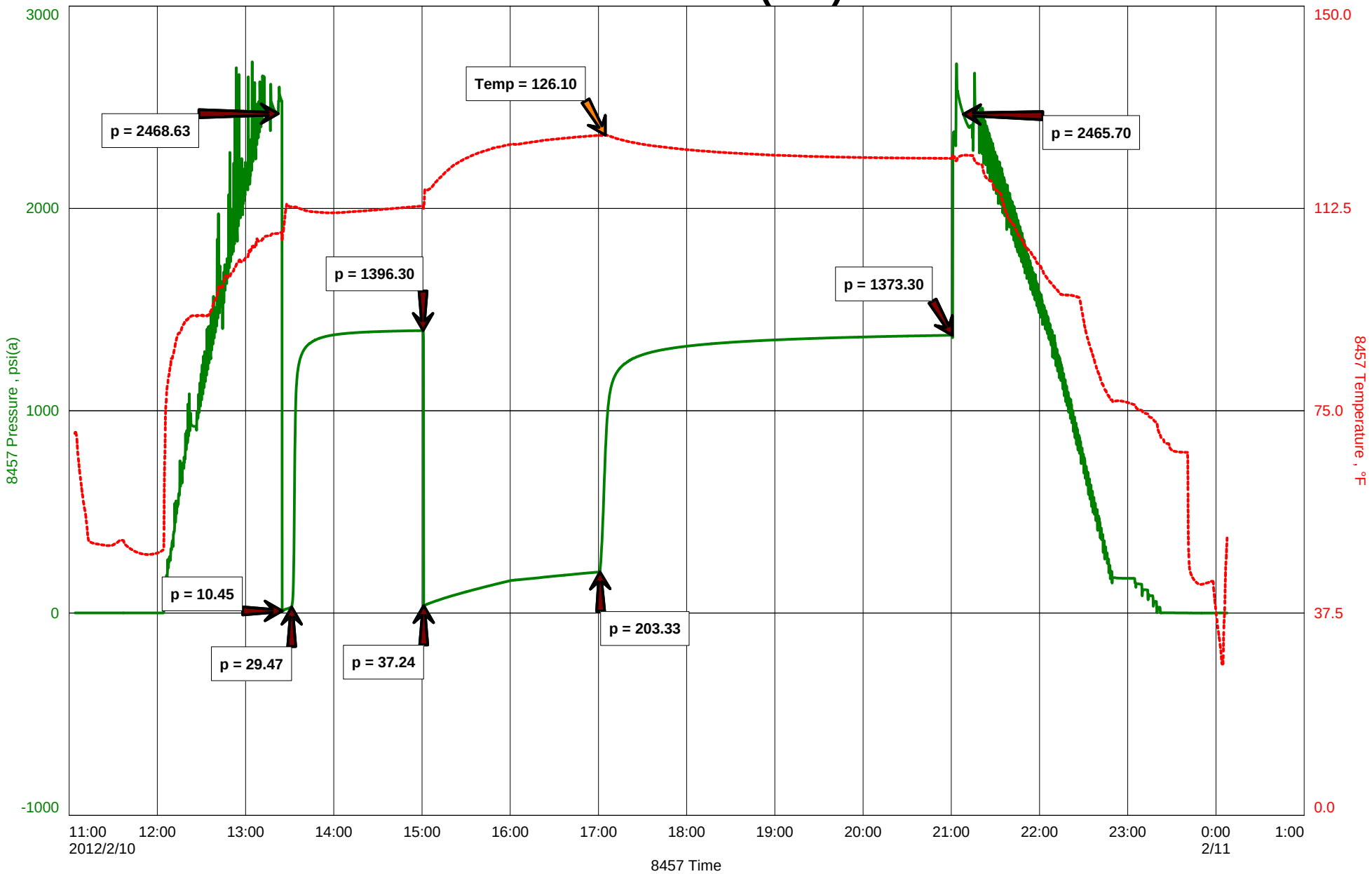
TOOL SAMPLE: 1% OIL, 87% WATER, 12% MUD

CHLORIDES: 77,000 ppm
PH: 6.0
RW: .12 @ 60 deg.

FALCON EXPLORATION, INC.
DST #2, ST. LOUIS, 5296-5315
Start Test Date: 2012/02/10
Final Test Date: 2012/02/11

DAVIS #2-33 (SW)
Formation: DST #2, ST. LOUIS, 5296-5315
Pool: RENEGADE
Job Number: T013

DAVIS #2-33 (SW)



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

DRILL-STEM TEST TICKET
FILE: DAVIS233SWDST2

TIME ON: 11:04 2-10-12
TIME OFF: 00:08 2-11-12

Company FALCON EXPLORATION, INC. Lease & Well No. DAVIS #2-33 (SW)

Contractor STERLING DRILLING CO. RIG #5 Charge to FALCON EXPLORATION, INC.

Elevation 2824 KB Formation ST. LOUIS Effective Pay _____ Ft. Ticket No. T013

Date 2-10-12 Sec. 33 Twp. 27 S Range 30 W County GRAY State KANSAS

Test Approved By DAVE WILLIAMS Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 2 Interval Tested from 5296 ft. to 5315 ft. Total Depth 5315 ft.

Packer Depth 5291 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Packer Depth 5296 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 5282 ft. Recorder Number 8457 Cap. 10,000 P.S.I.

Bottom Recorder Depth (Outside) 5293 ft. Recorder Number 11029 Cap. 5,025 P.S.I.

Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type CHEMICAL Viscosity 62 Drill Collar Length 0 ft. I.D. 2 1/4 in.

Weight 9.0 Water Loss 6.4 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in

Chlorides 1,900 P.P.M. Drill Pipe Length 4928 ft. I.D. 3 1/2 in

Jars: Make STERLING Serial Number #4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in

Did Well Flow? NO Reversed Out NO Anchor Length 19 ft. Size 4 1/2-FH in

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK SURFACE BLOW, BUILDING TO 1 1/2 INCHES (NOBB)

2nd Open: WEAK SURFACE BLOW, BUILDING, REACHING BOB 89 MIN. (NOBB)

Recovered 370 ft. of SMCW W/TR. O, TRACE OIL, 94% WATER, 6% MUD

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Remarks: CHLORIDES: 77,000 ppm
PH: 6.0
RW: .12 @ 60 deg.

TOOL SAMPLE: 72% OIL, 28% MUD

Price Job	
Other Charges	
Insurance	
Total	

Time Set Packer(s) 1:25 PM A.M. P.M. Time Started Off Bottom 9:00 PM A.M. P.M. Maximum Temperature 126 deg.

Initial Hydrostatic Pressure ..... (A) 2469 P.S.I.

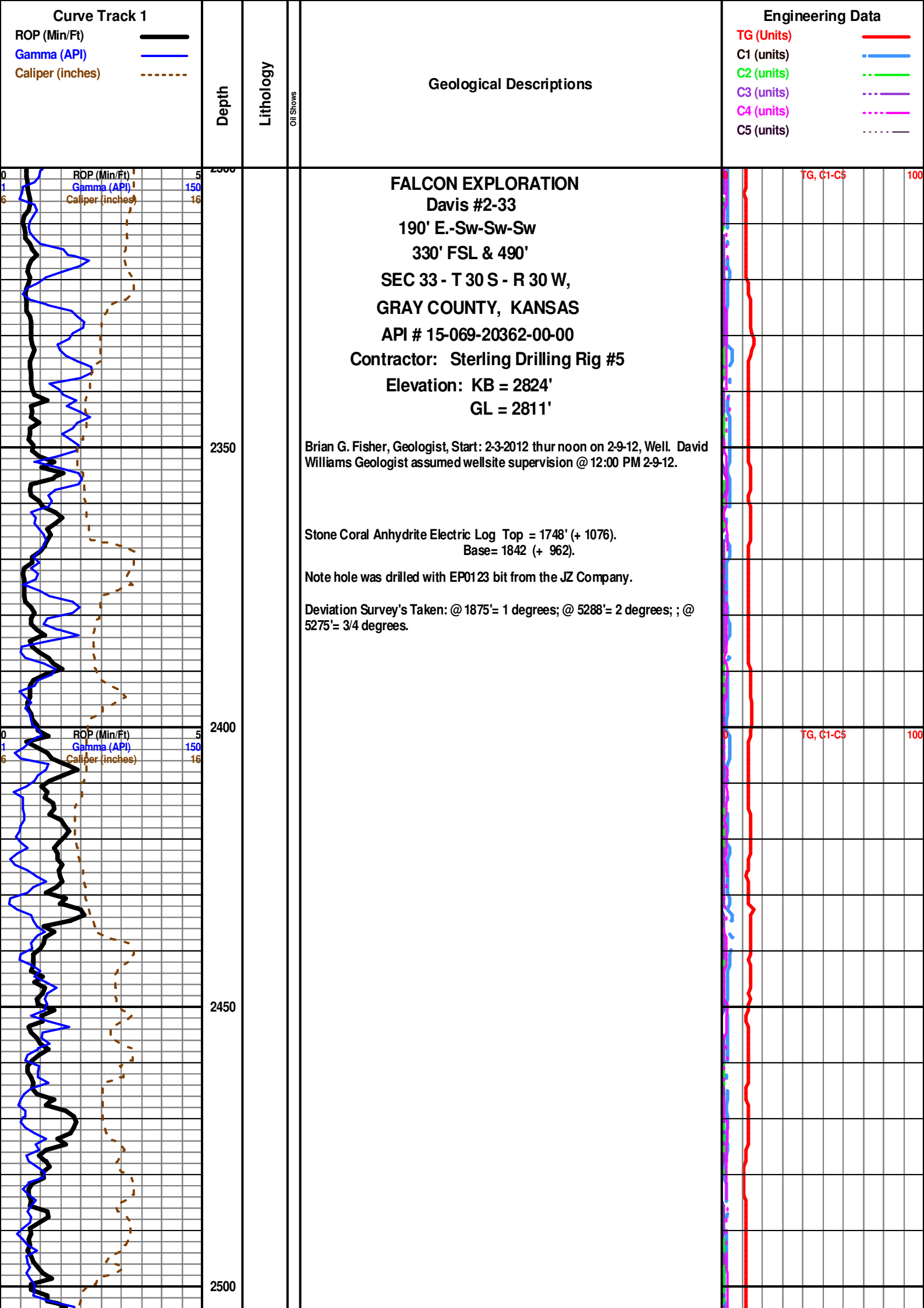
Initial Flow Period ..... Minutes 5 (B) 10 P.S.I. to (C) 29 P.S.I.

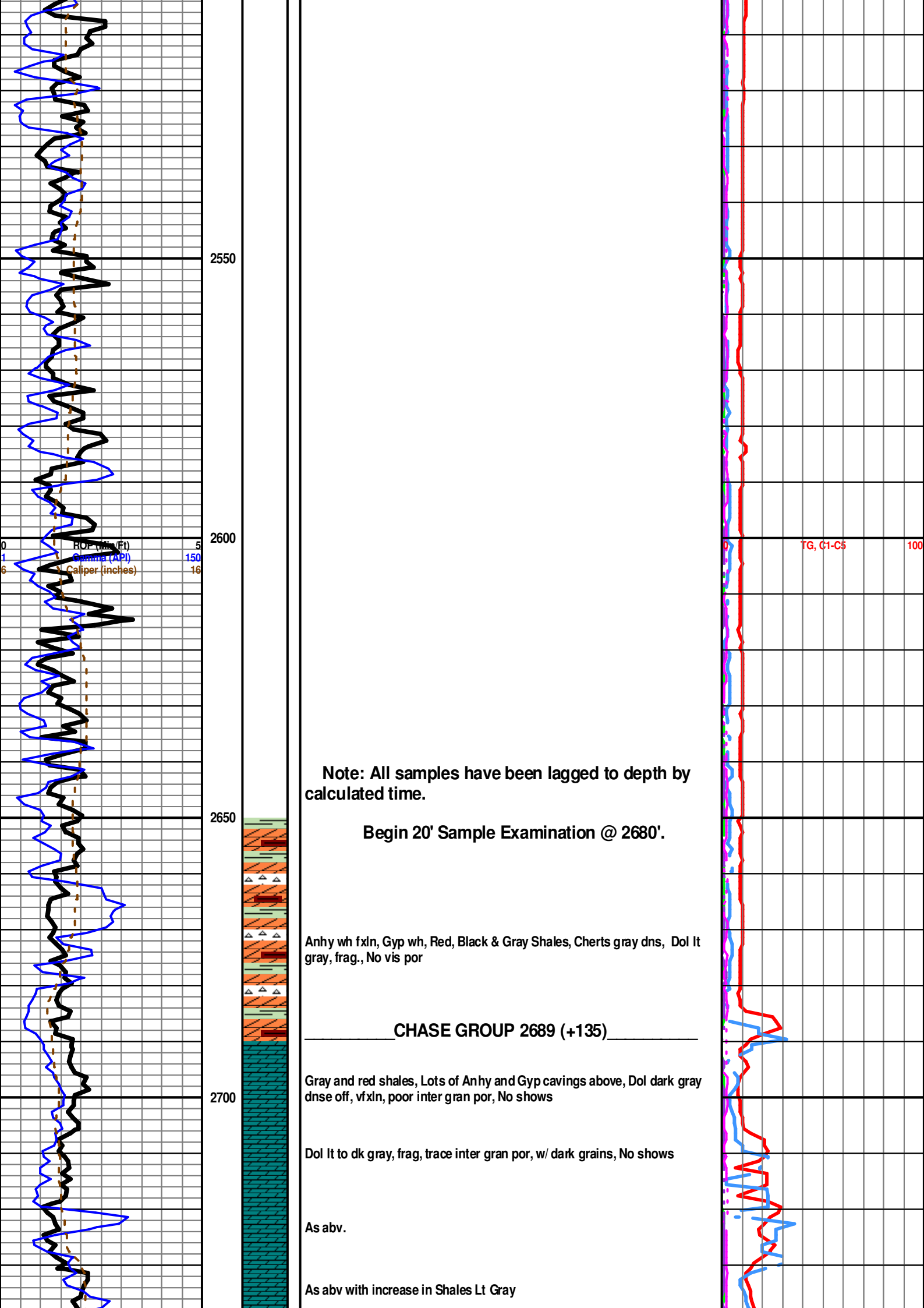
Initial Closed In Period ..... Minutes 90 (D) 1396 P.S.I.

Final Flow Period ..... Minutes 120 (E) 37 P.S.I. to (F) 203 P.S.I.

Final Closed In Period ..... Minutes 240 (G) 1373 P.S.I.

Final Hydrostatic Pressure ..... (H) 2466 P.S.I.


Curve Track 1
ROP (Min/Ft)
Gamma (API)
Caliper (inches)
Depth
Lithology
Oil Shows
Geological Descriptions
Engineering Data
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
C5 (units)
ROP (Min/Ft)
Gamma (API)
Caliper (inches)
TG, C1-C5
2350
2400
2450
2500
FALCON EXPLORATION
Davis #2-33
190' E.-Sw-Sw-Sw
330' FSL & 490'
SEC 33 - T 30 S - R 30 W,
GRAY COUNTY, KANSAS
API # 15-069-20362-00-00
Contractor: Sterling Drilling Rig #5
Elevation: KB = 2824'
GL = 2811'
Brian G. Fisher, Geologist, Start: 2-3-2012 thur noon on 2-9-12, Well. David Williams Geologist assumed wellsite supervision @ 12:00 PM 2-9-12.
Stone Coral Anhydrite Electric Log Top = 1748' (+ 1076).
Base= 1842 (+ 962).
Note hole was drilled with EP0123 bit from the JZ Company.
Deviation Survey's Taken: @ 1875'= 1 degrees; @ 5288'= 2 degrees; ; @ 5275'= 3/4 degrees.



Note: All samples have been lagged to depth by calculated time.

Begin 20' Sample Examination @ 2680'.

Anhy wh fxln, Gyp wh, Red, Black & Gray Shales, Cherts gray dns, Dol lt gray, frag., No vis por

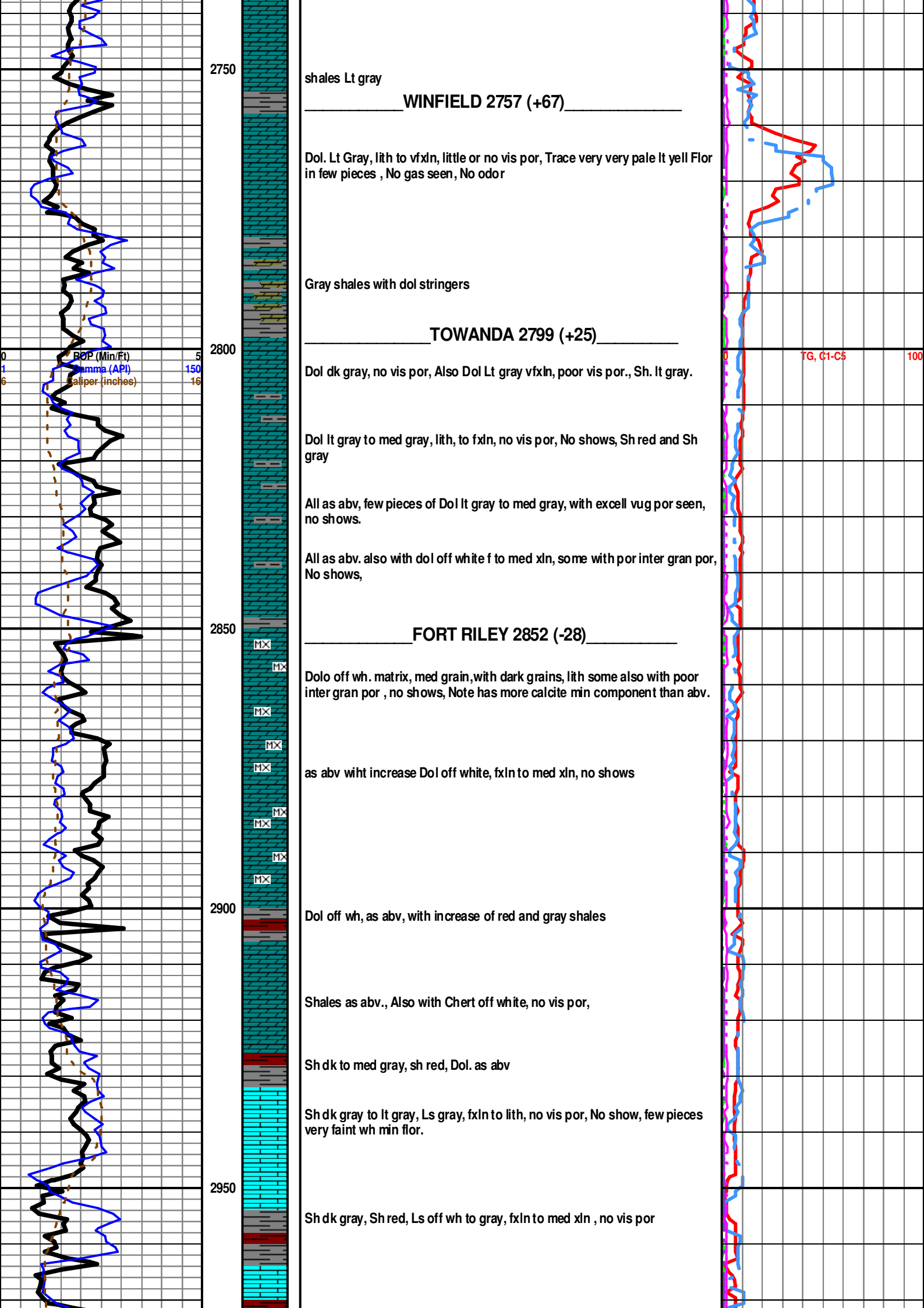
_____CHASE GROUP 2689 (+135)_____

Gray and red shales, Lots of Anhy and Gyp cavings above, Dol dark gray dnse off, vfxln, poor inter gran por, No shows

Dol lt to dk gray, frag, trace inter gran por, w/ dark grains, No shows

As abv.

As abv with increase in Shales Lt Gray



shales Lt gray

WINFIELD 2757 (+67)

Dol. Lt Gray, lith to vfxln, little or no vis por, Trace very very pale lt yell Flor in few pieces , No gas seen, No odor

Gray shales with dol stringers

TOWANDA 2799 (+25)

Dol dk gray, no vis por, Also Dol Lt gray vfxln, poor vis por., Sh. lt gray.

Dol lt gray to med gray, lith, to fxln, no vis por, No shows, Sh red and Sh gray

All as abv, few pieces of Dol lt gray to med gray, with excell vug por seen, no shows.

All as abv. also with dol off white f to med xln, some with por inter gran por, No shows,

FORT RILEY 2852 (-28)

Dolo off wh. matrix, med grain,with dark grains, lith some also with poor inter gran por , no shows, Note has more calcite min component than abv.

as abv wiht increase Dol off white, fxln to med xln, no shows

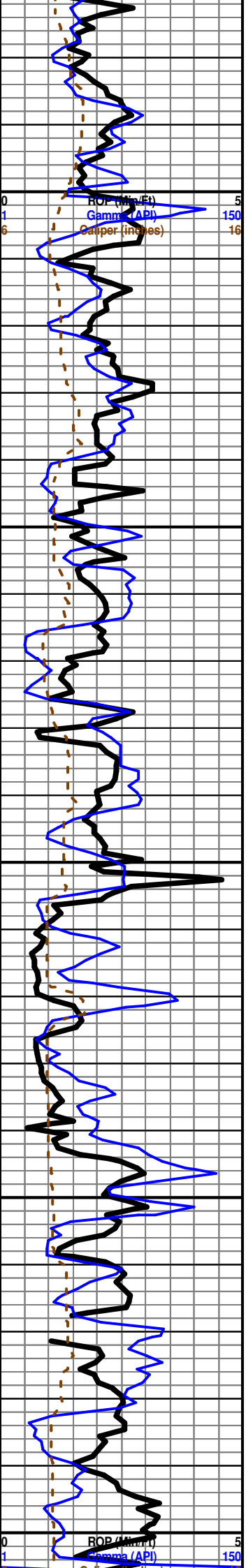
Dol off wh, as abv, with increase of red and gray shales

Shales as abv., Also with Chert off white, no vis por,

Sh dk to med gray, sh red, Dol. as abv

Sh dk gray to lt gray, Ls gray, fxln to lith, no vis por, No show, few pieces very faint wh min flor.

Sh dk gray, Sh red, Ls off wh to gray, fxln to med xln , no vis por



3000

3050

3100

3150

3200

Ls dk gray, lith, No vis por, Sh dk gray, Sh red

Sh red and Sh dk gray

Ls med gray, lith no vis por, Sh dk gray, Sh red sndy

Ls off wh, lith, no vis por also Sh gray

Ls off wh lith, no vis por.

Sh dk gray, blocky, Sh red sndy

Ls off wh, med to flxn no vis por.

Sh dk gray, Sh gray, Sh red, Ls off wh, med to flxn No vis por.

Ls dk gray, lith, no vis por,Sh dk gray

Begin 10' Sample Examination @ 3100'.

Sh dark gray with some Sh red, trace Ls. off wh med xln, no vis por, No shows

Ls dk gray lith to fxln no vis por, Sh red and gray

Sh red wth Sh dk gray

Sh. red and Sh. dk gray, Ls off wh f to med xln, trace inter rgan por, No shows

Sh red and gray

_____COTTONWOOD 3125(-301)_____

Ls wh, fxln to mxln, trace inter gran por,, many pieces appear to to be re xln fine to med size ooids, No shows, Ls also has br wh min flor, Ls gray, some med xln, some with sl inter gran por,

Ls wh med xln, sl vis po, wh br cal min. flor, No shows

Mainly Sh red and sh dk gray, Also Ls off wh, med to fine xln, no vis por.

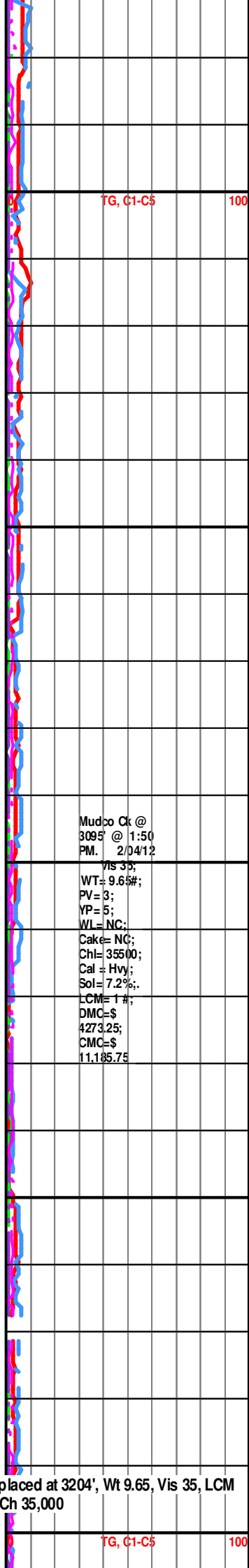
Shales red and gray, Ls off wh to wh, fine to med xln, poor to good por, this ls has wh min flor, no shows. Ls lt gray, lith, dense, few pieces with trace of vug por. No shows.

_____NEVA LS 3178 (-354)_____

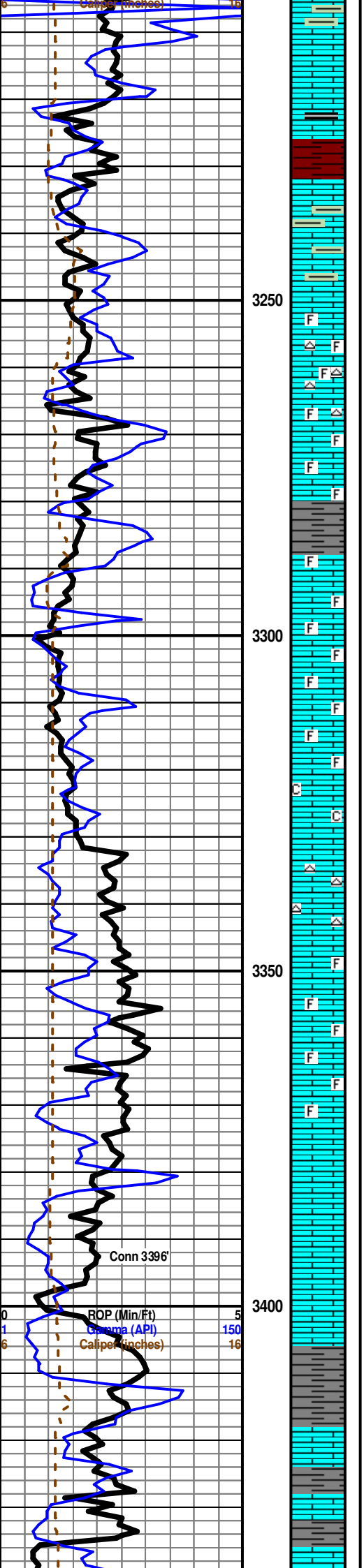
Shale red and gray, Ls dk gray, vey foss and with clear cal grains, poor inter gran por, Also Ls lt gray, lith also foss, with forams, Ls off wh fine to med xln, trace poor inter gran por, also has br wh min flor, All no shows.

Displaced at 3204', Wt 9.65, Vis 35, LCM 1#, Ch 35,000

Ls off wh to lt gray, lith, dense, no vis por, Ls off wh, f to med xln, poor to mainly no vis por, No Shows, Sh red with round pale green inclusions, trace Sh pale green, Sh gray. Note Ls wh - have wh min flor.



Mudco Ck @
3095' @ 1:50
PM. 2/04/12
Vis 35;
WT= 9.65#;
PV= 3;
YP= 5;
WL= NC;
Cake= NC;
Chl= 35500;
Cal = Hvy;
Sol= 7.2%;.
LCM= 1 #;
DMC=$
4273.25;
CMC=$
11,185.75



Begin 20' Sample Examination @ 3220'.

As abv. Samples much better, Also with Sh bl carb Note at 3221' reset back ground gas to 10 units.

Ls off wh, f to med xln, trace inter gran por, No shows. Sh red, with rnd green sh inclusions. Sh bl carb

3250

Red shales drop out, Ls off wh, med xln to fxln, fraf and foss in part, trace poor to fair vug por, No Shows, Also trace of Lt gray chert, All no shows

As abv, increase in Ls gray frag, foss, med xln to fxln, No vis por, Trace Ls lt gray, lith, No vis por, All No shows.

Sh dk gray

3300

Ls dk gray ss abv.

Ls off wh, frag, fxln med xln, poor por, No shows

Ls med gray, fxln to lith, poor vis por, trace chert wh lith excell. concod/ fracture, chert has bright min flor, Trace Ls dk gray gradding to med gray, Ls wh lith has br wh min flor. All no shows.

3350

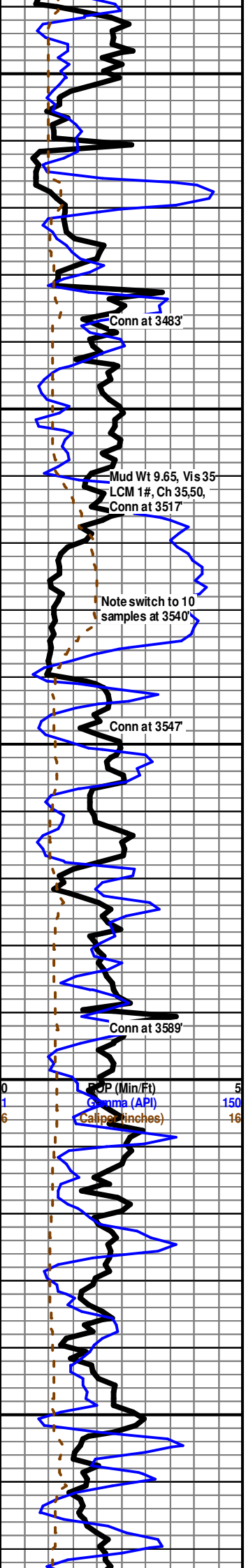
Increase in Ls med gray, fine med xln, frag, foss, poor to fair vis por. No shows

Ls med gray, fine med xln, frag, poor to fair vis por. No shows, Note some pieces grade to Ls wh to off wh, med xln, fair to inter gran por, trace br stain, - non oil type, (had no cut), also has dull wh min flor. All no shows.

3400

TG, C1-C5

Ls med grain, frag, poor por, Ls of wh md xln, fair por, No shows.



Ls tan lith no vis por, Ls lt Br, gran med gain, dns, note some calcite edges, poss excell. vug por, trace lt yell min Flor, No shows

Ls lt br as abv, Ls off wh wh fxln to medxln grain, poor inter gran por. No shows.

Ls all as abv, No shows

Begin 10' Sample Examination @ 3510'.

Ls tan, fxln to med xln, clastic, well cmted , ukn bl minerals, Ls tan lith, All no shows

Ls lt br clastic as abv, Sh gray, Sh bl carb, No shows

_____ROOT SH 3516 (-692)_____

Sh med brown, Ls tan lith

Sh med brown, Sh pale gray, Ls med gray clastic fxln, no vis por Trace of Sh bl, carb, All no shows

_____STOTLER LS 3540 (-716)_____

Ls off wh, dnse also with med to fxln, no vis por. Ls lt gray, oolitic well cemented, no vis po, All no shows

Ls lt br oolitic, well cmted to poor inter gran por, Ls lt gray frag, fxln, no vis por. No shows.

Ls tan lith to trace with poor vug por, Ls off wh, med xln, poor inter gran por, Ls off wh, recry oolitic well cmt, no vis por seen, Sh med gray, No shows.

Ls off wh fxln to mxln, recry oolitc, trace poor vis por, Ls lt gray lith no vis por, Sh greenish brown, No shows
Ls off wh, lith to med gain, poor to good por, some pieces have large xlns on edges, sl glauc, Ls med br clastic and foss well cmted, dk black grains. No shows.

_____TARKIO LS 3595 (-771)_____

as abv with increase of Ls med br. No Shows

Ls med br. as abv, also trace Chert Lt gray, Sh dk gray, No shows.

Ls Lt gray green, lith, oolitic in part, few pices have fine inter xln por. trace Sh lt gray, No shows.

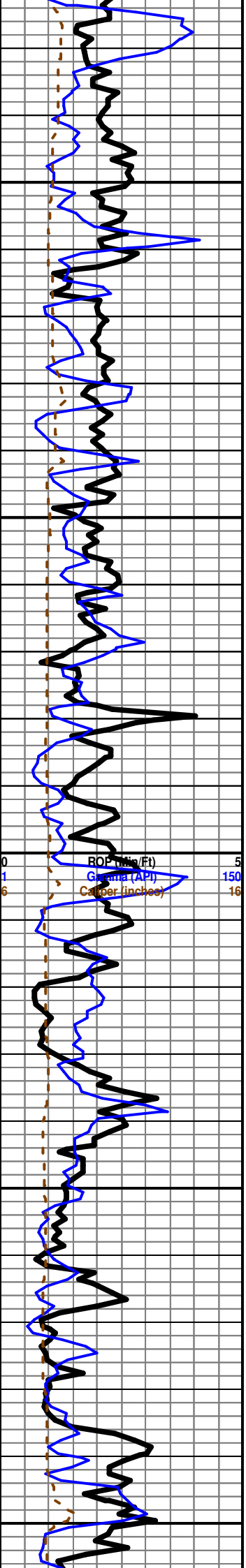
As abv Sh lt gray

Ls med br as abv, less por, No shows

Ls gray green as abv,, Ls lt br lith few pieces with trace carbon foss, Ls off wh, foss, corals, trace cal min flor, Sh lt gray, No shows, trace sh gray green

Ls off wh lith, to sl chlky, Ls lt br lith also oolitic well cmted, No shows, trace sh lt gray green

Mudco Ck @ 3603' @ 6:45 AM. 2/05/12
Vis 47;
WT= 8.75#;
PV= 14;
YP= 14;
WL= 8.0;
Cake= 1; Chl= 2350; Cal = 20;
Sol= 2.7%;
LCM= 2#;
DMC=$ 146.30;
CMC=$ 11,332.05.



3700

3750

3800

3850

3900

Ls lt gray to lt. br, lith, frag, very foss, poor to excell por, (large xlnxs on edges of rock cuttings), Ls med br, frag on vis por, No shows, Sh bl carb,

Ls med gray, ltih to foss, crinoids, fuss, fair to excel vug por, sl chlky in part, Sh bl to med gray, No shows

Ls lt gray, very foss, frag, forams, matrix is lith, no vis por, LS off wh ot lt gray, chlky in part, Ls grey green liht no vis por, Sh bl carb, Chert dk gray, All no shows

Ls tan med br, lith, fxln to med xln, poor inter gran por, sl chlky in part, Sh bl carb, off wh vfxln, no vis por, few pieces ft wh min flor. All no shows.

Ls off wh, vfxln, heavy recry oodis, chky in part, Ls med br, foss, to ltih, Sh gray, trace Sh dk grey green,

All as abv, also Ls Ls off wh, ltih some fractures por with br stain, No odor, Sl overall, cal min flor, No cut, No odor.

Ls off wh as abv, foss to chlky in part, ltih poor to fair vis por, Ls dk gray, frag no vis por, LS dk br, foss and clastic, Sh dk gray, foss, No shows

All as abv, increase in Sh dk gray, also trace Sh red. Ls wh lith, sl foss in part, No vis por, No shows.

0 TG, C1-C5 100

TOPEKA 3809 (-985)

Ls off wh, dns no vis por, Sh dk gray, No shows.

LS off wh, fxln to chlky in part fair por, No shows

Ls as abv.

Ls off wh as abv, increase in chalk, sample washes wh., pale wh min flor no odor, No Shows.

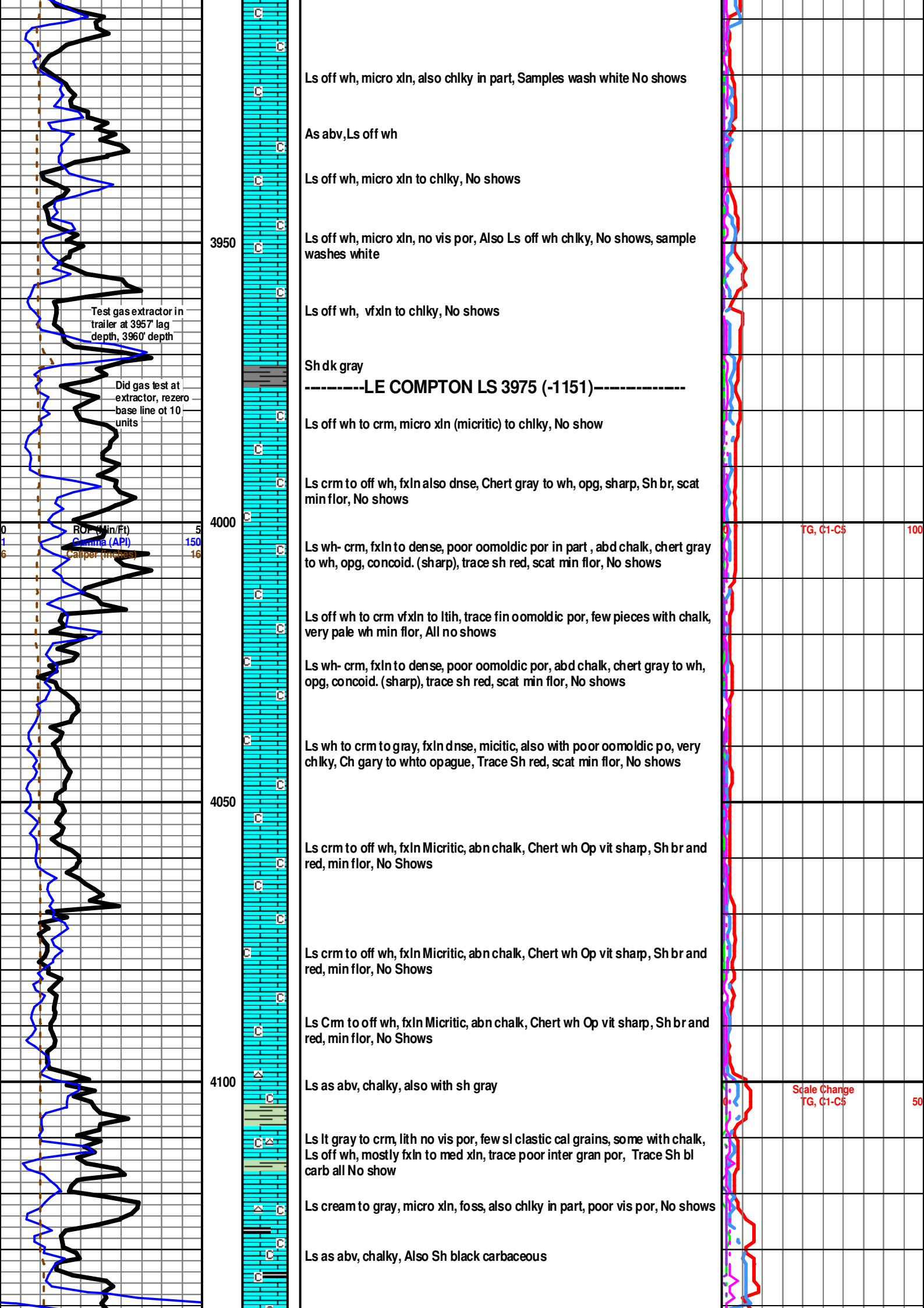
Ls off wh fxln to vflxn, poor to fair inter gran por, No shows.

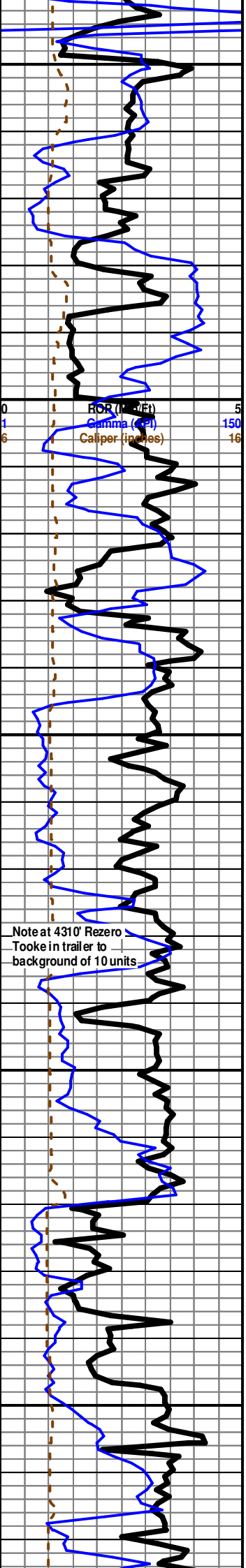
Ls off wh as abv, with increase in Ls chalky, No shows.

Ls off wh very chlky, No shows

As abv wiht Sh lt gray

Ls off wh, micro xln, chlky, No shows


Test gas extractor in trailer at 3957' lag depth, 3960' depth
Did gas test at extractor, rezero base line ot 10 units
0
ROP (Min/Ft)
5
1
Gamma (API)
150
6
Caliper (inches)
16
3950
4000
4050
4100
Ls off wh, micro xln, also chlky in part, Samples wash white No shows
As abv,Ls off wh
Ls off wh, micro xln to chlky, No shows
Ls off wh, micro xln, no vis por, Also Ls off wh chlky, No shows, sample washes white
Ls off wh, vfxln to chlky, No shows
Sh dk gray
---------LE COMPTON LS 3975 (-1151)----------
Ls off wh to crm, micro xln (micritic) to chlky, No show
Ls crm to off wh, fxln also dnse, Chert gray to wh, opg, sharp, Sh br, scat min flor, No shows
Ls wh- crm, fxln to dense, poor oomoldic por in part , abd chalk, chert gray to wh, opg, concoid. (sharp), trace sh red, scat min flor, No shows
Ls off wh to crm vfxln to ltih, trace fin oomoldic por, few pieces with chalk, very pale wh min flor, All no shows
Ls wh- crm, fxln to dense, poor oomoldic por, abd chalk, chert gray to wh, opg, concoid. (sharp), trace sh red, scat min flor, No shows
Ls wh to crm to gray, fxln dnse, micitic, also with poor oomoldic po, very chlky, Ch gary to whto opague, Trace Sh red, scat min flor, No shows
Ls crm to off wh, fxln Micritic, abn chalk, Chert wh Op vit sharp, Sh br and red, min flor, No Shows
Ls crm to off wh, fxln Micritic, abn chalk, Chert wh Op vit sharp, Sh br and red, min flor, No Shows
Ls Crm to off wh, fxln Micritic, abn chalk, Chert wh Op vit sharp, Sh br and red, min flor, No Shows
Ls as abv, chalky, also with sh gray
Ls lt gray to crm, lith no vis por, few sl clastic cal grains, some with chalk, Ls off wh, mostly fxln to med xln, trace poor inter gran por, Trace Sh bl carb all No show
Ls cream to gray, micro xln, foss, also chlky in part, poor vis por, No shows
Ls as abv, chalky, Also Sh black carbaceous
0
TG, C1-C5
100
Scale Change
0
TG, C1-C5
50



4150

4200

4250

4300

4350

----------Heebner Sh 4144(-1320)----------

Ls lt br, med to fxln, no vis por no show

Sh med gray to br., Ls of wh, med xln no vis por

----------Toronto Ls 4161 (-1337)----------

Ls wh, fxln, dnse. micritic, very chlky, sH bl as abv, Sh br - med gray, trace scat min flor, No shows

----------Douglas Sh 4181 (-1357)----------

Sh gray green, soft, Ls crm to off wh, vfln to micritic, no vis por, No shows.

Ls off wh, vfln, to dnse, also frag, chalky, trace chert bl, Sh lt gray soft, no shows.

Sh lt gray to med gray,

Sh gray green, Ls crm to off wh, no vis por, has lt. wh cal min flor, Trace Sh bl carb.

Sh dk gray to br , very sandy with fine qtz grains, very calcite rich cmt, Sh lt gay very soft, Ls off wh med xln, no vis por, No shows

----------Brown Ls 4239 (-1415)----------

Ls med to lr br, fxln to med xln, trace poor vug por, also sl foss in part, Sh bl carb, All no shows

----------LANSING 4248 (-1424)----------

Ls wh to crm dnse, to chalky, some w/ micritic por, Sh bl carb, Sh med br, very ft cal min flor, No shows

Ls crm to off wh, vf xln, some v sml recry ooids Note1 piece with poss gil stain on edge, Note sample has no odr, some with a very ft cal min flor no show, trace Sh bl carb,

Ls off wh to crm, lith to well recry or well cmted very fine oooids, sl foss in part, very dnse, No vis por, Chert crm wh opag, v ft min flor, All no shows

Ls med br lith dnse no vis por, sl chlky in few pieces, Ls off wh , sli foss as abv., All no show.

LS off wh to crm to gray few pieces withpin point por and inter gran por, also lith, Sh bl carb, All No show

Ls med gray very dnse, no vis por, Ls crm to off wh dnse no vis por, Sh dk gray ot bl carb

Ls off wh to crm lith to vf xln, no vis por, also some with recry fine ooids, trace Sh bl carb, No shows.

Ls as abv

Ls dk br, med xln gran, re xln foss, forams, Lg ooids, poor inter gran por, Ls off wh to lt brown as abv also chlky to micritic in part, Sh bl carb, No shows

Ls off wh to crm, also Lt br, dnse, also sl micritic, poor xln por, Chert wh opag vit, Ls off wh also chlky, Sh gray, Sh green, All no shows.

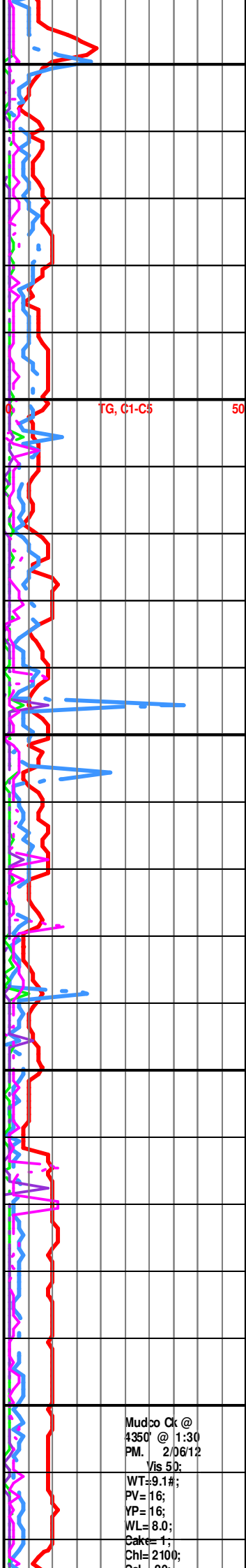
Ls med br to lt br, fine to med xln, poor por, Ls tan lith no vis por, trace Sh dk gray & Sh Bl carb, Ls wh all chalk, All no shows

Ls lt br to crm, lith trace poss frac por, mostly dns, Sh bl carb, No shows

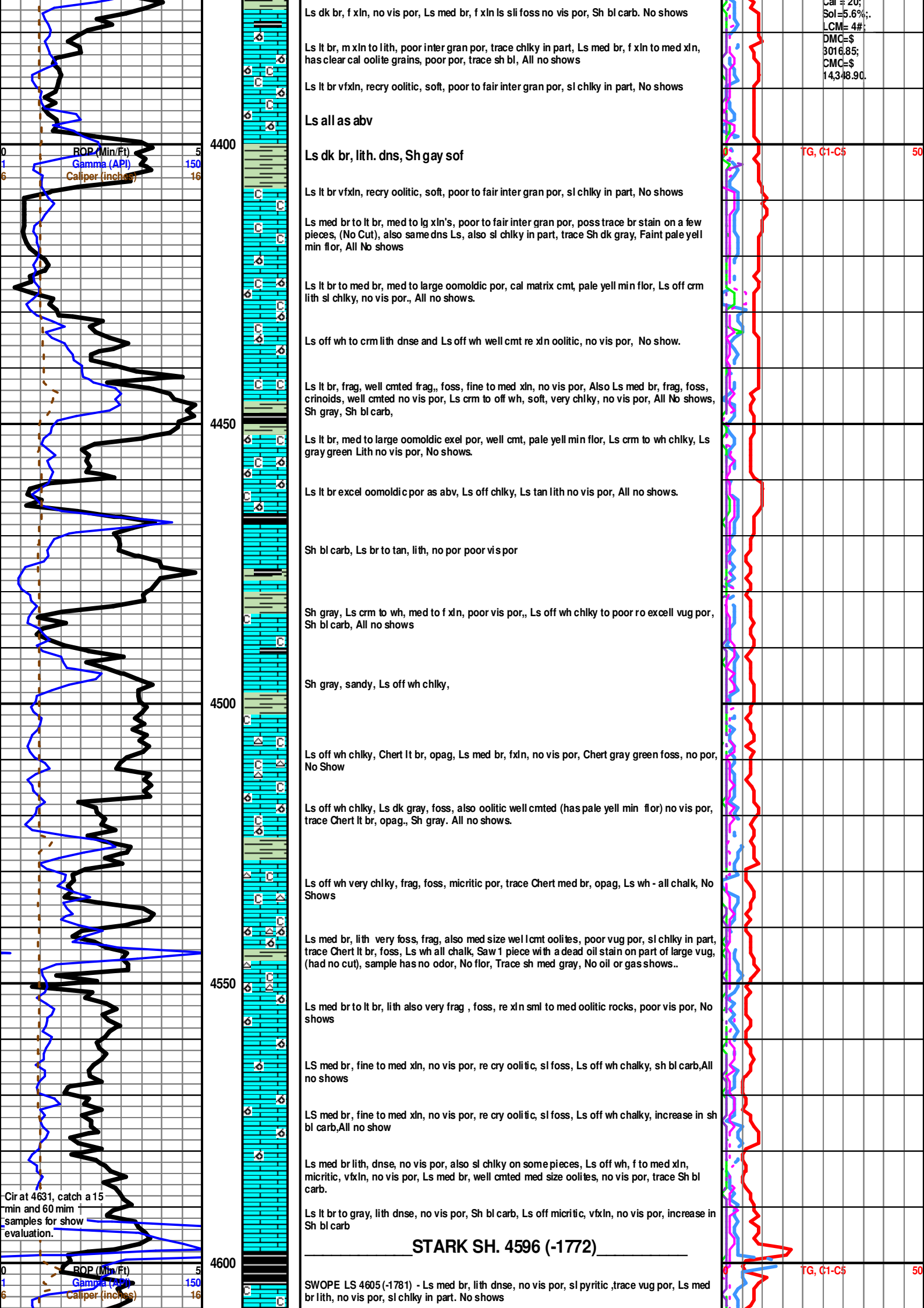
Ls dk br, ltih to vfxln, no vis por, Ls crm to off wh, lith dnse, few large recry flat ooids, sl frac por, Ls off wh to crm med xln por vis por, Trace Chert dk br, opag, All no show

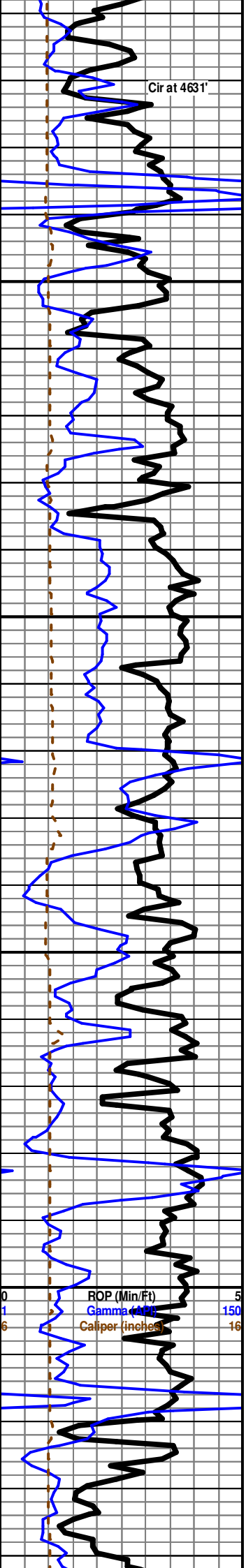
Ls dk br, lith dns, no vis por, also has sl pale min flor, Ls tan to lt br, lith grad to fxln, poor to excell vug por, Sh bl carb, Sh dk Sh gray, No vis por. No shows

Sh dk gray



Mudco Ck @
4350' @ 1:30
PM. 2/06/12
Vis 50;
WT=9.1#;
PV= 16;
YP= 16;
WL= 8.0;
Cake= 1;
Chl= 2100;


ROP (Min/Ft)
Gamma (API)
Caliper (inches)
0
5
150
16
4400
4450
4500
4550
4600
Ls dk br, f xln, no vis por, Ls med br, f xln ls sli foss no vis por, Sh bl carb. No shows
Ls lt br, m xln to lith, poor inter gran por, trace chlky in part, Ls med br, f xln to med xln, has clear cal oolite grains, poor por, trace sh bl, All no shows
Ls lt br vfxln, recry oolitic, soft, poor to fair inter gran por, sl chlky in part, No shows
Ls all as abv
Ls dk br, lith. dns, Sh gay sof
Ls lt br vfxln, recry oolitic, soft, poor to fair inter gran por, sl chlky in part, No shows
Ls med br to lt br, med to lg xln's, poor to fair inter gran por, poss trace br stain on a few pieces, (No Cut), also same dns Ls, also sl chlky in part, trace Sh dk gray, Faint pale yell min flor, All No shows
Ls lt br to med br, med to large oomoldic por, cal matrix cmt, pale yell min flor, Ls off crm lith sl chlky, no vis por., All no shows.
Ls off wh to crm lith dnse and Ls off wh well cmt re xln oolitic, no vis por, No show.
Ls lt br, frag, well cmted frag,, foss, fine to med xln, no vis por, Also Ls med br, frag, foss, crinoids, well cmted no vis por, Ls crm to off wh, soft, very chlky, no vis por, All No shows, Sh gray, Sh bl carb,
Ls lt br, med to large oomoldic exel por, well cmt, pale yell min flor, Ls crm to wh chlky, Ls gray green Lith no vis por, No shows.
Ls lt br excel oomoldic por as abv, Ls off chlky, Ls tan lith no vis por, All no shows.
Sh bl carb, Ls br to tan, lith, no por poor vis por
Sh gray, Ls crm to wh, med to f xln, poor vis por,, Ls off wh chlky to poor ro excell vug por, Sh bl carb, All no shows
Sh gray, sandy, Ls off wh chlky,
Ls off wh chlky, Chert lt br, opag, Ls med br, fxln, no vis por, Chert gray green foss, no por, No Show
Ls off wh chlky, Ls dk gray, foss, also oolitic well cmted (has pale yell min flor) no vis por, trace Chert lt br, opag., Sh gray. All no shows.
Ls off wh very chlky, frag, foss, micritic por, trace Chert med br, opag, Ls wh - all chalk, No Shows
Ls med br, lith very foss, frag, also med size well cmt oolites, poor vug por, sl chlky in part, trace Chert lt br, foss, Ls wh all chalk, Saw 1 piece with a dead oil stain on part of large vug, (had no cut), sample has no odor, No flor, Trace sh med gray, No oil or gas shows..
Ls med br to lt br, lith also very frag , foss, re xln sml to med oolitic rocks, poor vis por, No shows
LS med br, fine to med xln, no vis por, re cry oolitic, sl foss, Ls off wh chalky, sh bl carb,All no shows
LS med br, fine to med xln, no vis por, re cry oolitic, sl foss, Ls off wh chalky, increase in sh bl carb,All no show
Ls med br lith, dnse, no vis por, also sl chlky on some pieces, Ls off wh, f to med xln, micritic, vfxln, no vis por, Ls med br, well cmted med size oolites, no vis por, trace Sh bl carb.
Ls lt br to gray, lith dnse, no vis por, Sh bl carb, Ls off micritic, vfxln, no vis por, increase in Sh bl carb
Cir at 4631, catch a 15 min and 60 mim samples for show evaluation.
STARK SH. 4596 (-1772)
SWOPE LS 4605 (-1781) - Ls med br, lith dnse, no vis por, sl pyritic ,trace vug por, Ls med br lith, no vis por, sl chlky in part. No shows
Cal = 20;
Sol=5.6%;.
LCM= 4#;
DMC=$
3016.85;
CMC=$
14,348.90.
TG, C1-C5
0
50



Ls lt br, vfxln, med to fine xln, soft, micritic, poor por, few pieces good inter gran por, also sl chlky in part, Note saw 1 piece with poss dk bl stain, very faint dull yell min flor, No free oil seen, No oil cut, No odor.

Depth 4631 - 15 min sample- Saw 1 piece with poss dk bl stain on fracture as abv, No flor, no cut, no sample odor, No free oil, No sample cut, mainly Ls lt br to tan, med xln, well cmted cal grains, no vis por, 60 min sample, Mainly Ls lt br fxln, micritic, gradding to lith, no vis por, no stain, no odor, no flor.

Ls lt gray, vf recry xln oolitic, Sh med gray No shows

HUSH SH. 4640(-1816)

Sh bl carb, Sh med gray

Ls lt gray, oolitic, well cmt recrxln, No shows

Sh bl carb (looks like coal)

Ls med br lith to med xln, lots of loose pieces in the tray, poorly cmted, Also Ls tan to tt br, frag , foss, no vis por, Chert lt br, opag, Ls off wh vfg, poor to fair por, trace Chert lt br, very foss, opag, All No shows

Ls lt br oolitic, well cmt, no vis por, trace Chert lt br, very foss, opag. Ls off wh med to fxln, poor to good por, All no hsows

All as abv, Increase in Ls off wh, micrtic to chalky

Ls off wh, micritic to chlky, very fxln, soft to chalky, vfxln to poor por, LS gray lith no vis por, Sh bl, Sh dk gary, All Shows

increase in Sh bl carb, Sh dk gray

Shales as abv, Also large increase of Ls black to dk gray, lith, No vis por, Also Ls off , foss, fxln, poor por. All no shows

Shales as abv, Also large increase of Ls black to dk gray, lith, No vis por, Also Ls off , foss, fxln, poor por. All no shows

Shales as abv, Also large increase of Ls black to dk gray, lith, No vis por, Also Ls off , foss, fxln, poor por. All no shows

MARMATON LS. 4736 (-1904)

Sh gray soft, Ls med br, lith to vfxln, no vis por, Sh bl carb, L off to crm, med xln, poor inter gran por, Sh bl carb. No shows.

Ls off wh to crm, lith to f xln, poor inter gran por, Ls med br, lith to vfxln, no vis por, Sh bl carb. No shows.

Ls off wh to crm, lith to re cry med xlns, dnse, no vis por, Sh bl carb, trace pyrite xlns, trace sh gray. No shows

Ls off wh to lt br. lith also a few pieces frag to foss, Note lith has has a faint wh min flor, all no vis por.

All as abv, increase in Ls med br, No shows

Ls lt br, very oolitic med size med size, well cmted, no vis por, Ls med br, lith, dnse, sl pyritic, trace Chert med br, opage, Trace sh bl carb,No vis por, No shows.

Mainly Ls med br, lith no vis por, Ls off wh to lt br, very chalky, frag, micritic por, trace vug por, Chert lt br, opague, Sh dk gray.

Ls off wh to Lt br, lith to dnse, trace vug por, No shows

Ls lt br lith, dnse, recry oolitic ls, no vis por, Ls off wh, vfxln to lith, trace vug por, trace Sh lt gray, No shows

Ls med br, med to f xln, trace inter gran por, LS off wh med xln, no vis por, Sh bl Carb, No shows

PAWNEE LS. 4824 (-2000)

Ls lt br, lith, micritic to chlky in part, Ls med br, med xln, well cmted, no vis por, Sh bl carb (50%) & Sh Gry (50%). Ls off wh, fxln, poor intra gran por, Note Ls lt br, lith has a very faint lt white min flor, No shows.

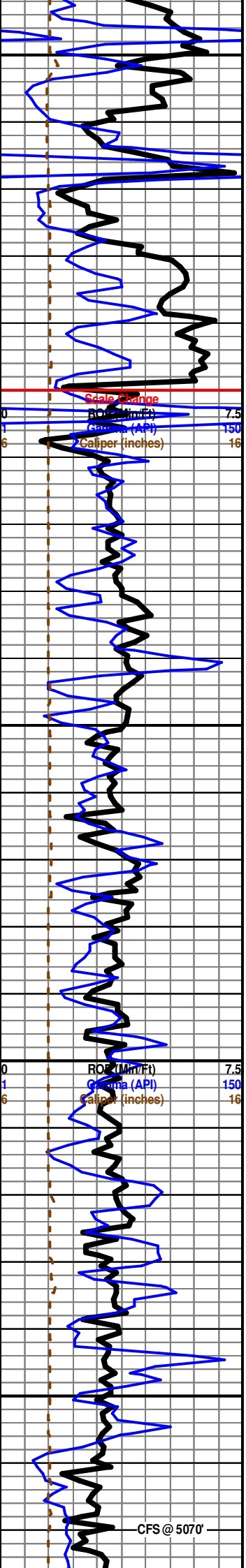
Ls lt br, foss and oolitic in part, rexln,no vis por, Sh bl carb, Sh dk gray, Ls off wh, fxln, very chlky, trace vfxln por, All no shows.*** Good Spl ?.

Ls lt br, vfxln, poor vug and inter gran por, also oolitic in part, well cmted, foss, Note ooids

Total gas kick 22 units, Back ground gas is 8 to 10 units, 12 over.

Mudco Ck @ 4709' @ 7:40 AM.
2/07/12
Vis 50;
WT=9.15#;
PV= 17;
YP= 21;
WL= 6.4;
Cake= 1;
Chl= 1600;
Cal = 20;
Sol=5.5%;.
LCM= 3.5#;
DMC=$ 2945.85;
CMC=$ 17,294.75.

C1 TG, C1-C5 50



4850

4900

4950

5000

5050

and foss are a calcareous med br in color and appear as rexln "ghost" outlines in the rocks, Ls same lt br, lith no vis por with trace of chlky por, has very ft yell min flor, trace Sh bl carb and Sh dk br, Saw 1 piece of Ls off wh to cream, very soft med yell flor, chalky por, No stain, No free oil, No cut, Poss lt fleeting oder in sample, All rocks no other shows

Ls off wh very chlky to micritic, frag, sl foss, chlky type extra fine por, Aslo Ls off wh to med xln, re cry ooids and sml carb ooid grains, poss poor inter gran por, wiht dk min grains, dnse also gardes to Chert, lt br sl foss, All no show

_____CHEROKEE SH. 4868 (-2044)_____

Sh bl Carb, Sh dk gray

Ls lt br vfxln to med xln, poor to fair inter gran por, re cry oolites, Ls dk gray, f to med xln, well cmted no vis por, No shows.

As abv: Ls lt br vfxln to med xln, poor to fair inter gran por, re cry oolites, increase in Ls dk gray, f to med xln, well cmted no vis por, No shows

As abv

As abv

_____2nd Cherokee Shale 4907 (-2083)----------

Sh bl carb

Sh bl carb, Sh dk br, Ls dk gray, lith, dnse, no vis por., Ls lt gray, lith dnse, no vis por, All no shows.

Sh bl carb, Sh dk br, Ls dk gray, lith, dnse, no vis por., Ls lt gray, lith dnse, no vis por, All no shows.

Sh bl carb, Sh dk br, Ls dk gray, lith, dnse, no vis por., Ls lt gray, lith dnse, no vis por, All no shows.

As abv.

---------3rd Cherokee Shale 4944 (-2120)---------

Ls dk gray, lith no vis por, Sh dk br to bl, No shows

Ls med br fxln to med xln no vis por, Ls lt br, med xln, no vis por, Sh dk gray, All no shows.

20 min cir, Ls med br, med xln, frag (unk bl min), sli foss (corals), no vis por, saw 1 piece

Sh bl carb, Sh dk br,, Ls med b, f to med xln, no vis por, No shows good inter gran por, trace sh bl carb, All no shows.

Sh bl carb, Sh dk gray, Ls med br, med xln, trace inter gran por, No shows.

Ls med br, med xln - fxln,no vis por, No shows, trace Ls off, med xln, trace vis inter gran por, No shows.

Ls med br to light br, lith, poor to good vug por, Ls off wh to crm, lith, trace poor vug por, No shows

Ls med br, med to fxln, trace inter gran por, Ls off wh, fine to med xln, trace inter gran por, No shows.

0 TG, C1-C5 50

Ls med br, med xln, no vis por, trace Ls off wh, very chlky, has dk tarry stain , Note total Sample has No flor, 1 piece No solvent cut, 2nd piece Ls med br, med grain, has vsli solvent cut, Sh bl carb, sh dk gray No other shows

Ls med br to lt br, f to med xln, poor inter gran por, also graddng to lith, chlky in part, trace Chert med br, opague with wh contrast wh fossils and inclusions, Saw 1 piece of Ls med br, med xln, rexln ooids and ukn cal gains that have a bl tarry outline around same grain, also sml tar filled fracture in Ls off wh med xln, no vis por,No cut, Sample had No flor, Rest no shows.

Ls dk br, lith, med xln, no vis por, sh greenish gray, Ls ed br, lith no vis por, Ls off wh to crm, lith, dnse, fair to med xln, poor inter gran por, All no shows

----------Top of INOLA LS at 5041 (-2217)---------

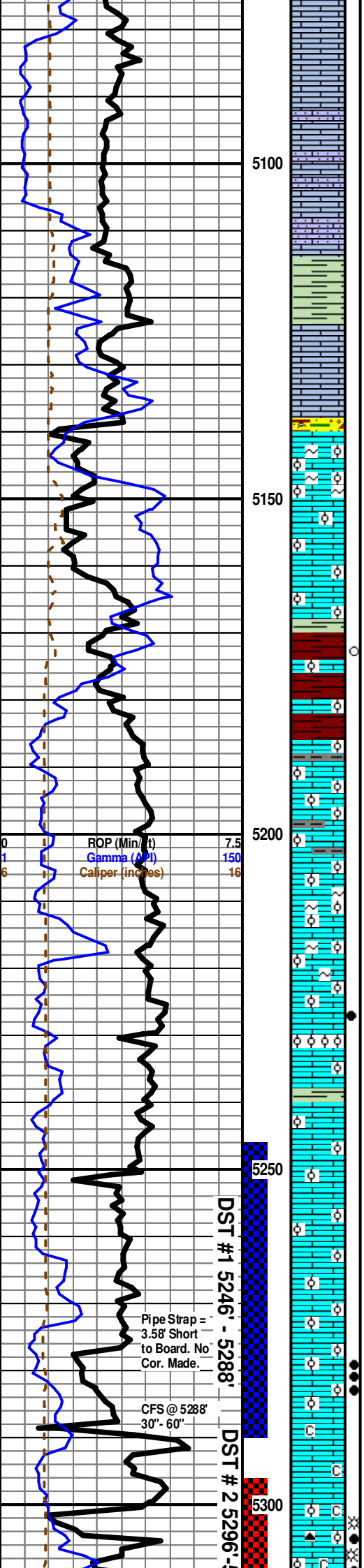
Ls med br, med xln, no vis por, few large cal xln's, trace vis por, few pieces fxln, excell por, Ls wh, f to med por, no vis por, Ls dk br to bl, lith, no vis por, Chert bl, also Ls bl very foss, foss are wh calcite or wh chert inclusions, opaq, no vis por., All no shows.

40 min, Ls med br, med xln, good to exel por, also lith, also oolitic in part, well cmted no vis por, saw 1 piece -Ls off wh. to very chlky, med xln, good inter gran por, has bl tarry stain, Excellent br wh solvent cut,

60 min Top of MORROW SH at 5069 (-2245) Ls dk br, has dk cal grains, med xln, few glau. grains, trace inter gran por, Ls off wh, med xln, pyr xlns, fair to good inter gran por, gradding to chlky, trace Sh bl carb, also sh pale green, also Sh lt gray. No shows in 60 min sample. Top Chester 5074 (-2250)

_____Top Chester 5074 (-2250)_____

At 5070' cir 60 min, Run short trip at base of surface casg, Pulled tight across Topeka section, trip back in, Cir 1 hr before driling ahead on 2-8-12, at 11:15 a.m.



Ls lt dull br, med xln, no vis por, Sh bl carb, Sh med gray, trace Sh pale green, Ls med xln, also with Ls med br with excell vuggy por - with med size cal xlns, No shows

Ls med br, med to fxln, no vis pos, re xln sli oolitic in part, few pieces with med vug por, increase in Sh bl carb, trace Sh lt gray, Sh lt green, trace Chert opague to clear, Also ls offwh, fxln to chlky, No shows.

Ls med br, med xln, gran, poor vis por, also with matrix alter.to chalk, some with wh lith ls, sl foss grains, No Shows

Ls med br, med xln clear to bl grains, part foss, some gradding to fxln, has xlns vuggy por, Also Ls med xln with med grains floating in altered chlky matrix, fair inter gran micritic por, Note some of the grains were well rounded, looks like Qtz grains, ALL DISSOLVED AWAY IN ACID, No shows

----------Chester Marker 5115 (-2291) ----------

-80% of Sample is: Sh med gray dnse hard, Ls Lt gray, lith with chlky por, Ls gray, frag with med size gray and wh cal grains, trace inter gran por, No Shows

Sh dk gray as abv,, Ls med fray lith, no vis por, Ls med br fxln no vis por,, Ls off wh very chlky, micritic, trace bk tarry stain, has (no cu), trace Ls off wh, matrix, with dk br foss, frag, No vis por, No Shows

Dramatic decrease in gray sh as abv (lees than 5%) Ls lt gray to tan, lith, dnse, with a poss few microfractures, sli foss, Saw 1 one 1 piece with dk min stain (had no cut), saw several pieces with med to lrg wh calcite on edges - excell vug por,, also Ls gray green lith no vis por, No shows

75% of sample Ls off wh, vflx, poss micro ooliitic, with trace micro glau grains, vf xln, poss fair inter gran por -?, Ls off wh lith to med grain, no vis por, trace sh bl, trace Ls med xln, sli pyritic, no vis por, trace lt gray soft clay with limonite stain,, trace green ply Sh with frag grains, trace clear Chert very foss, frag, vit All no shows

Ls off wh as abv.

Ls off wh, vfxn, grains well cmted, little or no visible porosity, dnse, few pieces have a sli greenish tint to the rocks, Ls pale green micro oolitic, well cmted no vis por to poor vis por. Trace Sh pale geen, med br, All No Shows.

Sh dull red, Sh dk gray, decrease in Ls wh abv, Ls med gray, lith no vis por No Shows, Saw 1 piece Ls wh, ext large cal xlns, indicating excel. vug por, lt stain on surfaces (had a very pale solvent cut), Sample washes pale red, No other shows.

----------ST GEN. 5174 (-2315)----------

increase in Sh dull red, Ls off wh, micro oolitic, well cmted, no vis por, Sh med olive gray, Sample washes red, No shows.

Marked decrease in Red shale, (sample does not wash red), Ls off wh, micro oolitic, well cmted, dns, no vis por, (as abv), Ls off wh and lt br (looks like salt and pepper) reddish to br tint, fair to good inter gran por, Sh olive green, very sandy,

Ls off wh, micro xln, micro oolitic, well cmted, dns, Same Ls but with a greenish tint, fair to good por, Trace sh dk gray massive. All no shows

Ls off wh, micro xln oolitic, well cemented,few piece, dns, salt and pepper texture no vis por, wtih traces of glauconite , trace green Sh, No shows.

Ls off wh, micro xln oolitic, well cemented, dns, range from no vis por to a some with poor vis por, No shows, few darker pieces were tested and had no solvent cut, few pieces of Ls lt , br, lith, dnse, no vis por, very faint wh min flor No shows

Mainly ls off, micro xln, micro oolitic, dnse, little or no por, Few piecres of Ls micro oolitic, dnse well cemented, have poss fractures that follow a lt br streak in the rock chip (no solvent cut), Ls off wh micro xln, micr oolitic, as before with excellent por, very weakly cmted, All no shows

-------St Louis Formation 5241 (-2417) ----------

Ls off wh vfxln, micro oolitic to med to large oolitic, well cmtd (Note this is the first time I have seen a med to large size oolite rock), trace sh grey green, few pices Ls micro xln, micro oolitic, weaky cmtd, excel inter gran por, Ls lt brown in color, micro oolitic as before well cmted, Ls med br, med xln, dnse, large re xln ooids, well cmted, no por, all no shows.

Ls off wh, vfxln, micro oolitic,well cmted, dnse, very little inter gran por, a lot of thie sample has a very ft yell min flor, (first time) No cut, Ls off wh, mixed micro to med oolitic grains, some poor inter gran por,Not as well cmted, few pieces Ls, lt br, micro oolitic, lt br,well cmted, no por, few pieces red shale, trace green shale, trace glauconte min grains, no odor all rock types No solvent cuts, No shows, Note there was a yell dish stain after sol cut- poss low grav crude oil?

5270 sample - Ls off wh, micro xln, micro oolitic, weakly cmted, has very dull lt yell flor, when crushed, no free oil seen, No odor, No cut but there was a more distinct yell dish stain after using solvent- poss low grav crude oil ?

-------St Louis B Porosity Zone 5277 (-2453)------

Sample at 5288,before gas kick arrived at detector, Ls lt greenish gray, lith, no vis por, Ls Few pices Chert, lt br, very oolitic as wh calcite rims, with lt br oil stained centers, observed leaking bl oil under lamp, Good oil show Also ls lt br, lith, no por, trace dk br shale

15 min sample at 5288', Very strong sample odor, Ls off wh med to fxln, excel inter oolitic por, loosely cmted, several pieces bleeding bl oil, stong dull yell solvent cut, Also with wh barren med size oolitc rocks, ls wh chlky no show, sh dk gray. 30 min, increase in same show rocks, also Ls wh chlky, 45 min dec show in rocks, 60 min dec show no odor, well cmted rocks.

30" CFS @ 5309' Ls Wht Good OOL Por w/OOL in pl Med-Lg Ooids Friable Well Sorted Lt Cmt Good Hvy Stn Sat Around Ooids SG/SFO Strong Odor Tr/Sli ? Stn Flor Cht Gry Op Shp Vit Good SG/SO

60" CFS @ 5309' Ls Wht Good OOL Por w/OOL in pl Med-Lg Ooids Friable Well Sorted Lt Cmt Good Hvy Stn Sat Around Ooids SG/SFO Strong Odor Tr/Sli ? Stn Flor Cht Gry Op Shp

Re zero at 5070 background to 10 units

Mudco Ck @ 5091' @ 7:40 AM. 2/08/12 Vis 52; WT=9.2#; PV= 20; YP= 20; WL= 7.6; Cake= 1; Chl= 2400; Cal = 20; Sol=6.3%;. LCM= 3#; DMC=$ 2380.05; CMC=$ 19,674.80.

DST # 1 5246'- 5288'. Times: 5"-90"-120"-240". Blow: IF = Weak Inc. BOB/4.4". FF= BOB/1.5". Recovery: 3845' GIP; 765' TF; 400' GO (97% O & 3% G); 65' GSMCO (90% O, 5% G & 5% M); 180' VHMCO (37% O, 27% G & 36% M); 120 GMCO (71% O, @% G & 27% M). 26 Grv. Pressures: IH=2462#: FH =2459#; IF= 35-77#; FF = 99-234#; ISIP = 1327#; FSIP = 1289#; Temp = 123 degrees F.

TG, C1-C5 0 50

DST # 2 5296'-5315'. Times: 5"-90"-120"-240". Blow: IF = Weak/1.5". FF= Weak / BOB/89". Recovery: 370' SMCW (w/Tr. Ø); 5 Mud. . Pressures: IH=2469#: FH =2466#; IF= 10-29#; FF = 37-203#; ISIP=1396#; FSIP=1373#; Temp = 126 degrees F.

Scale Change TG, C1-C5 0 100

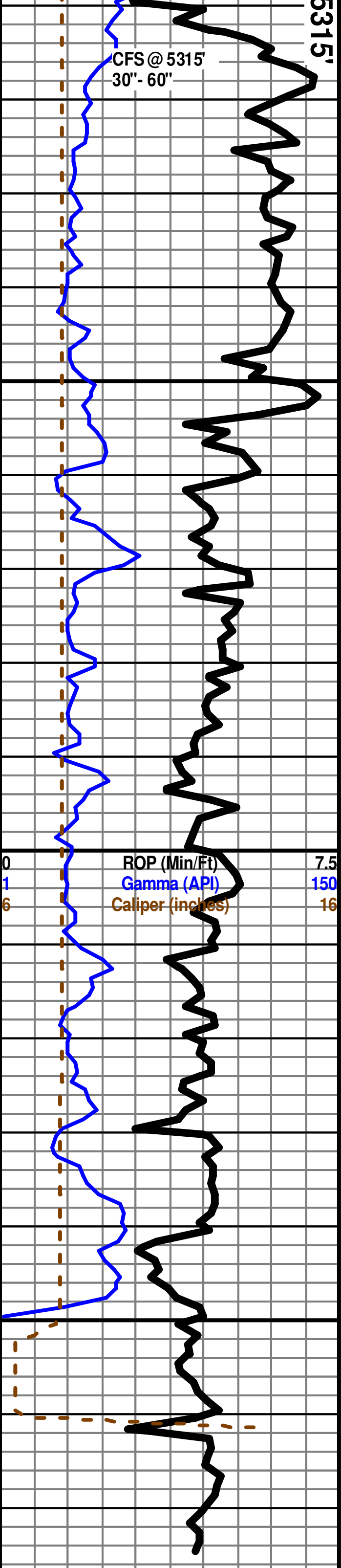
Mudco Ck @ 5238' @ 12:20 PM. 2/09/12 Vis 58; WT=9.2#; PV= 18; YP= 20; WL= 7.2; Cake= 1; Chl= 1900; Cal = 20; Sol=6.3%;. LCM= 3#; DMC=$ 1209.45; CMC=$ 20,884.25.

Gas Kick = 28 Units

Trip Gas = 59 Units

Gas Kick = 50 Units

Gas Kick = 62 Units



R.T.D. = 5475' (- 2651)

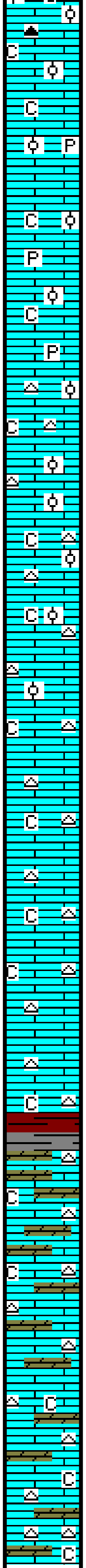
L.T.D. = 5473' (-2649)

5350

5400

5450

5500



Vit Sh Aqua-Grn-CharGood SG/SO

30" CFS @ 5315' Ls Wht Good OOL Por w/OOL in pl Med-Lg Ooids Friable Well Sorted Lt Cmt Good Hvy Stn Sat Around Ooids SG/SFO Strong Odor Tr/Sli ? Stn Flor Cht Gry Op Shp Vit Sh Aqua-Grn-Char Fissil Good SG/SO

60" CFS @ 5315' Ls Good OOL Por AA Strong Odor Good SG/SO AA

Ls Wht Microxln OOL "Sandy" Por Fgrn w/Pyr Inclus Grad Wht-Gry Micrite Dns Barren w/Pyr Inclus Chalk Wht Soft Sh Gry-Red-Char-Gry-Grn Fissil No Odor No Stn No Flor NS

Ls Wht Gry Micrite Dns Barren w/Pyr Inclus Grad Microxln OOL "Sandy" Por Fgrn w/Pyr Inclus AA Wht- Chalk Wht Soft Sh Char-Gry-Grn Fissil No Odor No Stn No Flor NS

Ls Wht Gry Micrite Dns Barren w/Pyr Inclus Grad Microxln OOL "Sandy" Por Fgrn w/Pyr Inclus AA Wht- Chalk Wht Soft Sh Gry-Red- Tr/Blk Carb (? Sluff) Fissil No Odor No Stn No Flor NS

Ls Wht Gry Micrite "Blocky" Inc Tr/Microxln OOL "Sandy" Por Fgrn AA Dec Cht Wht-Gry Translu-Op Shp Vit Chalk Wht Soft Sh Gry–Grn Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Dns Micritie Grad F-lgran Small OOL Por Poor -Fair InterOOL Por Barren w/Pyr Inclu Cht Tan Transl-Op Shp Vit Tr Chalk Sh Gry-Char-Aqua AA Fissil No Odor No Flor NS

Ls Wht-Crm-Gry Fxln Dns Micritie Grad F-lgran Small OOL Por Poor -Fair InterOOL Por Barren w/Pyr Inclus Cht Tan Transl-Op Shp Vit Tr Chalk Sh Gry-Char-Aqua AA Fissil No Odor No Flor NS

Ls Wht-Gry Fxln Dns Micritie Grad F-lgran V Small OOL Por Poor -Fair InterOOL Por Barren Cht Tan Transl-Op Por Shp Vit Tr Chalk Sh Gry-Char-Aqua AA Fissil No Odor No Flor NS

Ls Wht-Gry Fxln Dns Micritie Cht Gry (Banded Wht) Transl-Op Por Shp Vit Tr Chalk Sh Gry-Char Fissil No Odor No Flor NS

Ls Wht-Gry Fxln Dns Micritie Cht Gry (Banded Wht) Transl-Op Por Shp Vit Tr Chalk Sh Gry-Char Fissil No Odor No Flor NS

Ls Wht-Gry Fxln Dns Micritie Cht Gry (Banded Wht) Transl-Op Por Shp Vit Tr Chalk Sh Gry-Char Fissil No Odor No Flor NS

Ls Wht-Gry Fxln Dns Micritie Cht Gry (Banded Wht) Transl-Op Por Shp Vit Tr Chalk Sh Gry-Char Fissil No Odor No Flor NS

SALEM ? 5431' (- 2607)

Ls Wht-Gry Fxln Dns Micritie Tr Dolo-Gry-Wht Fxln Dns Cht Gry Transl-Op Por Shp Vit Tr Chalk Sh Char- Red Fissil No Odor No Flor NS

SALEM POR 5441' (- 2617)

Ls Wht-Gry Fxln Dns MicritieTr/Dolo Gry Fxln Micrite Dns Barren Cht Wht (Banded Blk)-Gry-Op Por Shp Vit Tr Chalk Sh Char-Aqua Fissil No Odor No Flor NS

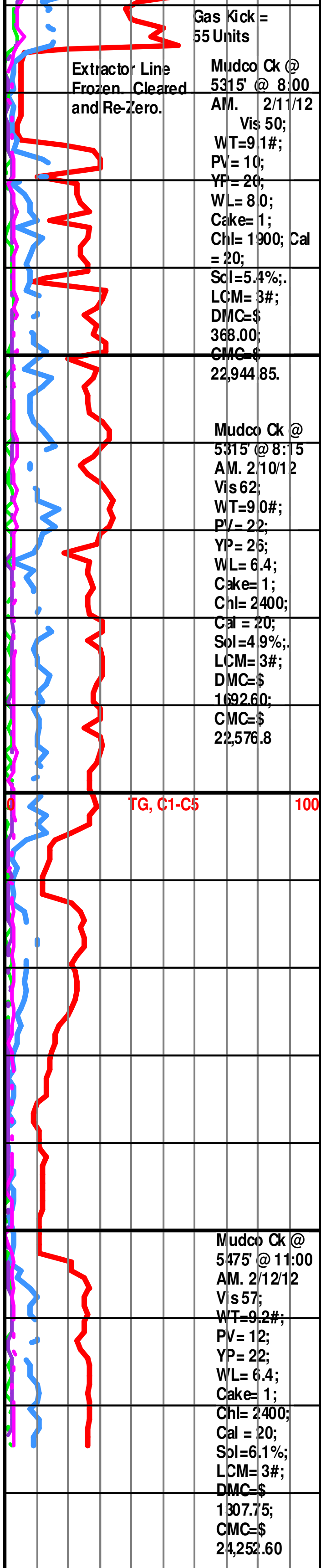
Ls Wht-Gry Fxln Dns Micritie Tr/Dolo Gry Fxln Micrite Dns Barren Cht Wht (Banded Blk)-Gry-Amber Op Por Shp Vit Tr Chalk Sh Char-Aqua Fissil No Odor No Flor NS

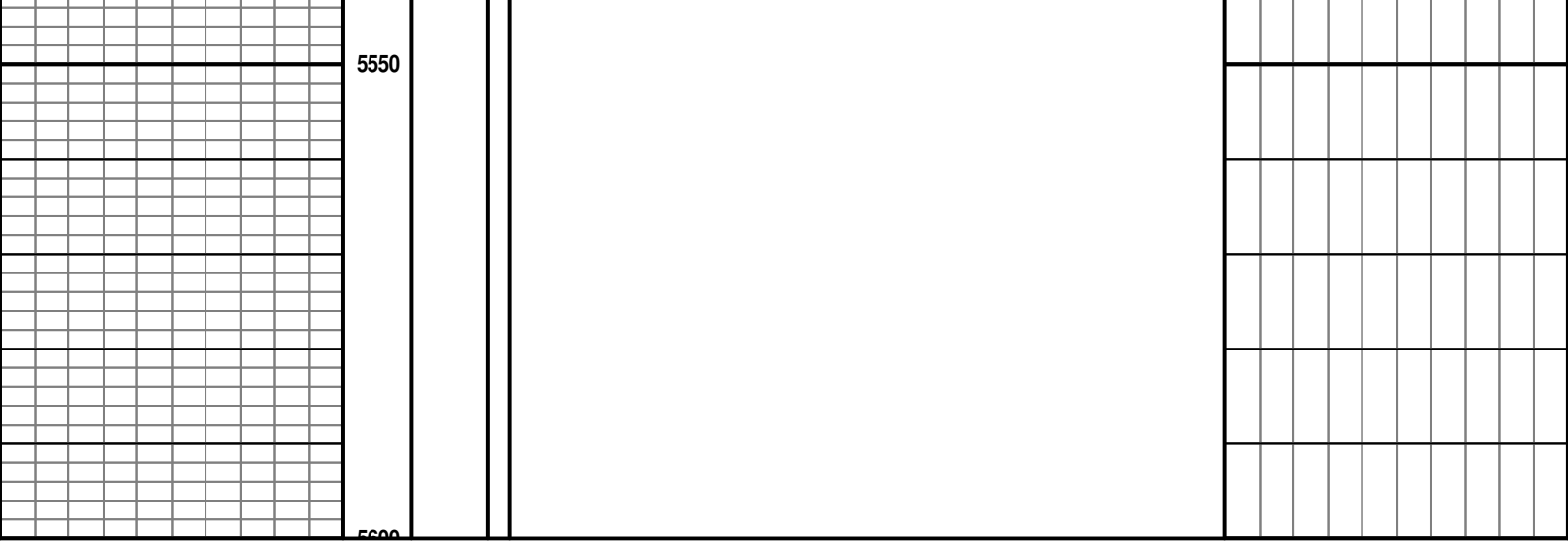
30" CFS @ 5475' Ls Wht-Gry Fxln Dns Mcritie Tr/Dolo Gry Fxln MicriteDns Barren Cht Wht-Op Por Shp Vit Tr Chalk Sh Char-Aqua Fissil No Odor No Flor NS

60" CFS @ 5475' Ls Wht-Gry Fxln Dns Micritie Tr/Dolo Gry Fxln MicriteDns Barren Cht Wht Op Por Shp Vit Tr Chalk Sh Char-Aqua Fissil No Odor No Flor NS

ELECTRIC LOGS BY LOGTECH, INC. : DUAL COMP. POROSITY; DUAL INDUCTION; BOREHOLE COMPENSATED SONIC; MICRORESISTIVITY; GAMMA RAY-NEUTRON (CASED HOLE).

Geologist Left Location @ 8:30 PM 2-12-12




5550