T. M. MCCOY & CO., INC.

CONSULTING GEOLOGISTS
P.O. BOX 608 · WILSON, WYOMING 83014 · 307-733-4332

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

Well Name:	**Berenergy Corporation H.J. Roetzel 'A' #26**
Location:	**Barton County, Kansas**
License Number:	**15-009-25867**
Region:	
Spud Date:	**September 24, 2013**
Drilling Completed:	**September 30, 2013**
Surface Coordinates:	**2530' FNL & 775 FEL**
	SE NE Sec. 2, T20S, R11W
Bottom Hole Coordinates:	**Vertical Hole**
Ground Elevation (ft):	**1745'**
K.B. Elevation (ft):	**1756'**
Logged Interval (ft):	**1400'** **To: TD**
Total Depth (ft):	**3260'**
Formation:	**Chase Group through Arbuckle**
Type of Drilling Fluid:	**Fresh water and water based mud**

OPERATOR

Company: **Berenergy Corporation**
Address: **1888 Sherman St #600**
Denver, Colorado
80203

GEOLOGIST

Name: **Ryan Thress**
Company: **T. M. McCoy & Co., Inc.**
Address: **P.O. Box 608**
Wilson, WY 83014
307-733-4332

ROCK TYPES

- Gypsum
- Anhy
- Cht
- Cgl ss
- Dol
- Lmst
- Salt
- Shale
- Sh gybrn
- Sh red-brn
- Sh gy-grn
- Sltst--gray
- Sltst- red brn
- Ss
- Bent
- Sh--green
- Sltst brn
- Sh-brn-blk
- Slty sh rd-brn
- Lmy sh brn-blk
- Cement

ACCESSORIES

MINERAL
- Anhy
- Arg
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Glau
- Gyp
- Minxl

- Nodule
- Pyr
- Sandy
- Silt
- Sil

FOSSIL
- Brach
- Fossil
- Pellet

STRINGER
- Sltstrg brn
- Sltsstrg rd-brn
- Shstrg gybrn
- Shstrg red-brn
- Shstrg gy red
- Arg
- Bent
- Dol
- Ls
- Sltsstrg gray

- Ssstrg
- Anhystrg
- Shstrg gy-grn
- Shstrg brn-blk
- Chtstrg
- Salt strg

TEXTURE
- Chalky
- Cryxln
- Microxln

OTHER SYMBOLS

POROSITY
- Earthy
- Fenest
- Fracture
- Inter

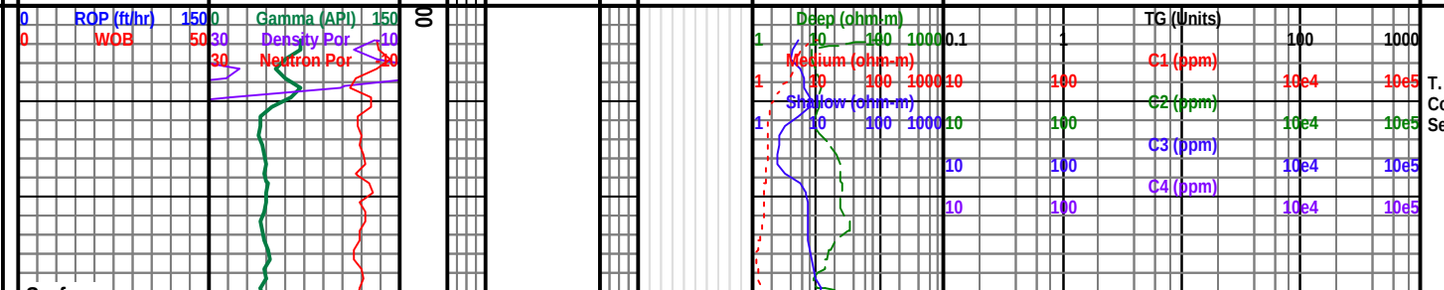
- Moldic
- Organic
- Pinpoint
- Vuggy

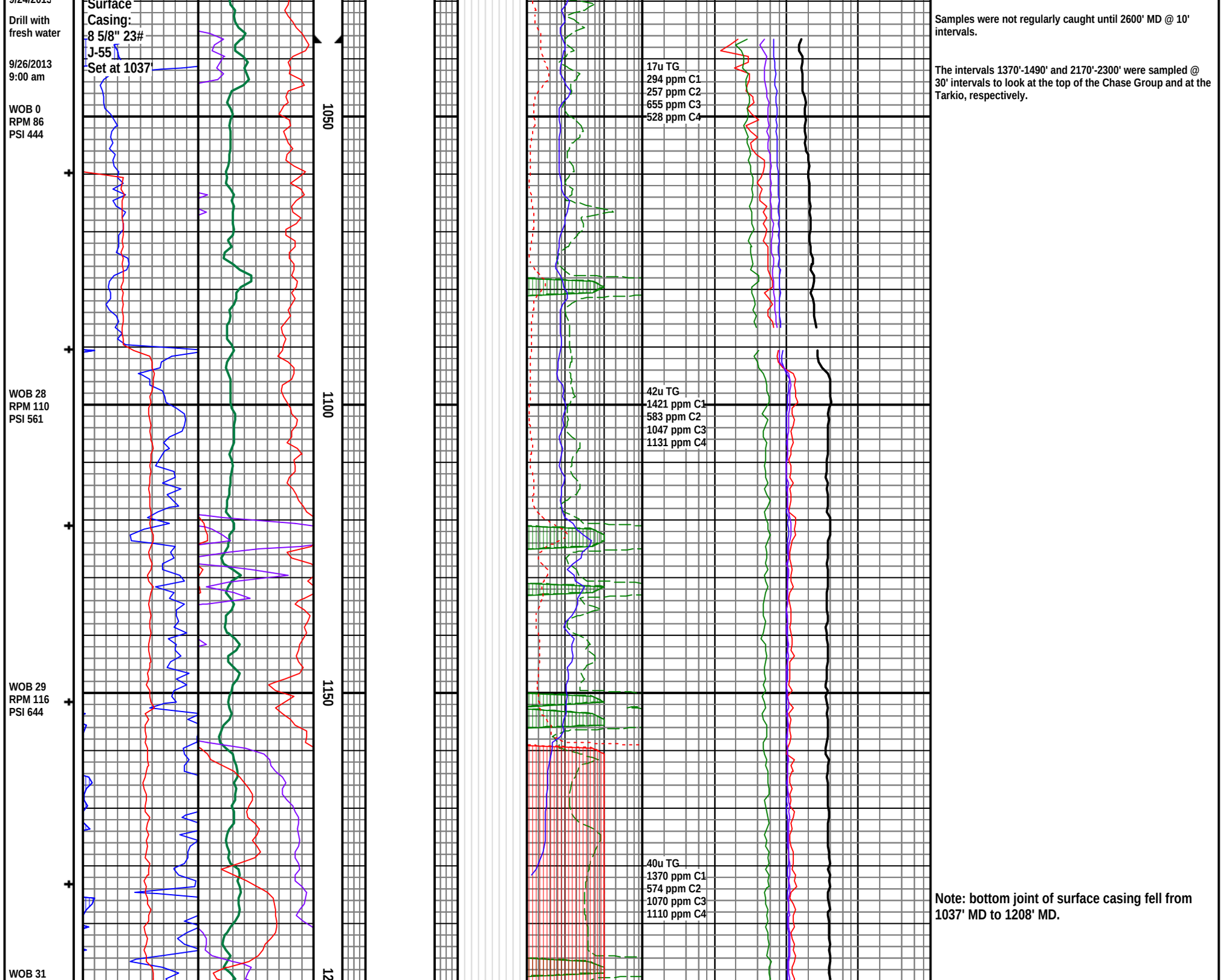
OIL SHOW

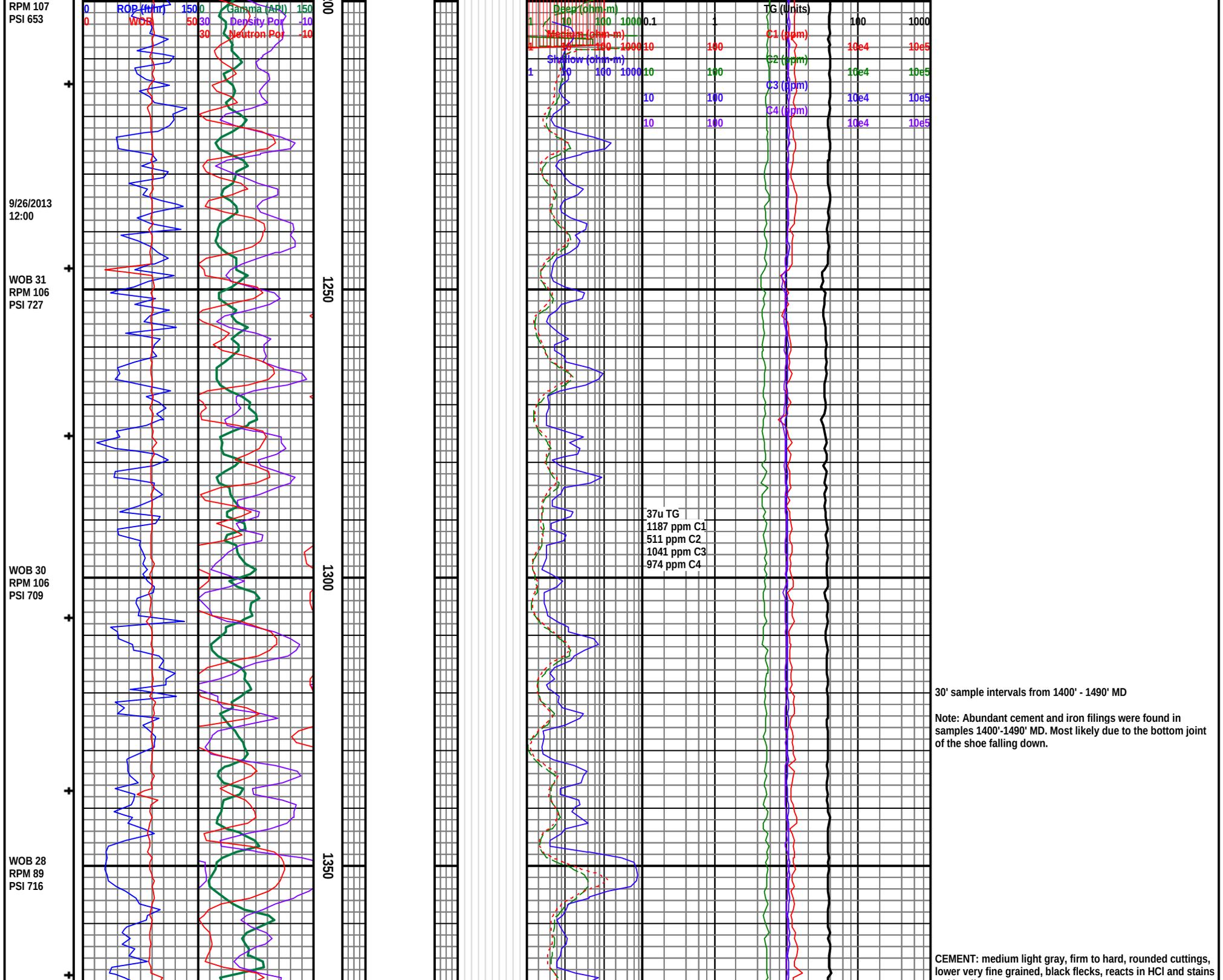
EVENT
- Csg shoe right
- Csg shoe left

- Off btm
- Connection
- Fm-bit line
- Csg shoe

Fm Tops	Engineering	ROP	GR, N-D Por	Depth	Porosity 0 - 24%	Lithology	Visual Show	% Lithology	Resistivity	TG, C1-C4	Geological Descriptions
		ROP (ft/hr) WOB	Gamma (API) Density Por Neutron Por						Deep (ohm-m) Medium (ohm-m) Shallow (ohm-m)	TG (Units) C1 (ppm) C2 (ppm) C3 (ppm) C4 (ppm)	




9/24/2013
Drill with fresh water
9/26/2013 9:00 am
WOB 0
RPM 86
PSI 444
Surface Casing:
8 5/8" 23#
J-55
Set at 1037'
1050
WOB 28
RPM 110
PSI 561
1100
WOB 29
RPM 116
PSI 644
1150
WOB 31
17u TG
294 ppm C1
257 ppm C2
655 ppm C3
528 ppm C4
42u TG
1421 ppm C1
583 ppm C2
1047 ppm C3
1131 ppm C4
40u TG
1370 ppm C1
574 ppm C2
1070 ppm C3
1110 ppm C4
Samples were not regularly caught until 2600' MD @ 10' intervals.
The intervals 1370'-1490' and 2170'-2300' were sampled @ 30' intervals to look at the top of the Chase Group and at the Tarkio, respectively.
Note: bottom joint of surface casing fell from 1037' MD to 1208' MD.



30' sample intervals from 1400' - 1490' MD

Note: Abundant cement and iron filings were found in samples 1400'-1490' MD. Most likely due to the bottom joint of the shoe falling down.

CEMENT: medium light gray, firm to hard, rounded cuttings, lower very fine grained, black flecks, reacts in HCl and stains

red in Alizarin

LIMESTONE: bluish white to light greenish gray, locally very pale orange, firm, platy cuttings, fossiliferous, locally sparry, very effervescent in HCl, no insoluble residue. No fluorescence, no cut, no shows.

SHALE: light olive gray to greenish gray, soft to firm, occasional platy cuttings, some zones very calcareous, others non calcaeous, without significant difference in appearance. Rare pyrite nodules, rare mollusc fossil.

GYPSUM: selenite crystals <3mm, pearly white to transluscent, fibrous stucture, soft but brittle. Likely rehydrated and recrystalized anhydrite.

ANHYDRITE: white to semi translucent, firm, amorphous structure, rounded, no reaction in HCl, produces selenite crystals when reprecipitated.

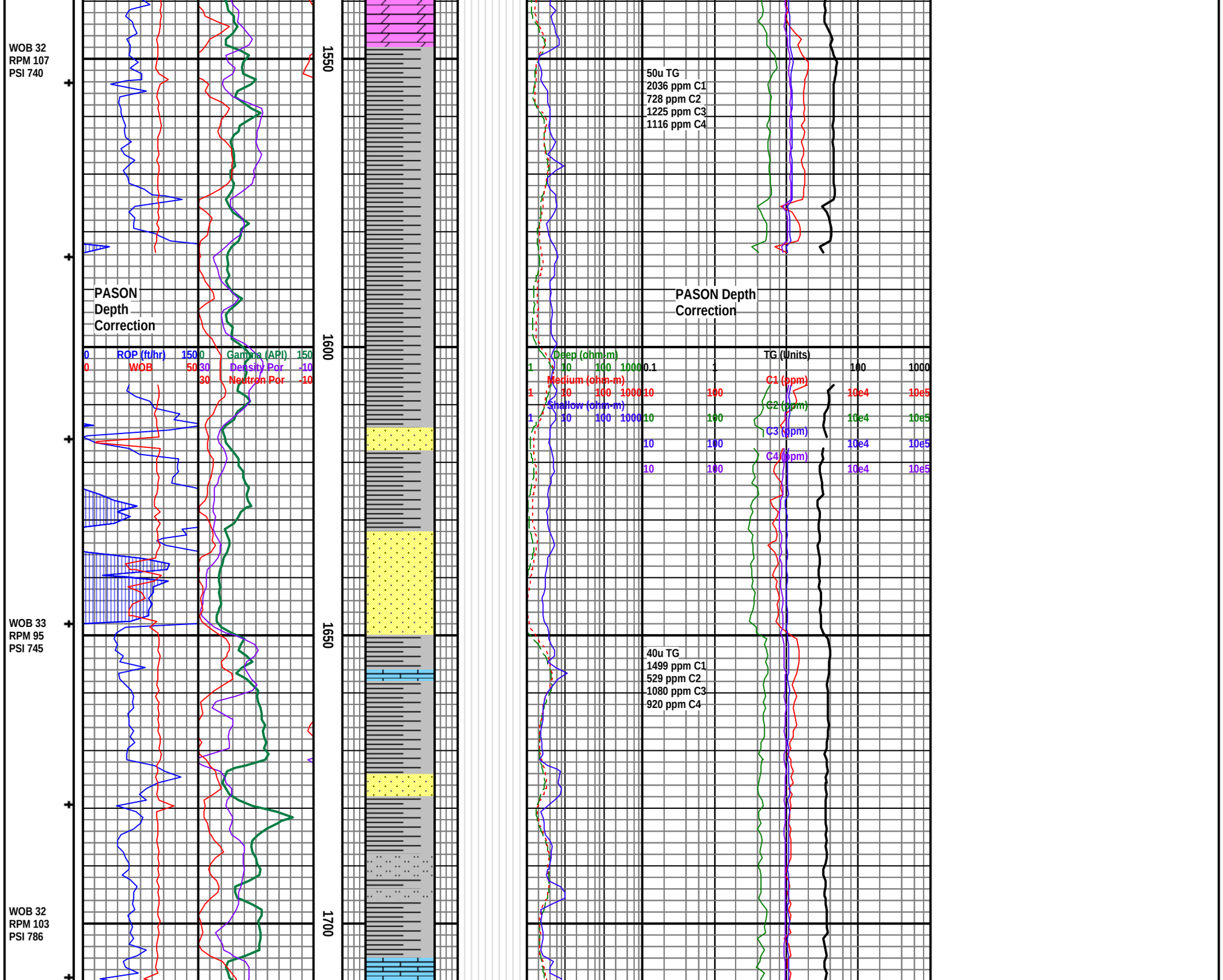
SHALE: light olive gray to greenish gray, soft to firm, occasional platy cuttings, some zones very calcareous, others non calcaeous, without significant difference in appearance, no fluorescence, no cut

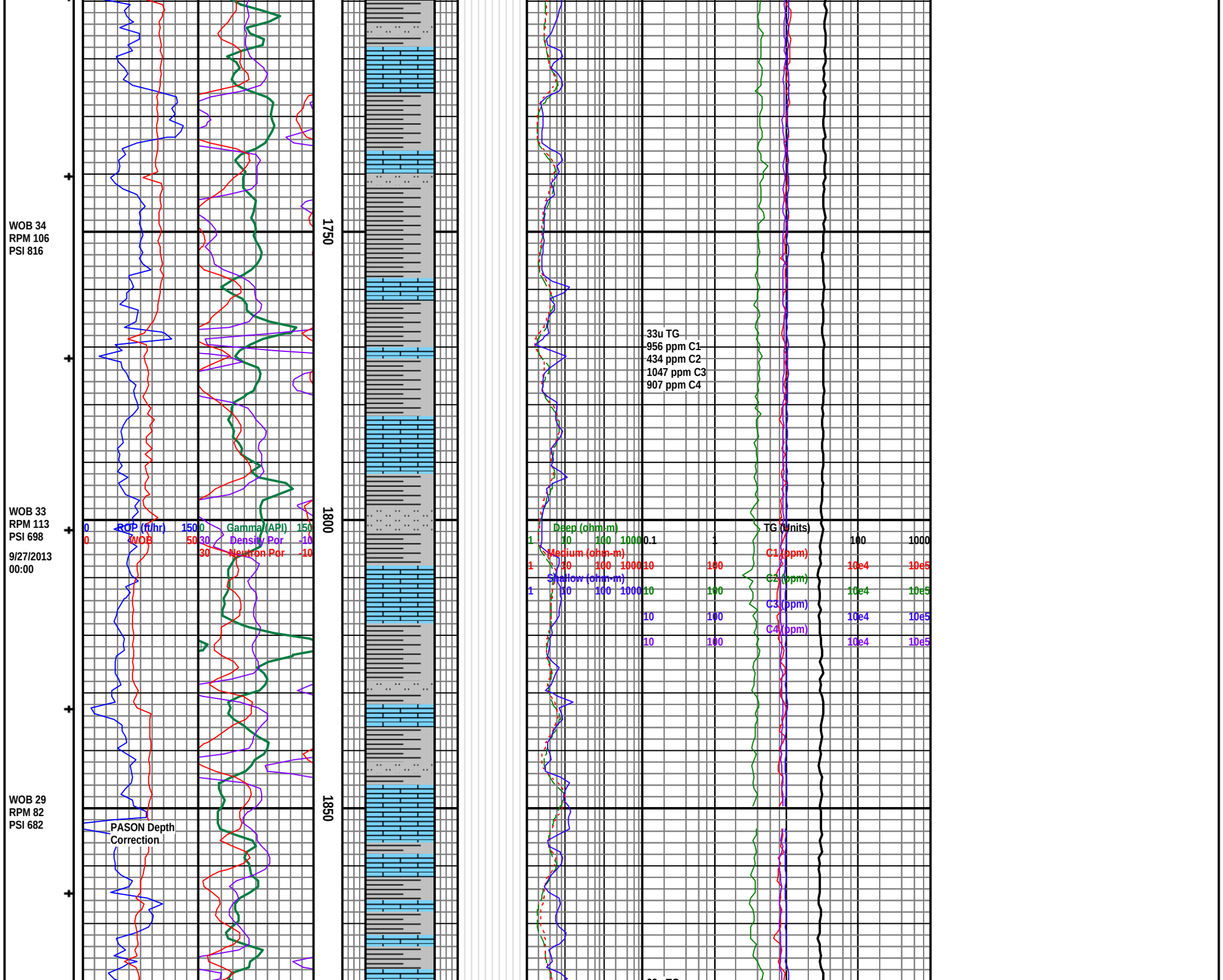
ANHYDRITE: white to clear, locally dark yellowish brown, semi translucent, firm, rounded cuttings, no reaction in HCl, produces selenite crystals when reprecipitated.

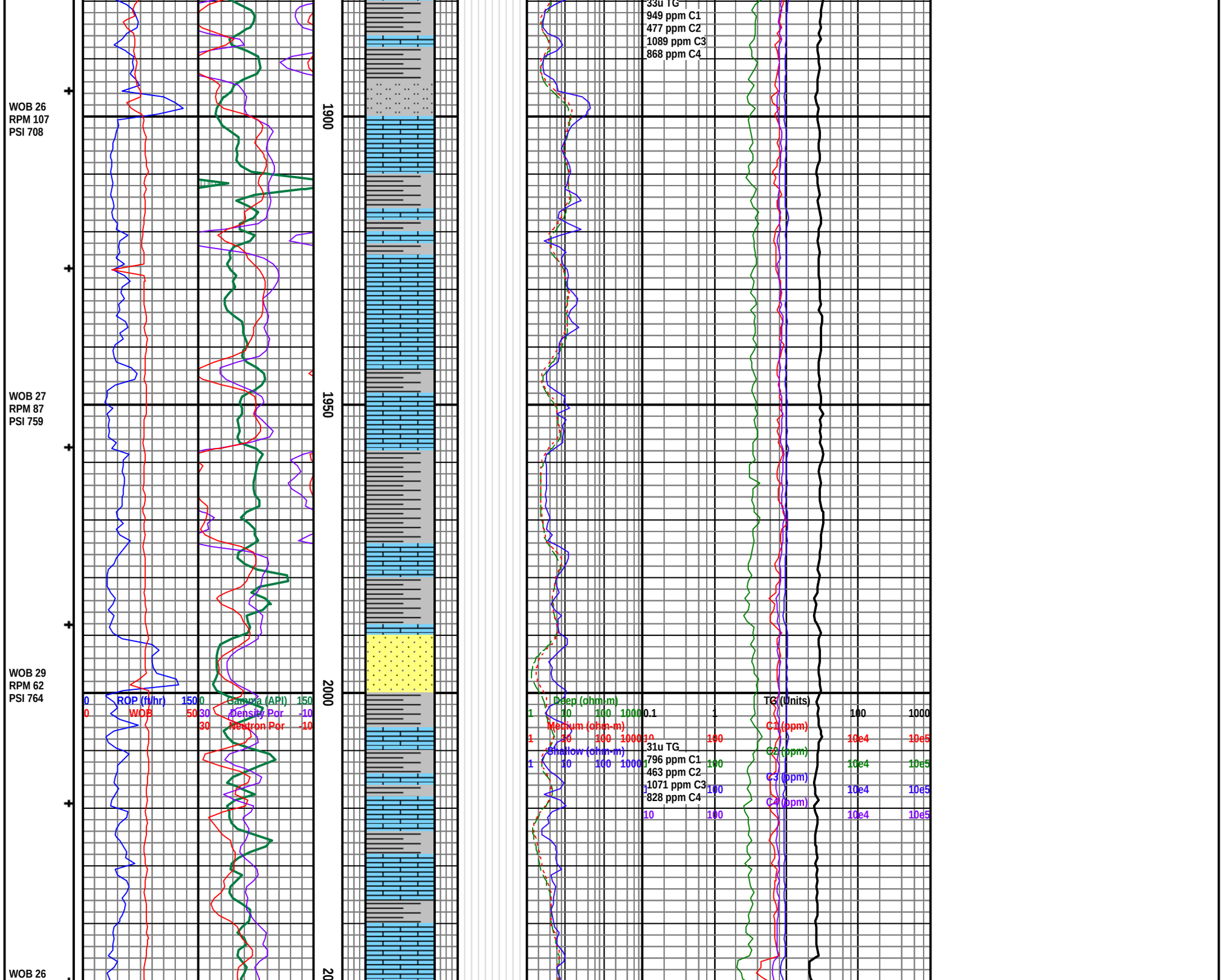
SILTSTONE: medium gray to medium dark gray, firm, blocky cuttings, significant very fine sand, calcareous.

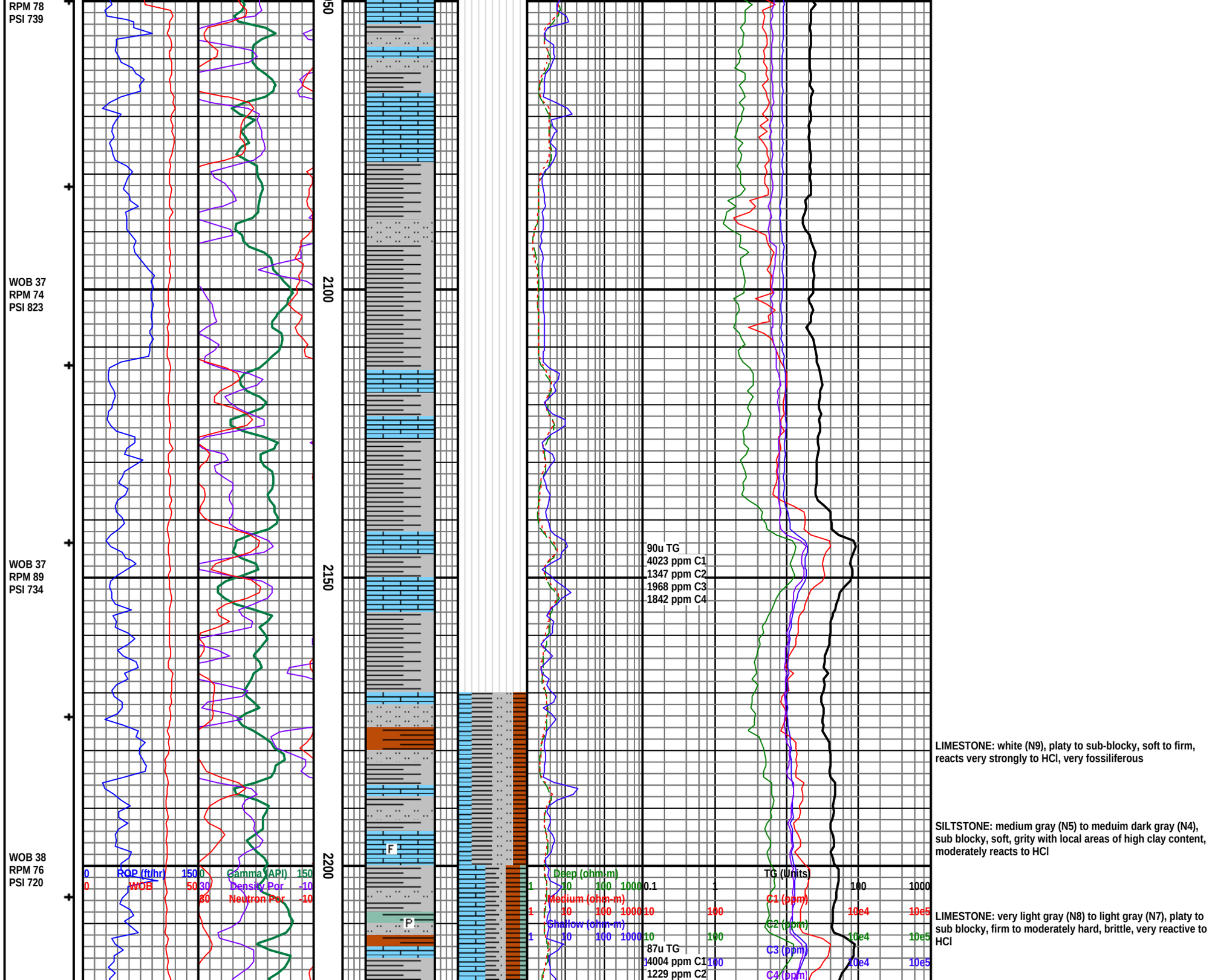
LIMY DOLOMITE: Light gray to medium gray, firm, sub-rounded cuttings, microcrystalline, effervescent in HCl, slight mottled stain in Alizarin, weak, diffuse cloudy dull yellow cut, patchy halo

trace CHERT: white to clear, hard, conchoidal fracture, no reaction with HCl.


WOB 32
RPM 107
PSI 740
WOB 33
RPM 95
PSI 745
WOB 32
RPM 103
PSI 786
1550
1600
1650
1700
PASON
Depth
Correction
0 ROP (ft/hr) 1500
0 WOB 50
Gamma (API) 150
30 Density Por -10
30 Neutron Por -10
Deep (ohm-m)
1 10 100 1000
Medium (ohm-m)
1 10 100 1000
Shallow (ohm-m)
1 10 100 1000
50u TG
2036 ppm C1
728 ppm C2
1225 ppm C3
1116 ppm C4
PASON Depth
Correction
TG (Units)
0.1 1 10 100 1000
C1 (ppm)
10 100 10e4 10e5
C2 (ppm)
10 100 10e4 10e5
C3 (ppm)
10 100 10e4 10e5
C4 (ppm)
10 100 10e4 10e5
40u TG
1499 ppm C1
529 ppm C2
1080 ppm C3
920 ppm C4


WOB 34
RPM 106
PSI 816
WOB 33
RPM 113
PSI 698
9/27/2013
00:00
WOB 29
RPM 82
PSI 682
1750
1800
1850
0 ROP (ft/hr) 150
0 WOB 50
Gamma (API) 150
30 Density Por -10
30 Neutron Por -10
PASON Depth
Correction
33u TG
956 ppm C1
434 ppm C2
1047 ppm C3
907 ppm C4
Deep (ohm-m)
1 10 100 1000
Medium (ohm-m)
1 10 100 1000
Shallow (ohm-m)
1 10 100 1000
TG (Units)
0.1 1 10 100 1000
C1 (ppm)
10 100 10e4 10e5
C2 (ppm)
10 100 10e4 10e5
C3 (ppm)
10 100 10e4 10e5
C4 (ppm)
10 100 10e4 10e5

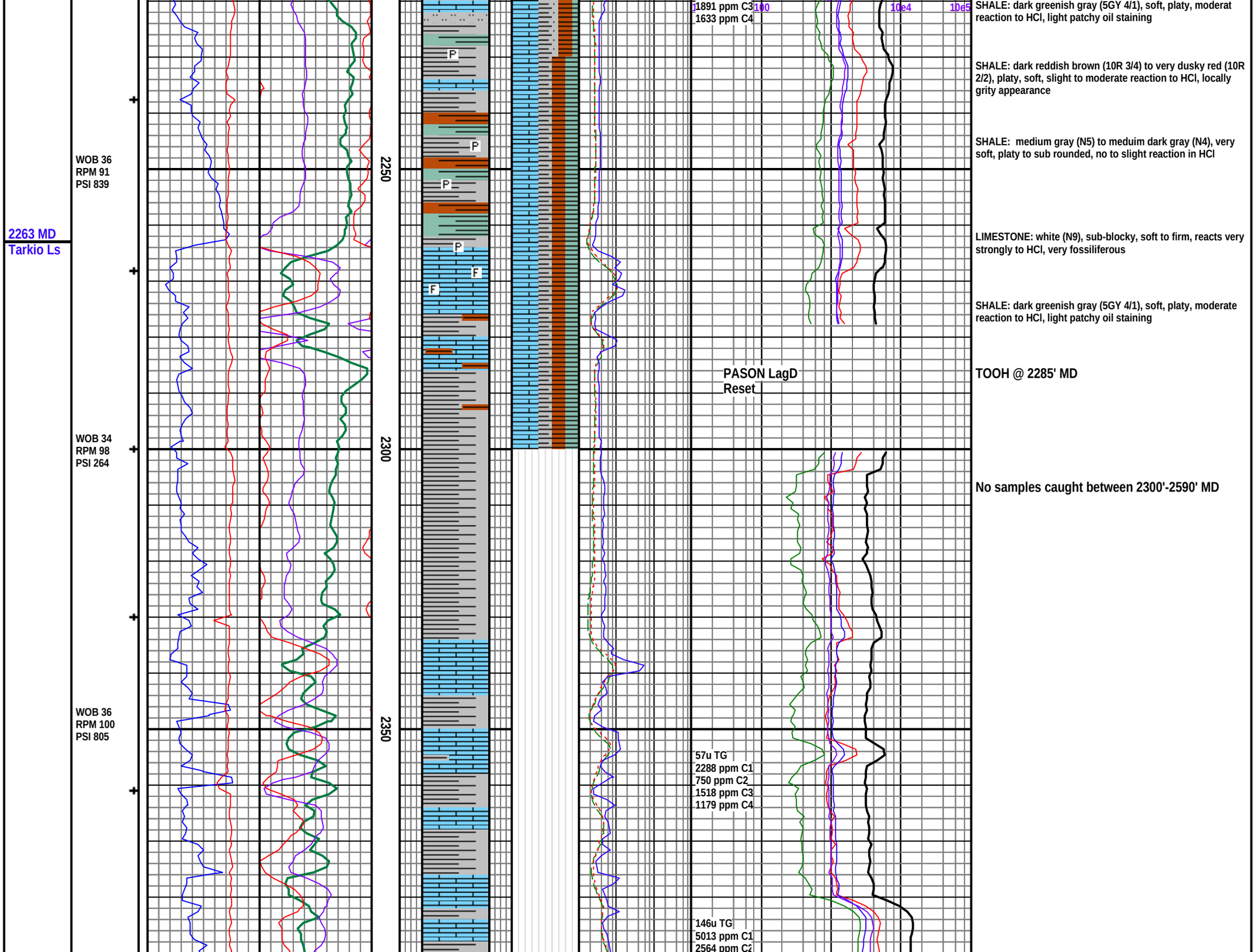

WOB 26
RPM 107
PSI 708
WOB 27
RPM 87
PSI 759
WOB 29
RPM 62
PSI 764
WOB 26
1900
1950
2000
2050
33u TG
949 ppm C1
477 ppm C2
1089 ppm C3
868 ppm C4
0 ROP (ft/hr) 150
0 WOB 50
0 Gamma (API) 150
30 Density Por -10
30 Neutron Por -10
1 Deep (ohm-m) 1000
1 Medium (ohm-m) 1000
1 Shallow (ohm-m) 1000
0.1 1 10 100 1000
TG (Units)
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
10e4
10e5
31u TG
796 ppm C1
463 ppm C2
1071 ppm C3
828 ppm C4

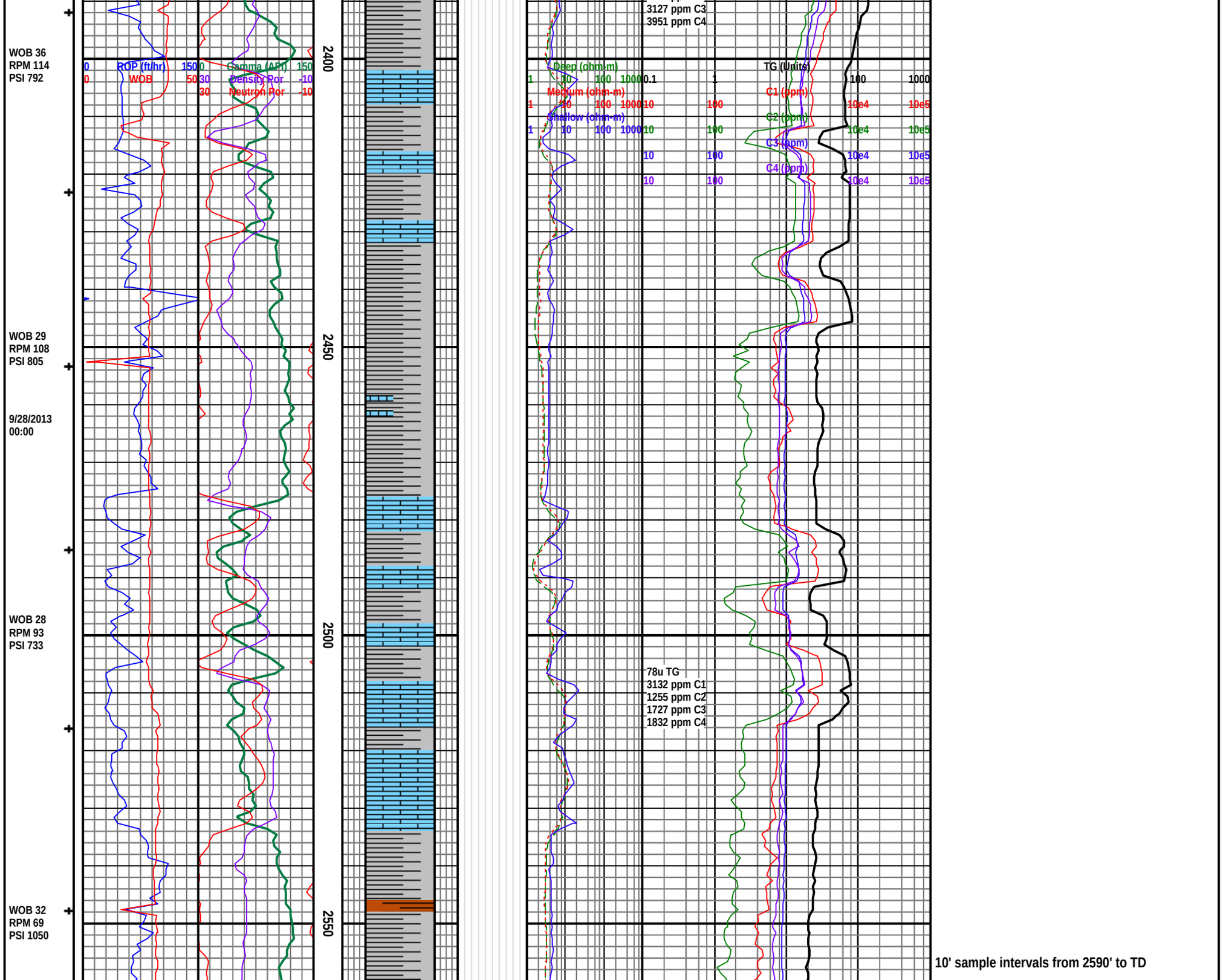


LIMESTONE: white (N9), platy to sub-blocky, soft to firm, reacts very strongly to HCl, very fossiliferous

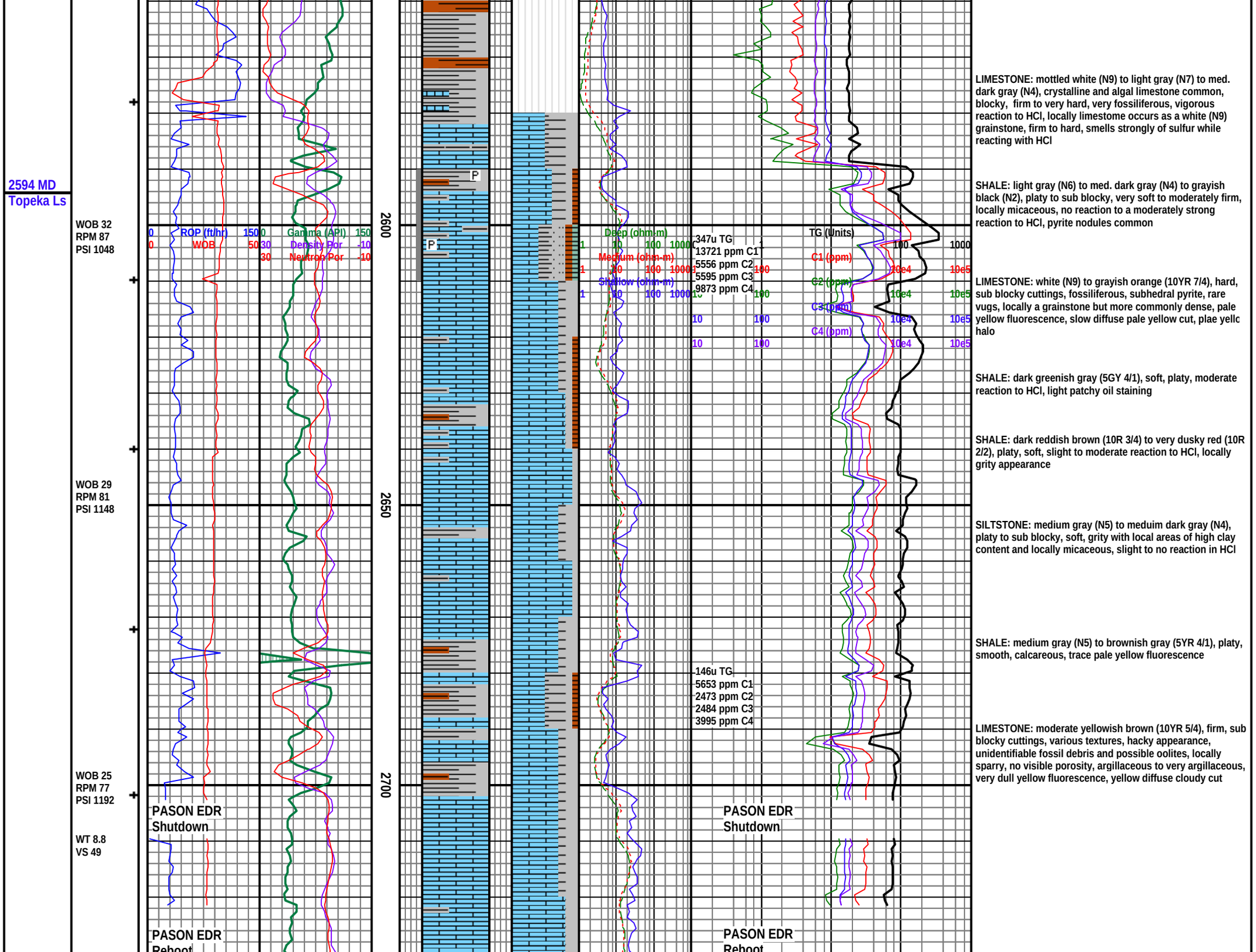
SILTSTONE: medium gray (N5) to meduim dark gray (N4), sub blocky, soft, grity with local areas of high clay content, moderately reacts to HCl

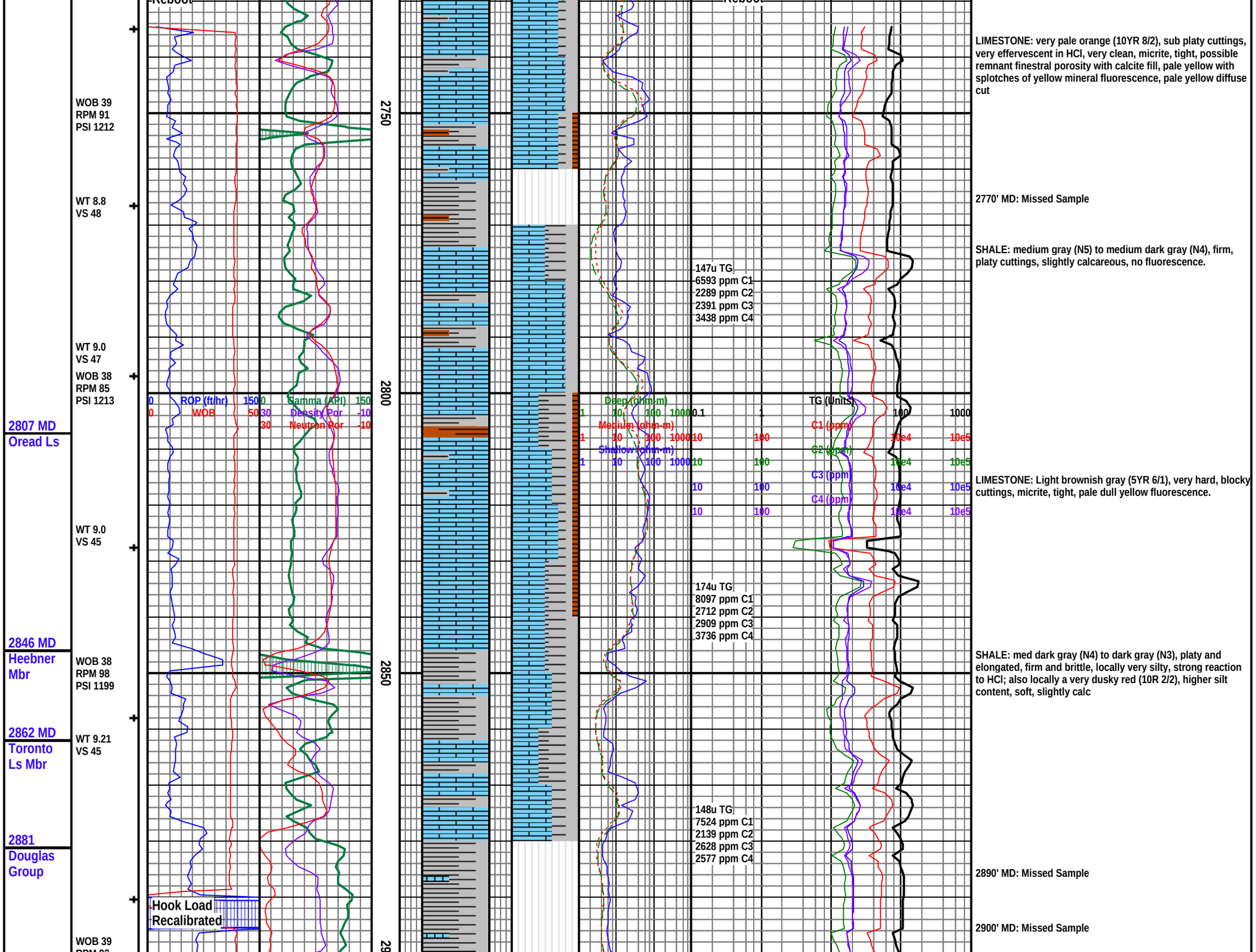
LIMESTONE: very light gray (N8) to light gray (N7), platy to sub blocky, firm to moderately hard, brittle, very reactive to HCl

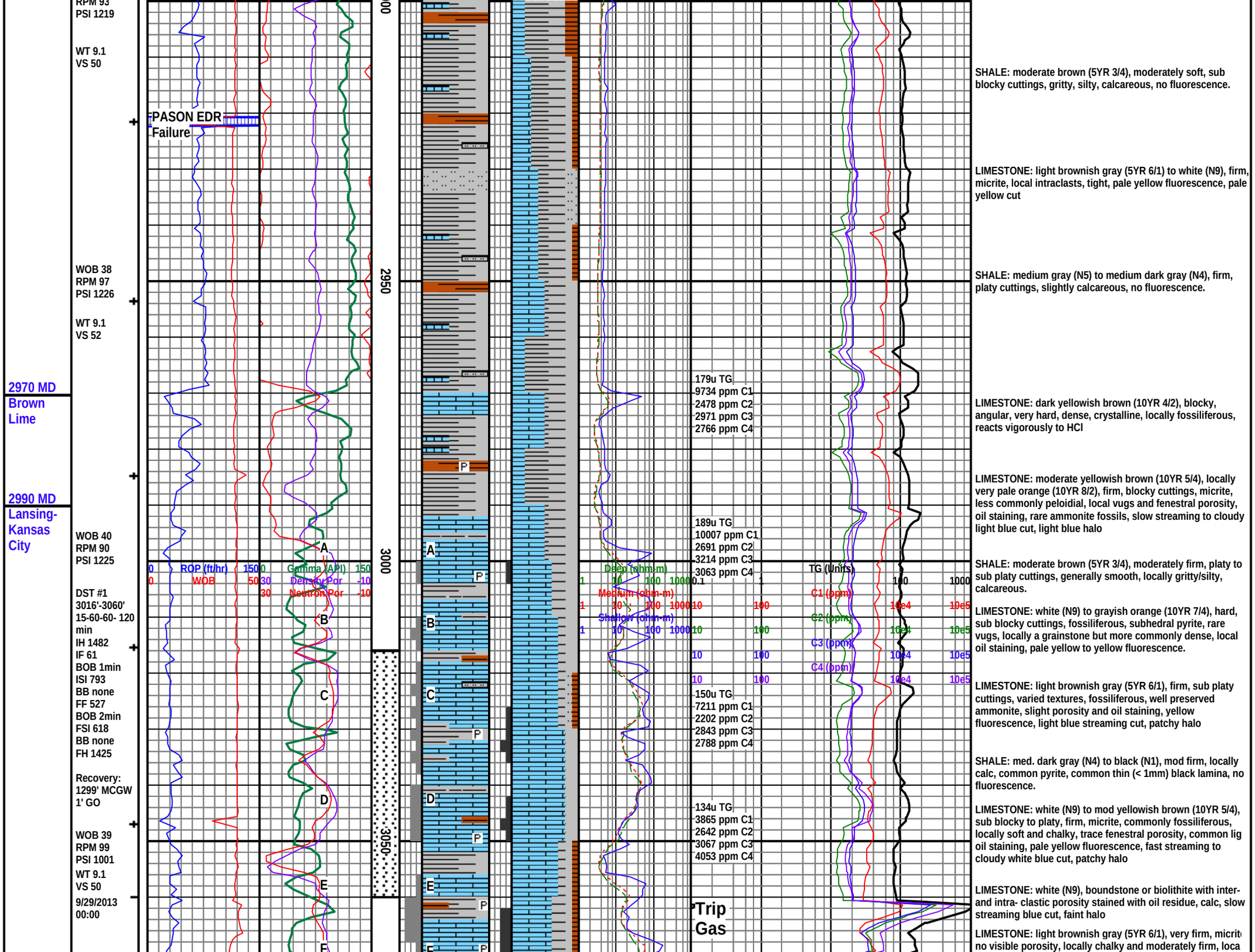

2263 MD
Tarkio Ls
WOB 36
RPM 91
PSI 839
WOB 34
RPM 98
PSI 264
WOB 36
RPM 100
PSI 805
2250
2300
2350
P
F
1891 ppm C3
1633 ppm C4
100
10e4
10e5
PASON LagD
Reset
57u TG
2288 ppm C1
750 ppm C2
1518 ppm C3
1179 ppm C4
146u TG
5013 ppm C1
2564 ppm C2
SHALE: dark greenish gray (5GY 4/1), soft, platy, moderat reaction to HCl, light patchy oil staining
SHALE: dark reddish brown (10R 3/4) to very dusky red (10R 2/2), platy, soft, slight to moderate reaction to HCl, locally grity appearance
SHALE: medium gray (N5) to meduim dark gray (N4), very soft, platy to sub rounded, no to slight reaction in HCl
LIMESTONE: white (N9), sub-blocky, soft to firm, reacts very strongly to HCl, very fossiliferous
SHALE: dark greenish gray (5GY 4/1), soft, platy, moderate reaction to HCl, light patchy oil staining
TOOH @ 2285' MD
No samples caught between 2300'-2590' MD



10' sample intervals from 2590' to TD


2594 MD
Topeka Ls
WOB 32
RPM 87
PSI 1048
WOB 29
RPM 81
PSI 1148
WOB 25
RPM 77
PSI 1192
WT 8.8
VS 49
0 ROP (ft/hr) 1500
0 WOB 50
Gamma (API) 150
30 Density Por -10
30 Neutron Por -10
Deep (ohm-m)
Medium (ohm-m)
Shallow (ohm-m)
1 10 100 1000
347u TG
13721 ppm C1
5556 ppm C2
5595 ppm C3
9873 ppm C4
146u TG
5653 ppm C1
2473 ppm C2
2484 ppm C3
3995 ppm C4
TG (Units)
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
100 1000
10e4 10e5
2600
2650
2700
PASON EDR
Shutdown
PASON EDR
Reboot
PASON EDR
Shutdown
PASON EDR
Reboot
LIMESTONE: mottled white (N9) to light gray (N7) to med. dark gray (N4), crystalline and algal limestone common, blocky, firm to very hard, very fossiliferous, vigorous reaction to HCl, locally limestome occurs as a white (N9) grainstone, firm to hard, smells strongly of sulfur while reacting with HCl
SHALE: light gray (N6) to med. dark gray (N4) to grayish black (N2), platy to sub blocky, very soft to moderately firm, locally micaceous, no reaction to a moderately strong reaction to HCl, pyrite nodules common
LIMESTONE: white (N9) to grayish orange (10YR 7/4), hard, sub blocky cuttings, fossiliferous, subhedral pyrite, rare vugs, locally a grainstone but more commonly dense, pale yellow fluorescence, slow diffuse pale yellow cut, plae yello halo
SHALE: dark greenish gray (5GY 4/1), soft, platy, moderate reaction to HCl, light patchy oil staining
SHALE: dark reddish brown (10R 3/4) to very dusky red (10R 2/2), platy, soft, slight to moderate reaction to HCl, locally grity appearance
SILTSTONE: medium gray (N5) to meduim dark gray (N4), platy to sub blocky, soft, grity with local areas of high clay content and locally micaceous, slight to no reaction in HCl
SHALE: medium gray (N5) to brownish gray (5YR 4/1), platy, smooth, calcareous, trace pale yellow fluorescence
LIMESTONE: moderate yellowish brown (10YR 5/4), firm, sub blocky cuttings, various textures, hacky appearance, unidentifiable fossil debris and possible oolites, locally sparry, no visible porosity, argillaceous to very argillaceous, very dull yellow fluorescence, yellow diffuse cloudy cut


Reboot
WOB 39
RPM 91
PSI 1212
WT 8.8
VS 48
WT 9.0
VS 47
WOB 38
RPM 85
PSI 1213
2807 MD
Oread Ls
WT 9.0
VS 45
2846 MD
Heebner Mbr
WOB 38
RPM 98
PSI 1199
2862 MD
WT 9.21
VS 45
Toronto Ls Mbr
2881
Douglas Group
Hook Load Recalibrated
WOB 39
2750
2800
2850
0 ROP (ft/hr) 1500
0 WOB 50
Gamma (API) 150
30 Density Por -10
30 Neutron Por -10
Deep (ohm-m)
Medium (ohm-m)
Shallow (ohm-m)
1 10 100 1000
0.1 1 10 100 1000
TG (Units)
C1 (ppm)
C2 (ppm)
C3 (ppm)
C4 (ppm)
10 100 10e4 10e5
147u TG
6593 ppm C1
2289 ppm C2
2391 ppm C3
3438 ppm C4
174u TG
8097 ppm C1
2712 ppm C2
2909 ppm C3
3736 ppm C4
148u TG
7524 ppm C1
2139 ppm C2
2628 ppm C3
2577 ppm C4
LIMESTONE: very pale orange (10YR 8/2), sub platy cuttings, very effervescent in HCl, very clean, micrite, tight, possible remnant finestral porosity with calcite fill, pale yellow with splotches of yellow mineral fluorescence, pale yellow diffuse cut
2770' MD: Missed Sample
SHALE: medium gray (N5) to medium dark gray (N4), firm, platy cuttings, slightly calcareous, no fluorescence.
LIMESTONE: Light brownish gray (5YR 6/1), very hard, blocky cuttings, micrite, tight, pale dull yellow fluorescence.
SHALE: med dark gray (N4) to dark gray (N3), platy and elongated, firm and brittle, locally very silty, strong reaction to HCl; also locally a very dusky red (10R 2/2), higher silt content, soft, slightly calc
2890' MD: Missed Sample
2900' MD: Missed Sample



SHALE: moderate brown (5YR 3/4), moderately soft, sub blocky cuttings, gritty, silty, calcareous, no fluorescence.

LIMESTONE: light brownish gray (5YR 6/1) to white (N9), firm, micrite, local intraclasts, tight, pale yellow fluorescence, pale yellow cut

SHALE: medium gray (N5) to medium dark gray (N4), firm, platy cuttings, slightly calcareous, no fluorescence.

LIMESTONE: dark yellowish brown (10YR 4/2), blocky, angular, very hard, dense, crystalline, locally fossiliferous, reacts vigorously to HCl

LIMESTONE: moderate yellowish brown (10YR 5/4), locally very pale orange (10YR 8/2), firm, blocky cuttings, micrite, less commonly peloidial, local vugs and fenestral porosity, oil staining, rare ammonite fossils, slow streaming to cloudy light blue cut, light blue halo

SHALE: moderate brown (5YR 3/4), moderately firm, platy to sub platy cuttings, generally smooth, locally gritty/silty, calcareous.

LIMESTONE: white (N9) to grayish orange (10YR 7/4), hard, sub blocky cuttings, fossiliferous, subhedral pyrite, rare vugs, locally a grainstone but more commonly dense, local oil staining, pale yellow to yellow fluorescence.

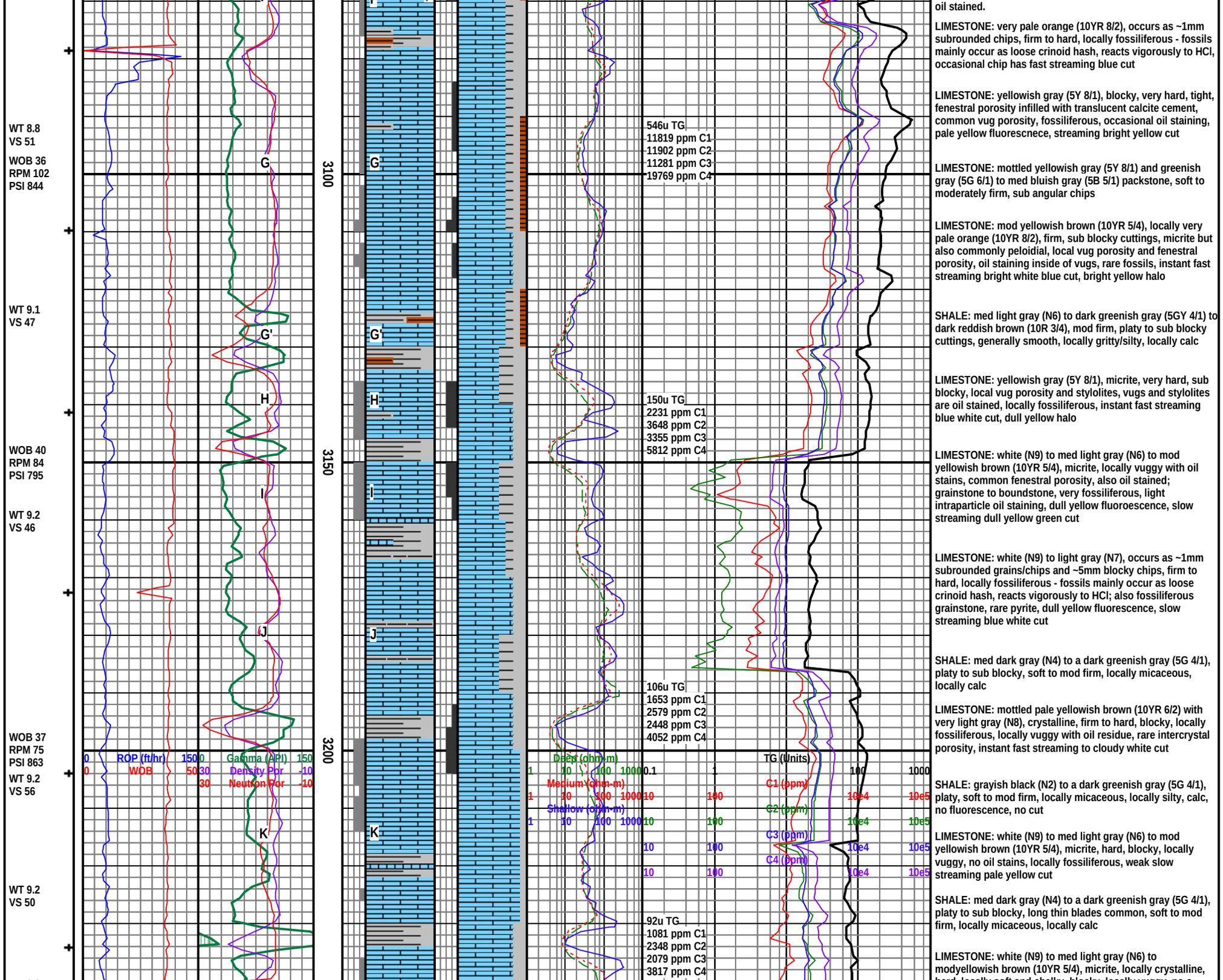
LIMESTONE: light brownish gray (5YR 6/1), firm, sub platy cuttings, varied textures, fossiliferous, well preserved ammonite, slight porosity and oil staining, yellow fluorescence, light blue streaming cut, patchy halo

SHALE: med. dark gray (N4) to black (N1), mod firm, locally calc, common pyrite, common thin (< 1mm) black lamina, no fluorescence.

LIMESTONE: white (N9) to mod yellowish brown (10YR 5/4), sub blocky to platy, firm, micrite, commonly fossiliferous, locally soft and chalky, trace fenestral porosity, common lig oil staining, pale yellow fluorescence, fast streaming to cloudy white blue cut, patchy halo

LIMESTONE: white (N9), boundstone or biolithite with inter- and intra- clastic porosity stained with oil residue, calc, slow streaming blue cut, faint halo

LIMESTONE: light brownish gray (5YR 6/1), very firm, micrit no visible porosity, locally chalky and moderately firm, loca



oil stained.

LIMESTONE: very pale orange (10YR 8/2), occurs as ~1mm subrounded chips, firm to hard, locally fossiliferous - fossils mainly occur as loose crinoid hash, reacts vigorously to HCl, occasional chip has fast streaming blue cut

LIMESTONE: yellowish gray (5Y 8/1), blocky, very hard, tight, fenestral porosity infilled with translucent calcite cement, common vug porosity, fossiliferous, occasional oil staining, pale yellow fluorescnece, streaming bright yellow cut

LIMESTONE: mottled yellowish gray (5Y 8/1) and greenish gray (5G 6/1) to med bluish gray (5B 5/1) packstone, soft to moderately firm, sub angular chips

LIMESTONE: mod yellowish brown (10YR 5/4), locally very pale orange (10YR 8/2), firm, sub blocky cuttings, micrite but also commonly peloidial, local vug porosity and fenestral porosity, oil staining inside of vugs, rare fossils, instant fast streaming bright white blue cut, bright yellow halo

SHALE: med light gray (N6) to dark greenish gray (5GY 4/1) to dark reddish brown (10R 3/4), mod firm, platy to sub blocky cuttings, generally smooth, locally gritty/silty, locally calc

LIMESTONE: yellowish gray (5Y 8/1), micrite, very hard, sub blocky, local vug porosity and stylolites, vugs and stylolites are oil stained, locally fossiliferous, instant fast streaming blue white cut, dull yellow halo

LIMESTONE: white (N9) to med light gray (N6) to mod yellowish brown (10YR 5/4), micrite, locally vuggy with oil stains, common fenestral porosity, also oil stained; grainstone to boundstone, very fossiliferous, light intraparticle oil staining, dull yellow fluoroescence, slow streaming dull yellow green cut

LIMESTONE: white (N9) to light gray (N7), occurs as ~1mm subrounded grains/chips and ~5mm blocky chips, firm to hard, locally fossiliferous - fossils mainly occur as loose crinoid hash, reacts vigorously to HCl; also fossiliferous grainstone, rare pyrite, dull yellow fluorescence, slow streaming blue white cut

SHALE: med dark gray (N4) to a dark greenish gray (5G 4/1), platy to sub blocky, soft to mod firm, locally micaceous, locally calc

LIMESTONE: mottled pale yellowish brown (10YR 6/2) with very light gray (N8), crystalline, firm to hard, blocky, locally fossiliferous, locally vuggy with oil residue, rare intercrystal porosity, instant fast streaming to cloudy white cut

SHALE: grayish black (N2) to a dark greenish gray (5G 4/1), platy, soft to mod firm, locally micaceous, locally silty, calc, no fluorescence, no cut

LIMESTONE: white (N9) to med light gray (N6) to mod yellowish brown (10YR 5/4), micrite, hard, blocky, locally vuggy, no oil stains, locally fossiliferous, weak slow streaming pale yellow cut

SHALE: med dark gray (N4) to a dark greenish gray (5G 4/1), platy to sub blocky, long thin blades common, soft to mod firm, locally micaceous, locally calc

LIMESTONE: white (N9) to med light gray (N6) to modyellowish brown (10YR 5/4), micrite, locally crystalline,

WT 9.2
VS 53

WOB 35
RPM 55
PSI 952

3251 MD
Arbuckle

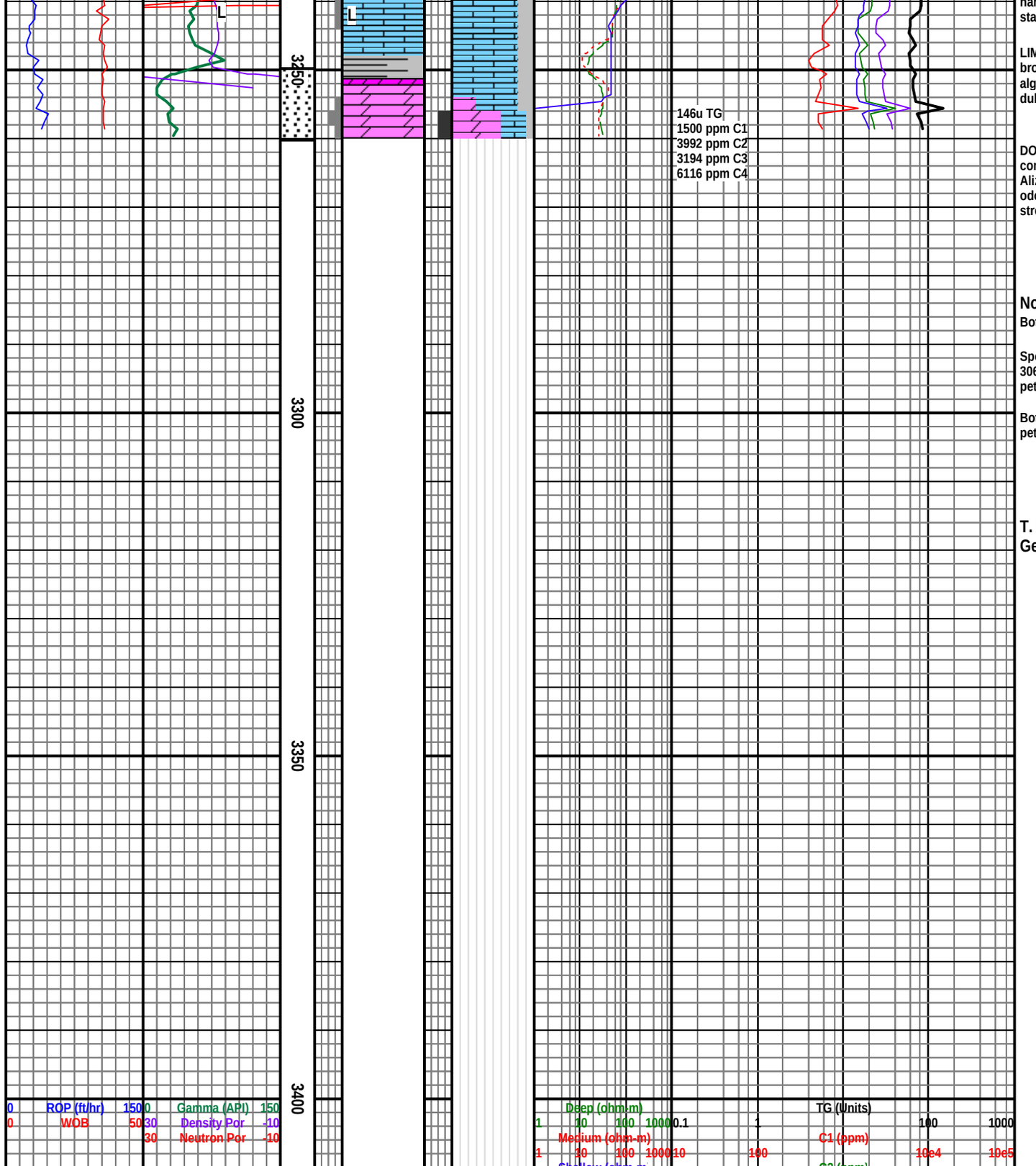
3260

Rig TD

TD 3260'
9/30/2013
02:00

DST #2
3250'-3260'
15-60-60- 120 min
IH 1592
IF 671
BOB 20sec
ISI 1042
BOB 12min
FF 1042
BOB 1sec
FSI 1043
BOB 6min
FH 1573

Recovery:
1698' Water
932' Oil



hard, locally soft and chalky, blocky, locally vuggy, no o stains, locally fossiliferous, no fluorescence, no cut

LIMESTONE: very pale orange (10YR 8/2) to pale yellowish brown (10YR 6/2), blocky, firm to hard, though can be soft, algal laminations visible, fossiliferous, no oil staining, patchy dull yellow fluorescence, no cut

DOLOMITE: white (N9) to buff, crysalline, sucrosic texture common, visible porosity, hard, vugs common, no stain in Alizarin Red, slow mild reaction in HCl, strong petroliferous odor, yellow flouorescence, instant bright white blue fast streaming cut and milky cloud, white halo

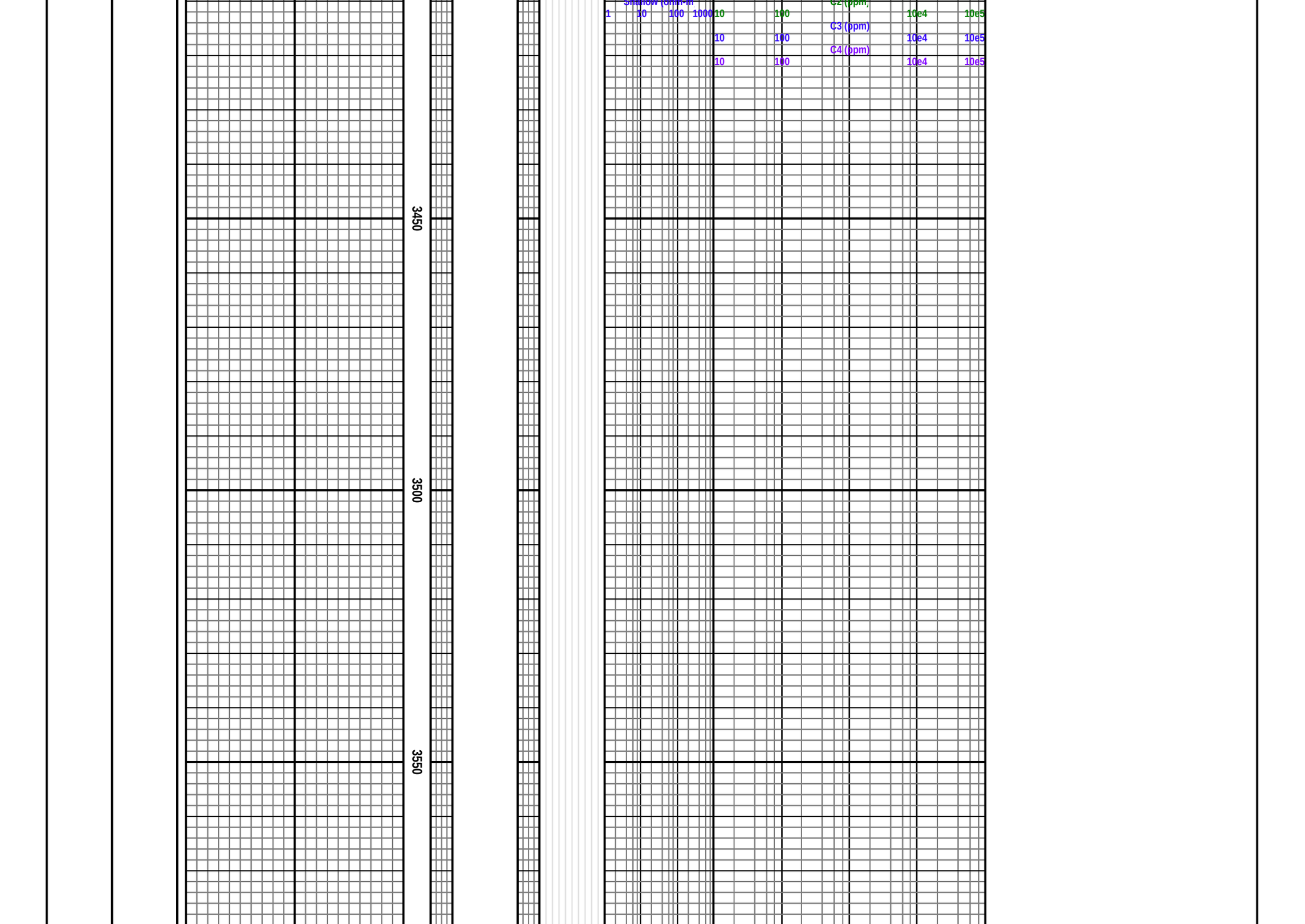
Note:

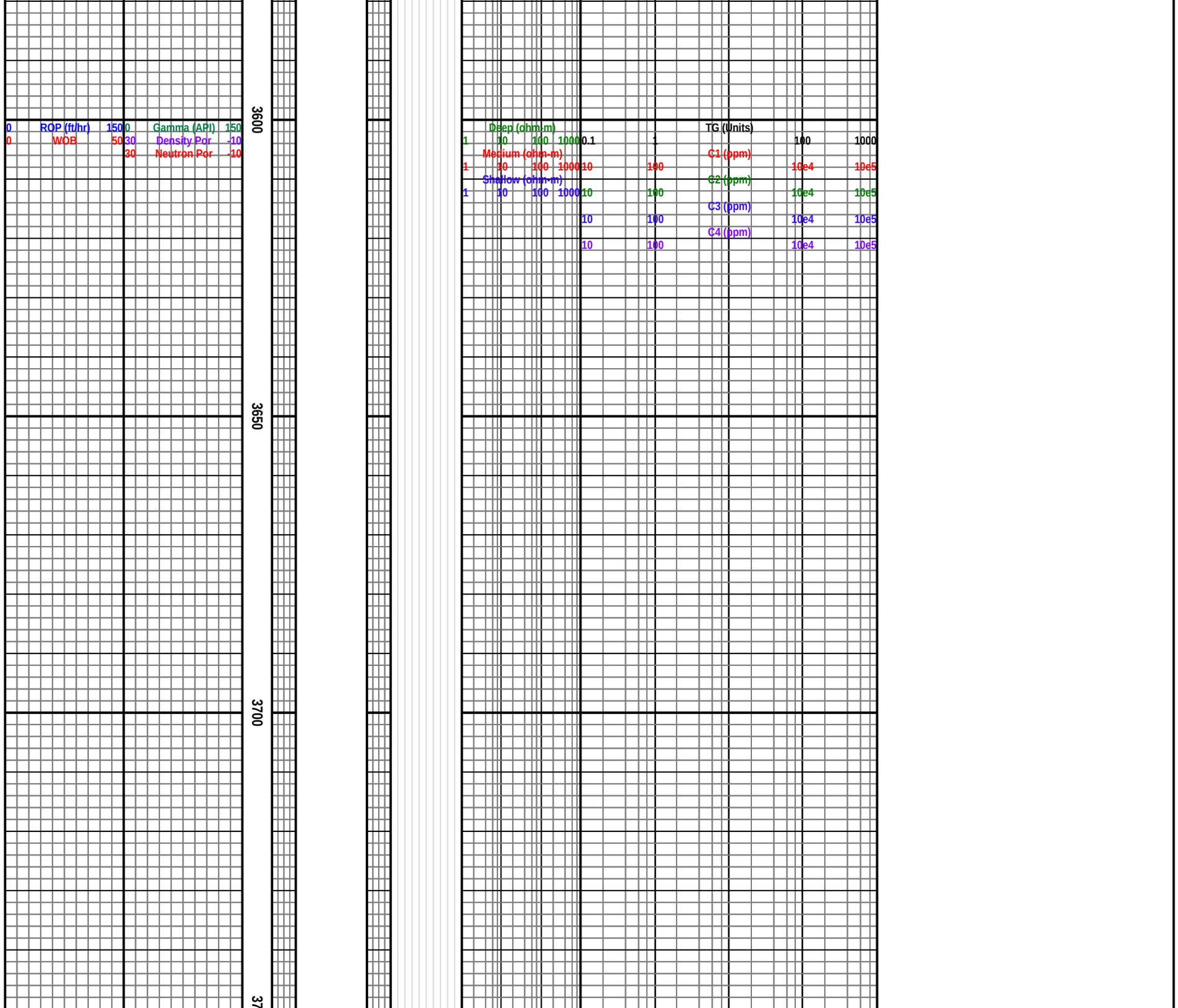
Bottoms up sample for 3055' MD contained no dolomite.

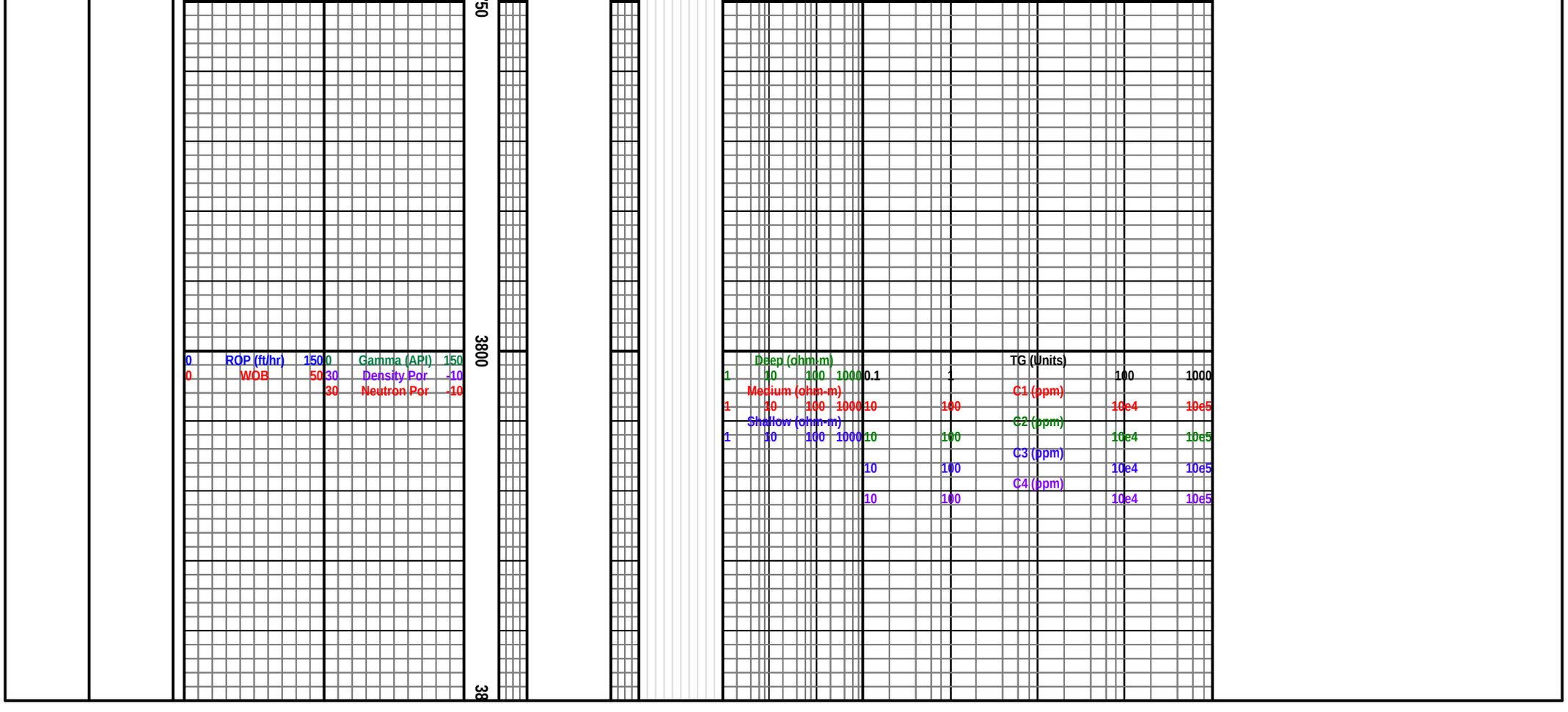
Spot check sample caught between BU 3055' MD and BU 3060' MD contained dolomite chips and had a strong petroliferous odor

Bottoms up sample 3060' MD: dolomite and strong petroliferous odor

T. M. McCoy & Co., Inc.
Geologist: Ryan Thress


Shallow (ohm-m)
1
10
100
1000
C2 (ppm)
10
100
10e4
10e5
C3 (ppm)
10
100
10e4
10e5
C4 (ppm)
10
100
10e4
10e5
3450
3500
3550


0 ROP (ft/hr) 1500
0 WOB 50
0 Gamma (API) 150
30 Density Por -10
30 Neutron Por -10
Deep (ohm-m)
1 10 100 1000
Medium (ohm-m)
1 10 100 1000
Shallow (ohm-m)
1 10 100 1000
TG (Units)
0.1 1 10 100 1000
C1 (ppm)
10 100 10e4 10e5
C2 (ppm)
10 100 10e4 10e5
C3 (ppm)
10 100 10e4 10e5
C4 (ppm)
10 100 10e4 10e5
3600
3650
3700


3750
3800
3850
0 ROP (ft/hr) 1500
0 WOB 50
Gamma (API) 150
30 Density Por -10
30 Neutron Por -10
Deep (ohm-m)
1 10 100 1000
Medium (ohm-m)
1 10 100 1000
Shallow (ohm-m)
1 10 100 1000
TG (Units)
0.1 1 100 1000
C1 (ppm)
10 100 10e4 10e5
C2 (ppm)
10 100 10e4 10e5
C3 (ppm)
10 100 10e4 10e5
C4 (ppm)
10 100 10e4 10e5