

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: Banks SWD #1
Location: SW SW NW
License Number: API: 15-007-24252-00-00
Spud Date: November 10, 2014
Surface Coordinates: 2970' FSL, 330' FWL Section 36-Twp 30 South - Rge 12 West
Region: Barber County, Kansas
Drilling Completed: November 18, 2014
Amber Creek
Bottom Hole Vertical Hole
Coordinates:
Ground Elevation (ft): 1638.5 K.B. Elevation (ft): 1650.5
Logged Interval (ft): 3200 To: 5314 Total Depth (ft): 5314
Formation: Arbuckle
Type of Drilling Fluid: Chemical Mud, Displace at 3391'.

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Indian Oil Company, Anthony Farrar - Contact
Address: PO Box 209
2507 SE US 160 Hwy
Medicine Lodge, Kansas 67104-0209

GEOLOGIST

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

FORMATION TOPS

	SAMPLE TOPS	LOG TOPS
LECOMPTON	3318(-1668)	3320(-1670)
HEEBNER	3540(-1890)	3541(-1891)
TORONTO	3554(-1904)	3555(-1905)
DOUGLAS SHALE	3571(-1921)	3571(-1921)
BROWN LIME	3738(-2088)	3738(-2088)
LANSING	3750(-2100)	3750(-2100)
STARK	4079(-2439)	4078(-2438)
HUSHPUCKNEY SHALE	4118(-2468)	4117(-2467)
B/KC	4188(-2538)	4188(-2538)
MISSISSIPPIAN	4258(-2608)	4256(-2606)
KINDERHOOK	4364(-2714)	4366(-2610)
VIOLA	4534(-2884)	4535(-2885)
SIMPSON	4620(-2970)	4620(-2970)
ARBUCKLE	4720(-3070)	4722(-3072)
RTD	5314(-3664)	
LTD		5314(-3664)

COMMENTS

Surface Casing: Set 6 joints 8 5/8" casing at 260' with 260 sxs Class A, Cement to surface. Plug down at 10:00 pm on 11-10-2014. Cement did circulate.

Production Casing: Ran 5 1/2" Casing.

Deviation Surveys: 1/2 - 267', 3/4 - 1012', 1/2 - 1519', 3/4 - 2023', 3/4 - 2499', 3/4 - 3006', 1 - 3546', 1 - 4053', 1 - 4339'.

Pipe Strap at 4339'- Strap .78 long to board

Contractor Bit Record: 1- 12 1/4" out at 267'.

2- 7 7/8" PDC Bit out at 5314'.

Gas Detector: Earth Tech Logging

Mud System: Mud Co, Brad Bortz, Engineer

DSTs: Triolbite Testing - One by Matt Smith

Logged By Pioneer Energy Services, Inc

DSTs

DST #1 4230 to 4339' Mississippian

Times 30-60-45-90

1st Opening - Strong Blow, BOB 30 seconds, GTS in 27 minutes, 9 1/2" blow back.

2nd Opening - Strong Blow, Gas immediately, Strong blow back.

Gas Gauge: 1st Opening

Second Opening

27 minute GTS

10 minutes 91.1MCFPD

No Gauge

20 minutes 89.5 MCFPD

30 minutes 118.7 MCFPD

45 minutes 98.5 MCFPD

Fluid Recovery: 730' TOTAL FLUID

96' GCM (1% G, 99% M)

192' WOGCM (13% G, 5% O, 2% W, 80% M)

192' MOGCW (28% G, 12% O, 53% W, 7% M)

250' GMCW w/ Show Oil (1%G, 96% W, 3% M)

Chlorides 99,000 ppm

IFP 131-240# FFP 229-362#

ISIP 1580# FSIP 1551#

IHP 2137# FHP 2092#

Temp 121

CREWS

Fossil Drilling Rig #3

Tool Pusher - Jim Wenrick

Drillers - Days - Daniel Orrantia

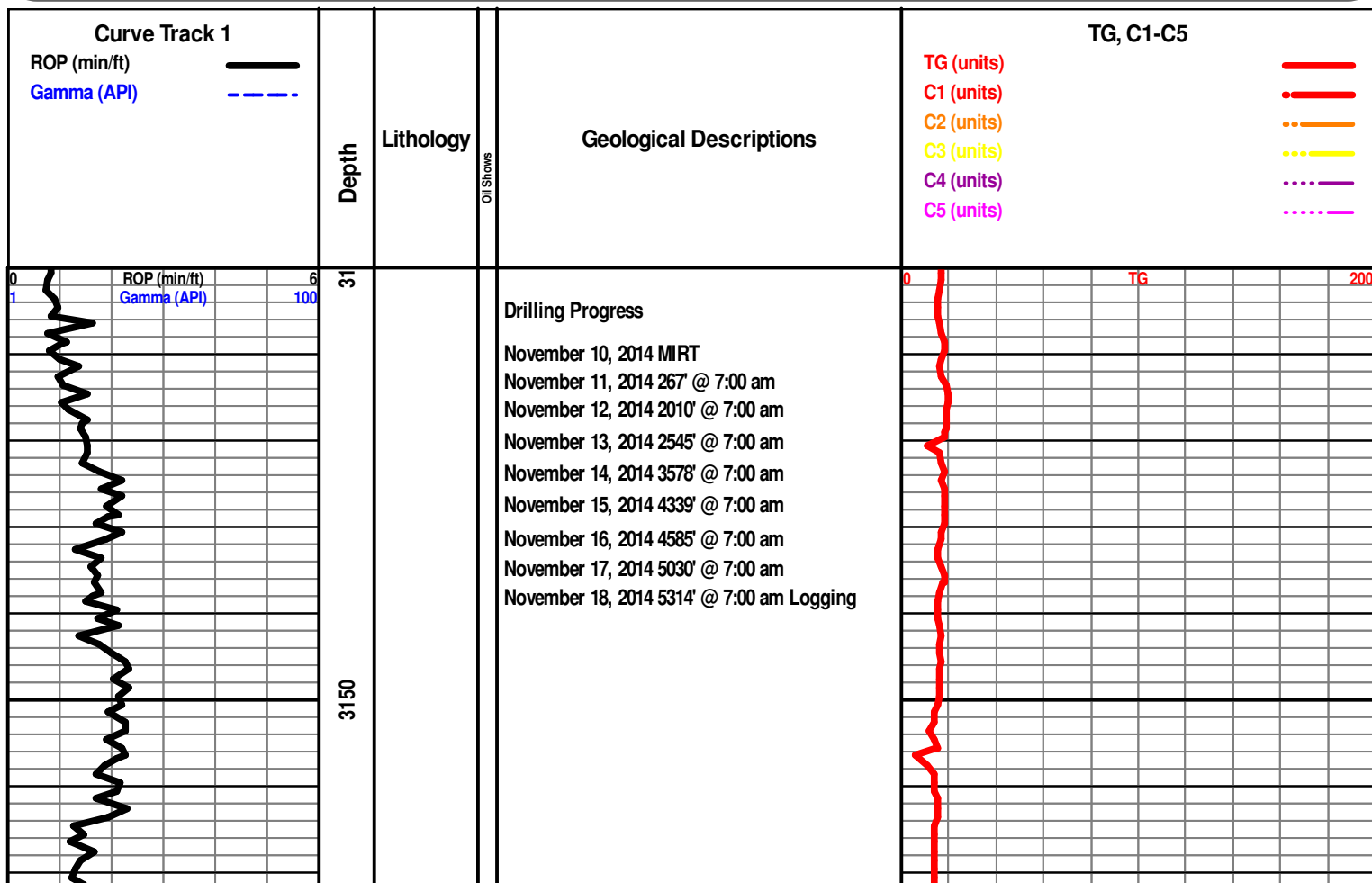
Evening - Ron Burns

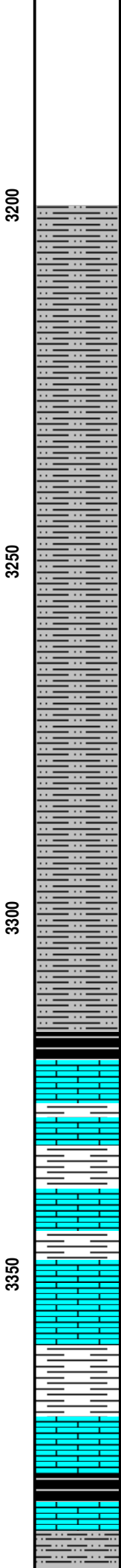
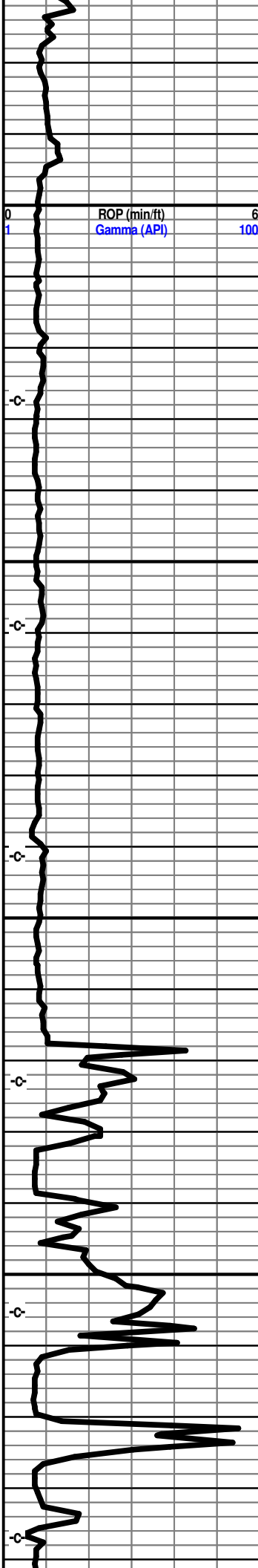
Morning - Kurt Shuman

Relief - Chris Staats

	Anhy		Congl		Lmst		Black sh
	Bent		Sdy dolo		Mrlst		Gry sh
	Brec		Shy dolo		Salt		Shale
	Cht		Dol		Shale		Shysltst
	Clyst		Gyp		Sltst		Sltys
	Coal		Sdy lmst		Ss		

MINERAL		Chlorite		Pelec		Grysh	
	Anhy		Dol			Gryslt	
	Arg		Sand			Lms	
	Bent		Silty			Sandylms	
	Bit					Sh	
	Brecfrag	Fossil				Sltstn	
	Calc		Algae				
	Carb		Amph				
	Chtdk		Belm				
	Chtlit		Bioclst				
	Dol		Brach				
	Ferrpel		Bryozoa				
	Ferr		Cephal				
	Glau		Coral				
	Gyp		Crin				
	Marl		Echin				
	Nodule		Fish				
	Phos		Foram				
	Pyr		Fossil				
	Salt		Gastro				
	Sandy		Oolite				
	Silt		Ostra				
				STRINGER		TEXTURE	
					Anhy		Boundst
					Arg		Chalky
					Bent		Cryxln
					Coal		Earthy
					Dol		Finexln
					Gyp		Grainst
					Ls		Lithogr
					Mrst		Microxln
					Sltstrg		Mudst
					Ssstrg		Packst
					Carbsh		Wackest
					Clystn		
					Dol		





Shale, grey, light grey, silty.

Shale, light grey, grey, very silty.

Shale, light grey, silty.

Shale, grey-black, carb, slight show gas.

Limestone, tan-brown, cream, crystalline, dense, trace fossils.

Shale, grey- green.

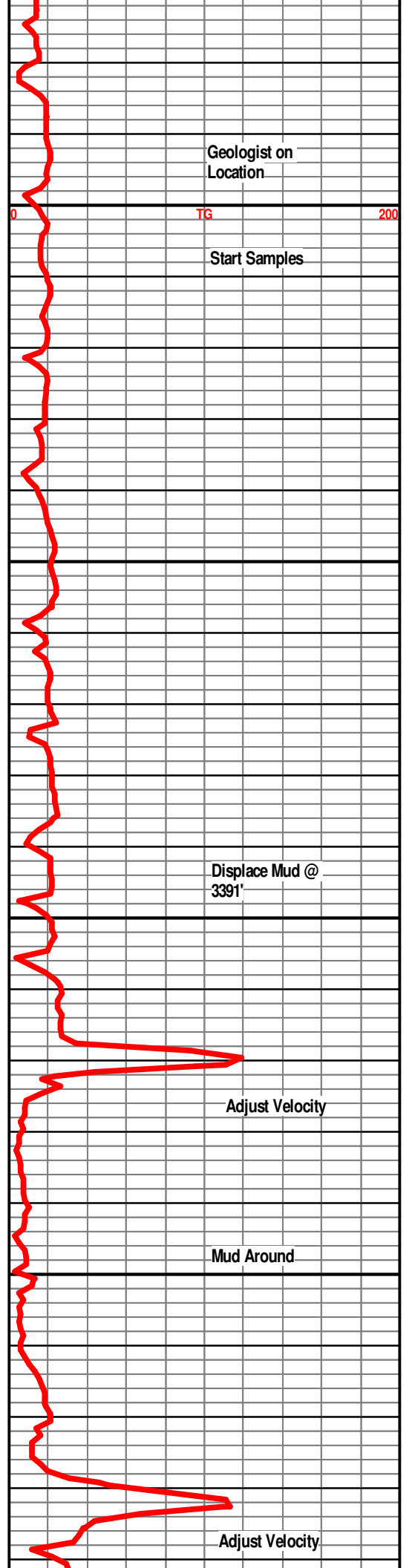
Limestone, tan, cream, crystalline, dense, trace fossils.

Shale, grey.

Limestone, tan, crystalline, dense.

Shale, grey-black, carb.

Limestone, tan-brown, crystalline, dense.



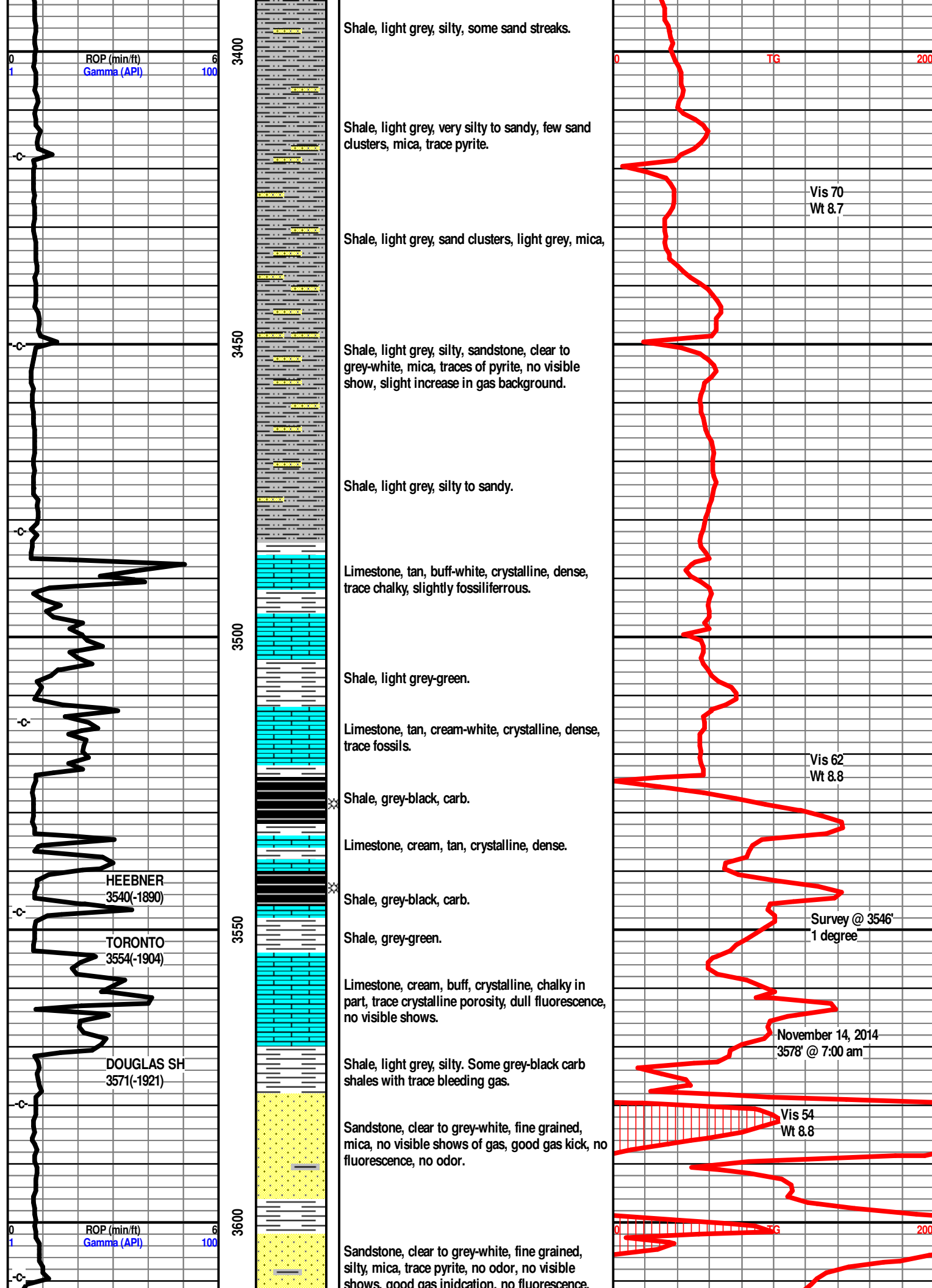
Start Samples

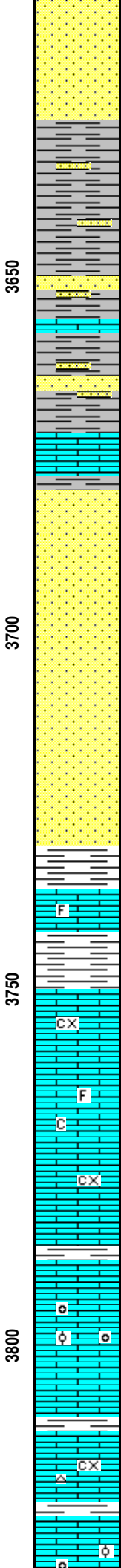
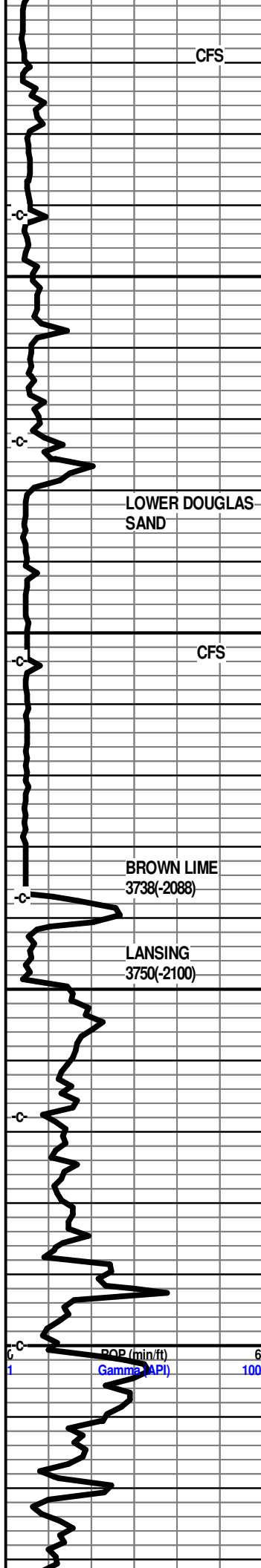
Displace Mud @
3391'

Adjust Velocity

Mud Around

Adjust Velocity





Shale, good gas indication, no mud pressure, shaley in part.

Shale, light grey, silty to very sandy, no visible shows.

Limestone, tan-brown, crystalline, dense.

Shale, light grey, silty.

Limestone, tan-brown, fine to medium crystalline, fossils.

Sandstone, fine to medium grained, poorly sorted, friable in part, mica, no odor, slight show light oil under uv light, trace gas bubbles.

Sandstone, clear to grey-white, fine to medium grained, friable in part, mica, no visible shows, no odor.

Shale, light grey.

Limestone, tan-brown, medium crystalline, dense, fossils.

Shale, grey-green.

Limestone, cream, tan-white, crystalline, dense in part, trace fossils, slightly chalky, no visible shows.

Limestone, buff-white, crystalline, partly dense, trace fossils, no visible shows.

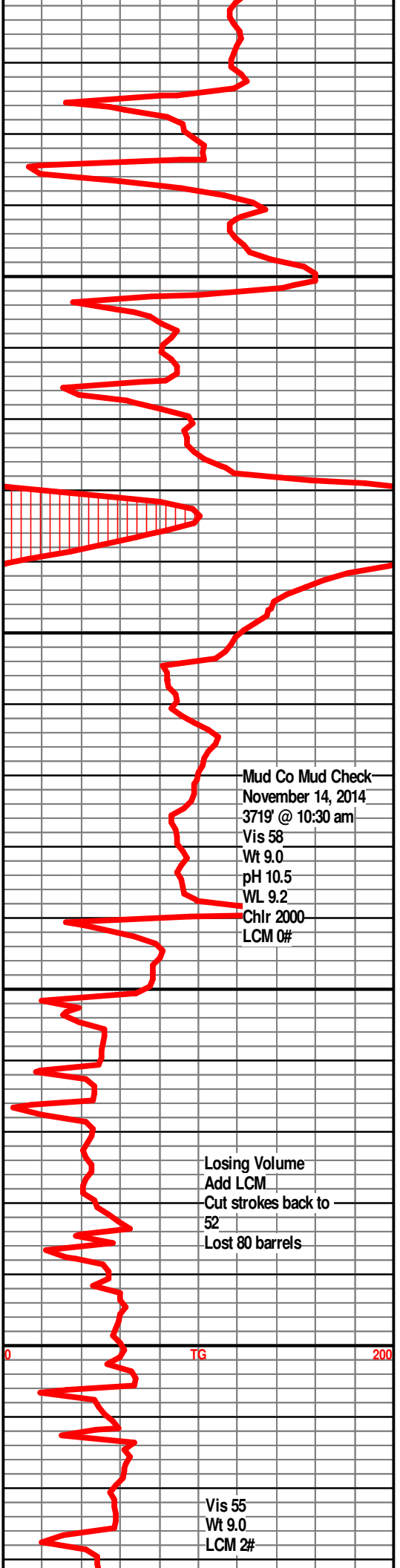
Shale, grey.

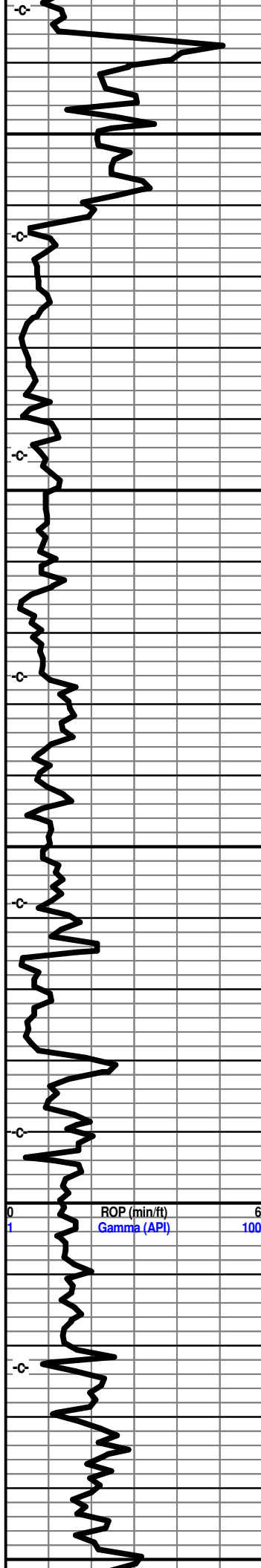
Limestone, tan, crystalline, traces oolitic porosity, oolitic, no odor, no visible shows.

Shale, grey.

Limestone, buff, grey, crystalline, trace chert, dense, no visible shows.

Shale, light grey.





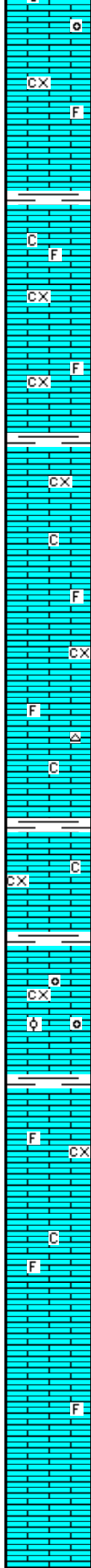
3850

3900

3950

4000

4050



Limestone, cream, tan-white, crystalline, partly dense, trace oolites, fossils, trace oolimidic porosity.

Shale, grey.

Limestone, cream, tan-white, crystalline, fossils, chalky, no visible shows, no odor.

Shale, grey.

Limestone, buff-white, crystalline, partly dense, trace fossils, chalky, no visible shows.

Limestone, tan-white, crystalline, partly dense, chalky, trace fossils, trace chert, no visible shows.

Shale, light grey.

Limestone, grey-white, crystalline, dense in part, chalky.

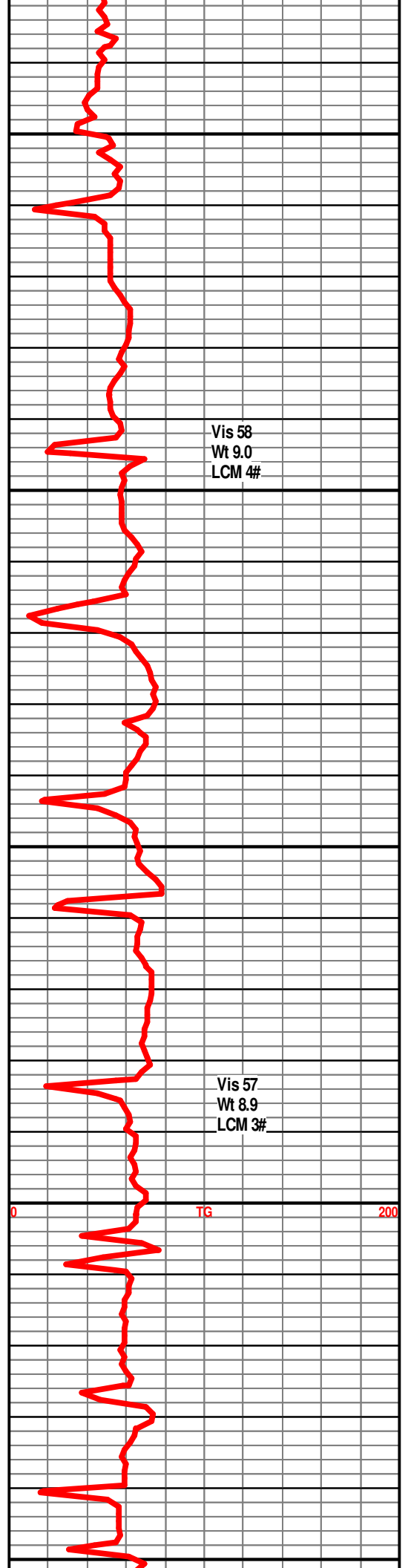
Shale, grey.

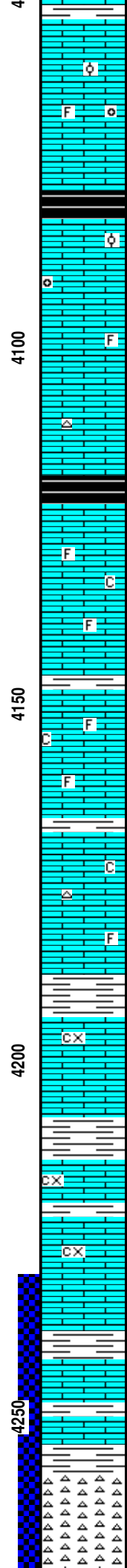
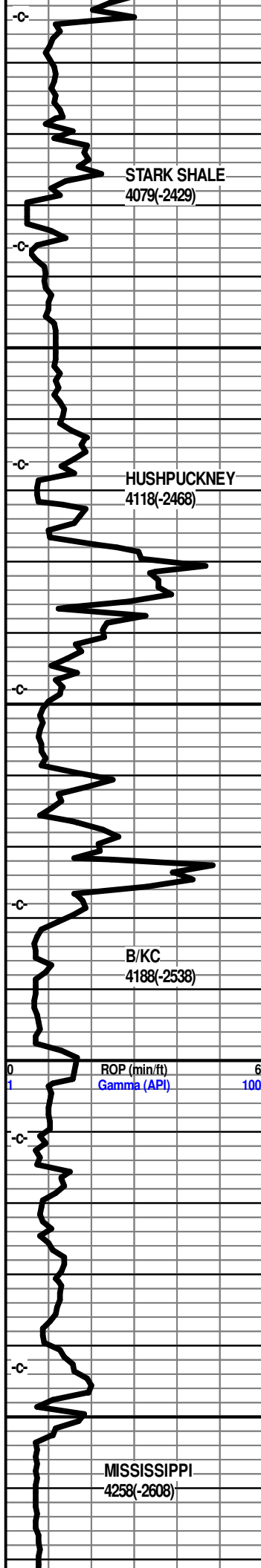
Limestone, grey, tan, buff-white, crystalline, partly dense, oolitic, oolimidic porosity, barren, no visible shows, no odor.

Limestone, grey-white, tan, brown, crystalline, partly dense, slightly fossiliferous, spotty porosity, no visible shows, no odor.

Limestone, cream, buff, crystalline, partly dense, chalky, trace fossils, no visible shows.

Limestone, tan, buff, crystalline, trace chert, fossils, trace crystalline porosity.





Shale, grey.

Limestone, tan, tan-white, crystalline, fossils, trace oolites, trace oolmoldic porosity, barron, no visible shows.

Shale, grey black, carb.

Limestone, tan-white, crystalline, partly dense, oolitic, traces oolmoldic porosity, barron, fossils, no visible shows, no odor.

Limestone, tan-white, crystalline, partly dense, no visible shows.

Shale, grey-black, carb.

Limestone, tan, crystalline, dense in part, trace fossils, slightly chalky, faint odor, spotty fluorescence.

Shale, grey.

Limestone, tan, buff, crystalline, fossils, trace pin point porosity, trace crystalline porosity, slightly chalky, slight show oil, faint odor.

Shale, grey-green.

Limestone, cream, tan, buff, crystalline, trace chalky, fossils, no visible shows, no odor.

Shale, grey-green.

Limestone, green-white, crystalline, shaley in part, partly dense.

Shale, pale green, grey.

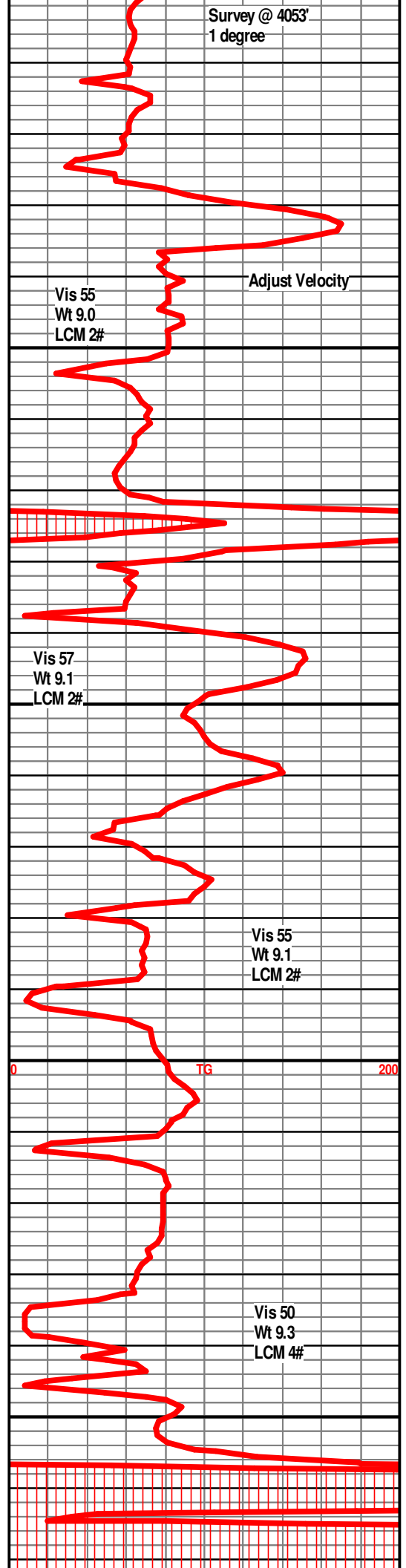
Limestone, cream-white, crystalline, dense, slightly chalky, trace fossils.

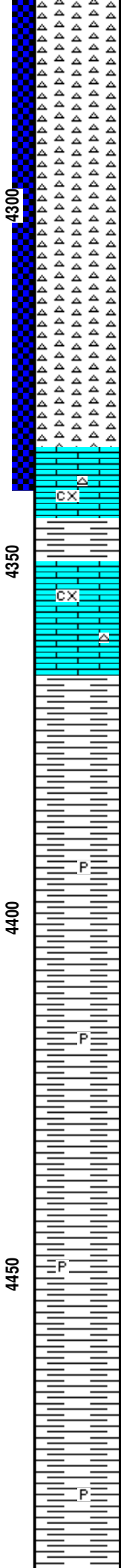
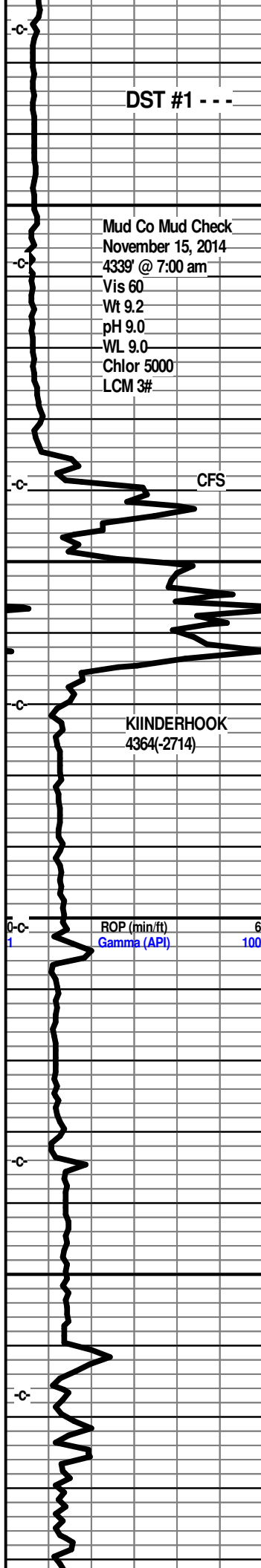
Shale, light grey-green.

Limestone, cream-white, crystalline, trace crystalline porosity, faint odor, light show of oil, some balck asphaltic stain, good gas indication.

Shale, grey-green.

Chert, white to off-white, weathered, pin point and vugular porosity, good odor, good spotty fluorescence, good show free oil, good gas indiction.





Chert, white to off-white, fresh to weathered, pin point porosity, few small vugs, good show oil, good odor, good gas indication, good patchy fluorescence.

Chert, off-white to bone white, fresh, slightly weathered in part, poor to fair odor, light show oil, some gas, good spotty stain, some asphaltic staining.

Chert, bone white, sharp, fresh, some weathered edges, asphaltic stain, faint odor, very slight show oil, patchy fluorescence.

Limestone, cream-white, crystalline, dense.

Limestone, cream, grey-white, crystalline, dense, trace chert.

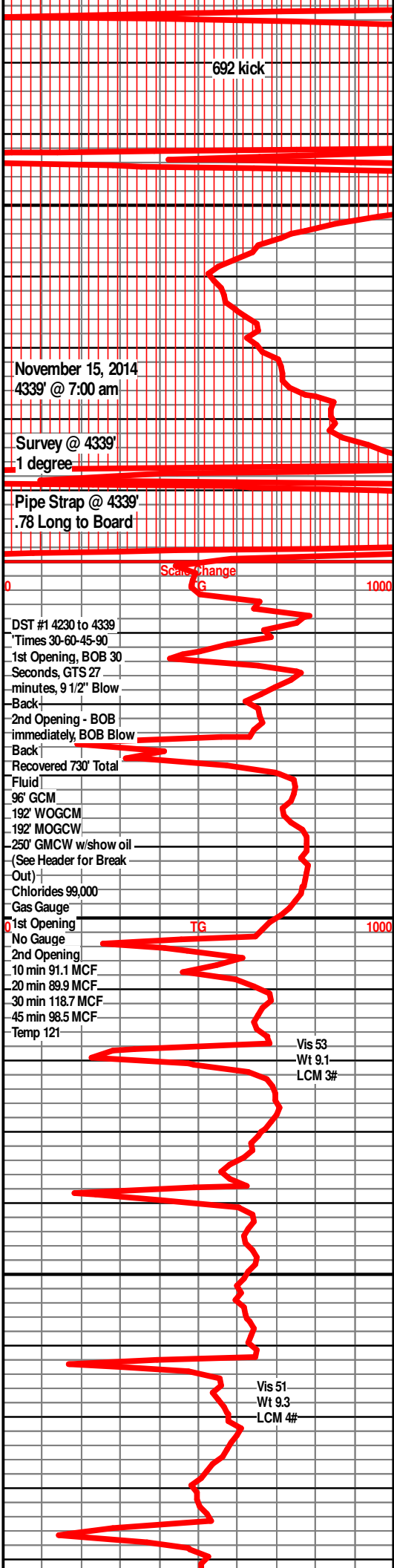
Shale, grey, light grey, silty.

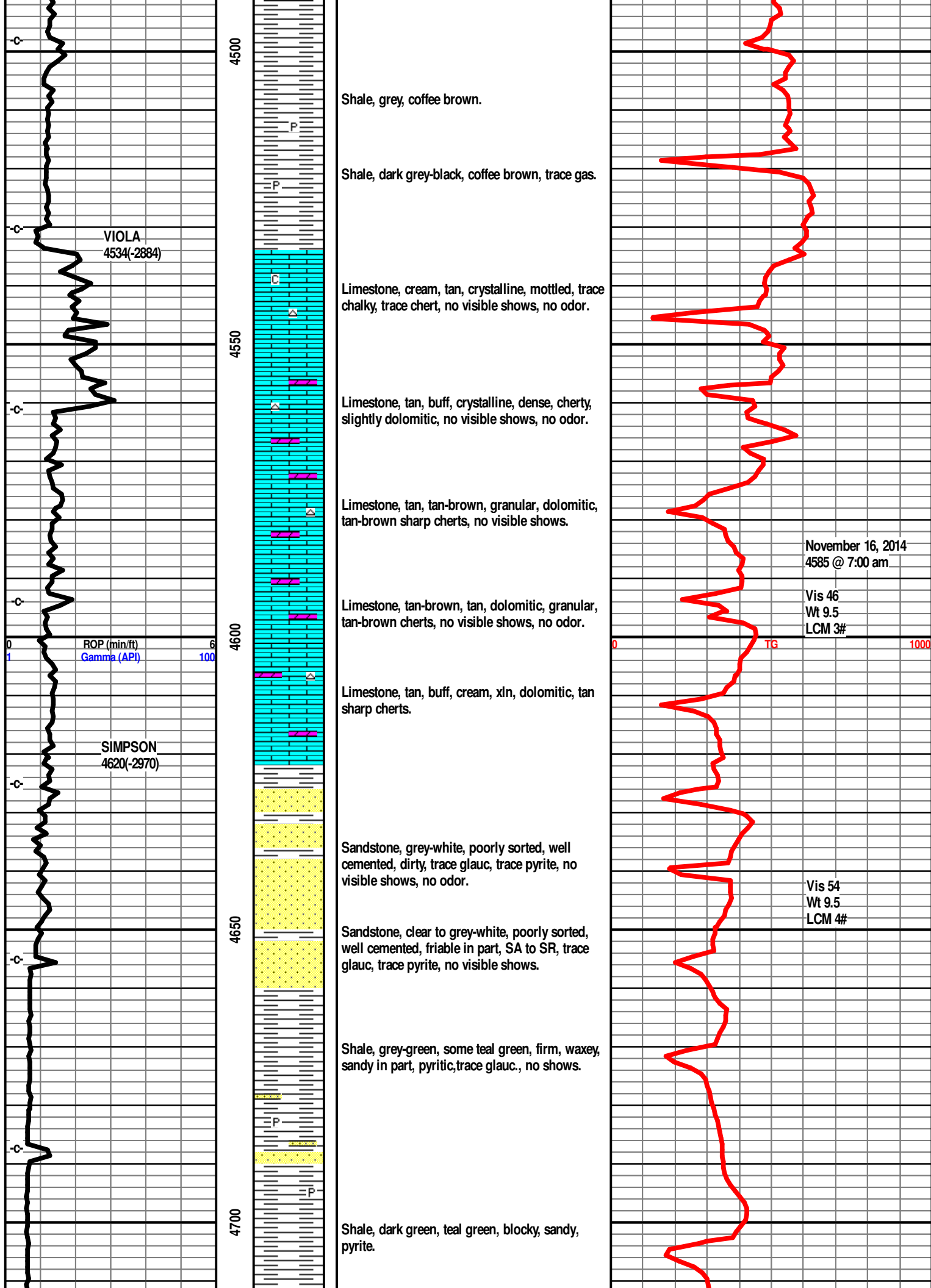
Shale, light grey, silty, trace pyrite.

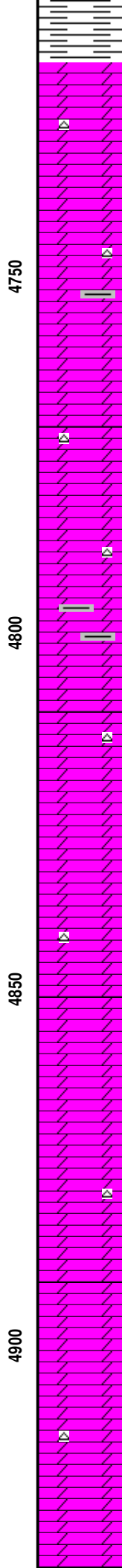
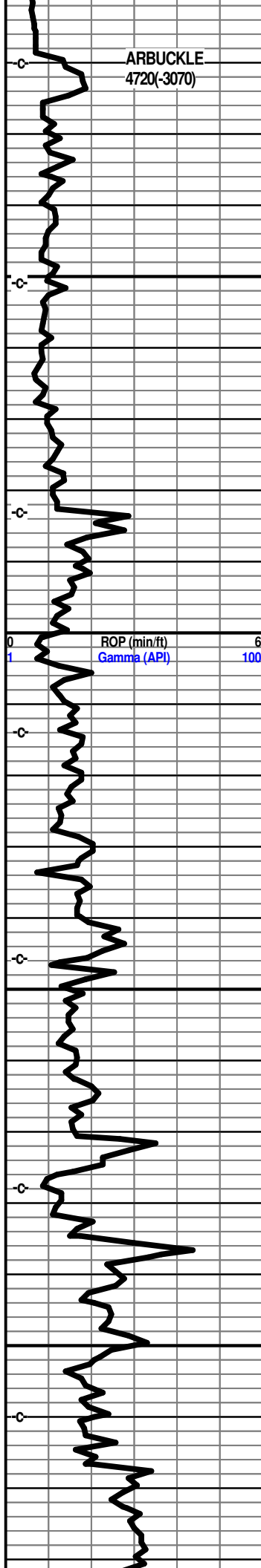
Shale, light grey, grey, silty, pyrite.

Shale, light grey, grey, silty, traces of pyrites.

Shale, grey, pyritic in part, firm.







Dolomite, tan, buff, crystalline, dense, trace chert, succurssic in part, trace succrosic porosity.

Dolomite, tan, buff, cream, crystalline, trace tan chert, no visible shows, no odor.

Dolomite, tan, buff, crystalline, traces pin point porosity, succrosic, trace chert.

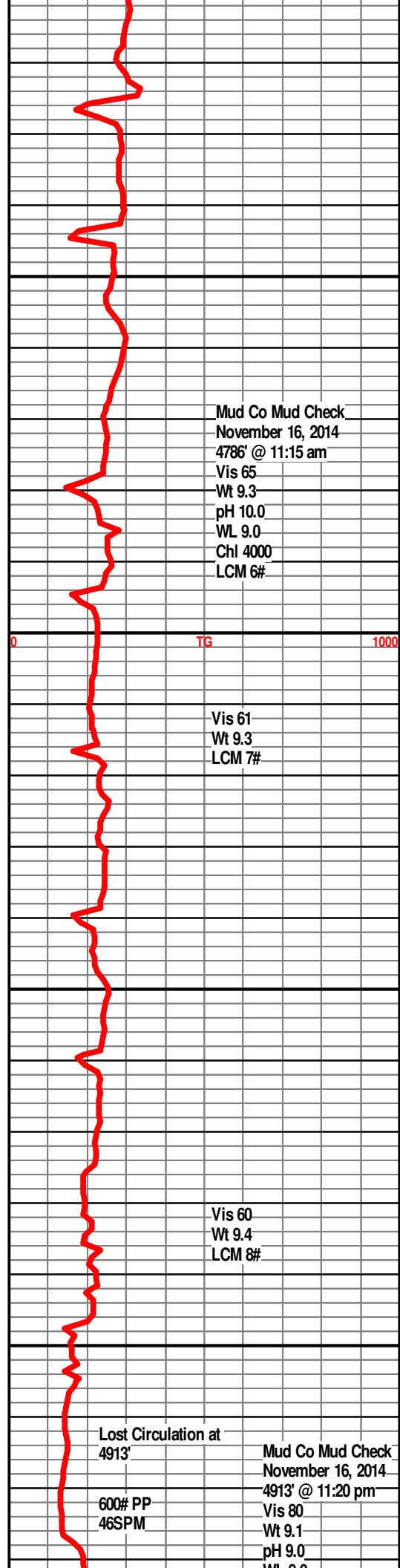
Dolomite, tan, cream-white, granular, succrosic, some green shales.

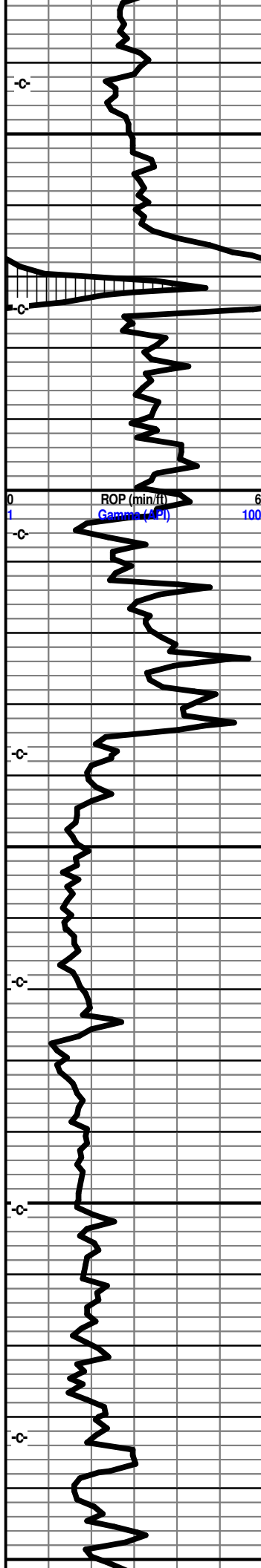
Dolomite, tan, buff-white, crystalline, partly dense, succrosic, trace chert.

Dolomite, tan, buff, crystalline, trace few small vugs, trace crystalline porosity.

Dolomite, tan-white, tan, crystalline, spotty crystalline porosity, oolitic, traces of oolimoldic porosity.

Dolomite, tan, cream, crystalline, partly dense, succrosic, trace of crystalline porosity, green shales.





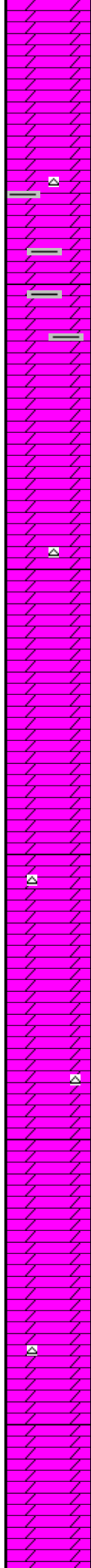
4950

5000

5050

5100

5150



Dolomite, tan, buff, crystalline, partly dense, crystalline porosity, trace chert.

Dolomite, tan, buff, crystalline, partly dense, traces of pyrite, some sharp white cherts, green shales.

Dolomite, buff, cream, tn, crystalline, partly dense, traces of chert. some green shales.

Dolomite, tan, crystalline, partly dense, succrosic, traces of white sharp cherts.

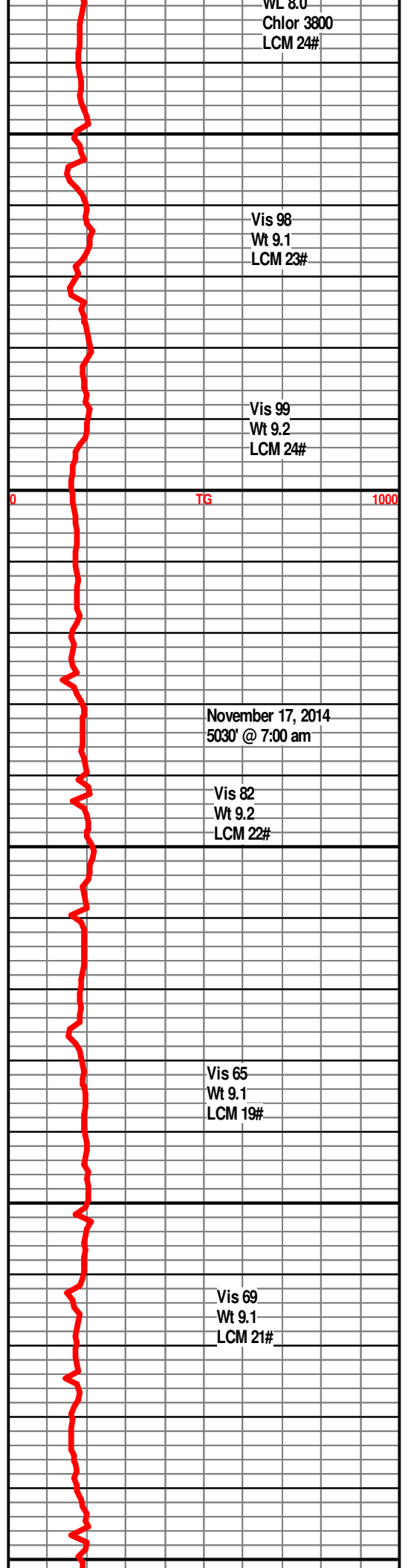
Dolomite, cream, tan, crystalline, oolitic, oolmoldic porosity, granular, traces of chert.

Dolomite, tan, cream, crystalline, oolimoldic, traces of white to translucent cherts, some green shales.

Dolomite, tan, buff, crystalline, some oolimoldic porosity, cherts, few green shales.

Dolomite, tan, cream, crystalline porosity, trace of white to grey-white oolitic cherts.

Dolomite, tan, buff-white, crystalline, partly dense, cherty, crystalline porosity.



WL 8.0
Chlor 3800
LCM 24#

Vis 98
Wt 9.1
LCM 23#

Vis 99
Wt 9.2
LCM 24#

November 17, 2014
5030' @ 7:00 am

Vis 82
Wt 9.2
LCM 22#

Vis 65
Wt 9.1
LCM 19#

Vis 69
Wt 9.1
LCM 21#

dense, cherty, crystalline porosity.

Dolomite, tan, buff, crystalline, traces of chert, some green shales.

Dolomite, tan, crystalline, cherty, shales.

Dolomite, tan, buff, crystalline, dense in part, traces of white chert, some shales.

Dolomite, tan, buff, crystalline, succrosic, cherty in part.

Dolomite, tan, buff-white, crystalline, succrosic, cherty.

Dolomite, tan, buff, cream, succrosic, traces of chert.

Vis 69
Wt 9.2
LCM 21#

Mud Co Mud Check
November 17, 2014
5185' @ 1:45 pm
Vis 60
Wt 9.2+
pH 9.5
WL 10.4
Chlor 4000
LCM 23#

Vis 66
Wt 9.2
LCM 24#

Vis 61
Wt 9.3
LCM 21#

TG

Vis 60
Wt 9.3
LCM 21#

Vis 56
Wt 9.3
LCM 21#

Vis 71
Wt 9.4
LCM 25#

November 18, 2014
5314' @ 7:00 am

RO (min/ft)
Gamma (API)

RTD 5314'
LTD 5314'