Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1236585

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 # 33168
Name: Woolsey Operating Company, LLC
Address 1: 125 N MARKET STE 1000
Address 2:
City: WICHITA State: KS Zip: 67202 + 1729
Contact Person: DEAN PATTISSON
Phone: (316) 267-4379
CONTRACTOR: License # 34484
Name: Fossil Drilling, Inc.
Wellsite Geologist: BILLY KLAVER
Purchaser:

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☐ D&A ☐ ENHR ☐ SIGW
☑ OG ☐ GSW ☐ Temp. Abd.
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:
Operator:
Well Name:
Original Comp. Date: Original Total Depth:

☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

09/03/2014 Spud Date or Recompletion Date
09/14/2014 Date Reached TD
10/22/2014 Completion Date or Recompletion Date

API No. 15 - 15-007-24218-00-00
Spot Description:
NW SE SE SW Sec. 12 Twp. 35 S. R. 12 ☐ East ☑ West
500 Feet from ☐ North / ☑ South Line of Section
2210 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: Barber
Lease Name: STERNBERGER B Well #: 2
Field Name: STRANATHAN
Producing Formation: MISSISSIPPIAN
Elevation: Ground: 1352 Kelly Bushing: 1364
Total Vertical Depth: 5356 Plug Back Total Depth: 5100
Amount of Surface Pipe Set and Cemented at: 217 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: 5000 ppm Fluid volume: 850 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: WOOLSEY OPERATIONG COMPANY, LLC
Lease Name: ALLEN C-1 SWD License #: 33168
Quarter NE Sec. 26 Twp. 34 S. R. 13 ☐ East ☑ West
County: BARBER Permit #: D-30360

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: 12/29/2014
☑ **Confidential Release Date:** 12/28/2016
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 01/05/2015

[redacted] 1236585

Operator Name: Woolsey Operating Company, LLC Lease Name: STERNBERGER B Well #: 2

Sec. 12 Twp. 35 S. R. 12 ☐ East ☑ West County: Barber

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:

Compensated Density/Comp Neutron PE
Dual Induction

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

Name	Top	Datum
CHASE	1867	-503
HEEBNER	3811	-2447
BROWN LIME	4240	-2870
SWOPE	4520	-3156
MISSISSIPPIAN	4806	-3442
VIOLA	5164	-3800
SIMPSON	5301	-3937

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	17.5	13.375	48	217	CLASS A	300	
PRODUCTION	7.875	5.5	15.5	5143	60/40 POZ	50	
PRODUCTION	7.875	5.5	15.5	5143	CLASS H	120	SEE ATTACHED

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
2	4806-4854 & 4862-4874 MISS	3000 GAL MIRA	4806-4874 OA
		323,000 gal slick wtr, 48,400 gal Hybrid gel,	
		142,200# 30/50 sd, 53,000# 16/30 mesh sd; 20,000# 16/30 mesh resin coated sd	

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run:
	2.875	4937		☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 10/23/2014

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	20	65	270	3250	

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:

Form	ACO1 - Well Completion
Operator	Woolsey Operating Company, LLC
Well Name	STERNBERGER B 2
Doc ID	1236585

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
SURFACE	17.5	13.375	48	217	CLASS A	300	
PRODUCTION	7.875	5.5	15.5	5143	60/40 POZ	50	
PRODUCTION	7.875	5.5	15.5	5143	CLASS H	120	SEE ATTACHED

ALLIED OIL & GAS SERVICES, LLC 063162

Federal Tax I.D. # 20-8651475

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

SEP 23 2014

SERVICE POINT: MEDICINE LODGE KS

DATE 9-3-14	SEC 12	TWP. 35 S	RANGE 12 W	CALLED OUT 700 PM	ON LOCATION 900 PM	JOB START 1100 PM	JOB FINISH 1130 PM
LEASE STARNBERGER	WELL # B #2		LOCATION 281 KIOWA JCT 1 S S INTO			COUNTY BARBER	STATE KS
OLD OR NEW (Circle one)							

CONTRACTOR FOSSIL #3
TYPE OF JOB SURFACE
HOLE SIZE 17 1/2 T.D. 217
CASING SIZE 13 3/8 DEPTH 217
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT 20'
CEMENT LEFT IN CSG. 20'
PERFS.
DISPLACEMENT FRESH H2O

OWNER WOOLSEY ENERGY

CEMENT
AMOUNT ORDERED

COMMON	A 300 sx	@ 17.90	5370.60
POZMIX		@	
GEL	564	@ .50	282.00
CHLORIDE	846	@ 1.10	930.60
ASC		@	
		@	
		@	
		@	
		@	
		@	
HANDLING		@	
MILEAGE			

20% = 1316.52 TOTAL 6582.60

EQUIPMENT

PUMP TRUCK # 894-302 CEMENTER SCOTT FRIDDY
HELPER ROBERT JOHNSON
BULK TRUCK # 364 DRIVER JAMES BOWEN
BULK TRUCK # DRIVER

WELL FILE
Regulatory Correspondence
Drlg / Comp
Tests / Meters
Workovers
Operations

REMARKS:

ON LOCATION TAILGATE MEETING SPOT IN RIG UP SAFETY MEETING, PRESSURE TEST PUMP SAVER, PUMP CEMENT START DISPLACEMENT, END DISPLACEMENT SHUT IN

SERVICE

DEPTH OF JOB 217'

PUMP TRUCK CHARGE			1512.25
EXTRA FOOTAGE	20	@ .40	88.00
MILEAGE	20	@ 7.70	154.00
MANIFOLD		@	
Handling	324	@ 2.48	803.52
Drayage	296.1	@ 2.75	814.27

20% = 674.40 TOTAL 3372.04

CHARGE TO: WOOLSEY ENERGY
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	

TOTAL

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 9954.64
DISCOUNT IF PAID IN 30 DAYS
NET 7963.71

PRINTED NAME MYLE THARP
SIGNATURE

OCT 02 2014

ALLIED OIL & GAS SERVICES, LLC

063168

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: MEDICINE LODGE KS

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
9-14-14	12	35S	12W	700 PM	830 PM	300 AM	415 AM

LEASE STORNBERGER WELL # B #2 LOCATION 281 KIOWA JCT 1 S & W THEN S & E INTO
COUNTY BARBER STATE KS
OLD OR NEW (Circle one)

CONTRACTOR FOSSELL #3
OWNER WOOLSEY ENERGY
TYPE OF JOB PRODUCTION
HOLE SIZE 7 7/8 T.D. 5356
CASING SIZE 5 1/2 DEPTH 5139
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT 37.66
CEMENT LEFT IN CSG. 37 1/2
PERFS.
DISPLACEMENT 2% KCL WATER

EQUIPMENT

PUMP TRUCK CEMENTER SCOTT PRIDDY
548-545 HELPER TODD SOBA, ROBERT JOHNSON
BULK TRUCK
364 DRIVER JAMES BOWEN
BULK TRUCK
DRIVER

REMARKS:

ON LOCATION TAILGATE MEETING, SPOT IN RIGUP
RUN CASING, SAFETY MEETING, PRESSURE TEST
PUMP 10 BBL SPACER, PLUG RAT HOLE
PLUG MOUSE HOLE, PUMP CEMENT,
SHUT DOWN CLEAN LINES, RELEASE PLUG
START DISPLACEMENT, SLOW RATE
BUMP PLUG, RELEASE PRESSURE
FLOAT DID HOLD

CHARGE TO: WOOLSEY
STREET
CITY STATE ZIP

WELL FILE
Regulatory Correspondence
Drlg / Comp Workovers
Tests / Meters Operations

CEMENT

AMOUNT ORDERED
90 sx 60:40:4% Gel
120 sx Class H+10% salt 10% Gypseal 6% Kol seal .8% FL160 + 1/4# Floseal C

COMMON H	120 SX	@ 27.24	3268.80
POZMIX		@	
GEL		@	
CHLORIDE		@	
ASC		@	
60:40:4	90 sx	@ 18.43	1658.70
Salt	648	@ .68	440.64
Gypseal	1128 #	@ .88	992.64
Kolseal	720 #	@ .98	705.60
FL-160	90.24 #	@ 18.25	1646.88
Floseal	30 #	@ 2.97	89.10
Clapro	13 Gals	@ 34.40	447.20
		@	
HANDLING		@	
MILEAGE			

20% = 1849.91 TOTAL 9249.56

SERVICE

DEPTH OF JOB 5139'
PUMP TRUCK CHARGE 3099.25

EXTRA FOOTAGE	20	@ 4.40	88.00
MILEAGE	20	@ 7.70	154.00
MANIFOLD		@	275.00
Handling	255	@ 2.48	632.40
Mileage	219.45	@ 2.70	592.51

20% = 968.23 TOTAL 4841.16

PLUG & FLOAT EQUIPMENT

1-AFU Float shoe	@	545.00
1-Latch Down plug	@	660.00
20-Rec scratcher	@ 89.00	1780.00
10-Turbolizers	@ 95.00	950.00
	@	

0

TOTAL 3935.00

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 18,025.72
DISCOUNT IF PAID IN 30 DAYS
Net 15,207.57

PRINTED NAME MIKE THARP

SIGNATURE [signature]

CELLS WITH BLUE BACKGROUND ARE THE ONLY CELLS TO BE EDITED*

Fracture Start Date/Time:	10/17/14 9:59
Fracture End Date/Time:	10/17/14 11:50
State:	Kansas
County:	Barber
API Number:	15-007-24218-0000 *(e.g. XX-XXX-XXXXX-0000)*
Operator Name:	WOOLSEY OPERATING COMPANY LLC
Well Name:	Sternberger B #2
Federal Well:	
Longitude:	-98.5779333
Latitude:	37.0080475
Long/Lat Projection:	NAD27
True Vertical Depth (TVD):	0'
Total Clean Fluid Volume* (gal):	383,250

Additive	*Specific Gravity*	*Additive Quantity*	*Mass (lbs)*	
Water	1.00	383,250	*3,198,221*	*gal*
Sand (Proppant)	2.65	215,200	*215,200*	*lb*
Plexcide B7	1.33	20	*222*	*gal*
Plexcide B7	1.33	20	*222*	*gal*
Plexgel Breaker XPA	1.03	65	*559*	*gal*
Plexset 730	0.90	140	*1,051*	*gal*
Plexset 730	0.90	140	*1,051*	*gal*
Plexsurf 580 ME	0.95	93	*737*	*gal*
Plexsurf 580 ME	0.95	93	*737*	*gal*
Plexslick 957	1.11	257	*2,381*	*gal*
Claymax	1.09	185	*1,683*	*gal*
Plexgel 907L-EB	1.04	228	*1,979*	*gal*
Plexgel 907L-EB	1.04	228	*1,979*	*gal*
Plexgel 907L-EB	1.04	228	*1,979*	*gal*
Plexgel 907L-EB	1.04	228	*1,979*	*gal*
Plexgel 907L-EB	1.04	228	*1,979*	*gal*
Plexgel Breaker 10L	1.10	3	*28*	*gal*
				gal
				gal

Total Slurry Mass (Lbs)
3,431,986

Ingredients Section:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Mass per Component (LBS)	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Operator	Carrier/Base Fluid	Water	7732-18-5	100.00%	***3,198,221***	***93.18864%***	
Sand (Proppant)	Uniman	Proppant	Crystalline Silica in the form of Quartz	14808-60-7 / 238-878-4	99.90%	***214,985***	***6.26415%***	
Plexcide B7	Chemplex	Biocide	Sodium Hydroxide	1310-73-2	4.99%	***11***	***0.00032%***	
Plexcide B7	Chemplex	Biocide	Alkaline Bromide Salts (non-hazardous)	NA	0.00%	***0***	***0.00000%***	
Plexgel Breaker XPA	Chemplex	Slickwater Breaker	Hydrogen Peroxide	7722-84-1	7.00%	***39***	***0.00114%***	
Plexset 730	Chemplex	Activator	Methanol	67-56-1	50.00%	***526***	***0.01532%***	
Plexset 730	Chemplex	Activator	Alcohol Ethoxylates	Mixture	60.00%	***631***	***0.01838%***	
Plexsurf 580 ME	Chemplex	Product Stabilizer	Methyl Alcohol	67-56-1	10.00%	***74***	***0.00215%***	
Plexsurf 580 ME	Chemplex	Product Stabilizer	2-Butoxyethanol	111-76-2	50.00%	***369***	***0.01074%***	
Plexslick 957	Chemplex	Friction Reducer	Petroleum Hydrotreated Light Distillate	64742-47-8	25.00%	***595***	***0.01734%***	
Claymax	Chemplex	Clay Stabilizer	No Hazardous Ingredient	NA	0.00%	***0***	***0.00000%***	
Plexgel 907L-EB	Chemplex	Gelling Agent	Distillates, Hydrotreated Light	64742-47-8	50.00%	***989***	***0.02883%***	
Plexgel 907L-EB	Chemplex	Gelling Agent	Organophylic Clay	NDA	2.00%	***40***	***0.00115%***	
Plexgel 907L-EB	Chemplex	Gelling Agent	Crystalline Silica	14808-60-7	0.06%	***1***	***0.00003%***	
Plexgel 907L-EB	Chemplex	Gelling Agent	Alcohol Ethoxylates	34398-01-1	1.00%	***20***	***0.00058%***	
Plexgel 907L-EB	Chemplex	Gelling Agent	Guar Gum	9000-30-0	50.00%	***989***	***0.02883%***	
Plexgel Breaker 10L	Chemplex	Breaker/Gel	No Hazardous Ingredient	NA	0.00%	***0***	***0.00000%***	
								Non-MSDS Component
								Non-MSDS Component
								Non-MSDS Component
								Non-MSDS Component
								Non-MSDS Component
								Non-MSDS Component

*Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.

DRILL STEM TEST REPORT

Woolsey Oper. Co. LLC.

125 N. Market Ste. 1000
Wichita, KS 67202-1729

ATTN: Joel Gearhart

12-35s-12w Barber Co., KS

Sternberger B-2

Job Ticket: 59907 **DST#: 1**

Test Start: 2014.09.10 @ 20:43:14

GENERAL INFORMATION:

Formation: **Miss.**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 23:04:59
Time Test Ended: 05:59:29

Test Type: Conventional Bottom Hole (Initial)
Tester: Ryan Reynolds
Unit No: 68

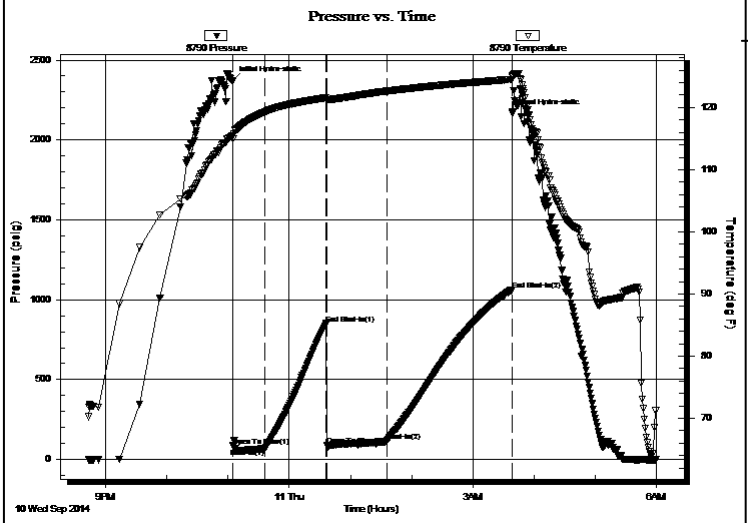
Interval: 4760.00 ft (KB) To 4859.00 ft (KB) (TVD)
Total Depth: 4859.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1364.00 ft (KB)
1352.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8790 **Inside**
Press@RunDepth: 112.87 psig @ 4766.50 ft (KB)
Start Date: 2014.09.10 End Date: 2014.09.11
Start Time: 20:43:19 End Time: 05:59:29

Capacity: 8000.00 psig
Last Calib.: 2014.09.11
Time On Btm: 2014.09.10 @ 23:03:59
Time Off Btm: 2014.09.11 @ 03:38:29

TEST COMMENT: IF: Strong blow . BOB @ 8min.
ISI: No blow
FF: Fair blow . 2" - 7"
FSI: No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2368.64	115.36	Initial Hydro-static
1	85.91	114.97	Open To Flow (1)
33	68.07	119.29	Shut-In(1)
93	850.38	121.58	End Shut-In(1)
93	88.92	121.23	Open To Flow (2)
152	112.87	122.62	Shut-In(2)
274	1062.54	124.53	End Shut-In(2)
275	2167.25	124.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	VSLI OCGM trc%o, 10%g, 89%m	0.98
0.00	250' GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Oper. Co. LLC.

125 N. Market Ste. 1000
Wichita, KS 67202-1729

ATTN: Joel Gearhart

12-35s-12w Barber Co., KS

Sternberger B-2

Job Ticket: 59907 **DST#: 1**

Test Start: 2014.09.10 @ 20:43:14

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:	4000 ppm
Viscosity:	74.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4000.00 ppm				
Filter Cake:	0.07 inches				

Recovery Information

Recovery Table

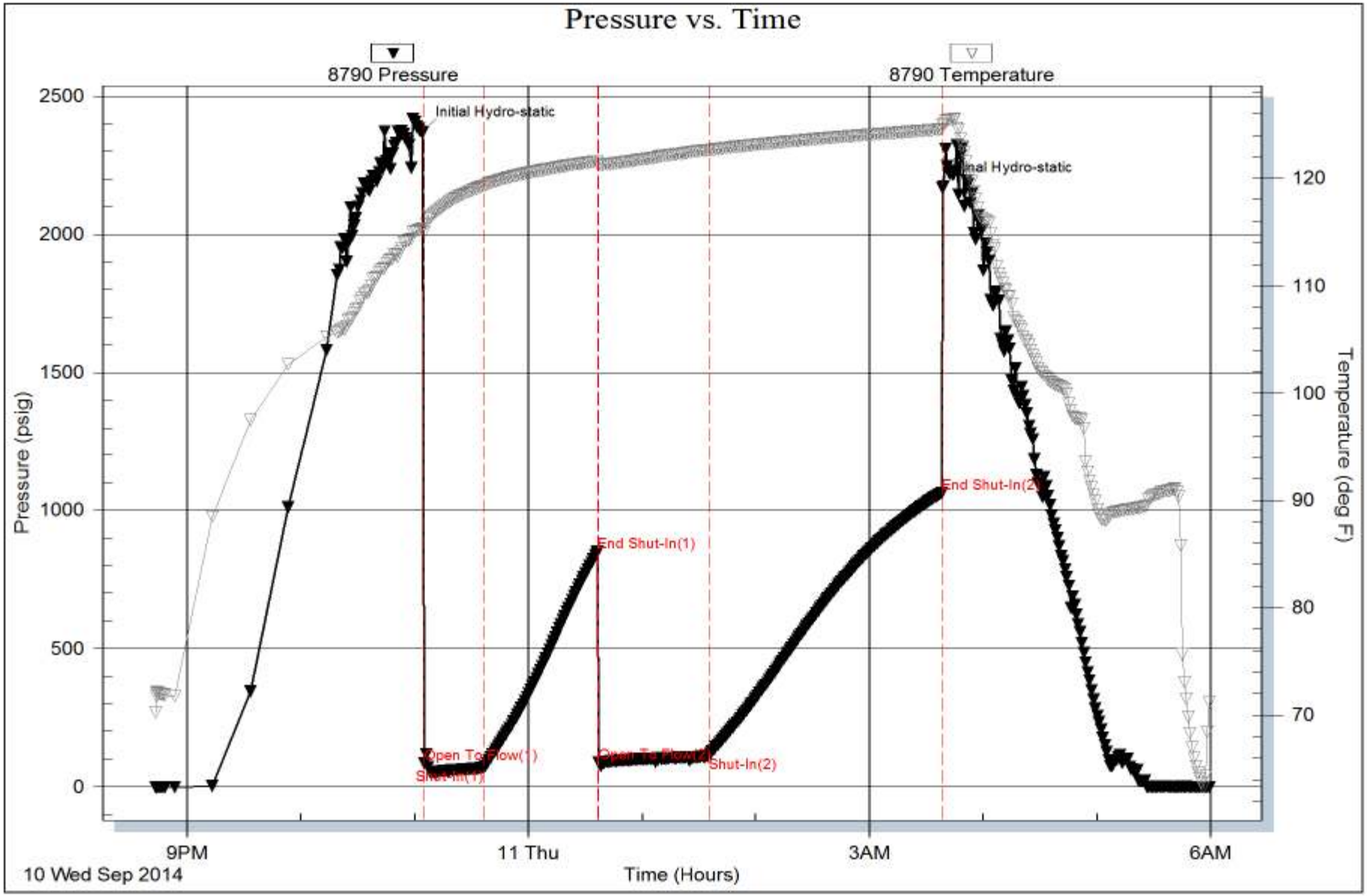
Length ft	Description	Volume bbl
200.00	VSLI OCGM trc%o, 10%g, 89%m	0.984
0.00	250' GIP	0.000

Total Length: 200.00 ft Total Volume: 0.984 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8790 Pressure
8790 Temperature
Initial Hydro-static
End Shut-In(1)
Shut-In(2)
Pressure (psig)
Temperature (deg F)
2500
2000
1500
1000
500
0
120
110
100
90
80
70
9PM
11 Thu
3AM
6AM
10 Wed Sep 2014
Time (Hours)

DRILL STEM TEST REPORT

Woolsey Oper. Co. LLC.

125 N. Market Ste. 1000
Wichita, KS 67202-1729

ATTN: Joel Gearhart

12-35s-12w Barber Co., KS

Sternberger B-2

Job Ticket: 59908 **DST#: 2**

Test Start: 2014.09.12 @ 17:22:35

GENERAL INFORMATION:

Formation: **Miesner**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 19:51:20
Time Test Ended: 02:47:20

Test Type: Conventional Bottom Hole (Reset)
Tester: Ryan Reynolds
Unit No: 68

Interval: 5045.00 ft (KB) To 5151.00 ft (KB) (TVD)
Total Depth: 5151.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

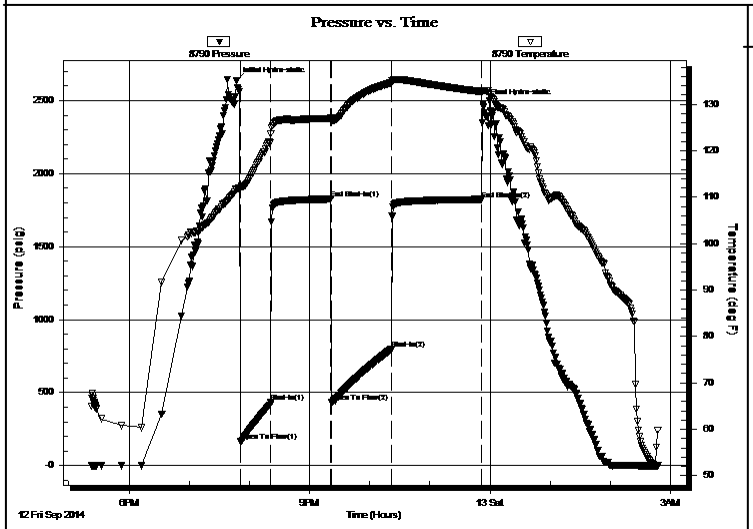
Reference Elevations: 1364.00 ft (KB)
1352.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8790 **Inside**

Press@RunDepth: 795.68 psig @ 5051.50 ft (KB)
Start Date: 2014.09.12 End Date: 2014.09.13
Start Time: 17:22:40 End Time: 02:47:20

Capacity: 8000.00 psig
Last Calib.: 2014.09.13
Time On Btm: 2014.09.12 @ 19:47:20
Time Off Btm: 2014.09.12 @ 23:53:05

TEST COMMENT: IF: Strong blow . BOB @ 5min.
ISI: No blow
FF: Strong blow . BOB @ 10min.
FSI: Good blow . surf. - 10"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2633.89	111.56	Initial Hydro-static
4	164.27	111.90	Open To Flow (1)
34	434.49	123.71	Shut-In(1)
94	1825.67	126.98	End Shut-In(1)
95	434.12	126.25	Open To Flow (2)
154	795.68	134.62	Shut-In(2)
245	1823.13	132.71	End Shut-In(2)
246	2479.22	132.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1000.00	MGCW 5%m, 10%g, 85%w	11.77
620.00	GMCW 10%g, 40%m, 50%w	8.70
0.00	200' GIP	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Oper. Co. LLC.

125 N. Market Ste. 1000
Wichita, KS 67202-1729

ATTN: Joel Gearhart

12-35s-12w Barber Co., KS

Sternberger B-2

Job Ticket: 59908 **DST#: 2**

Test Start: 2014.09.12 @ 17:22:35

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:	75000 ppm
Viscosity:	56.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	10.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	6500.00 ppm				
Filter Cake:	0.07 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1000.00	MGCW 5%m, 10%g, 85%w	11.768
620.00	GMCW 10%g, 40%m, 50%w	8.697
0.00	200' GIP	0.000

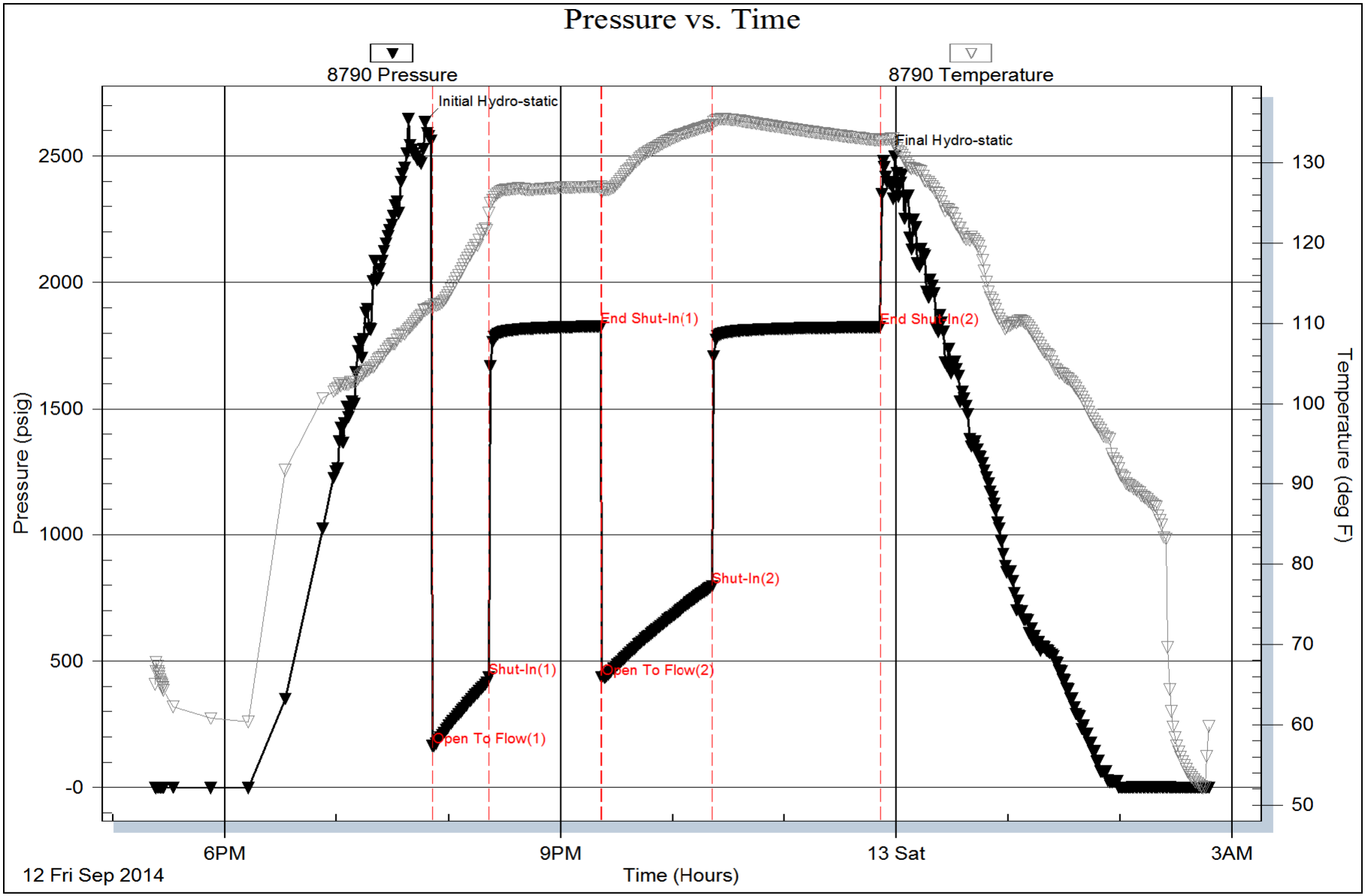
Total Length: 1620.00 ft Total Volume: 20.465 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #: none

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8790 **Inside** Woolsey Oper. Co. LLC. Sternberger B-2 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 59908 Printed: 2014.09.13 @ 07:16:55

Woolsey Operating Company, LLC

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name:	**STERNBERGER B-2**		
Location:	**Section 12 - Township 35 South - Range 12 West**		
License Number:	**15-007-24218-0000**	**Region:**	**Barber County, Kansas**
Spud Date:	**September 3, 2014**	**Drilling Completed:**	**September 14, 2014**
Surface Coordinates:	**500' FSL and 2210' FWL** **Approx. NW SE SE SW**		
Bottom Hole Coordinates:			
Ground Elevation (ft):	**1352'**	**K.B. Elevation (ft):**	**1364'**
Logged Interval (ft):	**4000'** **To: 5356'**	**Total Depth (ft):**	**5356'**
Formation:	**Kansas City Group ---->Simpson Group**		
Type of Drilling Fluid:	**Chemical Mud**		

OPERATOR

Company: **Woolsey Operating Company,LLC**
Address: **125 N. Market, Suite 1000**
Wichita, KS 67202

GEOLOGIST

Name: **Bill Klaver, Joel Gearhart**
Company: **Woolsey Operating Co. LLC**
Address: **125 N. Market, Wichita Kansas, 67202**

COMMENTS

Surface Casing: Spud at 4:30 pm on September 3rd 2014, ran 5 joints of new 13 3/8" X 48#/ft casing to 217' KB (tally 202'). Cemented with 300 sx Class A, 2% gel, 3% cc (by Allied). Plug down 11:30 pm on Sept 3rd 2014, cement did circulate.
Production Casing: 5 1/2" X 16.5#/ft set to 5143' KB with 170 sx.

Deviation Surveys: 2 at 217', 1 at 1011', 3/4 at 1517', 3/4 at 2024', 3/4 at 2561', 1/2 at 3008', 1/2 at 3514', 3/4 at 4024', 1 1/4 at 4247', 1 at 4501', 1 1/2 at 4859', 3/4-5104', 1/2 at 5356'

Pipe Strap @ 4859', Board: 4849.76', Strap: 4848.34', Strap is 1.42' short to the Board. No corrections were made to the board.

Fossil Drilling Rig 3 Bit Record:
1) 17 1/2" Smith RR in at 0' out at 217'. 2.25 hours
2) 7 7/8" Varel HE-21 in at 217', out at 4859', 117.5 hrs.
3) 7 7/8" Varel HE-29 RR in at 4859', shells out at 5356', 43 3/4 hrs

Gas Detector: Woolsey Operating Company, Gas Shack #2
Mud System: Chemical Mud, Mud-Co, Brad Bortz, Terry Ison, Engineers
DSTs: Trilobite Testing, Ryan Reynolds, Tester
Company Man: Mike Tharp, Woolsey Operating Company
E-Logs: Nabors Completion and Production Services, Dual Induction Laterolog w/SP, CNL-FDC w/PE, Gamma Ray and Caliper. Ian Mabb, Engineer

DSTs

DST #1, Mississippian (4760-4859)
30-60-60-120, IF: Strong Blow BOB in 8 min. ISI: No Blow, FF: Fair Blow 2"-7" FSI: No Blow, 250' G, 200' VSOCGM (10%G 1%O 89%M), ISIP: 850, FSIP: 1063, FP: 86-68/89-113, IH: 2369, FHP: 2167. BHT 125

DST #2 Misener Sand, 5045'-5151', 30"-60"-60"-90", SB BOB in 5 minutes of both flow periods, no blow on either shut in period. Rec: 200' GIP, 620' GMCW (10% Gas, 40% Mud, 50% Water), 1000' MGCW (5% Mud, 10% Gas, 85% Water). IHP 2633, IFP 164-434, ISIP 1825, FFP 434-795, FSIP 1823, FHP 2479. BHT 134.

CREWS

Jim Wenrich, Pusher (rarely seen)
Daniel Orrantia, Daylights
Ron Burns, Evening
Kirk Shuman, Morning
Chris Slatts, Relief

ROCK TYPES

- Anhy
- Bent
- Brec
- Cht
- Clyst
- Coal
- Congl
- Sdy dolo
- Shy dolo
- Dol
- Gyp
- Sdy lmst
- Lmst
- Mrlst
- Salt
- Shale
- Sltst
- Ss
- Black sh
- Gry sh
- Shale
- Shysltst
- Sltysh
- Ss 2
- Shale 3
- Silty dol
- Dol lmst
- Dol 2
- Granite wash
- Lmst
- Calc dol
- Shale 3

ACCESSORIES

MINERAL

- Anhy
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Ferrpel
- Ferr
- Glau
- Gyp
- Marl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Chlorite
- Dol
- Sand
- Slty

FOSSIL

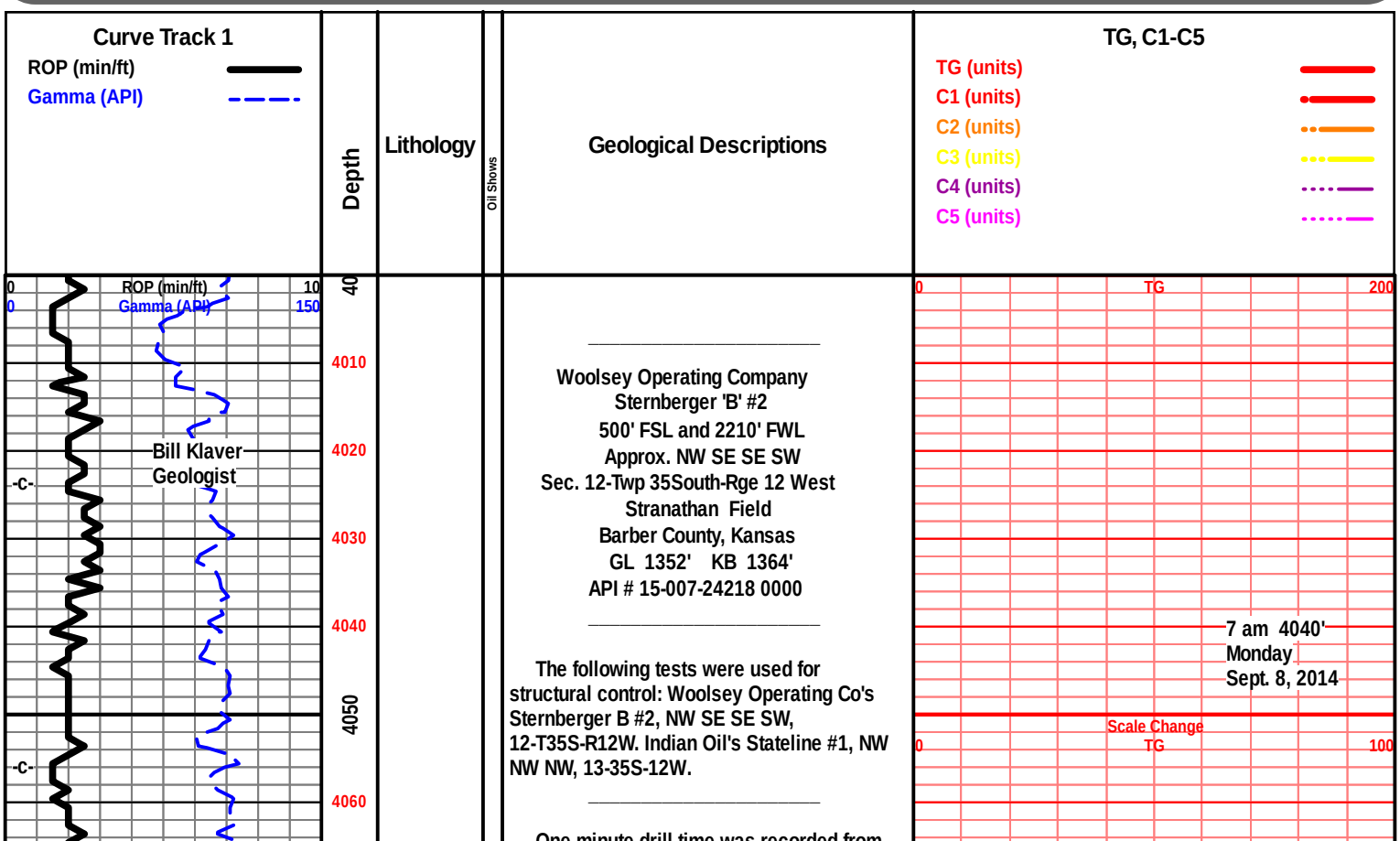
- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomoldic

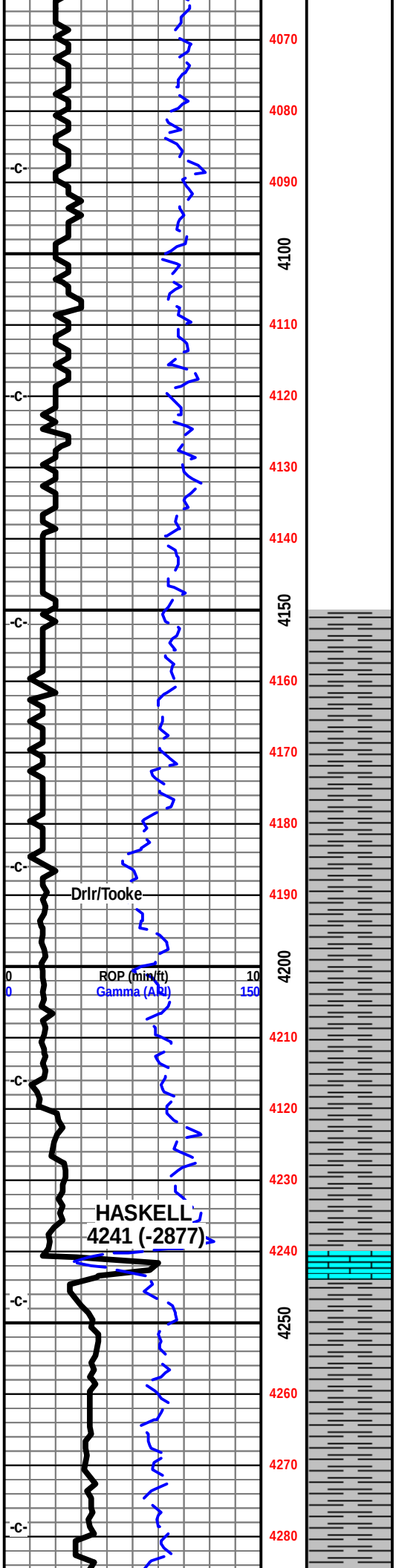
STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh
- Clystn
- Dol
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

TEXTURE

- BS Boundst
- C Chalky
- CX Cryxln
- E Earthy
- FX Finexln
- GS Grainst
- L Lithogr
- MX Microxln
- MS Mudst
- PS Packst
- WS Wackest





One minute drill time was recorded from 4000' to rotary total depth. Ten foot and circulationg samples were rough neck gathered from 4500' to rotary total depth. All samples were delivered to the Survey at the completion of the test.

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7 am Progress:

September 3, 2014 MIRT/SPUD
September 4, 2014 WOC, drill plug 8 am
September 5, 2014 Drilling at 1715'
September 6, 2014 Drilling at 2640'
September 7, 2014 Drilling at 3455'
September 8, 2014 Drilling at 4040'
September 9, 2014 Drilling at 4501'
September 10, 2014 Drilling at 4724'
September 11, 2014 Drilling at 4859'
September 12, 2014, Drilling at 5090'
September 13, 2014 Drilling at 5162'
September 14, 2014 TOOH for E-logs at 5356'. RR bit shells out in Wilcox. E-Logs out at 1 pm

---

E-Log Tops:
Herington 1867 (-503)
Onaga 2734 (-1370)
Wabaunsee 2792 (-1428)
LeCompton 3591 (-2227)
Kanwaka 3619 (-2255)
Heebner 3810 (-2446)
Toronto 3823 (-2459)
Douglas Grp 3848 (-2484)
Douglas Shale 3872 (-2508)
Haskell (Brown) LIme 4239 (-2875)
Quindaro 4347 (-2983)
Iola 4377 (-3013)
Drum 4430 (-3066)
Dennis 4465 (-3101)
Stark 4503 (-3139)
Swope 4515 (-3151)
Hushpuckney 4536 (-3172)
Hertha 4543 (-3179)
B/Kansas City 4586 (-3222)
Pawnee 4693 (-3329)
Cherokee Group 4739 (-3375)
Mississippi 4805 (-3441)
C3 4805 (-3441)
C2A 4814 (-3450)
C2 4862 (-3498)
C1 4910 (-3546)
Osage 5032 (-3668)
Northview Shale 5035 (-3671)
Compton 5039 (-3675)
Kinderhook 5047 (-3683)
Woodford 51230(-3759)
Misener 5144 (-3780)
Viola 5163 (-3799)
Simpson Group 5300 (-3936)
Wilcox Sand 5323 (-3959)
LTD 5356 (-3959)

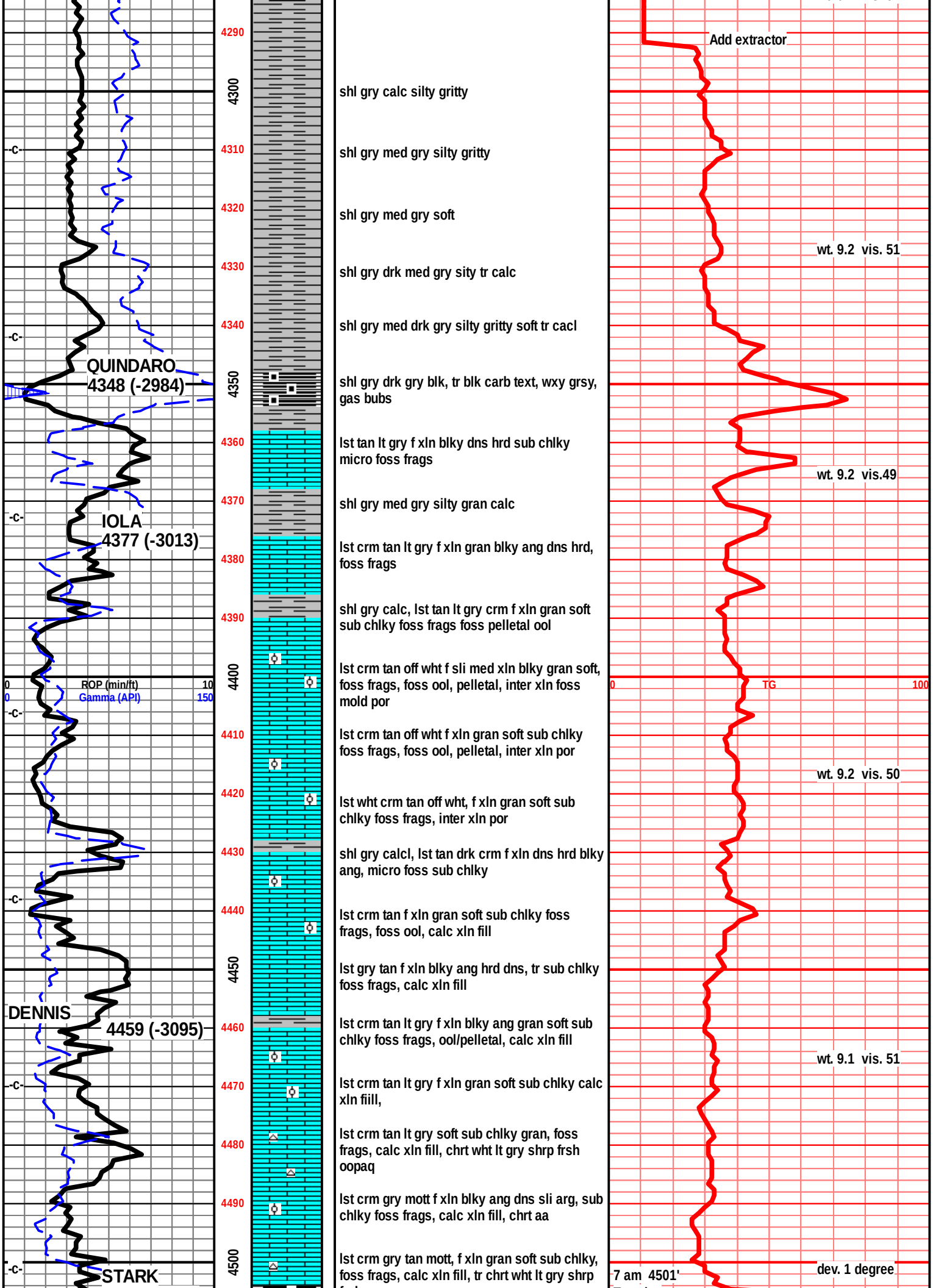
Mud-Co. 4088'
wt. 9.0 vis. 62
wl. 9.2 chl. 3,000

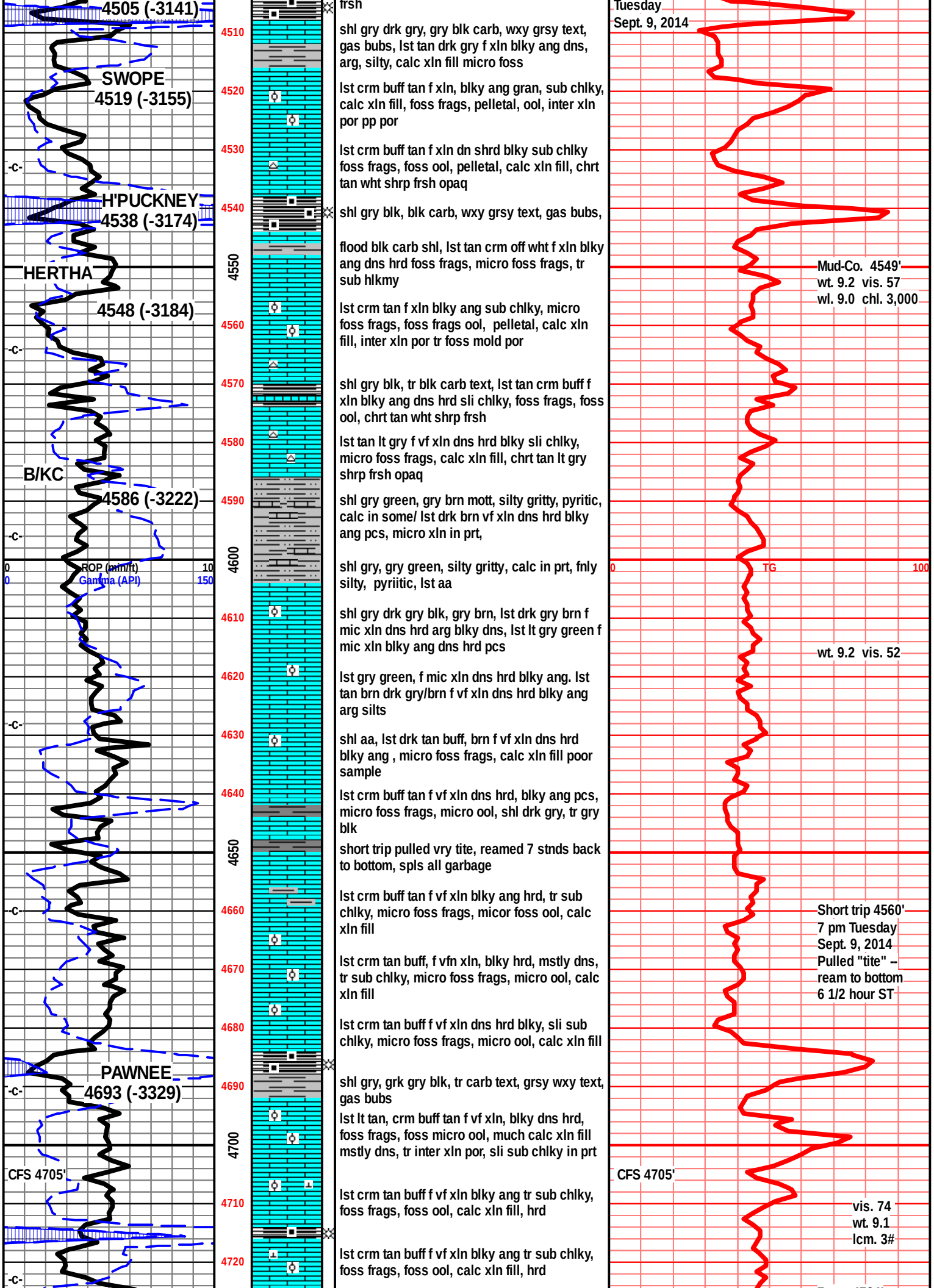
Geo on Location
4152' 11 am
Sept. 8, 2014

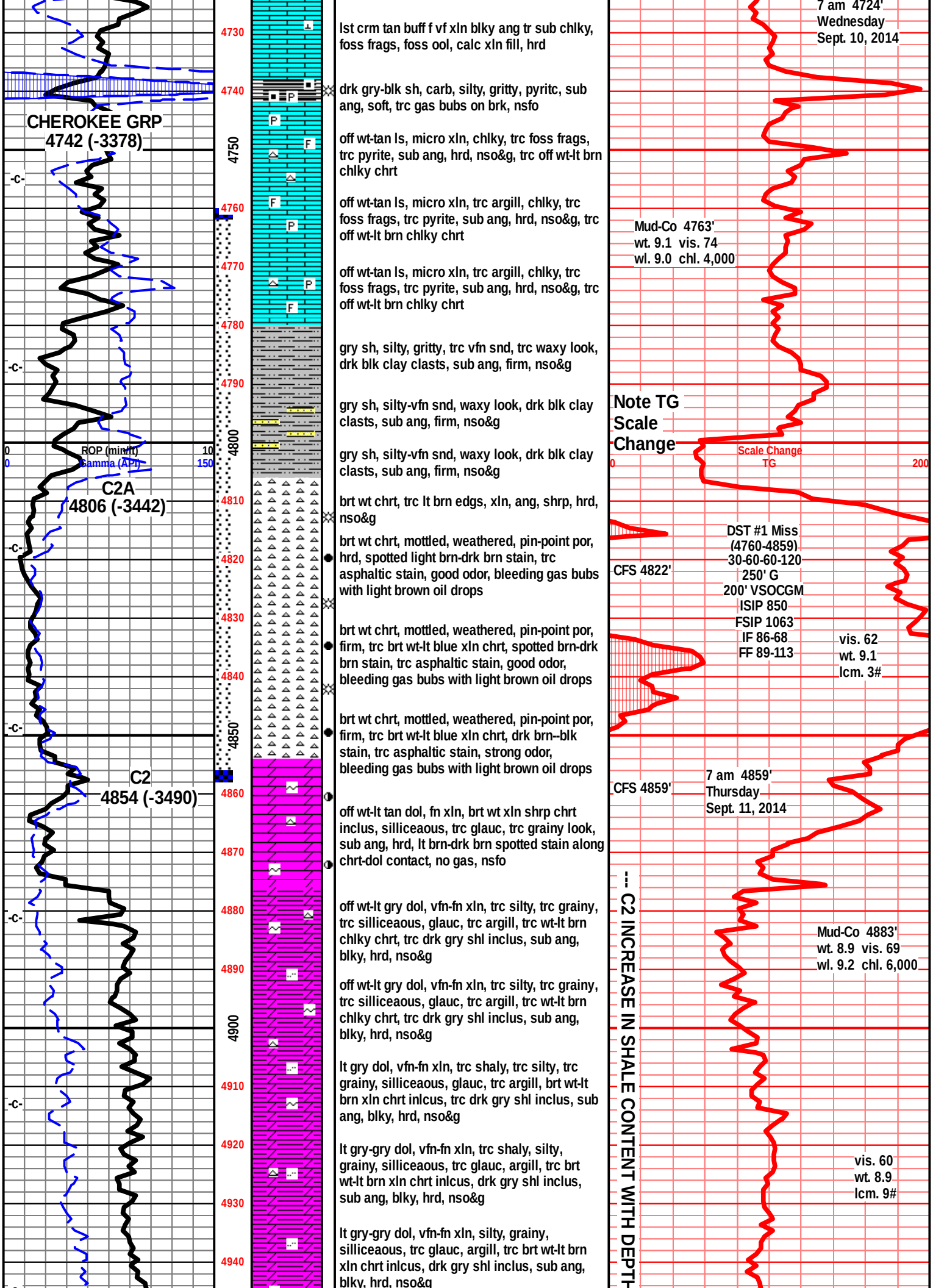
0 TG 100

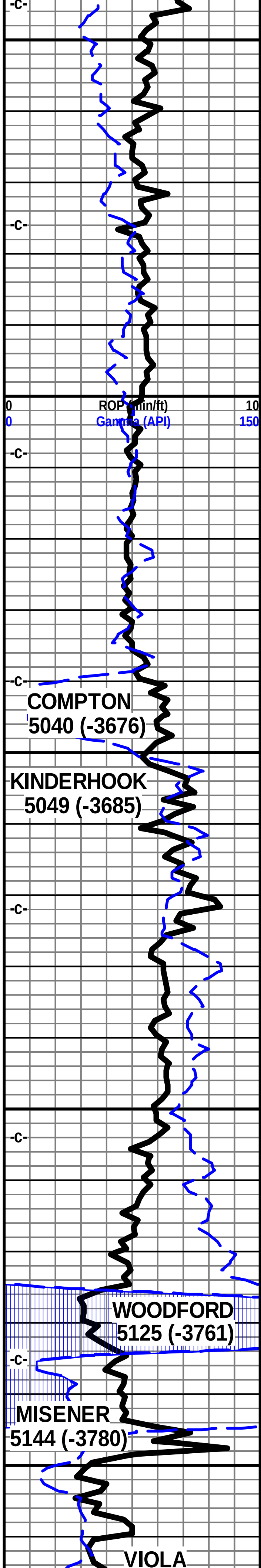
Survey 1 1/2 deg
at 4147', dec WOB

wt. 9.2 vis. 52


4290
4300
4310
4320
4330
4340
4350
4360
4370
4380
4390
4400
4410
4420
4430
4440
4450
4460
4470
4480
4490
4500
-C-
QUINDARO
4348 (-2984)
IOLA
4377 (-3013)
DENNIS
4459 (-3095)
STARK
0
ROP (min/ft)
10
0
Gamma (API)
150
shl gry calc silty gritty
shl gry med gry silty gritty
shl gry med gry soft
shl gry drk med gry sity tr calc
shl gry med drk gry silty gritty soft tr cacl
shl gry drk gry blk, tr blk carb text, wxy grsy, gas bubs
lst tan lt gry f xln blky dns hrd sub chlky micro foss frags
shl gry med gry silty gran calc
lst crm tan lt gry f xln gran blky ang dns hrd, foss frags
shl gry calc, lst tan lt gry crm f xln gran soft sub chlky foss frags foss pelletal ool
lst crm tan off wht f sli med xln blky gran soft, foss frags, foss ool, pelletal, inter xln foss mold por
lst crm tan off wht f xln gran soft sub chlky foss frags, foss ool, pelletal, inter xln por
lst wht crm tan off wht, f xln gran soft sub chlky foss frags, inter xln por
shl gry calcl, lst tan drk crm f xln dns hrd blky ang, micro foss sub chlky
lst crm tan f xln gran soft sub chlky foss frags, foss ool, calc xln fill
lst gry tan f xln blky ang hrd dns, tr sub chlky foss frags, calc xln fill
lst crm tan lt gry f xln blky ang gran soft sub chlky foss frags, ool/pelletal, calc xln fill
lst crm tan lt gry f xln gran soft sub chlky calc xln fiill,
lst crm tan lt gry soft sub chlky gran, foss frags, calc xln fill, chrt wht lt gry shrp frsh oopaq
lst crm gry mott f xln blky ang dns sli arg, sub chlky foss frags, calc xln fill, chrt aa
lst crm gry tan mott, f xln gran soft sub chlky, foss frags, calc xln fill, tr chrt wht lt gry shrp
Add extractor
wt. 9.2 vis. 51
wt. 9.2 vis.49
wt. 9.2 vis. 50
wt. 9.1 vis. 51
0
TG
100
7 am 4501'
dev. 1 degree


4505 (-3141)
SWOPE
4519 (-3155)
-c-
H'PUCKNEY
4538 (-3174)
HERTHA
4548 (-3184)
-c-
B/KC
4586 (-3222)
-c-
0
ROP (min/ft)
10
0
Gamma (API)
150
-c-
-c-
PAWNEE
4693 (-3329)
-c-
CFS 4705'
-c-
4510
4520
4530
4540
4550
4560
4570
4580
4590
4600
4610
4620
4630
4640
4650
4660
4670
4680
4690
4700
4710
4720
frsh
shl gry drk gry, gry blk carb, wxy grsy text, gas bubs, lst tan drk gry f xln blky ang dns, arg, silty, calc xln fill micro foss
lst crm buff tan f xln, blky ang gran, sub chlky, calc xln fill, foss frags, pelletal, ool, inter xln por pp por
lst crm buff tan f xln dn shrd blky sub chlky foss frags, foss ool, pelletal, calc xln fill, chrt tan wht shrp frsh opaq
shl gry blk, blk carb, wxy grsy text, gas bubs,
flood blk carb shl, lst tan crm off wht f xln blky ang dns hrd foss frags, micro foss frags, tr sub hlkmy
lst crm tan f xln blky ang sub chlky, micro foss frags, foss frags ool, pelletal, calc xln fill, inter xln por tr foss mold por
shl gry blk, tr blk carb text, lst tan crm buff f xln blky ang dns hrd sli chlky, foss frags, foss ool, chrt tan wht shrp frsh
lst tan lt gry f vf xln dns hrd blky sli chlky, micro foss frags, calc xln fill, chrt tan lt gry shrp frsh opaq
shl gry green, gry brn mott, silty gritty, pyritic, calc in some/ lst drk brn vf xln dns hrd blky ang pcs, micro xln in prt,
shl gry, gry green, silty gritty, calc in prt, fnly silty, pyriitic, lst aa
shl gry drk gry blk, gry brn, lst drk gry brn f mic xln dns hrd arg blky dns, lst lt gry green f mic xln blky ang dns hrd pcs
lst gry green, f mic xln dns hrd blky ang. lst tan brn drk gry/brn f vf xln dns hrd blky ang arg silts
shl aa, lst drk tan buff, brn f vf xln dns hrd blky ang , micro foss frags, calc xln fill poor sample
lst crm buff tan f vf xln dns hrd, blky ang pcs, micro foss frags, micro ool, shl drk gry, tr gry blk
short trip pulled vry tite, reamed 7 stnds back to bottom, spls all garbage
lst crm buff tan f vf xln blky ang hrd, tr sub chlky, micro foss frags, micor foss ool, calc xln fill
lst crm tan buff, f vfn xln, blky hrd, mstly dns, tr sub chlky, micro foss frags, micro ool, calc xln fill
lst crm tan buff f vf xln dns hrd blky, sli sub chlky, micro foss frags, micro ool, calc xln fill
shl gry, grk gry blk, tr carb text, grsy wxy text, gas bubs
lst lt tan, crm buff tan f vf xln, blky dns hrd, foss frags, foss micro ool, much calc xln fill mstly dns, tr inter xln por, sli sub chlky in prt
lst crm tan buff f vf xln blky ang tr sub chlky, foss frags, foss ool, calc xln fill, hrd
lst crm tan buff f vf xln blky ang tr sub chlky, foss frags, foss ool, calc xln fill, hrd
Tuesday
Sept. 9, 2014
Mud-Co. 4549'
wt. 9.2 vis. 57
wl. 9.0 chl. 3,000
0
TG
100
wt. 9.2 vis. 52
Short trip 4560'
7 pm Tuesday
Sept. 9, 2014
Pulled "tite" --
ream to bottom
6 1/2 hour ST
CFS 4705'
vis. 74
wt. 9.1
lcm. 3#


CHEROKEE GRP
4742 (-3378)
C2A
4806 (-3442)
C2
4854 (-3490)
-C-
ROP (min/ft)
0
10
Gamma (API)
0
150
4730
4740
4750
4760
4770
4780
4790
4800
4810
4820
4830
4840
4850
4860
4870
4880
4890
4900
4910
4920
4930
4940
lst crm tan buff f vf xln blky ang tr sub chlky, foss frags, foss ool, calc xln fill, hrd
drk gry-blk sh, carb, silty, gritty, pyritc, sub ang, soft, trc gas bubs on brk, nsfo
off wt-tan ls, micro xln, chlky, trc foss frags, trc pyrite, sub ang, hrd, nso&g, trc off wt-lt brn chlky chrt
off wt-tan ls, micro xln, trc argill, chlky, trc foss frags, trc pyrite, sub ang, hrd, nso&g, trc off wt-lt brn chlky chrt
off wt-tan ls, micro xln, trc argill, chlky, trc foss frags, trc pyrite, sub ang, hrd, nso&g, trc off wt-lt brn chlky chrt
gry sh, silty, gritty, trc vfn snd, trc waxy look, drk blk clay clasts, sub ang, firm, nso&g
gry sh, silty-vfn snd, waxy look, drk blk clay clasts, sub ang, firm, nso&g
gry sh, silty-vfn snd, waxy look, drk blk clay clasts, sub ang, firm, nso&g
brt wt chrt, trc lt brn edgs, xln, ang, shrp, hrd, nso&g
brt wt chrt, mottled, weathered, pin-point por, hrd, spotted light brn-drk brn stain, trc asphaltic stain, good odor, bleeding gas bubs with light brown oil drops
brt wt chrt, mottled, weathered, pin-point por, firm, trc brt wt-lt blue xln chrt, spotted brn-drk brn stain, trc asphaltic stain, good odor, bleeding gas bubs with light brown oil drops
brt wt chrt, mottled, weathered, pin-point por, firm, trc brt wt-lt blue xln chrt, drk brn--blk stain, trc asphaltic stain, strong odor, bleeding gas bubs with light brown oil drops
off wt-lt tan dol, fn xln, brt wt xln shrp chrt inclus, silliceaous, trc glauc, trc grainy look, sub ang, hrd, lt brn-drk brn spotted stain along chrt-dol contact, no gas, nsfo
off wt-lt gry dol, vfn-fn xln, trc silty, trc grainy, trc silliceaous, glauc, trc argill, trc wt-lt brn chlky chrt, trc drk gry shl inclus, sub ang, blky, hrd, nso&g
off wt-lt gry dol, vfn-fn xln, trc silty, trc grainy, trc silliceaous, glauc, trc argill, trc wt-lt brn chlky chrt, trc drk gry shl inclus, sub ang, blky, hrd, nso&g
lt gry dol, vfn-fn xln, trc shaly, trc silty, trc grainy, silliceaous, glauc, trc argill, brt wt-lt brn xln chrt inlcus, trc drk gry shl inclus, sub ang, blky, hrd, nso&g
lt gry-gry dol, vfn-fn xln, trc shaly, silty, grainy, silliceaous, trc glauc, argill, trc brt wt-lt brn xln chrt inlcus, drk gry shl inclus, sub ang, blky, hrd, nso&g
lt gry-gry dol, vfn-fn xln, silty, grainy, silliceaous, trc glauc, argill, trc brt wt-lt brn xln chrt inlcus, drk gry shl inclus, sub ang, blky, hrd, nso&g
7 am 4724'
Wednesday
Sept. 10, 2014
Mud-Co 4763'
wt. 9.1 vis. 74
wl. 9.0 chl. 4,000
Note TG
Scale
Change
Scale Change
TG
0
200
DST #1 Miss
(4760-4859)
30-60-60-120
250' G
200' VSOCGM
ISIP 850
FSIP 1063
IF 86-68
FF 89-113
CFS 4822'
vis. 62
wt. 9.1
lcm. 3#
CFS 4859'
7 am 4859'
Thursday
Sept. 11, 2014
Mud-Co 4883'
wt. 8.9 vis. 69
wl. 9.2 chl. 6,000
vis. 60
wt. 8.9
lcm. 9#
--- C2 INCREASE IN SHALE CONTENT WITH DEPTH



4950 4960 4970 4980 4990 5000 5010 5020 5030 5040 5050 5060 5070 5080 5090 5100 5110 5120 5130 5140 5150 5160

gry dol, vfn-fn xln, shaly, silty, grainy, trc vfn snd inclus, argill, trc pyritie, trc glauc, trc siliceaous, drk gry shl inclus, sub ang, blky, hrd, nso&g

gry dol, vfn-fn xln, shaly, silty, grainy, trc vfn snd inclus, argill, trc pyritie, trc glauc, trc siliceaous, drk gry shl inclus, sub ang, blky, hrd, nso&g

gry dol, vfn-fn xln, silty, grainy, trc vfn snd inclus, very argill, trc pyritie, trc glauc, trc siliceaous, drk gry shl inclus, sub ang, blky, hrd, waxy brk, nso&g

gry dol, vfn-fn xln, silty, grainy, trc vfn snd inclus, very argill, trc pyritie, trc glauc, trc siliceaous, drk gry shl inclus, sub ang, blky, hrd, waxy brk, nso&g

gry dol, vfn-fn xln, silty, grainy, trc vfn snd inclus, very argill, trc pyritie, trc glauc, trc siliceaous, drk gry shl inclus, sub ang, blky, hrd, waxy brk, nso&g

gry dol, vfn-fn xln, silty, grainy, trc vfn snd inclus, very argill, trc pyritie, trc glauc, trc siliceaous, drk gry shl inclus, sub ang, blky, hrd, waxy brk, nso&g

gry dol, vfn-fn xln, silty, grainy, trc vfn snd inclus, very argill, trc pyritie, trc glauc, trc siliceaous, drk gry shl inclus, sub ang, blky, hrd, waxy brk, nso&g

lt tan lst, micro xln, trc chlky, trc foss frags, trc argill, trc glauc, trc silt, sub ang, hrd, nso&g

gry shl, silty, trc pryite, sub ang, blky, waxy, nso&g

gry shl, trc brwn hue, silty, trc pryite, sub ang, blky, waxy, nso&g

drk gry shl, trc brwn hue, silty, trc pryite, sub ang, blky, waxy, nso&g

drk gry shl, trc brwn hue, silty, trc pryite, sub ang, blky, waxy, nso&g

drk gry shl, trc brwn hue, silty, trc pryite, sub ang, blky, waxy, nso&g

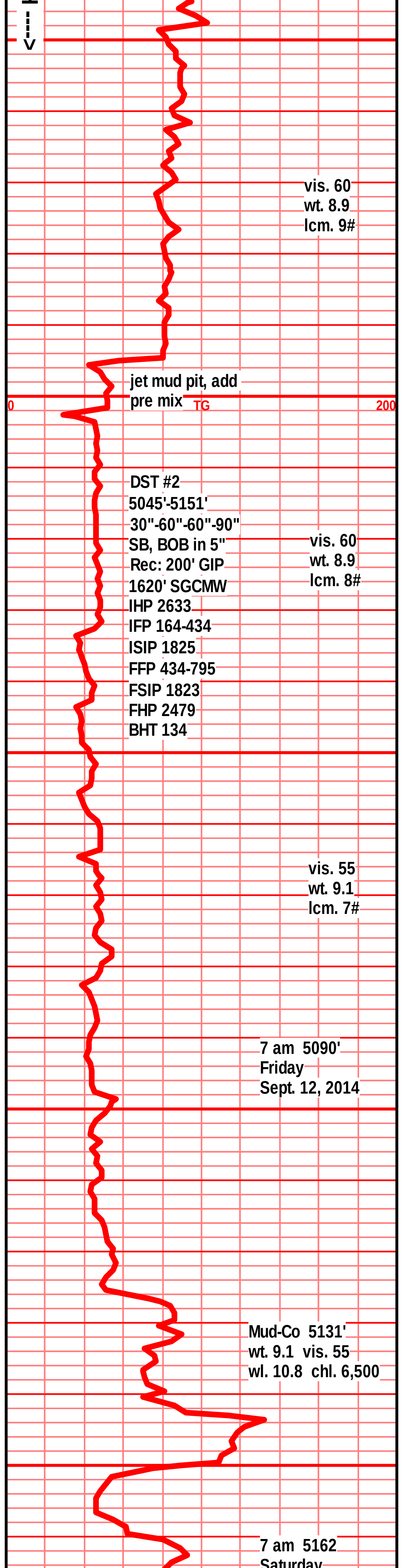
drk gry shl, trc brwn hue, silty, trc pryite, sub ang, blky, waxy, nso&g

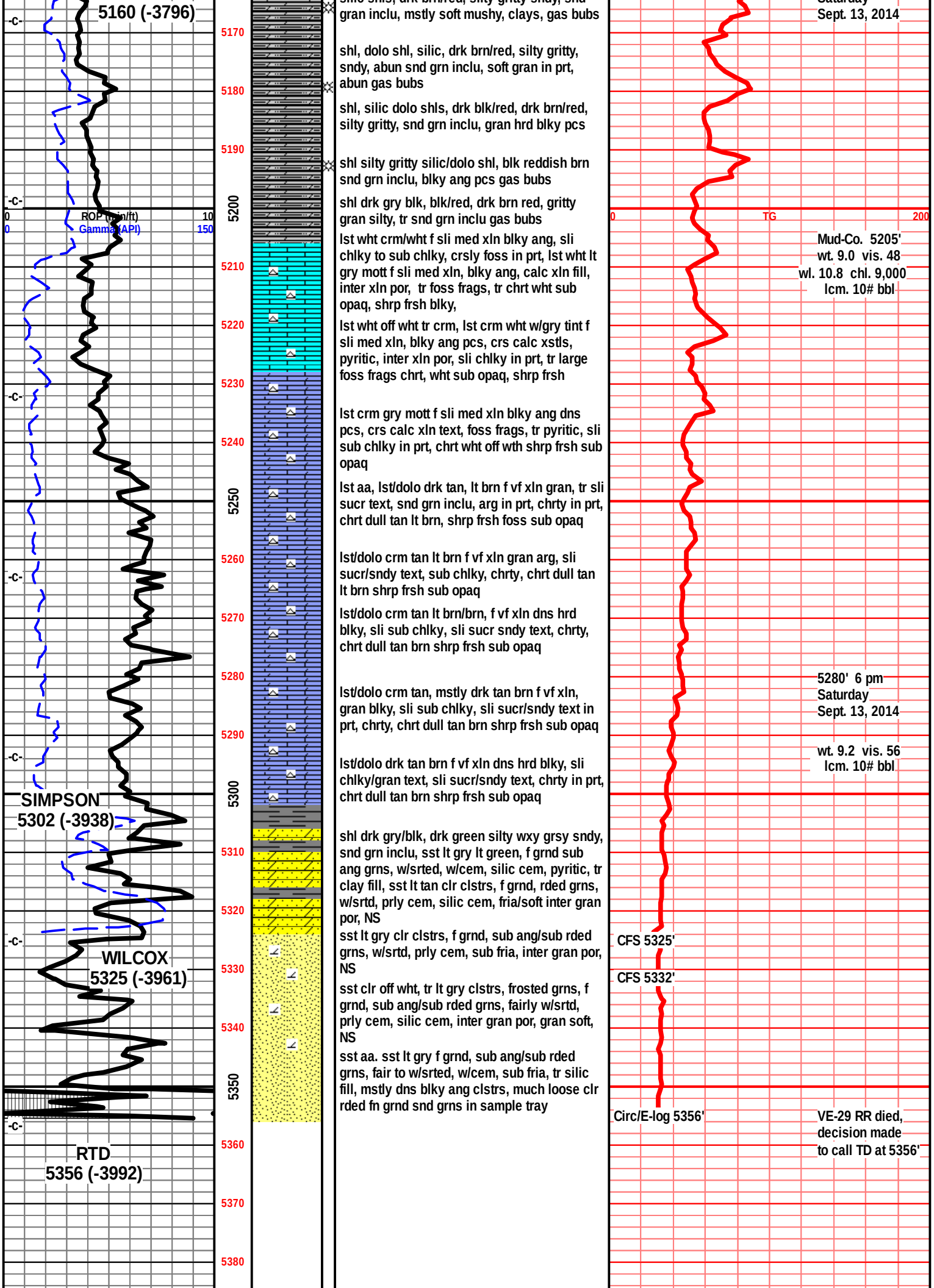
drk gry shl, trc brwn hue, silty, trc pryite, sub ang, blky, waxy, nso&g

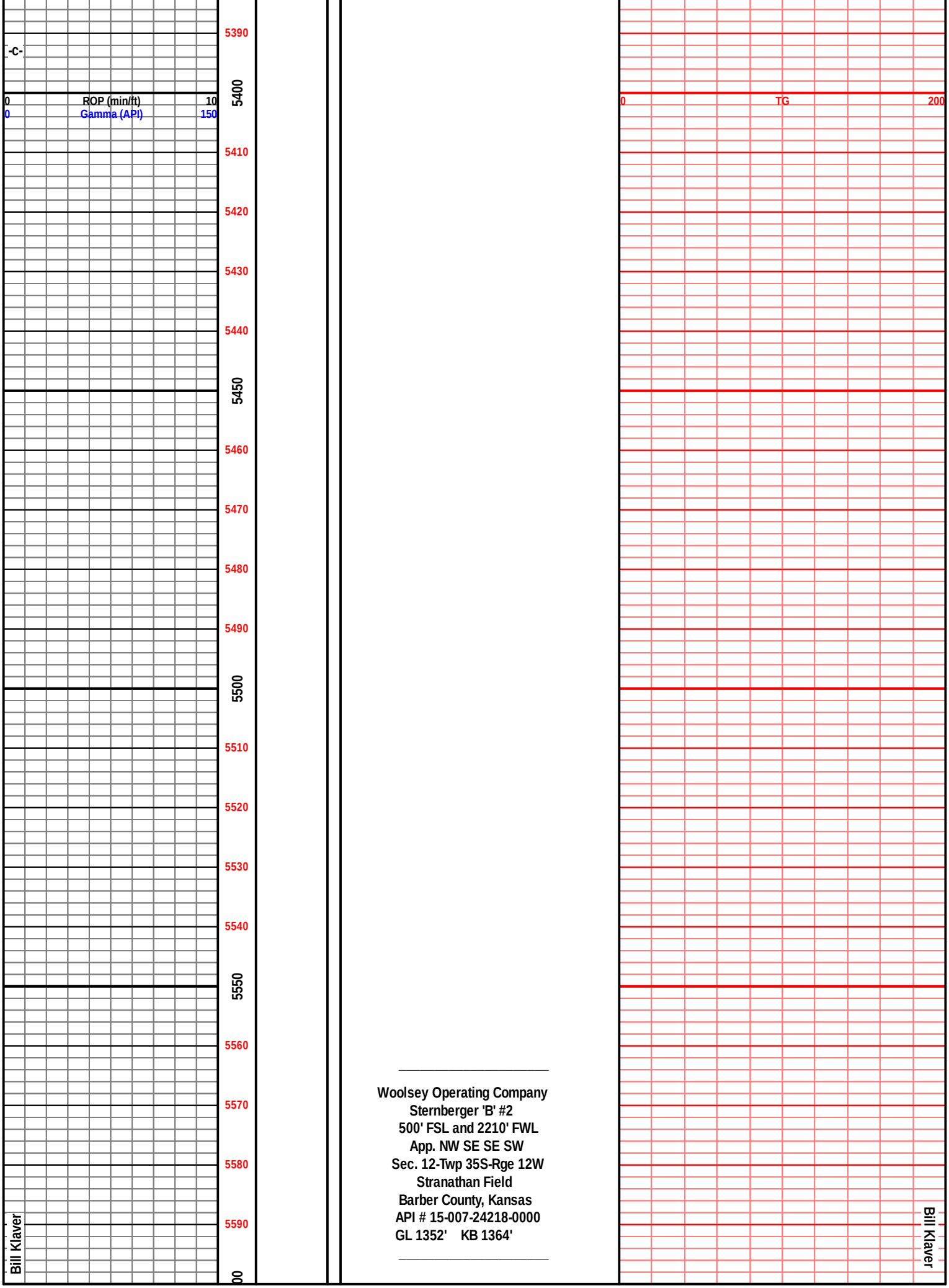
blk shl, red hue, carb, pyritic, sub ang, blky, hrd, trc gas bubs on brk, nsfo

frsty wt sst, vfn-fn grn, fair srtd, sub rnd, well cmntd, off wt-brt wt cmnt, lots of dark lithics, trc pyrite, slight odor, very light brown spotted stain, trc gas bubs on brk, nsfo

shl gry med/lt gry soft, clays, silty, sli gritty, spl wsh gry/wht, silic dolo text in prt




5160 (-3796)
-C-
0
ROP (min/ft)
10
0
Gamma (API)
150
5170
5180
5190
5200
5210
5220
5230
5240
5250
5260
5270
5280
5290
5300
5310
5320
5330
5340
5350
5360
5370
5380
SIMPSON
5302 (-3938)
WILCOX
5325 (-3961)
RTD
5356 (-3992)
gran inclu, mstly soft mushy, clays, gas bubs
shl, dolo shl, silic, drk brn/red, silty gritty, sndy, abun snd grn inclu, soft gran in prt, abun gas bubs
shl, silic dolo shls, drk blk/red, drk brn/red, silty gritty, snd grn inclu, gran hrd blky pcs
shl silty gritty silic/dolo shl, blk reddish brn snd grn inclu, blky ang pcs gas bubs
shl drk gry blk, blk/red, drk brn red, gritty gran silty, tr snd grn inclu gas bubs
lst wht crm/wht f sli med xln blky ang, sli chlky to sub chlky, crsly foss in prt, lst wht lt gry mott f sli med xln, blky ang, calc xln fill, inter xln por, tr foss frags, tr chrt wht sub opaq, shrp frsh blky,
lst wht off wht tr crm, lst crm wht w/gry tint f sli med xln, blky ang pcs, crs calc xstls, pyritic, inter xln por, sli chlky in prt, tr large foss frags chrt, wht sub opaq, shrp frsh
lst crm gry mott f sli med xln blky ang dns pcs, crs calc xln text, foss frags, tr pyritic, sli sub chlky in prt, chrt wht off wth shrp frsh sub opaq
lst aa, lst/dolo drk tan, lt brn f vf xln gran, tr sli sucr text, snd grn inclu, arg in prt, chrty in prt, chrt dull tan lt brn, shrp frsh foss sub opaq
lst/dolo crm tan lt brn f vf xln gran arg, sli sucr/sndy text, sub chlky, chrty, chrt dull tan lt brn shrp frsh sub opaq
lst/dolo crm tan lt brn/brn, f vf xln dns hrd blky, sli sub chlky, sli sucr sndy text, chrty, chrt dull tan brn shrp frsh sub opaq
lst/dolo crm tan, mstly drk tan brn f vf xln, gran blky, sli sub chlky, sli sucr/sndy text in prt, chrty, chrt dull tan brn shrp frsh sub opaq
lst/dolo drk tan brn f vf xln dns hrd blky, sli chlky/gran text, sli sucr/sndy text, chrty in prt, chrt dull tan brn shrp frsh sub opaq
shl drk gry/blk, drk green silty wxy grsy sndy, snd grn inclu, sst lt gry lt green, f grnd sub ang grns, w/srted, w/cem, silic cem, pyritic, tr clay fill, sst lt tan clr clstrs, f grnd, rded grns, w/srtd, prly cem, silic cem, fria/soft inter gran por, NS
sst lt gry clr clstrs, f grnd, sub ang/sub rded grns, w/srtd, prly cem, sub fria, inter gran por, NS
sst clr off wht, tr lt gry clstrs, frosted grns, f grnd, sub ang/sub rded grns, fairly w/srtd, prly cem, silic cem, inter gran por, gran soft, NS
sst aa. sst lt gry f grnd, sub ang/sub rded grns, fair to w/srted, w/cem, sub fria, tr silic fill, mstly dns blky ang clstrs, much loose clr rded fn grnd snd grns in sample tray
Sept. 13, 2014
0
TG
200
Mud-Co. 5205'
wt. 9.0 vis. 48
wl. 10.8 chl. 9,000
lcm. 10# bbl
5280' 6 pm
Saturday
Sept. 13, 2014
wt. 9.2 vis. 56
lcm. 10# bbl
CFS 5325'
CFS 5332'
Circ/E-log 5356'
VE-29 RR died,
decision made
to call TD at 5356'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ROP (min/ft)
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0
Gamma (API)
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5470
5480
5490
5500
5510
5520
5530
5540
5550
5560
5570
5580
5590
00
0
TG
200
Bill Klaver
Woolsey Operating Company
Sternberger 'B' #2
500' FSL and 2210' FWL
App. NW SE SE SW
Sec. 12-Twp 35S-Rge 12W
Stranathan Field
Barber County, Kansas
API # 15-007-24218-0000
GL 1352' KB 1364'
Bill Klaver