

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: 10/1/2012

Bottom Hole Coordinates: Longitude: -101.0722814
Latitude: 37.3810169

Ground Elevation (ft): 2926'

K.B. Elevation (ft): 2939'

Logged Interval (ft): 0 To: 7742 Total Depth (ft): 7742

Formation: GRANITE

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: Kent cristler, Ganganath (G) Koralegedara, Troy Hommertzhaim, Clint Bleier

Company: Berexco LLC

Address: 2020 N. Bramblewood, Wichita, KS 67206

Cores

1.) 5233' - 5252' 2.) 5252' - 5305' 3.) 5400' - 5460' 4.) 5460' - 5483' 5.) 5483' - 5543' 6.) 5543' - 5603' 7.) 5603' - 5621'
8.) 5621' - 5668' 9.) 6360' - 6373' 10.) 6373' - 6393' 11.) 6393' - 6399' 12.) 6440' - 6500' 13.) 6500' - 6516' 14.) 6516' -
6531' 15.) 6655' - 6715' 16.) 6715' - 6770' 17.) 6904' - 6964' 18.) 6964' - 6989' 19.) 7090' - 7150' 20.) 7150' - 7178' 21.)
7178' - 7237' 22.) 7257' - 7271' 23.) 7334' - 7395' 24.) 7395' - 7426' 25.) 7426' - 7433' 26.) 7530' - 7568' 27.) 7568' -

DSTs

DST #1 (REGAN - GRANITE) 7522' - 7735' REC. 824' SW, IHP 3710# FHP 3419#, ISP 2449# FSP 2507#

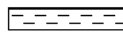



DST#2 (LWR ARBK) 7426' - 7457' - MISS RUN
REC 2754' M, IHP 3649#, ISP 80#, FHP 3071#





LOG TOPS

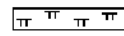

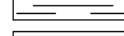

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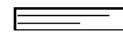



ROCK TYPES

 Anhy
 Bent
 Brec
 Cht



 Clyst
 Coal
 Congl
 Dol













 Gyp
 Igne
 Lmst
 Meta












 Mrlst
 Salt
 Shale
 Shcol



 Shgy
 Sltst
 Ss
 Till

ACCESSORIES

MINERAL
 Anhy
 Arggrm
 Arg
 Bent
 Bit
 Brecfrag
 Calc
 Carb
 Chtdk
 Chttt
 Dol
 Feldspar










 Gyp
 Hvymn
 Kaol
 Marl
 Minxl
 Nodule
 Phos
 Pyr
 Salt
 Sandy
 Silt
 Sil
 Sulphur

FOSSIL
 Algae
 Amph
 Belm
 Bioclst
 Brach
 Bryozoa
 Cephal
 Coral
 Crin
 Echin
 Fish
 Foram

 Ostra
 Pelec
 Pellet
 Pisolite
 Plant
 Strom

STRINGER
 Anhy
 Arg
 Bent
 Coal
 Dol

 Sltstrg
 Ssstrg

TEXTURE
 Boundst
 Chalky
 Cryxln
 Earthy
 Finexln
 Grainst
 Lithogr
 Microxln
 Mudst

Ferr
Glau

Gastro
Oolite

Ls
Mrst

Wackest

OTHER SYMBOLS

POROSITY
E Earthy
B Fenest
F Fracture
X Inter
M Moldic
O Organic
P Pinpoint

Vuggy
SORTING
W Well
M Moderate
P Poor

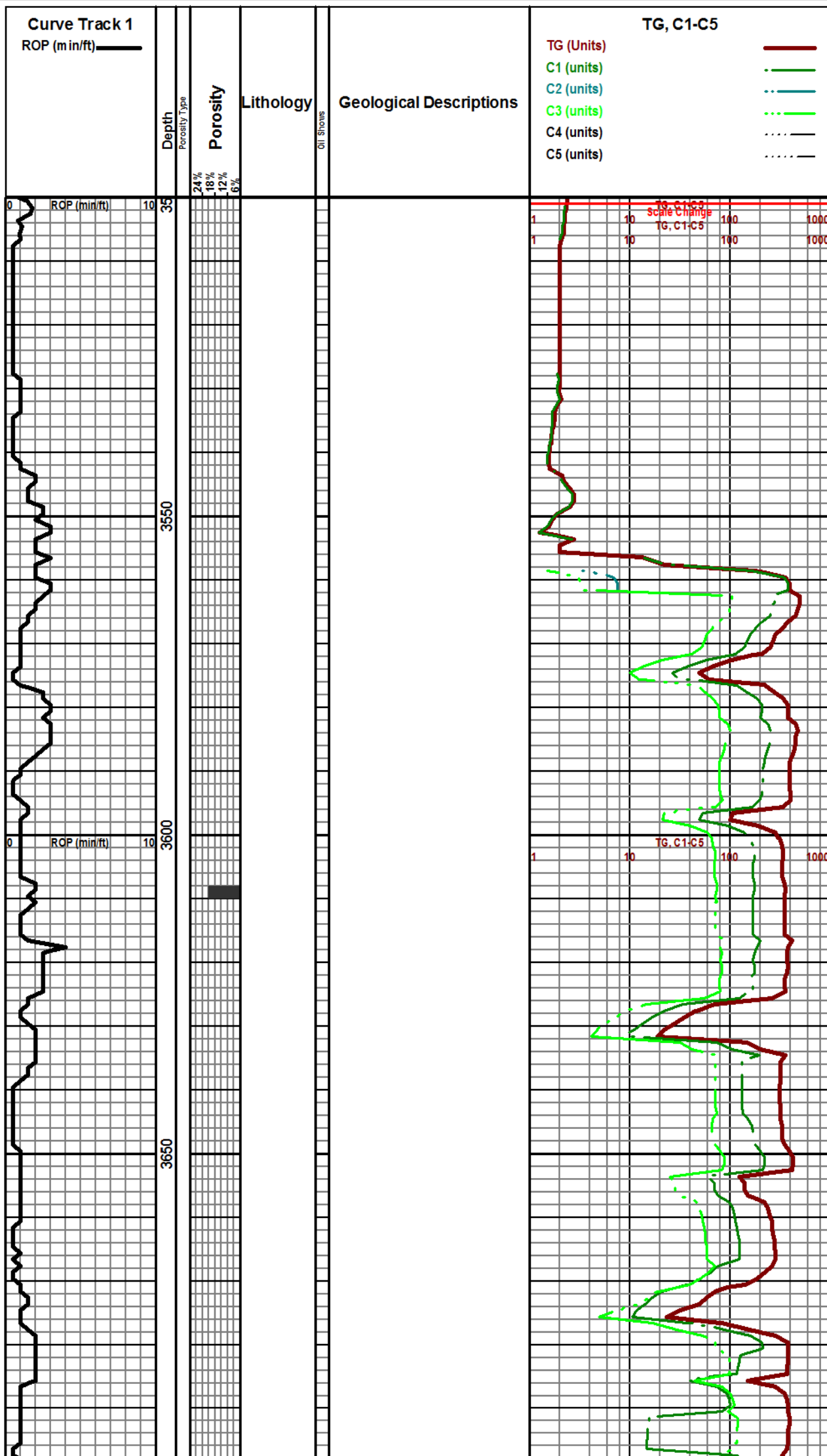
ROUNDING
R Rounded
F Subrnd
a Subang
A Angular

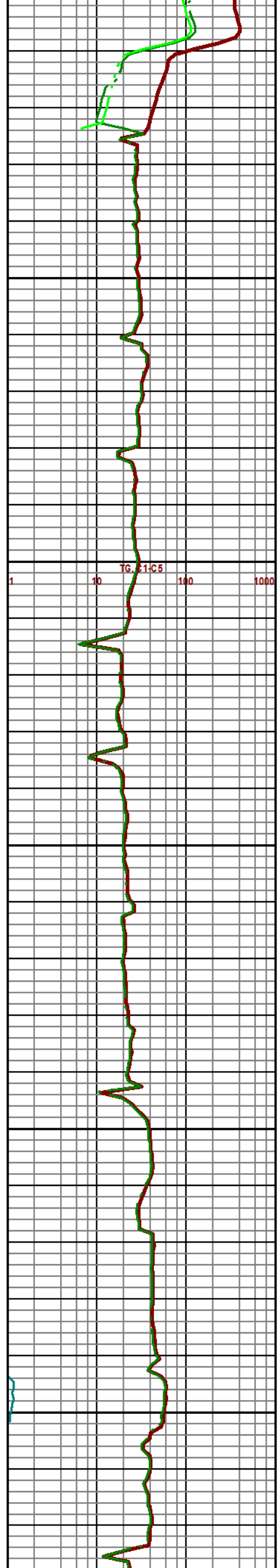
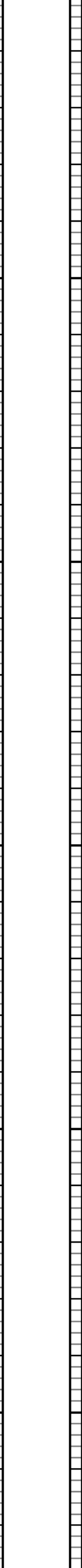
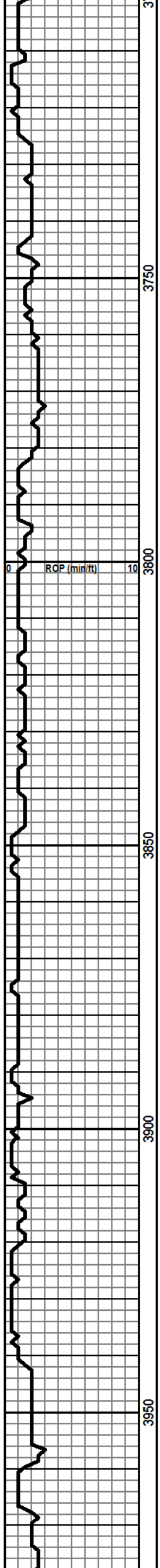
Spotted
 Ques
 Dead

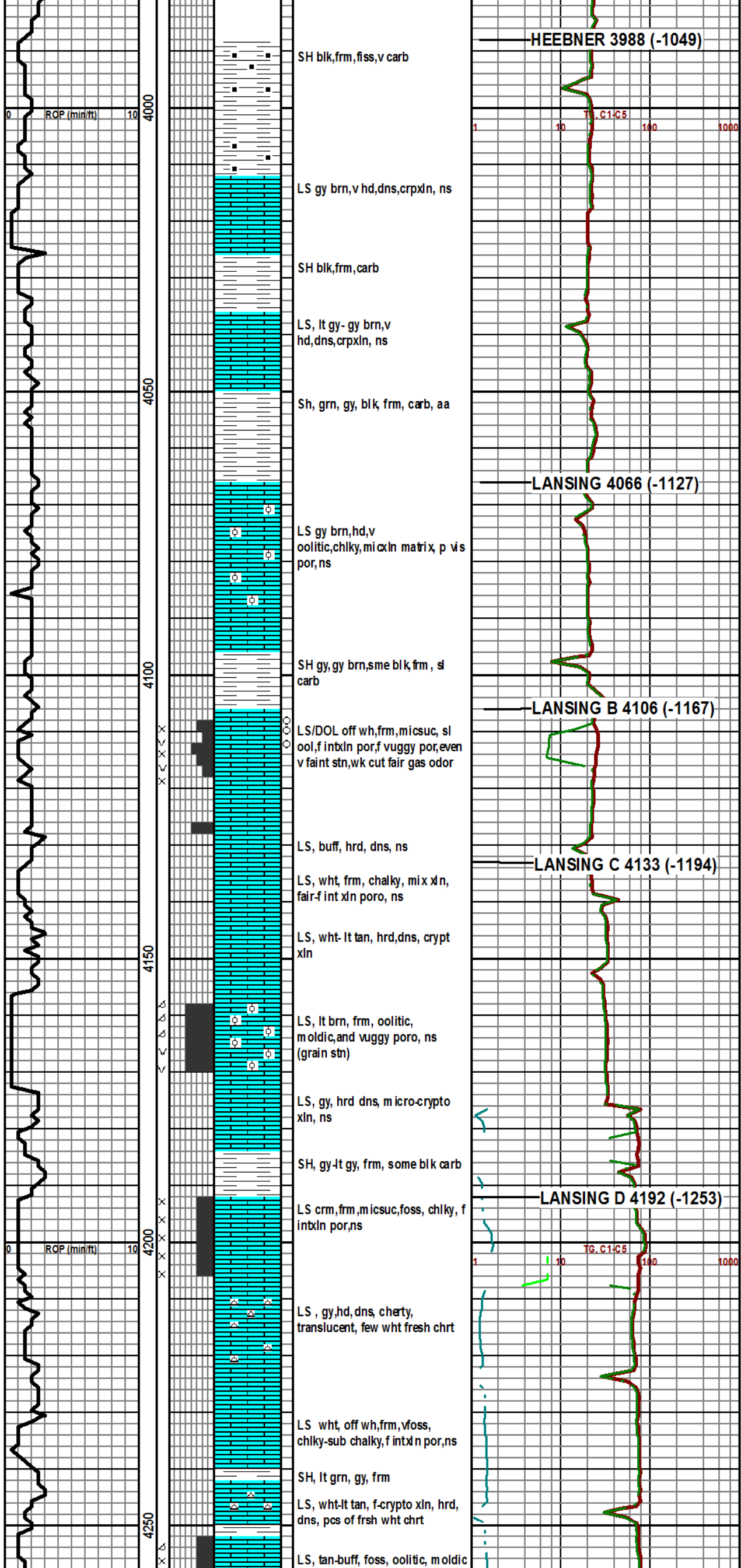
EVENT
Rft
Sidewall

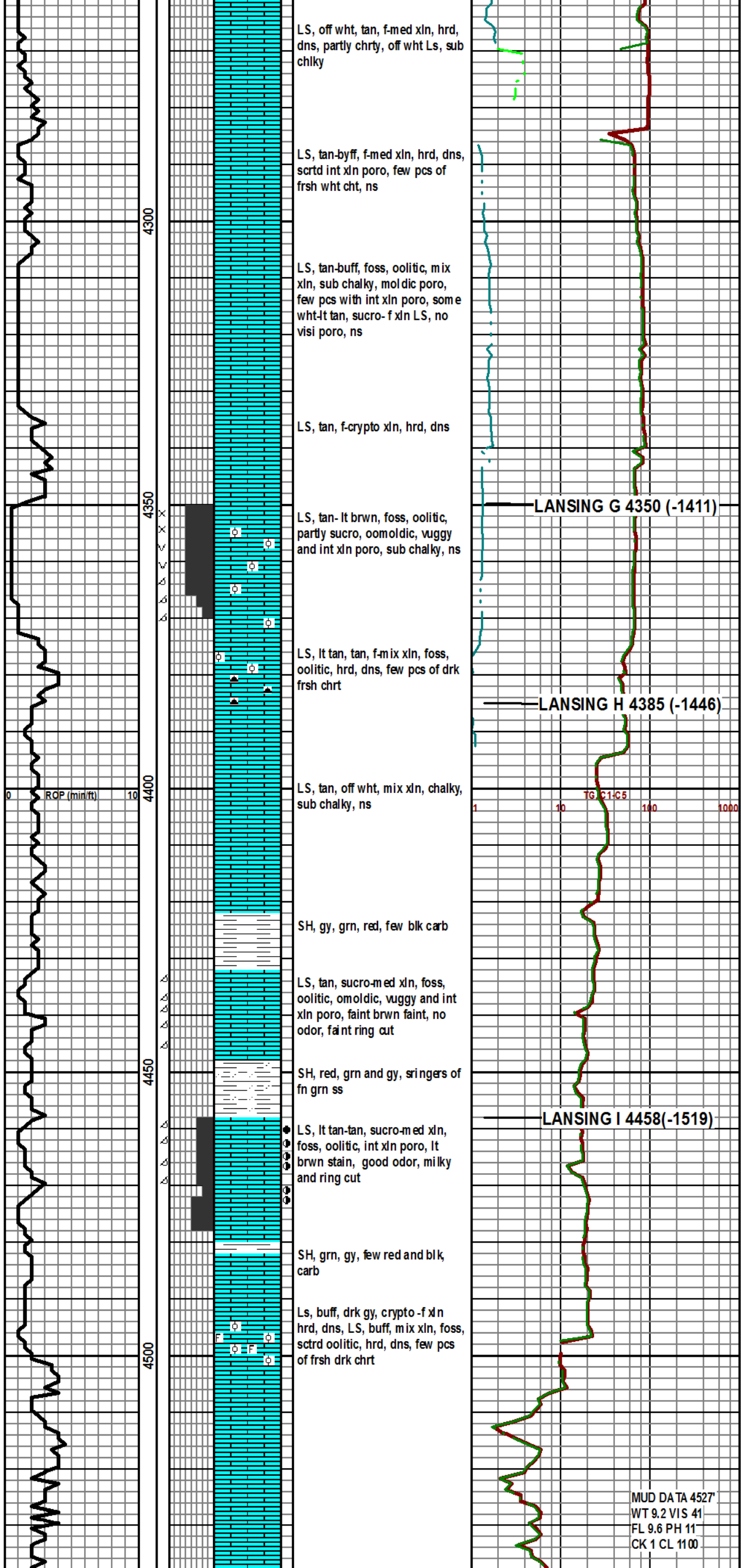
INTERVAL
Core
Dst

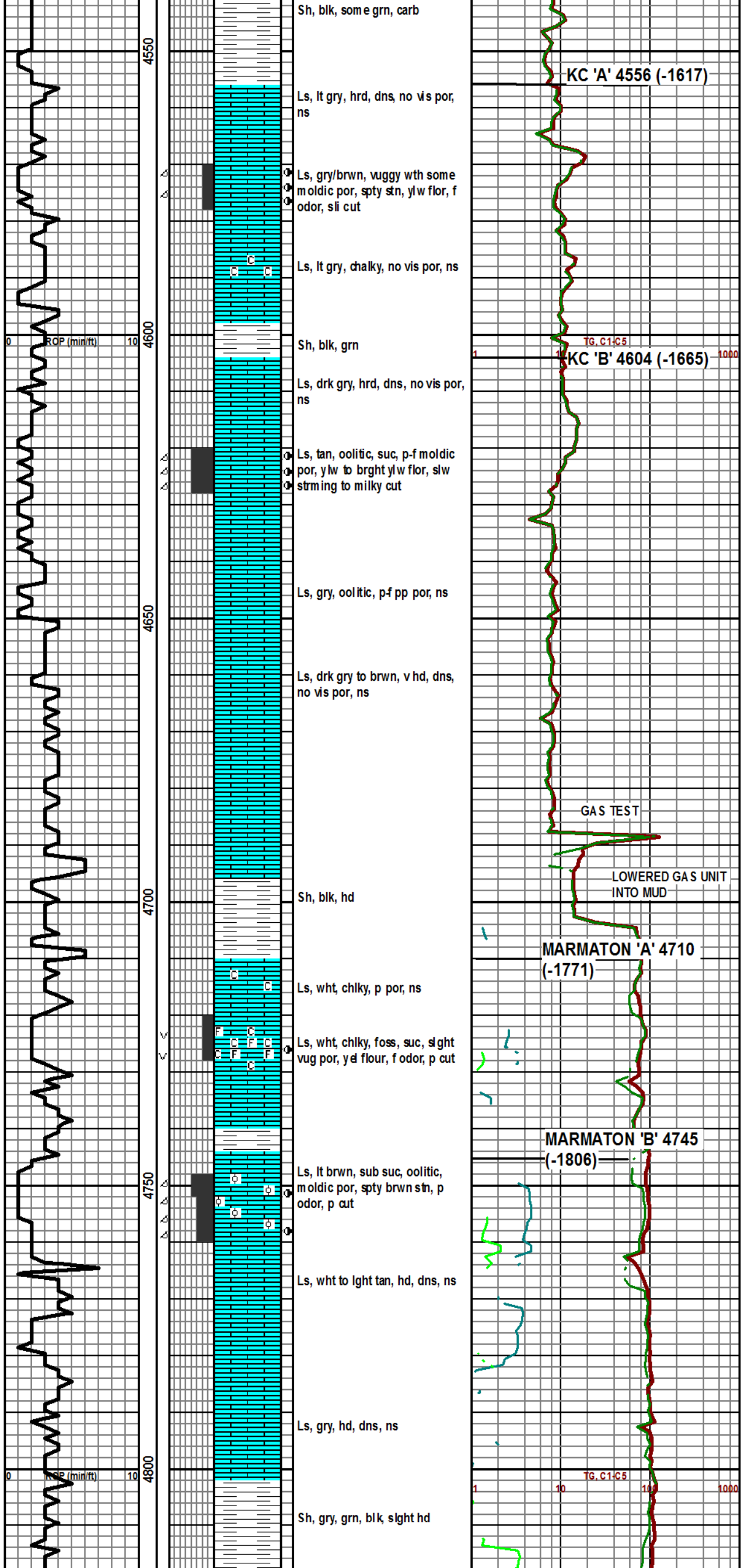
OIL SHOW
Even

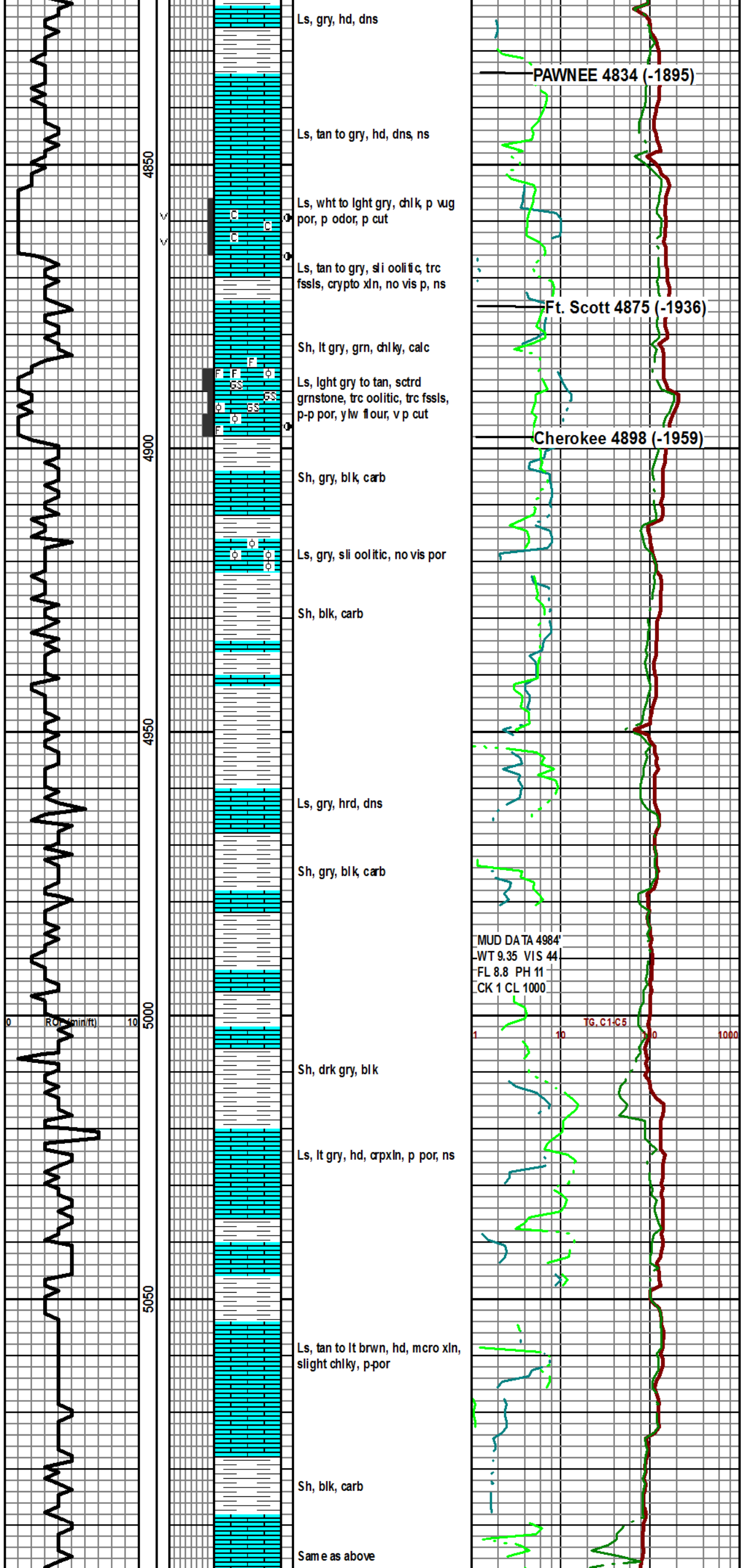


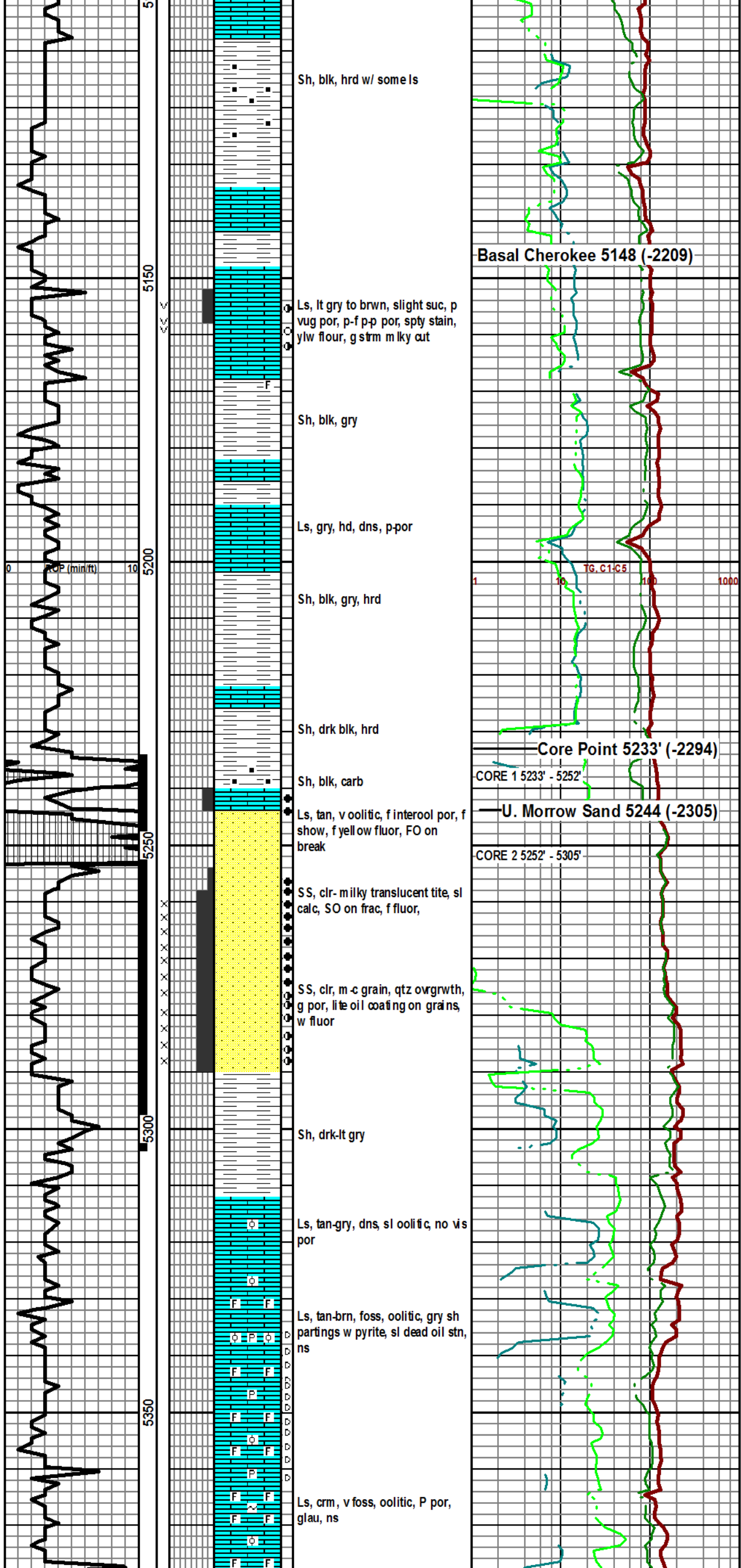


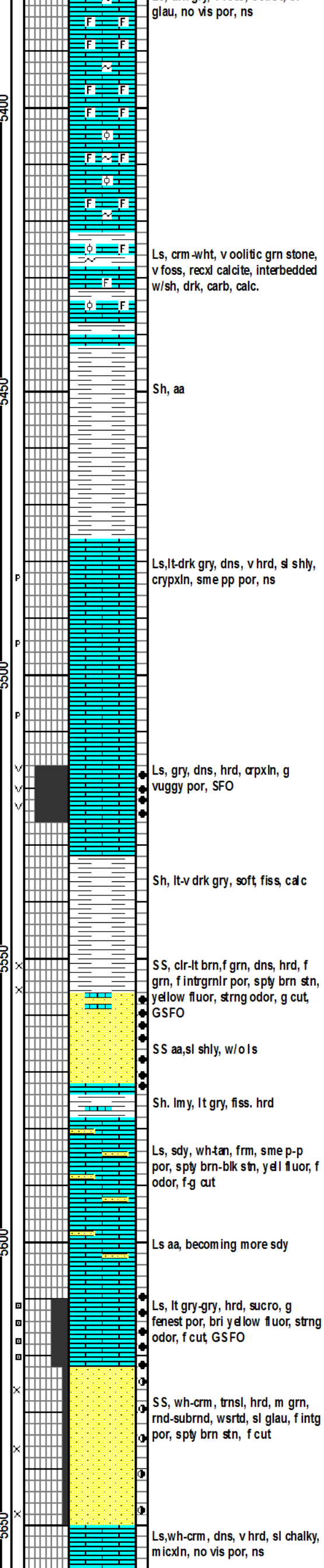
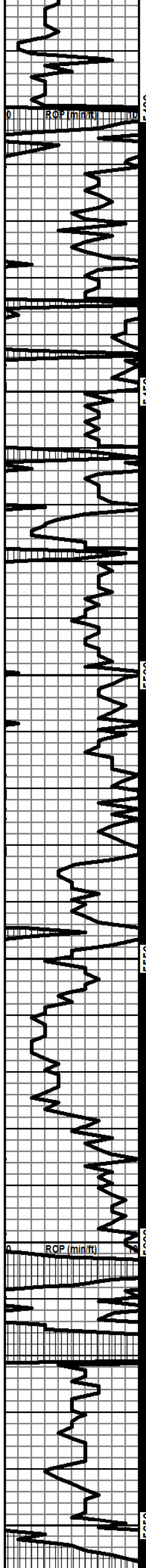












glau, no vis por, ns

Core Point 5400 (-2461)

CORE 3 5400' - 5460'

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

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

CORE 4 5460' - 5483'

Sh, aa

Chester 5476 (-2537)

CORE 5 5483' - 5543'

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

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

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

CORE 6 5543' - 5603'

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

Chester Porosity 5556 (-2617)

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

CORE 7 5603' - 5621'

Mud Data 5603'
WT 9.05 VIS 53
FL 7.6 PH 11.0 CK 1
CL 1000

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 odor, f-g cut

CORE 8 5621' - 5668'

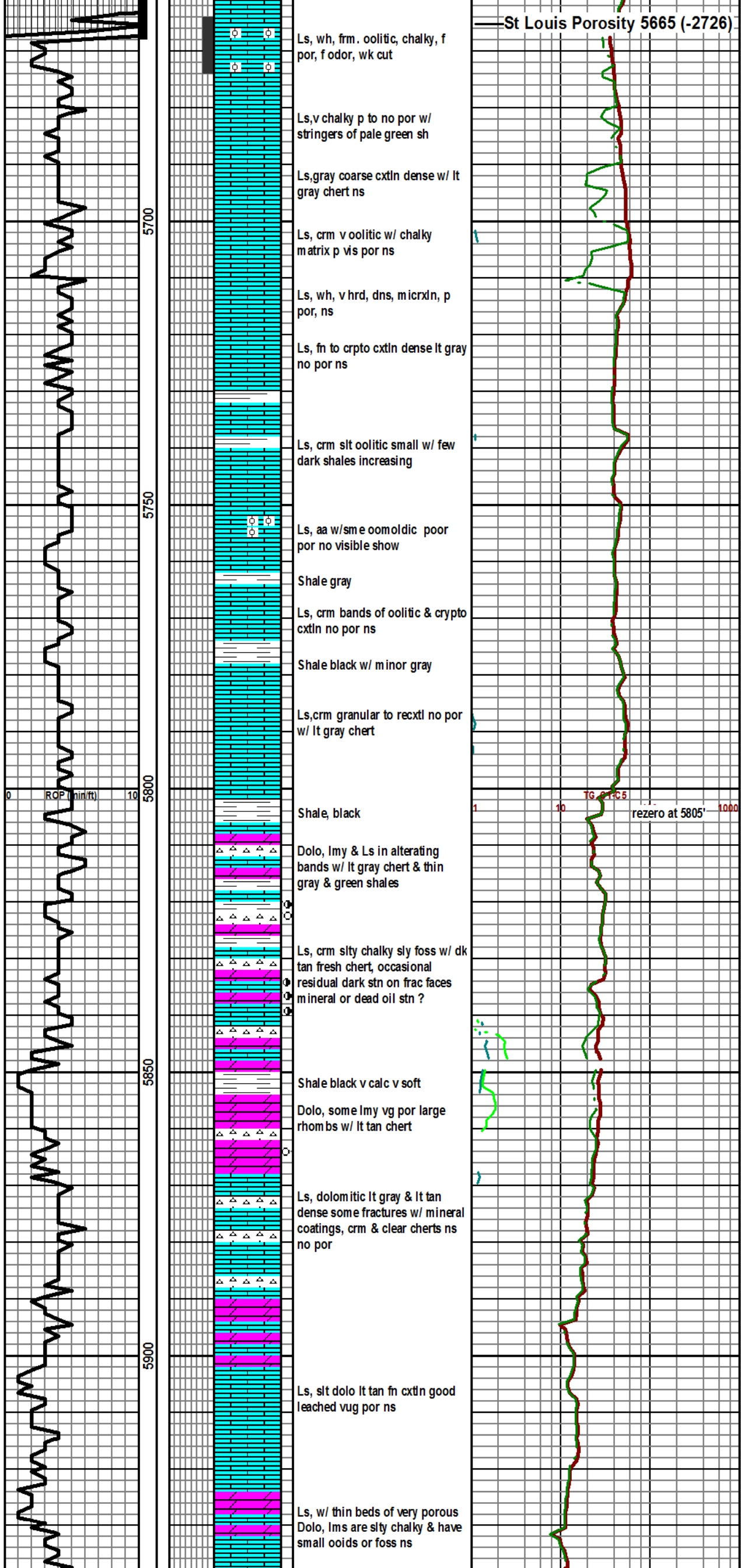
Mud Data 5642'
WT 8.9 VIS 55 FL
7.6 PH 10.5 CK 1
CL 1300

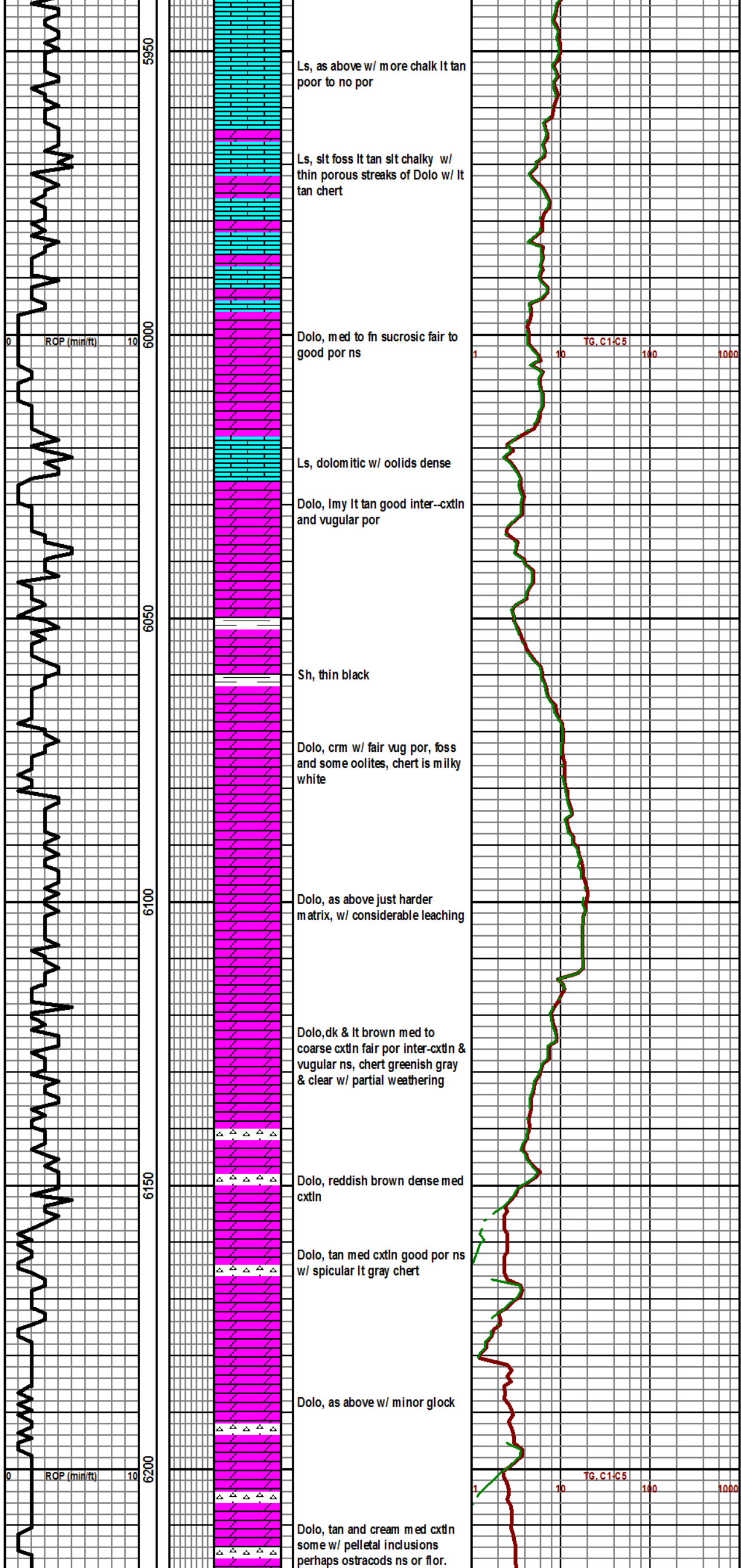
Ls aa, becoming more sdy

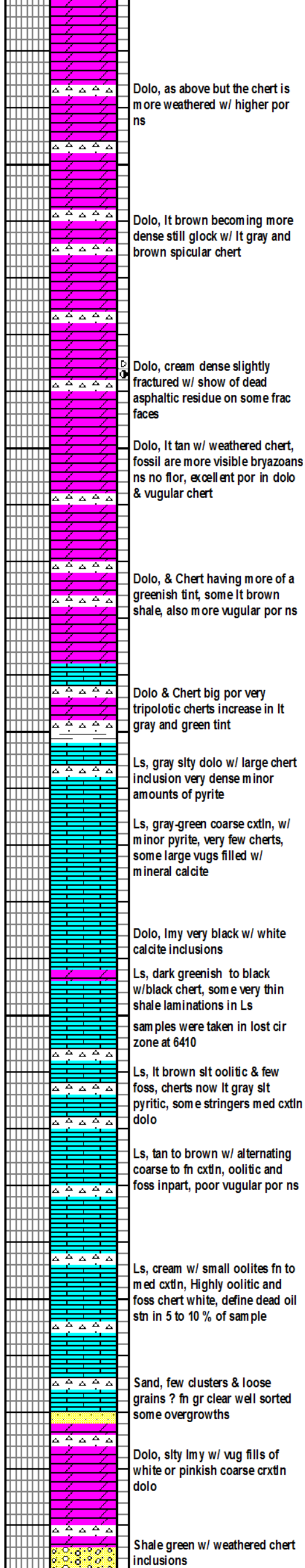
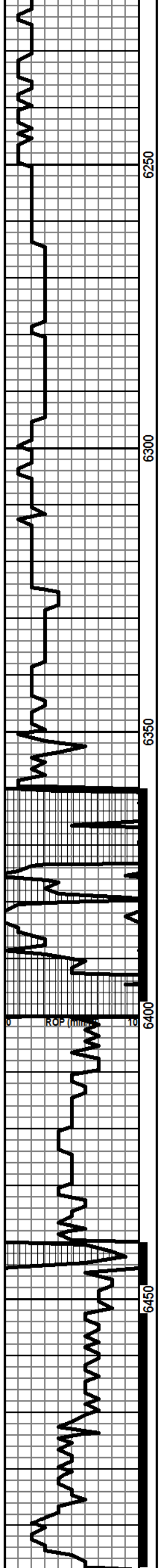
Ls, lt gry-gry, hrd, sucro, g fenest por, bri yel low fluor, strng odor, f cut, GSFO

SS, wh-crm, trnsl, hrd, m grn, rnd-subrnd, wsrt, sl glau, f intg por, sply brn stn, f cut

Ls, wh-crm, dns, v hrd, sl chalky, micxln, no vis por, ns







Dolo, as above but the chert is more weathered w/ higher por ns

Dolo, lt brown becoming more dense still block 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 no floor, 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 silty 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 slt oolitic & few foss, cherts now lt gray slt pyritic, some stringers med cxtln dolo

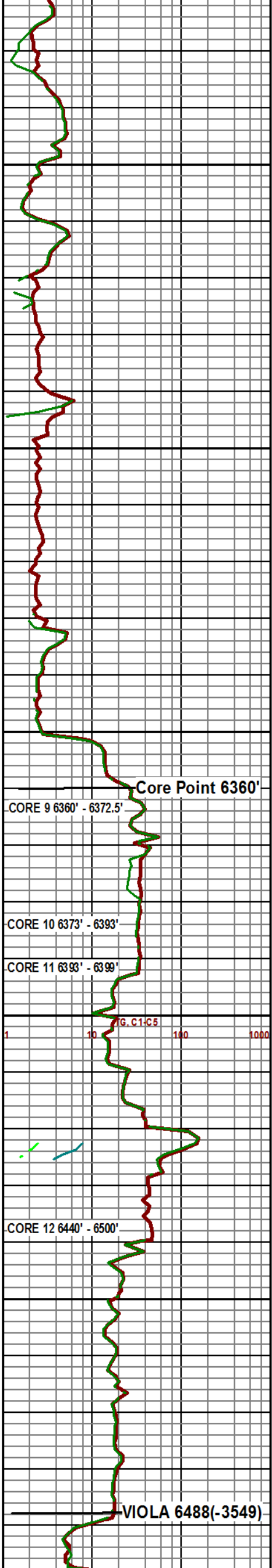
Ls, tan to brown w/ alternating coarse to fn cxtln, oolitic and foss in part, poor vugular por ns

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 ? fn gr clear well sorted some overgrowths

Dolo, stly lmy w/ vug fills of white or pinkish coarse crxtln dolo

Shale green w/ weathered chert inclusions



Core Point 6360'

CORE 9 6360' - 6372.5'

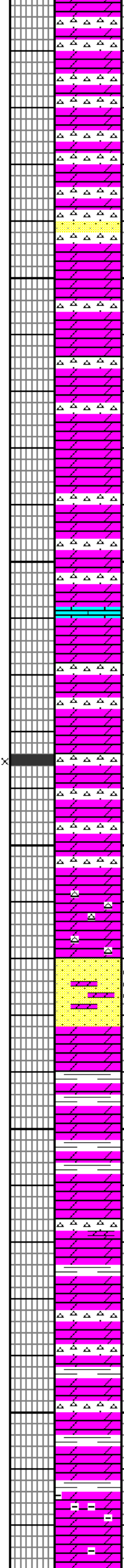
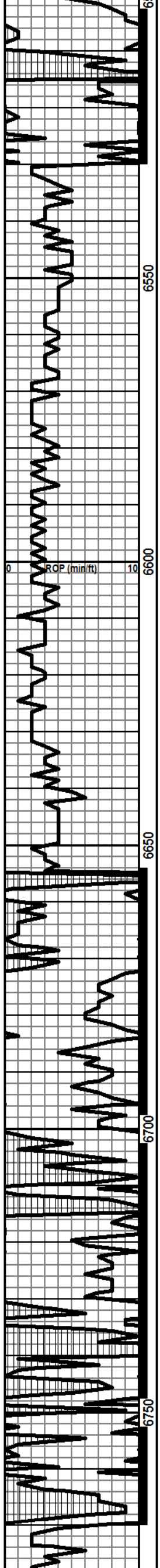
CORE 10 6373' - 6393'

CORE 11 6393' - 6399'

IG. C1-C5

CORE 12 6440' - 6500'

VIOLA 6488(-3549)



Dolo, dk tan med cxtln dense w/ med to large chert nodules no por ns

Dolo, lt cream med cxtln small amounts pyrite & general slty green tint w/ glock type spots & chrt inclusions w/ minor por ns lower cherts v weathered

Sand, fine gr well sorted clear, w/ qtz growth poor por ns thin bed

Dolo, med cxtln near sucrosic lt cream, w/ same cherts as above

working on cleaning suction pit, and switching to pump 2, no samples

Dolo, fn sucrosic poor por ns tan w/ usual chert

Ls, oomoldic tan thin bed poor por ns

Dolo, dk brown w/ lt tan occasional oolite very dense few frac faces w/ euhedral cxtl & dead stn

Dolo, lmy modeled lt & dk brown v dense w/ cxtl growth on fracs

Dolo, tan w/ few oolites w/ lt gray spicular chert

Dolo, tan, fxl n, hrd, dns, ns

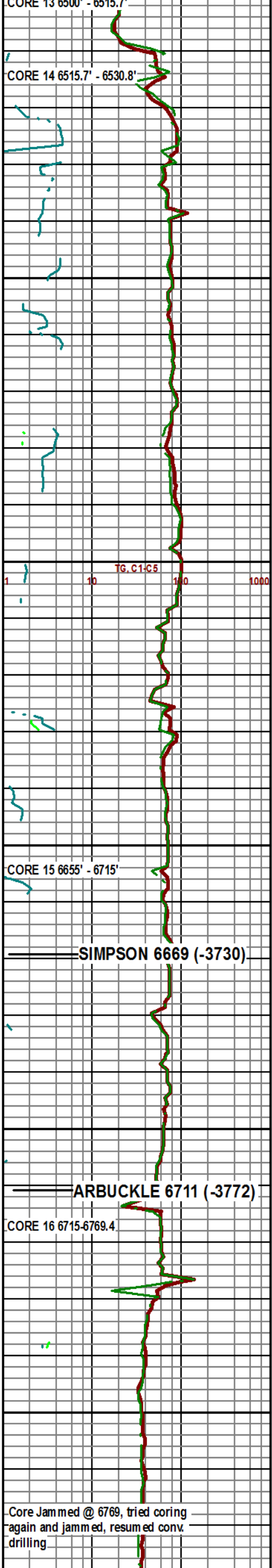
SS, interbedded with tan dolo, vuggy poro, drk brown, oil stain, fair odor

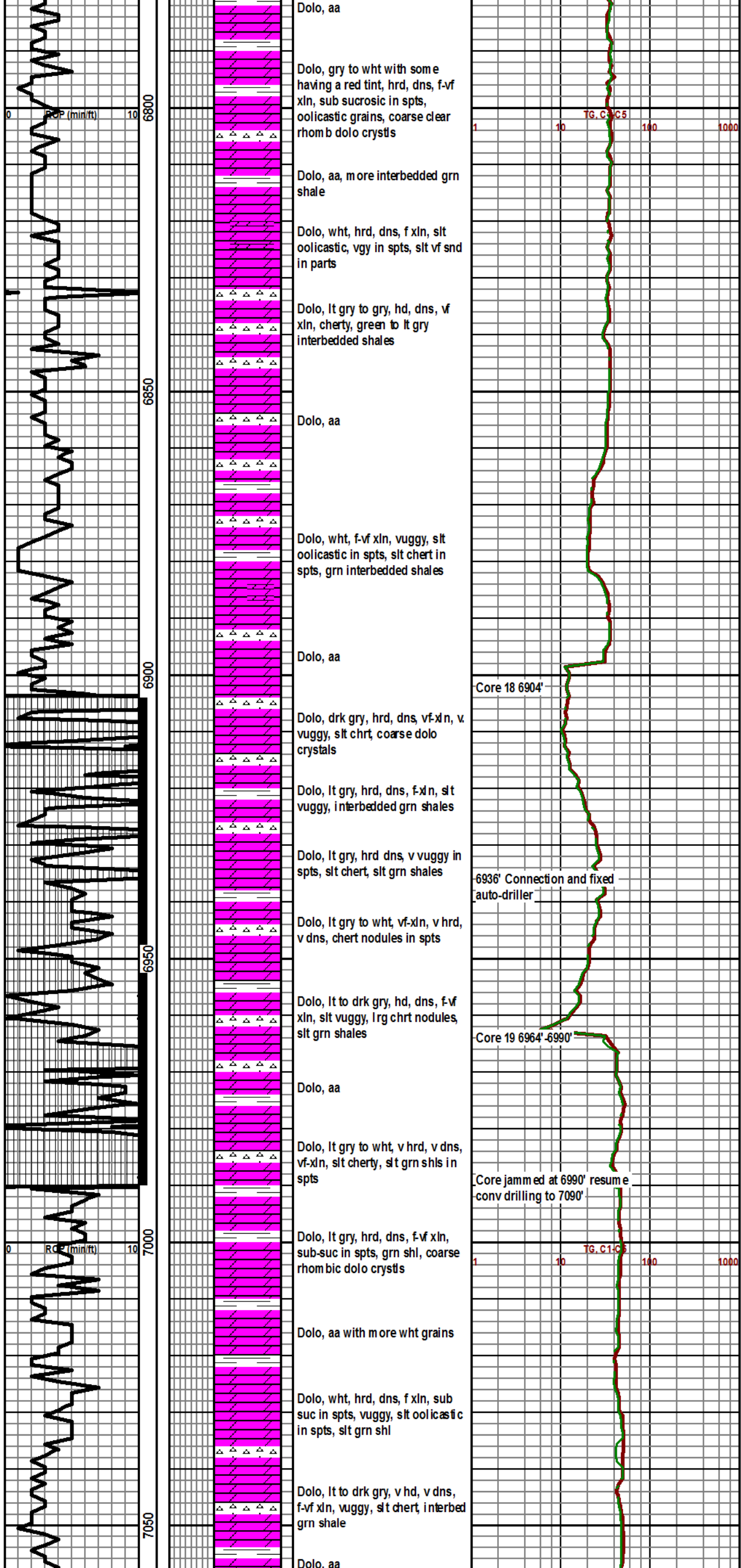
Dolo, buff, f-med xln, dns, vuggy poro, fresh white chert nodules, interbedded with grn sh, pyritic, bottom of the section tan-buff, suc-f xln hrd, dns dolo, chrt y

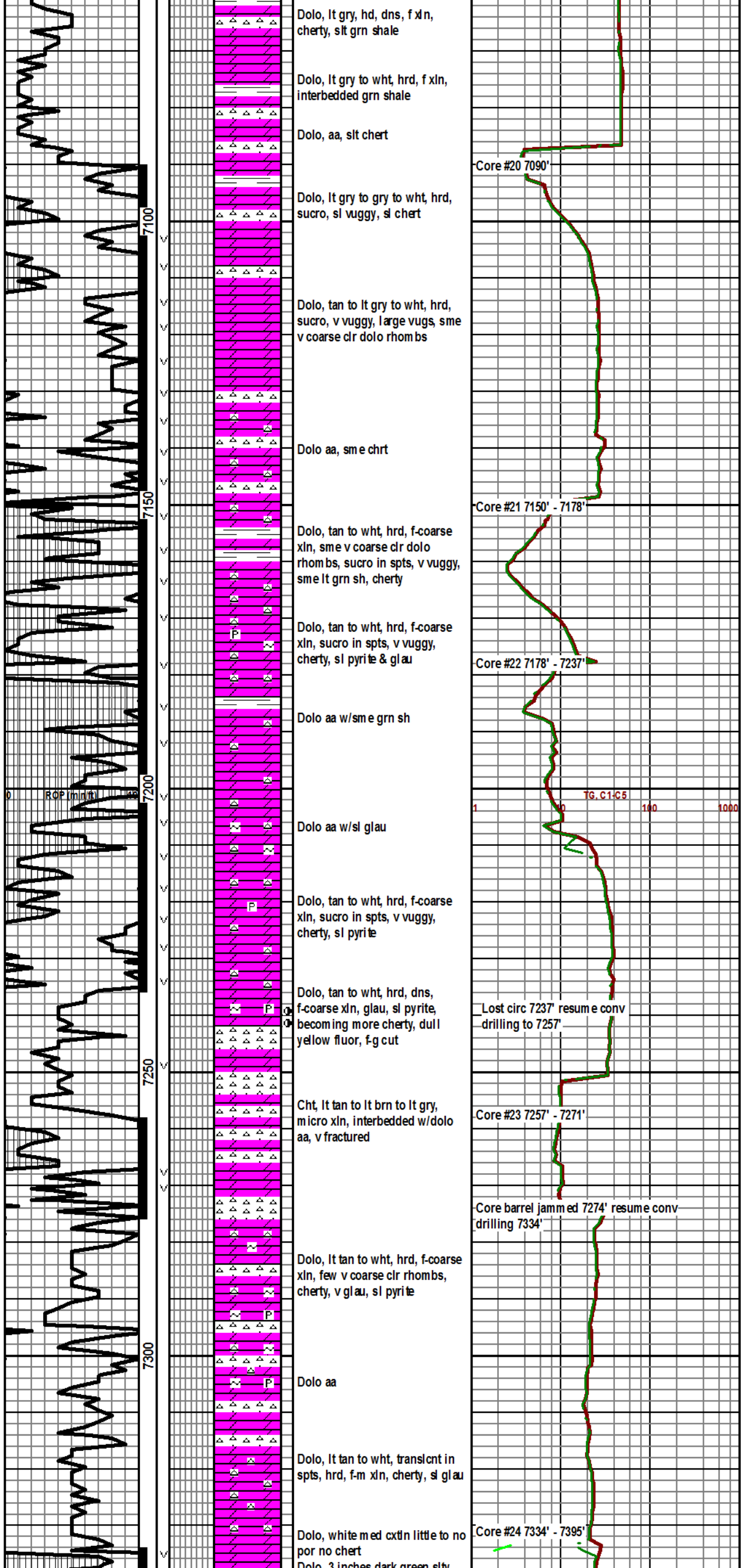
Dolo, gry, dns, some suc to f xln, vugs in spts, cherty

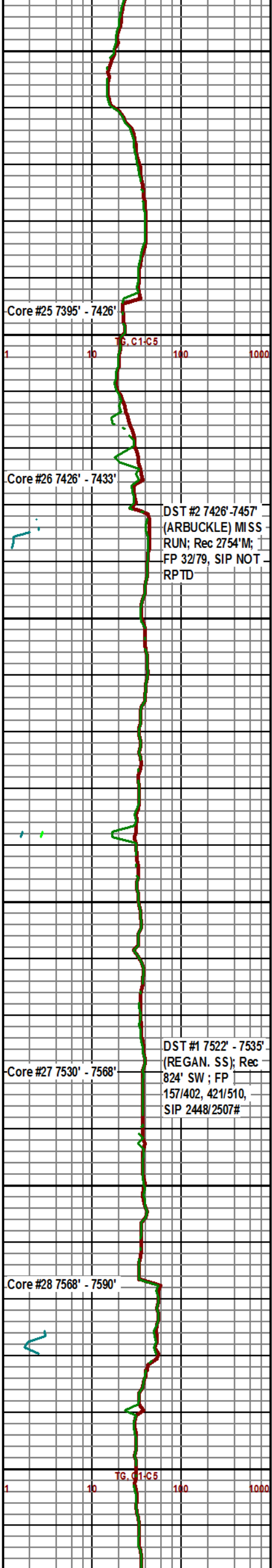
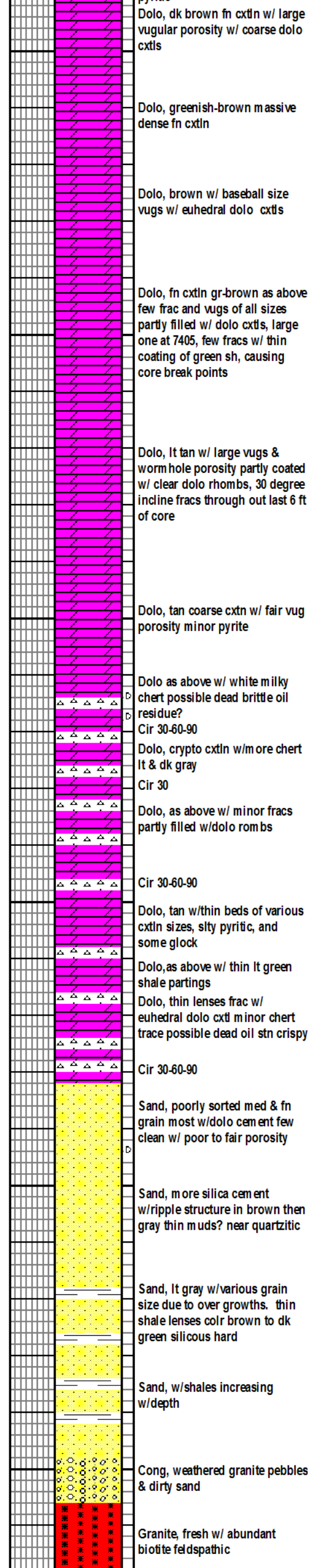
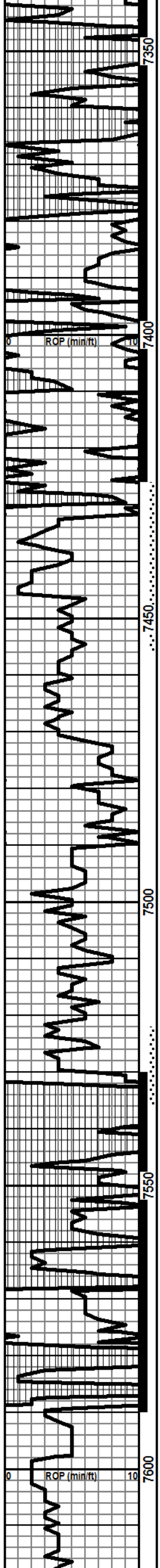
Dolo, gry to wht, hrd, dns, f xln, v vgy, slight chert, coarse clear rhombic dolo crystals, interbed grn shale

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









pyrite
Dolo, dk brown fn cxtln w/ large vugular porosity w/ coarse dolo 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

Core #25 7395' - 7426'

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

Core #26 7426' - 7433'

DST #2 7426'-7457' (ARBUCKLE) MISS RUN; Rec 2754'M; FP 32/79, SIP NOT RPTD

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, silty 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

Core #27 7530' - 7568'

DST #1 7522' - 7535' (REGAN. SS); Rec 824' SW ; FP 157/402, 421/510, SIP 2448/2507#

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

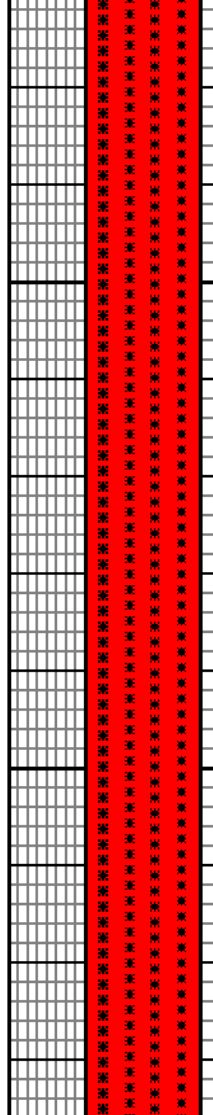
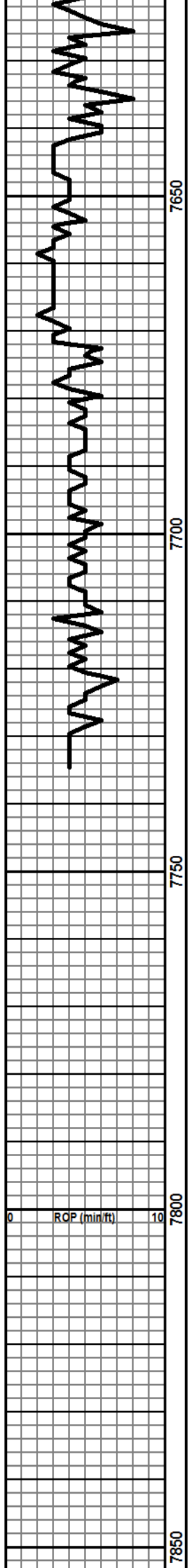
Core #28 7568' - 7590'

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

Sand, w/shales increasing w/depth

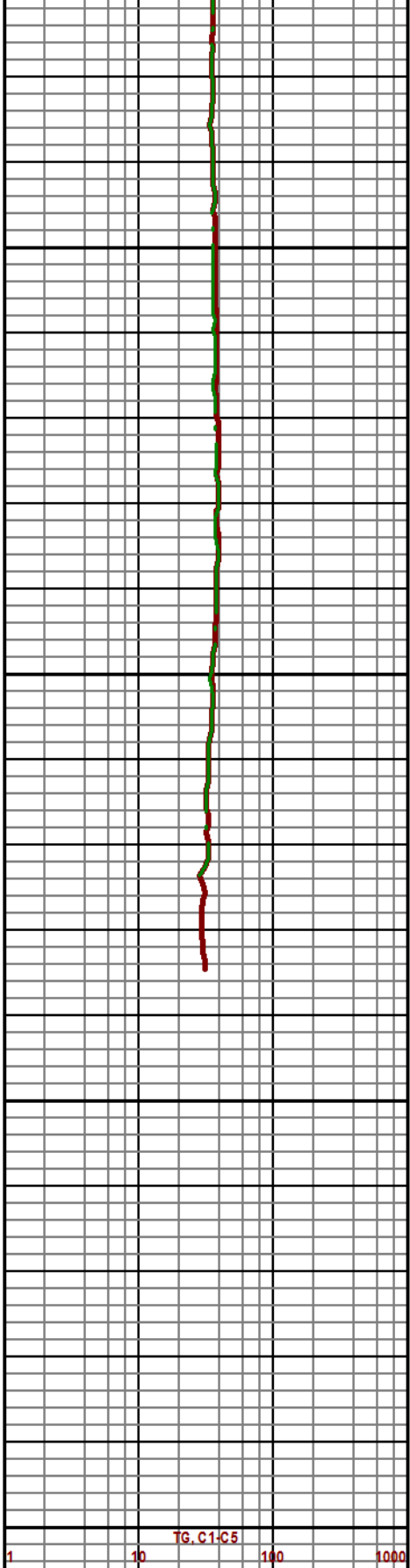
Cong, weathered granite pebbles & dirty sand

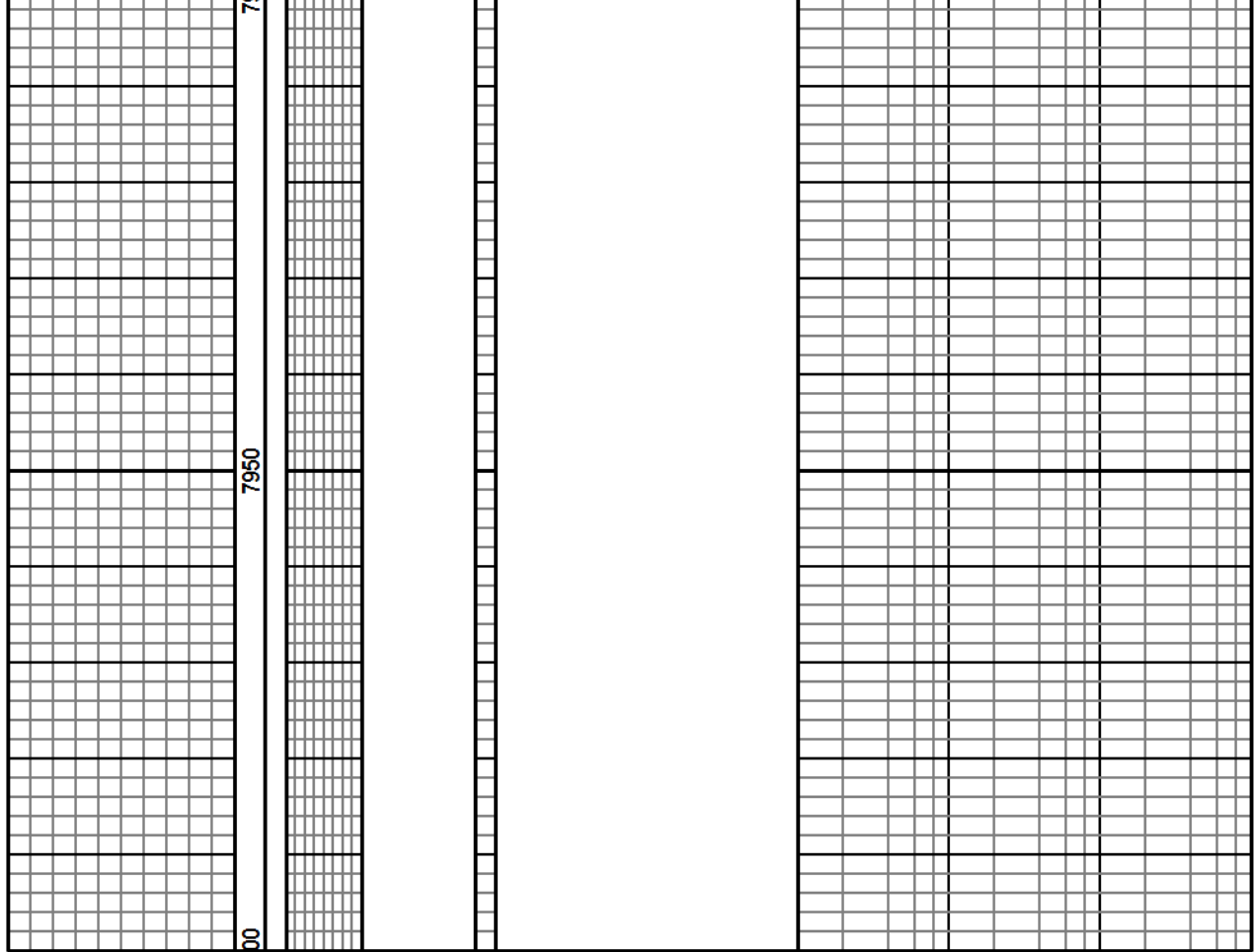
Granite, fresh w/ abundant biotite feldspathic



Granite as above w/ minor amount of clorite and another green mineral in minor frac's & a trace, also in frac's, of a tarnished copper colored mineral like dust in frac's

Granite, becoming lighter colored to more faded pink





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15189227810000_CUTTER KGS 1 GEO REPORT