



**Woolsey Operating Company, LLC**

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

Measured Depth Log

Well Name: Brack #2  
Location: Approximate NW NE SE SW  
License Number: API: 15-203-20195-00-00  
Spud Date: November 24, 2012  
Surface Coordinates: Section 20-T20S-R35W, 1240' FSL, 2295' FWL  
Bottom Hole Coordinates: SAND CREEK DRAW POOL  
Vertical Hole  
Ground Elevation (ft): 3184  
Logged Interval (ft): 3000 To: 5860  
Formation: Rotary Total Depth in Simpson?  
Type of Drilling Fluid: Chemical Mud, Displace at 3398'

Region: Wichita County County

Drilling Completed: December 7, 2012

**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

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

## FORMATION TOPS

	SAMPLE TOPS	LOG TOPS
HEEBNER SHALE	3962(-767)	3961(-766)
TORONTO	3986(-791)	3983(-788)
LANSING	4012(-817)	4008(-813)
KC IOLA 'G'	4232(-1037)	4230(-1035)
SWOPE	4398(-1203)	4390(-1195)
B/KC	4475(-1280)	4471(-1276)
MARMATON	4508(-1313)	4506(-1311)
PAWNEE	4613(-1418)	4608(-1413)
CHEROKEE GROUP	4696(-1501)	4691(-1496)
ATOKA	4781(-1536)	4774(-1579)
MORROW GROUP	4871(-1676)	4868(-1673)
MISSISSIPPIAN	4951(-1756)	4945(-1750)
VIOLA	5690(-2495)	5688(-2493)
SIMPSON GROUP	5827(-2632)	5825(-2630)
RTD	5860(-2665)	
LTD		5859(-2664)

## COMMENTS

Surface Casing: Set 5 joints 8 5/8" at 225'(tallied 212.4') with 165sxs Class A, 2% gel, 3% cc, plug down at 5:45 am on November 25, 2012. Cement did Circulate.

Production Casing: 4 1/2" Casing Ran.

Deviation Surveys: 1 - 227, 3/4 - 731', 3/4 - 1266', 3/4 1799', 3/4 2332', 3/4 2835', 1/2, 3619', 1/4 - 4122', 3/4 - 4530', 3/4 - 5860'.

- 1- 12 1/4" out at 227'
- 2- 7 7/8" out at 4530'
- 3 - 7 7/8" out at 5860'.

Pipe Strap at 4530' - .23' Short to Board.

Gas Detector: Woolsey Operating Company, Trailer #1

Mud System: Mud Co, Terry Ison, Tony Smith, Engineers.

DSTs: Trilobite Testing,

Logged by Superior Well Services.

LTD - 5859'.

## DSTs

### DST #1 4470 to 4530' Marmaton (Amazonia Ditch)

Times 30-60-60-90

1st Opening - Weak to fair, built to 4 1/2", no blow back.

2nd Opening - Weak to fair, built to 4 1/2", no blow back.

Recovery: 360' Total Fluid

100' oil spotted Mud, 260' MCW (20% M, 80% W)

IFP 38-102#    FFP 108-177#

ISIP 1063#    FSIP 1044#

IHP 2263#    FHP 2150#

Temp 113

Chlorides 28,000 ppm

### DST #2 4639-4694 Ft Scott

Times 30-60-30-60

1st opening, weak blow, died in 14 minutes

2nd Opening, no blow

Recovery: 5' Drilling Mud

IFP 20-20#    FFP 21-21#

ISIP 275#    FSIP 99#

IHP 2320#    FHP 2227#

Temp 110

## CREWS

H2 Drilling, Inc Rig #2

Tool Pusher - Steve Craig


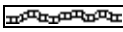
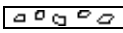
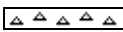
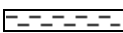

Drillers - Days - Mark McCain







Evening - Mike Moore


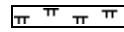

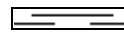


Morning - Terry Christenson






Relief - Heath Middleton

## ROCK TYPES

	Anhy
	Bent
	Brec
	Cht
	Clyst
	Coal

	Congl
	Sdy dolo
	Shy dolo
	Dol
	Gyp
	Sdy lmst

	Lmst
	Mrlst
	Salt
	Shale
	Slstst
	Ss

	Black sh
	Gry sh
	Shale
	Shyslstst
	Sltysh

**ACCESSORIES**

**MINERAL**

- Anhy
- Arg
- Bent
- Bit
- Brefracg
- 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

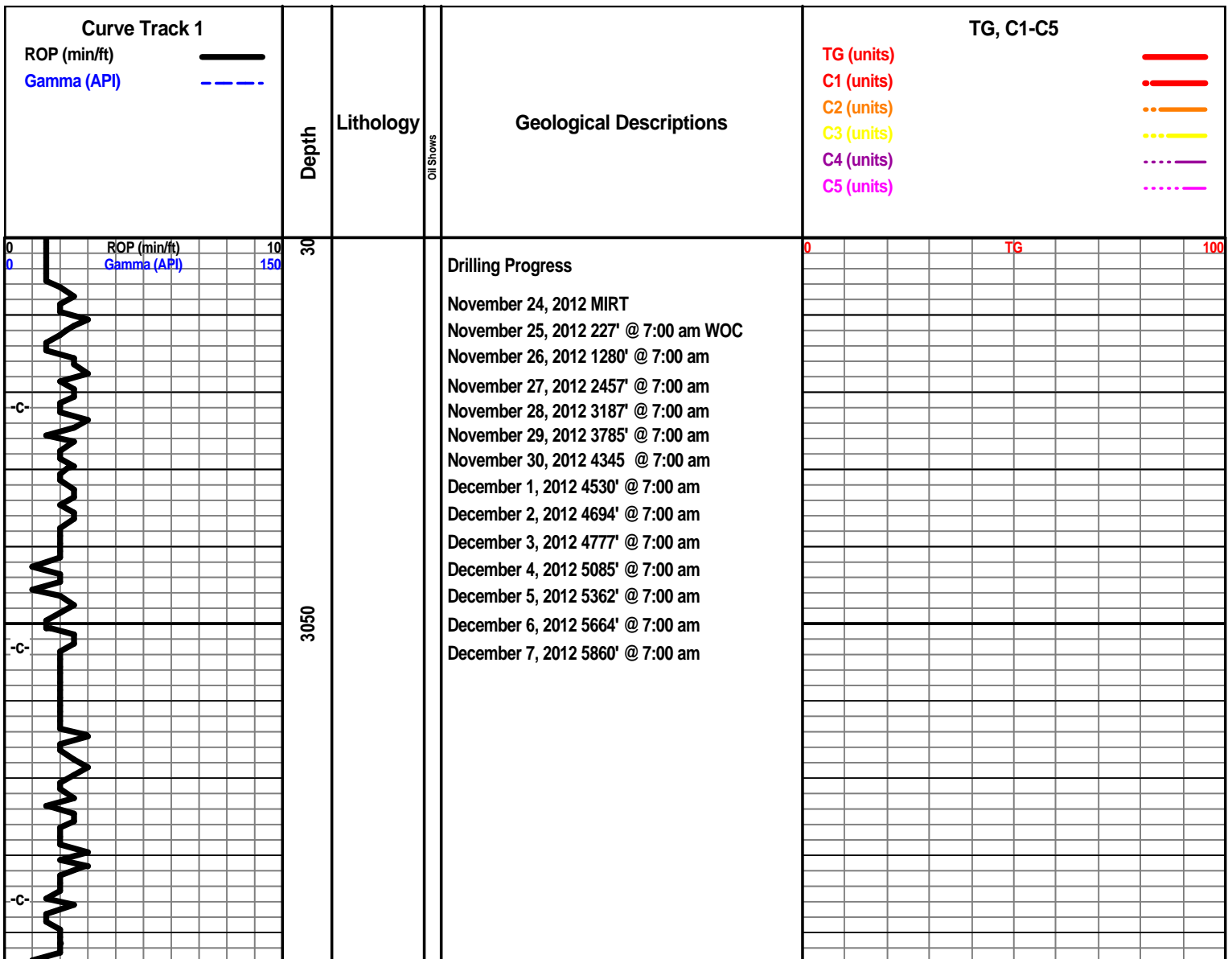
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Sltstn

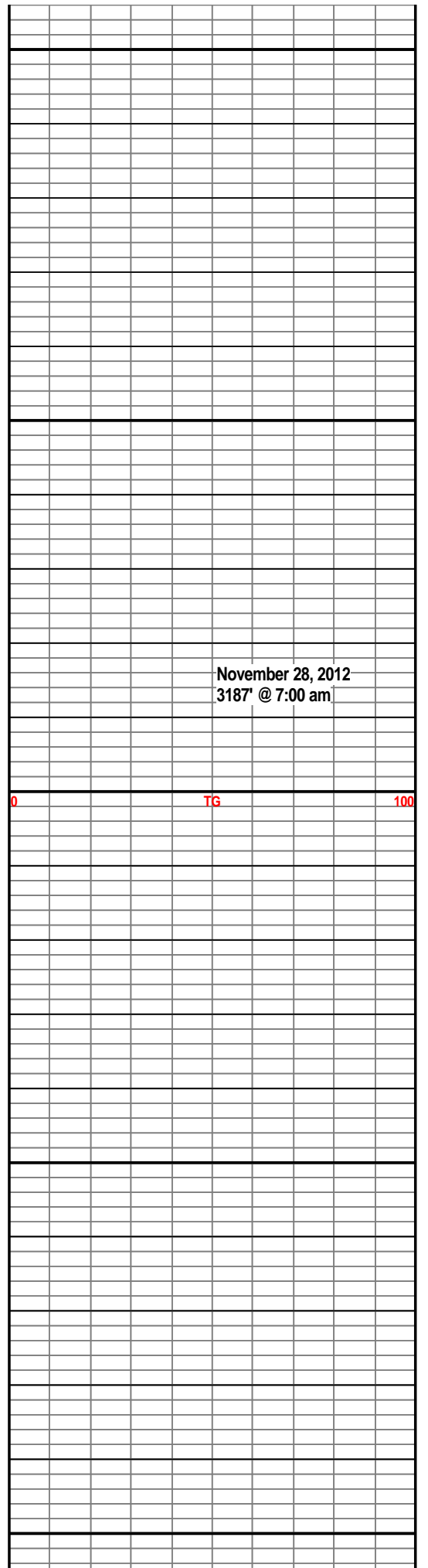
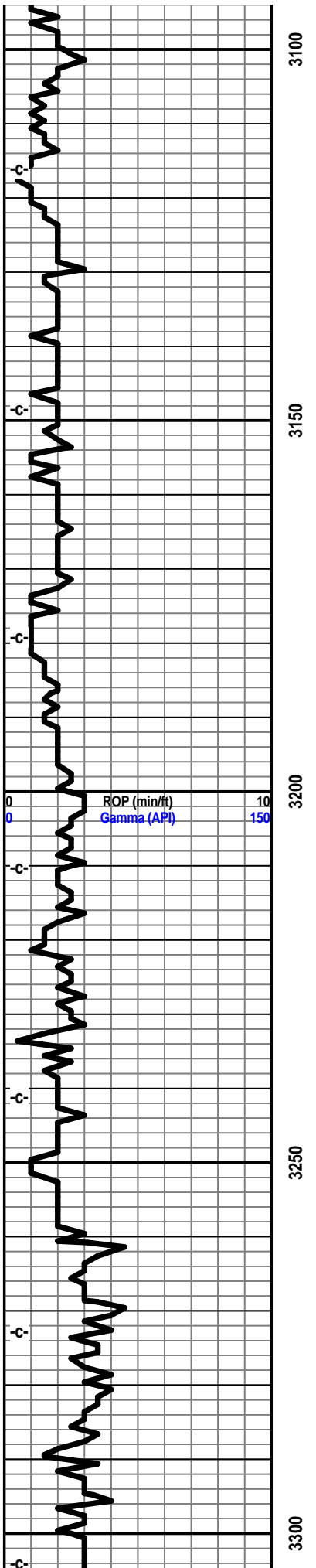
**STRINGER**

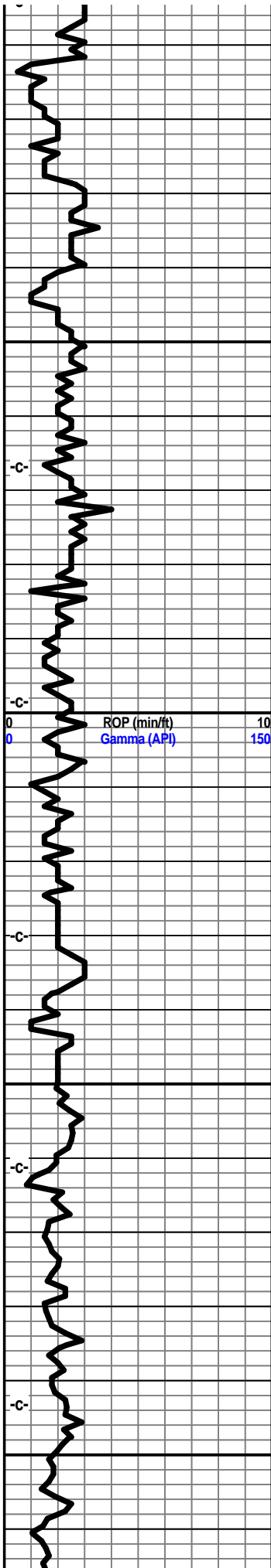
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Carbsh
- Clystn
- Dol

**TEXTURE**

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





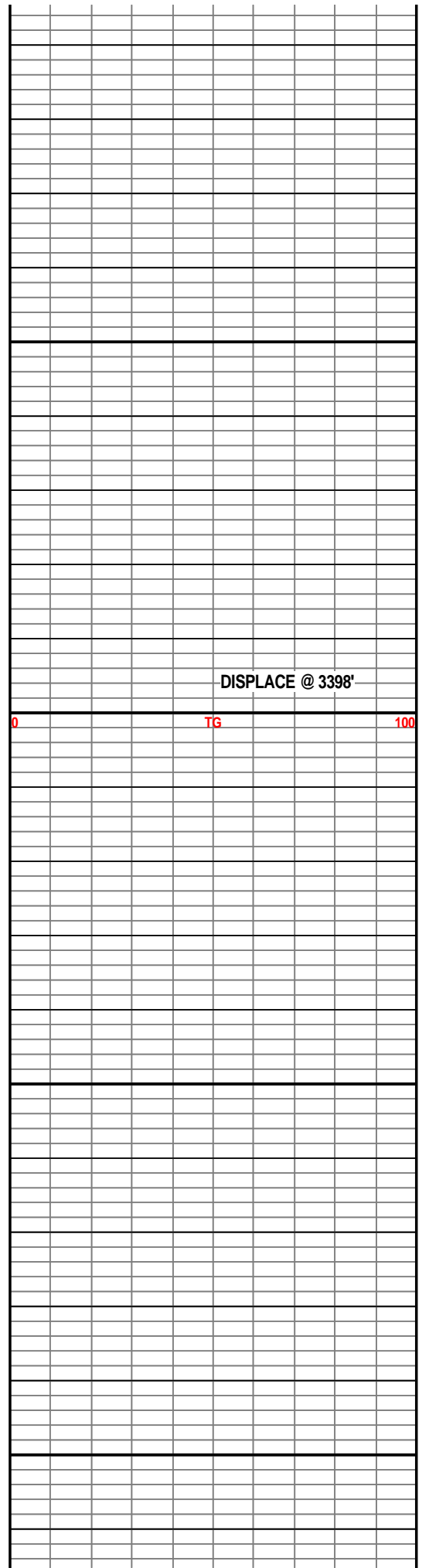


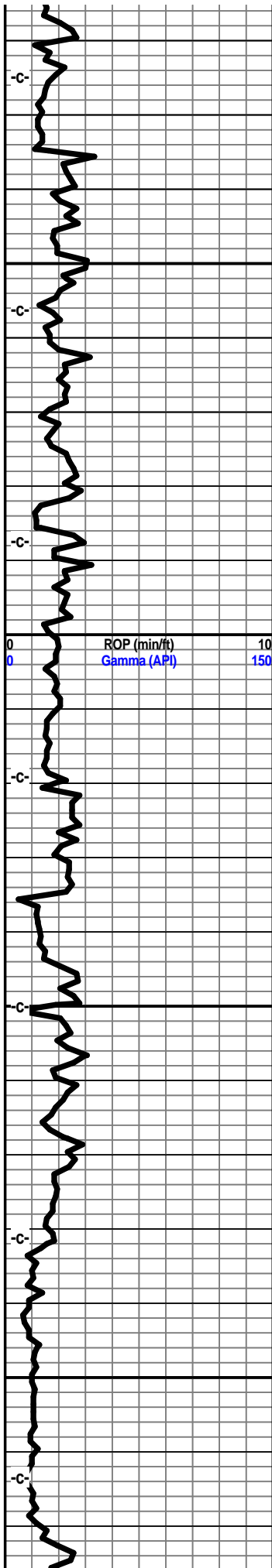
3350

3400

3450

3500



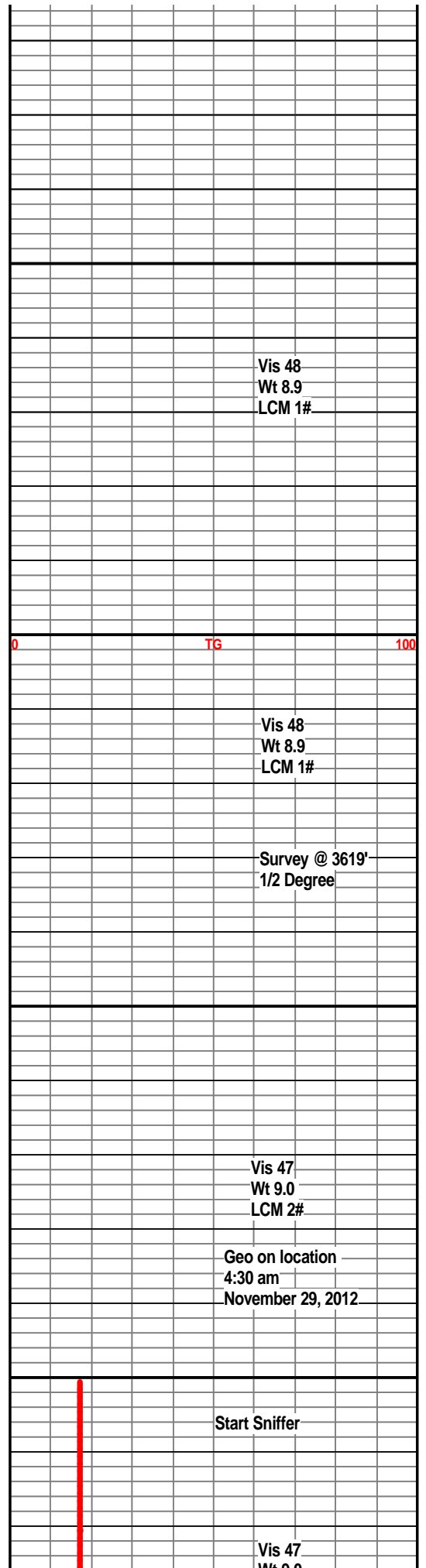


3550

3600

3650

3700



Vis 48  
Wt 8.9  
LCM 1#

TG

Vis 48  
Wt 8.9  
LCM 1#

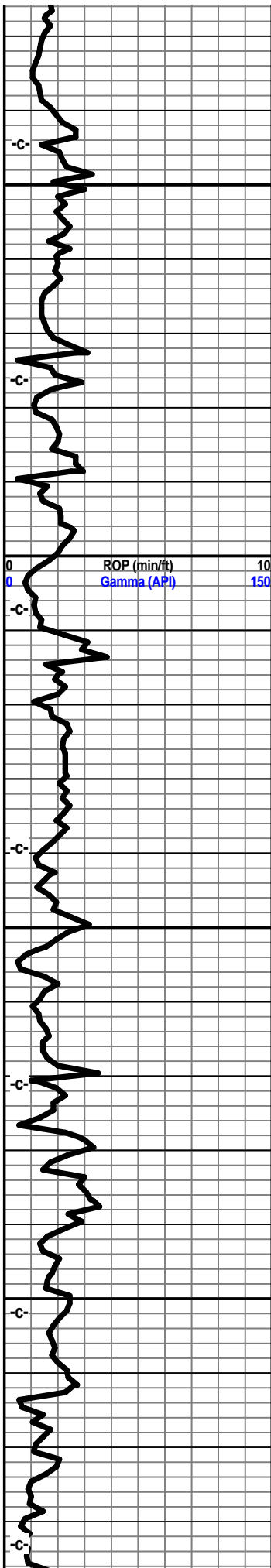
Survey @ 3619'  
1/2 Degree

Vis 47  
Wt 9.0  
LCM 2#

Geo on location  
4:30 am  
November 29, 2012

Start Sniffer

Vis 47  
Wt 9.0

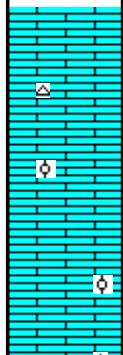


3750

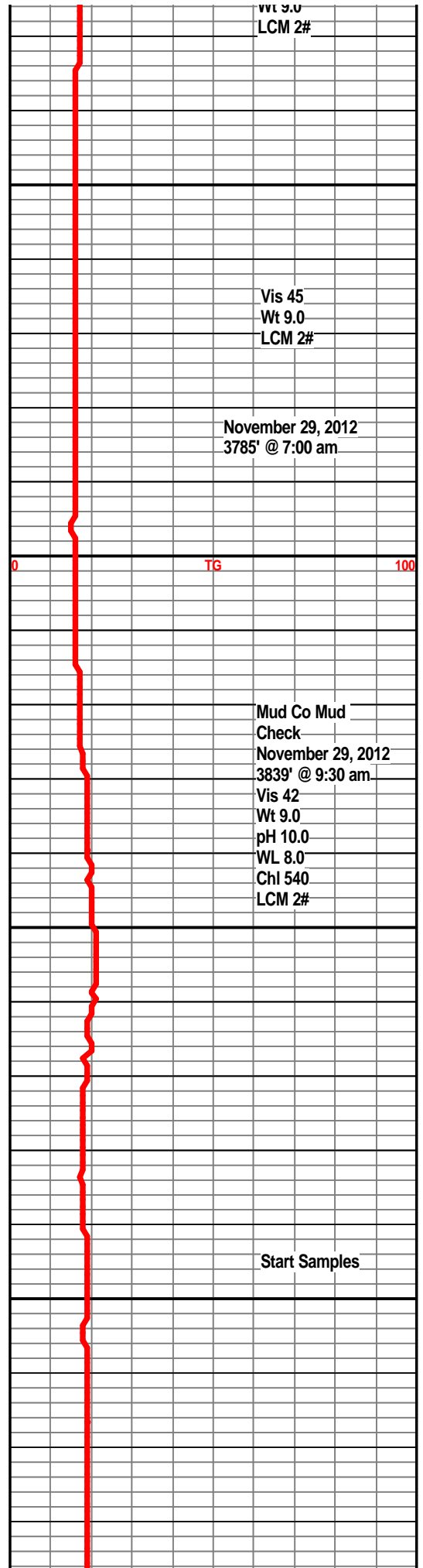
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3850

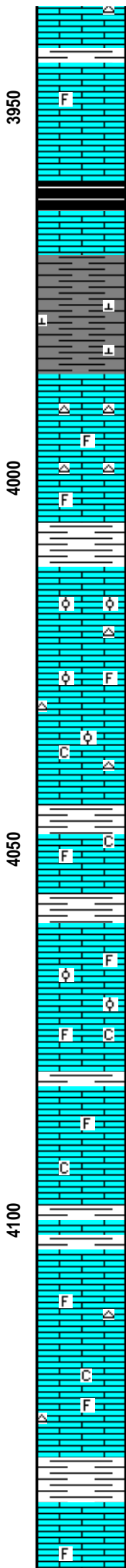
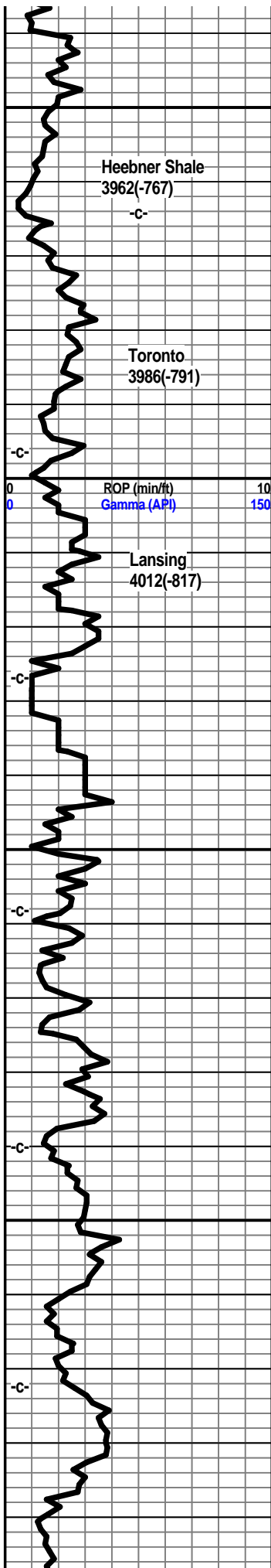
3900



Limestone, tan, grey-white, xln, dense, traces of white chert, trace oolites, some oolitic porosity.







Shale, grey, reddish brown

Limestone, tan, xln, dense, slightly foss.

Shale, grey-black.

Shale, grey, some reddish brown, calcitic in part.

Limestone, cream, tan-white, fxln, very chalky, off-white foss cherts, no visible shows.

Limestone, tan-white, white, xln, chalky, off-white chert.

Shale, light grey to grey.

Limestone, white to grey-white, xln, oolitic, chalky in part, some grey chert, no visible shows.

Limestone, cream, buff, xln, fossils, trace oolites, chalky in part, trace foss chert, no vis shows.

Shale, grey, some reddish brown.

Limestone, tan-white, xln, foss porosity, chalky in part, no vis shows.

Shale, grey, reddish brown.

Limestone, cream, buff-white, xln, dense in part, oolitic, trace oolimoldic porosity, chalky in part, no vis shows.

Shale, grey.

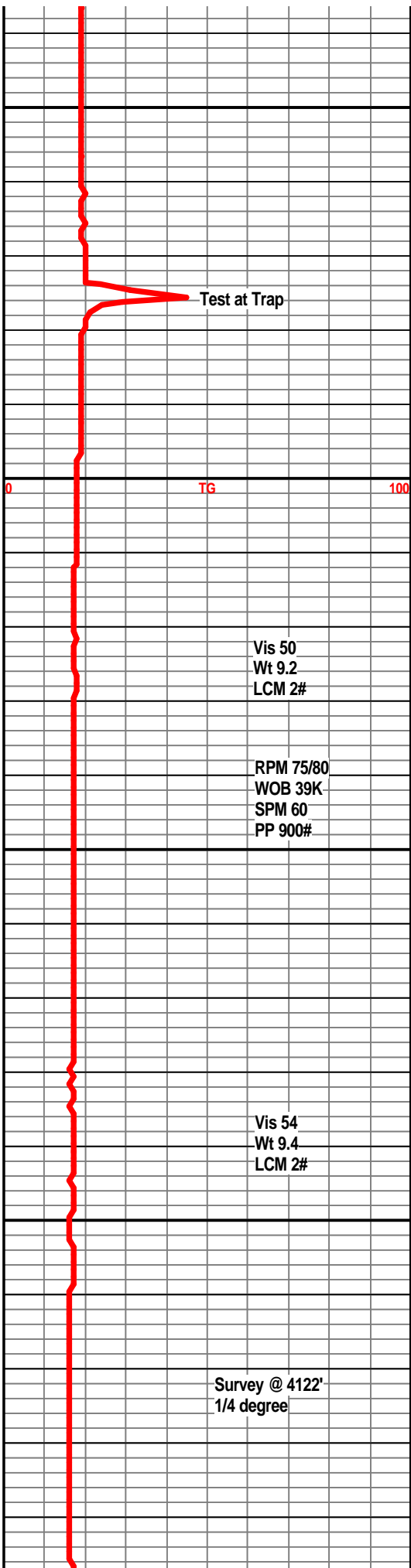
Limestone, grey-white, xln, dense, slightly foss, trace chalky, trace foss porosity.

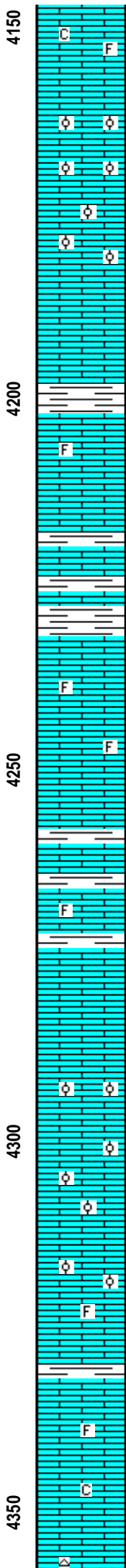
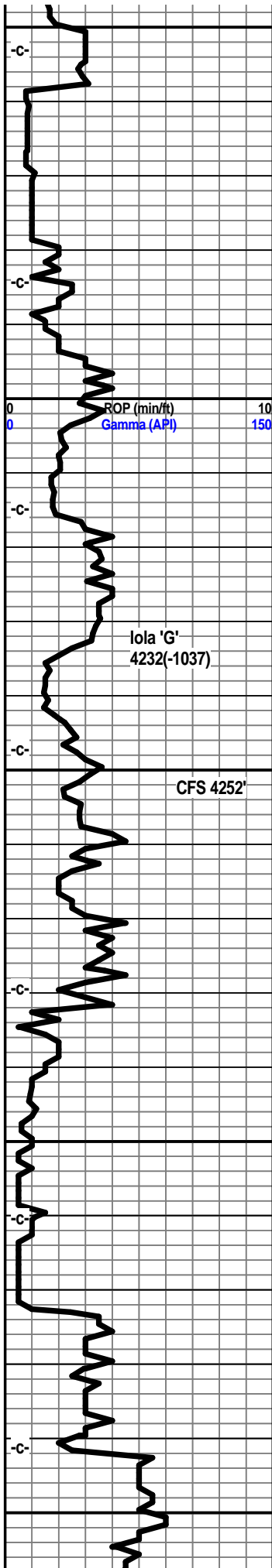
Shale, grey, dark grey.

Limestone, tan, buff-white, xln, dense, foss, trace white chert, slightly chalky.

Shale, grey, ls frags.

Limestone, cream, buff-white, xln, foss in part,





trace chalky.

Limestone, tan-white, fxln, very foss, oolimidic porosity, barron, no vis shows.

Limestone, grey-white, tan, xln, partly dense, foss in part, no vis shows.

Shale, grey.

Limestone, tan-white, grey-white, xln, dense in part, trace foss, foss porosity, slightly chalky.

Shale, grey.

Limestone, buff-white, grey-white, fxln, partly dense, trace few small vugs, some fossil frags, fossils, trace white foss chert, no visible shows, no odor.

Limestone, grey-white, xln, dense, slightly foss. Some grey shales interbedded.

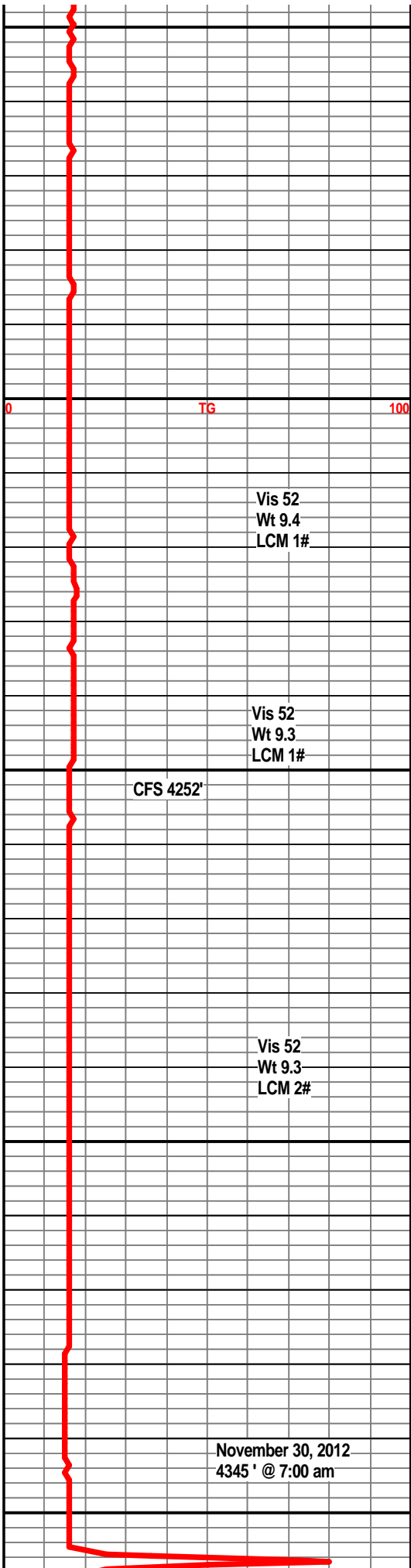
Limestone, tan, buff-white, fxln, oolitic, oolimidic porosity, barron, no vis shows, no odor.

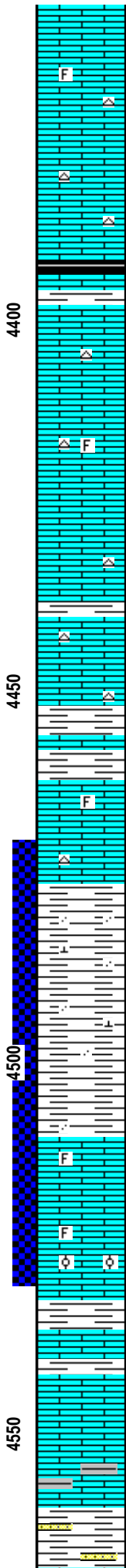
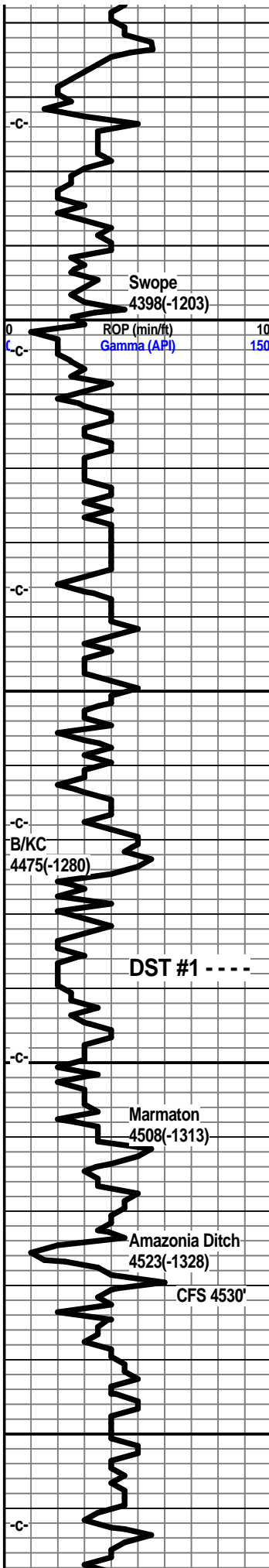
Limestone, a/a

Shale, grey.

Limestone, grey-white, xln, dense, foss in part, slightly shaley, no vis shows.

Limestone, tan, grey-white, fxln, dense, slightly chalky.





Limestone, grey-white, xln, dense, trace chalk, trace fossils.

Limestone, grey-white, tan, xln, dense, off-white cherts, light grey chert.

Shale, grey-black.

Limestone, grey-white, cream, xln, trace xln porosity, trace grey chert, no vis shows.

Limestone, grey-white, xln, cherty in part, no vis shows.

Limestone, tan, buff-white, xln, dense, grey cherts, some grey shale.

Shale, grey-black

Limestone, tan, tan-brown, xln, dense, slightly foss, trace grey chert, no vis shows.

Shale, light grey, pale green, very sandy, slightly calcitic, trace ls frags.

Shale, a/a, some reddish-brown, maroon.

Limestone, tan, tan-brown, xln, dense, trace foss., no vis shows.

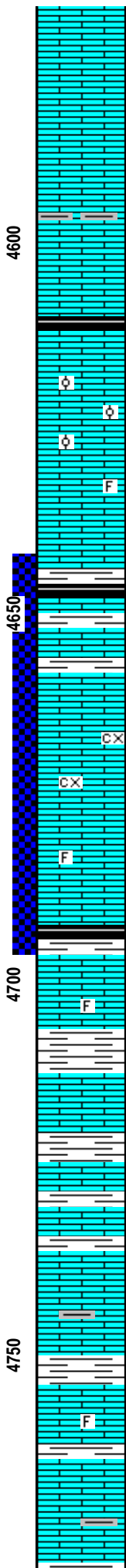
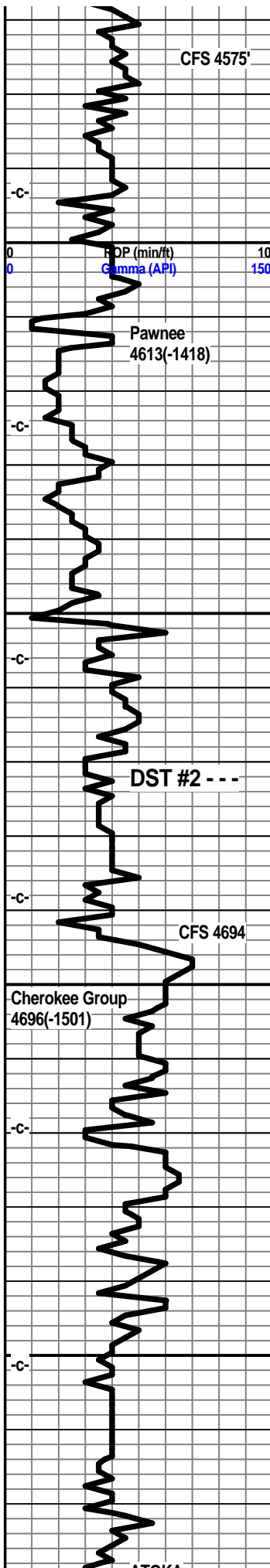
Limestone, tan, cream, xln, oolitic, foss frags, well cemented, inter foss porosity, poor visible porosity, light show of oil, questionable faint odor.

Shale, grey-black, some reddish brown.

Limestone, grey-white, xln, slightly foss, chalky in part, soft, some interbedded shales, no visible shows.

Shale, grey, some reddish-brown, few sand grains embedded with the grey shales, ls frags.

	Test at Trap
	Vis 51 Wt 9.4 LCM 1#
0	TG 100
	Mud Co Mud Check November 30, 2012 4400' @ 10:30 am Vis 45 Wt 9.3 pH 8.0 WL 10.4 Chl 8000 LCM 1#
	Vis 55 Wt 9.4 LCM 1#
	DST #1 4470 -4530 Times 30-60-60-90 1st Opening - Weak to fair, built to 4 1/2". no blow back 2nd Opening - Weak to fair, built to 4 1/2", no blow back. 360' Total Fluid 100' Oil spotted Mud 260' MCW (20% M, 80% W) IFP 38-102# FFP 108-177#
	Vis 50 Wt 9.4+ LCM 1#
	Mud Co Mud Check December 1, 2012 4530' @ 2:00 pm Vis 54 Wt 9.4 pH 10.0 WL 8.0 Chl 8000 LCM trace
	ISIP 1063# FSIP 1044# IHP 1163# FHP 1044# Temp 113 Chlorides 28,000 CFS 4530'
	December 1, 2012 4530' @ 7:00 am
Extractor Motor Quit Left Pumps on	Pipe Strap- 4530' Board 4530.69' Strap 4530.46' Short .23'



Limestone, tan, fxln, dense, trace chalky, no shows.

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

Limestone, grey-white, fxn, partly dense, shaley in part, no vis show.

Shale, grey-black.

Limestone, grey-white, xln, soft, mottled, foss, trace oolites, chalky in part, traces of shale, no visible shows, no odor.

Limestone, grey-white, buff, xln, dense, foss in part, trace oolites, fossils, no vis shows.

Shale, grey-black

Limestone, tan, tan-brown, xln, dense, trace xkn proosity, no vis shows.

Shale, grey.

Limestone, tan, buff, fnxln, xln porosity, few very small vugs, very faint odor, slight show of light oil.

Limestone, tan, buff, xln, dense, trace fossils, no vis shows.

Shale, grey-black.

Limestone, cream, grey-white, xln, dense, slightly foss.

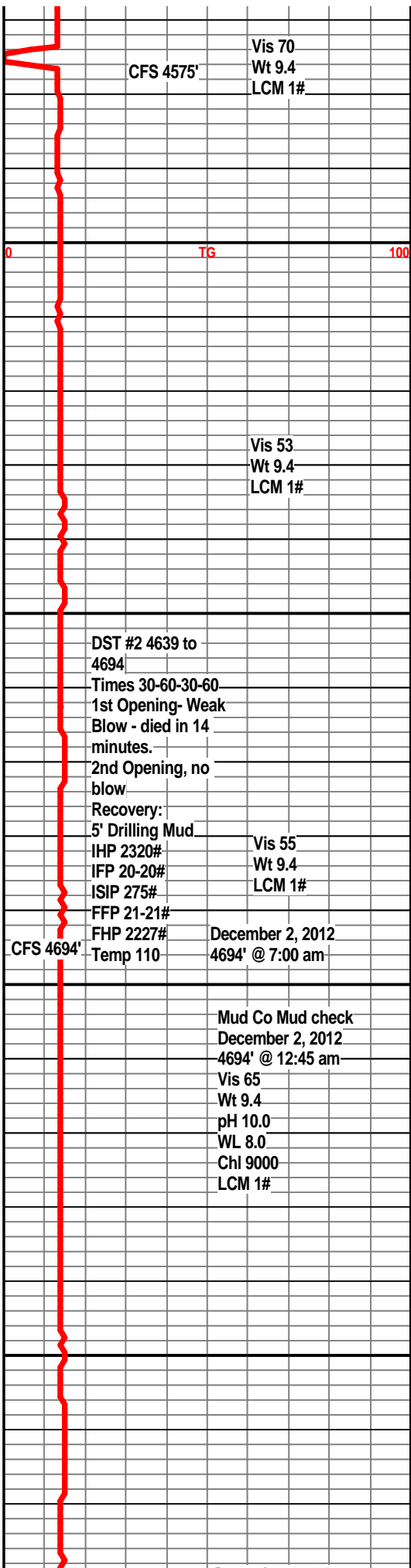
Limestone, cream, buff-white, xln, dense.

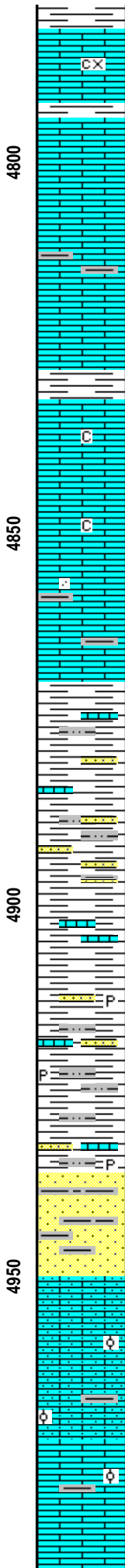
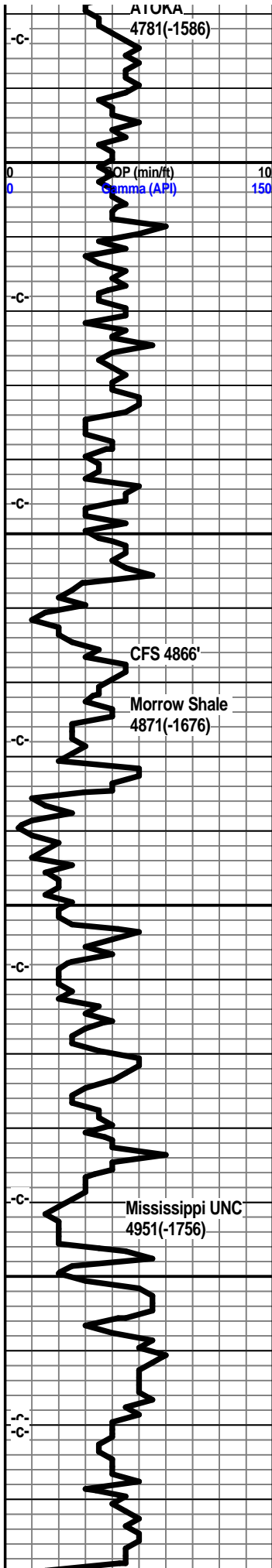
Limestone, cream, tan-white, fxln, dense. shales interdedded, no shows.

Shale, grey.

Limestone, buff-white, fxln, dense, trace foss.

Limestone, tan, tan-white, xln, partly dense, some interbedded shales.





Shale, grey-green.

Limestone, cream-white, tan, fxln, dense.

Shale, grey-green.

Limestone, grey-white, buff, some tan-brown, xln, dense, some shales interbedded, no visible shows.

Shale, grey.

Limestone, cream-tan,, tan, xln, mostly dense, trace chalky.

Limestone, grey-white, tan, fmxln, trace cherty, trace chalky.

Limestone, grey-white, xln, partly dense, trace grey chert, trace pp porosity, shaley, no visible shows, no odor.

Shale, grey-green, silty, ls stringers, some siltstone stringers, no vis shows.

Silty shales, grey, light grey, some grey-green shales, few siltstone clusters, few sand clusters, ls stringers, no vis shows.

Ls, tan, sandy, glauc., few sst clusters, clear, fair cementing, SA, no shows.

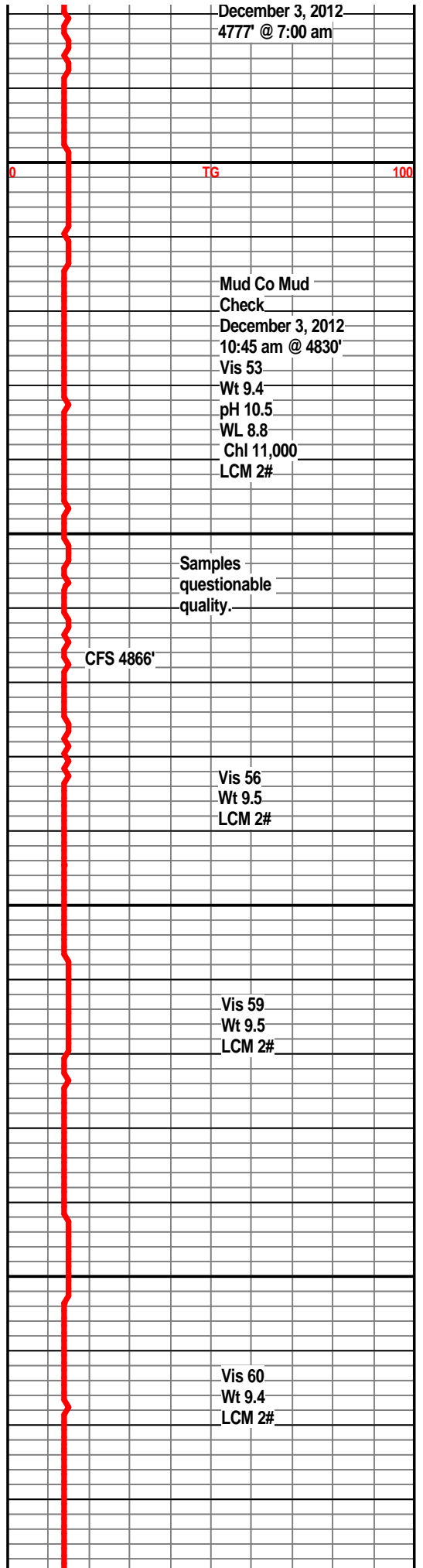
Shale, grey-green, soft, silty, traces sandstone clusters, some chalky ls, gluac, pyrite.

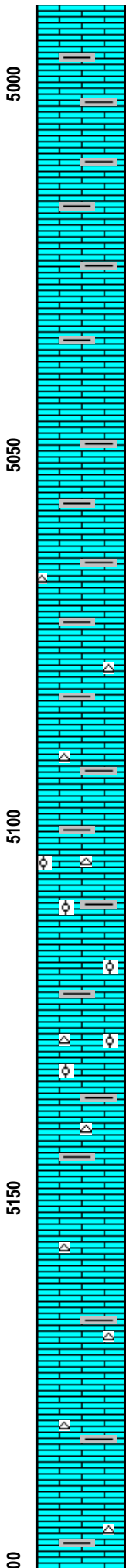
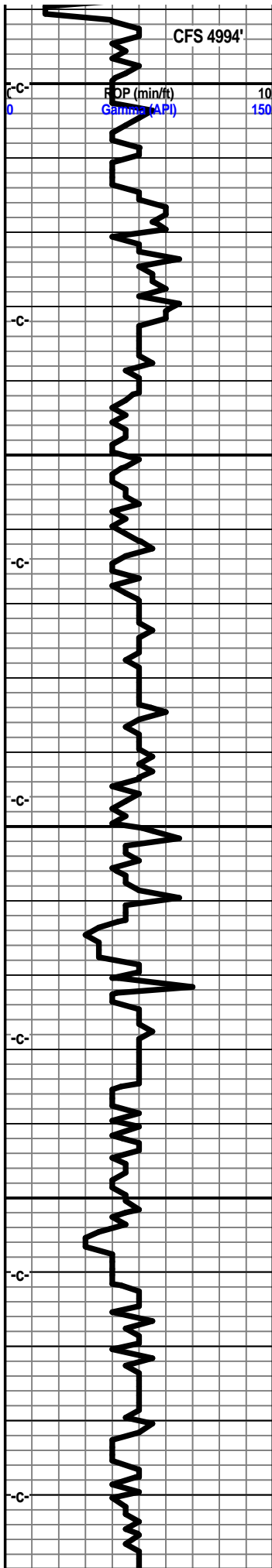
Shale, grey-green, very sandy to silty.

Sandstone, white, fn grained, sr to sa, friable, no vis shows, no odor.

Limestone, off-white, fxln, snady, chalky in part, some oolites, dull mineral fluor, no odor, no vis shows.

Limestone, crm-buff, fxln, sandy in part, chalky, oolitic in part, traces of black shales, no visible shaows.





Limestone, buff-white tan, fnxn, grainy to sandy textures traces of xln porosity, some scattered oolites, dull mineral fluor., scattered grey to pale green splintery shales, no vis shows, no odor.

Limestone, tan, to cream-white, xln, dense, sandy, grainy texture, scattered splintery shales, some oolites, traces of glauc.

Limestone, tan, xln, dense, grainy texture, trace chalky, glauc., grey-green splintery shales.

Limestone, tan, cream-white, xln, dense, traces of chalk, grainy, grey-green, some red splintery shales, traces translucent chert.

Limestone, tan, cream-white, grey, green, reddish orange shales, tan, trans, orangish cherts, no visible shows.

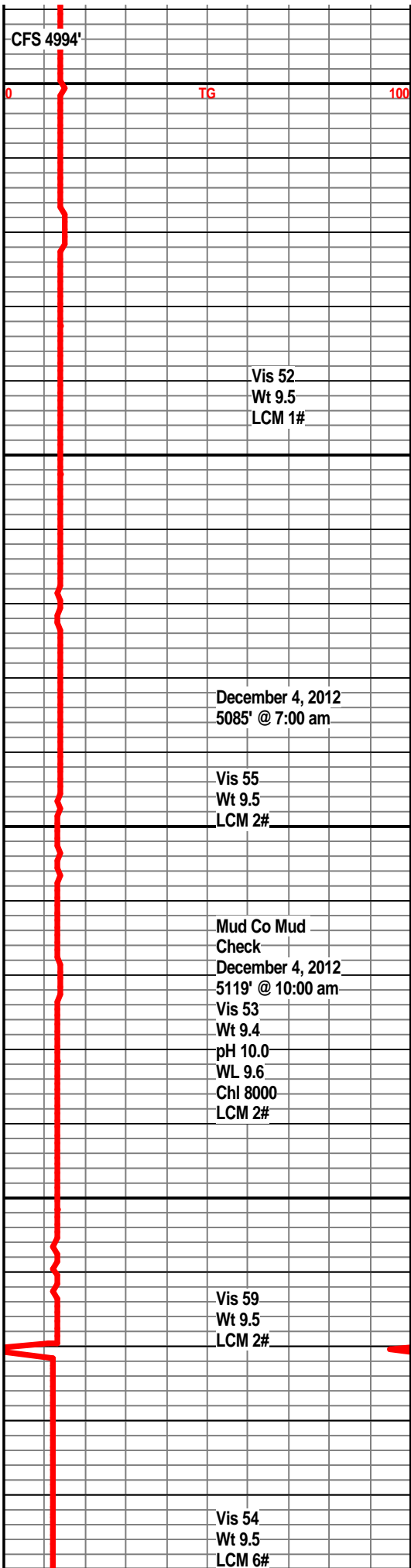
Limestone, cream-white, xln, mostly dense, oolites, grey-green splintery shales, some vari-colored cherts, mostly tan, no vis shows, no odor.

Limestone, cream, buff-white, xln, dense, trace oolites, tan to vari-colored cherts, splintery shales.

Limestone, tan, tan-brown, cream, xln, dense, trace grey shales, tan chert, no visible shows.

Limestone, tan, some tan-brown, xln, dense, traces tan cherts, some cream-tan, traces of green shales, few fossils.

Limestone, tan, cream, tan-brown, fxln, dense, traces of grey-green shales, tan cherts, dull mineral fluor, no shows, no odor.



Vis 52  
Wt 9.5  
LCM 1#

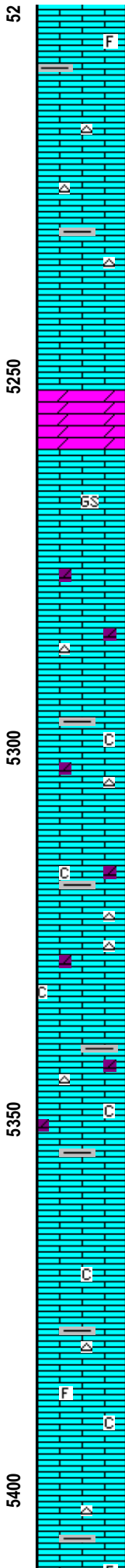
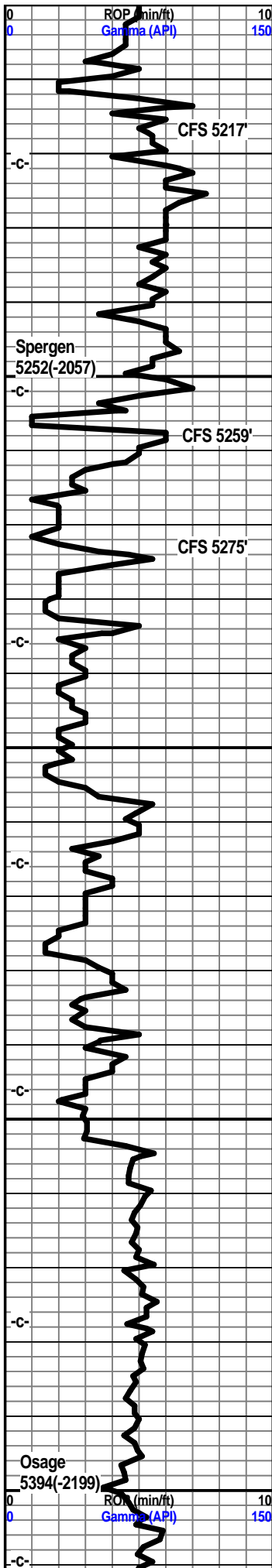
December 4, 2012  
5085' @ 7:00 am

Vis 55  
Wt 9.5  
LCM 2#

Mud Co Mud  
Check  
December 4, 2012  
5119' @ 10:00 am  
Vis 53  
Wt 9.4  
pH 10.0  
WL 9.6  
Chl 8000  
LCM 2#

Vis 59  
Wt 9.5  
LCM 2#

Vis 54  
Wt 9.5  
LCM 6#



Limestone, tan, cream-tan, xln, partly dense, traces of xln porosity, grainy texture, traces of tan chert, no vis shows, no odor.

Limestone, tan, cream-white, dense, xln, tan cherts, some grey shale.

Dolo, cream-white, fnxln, fine grained, friable, sandy texture, no odor, no visible shows, dull mineral flour.

Limestone, tan, coarse grained, friable traces inter xln porosity, trace few small vugs, no odor, no visible show, no flour.

Limestone, grey-white, tan, xln, mottled, shale inclusion, trace vuggy porosity, traces of white chert, slight trace chalky ls, dolo in part, no visible shows, no odor.

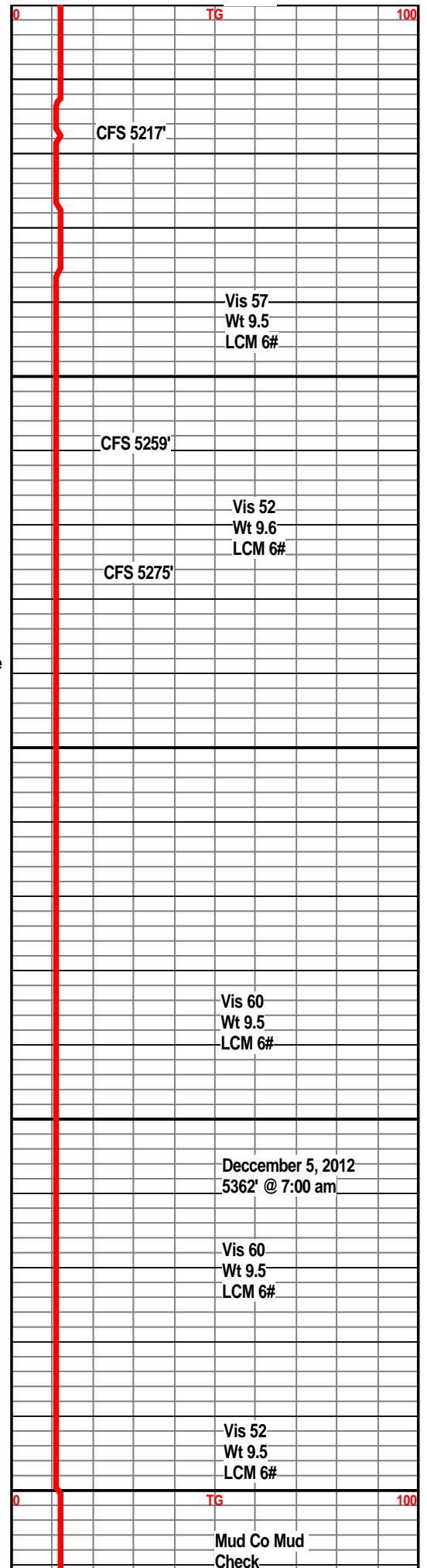
Limestone, grey-white, fxl, partly dense, mottled, trace fossils, chaky in part, slightly dolo, trace white cherts, some shale inclusions, traces of vug porosity,

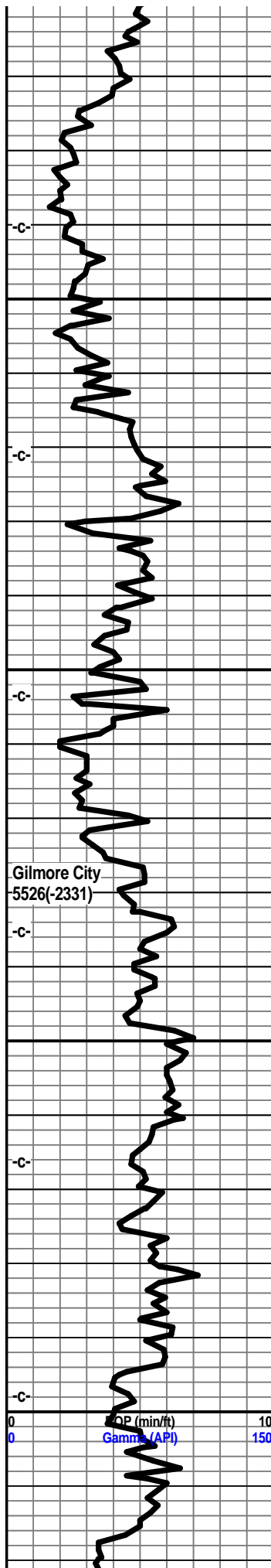
Limestone, tan-white, grey-white, mottled, trace foss, trace shale, trace vug porosity, lightly chalky, white to trans cherts, no vis shows.

Limestone, tan, grey-white, xln, dolomitic, mottled, chalky in part, trace shales, no vis shows.

Limestone, grey-white, tan, xln, dense, trace foss, trace tan to grey chert, mottled in part, some chalky.

Limestone, tan-white, grey-white, xln, partly dense, trans to off-white chert, trace foss, shaley in part, slightly chaky, no vis shows.





Limestone, cream to buff-white, tan, grey-white, xln, traces of xln porosity, off-white to trans cherts, grey shales, some chaky ls., no vis shows, no odor.

Limestone, tan, cream-buff, xln, trace xln porosity, blue-grey cherts, slightly chaky, slightly dolo in part, no vis shows.

Limestone, tan-white, buff, xln, dense, off-white cherts, trace grey shales.

Limestone, grey-white, xln, dense, grey-white cherts, no shows.

Limestone, tan, grey-white, xln, dense, abundant grey-white sharp cherts, no visible shows.

Limestone, tan, cream-white, xln, dense, traces of off-white cherts, slightly chalky.

Limestone, buff-white, xln, dense, slightly foss, chalky in part.

Limestone, tan, tan-brown, xln, dense, foss, trace tan chert, trace chalky.

Limestone, tan, tan-brown, cream, xln, oolitic.

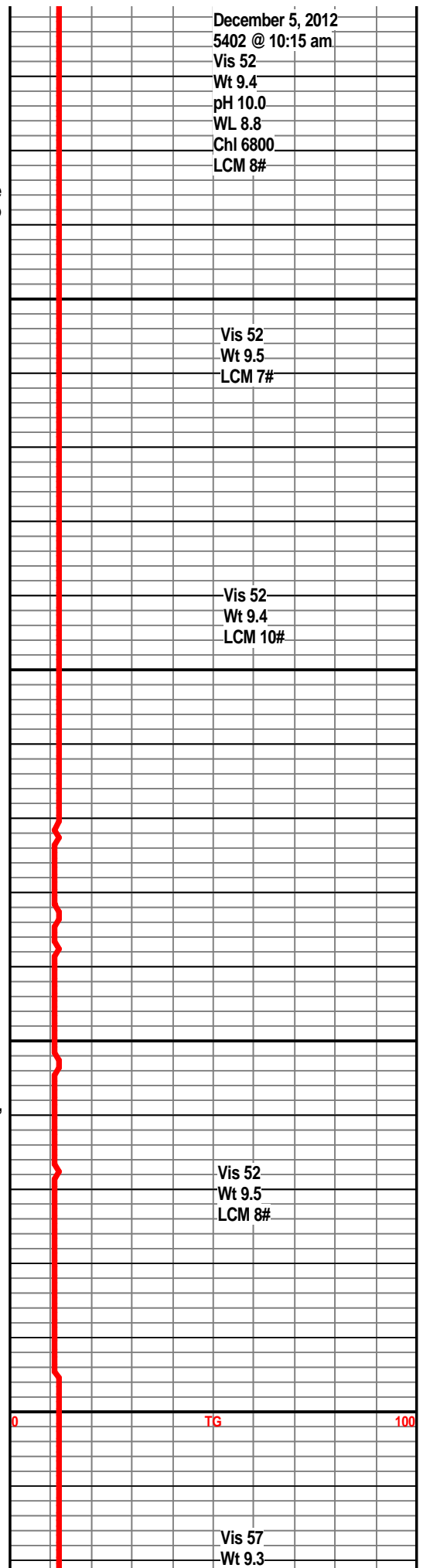
December 5, 2012  
5402 @ 10:15 am  
Vis 52  
Wt 9.4  
pH 10.0  
WL 8.8  
Chl 6800  
LCM 8#

Vis 52  
Wt 9.5  
LCM 7#

Vis 52  
Wt 9.4  
LCM 10#

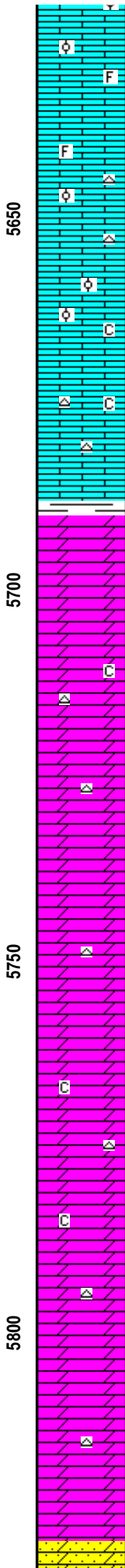
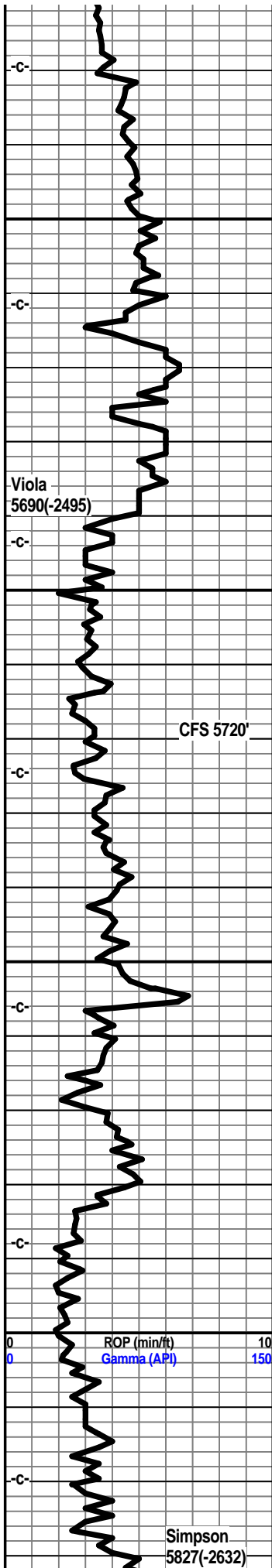
Vis 52  
Wt 9.5  
LCM 8#

Vis 57  
Wt 9.3



Gilmore City  
5526(-2331)





trace chalky, no vis shows., no odor.

Limestone, tan, buff, xln, dense, foss in part, no vis shows.

Limestone, tan-white, tan, xln, oolitic, fossils, trace chalk, off-white to grey chert, no vis shows, no odor.

Limestone, tan, cream-white, xln, dense, trace white chert, trace grey dolo, no shows, no odor.

Dolo, tan-white, cream, xln, fn grained, succ texture, succ porosity, tite, dull mineral fluor, no vis shows, no odor.

Dolo, cream, tan-white, xln, succ, xln porosity, fair porosity, small scattered vugs, trace chalky ls, no visible shows. no odor.

Dolo, tan, tan-white, xln, dense, succ texture, some succ porosity, few small scattered vugs, trace of white chert, no visible shows.

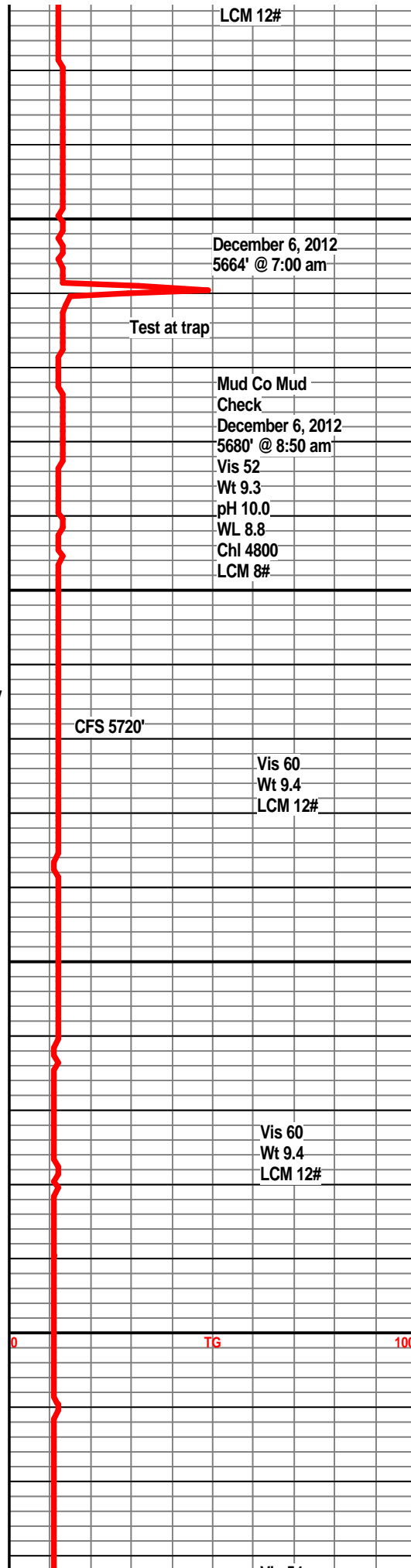
Dolo, tan-white, buff, xln, succ, fine grained, some pyrite inclusions, white chert, no shows.

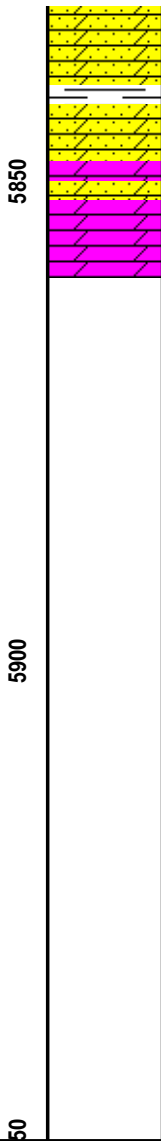
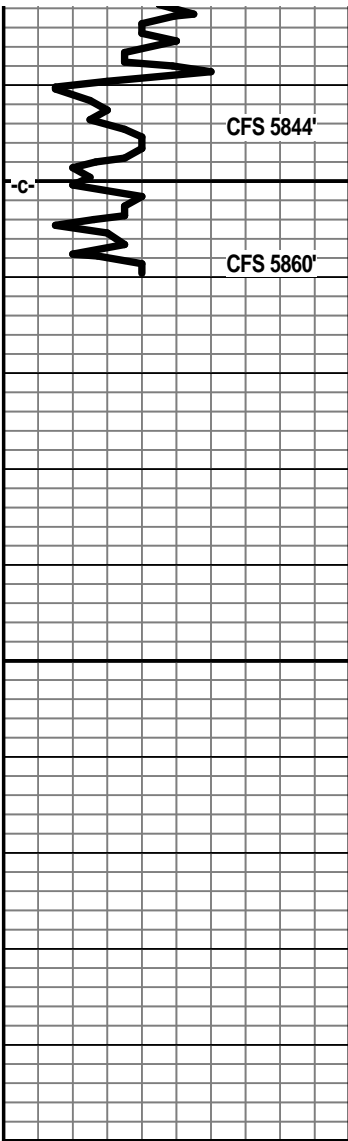
Dolo, tan, xln, succ in part, partly dense, trace chalk, trace pyrite, white chert, no visible shows.

Dolo, tan-white, xln, succ, white chert, succ porosity, cattered small vugs, trace chalk, no visible shows, no odor, dull mineral fluor.

Dolo, tan, cream-buff, xln, succ, white chert, trace tan specked chert, no vis shows.

Dolo. white. sandv. well cemented. anular





Dolo, white, sandy, thin cemented, angular grains, trace glauc, no shows. (very few samples.)

Shale, dark green.

Dolo, white, very fine grained, sugar texture, some pyrite, sa grains, intergranular porosity, no vis shows, no odor.

		Vis 54 Wt 9.4 LCM 8#
	CFS 5844'	
	CFS 5860'	RTD 5860' LTD 5859'
		December 7, 2012 5860' @ 7:00 am
		Survey @ 5860' 3/4 degree