



**Woolsey Operating Company, LLC**

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

Measured Depth Log

Well Name: LUTHI GU #5  
Location: APROX N/2 S/2 SE  
License Number: API: 15-007-23873-00-00  
Spud Date: May 23, 2012  
Surface Coordinates: Section 36-T33S-R11W, 1015' FSL, 1420' FEL  
Kochia Pool  
Bottom Hole Vertical Hole  
Coordinates:  
Ground Elevation (ft): 1441 K.B. Elevation (ft): 1454  
Logged Interval (ft): 4000 To: 5092 Total Depth (ft): 5092  
Formation: Simpson Sand  
Type of Drilling Fluid: Chemical Mud, Displace at 3990'(second time)  
Region: Barber County, Kansas  
Drilling Completed: June 2, 2012  
Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

**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		4370(-2916)
B/KC	4421(-2967)	4426(-2973)
PAWNEE	4511(-3057)	4515(-3061)
CHEROKEE GROUP	4558(-3104)	4563(-3109)
MISSISSIPPIAN	4596(-3142)	4591(-3137)
KINDERHOOK SHALE	4812(-3358)	4818(-3364)
WOODFORD SHALE	4893(-3439)	4897(-3443)
VIOLA	4930(-3476)	4931(-3477)
SIMPSON GROUP	5025(-3571)	5024(-3570)
SIMPSON SAND	5045(-3591)	5042(-3588)
MCLISH SHALE		
RTD	5092(-3638)	
LTD		5097(-3643)

## COMMENTS

Surface Casing: Set 5 joints 10 3/4" at 217' with 240 sxs Class A, 2% gel, 3% cc, plug down at 12:00 am on May 24, 2012. Cement did Circulate.

Production Casing: 5 1/2 casing ran

Deviation Surveys: 1/4 - 220', 3/4 - 517', 1/2 - 1014', 1/2 - 1513', 3/4 - 1985', 1/4 - 2486', 3/4 - 3015', 3/4 - 3550', 5.85 - 3990', 5 1.2 - 3990; pull up hole - 1/2 3515', 1 - 3770', 2-3801, 3 1/2 -3864', cement back, new surveys, 2 - 3801, 1 1/4 - 3801, 1 3/4 3832, 2-3864', 1 1/4 - 3895', 1 1/2 - 3927', 1 - 3958', 1 - 3990, 1 1/2 - 4083', 3/4 4178', 3/4 4273', 3/4 - 4400', 3/4 - 4495', 1- 4715', 1-4841', 3/4 4950', 3/4 - 5092'.

Contractor Bit Record:

1- 14 3/4" out at 220'.

2- 7 7/8" out at 3560' PDC

3 - 7 7/8" out at 3990'

Put PDC back in after cementing back @ 3990'

2- 7 7/8" out at 4400' PDC

3 - 7 7/8" out at 5092'

Pipe Strap at 4527' Strap 5.17' long to board.

Gas Detector: Woolsey Operating Company, Trailer #1

Mud System: Mud Co, Brad Bortz, Terry Ison, Engineers

DSTs: Trilobite Testing

Logged by Superior Well Services.

LTD - 5097'

## DSTs

**DST #1 4490 to 4527 Times 30-40-60-90 Pawnee ( Tester opened tool prior to the 60 minute requested shutin on initial shut in)**

**1st Opening - GTS 90 seconds - Blow back BOB**

**2nd opening - GTS Immediately - Blow back BOB**

**Gas Gauge:**

**1st opening - 5 min 1787mcfgpd**

15 min 1631mcfgpd

20 min 1475mcfgpd

30 min 1334mcfgpd

**2nd Opening-10 min 1599mcfgpd**

20 min 1271mcfgpd

30 min 1068mcfgpd

40 min 943mcfgpd

50 min 850mcfgpd

60 min 787mcfgpd

**Recovery: 25' GCM (4% gas, 96% mud)**

**IFP 348-198# FFP 280-114#**

**ISIP 1577# FSIP 1550#**

**IHP 2125# FHP 2059#**

**DST #2 4890 to 4950 Times 30-60-60-120 (Viola)**

**1 st Opening - Strong Blow, GTS 12 minutes - no blow back**

**2nd Opening - Strong Blow, GTS immediately - fair to strong blow back**

**Gas Gauge**

**1st Opening - 20 min 71 mcfgpd**

30 min 75 mcfgpd

**2nd opening- 10 min 75 mcfgpd**

20 min 78 mcfgpd

30 min 82 mcfgpd

40 min 78 mcfgpd

50 min 78 mcfgpd

60 min 75 mcfgpd

**Recovery: 455' CGO(38% Gas, 62% Oil)**

**180' GOCM (32% Gas, 30% Oil, 38% Mud)**

**Temp 128, Gravity 40 degrees**

**IFP 64-114# FFP 114-216#**

**ISIP 1719# FSIP 1645#**

**IHP 2402# FHP 2322#**

## CREWS

**Duke Drilling**


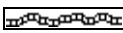
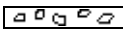



**Tool Pusher - Galen Roach**


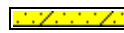




**Drillers - Shane Meitler**


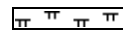
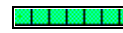
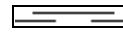


**Charles Stout**






**Craig Mertens**

## ROCK TYPES

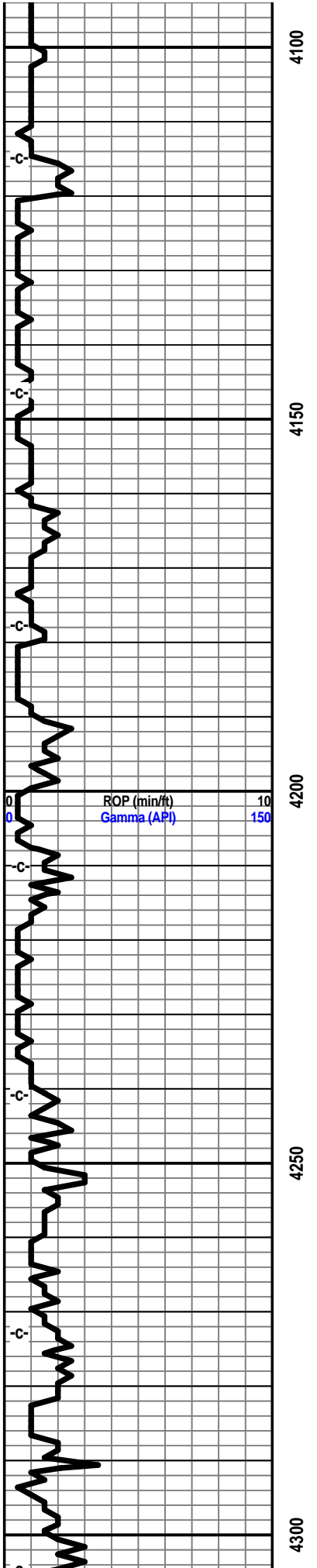
	<b>Anhy</b>
	<b>Bent</b>
	<b>Brec</b>
	<b>Cht</b>
	<b>Clyst</b>
	<b>Coal</b>

	<b>Congl</b>
	<b>Sdy dolo</b>
	<b>Shy dolo</b>
	<b>Dol</b>
	<b>Gyp</b>
	<b>Sdy lmst</b>

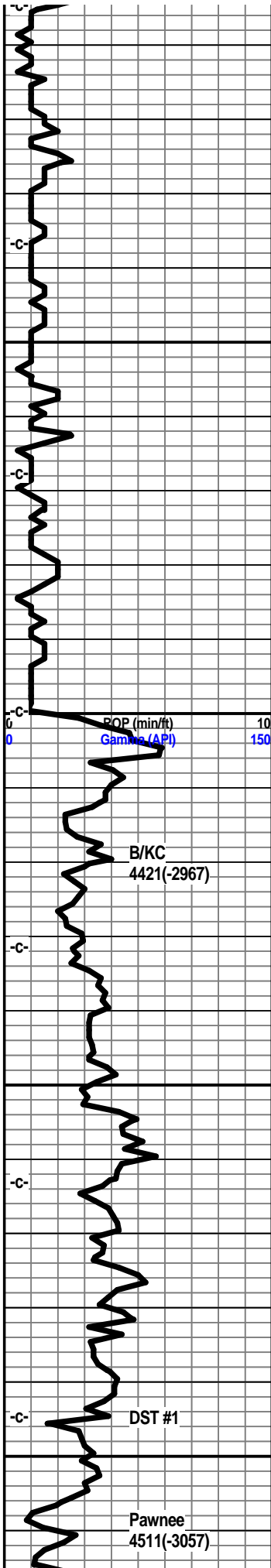
	<b>Lmst</b>
	<b>Mrlst</b>
	<b>Salt</b>
	<b>Shale</b>
	<b>Slstst</b>
	<b>Ss</b>

	<b>Black sh</b>
	<b>Gry sh</b>
	<b>Shale</b>
	<b>Shyslstst</b>
	<b>Sltysh</b>

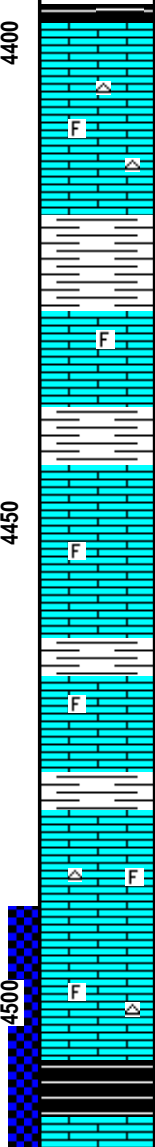




Mud Co Mud Check May 29, 2012 4115' @ 11:00 am Vis 44 Wt 8.9 pH 12.5 WL 9.5 Chl 4000 LCM 0		
Survey 4178 3/4 degree		
0	TG	100
Survey 4273' 3/4 degree		
Geologist on Location 4300' @ 4:00 pm May 29, 2012		



4350  
4400  
4450  
4500



Shale, grey-black, grey.

Limestone, tan-white, fxln, dense, trace foss, traces of tan chert.

Limestone, tan, buff, xln, dense, foss, trace tan chert.

Shale, pale green, soft, calcitic.

Limestone, pale green, buff, xln, shaley in part.

Shale, green, dark green.

Limestone, buff, pale green, xln, dense in part, slightly shaley.

shale, light grey

Limestone, tan, buff, light grey, xln, dense, trace foss., some green shales interbedded.

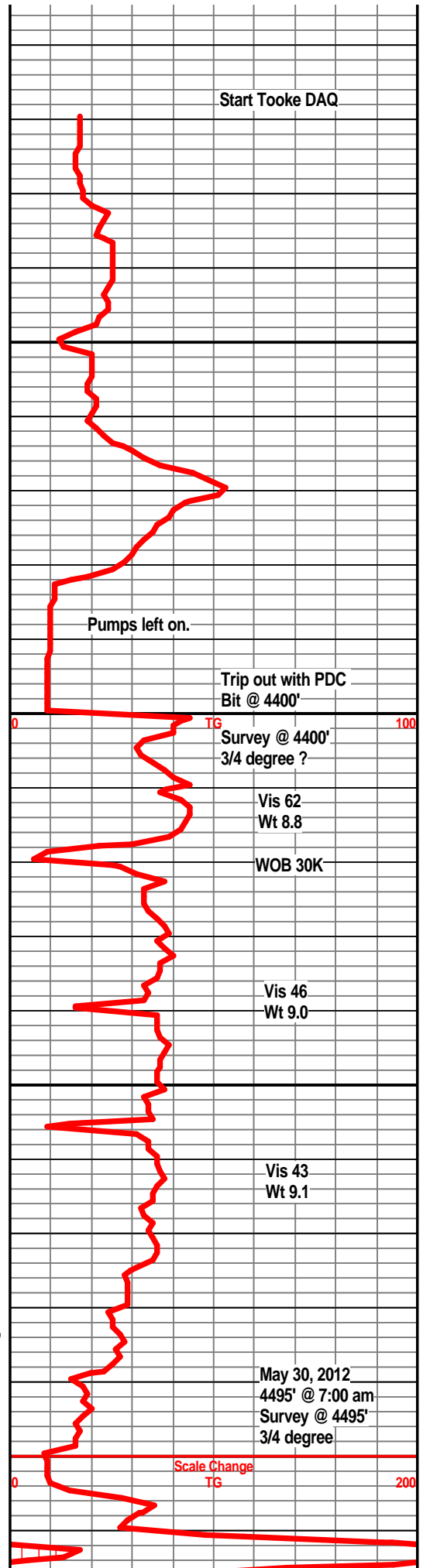
Shale., light grey.

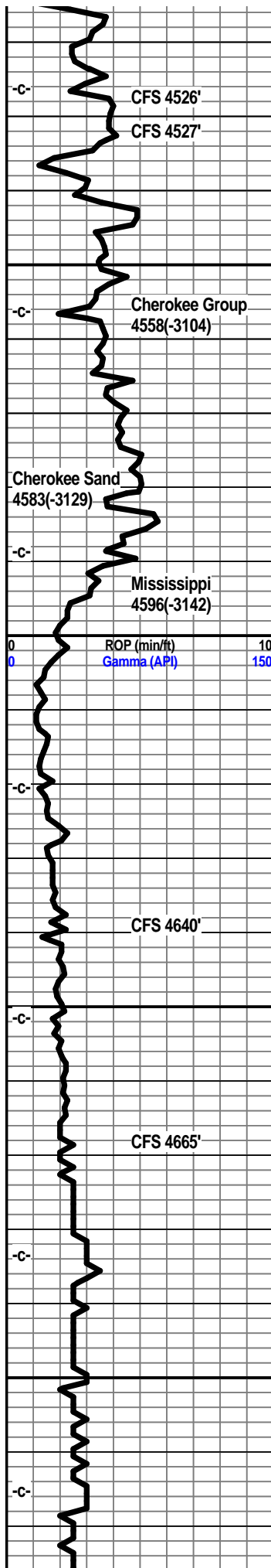
Limestone, tan-white, fxln, dense, slightly foss, traces of tan chert.

Limestone, tan-white, buff, fxln, dense, slightly foss, trace tan cherts, slightly chalky.

Shale, grey-black, carb.

Limestone, buff-white, xln, oolitic, inter-oolitic





porosity, trace show gas bubbles, very dull scattered fluor, no visible show of oil, no odor, good gas indication.

Limestone, cream, buff, xln, foss, mostly dense, some tan chert.

Shale, grey-black, carb.

Limestone, tan, buff, fxln, dense, foss in part, subchalky.

Shale, grey-black, slightly carb

Limestone, tan-white, buff, xln, dense, cherty in part, subchalky.

Limestone, tan,fxln, foss in part, tan chert.

Shale, light grey, green.

Sandstone, grey, tan, fine grained, well cemented, trace dark staining, no odor, no visible shows.

Shale, light grey, green, some vari-colored, traces of chert.

Chert, white, off-white, tan, sharp, fresh, weathered in part, trace pp porosity, light brown scattered staining, some edge staining, poor odor, dull scattered fluor.

Chert, off-white, tan, sharp, increasing weathered cherts, pp to scattered small vugular porosity, fair odor, slight show light oil, some bleeding gas, scattered fluor.

Chert, tan, off-white, sharp to weathered, scattered small vugs, pp porosity, trace show of oil and some bleeding gas, scattered dark brown to light brown staining, dull fluor.

Chert, off-white, tan, weathered, pp porosity, light brown staining, faint odor, dull fluor, trace show of oil., traces of grey-green splintery shales.

Chert, tan-white, sharp, weathered, faint odor, scattered staining, trace shales, trace tan dolo.

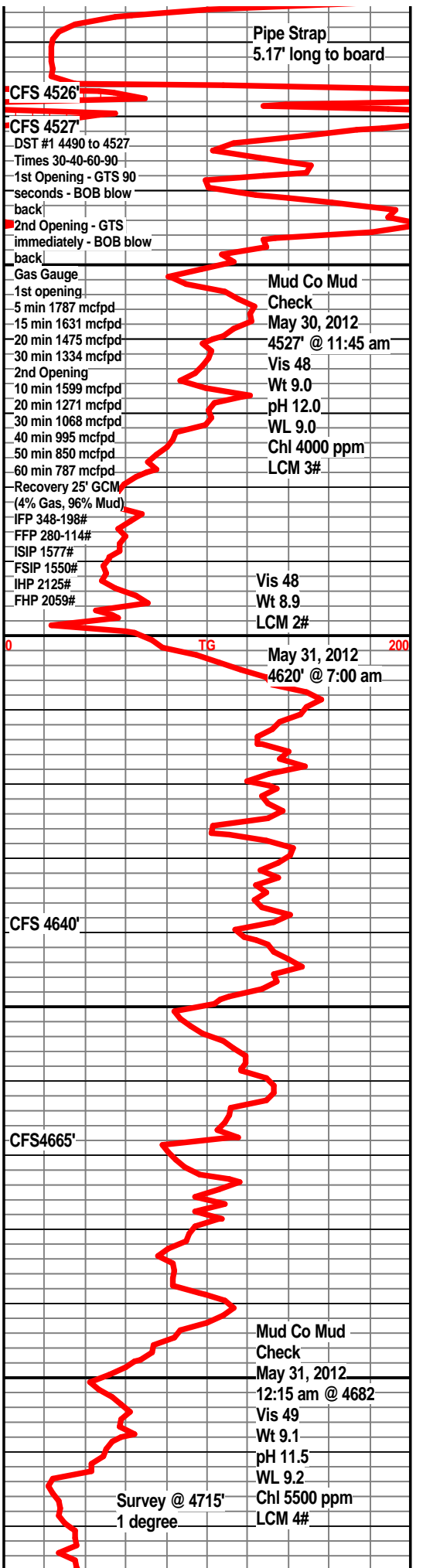
Dolo, tan, grey, xln, abundant weathered cherts, light brown staining, very faint odor.

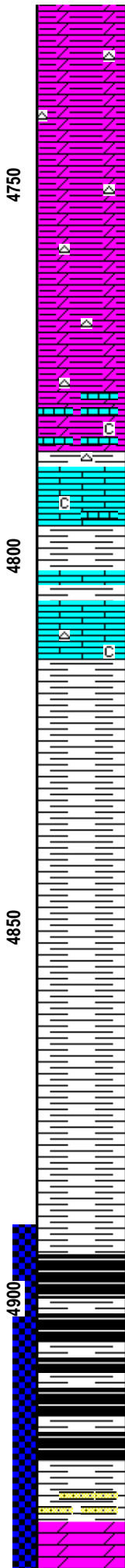
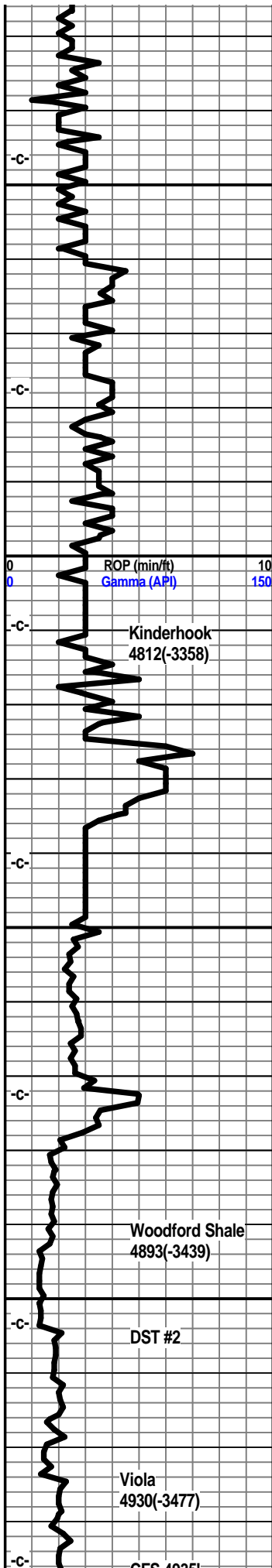
Dolo, tan, grey, xln, dense, cherty, weathered, some light brown staining, slight odor, grey green splintery shales.

Dolo, grey-white, tan, xln, dense, weathered cherts, slight scattered staining, very faint odor, grey-green shales.

Dolo, tan-white, grey, xln, dense, grey shales, some cherts, decreasing amounts of weathered chert.

Dolo, grey-white, fxln, dense, grey shales, tan to off-white chert, faint staining.





Dolo, tan, grey-white, xln, dense, grey-green splintery shales, tan cherts.

Dolo, grey-white, grey, xln, dense, sharp off-white chert, some tan, grey shales.

Dolo, grey-white, grey, xln, dense, grey shales, tan to off-white fresh sharp cherts.

Dolo, light grey, grey, tan, xln, dense, tan to off-white sharp cherts, grey green shales.

Dolo, grey-white, xln, dense, tan-white chert, fresh, sharp, grey shales.

Dolo, grey-white, xln, dense, tan to cream limestone fragments, tan to fresh cherts, grey-green shale.

Limestone, tan-white, buff, xln, dense, cherty, chalky.

Shale, green, firm.

Limestone, tan, cream-white, xln, dense, trace tan chert, subchaly in part, glauc.

Shale, dark green, silty, traces of pyrite.

Shale, dark green, grey.

Shale, grey, dark grey, silty, pyritic.

Shale, dark grey, pyrite

Shale, dark grey, grey, silty, pyritic.

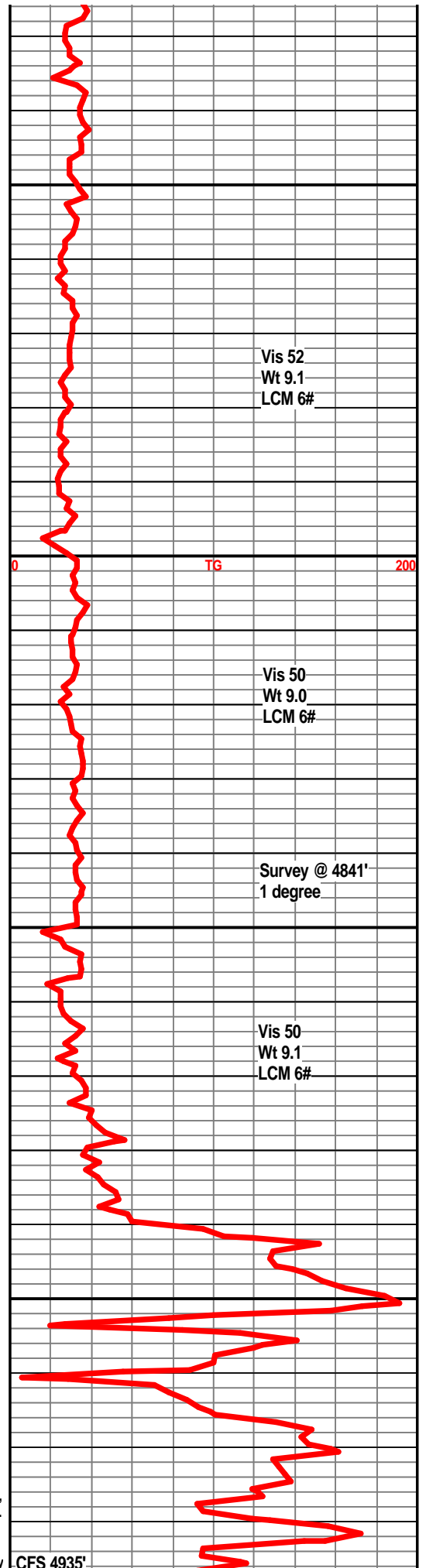
Shale, grey-black, carb, gas bubbles.

Shale, grey-black, coffee brown, carb, show gas bubbles, spotty fluor on spores.

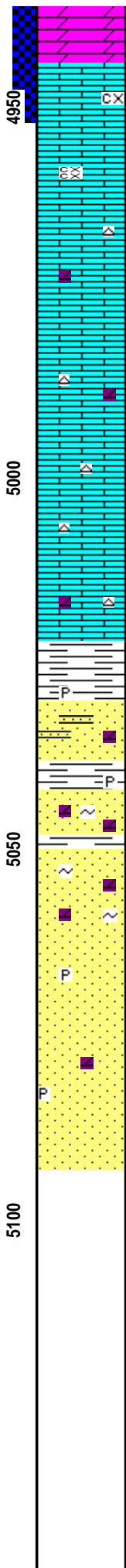
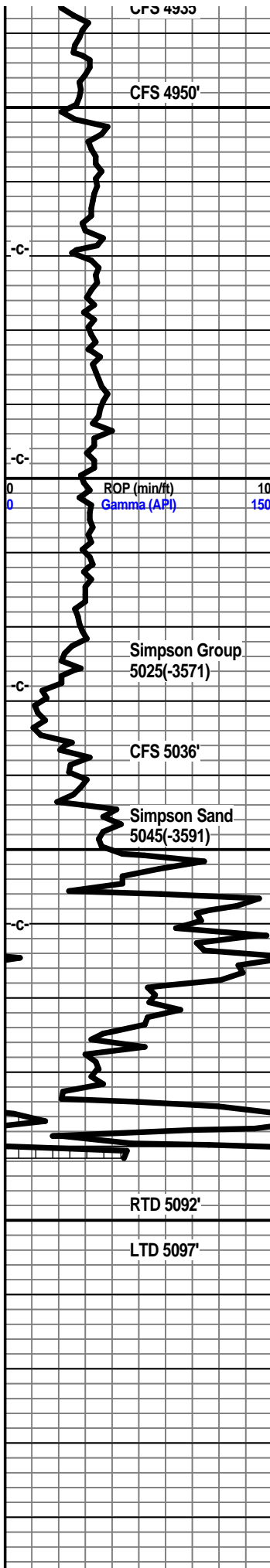
Shale, grey-black, coffee brown, gas bubbles, pyritic in part.

Sandstone, grey-white, poorly sorted well cemented, dirty, traces of pyrite, trace of scummy oil, no odor, spotty fluor.

Dolomite, cream-white, white xln, trace xln porosity, no odor, slight show light oil, faint odor when crushed, spotty







fluor.

Dolomite, white, cream-white, xln, xln porosity, slight show free oil, very faint odor, fair show oil under uv light, fair fluor.

Limestone, grey-white, white, xln, trace xln porosity, chalky, dull fluor.

Limestone, tan-white, grey, xln, dense, chalky in part.

Limestone, tan-white, tan, xln, dense, tan sharp chert, sl dolo in part.

Limestone, tan, xln, dense, granular, tan cherts, trace chalky, sl. dolo.

Limestone, tan-white, tan, xln, dense, cherty in part, tan sharp chert.

Limestone, tan, tan-white, xln, dense, tan chert, granular texture.

Shale, dark green, teal green, trace pyrite.

Sandstone stringers, grey-white, white, sa to sr, well cemented, trace friable, no visible shows, no odor, no fluor, trace pyrite, dolo in part.

Sandstone, grey-white, sa, well cemented, glauc, pyrite, dolo, no visible shows.

Sandstone, clear to white, Some grey-white, SA to SR, well cemented in part, dolo, glauc, traces of pyrite, very faint show dark oil, one rock with slight fluor., no odor

Sandstone, clear to white, SA to SR, well sorted, friable in part, some well cemented, dolo in part, pyritic, glauc, no visible shows, no odor, no fluor.

Sandstone, clear to white, fair sorting, SA to SR, friable in part, mostly well cemented, glauc, traces of pyrite, no visible shows, no odor, no fluor.

