



Woolsey Operating Company, LLC

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

Measured Depth Log

Well Name: Miller D #1
Location: E2 NW NW NW
License Number: API: 15-007-23710-00-00
Spud Date: June 2, 2011
Surface Coordinates: 330' FNL & 500' FWL Section 14-Twp 34 South - Rge 11 West
Wildcat
Bottom Hole Vertical Hole
Coordinates:
Ground Elevation (ft): 1375 K.B. Elevation (ft): 1384
Logged Interval (ft): 3000 To: RTD Total Depth (ft): 5225
Formation: McLish Shale
Type of Drilling Fluid: Chemical Mud, Displace at 3429'

Region: Barber County, Kansas
Drilling Completed: June 12, 2011

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
LECOMPTON	3435(-2051)	3429(-2045)
HEEBNER	3653(-2269)	3648(-2264)
DOUGLAS	3690(-2306)	3684(-2300)
HASKELL	4077(-2693)	4072(-2688)
QUINDARO SHALE	4153(-2769)	4148(-2764)
HUSHPUCKNEY SHALE	4366(-2982)	4360(-2976)
B/KC	4415(-3031)	4411(-3027)
PAWNEE	4514(-3130)	4508(-3125)
CHEROKEE GROUP	4561(-3177)	4556(-3172)
MISSISSIPPIAN	4598(-3214)	4595(-3211)
KINDERHOOK SHALE	4788(-3404)	4784(-3400)
WOODFORD SHALE	4871(-3487)	4867(-3483)
VIOLA	4902(-3518)	4899(-3515)
SIMPSON GROUP	5021(-3637)	5016(-3632)
SIMPSON SAND	5034(-3650)	5030(-3646)
MCLISH SHALE	5094(-3710)	5087(-3703)
MCLISH SAND	5190(-3806)	5186(-3802)
RTD	5225(-3841)	
LTD		5218(-3834)

COMMENTS

Surface Casing: Set 5 joints 10 3/4" at 214' with 240 sxs Class A, 2% gel, 3% cc, plug down at 4:30 am on June 3, 2011. Cement did Circulate.

Production Casing: Ran 5 1/2" Casing.

Deviation Surveys: 1 1/2- 220', 1 - 1229', 1/2-1763', 1 1/4-2201, 3/4 - 2705', 1 - 3209', 1/2 - 3618', 1 1/2 - 3806, 1 - 3899', 3/4 - 4023', 1/4 - 4149', 3/4 - 4640', 1 - 5225'

Contractor Bit Record:

- 1- 14 3/4" out at 220'.
- 2 - 7 7/8" out at 4640'.
- 3 - 7 7/8" out at 5225'.

Gas Detector: Woolsey Operating Company, Trailer #1

Mud System: Mud Co, Aaron Rush, Brad Bortz, Engineers

DSTs: Two Tessts by Superior Testers Enterprises, LLC

Logged by Superior Well Services

LTD - 5218'.

DST'S

DST #1 4524 to 4640 Times 30-60-60-120

1st Opening - BOB in 5 minutes, no blow back

2nd Opening - BOB in 1 minute, no blow back

Recovery: 70' Drilling Mud, 60' Mud with slight show of oil, (1/2% oil, 99 1/2% Mud), No GIP.

IHP 2337 FHP 2195

IFP 131-119 FFP 121-142

ISIP 703 FSIP 884

DST #2 4648 to 4690' Times 30-60-60-120

1st Opening - Weak blow building to 6 1/2" in bucket

2nd opening - Fair blow built to BOB on 11 minutes

Recovery: 70' Drilling Mud, 60' SOCM (5% oil, 5% gas, 90% Mud)

IHP 2347 FHP 2337

IFP 61-93 FFP 91-120

ISIP 360 FSIP 587

CREWS

H2 Drilling Rig #3


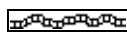
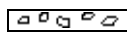

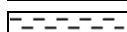

Tool Pusher - Randy Smith







Drillers - Gary Axtell


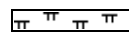
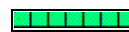



Luis Marquez






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
	Shyslts
	Sltys

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

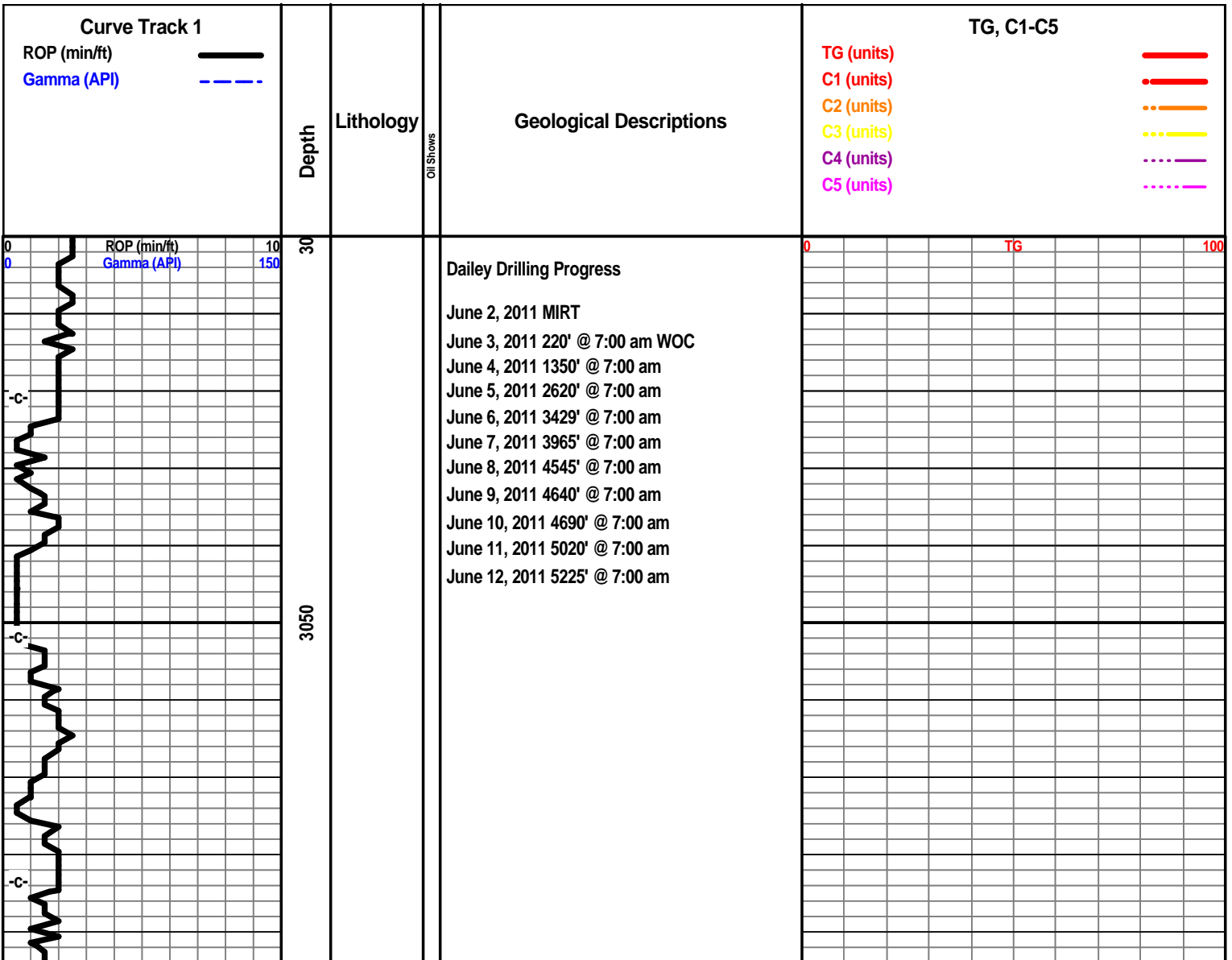
- Grysh
- Gryslt
- Lms
- Sandylms
- Sh
- Slststn

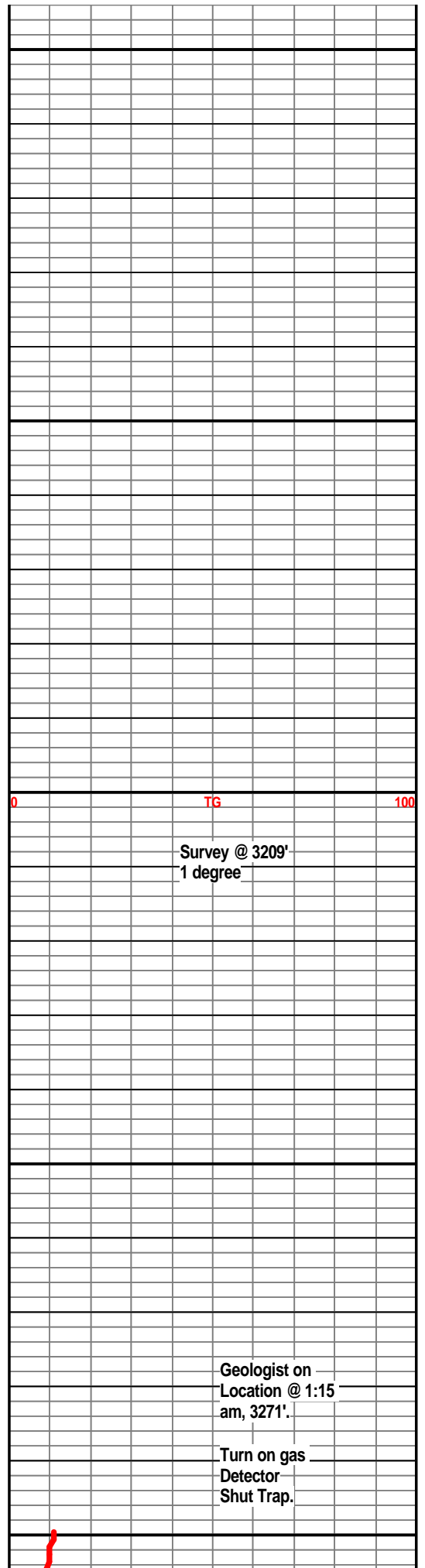
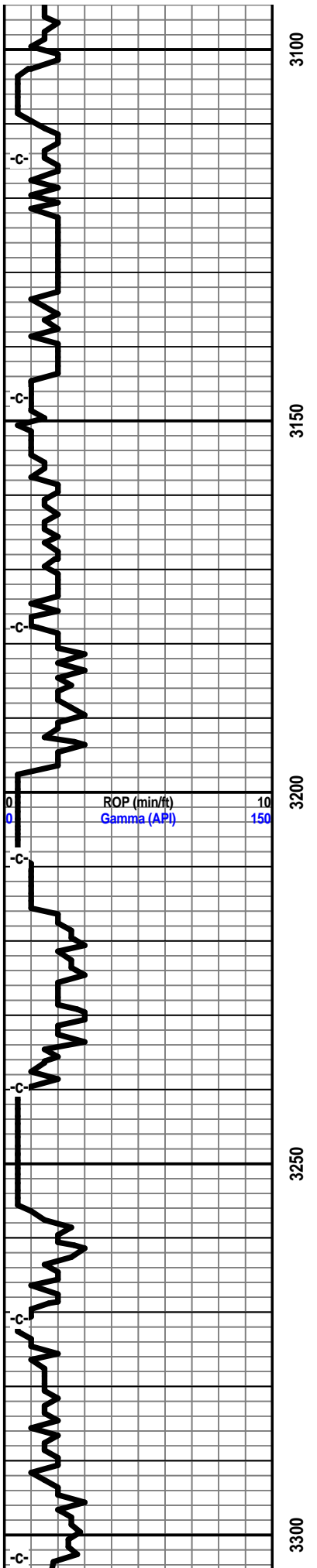
STRINGER

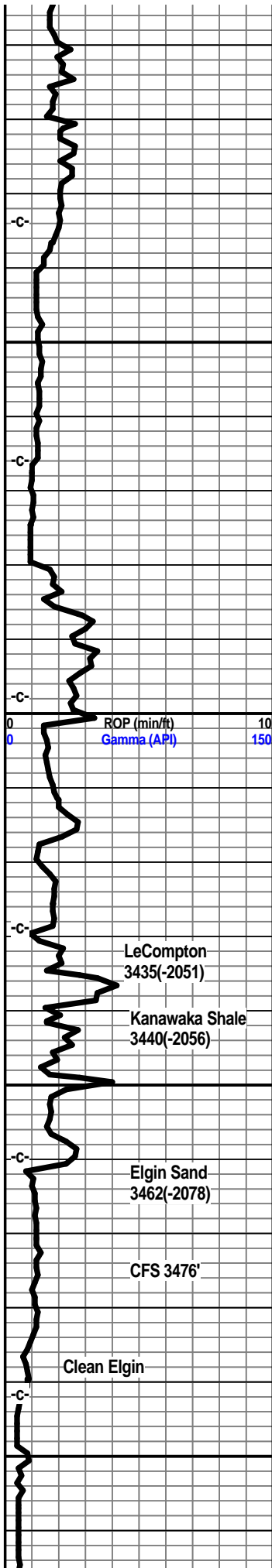
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Slststrg
- Ssstrg
- Carbsh
- Clystn
- Dol

TEXTURE

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





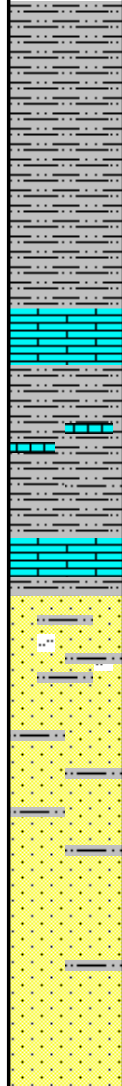


3350

3400

3450

3500



Poor Samples.

Shale, lt grey, silty, uphole cuttings.

Shale, Lt grey, silty.

Limestone, tan-white, xln, dense, foss. in part.

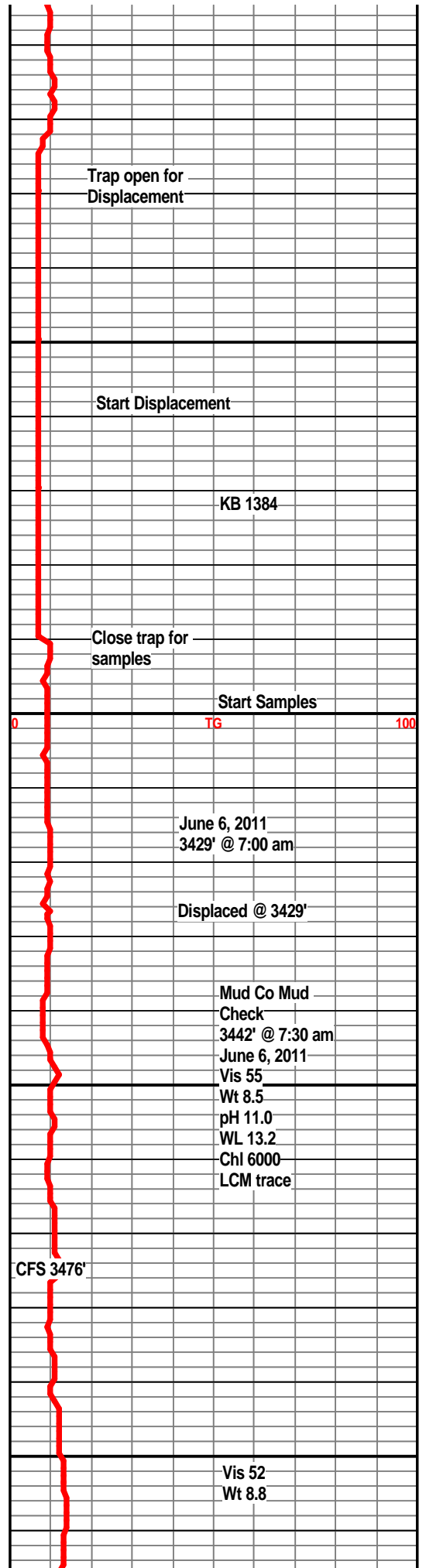
Shale, grey, silty, trace limestone.

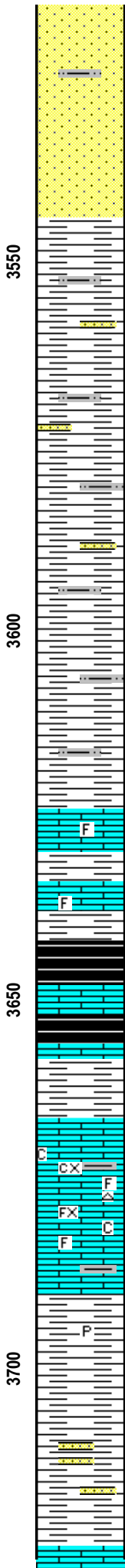
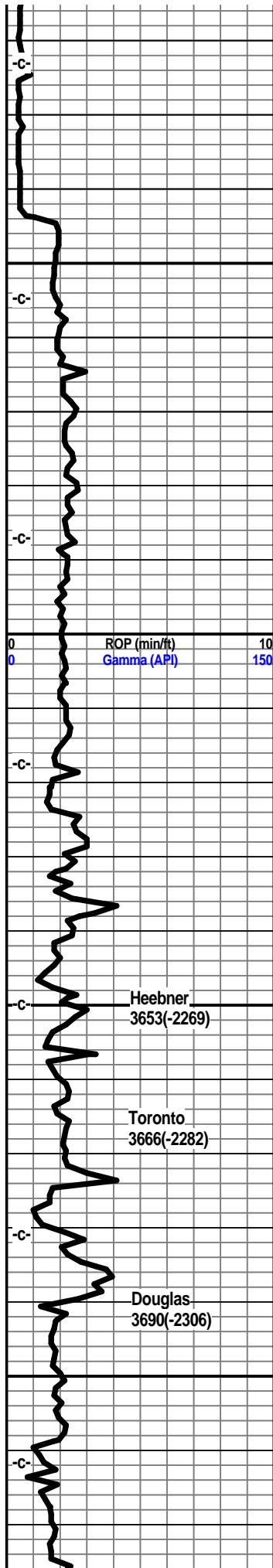
Limestone, cream-white, xln, dense, trace foss.

Sandstone, lt grey, very fn grained, very silty, mica, no visible shows, no kick.

Sandstone, clear to white, very fn grained, silty, friable in part, mica, cleaner sand than above, no visible shows, no odor, no kick.

Sandstone, clear to grey-white, fn grained, friable. silty in part. mica. no visible shows.





Sandstone, clear to white, fn grained, friable, silty, no visible shows.

Shale, Lt grey, very silty to sandy, soft.

Shale, lt grey, silty to sandy, trace tan limestone fragments.

Shale, lt grey, silty to sandy.

Shale, Lt grey silty to sandy.

Shale, lt grey.

Limestone, tan, xln dense, foss.

Shale, grey-green

Limestone, grey-brown, fn xln, dense, sl foss.

Shale, grey-black.

Limestone, cream-tan, xln, dense.

Shale, grey-black.

Limestone, tan-brown, xln dense.

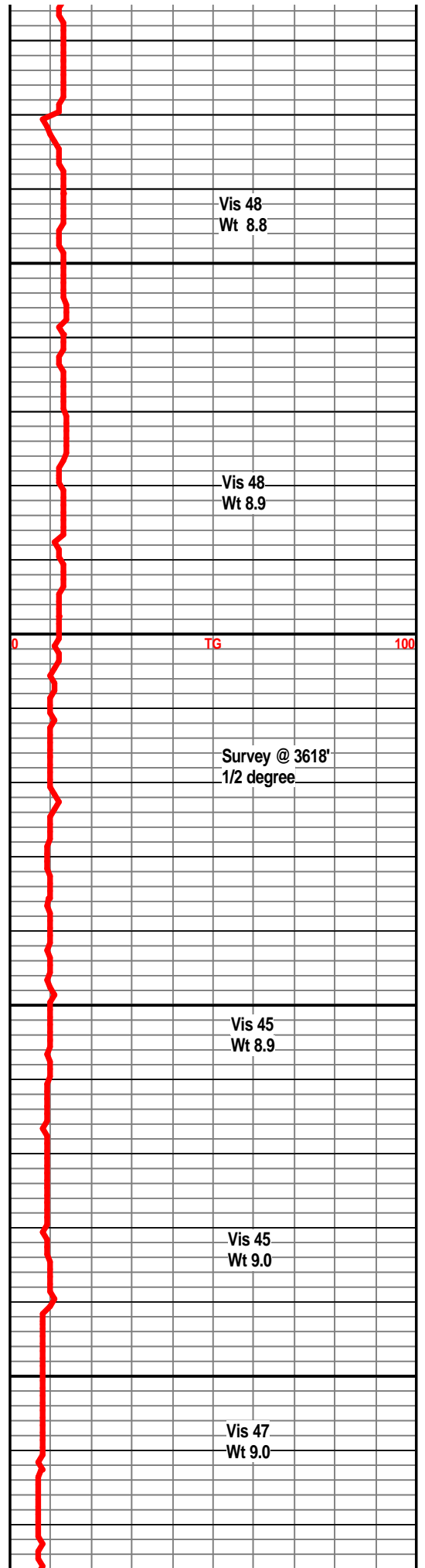
Shale, lt grey, silty.

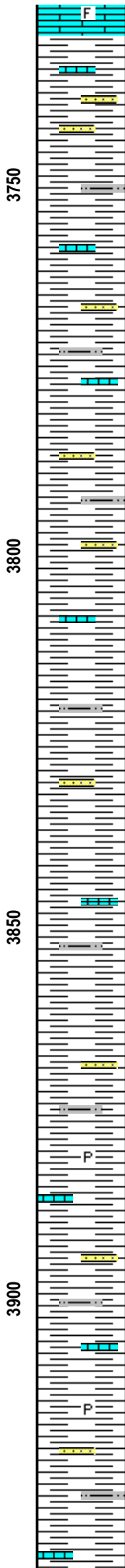
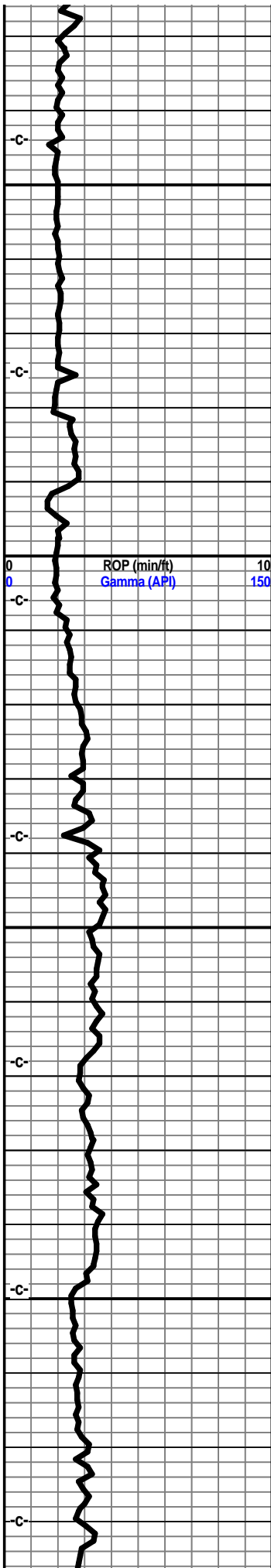
Limestone, tan-white, xln, slightly foss, subchalky, trace shale stringer.

Limestone, cream-white, tan, fxln, trace xln porosity, foss in part, subchalky, traces of white chert, no visible shows.

Shale, grey, silty, trace pyritic.

Shale, lt grey, traces of sandstone, well cemented, fn grained, mica, poorly sorted, no visible shows.





Limestone, tan-brown, mxln, dense, slightly foss.

Shale, Lt grey, light grey-green, silty to sandy, some interbedded lime stringers.

Shale, lt grey, silty, traces of sandstone clusters, some tan-brown interbedded ls.

Shale, grey to light grey, silty, sandy in part, traces of tan ls fragments.

Shale, light grey, silty, sandy and some ls frags.

Shale, Light grey, silty, some sand clusters and tan limestone fragments.

Shale, grey, silty, sst & tan-brown ls interbedded.

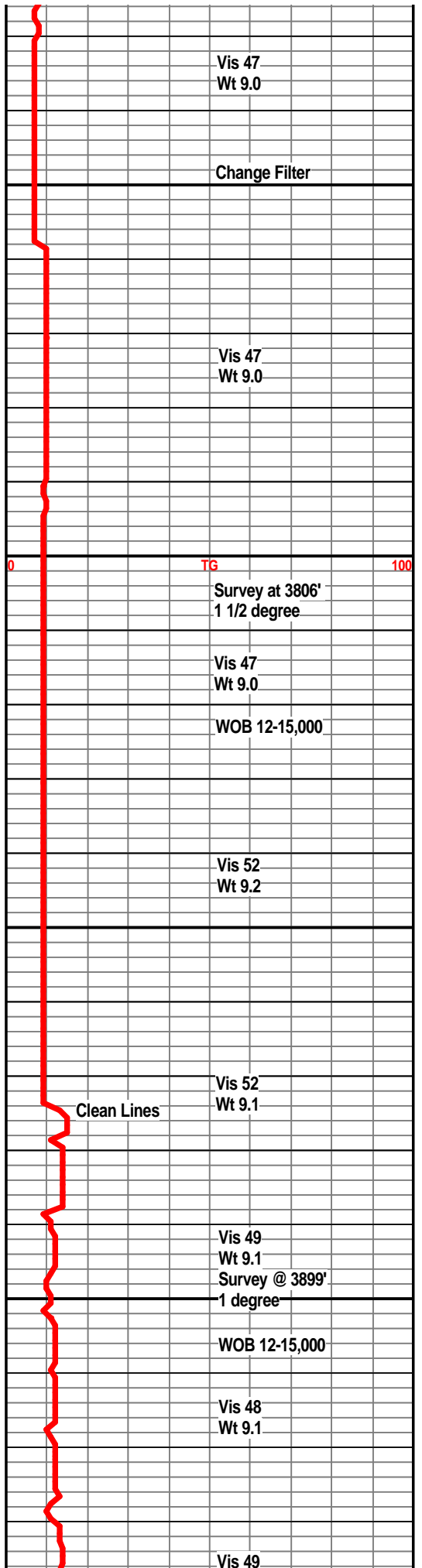
Shale, light grey, silty.

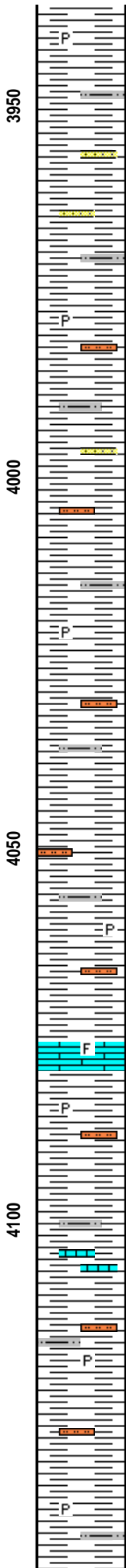
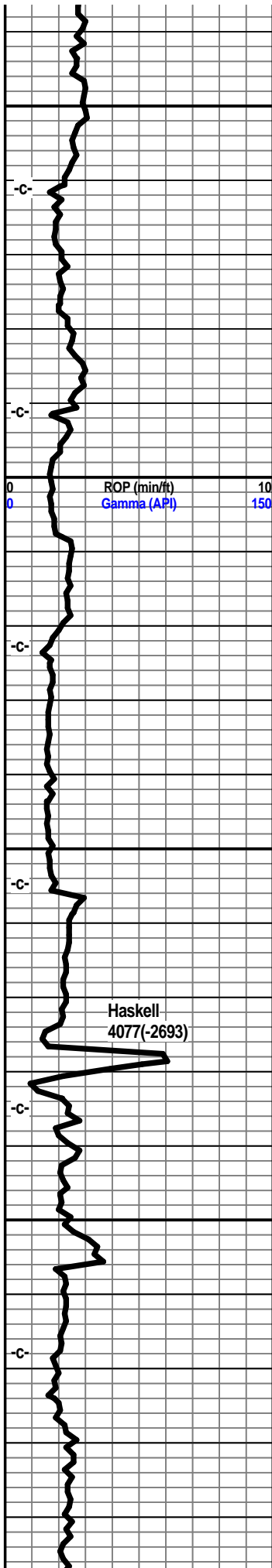
Shale, light grey, silty, sandy with limestone.

Shale, grey, silty, traces of sand, traces of limestone.

Shale, light grey to green, silty, traces of pyrite, sand and limestone.

Shale, light grey-green, silty, sand and limestone fragments.





Shale, light grey to green, silty.

Shale, light grey to grey, silty, traces of sandstone clusters, some tan-brown limestone.

Shale, light grey to grey, silty, trace pyrite.

Shale, grey, soft, silty, traces of sand.

Shale, grey to light grey, silty, traces of pyrite, slightly sandy in part.

Shale, grey, silty to sandy.

Shale, grey, dark grey, traces of pyrite.

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

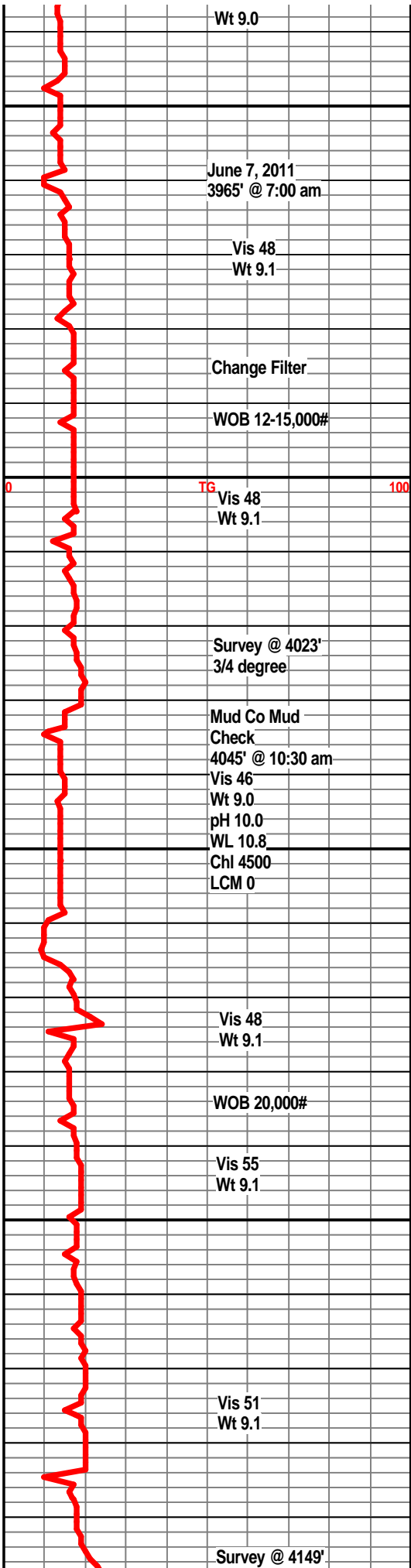
Shale, dark grey, silty.

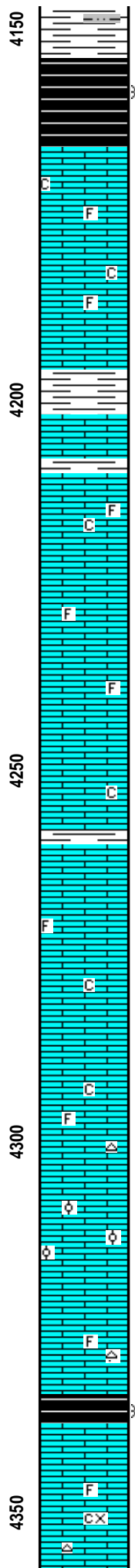
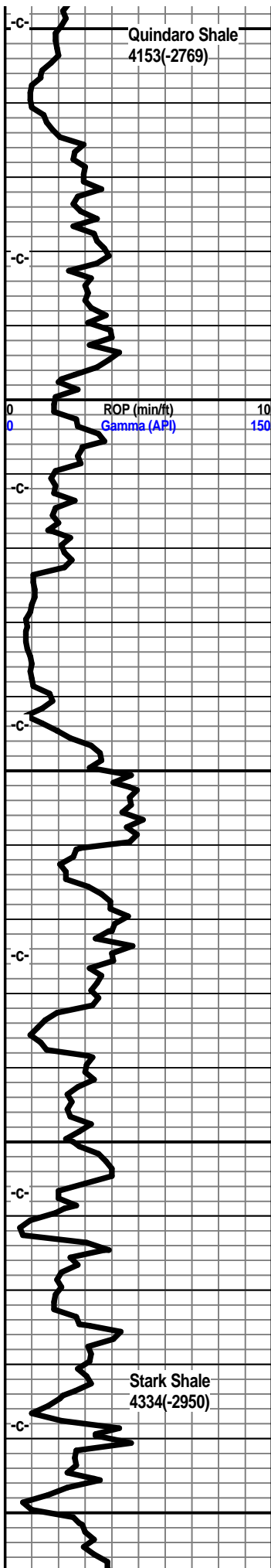
Shale, dark grey to grey, silty, trace pyrite.

Shale, dark grey, silty, traces of brown limestone, dense.

Shale, grey to dark grey, silty, traces of pyrite inclusions.

Shale, dark grey, silty.





Shale, grey-black, slightly carb.

Limestone, cream, grey-white, fxln, dense, slightly shaley, foss, subchalky in part.

Limestone, cream, tan-white, fxln, dense, slightly foss, slightly chalky.

Shale, light grey.

Limestone, tan-brown, xln, dense

Limestone, cream-tan, xln, slight foss. chalky.

Limestone, cream-white, xln, foss fragments, foss porosity, xln porosity.

Limestone, cream-tan, xln, partly dense, foss in part.

Shale, light grey.

Limestone, cream-tan, xln, foss frags, foss porosity.

Limestone, cream-tan, xln, xln porosity, foss porosity, slightly chalky.

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

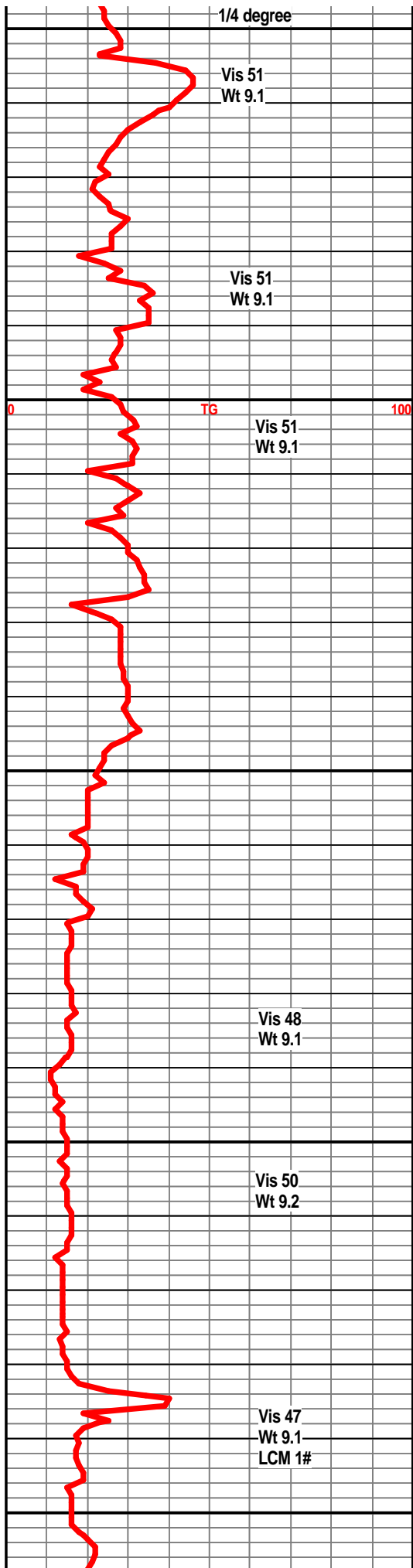
Limestone, tan-white, xln, dense, oolitic, oolimidic porosity.

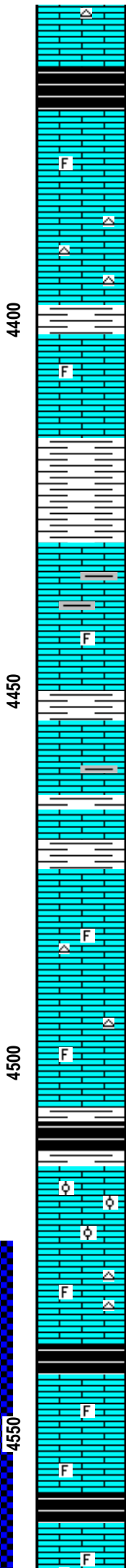
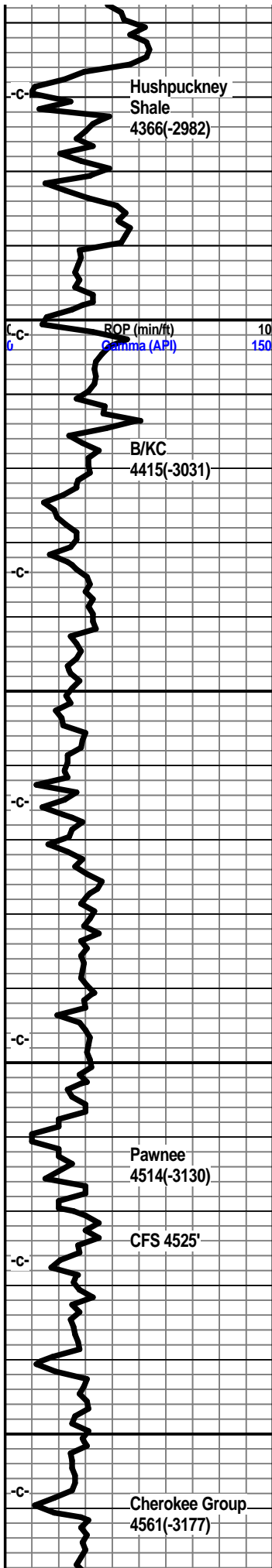
Limestone, tan-white, xln, partly dense, slightly foss, cherty in part.

Shale, grey-black, slightly carb.

Limestone, tan, cream-white, fxln, foss. traces of xln porosity, fsoss porosity, no visible shows, no odor.

Limestone, tan-white, fxln, partly dense, traces





of tan-grey chert.

Shale, dark grey-black, carb.

Limestone, cream-tan, xln, slightly foss, traces of foss porosity, no visible shows.

Limestone, tan-white, xln, slight foss, trace tan chert.

Shale, dark grey.

Limestone tan-white, tan, xln dense, trace foss porosity, no shows.

Shale, lt grey to grey-green.

Limestone, grey to light grey, xln shaley in part, light grey-green.

Shale, light grey-green.

Limestone, buff to cream-white, some pale green, xln, shaley in part.

Shale, grey.

Limestone, tan-white, xln dense, trace of foss, traces of tan cherts.

Limestone, tan-white, xln dense, foss in part, tan cherts.

Shale, grey-black, dark grey, slight show of gas.

Limestone, cream-white, fxln, foss, oolitic in part, traces of xln porosity, trace foss porosity, no visible shows, no odor.

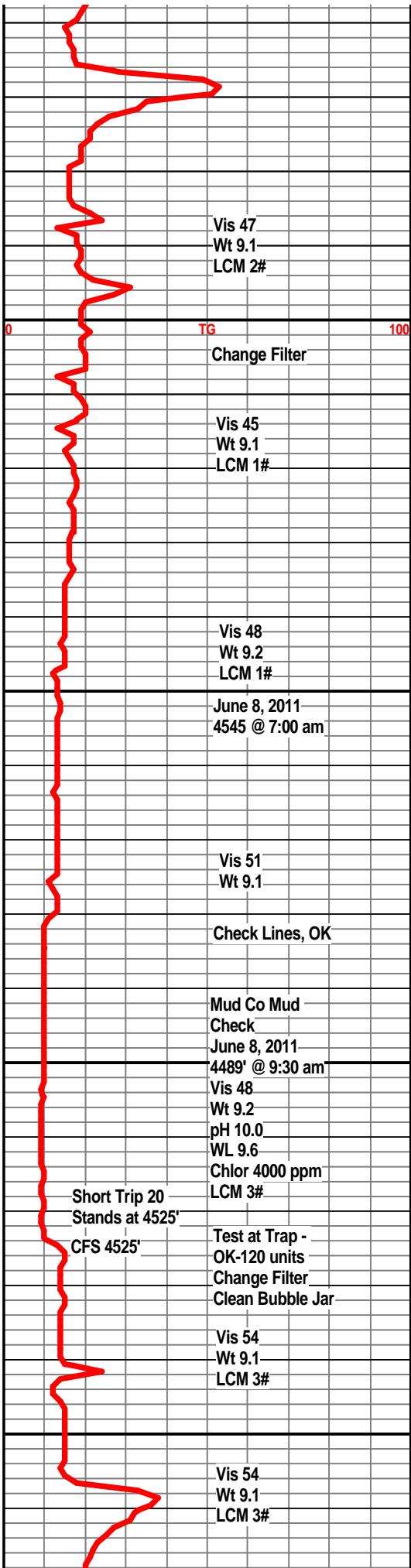
Limestone, cream-white, xln, dense, slight foss, traces of tan chert, subchalky in part.

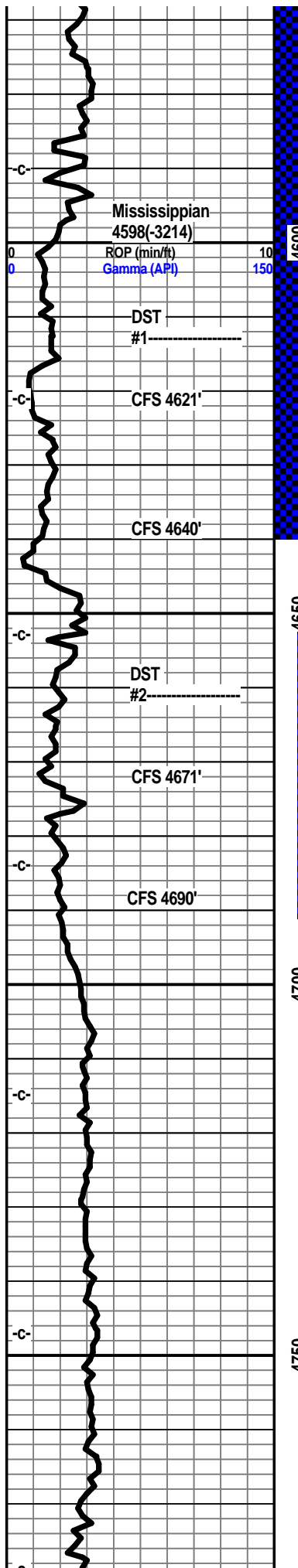
Shale, grey-black, carb.

Limestone, grey-white, fxln, partly dense, traces of foss, subchalky, traces of tan chert.

Shale, grey-black, carb.

Limestone, grey-white, cream-white, fxl





Limestone, grey-white, cream-white, xln, dense, foss, trace of tan-grey chert.

Limestone, tan-white, xln, dense, slightly foss, some granular texture, questionable asphaltic stain, traces of tan chert.

Shale, grey, grey-black, some light grey.

Limestone, cream-white, tan, xln, cherty in part, some weathered chert, pp porosity, slight show of light oil, faint odor, dull fluor.

Chert, off-white, tan, weathered in part, pp porosity, traces of fresh sharp chert, some limey in part, faint odor, slight show of light oil, dull fluor.

Chert, tan-white to grey-white, weathered, pp porosity, traces of scattered small vugs, light brown scattered staining, some dark black staining, fair odor, light show of oil and gas, dull fluor.

Chert, off-white to tan, weathered, pp porosity, some small scattered vugs, light staining, fresh sharp chert, limey in part, fair odor, fair scattered show light oil and gas, dull fluor.

Chert, white to off-white, weathered, scattered pp and vug porosity, fair odor, scattered show light oil and gas, sharp white cherts, dull fluor.

Chert, white to off-white, tan, weathered, pp porosity, fair odor, traces of light green shale, sharp off-white to white tan chert, dull fluor.

Chert, off-white to tan, weathered, some sharp fresh, fair odor, light brown staining, dolo to limey in part, show of bleeding oil and gas, some free oil in tray, dull fluor.

Chert, white, off-white, tan, weathered, pp porosity, fair odor, show light oil and gas, scattered staining, some tan-white dolo w/ gil specks, pale light green shale, very dull fluor.

Dolo, grey-white, xln, abundant weathered cherts, traces of pp porosity, poor odor, slight show oil and gas, slight brown staining, some fresh sharp cherts, grey-green shales.

Dolo, grey-white, xln, abundant cherts, trace shows light oil, light staining, poor odor, grey-green shales, some sharp cherts.

Dolo, grey-white, xln, cherts decreasing, still some with scattered light brown staining, no odor, very dull fluor, grey-green splintery shales.

Dolo, grey-white, tan-white, xln, some off-white to translucent chert, sharp, very seldom stain on chert, grey-green splintery shales, no odor, no free oil.

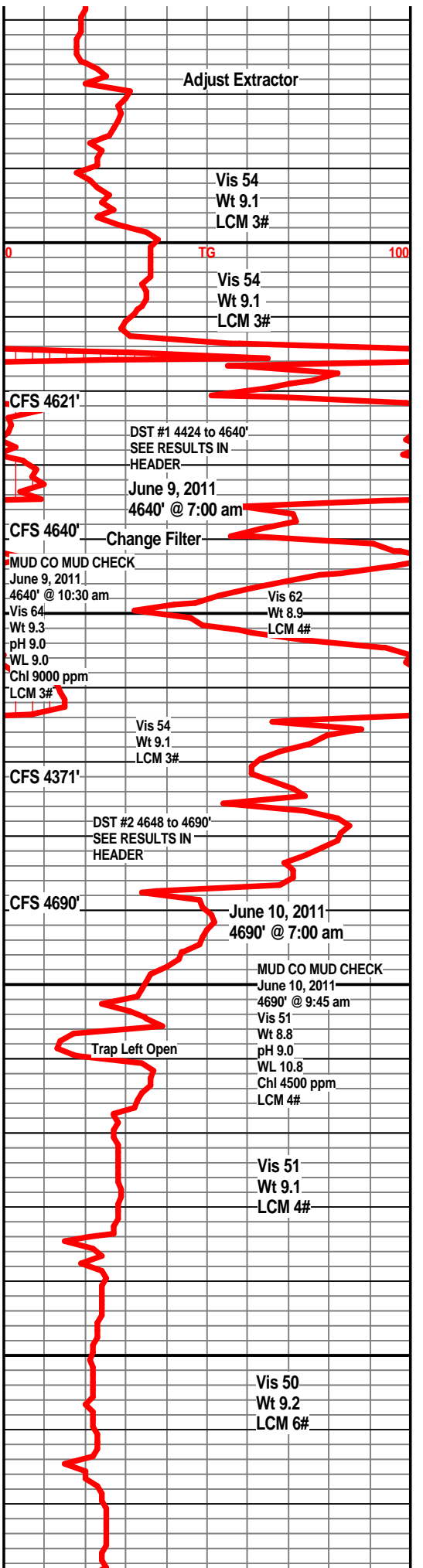
Dolo, grey-white, xln, dense, traces of chert, traces of grey-green shales, no odor, no shows.

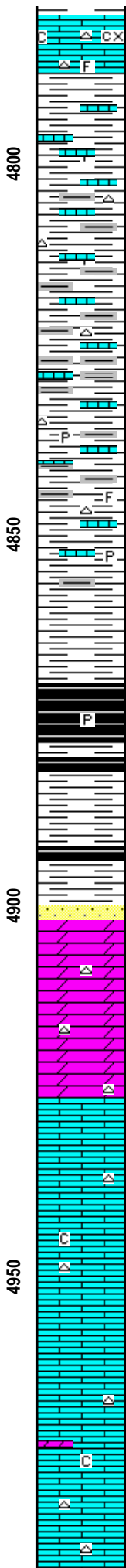
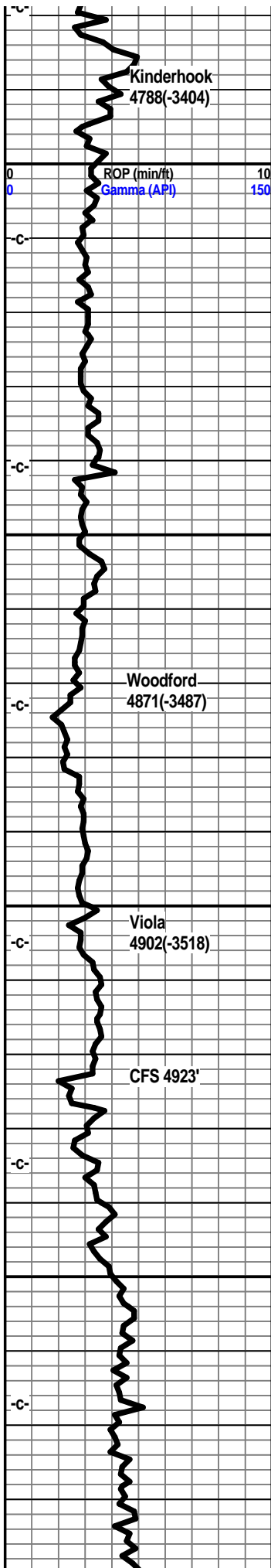
Dolo, tan-white, xln, dense, traces of tan chert, traces of light grey shale, no visible shows.

Dolo, tan, grey-white, xln dense, traces of white chert, some grey-green shales.

Dolo, grey-white, xln, dense, white chert, grey-green shales.

Dolo, grey-white, xln, dense, traces of white to trans chert, trace grey and green shales.





Limestone, cream-white to tan, fxln, foss in part, subchalky, trace of off-white chert.

Shale, pale green, traces of pyrite.

Shale, grey-green, abundant limestone, cream to tan, fxln, dense, traces of imbedded pyrite, traces of off-white chert with slight staining.

Shale, grey-green, abundant limestone, tan-white, fxln, dense, traces of glauconite, some off-white chert.

Shale, grey, abundant limestone, tan-white, xln, traces of pyrite, traces of tan-white cherts.

Shale, grey, abundant limestone, grey-white, tan, fxln, traces of pyrite, slightly foss., some scattered glauconite.

Shale, grey-green, splintery.

Shale, grey-black, pyritic, slightly carb.

Shale, grey, dark grey-black, carb, pyritic.

Shale, dark grey, coffee brown, pyritic.

Sandstone, clear to grey white, poorly sorted, sa to sr, gil, some shale inclusions, most well cemented, few friable, faint odor, slight show of oil under uv, scattered show, traces of pyrite.

Dolo, grey-white, xln, traces of off-white chert.

Dolo, grey-white, xln, traces of chert.

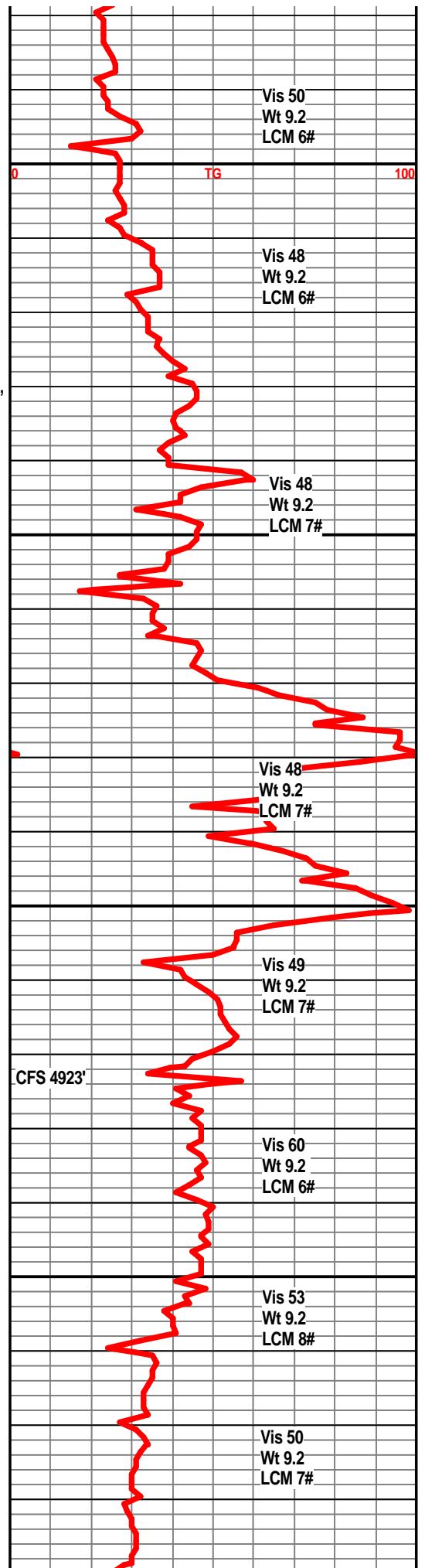
Dolo, light grey, xln, traces of white chert.

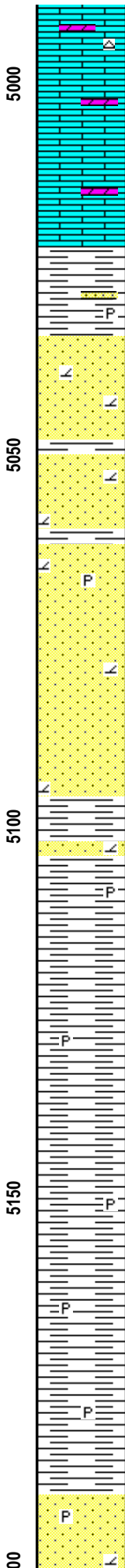
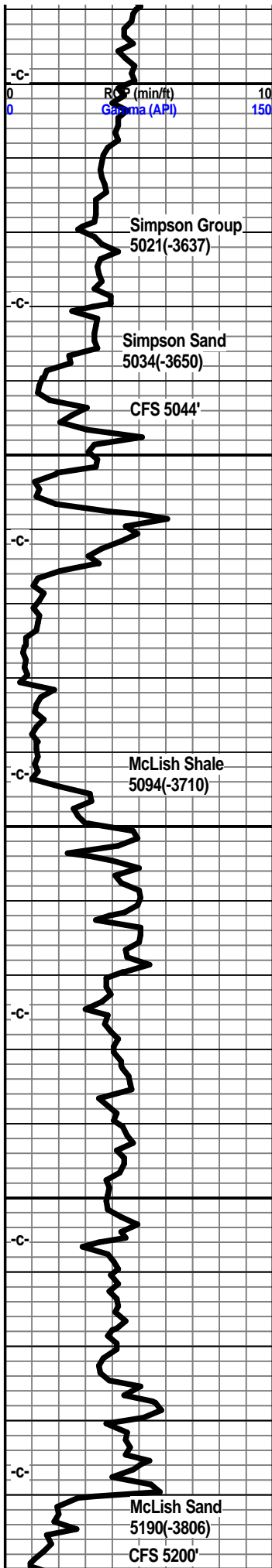
Limestone, cream-white to white, xln, traces of xln porosity, off-white chert, subchalky in part, questionable scattered staining.

Limestone, off-white, tan, xln, dense, traces of tan chert.

Limestone, off-white, tan-white, xln, dense, tan cherts.

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





Limestone, tan-white, fxln, dense, tan sharp chert, slightly dolo in part.

Limestone, tan-white, tan, fxln, dense, dolo, tan sharp cherts.

Limestone, tan-white, fxln, dense, tan sharp cherts, slightly dolomitic.

Shale, dark green, firm, waxey, trace of sand clusters.

Sandstone, clear to white, SA to SR, friable in part, dolo in part, glauc, traces of light stain, no show free oil, no odor, no kick

Sandstone, clear to white, SA to SR, fair sorting, friable in part, traces of glauc, trace of pyrite, some green shales, some well cemented, dolo streaks. no visible shows, questionable light stain.

Sandstone, clear to frosted white, SA to SR, friable, good sorting, clean, some glauc, traces of pyrite, traces of green firm shales, no visible shows, no odor, no fluor.

Sandstone, clear to white, some tanish-white, SA to SR friable in part, friable, fair sorting, glauc, some gil, no visible shows, no odr, no fluor.

Shale, dark green, firm, waxey, traces of sand clusters imbedded, trace pyrite.

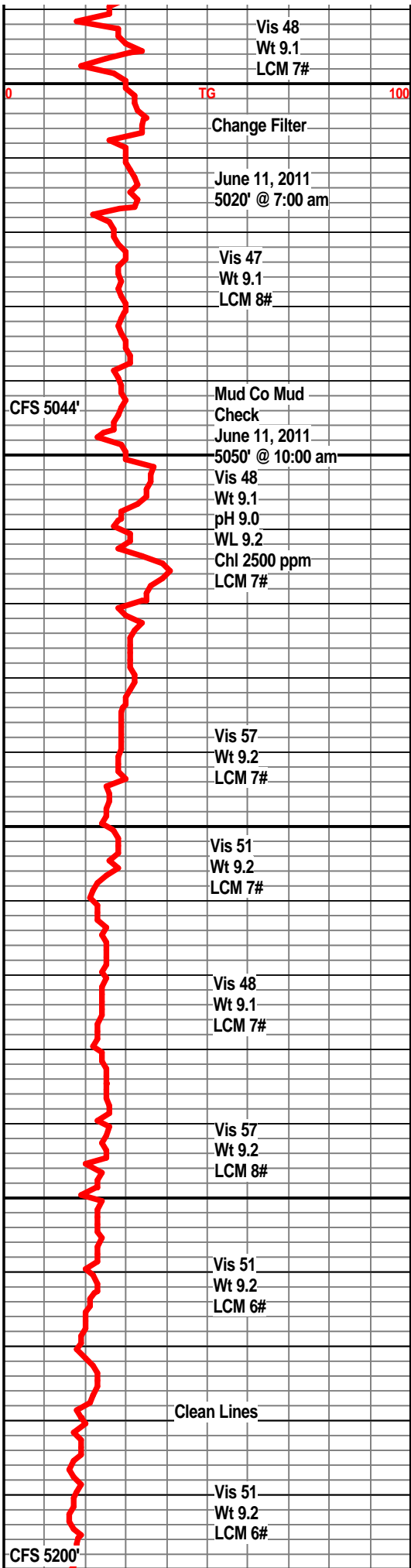
Shale, dark green, firm, traces of pyrite, few scattered sand clusters.

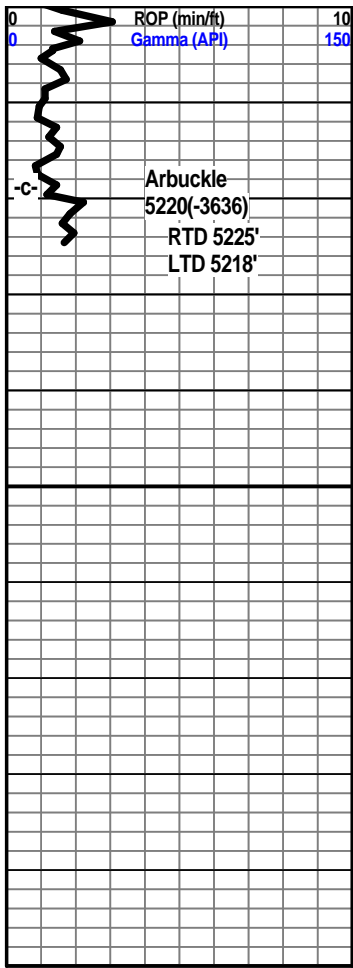
Shale, dark green, firm, traces of pyrite inclusions.

Shale, dark green, firm, waxey, pyrite.

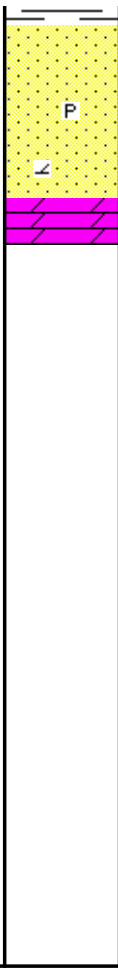
Shale, dark green, green, firm, traces of pyrite inclusions.

Sandstone, clear to frsted white, SA to SR, Friable, fair sorting, traces of glauc, some gil, dolo in part, n odor, no visible shows, traces of





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5250
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pyrite.

Sandstone, clear to white, SA to SR, friable, some well cemented, fair sorting, trace glauc, trace pryite, dolomitic in part.

Dolomite, tan-white, xln, succ, dull fluor., no visible shows, no odor.

