

# MUD LOG

## WellSight Systems

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

Well Name: Cutter KGS #1  
 Location: S/2 S/2 S/2 NE, Sec. 1-31S-35W  
 License Number: 15-189-22781  
 Spud Date: 8/1/2012  
 Surface Coordinates: Longitude: -101.0722814  
 Latitude: 37.3810169  
 Region: Mid-Con  
 Drilling Completed:  
 Bottom Hole Coordinates:  
 Ground Elevation (ft): 2926' K.B. Elevation (ft): 2939'  
 Logged Interval (ft): 0 To: Total Depth (ft):  
 Formation:  
 Type of Drilling Fluid: Chemical (Bentonite) Mud

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

### OPERATOR

Company: Berexco LLC  
 Address: 2020 N. Bramblewood, Wichita, Kansas 67206

### GEOLOGIST





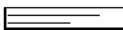
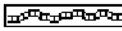




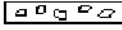


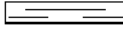

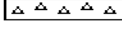




Name: Ganganath (G) Koralegedara, Troy Hommertzheim  
 Company: Berexco LLC  
 Address: 2020 N. Bramblewood, Wichita, KS 67206

### Cores






















### DSTs

### Comments

### ROCK TYPES

 Anhy	 Clyst	 Gyp	 Mrlst	 Shgy
 Bent	 Coal	 Igne	 Salt	 Slstst
 Brec	 Congl	 Lmst	 Shale	 Ss
 Cht	 Dol	 Meta	 Shcol	 Till

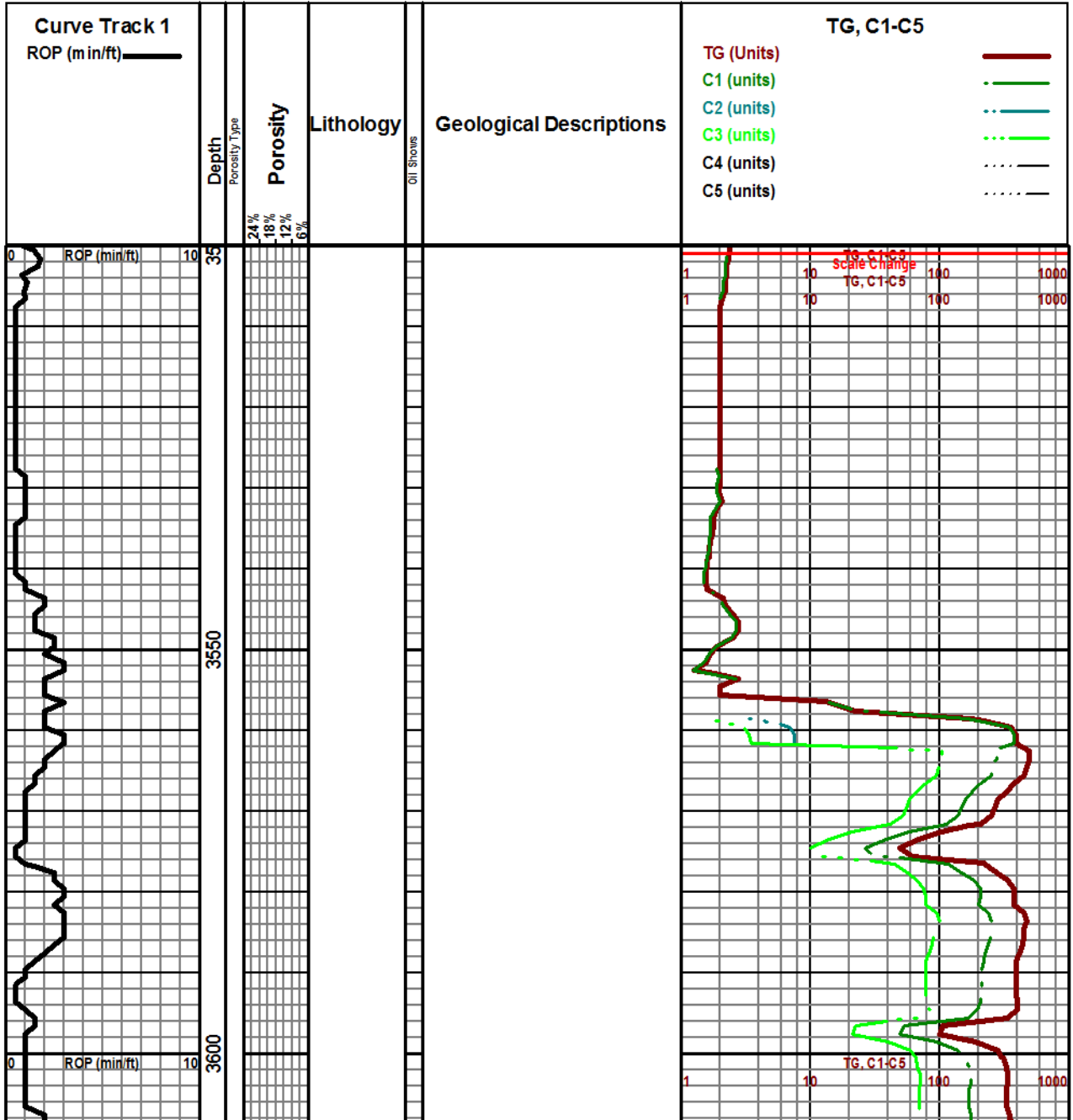
### ACCESSORIES

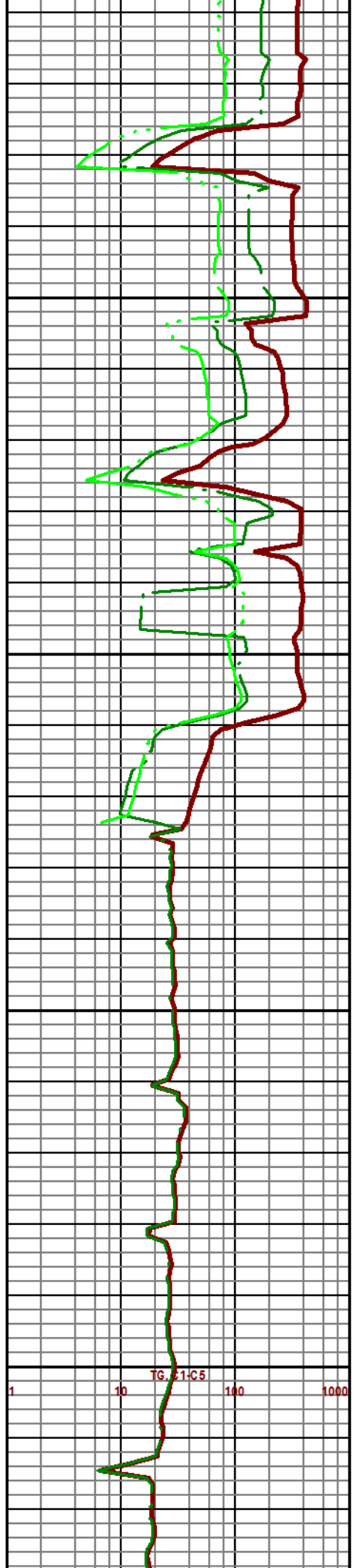
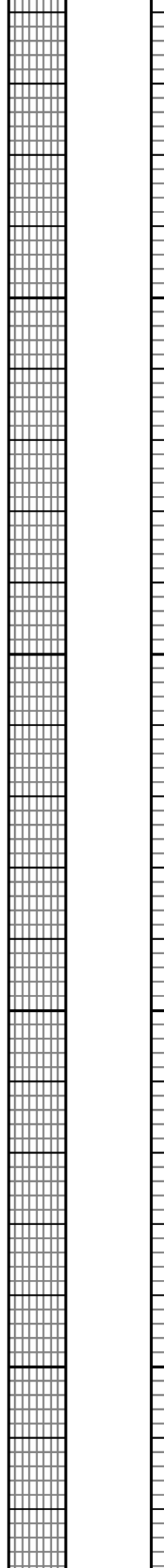
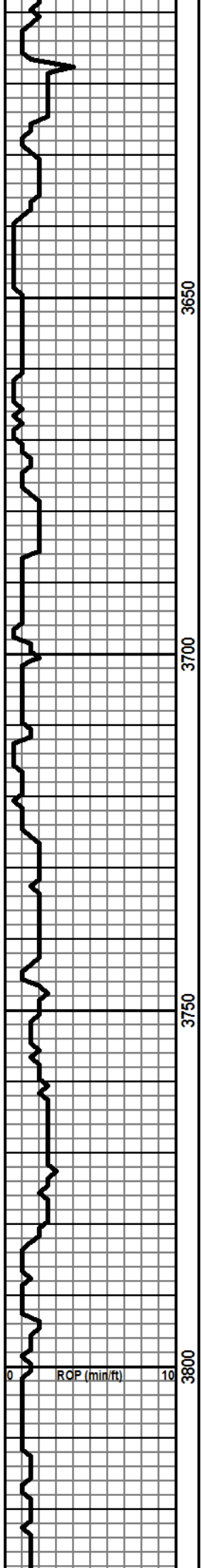
<b>MINERAL</b>	 Gyp	<b>FOSSIL</b>	 Ostra
 Anhy	 Hvymin	 Algae	 Pelec
 Arggrn	 Kaol	 Amph	 Pellet
 Arg	 Marl	 Belm	 Pisolite
 Bent	 Minxl	 Pisclst	 Plant
			 Sltstrg
			 Ssstrg
			<b>TEXTURE</b>
			 Boundet

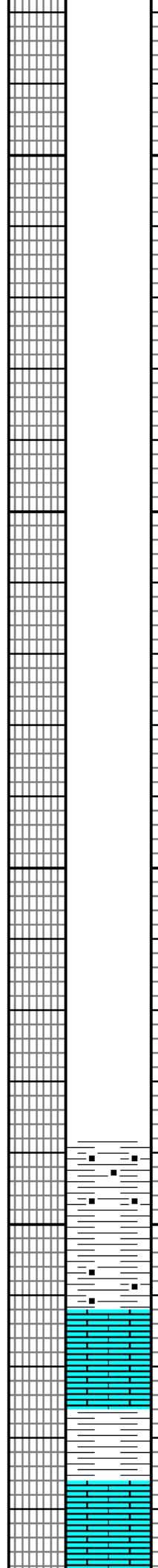
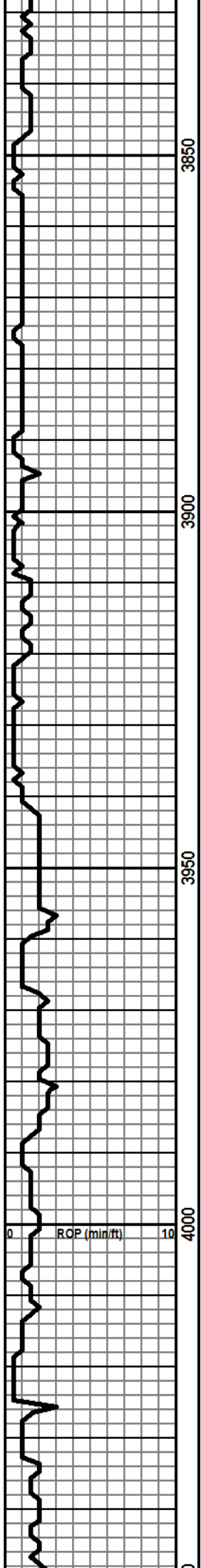
Bit	Nodule	Brach	Plant	Bouldst
Brecfrag	Phos	Bryozoa	Strom	Chalky
Calc	Pyr	Cephal	<b>STRINGER</b>	Cryxln
Carb	Salt	Coral	Anhy	Earthy
Chtdk	Sandy	Crin	Arg	Finexln
Chtlt	Silt	Echin	Bent	Grainst
Dol	Sil	Fish	Coal	Lithogr
Feldspar	Sulphur	Foram	Dol	Microxln
Ferrpel	Tuff	Fossil	Gyp	Mudst
Ferr		Gastro	Ls	Packst
Glau		Oolite	Mrst	Wackest

### OTHER SYMBOLS

<b>POROSITY</b>	Vuggy	<b>ROUNDING</b>	Spotted	<b>EVENT</b>
Earthy		Rounded	Ques	Rft
Fenest	<b>SORTING</b>	Subrnd	Dead	Sidewall
Fracture	Well	Subang		
Inter	Moderate	Angular	<b>INTERVAL</b>	
Moldic	Poor		Core	
Organic		<b>OIL SHOW</b>	Dst	
Pinpoint		Even		





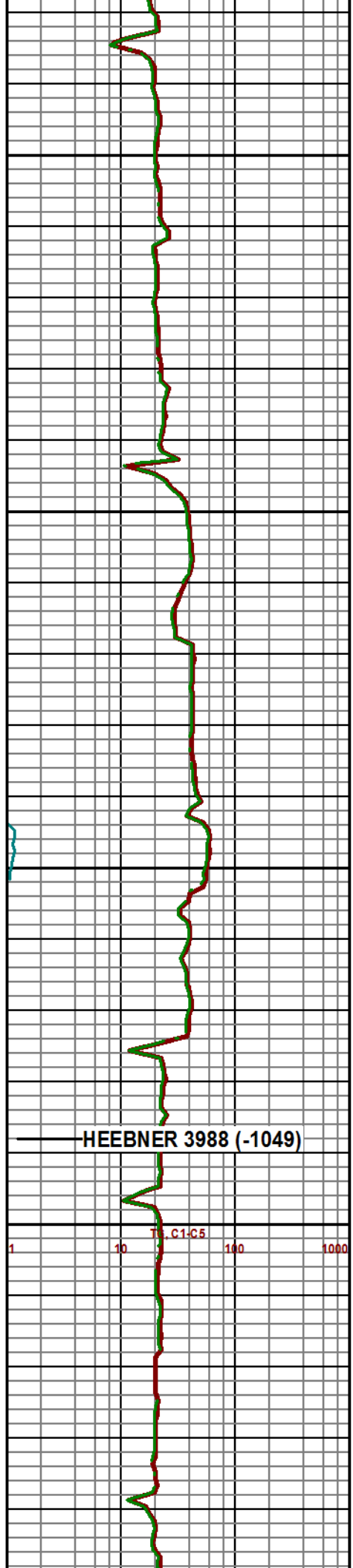


SH blk, frm, fiss, v carb

LS gy brn, v hd, dns, crpxln, ns

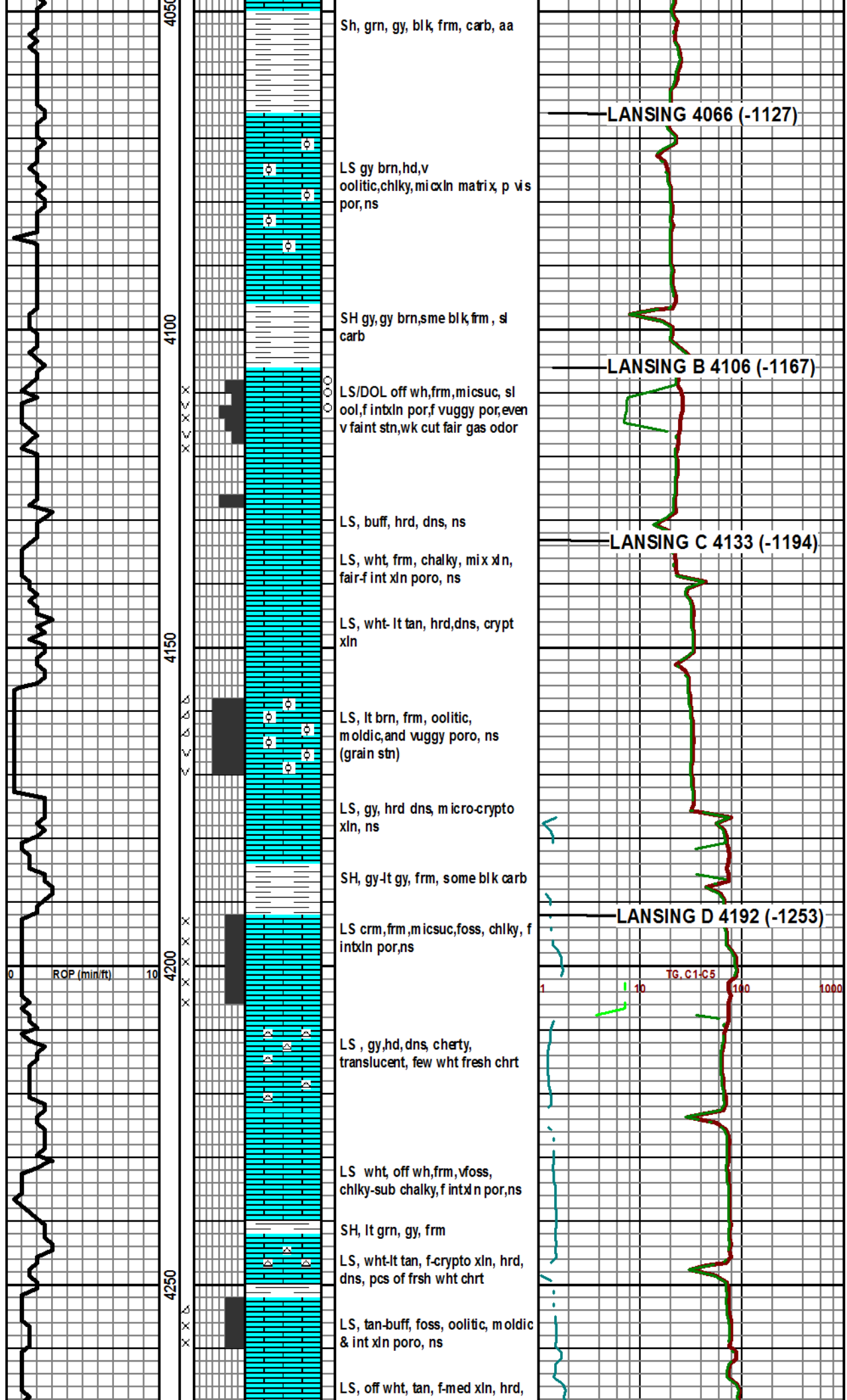
SH blk, frm, carb

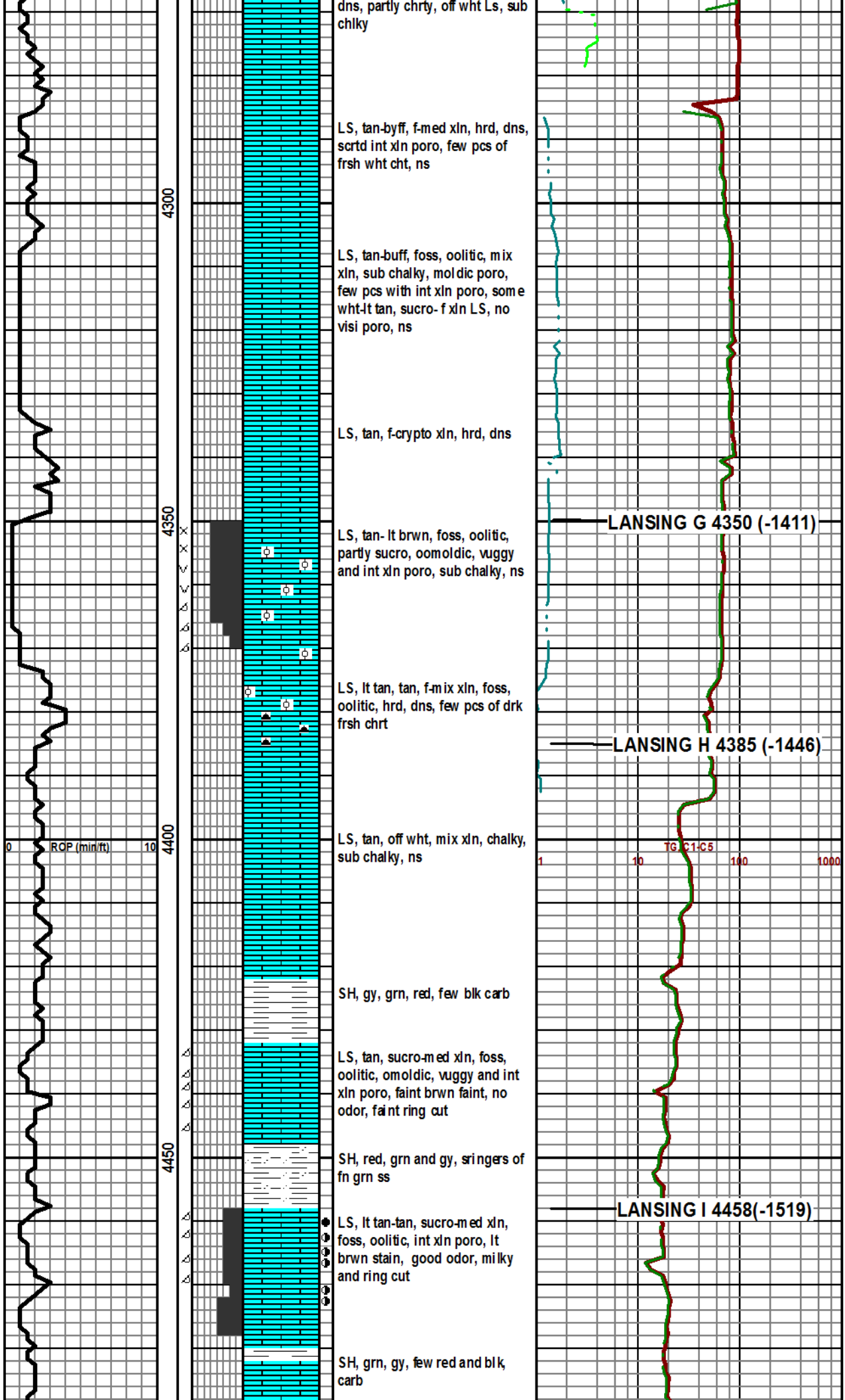
LS, lt gy - gy brn, v hd, dns, crpxln, ns

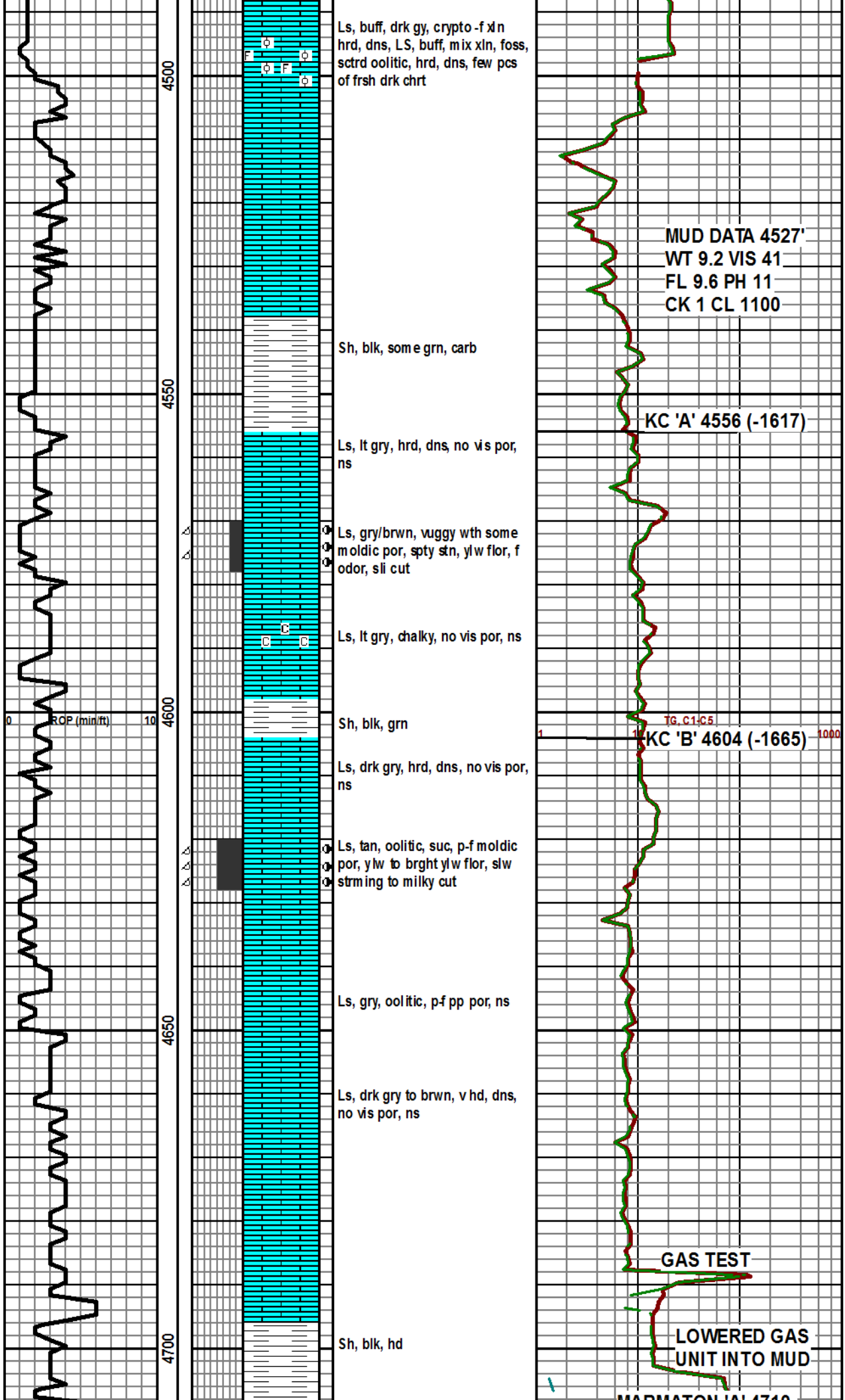


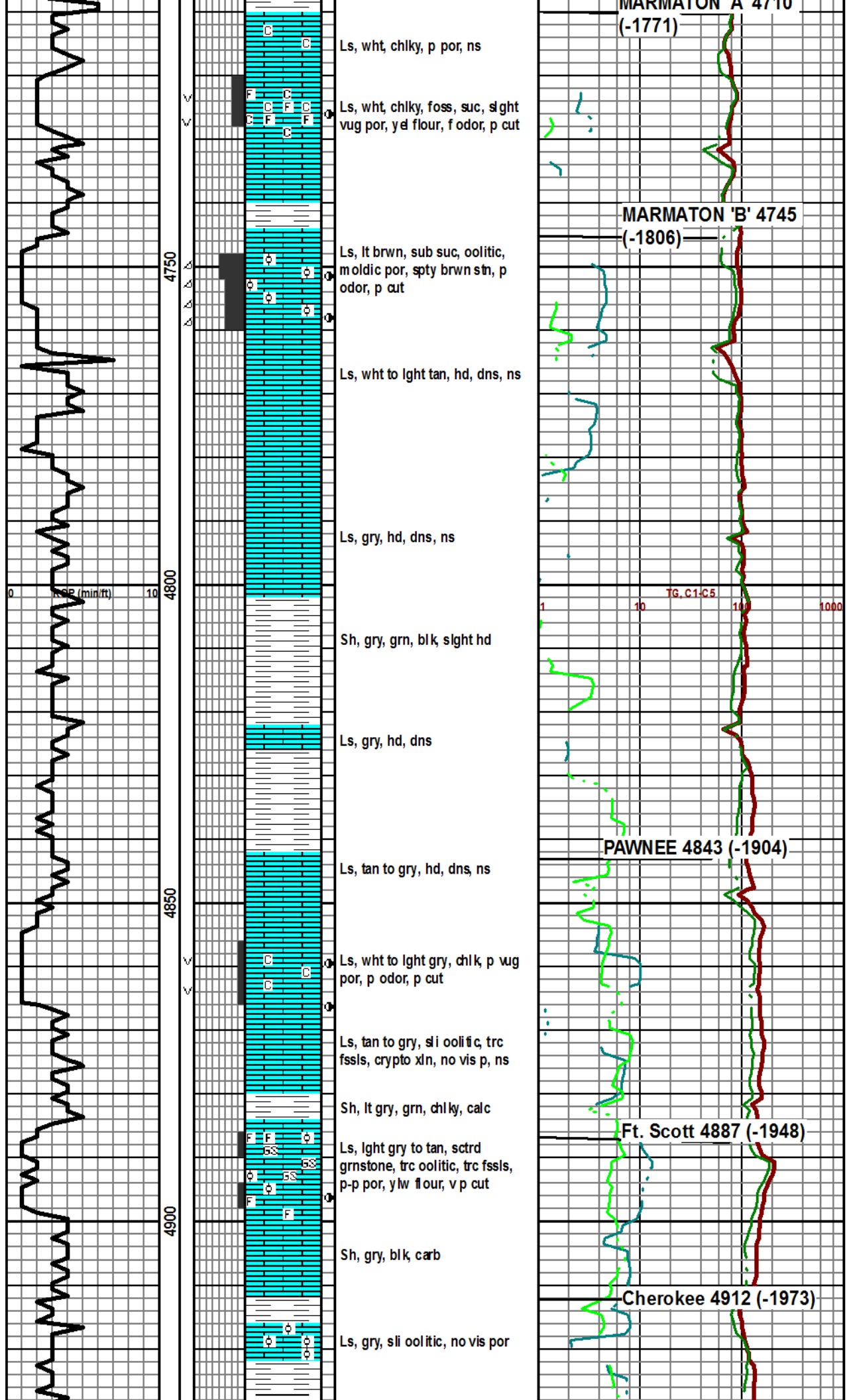
HEEBNER 3988 (-1049)

C1-C5

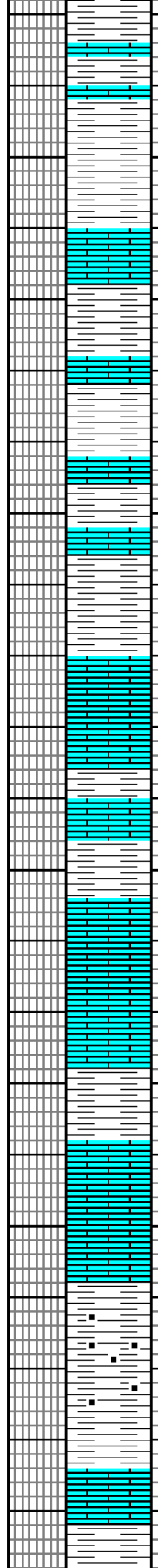
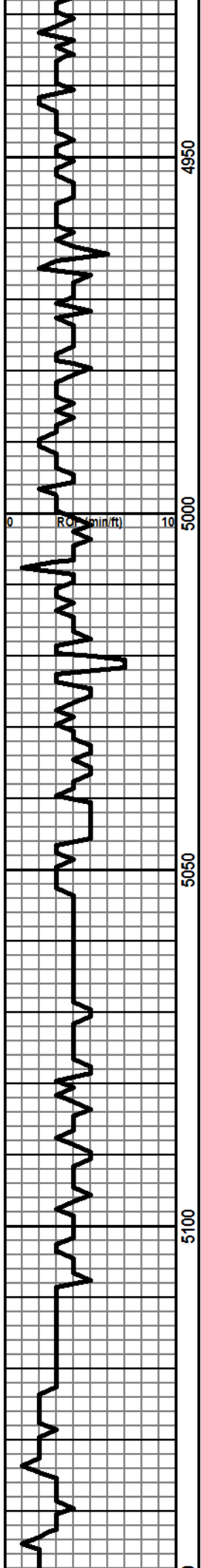




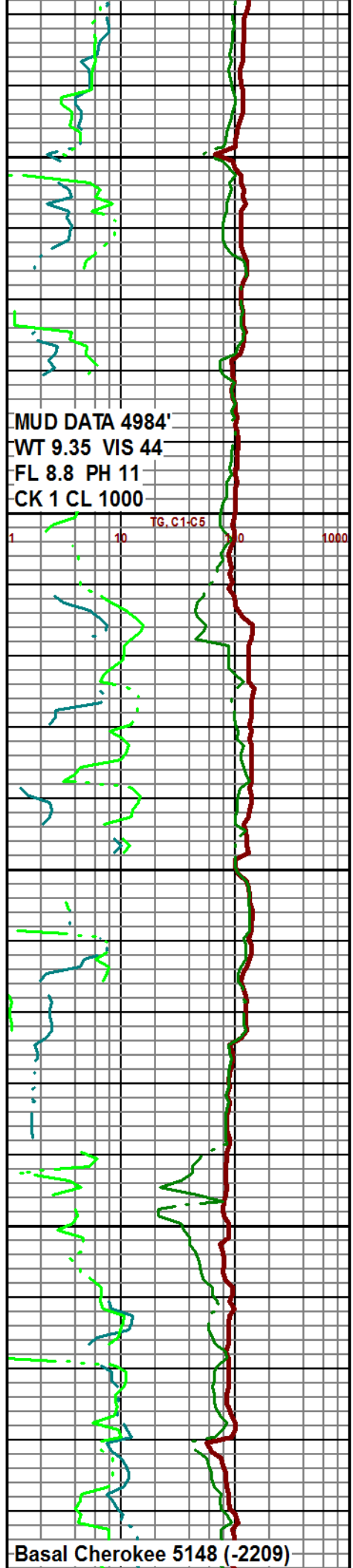








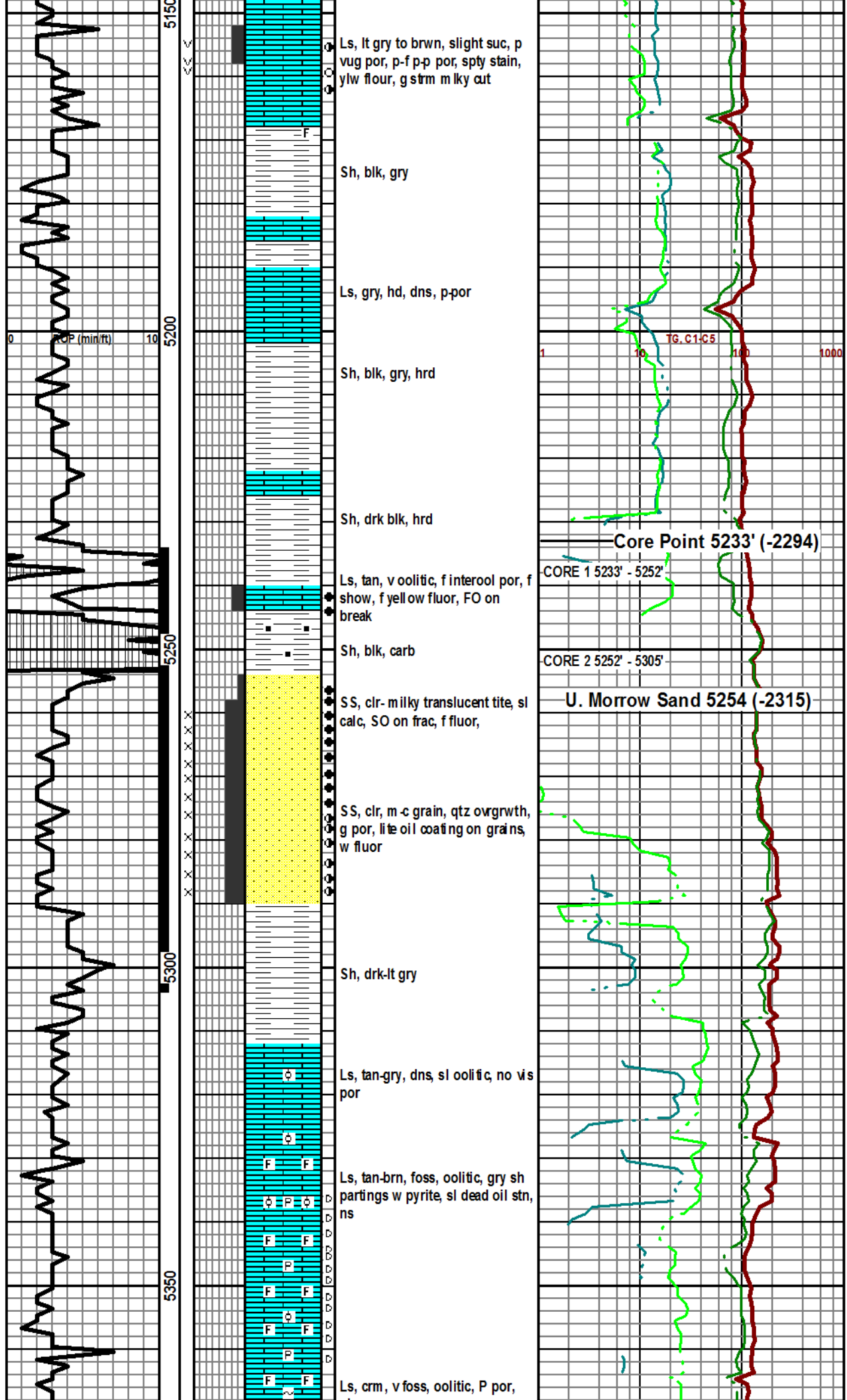
Sh, blk, carb  
 Ls, gry, hrd, dns  
 Sh, gry, blk, carb  
 Sh, drk gry, blk  
 Ls, lt gry, hd, crpxln, p por, ns  
 Ls, tan to lt brwn, hd, mcro xln, slight chky, p-por  
 Sh, blk, carb  
 Same as above  
 Sh, blk, hrd w/ some ls

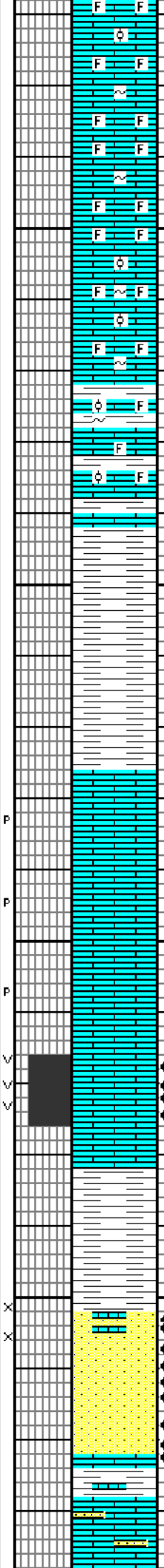
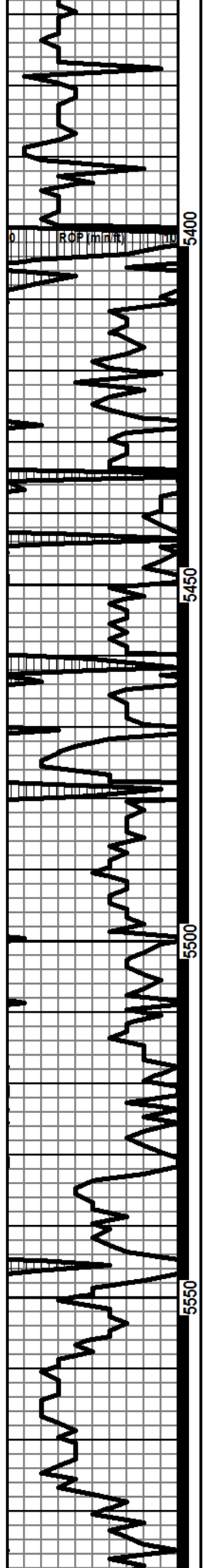


MUD DATA 4984'  
 WT 9.35 VIS 44  
 FL 8.8 PH 11  
 CK 1 CL 1000

TG, C1-C5

Basal Cherokee 5148 (-2209)





glau, ns

Ls, drk gry, v foss, oolitic, sl glau, no vis por, ns

Ls, crm-wht, v oolitic grn stone, v foss, recxl calcite, interbedded w/sh, drk, carb, calc.

Sh, aa

Ls, lt-drk gry, dns, v hrd, sl shly, crypxln, sme pp por, ns

Ls, gry, dns, hrd, crpxln, g vuggy por, SFO

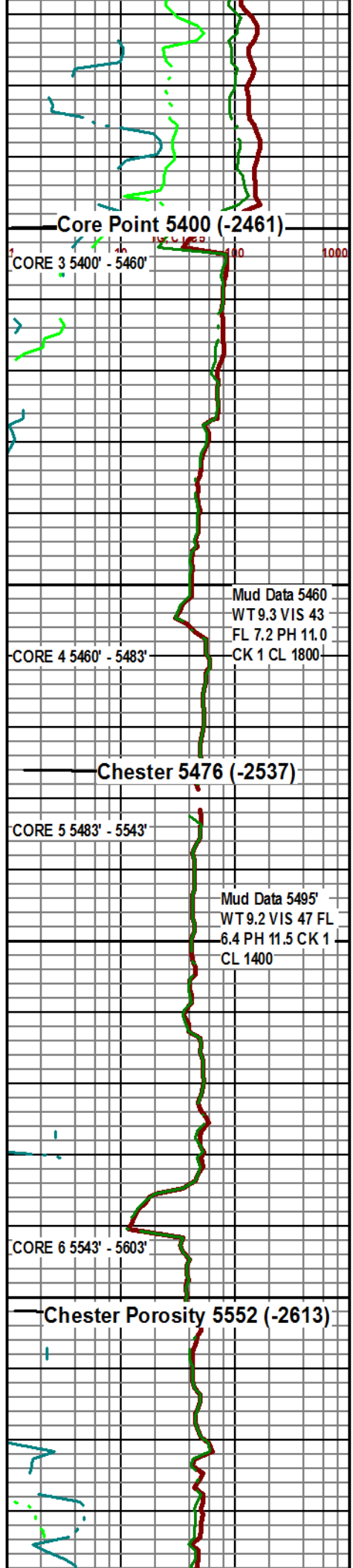
Sh, lt-v drk gry, soft, fiss, calc

SS, clr-lt brn, f grn, dns, hrd, f grn, f intrgrnlr por, sply brn stn, yellow fluor, strng odor, g cut, GSFO

SS aa, sl shly, w/o ls

Sh. lmy, lt gry, fiss, hrd

Ls, sdy, wh-tan, frm, sme p-p por, sply brn-blk stn, yel fluor, f



Core Point 5400 (-2461)

CORE 3 5400' - 5460'

CORE 4 5460' - 5483'

Chester 5476 (-2537)

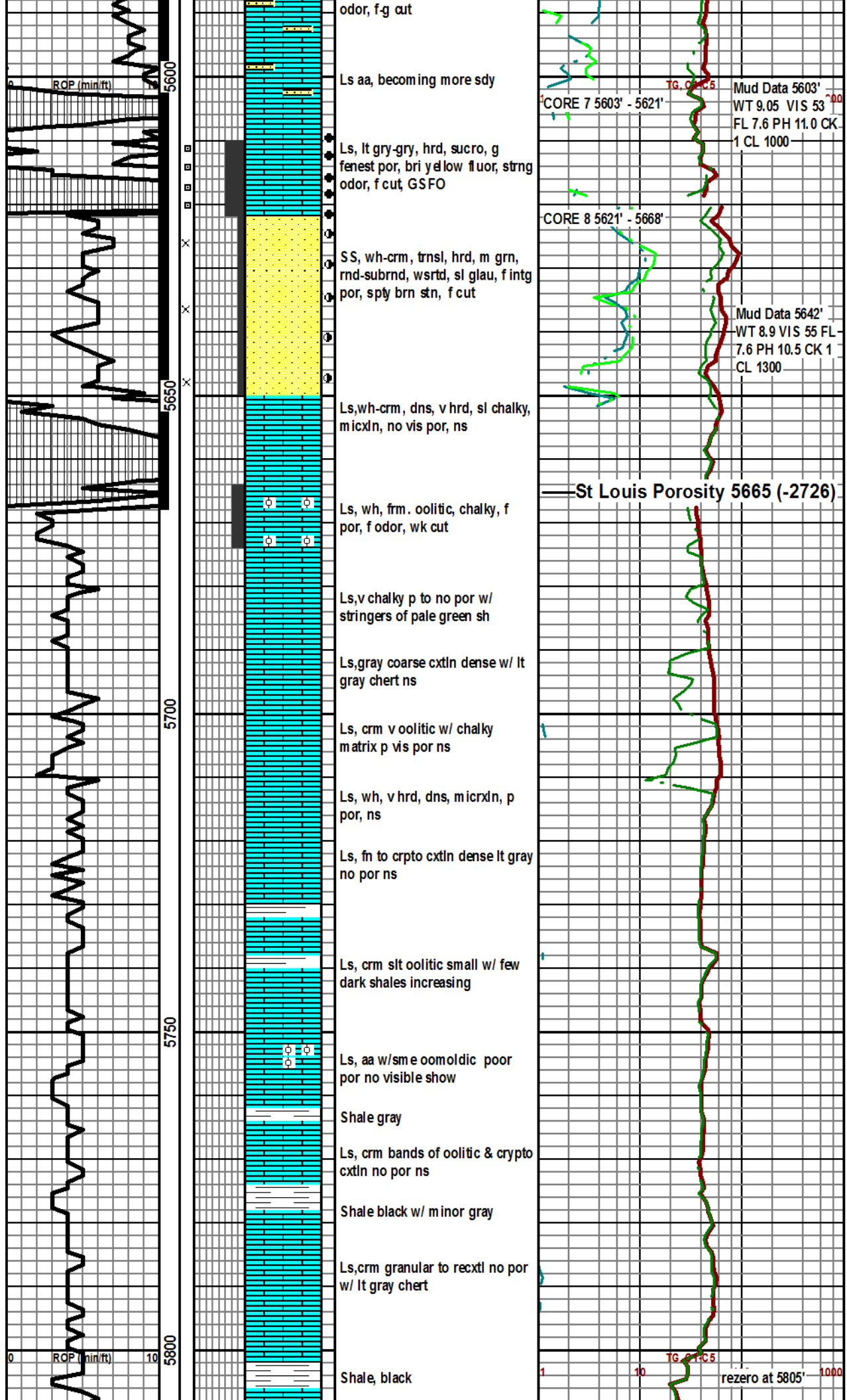
CORE 5 5483' - 5543'

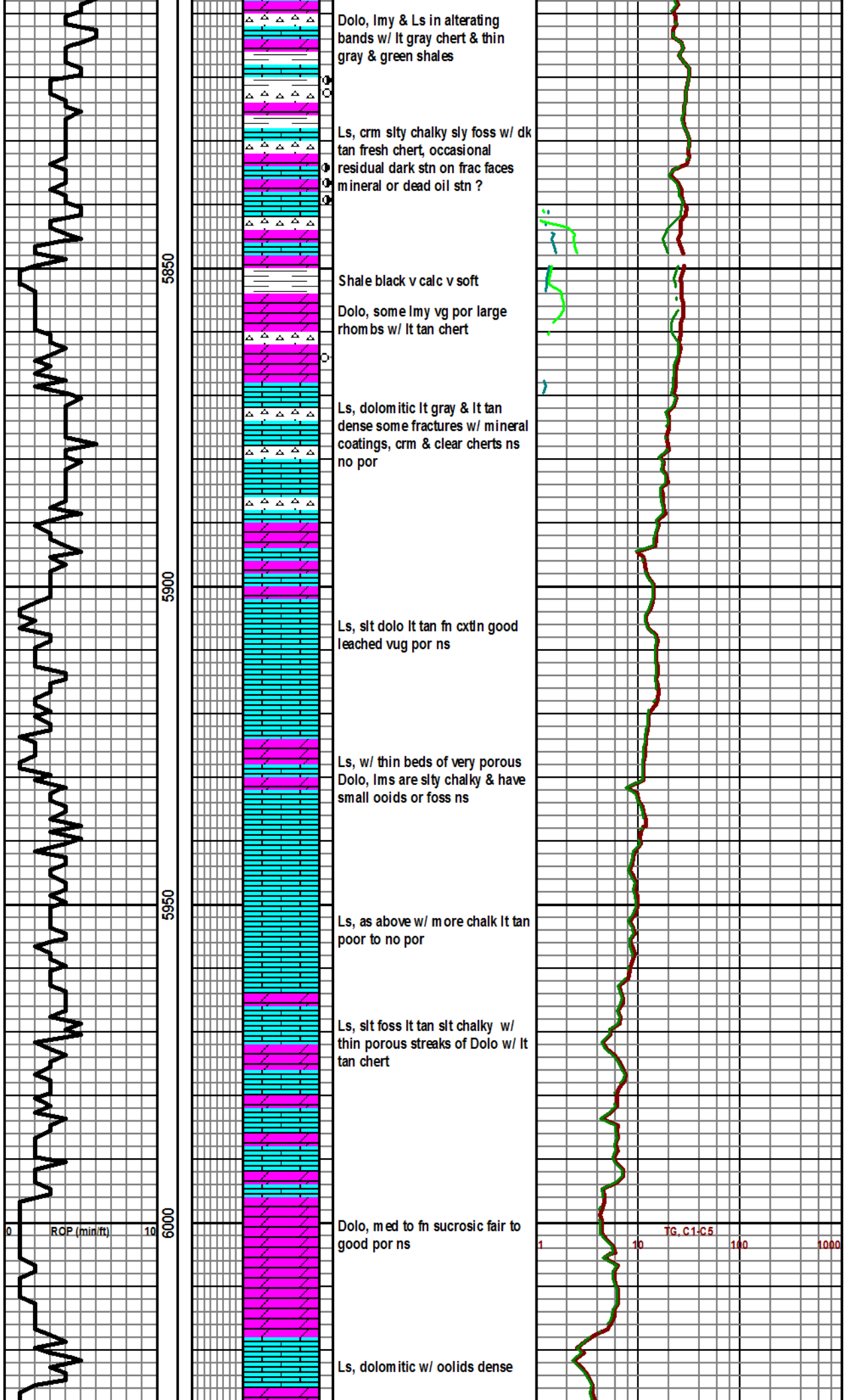
CORE 6 5543' - 5603'

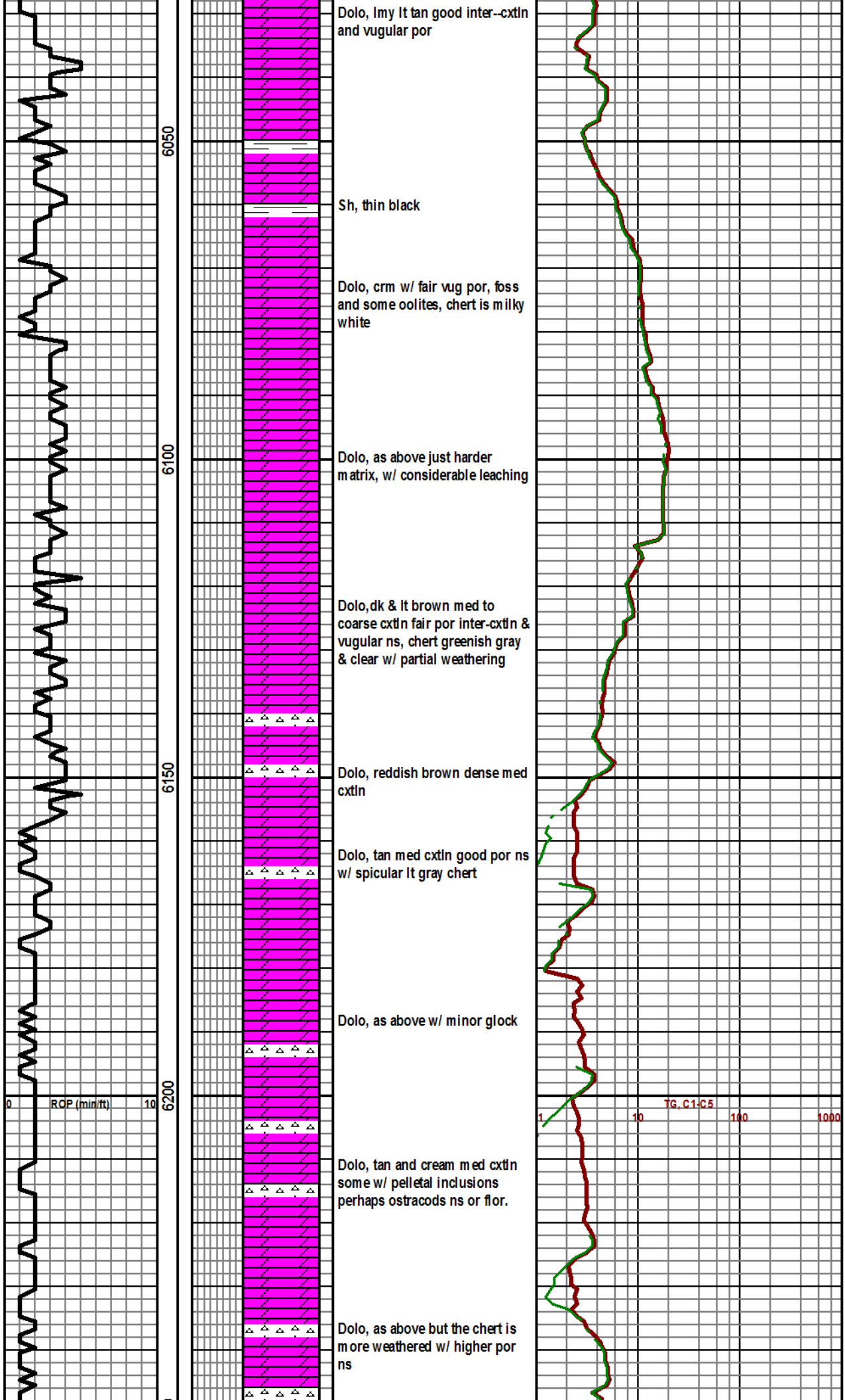
Chester Porosity 5552 (-2613)

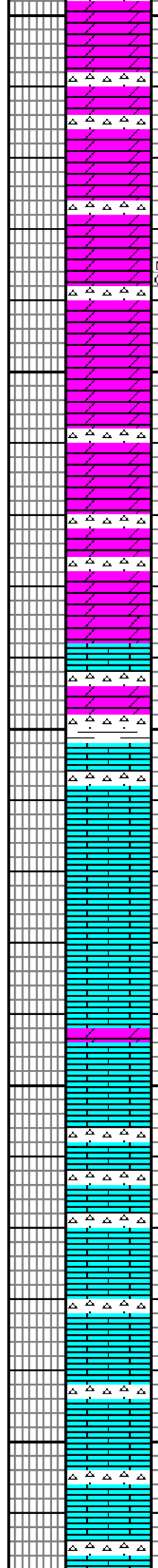
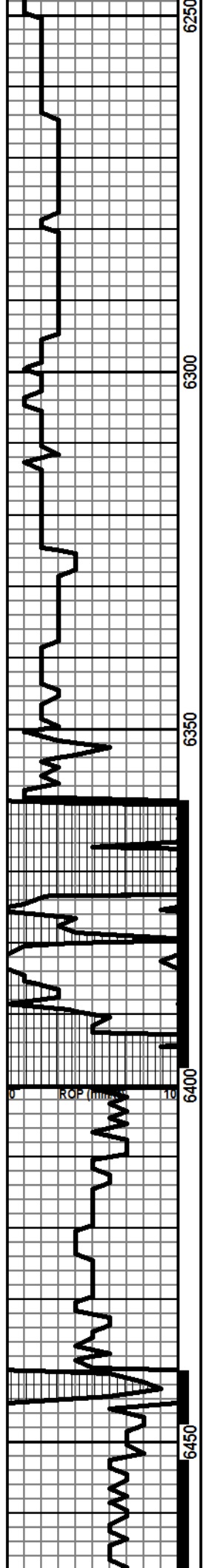
Mud Data 5460  
WT 9.3 VIS 43  
FL 7.2 PH 11.0  
CK 1 CL 1800

Mud Data 5495'  
WT 9.2 VIS 47 FL  
6.4 PH 11.5 CK 1  
CL 1400









Dolo, lt brown becoming more dense still glock w/ lt gray and brown spicular chert

Dolo, cream dense slightly fractured w/ show of dead asphaltic residue on some frac faces

Dolo, lt tan w/ weathered chert, fossil are more visible bryozoans ns no flor, excellent por in dolo & vugular chert

Dolo, & Chert having more of a greenish tint, some lt brown shale, also more vugular por ns

Dolo & Chert big por very tripolitic cherts increase in lt gray and green tint

Ls, gray slty dolo w/ large chert inclusion very dense minor amounts of pyrite

Ls, gray-green coarse cxtln, w/ minor pyrite, very few cherts, some large vugs filled w/ mineral calcite

Dolo, lmy very black w/ white calcite inclusions

Ls, dark greenish to black w/black chert, some very thin shale laminations in Ls

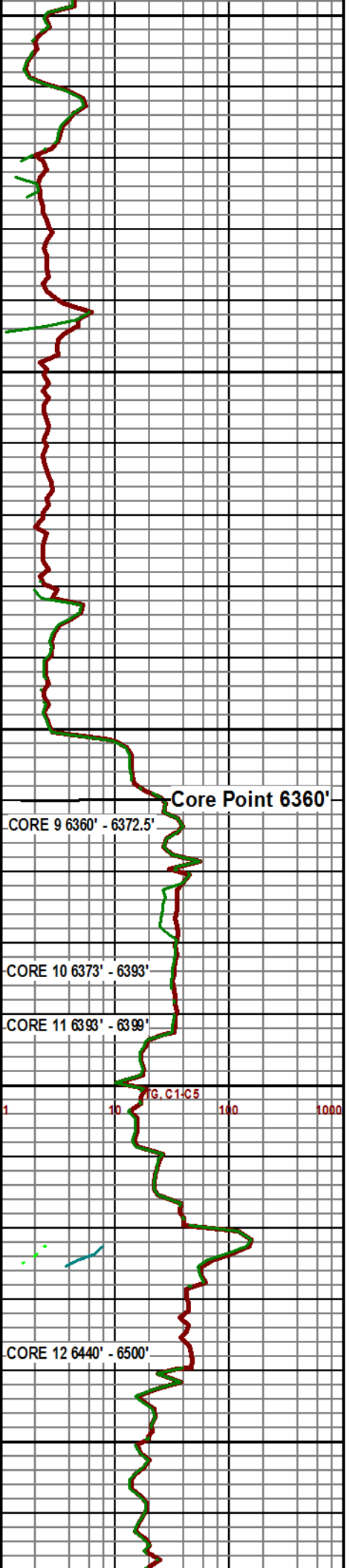
samples were taken in lost cir zone at 6410

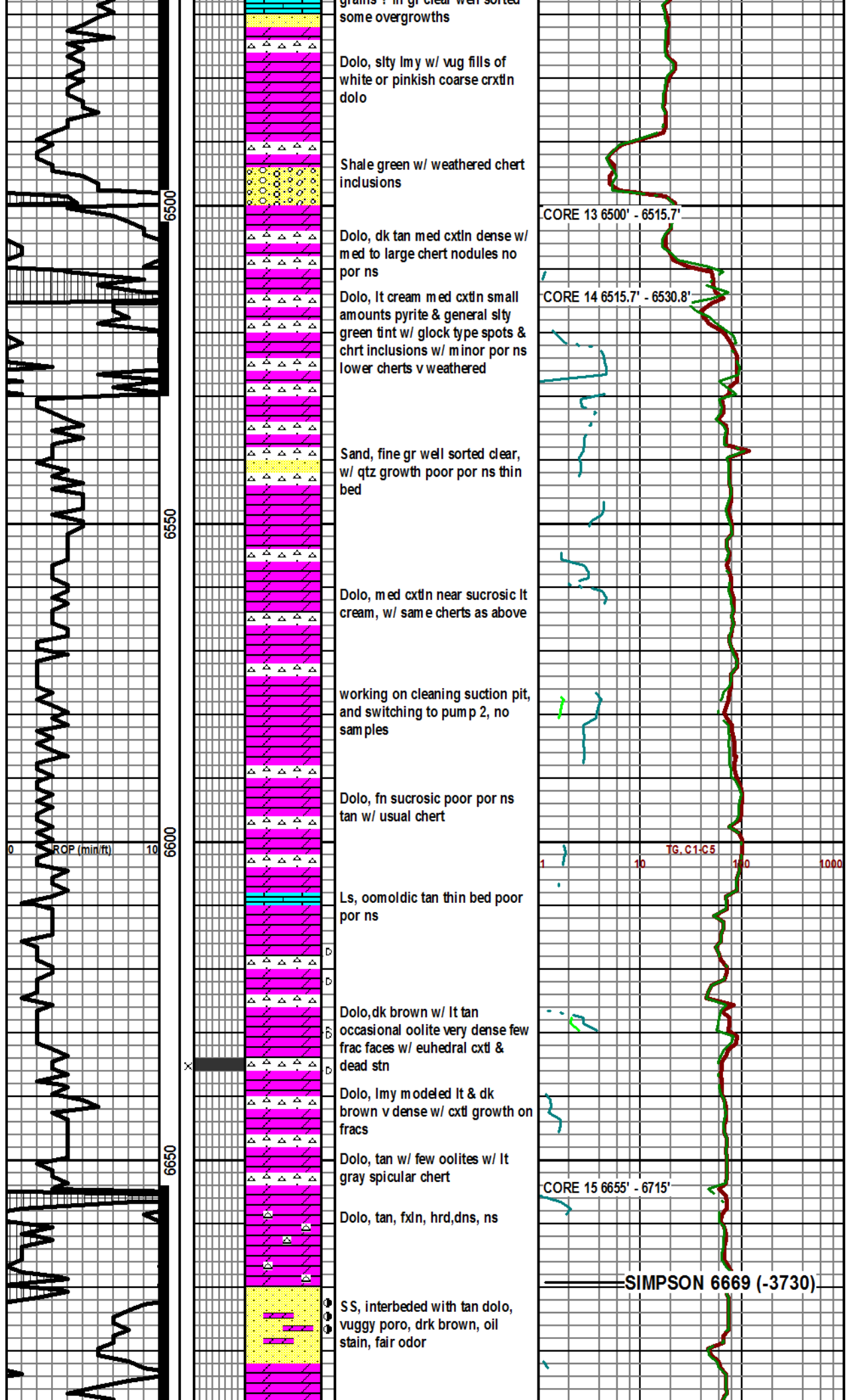
Ls, lt brown slit oolitic & few foss, cherts now lt gray slit pyritic, some stringers med cxtln dolo

Ls, tan to brown w/ alternating coarse to fn cxtln, oolitic and foss in part, poor vugular por ns

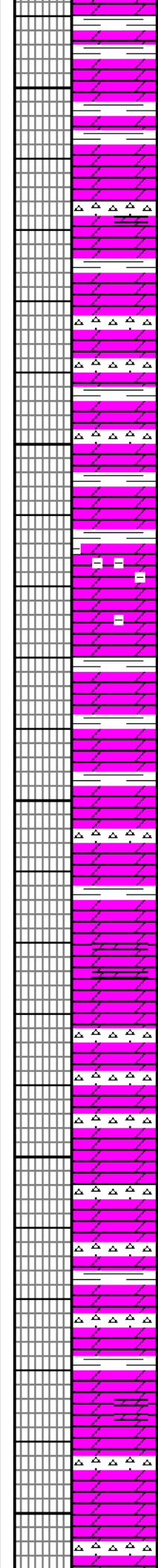
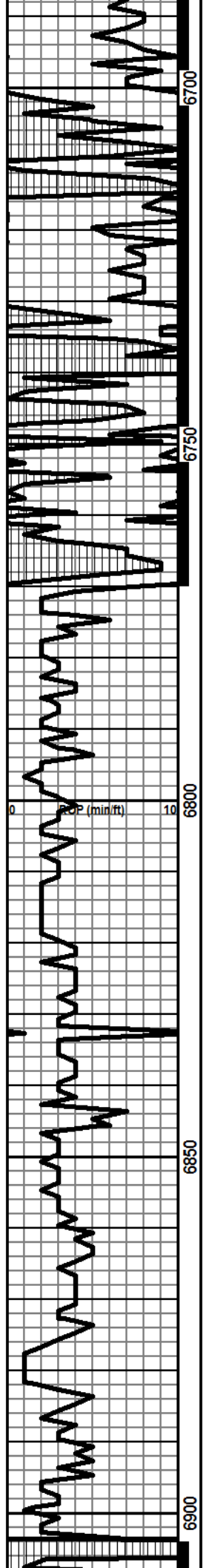
Ls, cream w/ small oolites fn to med cxtln, Highly oolitic and foss chert white, define dead oil stn in 5 to 10 % of sample

Sand, few clusters & loose grains 2 fn or clear well sorted









Dolo, buff, f-med xln, dns, vuggy poro, fresh white chert nodules, interbedded with grn sh, pyritic, bottom of the section tan-buff, suc-f xln hrd, dns dolo, chrt

Dolo, gry, dns, some suc to f xln, vugs in spts, cherty

Dolo, gry to wht, hrd, dns, f xln, v vgy, slight chert, coarse clear rhombic dolo crystals, interbed grn shale

Dolo, gry to wht, vf xln, more soft, argillaceous, some grn shl

Dolo, aa

Dolo, gry to wht with some having a red tint, hrd, dns, f-vf xln, sub sucrosic in spts, oolitic grains, coarse clear rhomb dolo crystals

Dolo, aa, more interbedded grn shale

Dolo, wht, hrd, dns, f xln, slit oolitic, vgy in spts, slit vf snd in parts

Dolo, lt gry to gry, hd, dns, vf xln, cherty, green to lt gry interbedded shales

Dolo, aa

Dolo, wht, f-vf xln, vuggy, slit oolitic in spts, slit chert in spts, grn interbedded shales

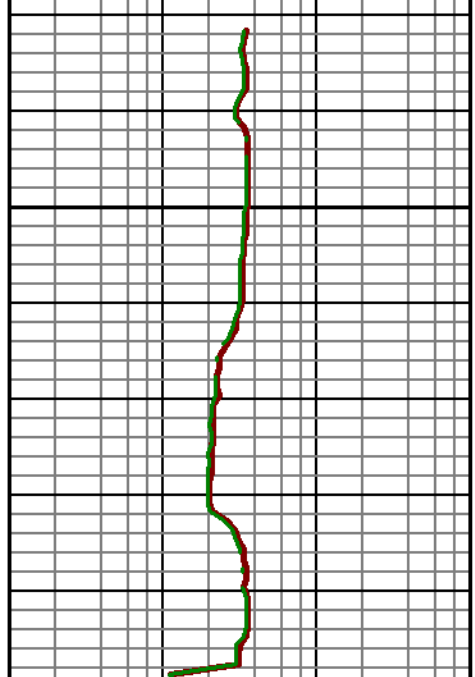
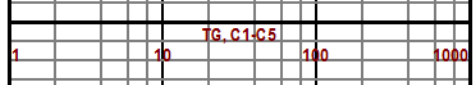
Dolo, aa

Dolo, drk gry, hrd, dns, vf xln, v

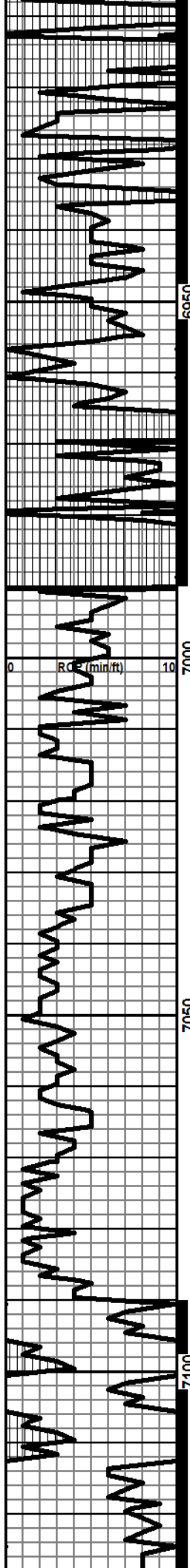
ARBUCKLE 6700 (-3761)

CORE 16 6715-6769.4

Core Jammed @ 6769, tried coring again and jammed, resumed conv. drilling



Core 18 6904'



6950

7000

7050

7100



Dolo, drk gry, hrd, dns, vf-xln, v vuggy, slt chrt, coarse dolo crystals

Dolo, lt gry, hrd, dns, f-xln, slt vuggy, interbedded grn shales

Dolo, lt gry, hrd dns, v vuggy in spts, slt chert, slt grn shales

Dolo, lt gry to wht, vf-xln, v hrd, v dns, chert nodules in spts

Dolo, lt to drk gry, hd, dns, f-vf xln, slt vuggy, lrg chrt nodules, slt grn shales

Dolo, aa

Dolo, lt gry to wht, v hrd, v dns, vf-xln, slt cherty, slt grn shls in spts

Dolo, lt gry, hrd, dns, f-vf xln, sub-suc in spts, grn shl, coarse rhombic dolo crystals

Dolo, aa with more wht grains

Dolo, wht, hrd, dns, f xln, sub suc in spts, vuggy, slt oolitic in spts, slt grn shl

Dolo, lt to drk gry, v hd, v dns, f-vf xln, vuggy, slt chert, interbed grn shale

Dolo, aa

Dolo, lt gry, hd, dns, f xln, cherty, slt grn shale

Dolo, lt gry to wht, hrd, f xln, interbedded grn shale

Dolo, aa, slt chert

Dolo, lt gry to gry to wht, hrd, sucro, sl vuggy, sl chert

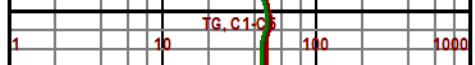
Dolo, tan to lt gry to wht, hrd, sucro, v vuggy, large vugs, sme v coarse clr dolo rhomb

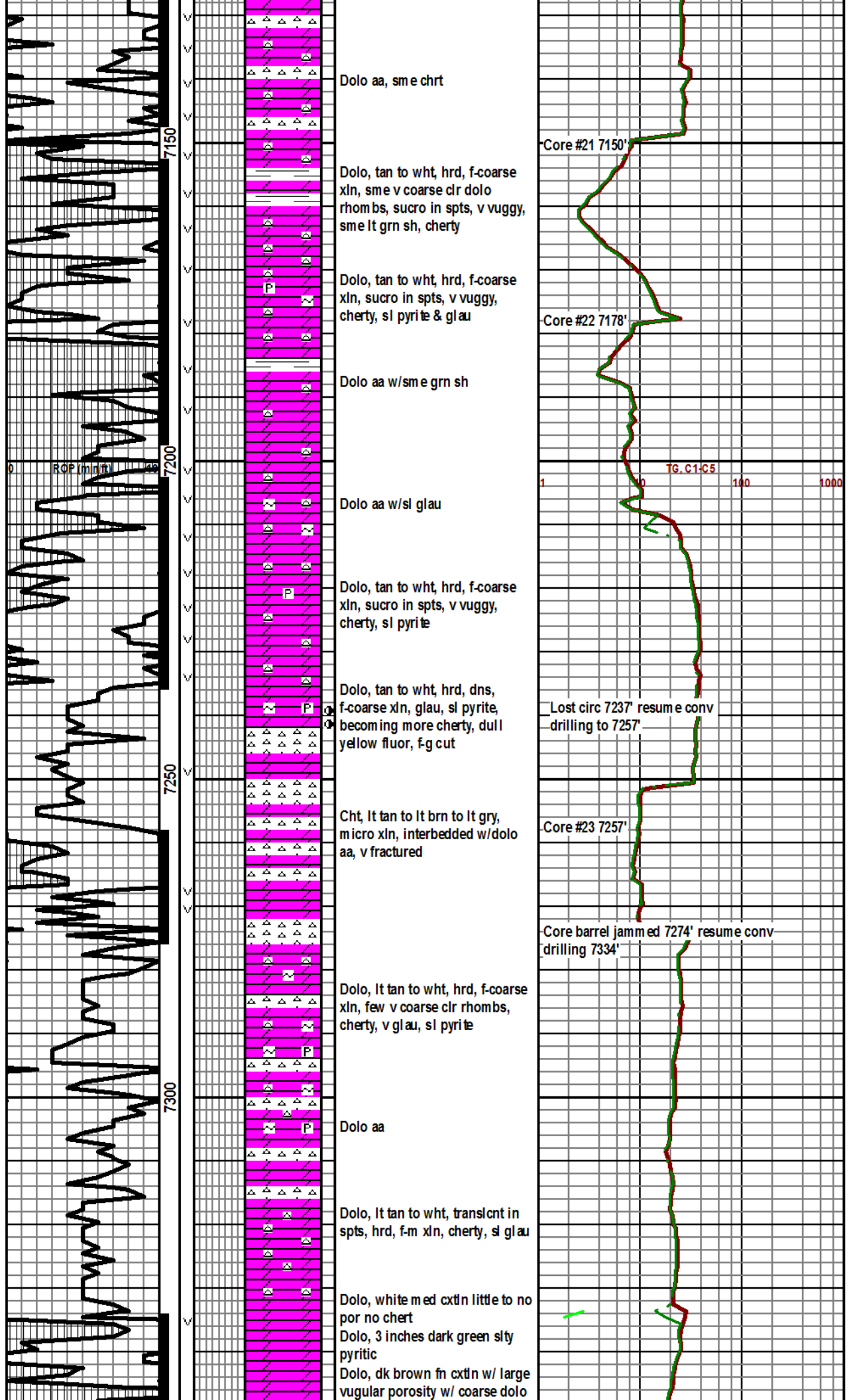
6936' Connection and fixed auto-driller

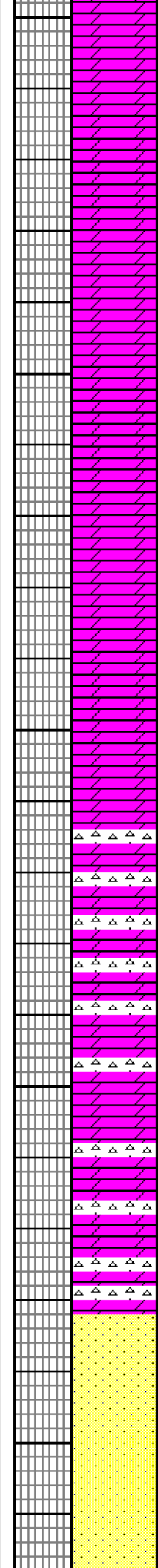
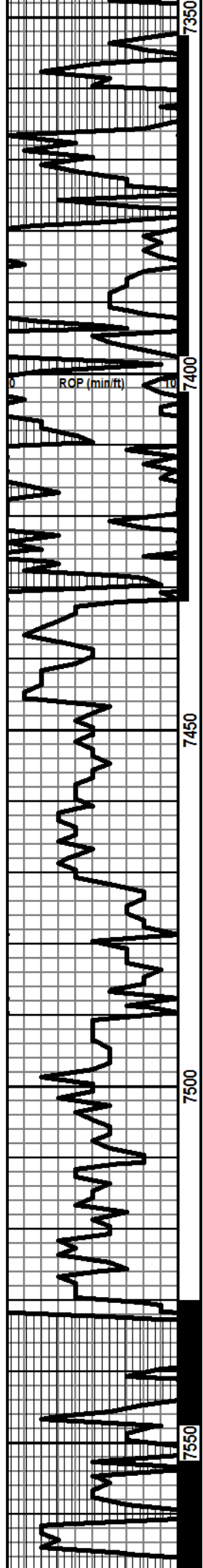
Core 19 6964' -6990'

Core jammed at 6990' resume conv drilling to 7090'

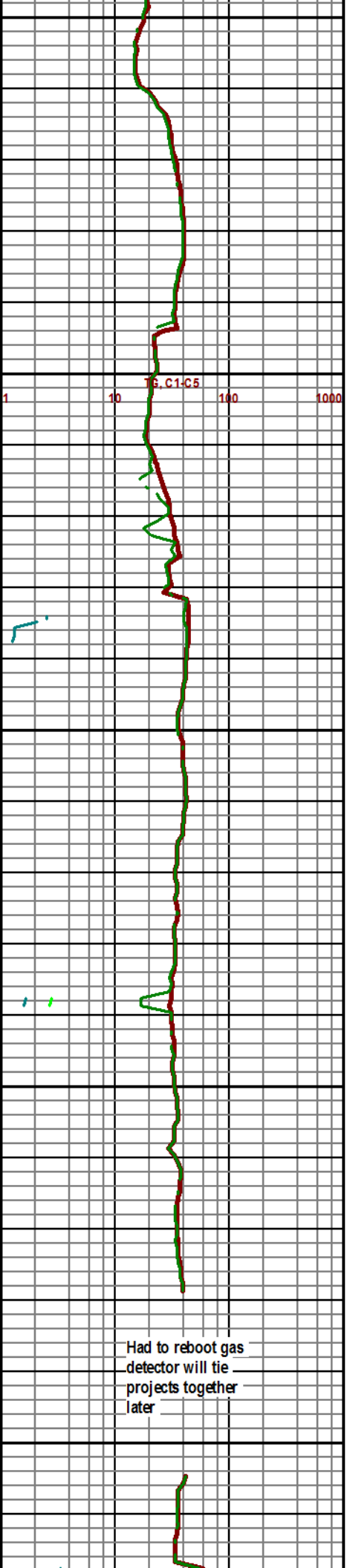
Core #20 7090'

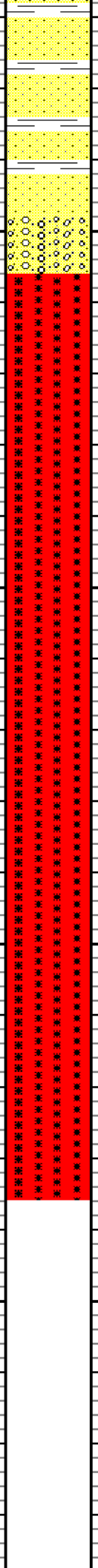
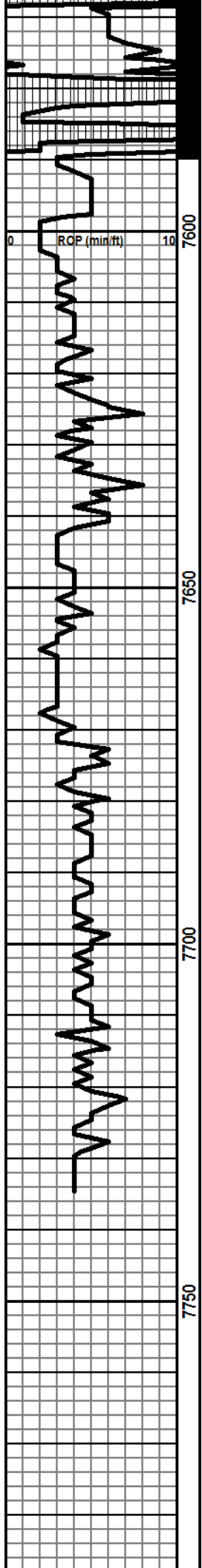






cxtls  
 Dolo, greenish-brown massive dense fn cxtln  
 Dolo, brown w/ baseball size vugs w/ euhedral dolo cxtls  
 Dolo, fn cxtln gr-brown as above few frac and vugs of all sizes partly filled w/ dolo cxtls, large one at 7405, few fracs w/ thin coating of green sh, causing core break points  
 Dolo, lt tan w/ large vugs & worm hole porosity partly coated w/ clear dolo rhombs, 30 degree incline fracs through out last 6 ft of core  
 Dolo, tan coarse cxtln w/ fair vug porosity minor pyrite  
 Dolo as above w/ white milky chert possible dead brittle oil residue?  
 Cir 30-60-90  
 Dolo, crypto cxtln w/m ore chert lt & dk gray  
 Cir 30  
 Dolo, as above w/ minor fracs partly filled w/dolo rombs  
 Cir 30-60-90  
 Dolo, tan w/ thin beds of various cxtln sizes, slty pyritic, and some glock  
 Dolo, as above w/ thin lt green shale partings  
 Dolo, thin lenses frac w/ euhedral dolo cxtl minor chert trace possible dead oil stn crispy  
 Cir 30-60-90  
 Sand, poorly sorted med & fn grain most w/dolo cement few clean w/ poor to fair porosity  
 Sand, more silica cement w/ripple structure in brown then gray thin muds? near quartzitic





Sand, lt gray w/ various grain size due to overgrowths. thin shale lenses color brown to dk green silicious hard

Sand, w/shales increasing w/depth

Cong, weathered granite pebbles & dirty sand

Granite, fresh w/ abundant biotite feldspathic

Granite as above w/ minor amount of chlorite and another green mineral in minor frags & a trace, also in frags, of a tarnished copper colored mineral like dust in frags

Granite, becoming lighter colored to more faded pink

