KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1065885

Form ACO-1
June 2009
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 # 33793
Name: H2 Drilling LLC
Wellsite Geologist: SCOTT ALBERG
Purchaser: PLAINS MARKETING / BLUESTEM GAS MARKETING

Designate Type of Completion:

- [x] New Well
- [ ] Re-Entry
- [ ] Workover

- [ ] Oil
- [ ] WSW
- [ ] SWD
- [ ] SIOW
- [ ] Gas
- [ ] D&A
- [ ] ENHR
- [ ] SIGW
- [x] 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
- [ ] Conv. to GSW
- [ ] Plug Back: Plug Back Total Depth
- [ ] Commingled Permit #:
- [ ] Dual Completion Permit #:
- [ ] SWD Permit #:
- [ ] ENHR Permit #:
- [ ] GSW Permit #:

02/23/2011	03/06/2011	04/21/2011
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-007-23660-00-00
Spot Description:
W2 - SE - SE - SE Sec. 13 Twp. 34 S. R. 12 [ ] East [x] West
330 Feet from [ ] North / [x] South Line of Section
430 Feet from [x] East / [ ] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[ ] NE [ ] NW [x] SE [ ] SW
County: Barber
Lease Name: HARBAUGH GU Well #: 2
Field Name: STRANATHAN
Producing Formation: MISSISSIPPIAN
Elevation: Ground: 1432 Kelly Bushing: 1441
Total Depth: 5240 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 215 Feet
Multiple Stage Cementing Collar Used? [ ] Yes [x] 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: 62000 ppm Fluid volume: 1000 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: WOOLSEY OPERATING COMPANY LLC
Lease Name: SWARTZ 2 SWD License #: 33168
Quarter NE Sec. 1 Twp. 34 S. R. 11 [ ] East [x] West
County: BARBER Permit #: D-30567

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

- [ ] Letter of Confidentiality Received
  Date:
- [ ] Confidential Release Date:
- [x] Wireline Log Received
- [x] Geologist Report Received
- [ ] UIC Distribution

ALT [x] I [ ] II [ ] III Approved by: Deanna Garrisor Date: 10/25/2011

Side Two

1065885

Operator Name: Woolsey Operating Company, LLC Lease Name: HARBAUGH GU Well #: 2

Sec. 13 Twp. 34 S. R. 12 ☐ East ☑ West County: Barber

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

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

Electric Log Submitted Electronically ☑ Yes ☐ No
(If no, Submit Copy)

List All E. Logs Run:

Compensated Density/Comp Neutron PE
Dual Induction

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

Name	Top	Datum
CHASE	1876	-435
ELGIN SD	3553	-2112
DOUGLAS	3783	-2342
HERTHA	4471	-3030
MISSISSIPPIAN	4680	-3239
VIOLA	5029	-3588
SIMPSON	5144	-3703

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	14.75	10.75	28	215	CLASS A	215	2% gel, 3% cc
PRODUCTION	7.875	4.5	10.5	5137	60/40 POZMIX	50	4% gel, 1/4# Celoflake
PRODUCTION	7.875	4.5	10.5	5137	CLASS H	200	10% salt, 10% Gypseal, 6# Kolseal, 1/4#

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:
☐ Perforate
☐ Protect Casing
☐ Plug Back TD
☐ Plug Off Zone

Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
-			
-			

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	4668-4675 &	6450 GAL 10% MIRA	4668-4860 OA
2	4680-4736, 4762-4816 & 4850-4860	459,400 gal treated 2% KCl wtr, 136,900# 30/70 sd,	
		60,800# 16/30 sd & 17,500# 16/30 resin coated sd	4668-4860 OA

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

Date of First, Resumed Production, SWD or ENHR. 05/04/2011

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	1	140	68		

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:
4668-4860 OA

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

ALLIED CEMENTING CO., LLC. 040653

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Medicine Lodge KS

DATE 2-24-11	SEC. 13	TWP. 34S	RANGE 12W	CALLED OUT	ON LOCATION	JOB START 2:30 am	JOB FINISH 3:30 am
LEASE Harbaugh	WELL # GW #2	LOCATION Med. Lodge 14S, W into				COUNTY Barber	STATE KS
OLD OR NEW (Circle one)							

CONTRACTOR H-2 Drilling
TYPE OF JOB Surface
HOLE SIZE 14 3/4 T.D. 212'
CASING SIZE 10 3/4 DEPTH 200'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 20'
PERFS.
DISPLACEMENT 19 bbls H2O

OWNER Woolsey Operating

CEMENT

AMOUNT ORDERED 230 sx class A + 2% gel + 3% cc

EQUIPMENT

PUMP TRUCK # 471/265 CEMENTER Matt Thimesch
HELPER Jason Thimesch
BULK TRUCK # 364 DRIVER Raymond R
BULK TRUCK # DRIVER

COMMON A	230 sx	@ 15.45	3553.50
POZMIX		@	
GEL	5 sx	@ 20.80	104.00
CHLORIDE	8 sx	@ 58.20	465.60
ASC		@	
HANDLING	243	@ 2.40	583.20
MILEAGE	243 - .10 / 15		364.50
		TOTAL	5070.80

REMARKS:

Brk circulation with Rig pump 3 H2O ahead
MIX 230 sx cement
Disp. 19 bbls H2O Shut in.
cement did circulate.

SERVICE

DEPTH OF JOB 200'
PUMP TRUCK CHARGE 1018.00
EXTRA FOOTAGE @
MILEAGE 15 @ 7.00 105.00
MANIFOLD @
@
@
TOTAL 1123.00

CHARGE TO: Woolsey Operating
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

@
@
@
@
@
TOTAL

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

SALES TAX (If Any)
TOTAL CHARGES [redacted]
DISCOUNT IF PAID IN 30 DAYS [redacted]

PRINTED NAME MIKE THARP

SIGNATURE Mike Tharp

ALLIED CEMENTING CO., LLC. 040041

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:
Medicine Lodge, Ks

Harbaugh

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
3-5-2011	13	34S	12W	3:00 AM	5:00 AM	9:00 AM	10:00 AM
LEASE Harbaugh GU	WELL # 2		LOCATION Medicine Lodge Ks			COUNTY Barber	STATE KS
OLD OR (NEW) (Circle one)			14 south W into				

CONTRACTOR H2 #3
TYPE OF JOB Production
HOLE SIZE 7 7/8 T.D. 5240'
CASING SIZE 4 1/2 DEPTH 5138'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT 42'
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT 81 1/2 bbls of 2% KCL water

OWNER Woolsey Operating

EQUIPMENT

PUMP TRUCK # 414-302 CEMENTER Derin F.
HELPER Ron G
BULK TRUCK # 363-290 DRIVER Bobby W
BULK TRUCK # DRIVER

CEMENT

AMOUNT ORDERED 75 sx 60:40:4% Gel
200 sx Class H + 10% Gyp + 10% Salt
6# Kolseal, 8% FL-160 + 1/4 # Flosel
1 gal Clapro

COMMON	A 45 sx	@ 15.45	695.25
POZMIX	30 sx	@ 8.00	240.00
GEL	3 sx	@ 20.80	62.40
CHLORIDE		@	
ASC		@	
H	200 sx	@ 16.75	3350.00
Gypseal	19 sx	@ 29.20	554.80
Salt	22 sx	@ 12.00	264.00
Kolseal	1200 #	@ .89	1068.00
FL-160	150.4	@ 13.30	2000.32
Floseal	50 #	@ 2.50	125.00
Clapro	8 Gal	@ 31.25	250.00
		@	
HANDLING	348	@ 2.40	835.20
MILEAGE	348/.10/15		522.00
		TOTAL	9966.97

REMARKS:

Pipeon bottom break circulation mix 25 sx Cement for Rat hole, mix 50 sx SC Sunger cement, mix 200 sx H Gel Cement Shut down, Wash pump & lines, Release Plug, Start displacement, Lift Pressure @ 45 bbls, Slow rate to 3 bpm @ 75 bbls, bump plug @ 81 1/2 bbls 800-1500 PSI, floor did hold

SERVICE

DEPTH OF JOB 5138'
PUMP TRUCK CHARGE 2185.00
EXTRA FOOTAGE @
MILEAGE 15 @ 7.00 105.00
MANIFOLD @
Headrental @ 100.00
@
TOTAL 2390.00

CHARGE TO: Woolsey Operating
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

4 1/2

1-AFU Float Shoe	@	214.20
1-Latchdown Plug	@	163.80
12-Turbolizers	@ 40.60	487.20
2-Scratchers	@ 23.94	478.80
	@	
	TOTAL	1344.00

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

SALES TAX (If Any)
TOTAL CHARGES [redacted]
DISCOUNT [redacted] IF PAID IN 30 DAYS

PRINTED NAME X MIKE THARP
SIGNATURE X Mike Tharp

Thank you !!!

DRILL STEM TEST REPORT

Woolsey Operating Company

125 North Market Suite 100
Wichita Kansas 67202+1729

ATTN: Scott Alberg

Harbaugh GU #2

13/34S/12W Barber

Job Ticket: 15661 **DST#: 1**

Test Start: 2011.03.02 @ 07:50:00

GENERAL INFORMATION:

Formation: **Cherokee-Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:10:00
Time Test Ended: 18:01:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Dylan E Ellis
Unit No: 3345/Pratt/104

Interval: 4617.00 ft (KB) To 4710.00 ft (KB) (TVD)
Total Depth: 4710.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

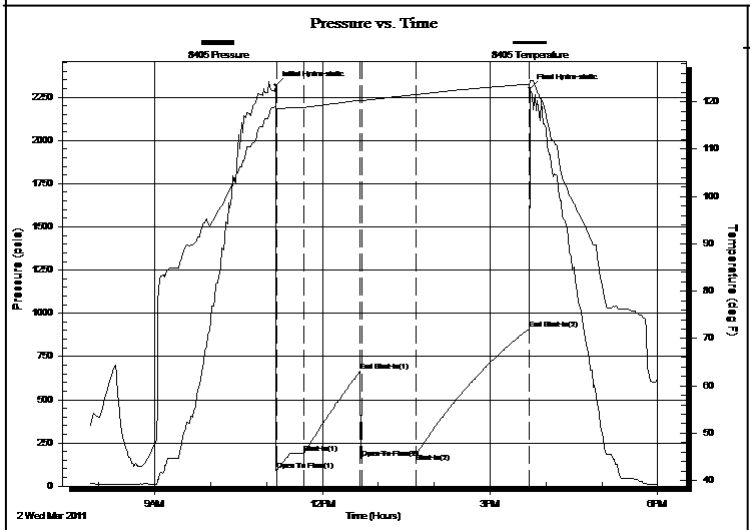
Reference Elevations: 1441.00 ft (KB)
1432.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8405 **Inside**

Press@RunDepth: 910.56 psia @ 4706.44 ft (KB)
Start Date: 2011.03.02 End Date: 2011.03.02
Start Time: 07:50:00 End Time: 18:00:51

Capacity: 5000.00 psia
Last Calib.: 2011.03.02
Time On Btm: 2011.03.02 @ 11:09:21
Time Off Btm: 2011.03.02 @ 15:42:51

TEST COMMENT:
1ST Opening 30 Minutes fair blow /blow built to 11 inches into bucket of w ater
1ST Shut-In 60 Minutes no bow back
2ND Opening 60 Minutes good blow /blow blew bottom of bucket in 3 minutes
2ND Shut-In 120 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2319.85	118.83	Initial Hydro-static
1	89.47	118.49	Open To Flow (1)
31	188.01	118.80	Shut-In(1)
91	663.52	120.34	End Shut-In(1)
93	161.38	120.24	Open To Flow (2)
152	188.46	121.52	Shut-In(2)
273	910.56	123.68	End Shut-In(2)
274	2302.02	124.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
295.00	Mud 100%	1.54

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Woolsey Operating Company

125 North Market Suite 100
Wichita Kansas 67202+1729

ATTN: Scott Alberg

Harbaugh GU #2

13/34S/12W Barber

Job Ticket: 15661 **DST#: 1**

Test Start: 2011.03.02 @ 07:50:00

Tool Information

Drill Pipe:	Length:	4333.00 ft	Diameter:	3.80 inches	Volume:	60.78 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		20000.00 lb
Drill Collar:	Length:	285.44 ft	Diameter:	2.25 inches	Volume:	1.40 bbl	Weight to Pull Loose:		7000.00 lb
					Total Volume:	62.18 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		29.44 ft					String Weight:	Initial	60000.00 lb
Depth to Top Packer:		4617.00 ft						Final	61000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		93.44 ft							
Tool Length:		121.44 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut-In Tool	5.00			4594.00		
Hydrolic Tool	5.00			4599.00		
Jars	6.00			4605.00		
Safety Joint	2.00			4607.00		
Packer	5.00			4612.00	28.00	Bottom Of Top Packer
Packer	5.00			4617.00		
Perforations	5.00			4622.00		
Change Over Sub	0.75			4622.75		
Drill Pipe	63.94			4686.69		
Change Over Sub	0.75			4687.44		
Perforations	18.00			4705.44		
Recorder	1.00	8405	Inside	4706.44		
Recorder	1.00	8400	Outside	4707.44		
Bull Plug	3.00			4710.44	93.44	Bottom Packers & Anchor
Total Tool Length:	**121.44**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Operating Company

125 North Market Suite 100
Wichita Kansas 67202+1729

ATTN: Scott Alberg

Harbaugh GU #2

13/34S/12W Barber

Job Ticket: 15661 **DST#: 1**

Test Start: 2011.03.02 @ 07:50:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.00 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psia		
Salinity:	2000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

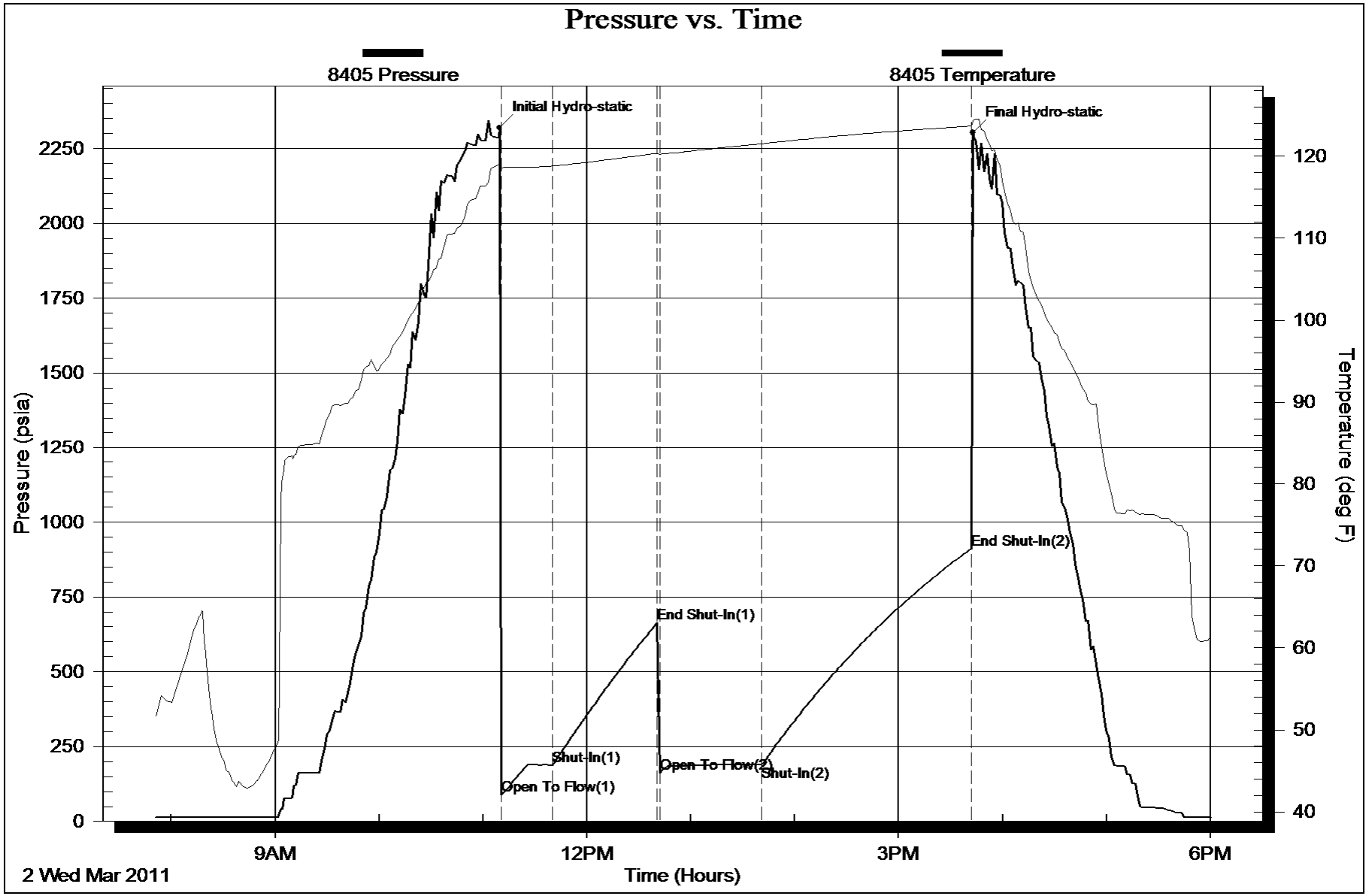
Length ft	Description	Volume bbl
295.00	Mud 100%	1.538

Total Length: 295.00 ft Total Volume: 1.538 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8405 Pressure
8405 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Open To Flow(1)
Open To Flow(2)
Shut-In(2)
Pressure (psia)
Temperature (deg F)
Time (Hours)
9AM
12PM
3PM
6PM
2 Wed Mar 2011
0
250
500
750
1000
1250
1500
1750
2000
2250
40
50
60
70
80
90
100
110
120

Woolsey Operating Company, LLC

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

Well Name:	**Harbaugh GU #2**		
Location:	**W/2 SE SE SE**		
License Number:	**API: 15-007-23660-00-00**	**Region:**	**Barber County, Kansas**
Spud Date:	**February 23, 2011**	**Drilling Completed:**	**March 4, 2011**
Surface Coordinates:	**330' FSL, 430' FEL Section 13-Twp 34 South - Rge 12 West Rhodes South Pool**		
Bottom Hole Coordinates:	**Vertical Hole**		
Ground Elevation (ft):	**1432**	**K.B. Elevation (ft):**	**1441**
Logged Interval (ft):	**4000 To: 5240**	**Total Depth (ft):**	**5240**
Formation:	**McLish Shale**		
Type of Drilling Fluid:	**Chemical Mud, Displace at 3410'**		

OPERATOR

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

GEOLOGIST

Name: **W. Scott Alberg**
Company: **Alberg Petroleum, LLC**
Address: **609 Meadowlark Lane**
Pratt, Kansas 67124

FORMATION TOPS

	SAMPLE TOPS	LOG TOPS
HUSHPUCKNEY SHALE	4461(-3020)	4464(-3023)
B/KC	4511(-3070)	4511(-3070)
PAWNEE	4603(-3162)	4615(-3174)
CHEROKEE GROUP	4647(-3206)	4654(-3213)
CHEROKEE SAND	4662(-3221)	4668(-3227)
MISSISSIPPIAN	4675(-3234)	4683(-3242)
KINDERHOOK SHALE	4915(-3474)	4915(-3474)
WOODFORD SHALE	4989(-3548)	4993(-3552)
MISNER SAND	5022(-3581)	5028(-3587)
VIOLA	5042(-3601)	5048(-3607)
SIMPSON GROUP	5147(-3706)	5145(-3704)
SIMPSON WILCOX	5160(-3719)	5166(-3725)
MCLISH SHALE	5196(-3755)	5202(-3761)
MCLISH SAND	NDE	NDE
RTD	5240(-3799)	
LTD		5245(-3804)

COMMENTS

Surface Casing: Set 5 joints 10 3/4" at 215' with 230 sxs Class A, 2% gel, 3% cc, plug down at 3:00 am on February 24, 2011. Cement did Circulate.
Production Casing: Ran 4 1/2" Casing
Deviation Surveys: 215' 3/4,1535' 1, 2011 1, 2518' 1, 3026' 1, 3501' 1 1/4, 3819' 1, 4073' 2, 4168' 3/4, 4328' 1 1/2, 4487' 3/4, 4710' 3/4, 5240' 1 1/4
Contractor Bit Record: 1- 14 3/4" out at 215'.
2- 7 7/8" out at 4710'
3 -7 7/8" out at 5240'

Gas Detector: Woolsey Operating Company, Trailer #2
Mud System: Mud Co, Brad Bortz, Engineer
DSTs: Superior Testing Company
Logged by Superior Well Services
LTD 5245'

DSTs

DST #1 4617 to 4710', Times 30-60-60-120
IF Fair Blow built to 11 inches, no blow back
FF BOB in 3 minutes, no blow back
IHP 2341# FHP 2304#
IFP 90-190# FFP 163# -190#
ISIP 665# FSIP 912#

Recovery:
295' Drilling Mud

CREWS

H2 Drilling Rig #3
Tool Pusher - Randy Smith
Drillers - Gary Axtell
Luis Marquez
Cain Charles

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

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

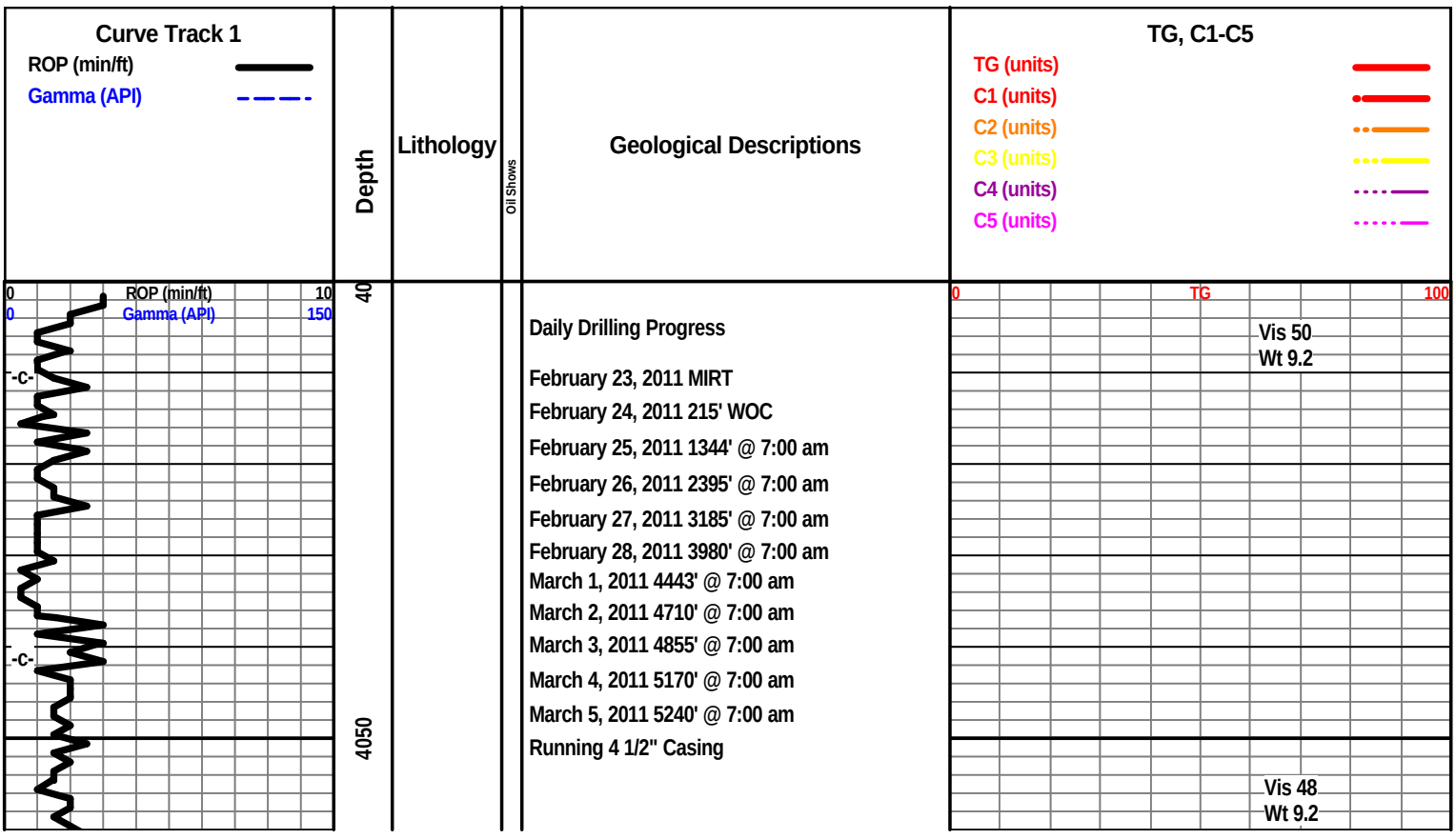
- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom
- Fuss
- Oomoldic

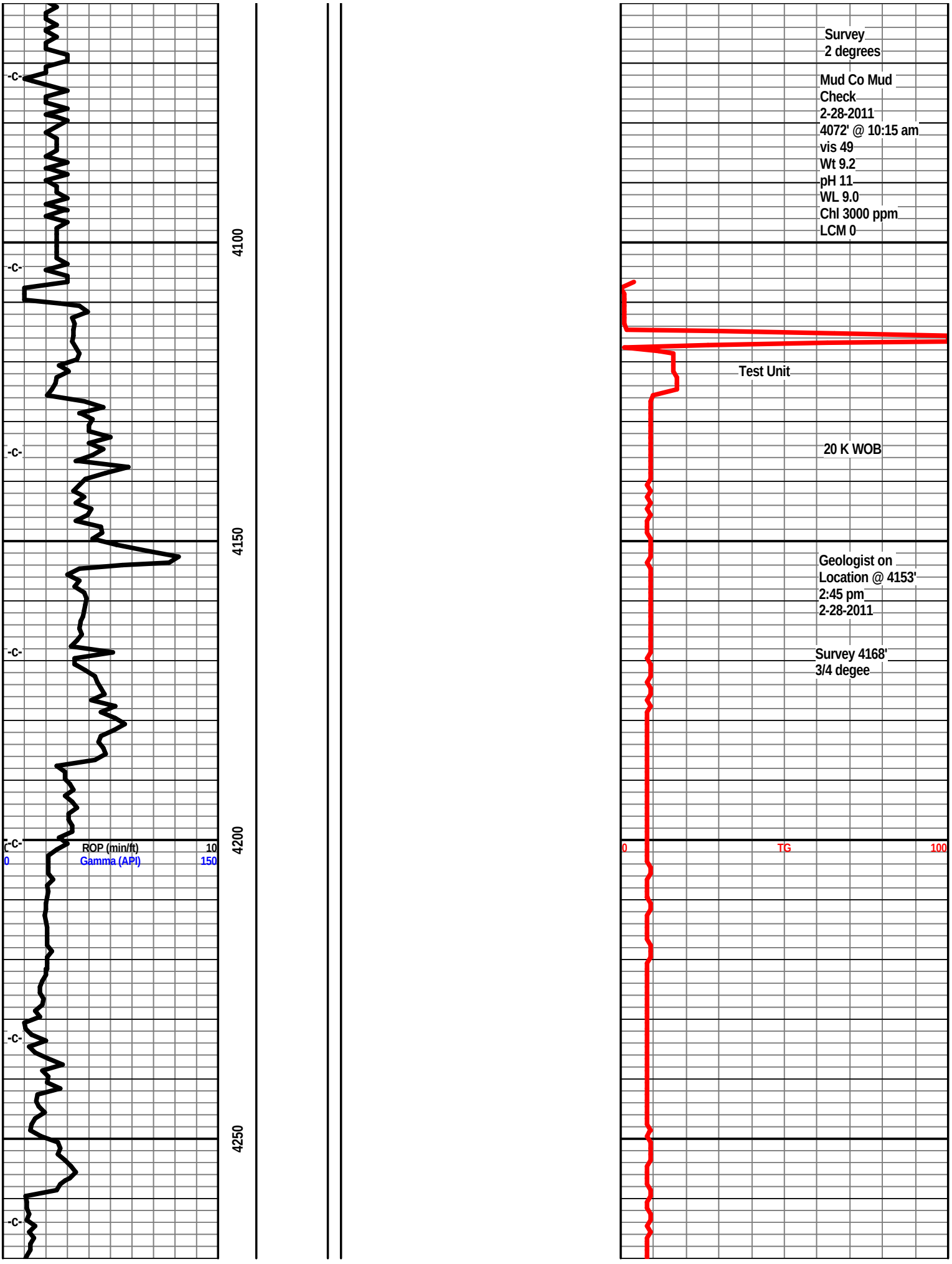
STRINGER

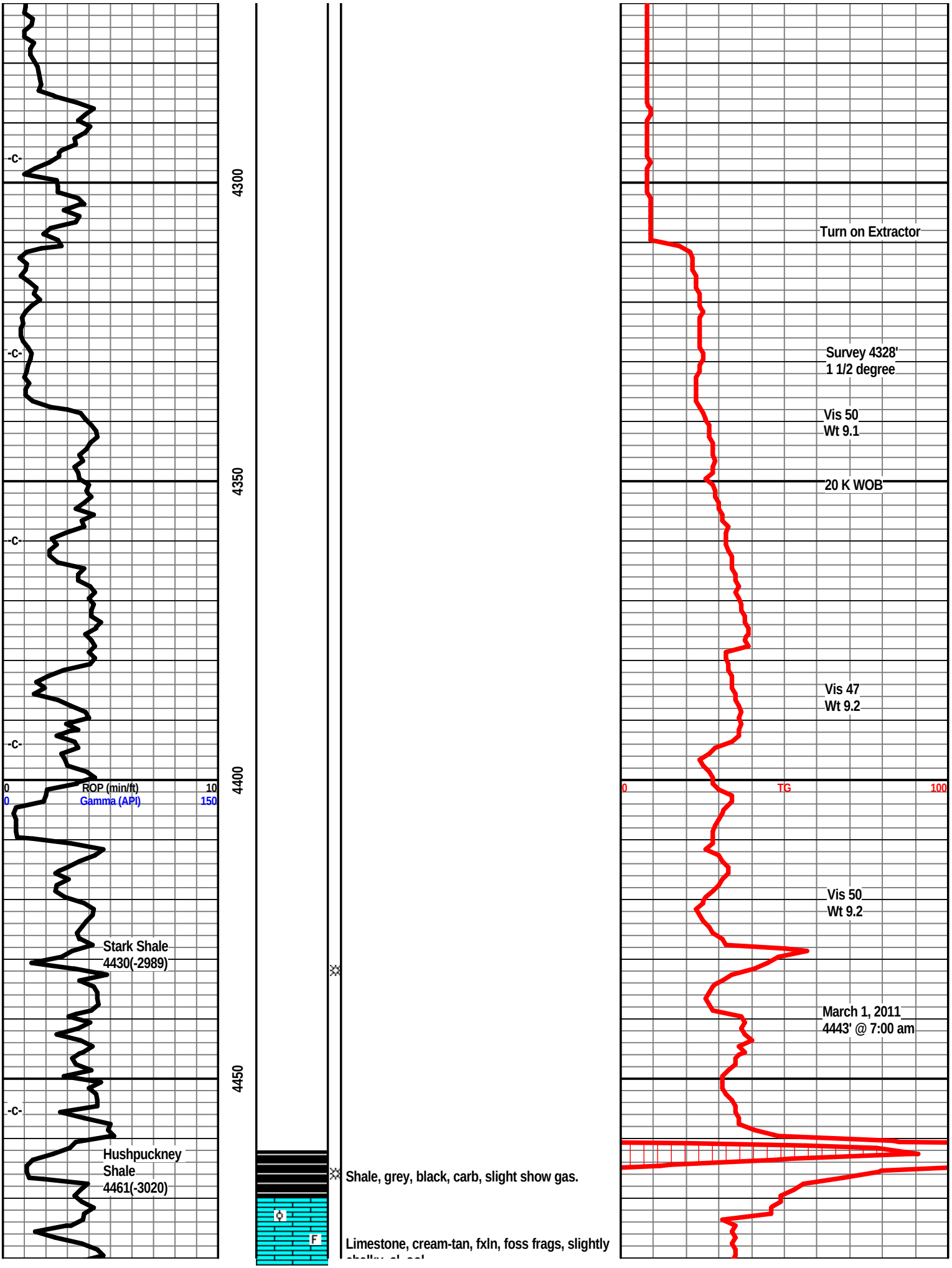
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh
- Clystn
- Dol
- Grysh
- Grysltt
- Lms
- Sandylms
- Sh
- Sltstn

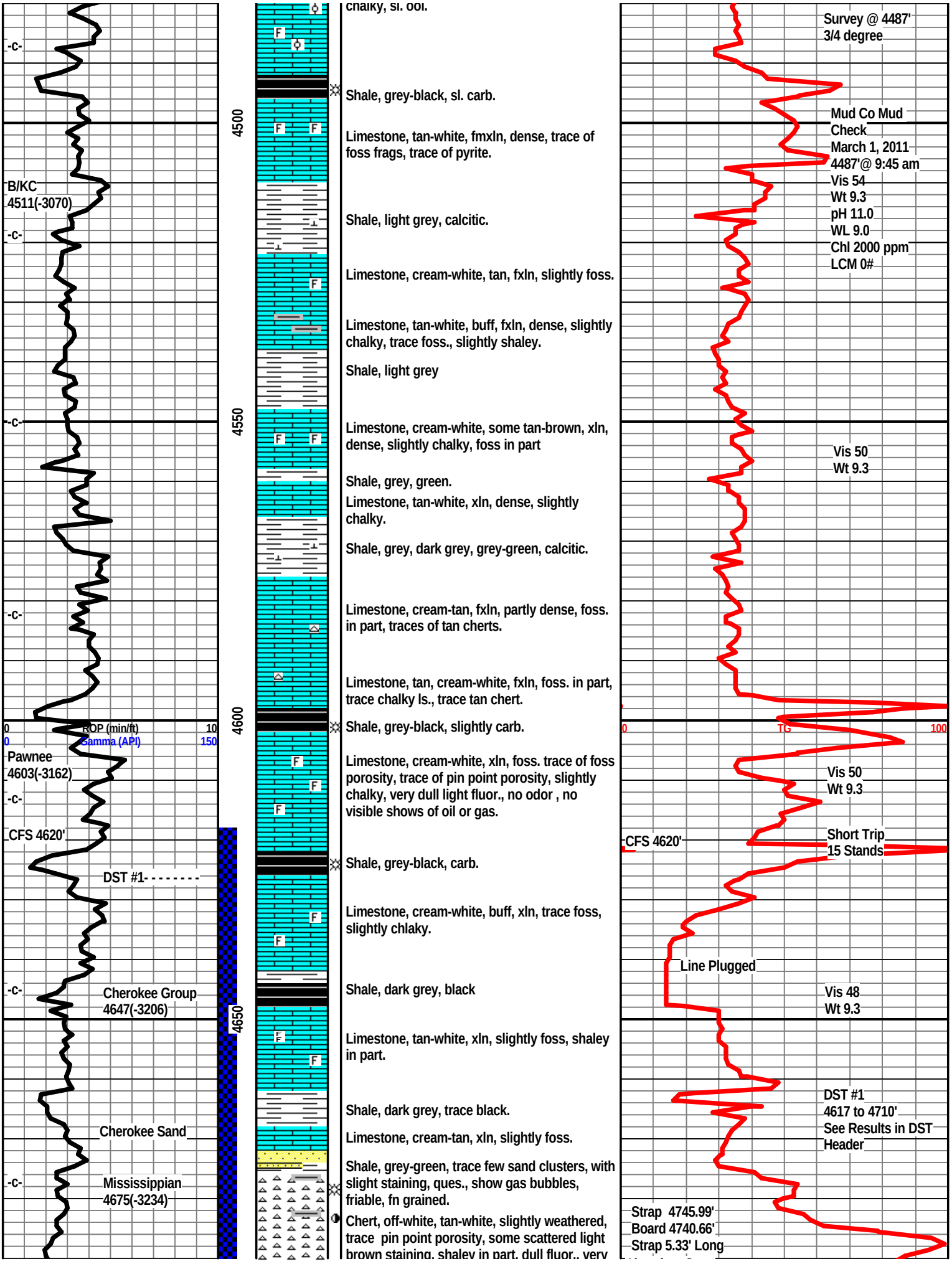
TEXTURE

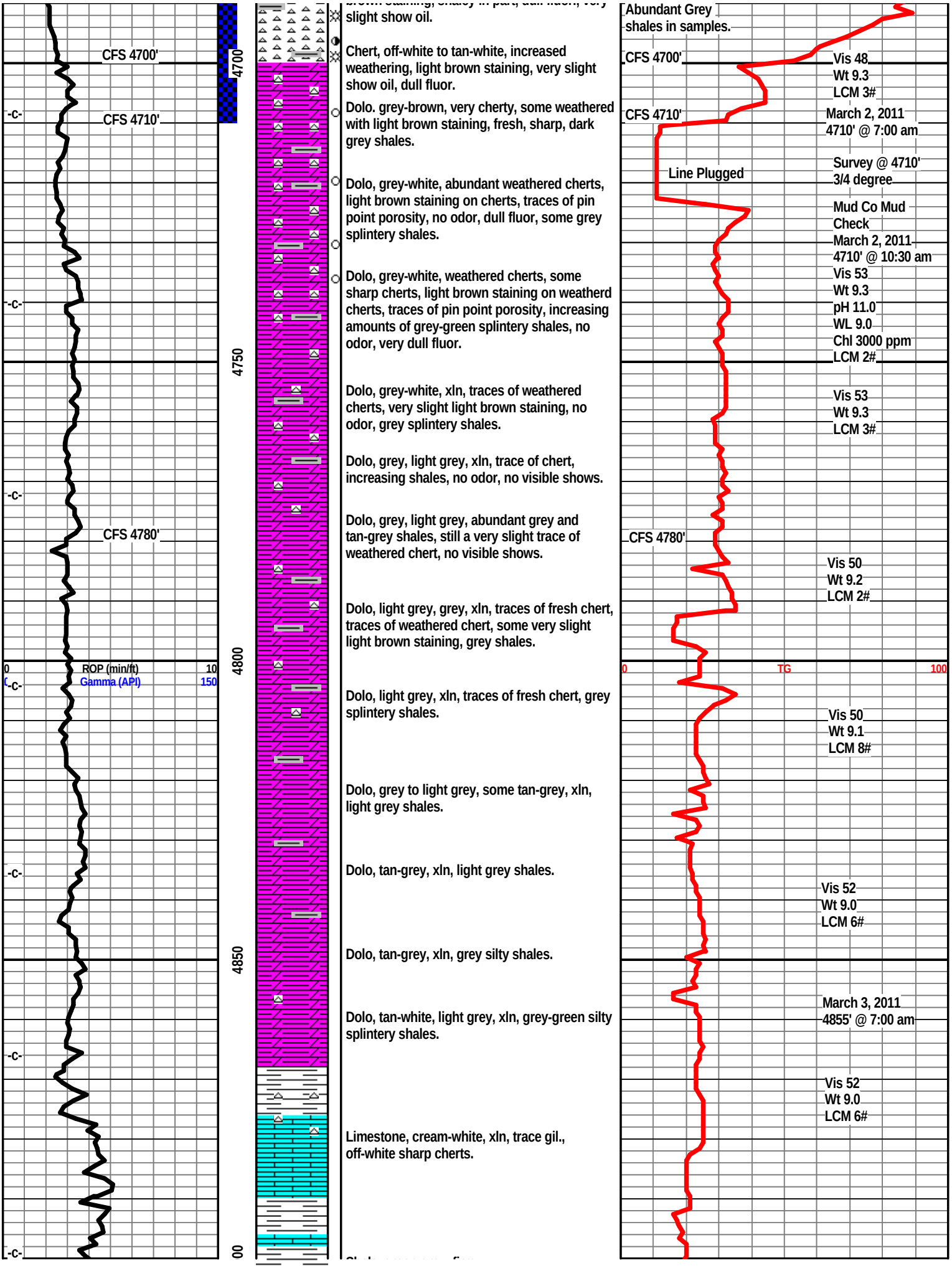
- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

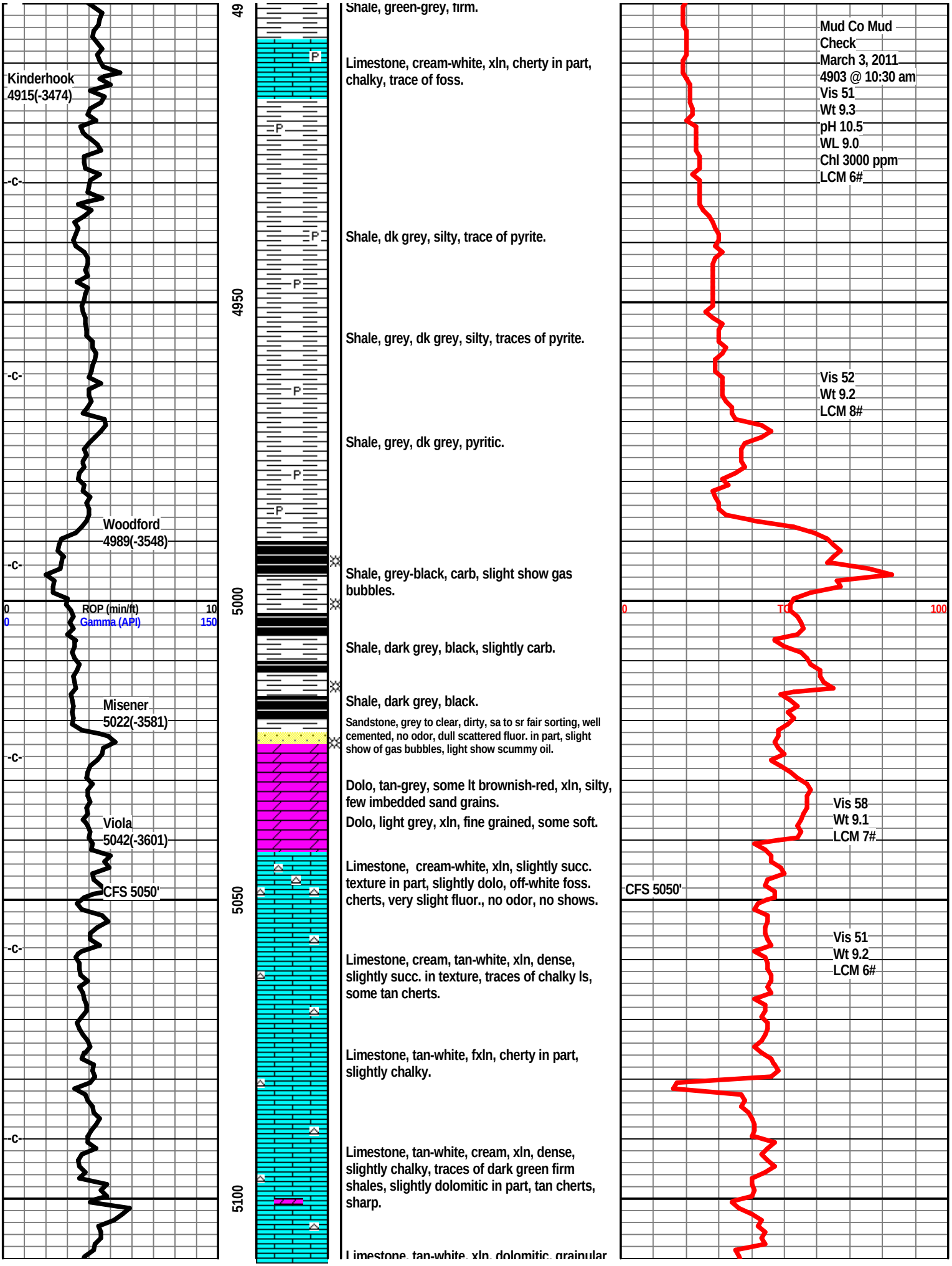


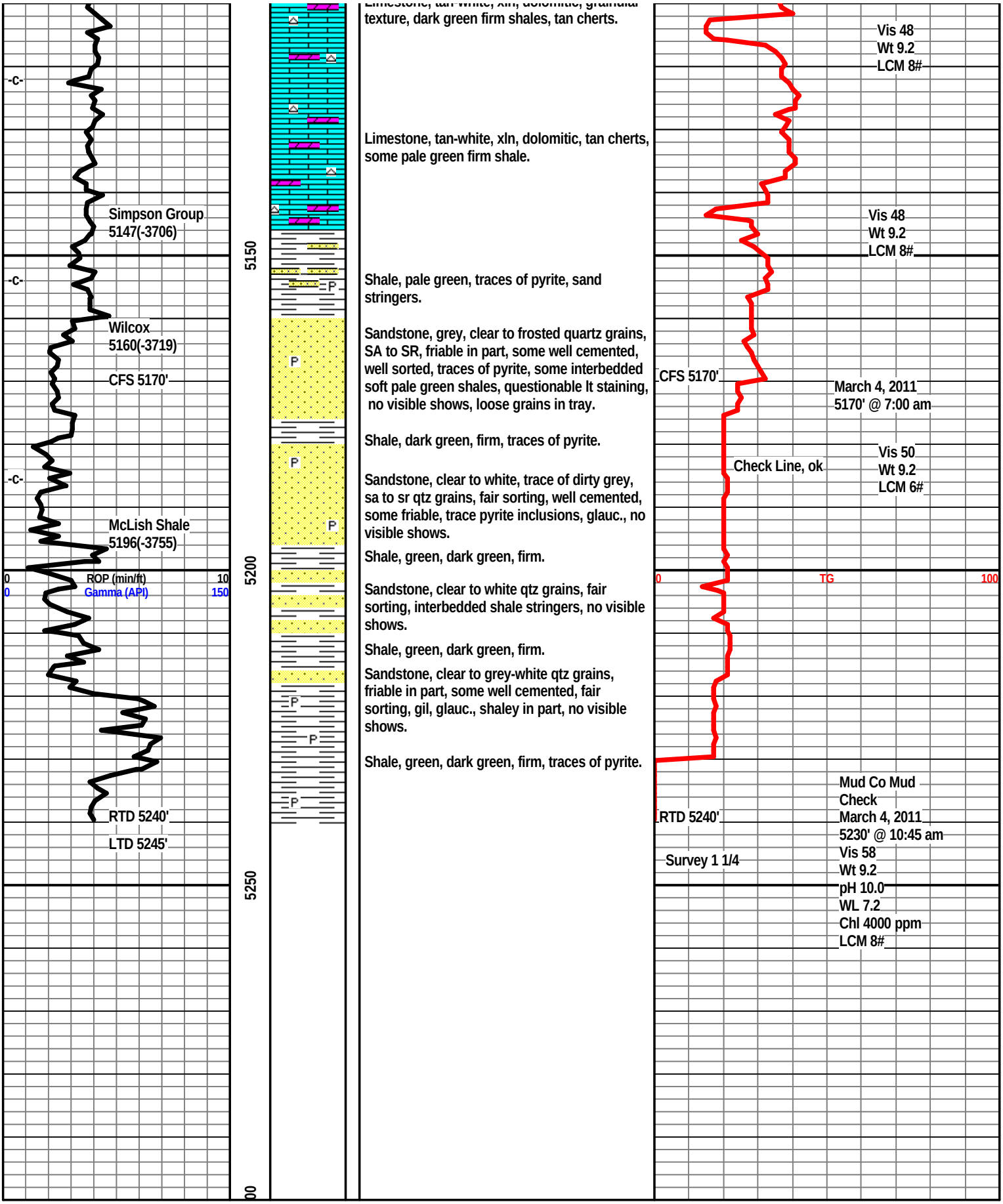

-C-
-C-
-C-
-C-
-C-
-C-
4100
4150
4200
4250
ROP (min/ft)
10
0
Gamma (API)
150
Survey
2 degrees
Mud Co Mud
Check
2-28-2011
4072' @ 10:15 am
vis 49
Wt 9.2
pH 11
WL 9.0
Chl 3000 ppm
LCM 0
Test Unit
20 K WOB
Geologist on
Location @ 4153'
2:45 pm
2-28-2011
Survey 4168'
3/4 degee
0
TG
100


-C-
-C-
-C-
-C-
-C-
4300
4350
4400
4450
0
ROP (min/ft)
10
0
Gamma (API)
150
Stark Shale
4430(-2989)
Hushpuckney
Shale
4461(-3020)
F
Shale, grey, black, carb, slight show gas.
Limestone, cream-tan, fxln, foss frags, slightly
Turn on Extractor
Survey 4328'
1 1/2 degree
Vis 50
Wt 9.1
20 K WOB
Vis 47
Wt 9.2
0
TG
100
Vis 50
Wt 9.2
March 1, 2011
4443' @ 7:00 am


-c-
B/KC
4511(-3070)
-c-
-c-
-c-
0
ROP (min/ft)
10
0
Gamma (API)
150
Pawnee
4603(-3162)
-c-
CFS 4620'
DST #1- - - - - - - -
-c-
Cherokee Group
4647(-3206)
Cherokee Sand
-c-
Mississippian
4675(-3234)
4500
4550
4600
4650
chalky, sl. ool.
Shale, grey-black, sl. carb.
Limestone, tan-white, fmxln, dense, trace of foss frags, trace of pyrite.
Shale, light grey, calcitic.
Limestone, cream-white, tan, fxln, slightly foss.
Limestone, tan-white, buff, fxln, dense, slightly chalky, trace foss., slightly shaley.
Shale, light grey
Limestone, cream-white, some tan-brown, xln, dense, slightly chalky, foss in part
Shale, grey, green.
Limestone, tan-white, xln, dense, slightly chalky.
Shale, grey, dark grey, grey-green, calcitic.
Limestone, cream-tan, fxln, partly dense, foss. in part, traces of tan cherts.
Limestone, tan, cream-white, fxln, foss. in part, trace chalky ls., trace tan chert.
Shale, grey-black, slightly carb.
Limestone, cream-white, xln, foss. trace of foss porosity, trace of pin point porosity, slightly chalky, very dull light fluor., no odor , no visible shows of oil or gas.
Shale, grey-black, carb.
Limestone, cream-white, buff, xln, trace foss, slightly chlaky.
Shale, dark grey, black
Limestone, tan-white, xln, slightly foss, shaley in part.
Shale, dark grey, trace black.
Limestone, cream-tan, xln, slightly foss.
Shale, grey-green, trace few sand clusters, with slight staining, ques., show gas bubbles, friable, fn grained.
Chert, off-white, tan-white, slightly weathered, trace pin point porosity, some scattered light brown staining, shaley in part, dull fluor., very
Survey @ 4487'
3/4 degree
Mud Co Mud Check
March 1, 2011
4487'@ 9:45 am
Vis 54
Wt 9.3
pH 11.0
WL 9.0
Chl 2000 ppm
LCM 0#
Vis 50
Wt 9.3
0
TG
100
Vis 50
Wt 9.3
CFS 4620'
Short Trip
15 Stands
Line Plugged
Vis 48
Wt 9.3
DST #1
4617 to 4710'
See Results in DST Header
Strap 4745.99'
Board 4740.66'
Strap 5.33' Long


CFS 4700'
CFS 4710'
CFS 4780'
4700
4750
4800
4850
00
-C-
0
ROP (min/ft)
10
Gamma (API)
150
slight show oil.
Chert, off-white to tan-white, increased weathering, light brown staining, very slight show oil, dull fluor.
Dolo. grey-brown, very cherty, some weathered with light brown staining, fresh, sharp, dark grey shales.
Dolo, grey-white, abundant weathered cherts, light brown staining on cherts, traces of pin point porosity, no odor, dull fluor, some grey splintery shales.
Dolo, grey-white, weathered cherts, some sharp cherts, light brown staining on weatherd cherts, traces of pin point porosity, increasing amounts of grey-green splintery shales, no odor, very dull fluor.
Dolo, grey-white, xln, traces of weathered cherts, very slight light brown staining, no odor, grey splintery shales.
Dolo, grey, light grey, xln, trace of chert, increasing shales, no odor, no visible shows.
Dolo, grey, light grey, abundant grey and tan-grey shales, still a very slight trace of weathered chert, no visible shows.
Dolo, light grey, grey, xln, traces of fresh chert, traces of weathered chert, some very slight light brown staining, grey shales.
Dolo, light grey, xln, traces of fresh chert, grey splintery shales.
Dolo, grey to light grey, some tan-grey, xln, light grey shales.
Dolo, tan-grey, xln, light grey shales.
Dolo, tan-grey, xln, grey silty shales.
Dolo, tan-white, light grey, xln, grey-green silty splintery shales.
Limestone, cream-white, xln, trace gil., off-white sharp cherts.
Abundant Grey shales in samples.
CFS 4700'
CFS 4710'
Line Plugged
CFS 4780'
Vis 48
Wt 9.3
LCM 3#
March 2, 2011
4710' @ 7:00 am
Survey @ 4710'
3/4 degree
Mud Co Mud Check
March 2, 2011
4710' @ 10:30 am
Vis 53
Wt 9.3
pH 11.0
WL 9.0
Chl 3000 ppm
LCM 2#
Vis 53
Wt 9.3
LCM 3#
Vis 50
Wt 9.2
LCM 2#
0
TG
100
Vis 50
Wt 9.1
LCM 8#
Vis 52
Wt 9.0
LCM 6#
March 3, 2011
4855' @ 7:00 am
Vis 52
Wt 9.0
LCM 6#


Kinderhook
4915(-3474)
-c-
Woodford
4989(-3548)
-c-
0
ROP (min/ft)
10
0
Gamma (API)
150
Misener
5022(-3581)
-c-
Viola
5042(-3601)
CFS 5050'
-c-
-c-
4900
4950
5000
5050
5100
P
Shale, green-grey, firm.
Limestone, cream-white, xln, cherty in part, chalky, trace of foss.
Shale, dk grey, silty, trace of pyrite.
Shale, grey, dk grey, silty, traces of pyrite.
Shale, grey, dk grey, pyritic.
Shale, grey-black, carb, slight show gas bubbles.
Shale, dark grey, black, slightly carb.
Shale, dark grey, black.
Sandstone, grey to clear, dirty, sa to sr fair sorting, well cemented, no odor, dull scattered fluor. in part, slight show of gas bubbles, light show scummy oil.
Dolo, tan-grey, some lt brownish-red, xln, silty, few imbedded sand grains.
Dolo, light grey, xln, fine grained, some soft.
Limestone, cream-white, xln, slightly succ. texture in part, slightly dolo, off-white foss. cherts, very slight fluor., no odor, no shows.
Limestone, cream, tan-white, xln, dense, slightly succ. in texture, traces of chalky ls, some tan cherts.
Limestone, tan-white, fxln, cherty in part, slightly chalky.
Limestone, tan-white, cream, xln, dense, slightly chalky, traces of dark green firm shales, slightly dolomitic in part, tan cherts, sharp.
Limestone, tan-white, xln, dolomitic, grainular
Mud Co Mud Check
March 3, 2011
4903 @ 10:30 am
Vis 51
Wt 9.3
pH 10.5
WL 9.0
Chl 3000 ppm
LCM 6#
Vis 52
Wt 9.2
LCM 8#
0
TG
100
Vis 58
Wt 9.1
LCM 7#
CFS 5050'
Vis 51
Wt 9.2
LCM 6#


-c-
Simpson Group
5147(-3706)
-c-
Wilcox
5160(-3719)
CFS 5170'
-c-
McLish Shale
5196(-3755)
0
ROP (min/ft)
10
0
Gamma (API)
150
RTD 5240'
LTD 5245'
5150
5200
5250
P
Limestone, tan-white, xln, dolomitic, granular texture, dark green firm shales, tan cherts.
Limestone, tan-white, xln, dolomitic, tan cherts, some pale green firm shale.
Shale, pale green, traces of pyrite, sand stringers.
Sandstone, grey, clear to frosted quartz grains, SA to SR, friable in part, some well cemented, well sorted, traces of pyrite, some interbedded soft pale green shales, questionable lt staining, no visible shows, loose grains in tray.
Shale, dark green, firm, traces of pyrite.
Sandstone, clear to white, trace of dirty grey, sa to sr qtz grains, fair sorting, well cemented, some friable, trace pyrite inclusions, glauc., no visible shows.
Shale, green, dark green, firm.
Sandstone, clear to white qtz grains, fair sorting, interbedded shale stringers, no visible shows.
Shale, green, dark green, firm.
Sandstone, clear to grey-white qtz grains, friable in part, some well cemented, fair sorting, gil, glauc., shaley in part, no visible shows.
Shale, green, dark green, firm, traces of pyrite.
Vis 48
Wt 9.2
LCM 8#
Vis 48
Wt 9.2
LCM 8#
CFS 5170'
March 4, 2011
5170' @ 7:00 am
Check Line, ok
Vis 50
Wt 9.2
LCM 6#
0
TG
100
RTD 5240'
Survey 1 1/4
Mud Co Mud Check
March 4, 2011
5230' @ 10:45 am
Vis 58
Wt 9.2
pH 10.0
WL 7.2
Chl 4000 ppm
LCM 8#