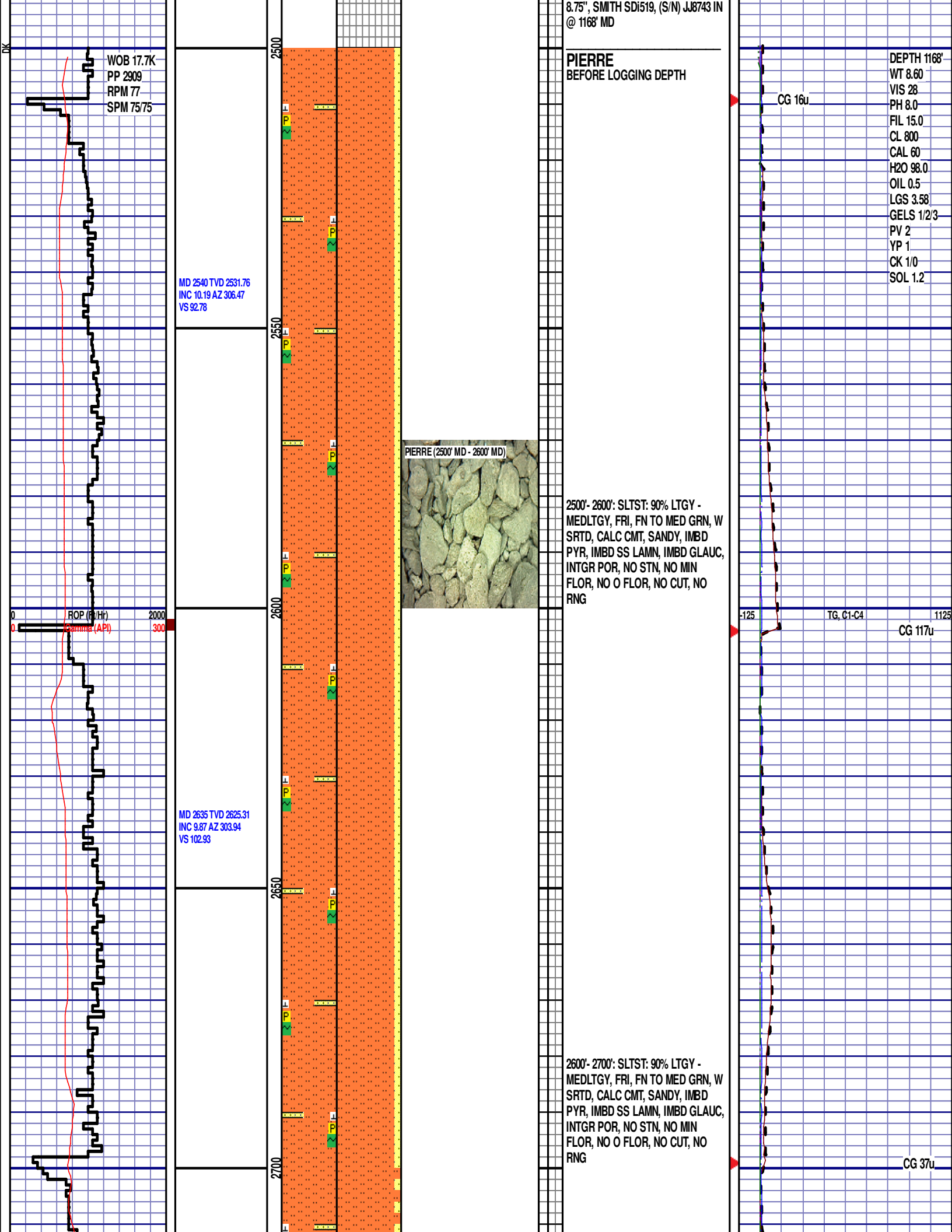


Logger On Shift			ROP (Ft/Hr) Gamma (API)		Drill Depth v. Time		Slide Rule		Survey Data		Depth		Lithology		Lithology Percentages		Sample Photographs		Porosity		Geological Description		Connections	
0			ROP (Ft/Hr)		2000						24								Oil		NOBLE ENERGY INC		-125	
0			Gamma (API)		300														Fair		OSCAR Y10-73-1HC		TG, C1-C4	
																			Good		10,3-2N-64W		1125	
																					2380' FSL, 898' FEL			
																					WELD CO., CO			
																					H&P 277			
																					LOGGERS:			
																					ROSS APODACA			
																					DANIEL KING			
																					CALLED OUT BY COMPANY MAN			
																					ON 10/17/2014 @ 5:00 AM			
																					COMMENCED LOGGING @ 10:35 PM			
																					ON 10/17/2014 @ 2500' MD W/BIT #2,			



MD 2730 TVD 2718.94  
INC 9.57 AZ 303.36  
VS 112.43

2750

2800

MD 2825 TVD 2812.66  
INC 9.31 AZ 302.49  
VS 121.5

2850

2900

MD 2919 TVD 2905.42  
INC 9.29 AZ 301.32  
VS 130.11

2700'- 2800': SLTST: 95% LTGY -  
MEDLTGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, SANDY, IMBD  
PYR, IMBD SS LAMN, INTGR POR,  
NO STN, NO MIN FLOR, NO O  
FLOR, NO CUT, NO RNG

CG 78u

-125

TG, C1-C4

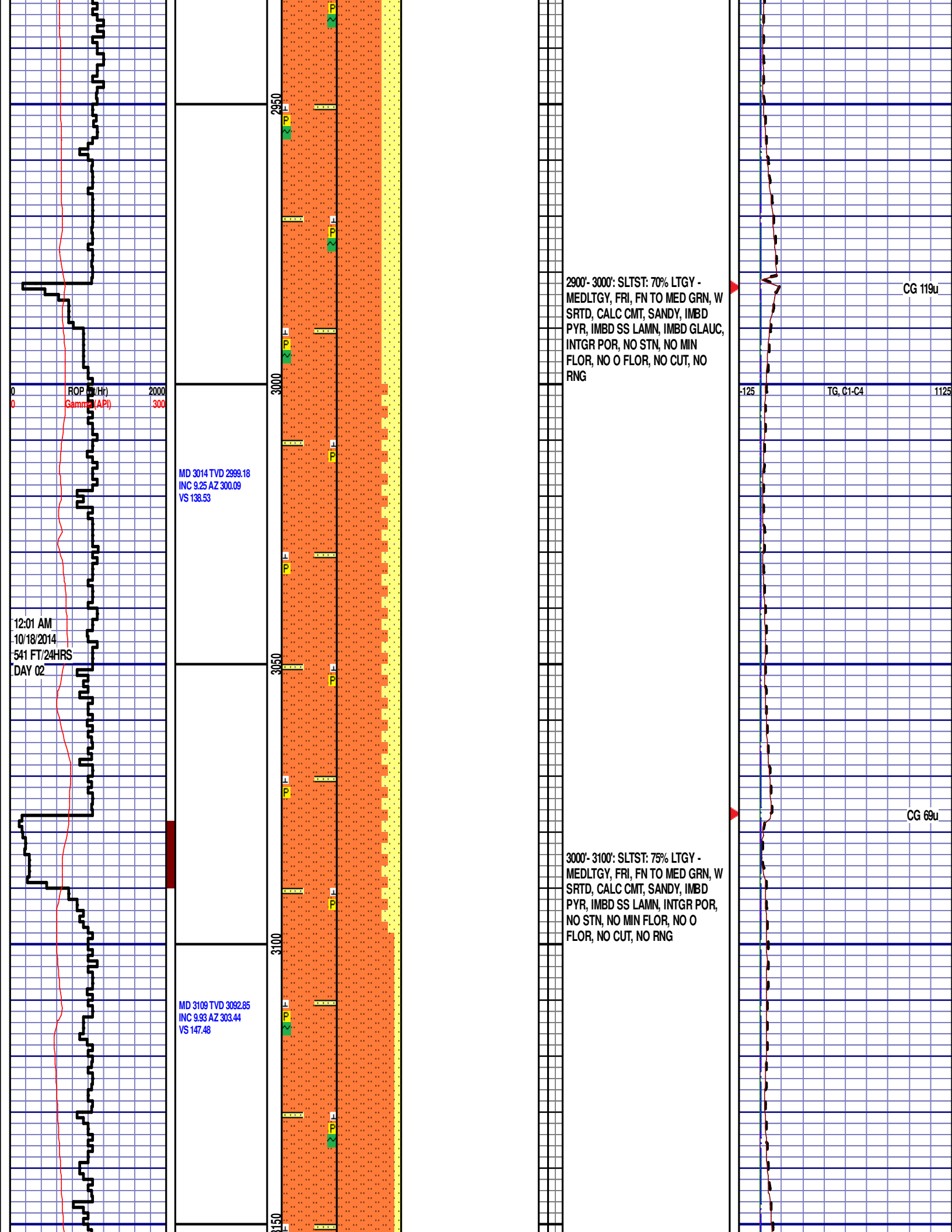
1125

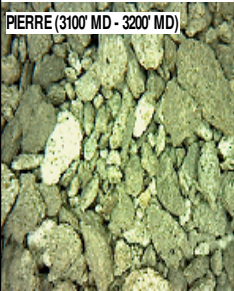
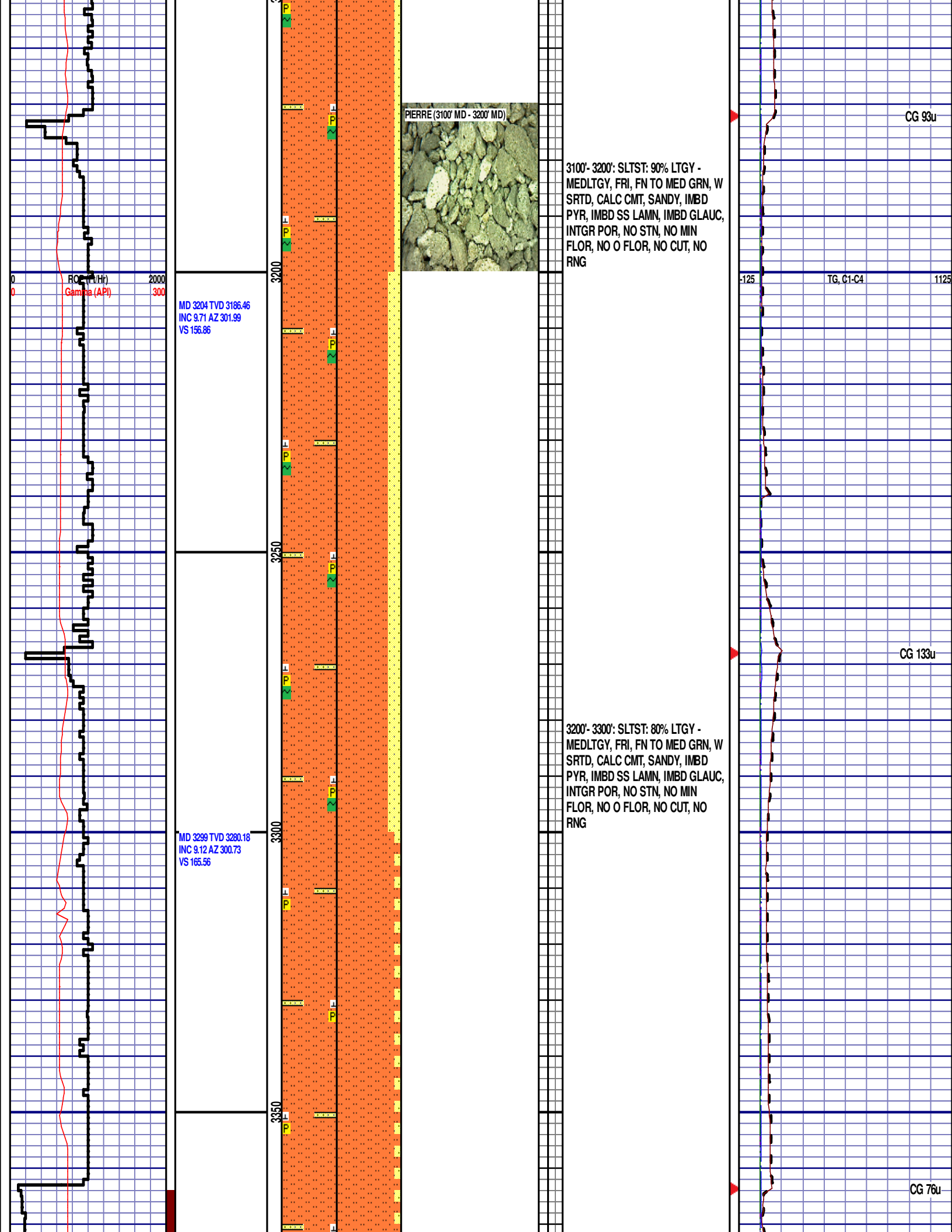
PIERRE (2800' MD - 2900' MD)



2800'- 2900': SLTST: 80% LTGY -  
MEDLTGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, SANDY, IMBD  
PYR, IMBD SS LAMN, INTGR POR,  
NO STN, NO MIN FLOR, NO O  
FLOR, NO CUT, NO RNG

CG 108u





3100'- 3200': SLTST: 90% LTGY - MEDLTGY, FRI, FN TO MED GRN, W SRTD, CALC CMT, SANDY, IMBD PYR, IMBD SS LAMN, IMBD GLAUC, INTGR POR, NO STN, NO MIN FLOR, NO O FLOR, NO CUT, NO RNG

3200'- 3300': SLTST: 80% LTGY - MEDLTGY, FRI, FN TO MED GRN, W SRTD, CALC CMT, SANDY, IMBD PYR, IMBD SS LAMN, IMBD GLAUC, INTGR POR, NO STN, NO MIN FLOR, NO O FLOR, NO CUT, NO RNG

MD 3204 TVD 3186.46  
INC 9.71 AZ 301.99  
VS 156.86

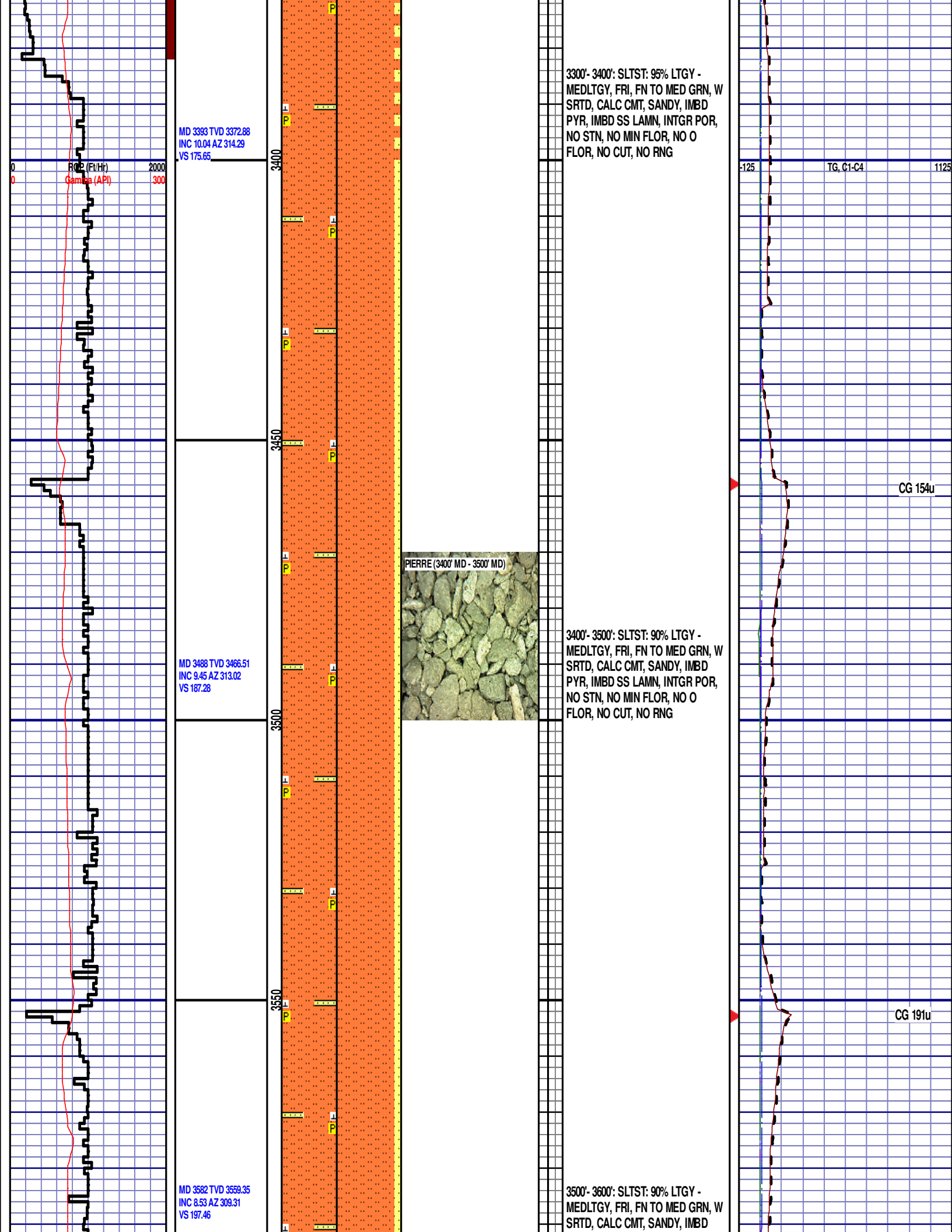
MD 3299 TVD 3280.18  
INC 9.12 AZ 300.73  
VS 165.56

CG 93u

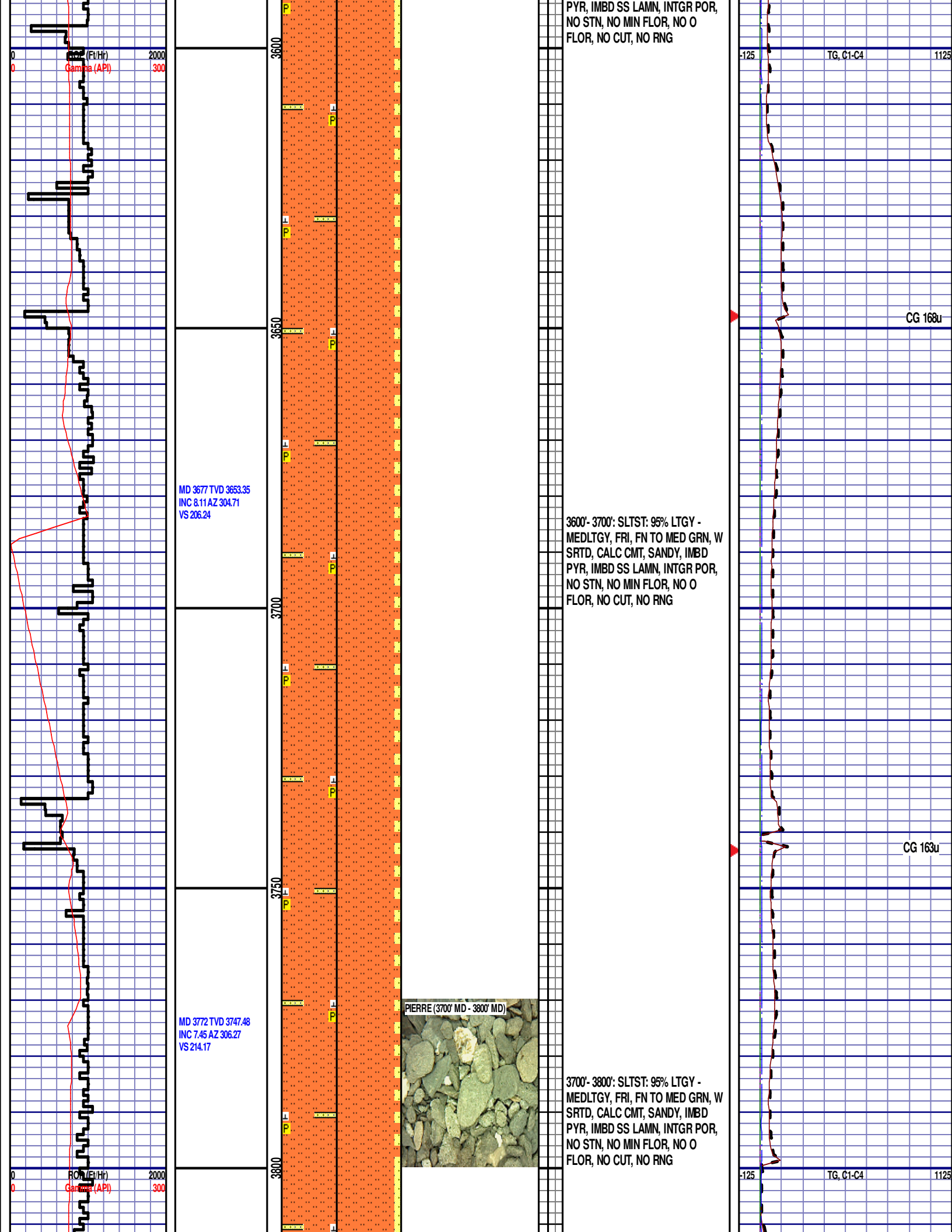
TG, C1-C4

CG 133u

CG 76u







PYR, IMBD SS LAMN, INTGR POR,  
NO STN, NO MIN FLOR, NO O  
FLOR, NO CUT, NO RNG

-125 TG, C1-C4 1125

MD 3677 TVD 3653.35  
INC 8.11 AZ 304.71  
VS 206.24

3600'- 3700': SLTST: 95% LTGY -  
MEDLTGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, SANDY, IMBD  
PYR, IMBD SS LAMN, INTGR POR,  
NO STN, NO MIN FLOR, NO O  
FLOR, NO CUT, NO RNG

CG 168u

CG 163u

MD 3772 TVD 3747.48  
INC 7.45 AZ 306.27  
VS 214.17

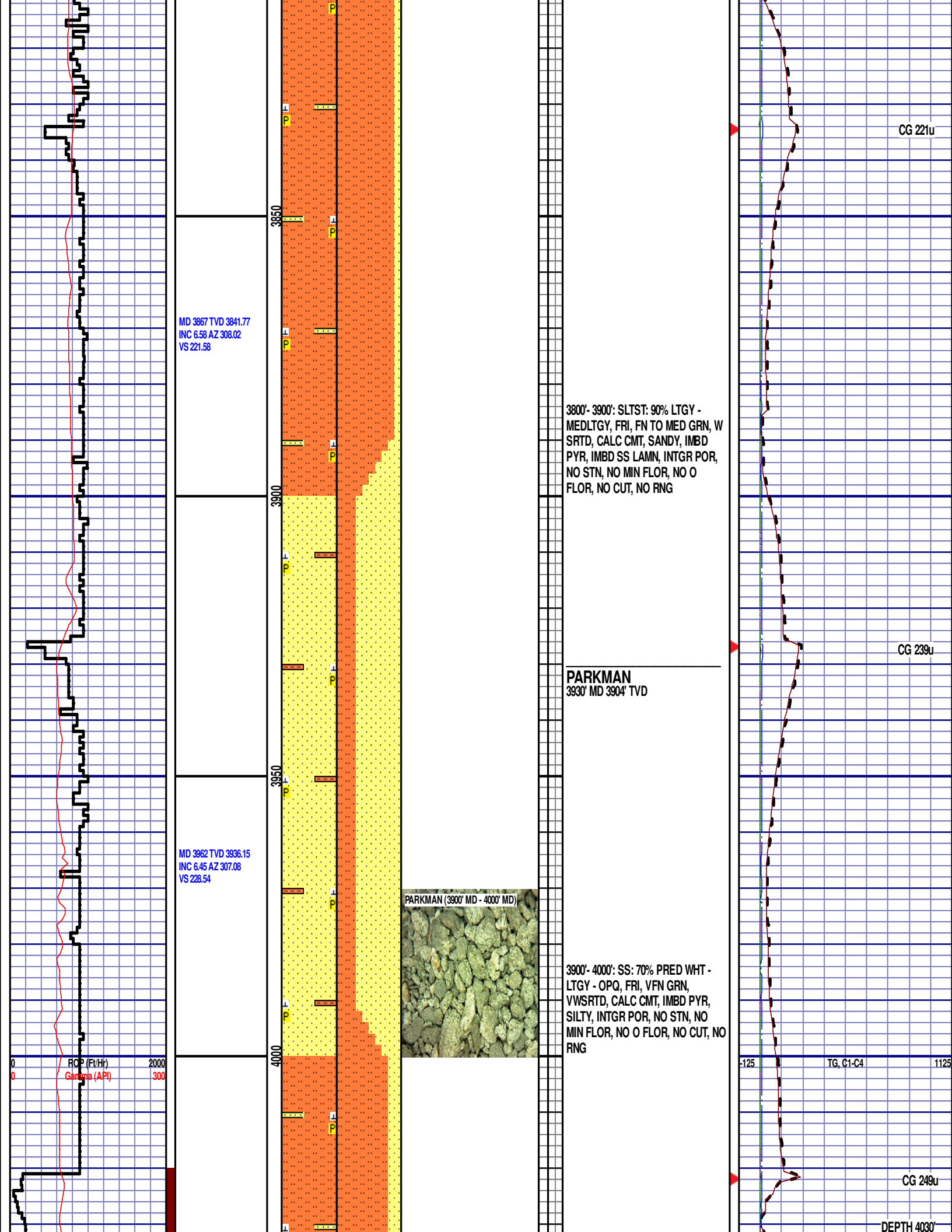
PIERRE (3700' MD - 3800' MD)



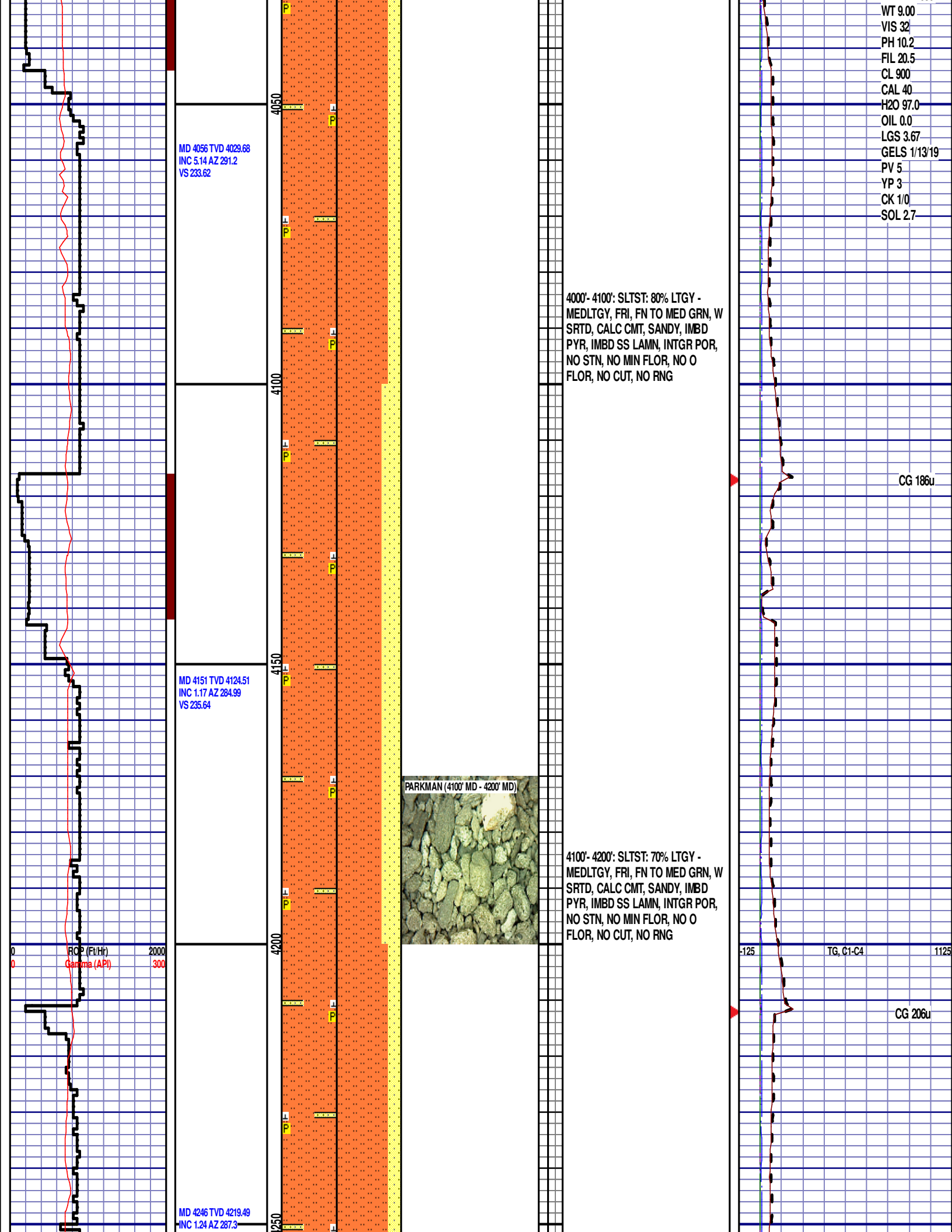
3700'- 3800': SLTST: 95% LTGY -  
MEDLTGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, SANDY, IMBD  
PYR, IMBD SS LAMN, INTGR POR,  
NO STN, NO MIN FLOR, NO O  
FLOR, NO CUT, NO RNG

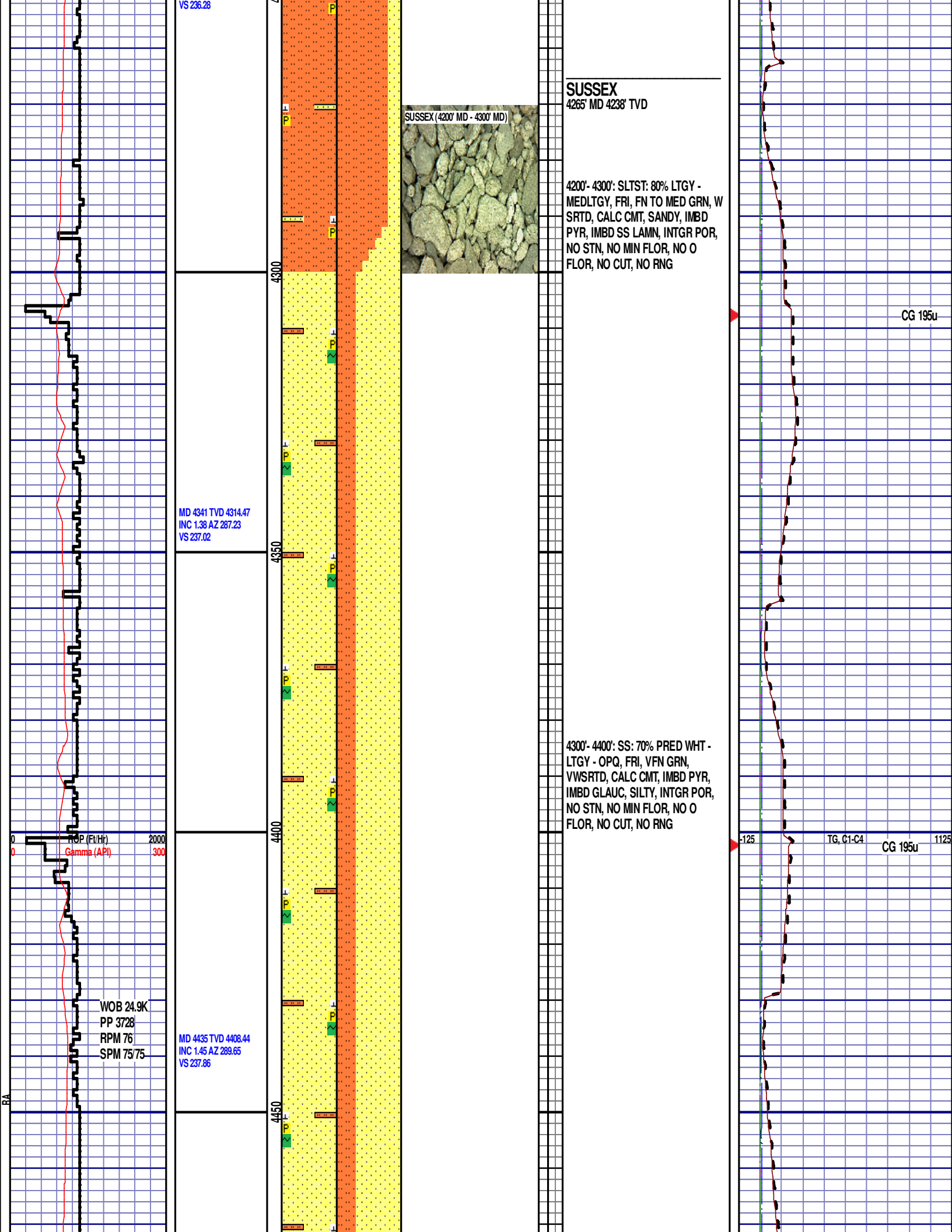
-125 TG, C1-C4 1125

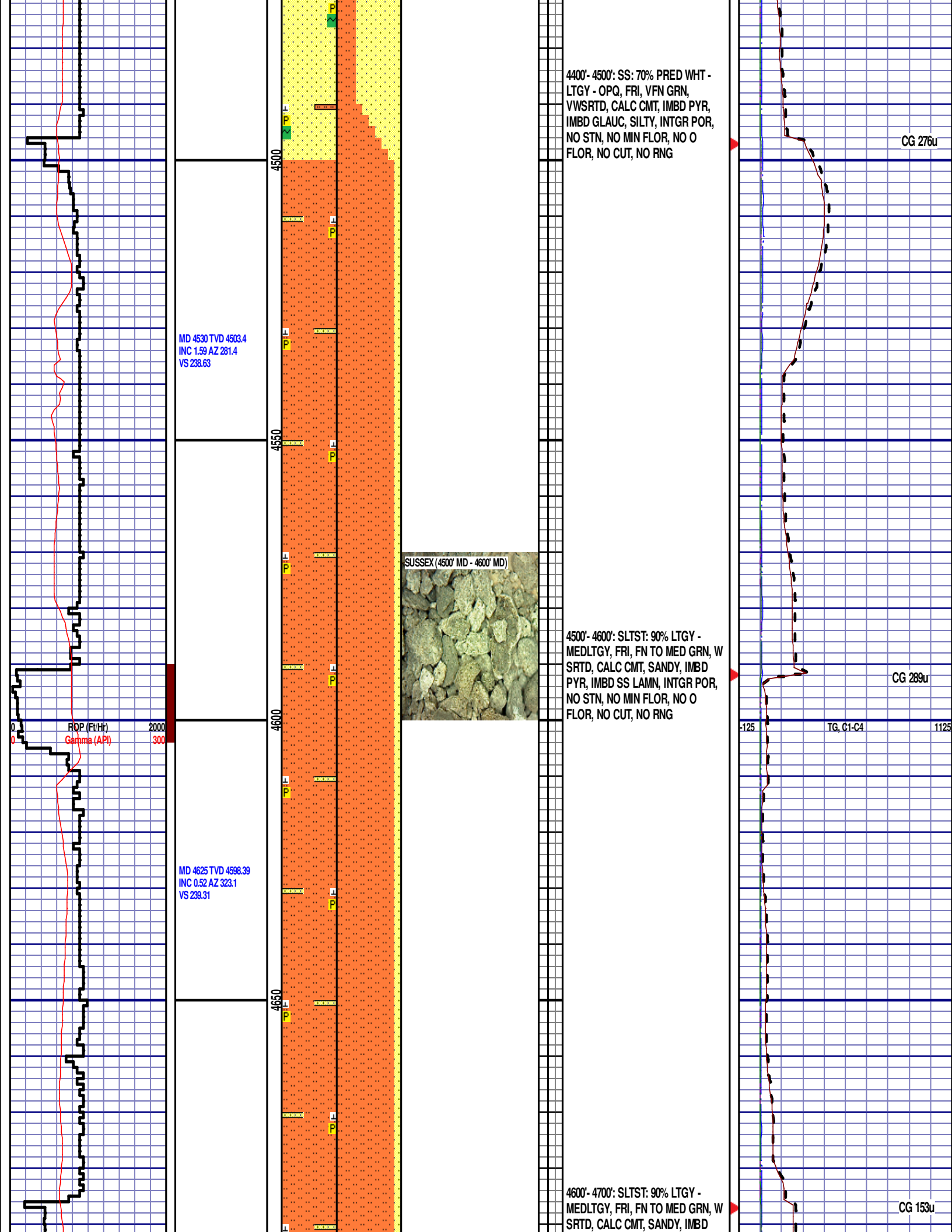
0 RO (ft/Hr) 2000  
0 Gamma (API) 300











4700'- 4800': SLTST: 85% LTGY -  
MEDLTGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, SANDY, IMBD  
PYR, IMBD SS LAMN, INTGR POR,  
NO STN, NO MIN FLOR, NO O  
FLOR, NO CUT, NO RNG

4800'- 4900': SLTST: 80% LTGY -  
MEDLTGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, SANDY, IMBD  
PYR, IMBD SS LAMN, INTGR POR,  
NO STN, NO MIN FLOR, NO O  
FLOR, NO CUT, NO RNG



INC 0.39 AZ 106.48  
VS 239.99

MD 5003 TVD 4976.38  
INC 1 AZ 135.21  
VS 239.27

MD 5098 TVD 5071.36  
INC 1.14 AZ 138.56  
VS 237.91

4950

5000

5050

5100

4900'- 5000': SLTST: 90% LTGY -  
MEDLTGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, SANDY, IMBD  
PYR, IMBD SS LAMN, INTGR POR,  
NO STN, NO MIN FLOR, NO O  
FLOR, NO CUT, NO RNG

**SHANNON**  
5065' MD 5038' TVD

SHANNON (5000' MD - 5100' MD)

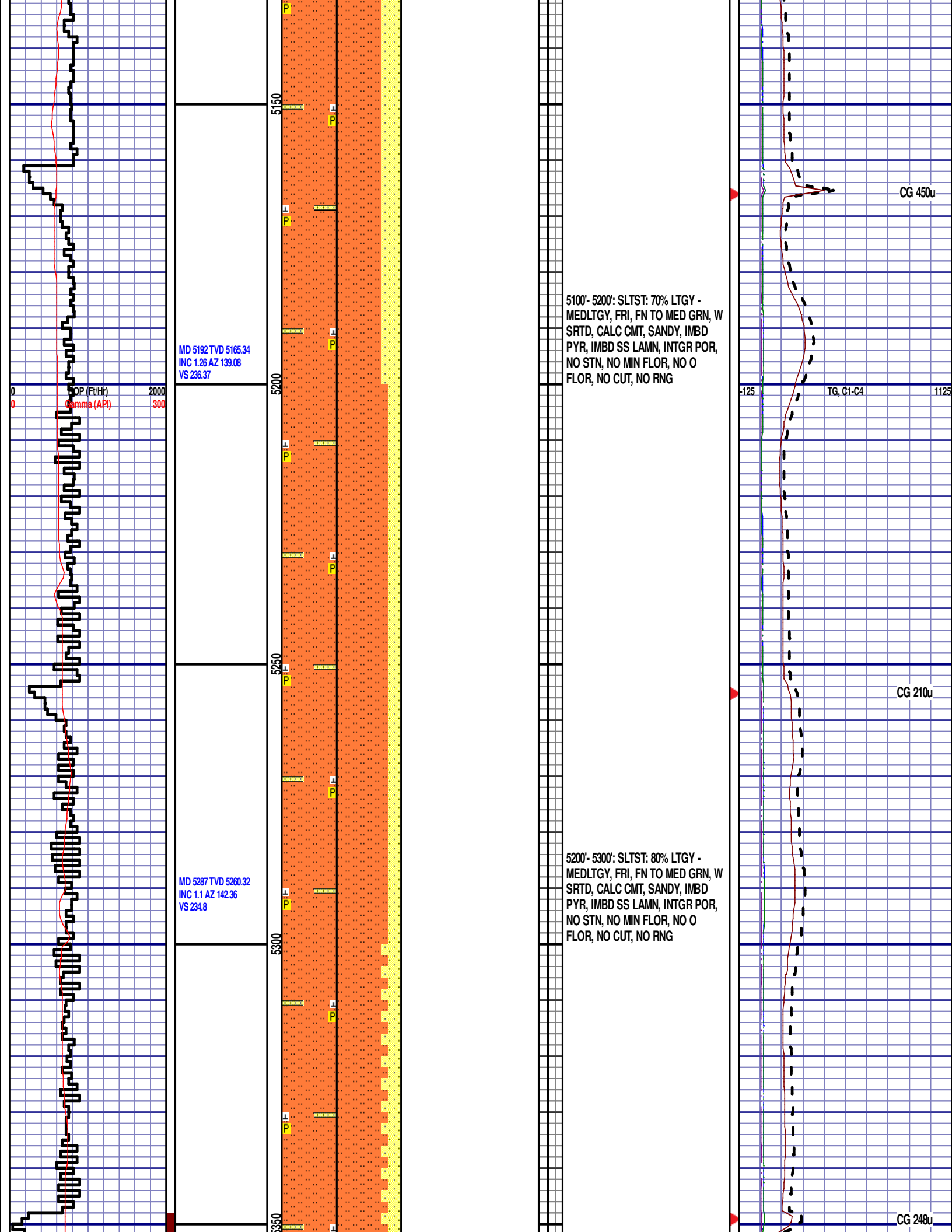


5000'- 5100': SLTST: 80% LTGY -  
MEDLTGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, SANDY, IMBD  
PYR, IMBD SS LAMN, INTGR POR,  
NO STN, NO MIN FLOR, NO O  
FLOR, NO CUT, NO RNG

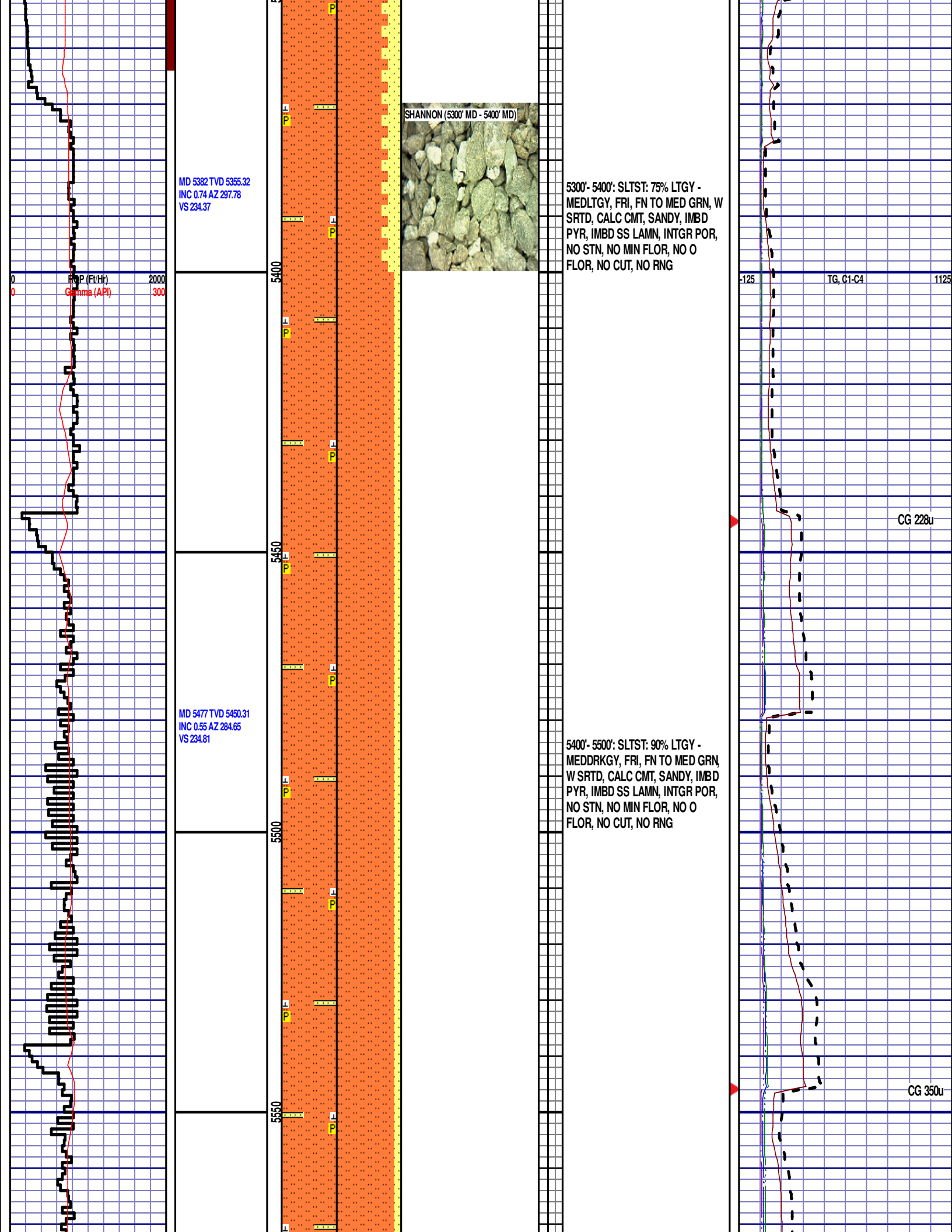
CG 259u

TG, C1-C4

CG 294u







MD 5571 TVD 5544.31  
INC 0.32 AZ 294.2  
VS 235.06

ROP (Ft/Hr) 2000  
Gamma (API) 300

WOB 27.0K  
PP 3788  
RPM 77  
SPM 75/75

MD 5761 TVD 5734.3  
INC 0.51 AZ 320.81  
VS 235.98

5600

5650

5700

5750

SHANNON (5600' MD - 5700' MD)



5500'- 5600': SLTST: 90% MEDLTGY -  
DRKGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, SANDY, IMBD  
PYR, IMBD SS LAMN, INTGR POR,  
NO STN, NO MIN FLOR, NO O  
FLOR, NO CUT, NO RNG

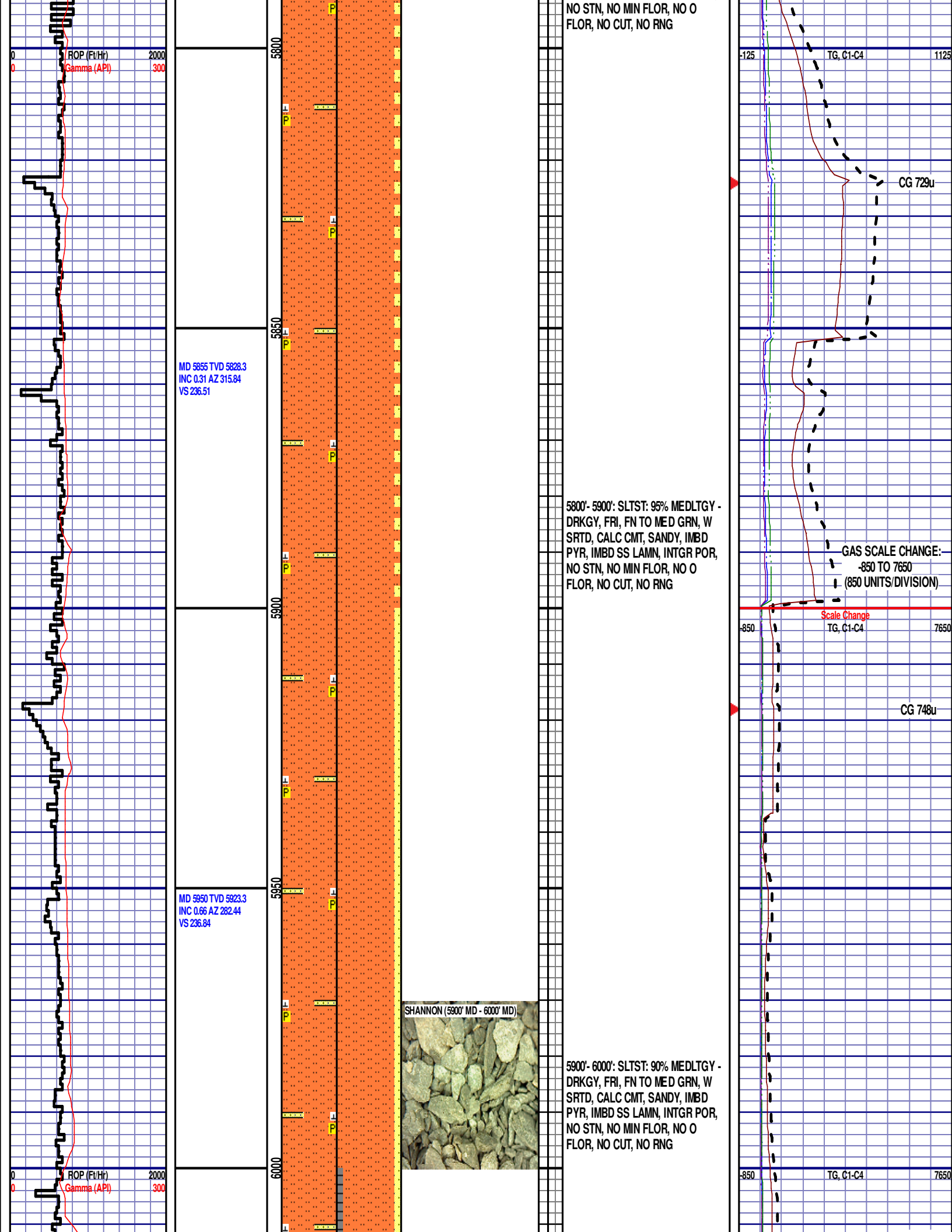
5600'- 5700': SLTST: 95% MEDLTGY -  
DRKGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, SANDY, IMBD  
PYR, IMBD SS LAMN, INTGR POR,  
NO STN, NO MIN FLOR, NO O  
FLOR, NO CUT, NO RNG

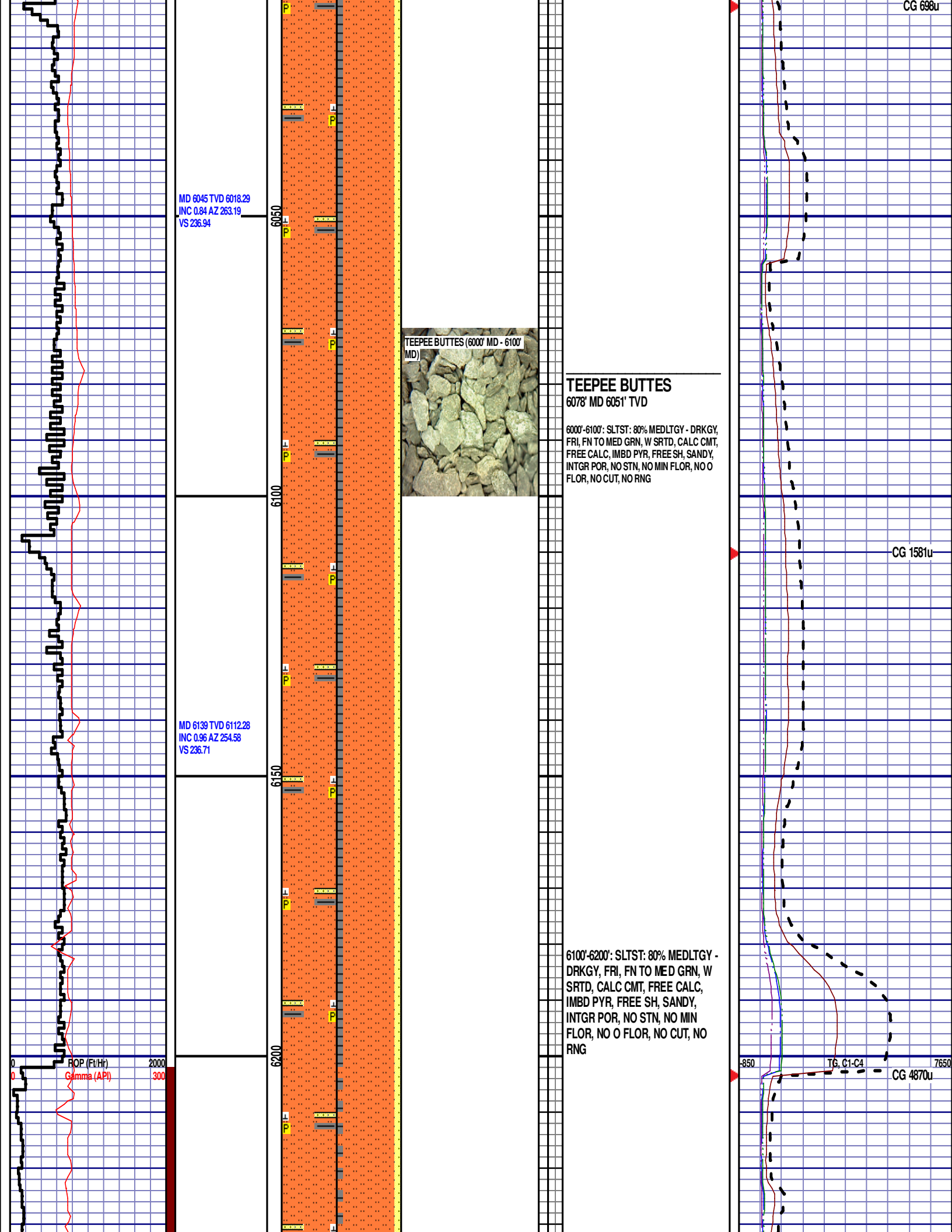
5700'- 5800': SLTST: 95% MEDLTGY -  
DRKGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, SANDY, IMBD  
PYR, IMBD SS LAMN, INTGR POR,

-125 TG, C1-C4 1125

CG 342u

CG 451u





MD 6234 TVD 6207.21  
INC 3.39 AZ 328.5  
VS 238.99

MD 6329 TVD 6300.94  
INC 14.56 AZ 0.45  
VS 253.43

MD 6424 TVD 6390.97  
INC 22.38 AZ 359.66  
VS 283.47

6250

6300

6350

6400

6450

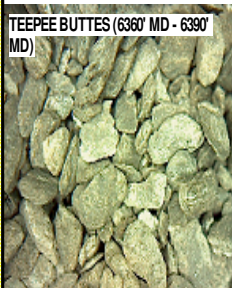
6200'-6300': SLTST: 85% MEDLTGY -  
DRKGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, FREE CALC,  
IMBD PYR, FREE SH, SANDY,  
INTGR POR, NO STN, NO MIN  
FLOR, NO O FLOR, NO CUT, NO  
RNG

SWITCHING TO 30' SAMPLE  
INTERVAL

6300'-6330': SLTST: 85% MEDLTGY -  
DRKGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, FREE CALC,  
IMBD PYR, FREE SH, SANDY,  
INTGR POR, NO STN, NO MIN  
FLOR, NO O FLOR, NO CUT, NO  
RNG

6330'-6360': SLTST: 85% MEDLTGY -  
DRKGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, FREE CALC,  
IMBD PYR, FREE SH, SANDY,  
INTGR POR, NO STN, NO MIN  
FLOR, NO O FLOR, NO CUT, NO  
RNG

TEEPEE BUTTES (6360' MD - 6390'  
MD)



6360'-6390': SLTST: 80% MEDLTGY -  
DRKGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, FREE CALC,  
IMBD PYR, FREE SH, SANDY,  
INTGR POR, NO STN, NO MIN  
FLOR, NO O FLOR, NO CUT, NO  
RNG

6390'-6420': SLTST: 80% MEDLTGY -  
DRKGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, FREE CALC,  
IMBD PYR, FREE SH, SANDY,  
INTGR POR, NO STN, NO MIN  
FLOR, NO O FLOR, NO CUT, NO  
RNG

6420'-6450': SLTST: 70% MEDLTGY -  
DRKGY, FRI, FN TO MED GRN, W  
SRTD, CALC CMT, FREE CALC,  
IMBD PYR, FREE SH, SANDY,  
INTGR POR, NO STN, NO MIN  
FLOR, NO O FLOR, NO CUT, NO  
RNG

CG 1185u

CG 1051u

TG, C1-C4

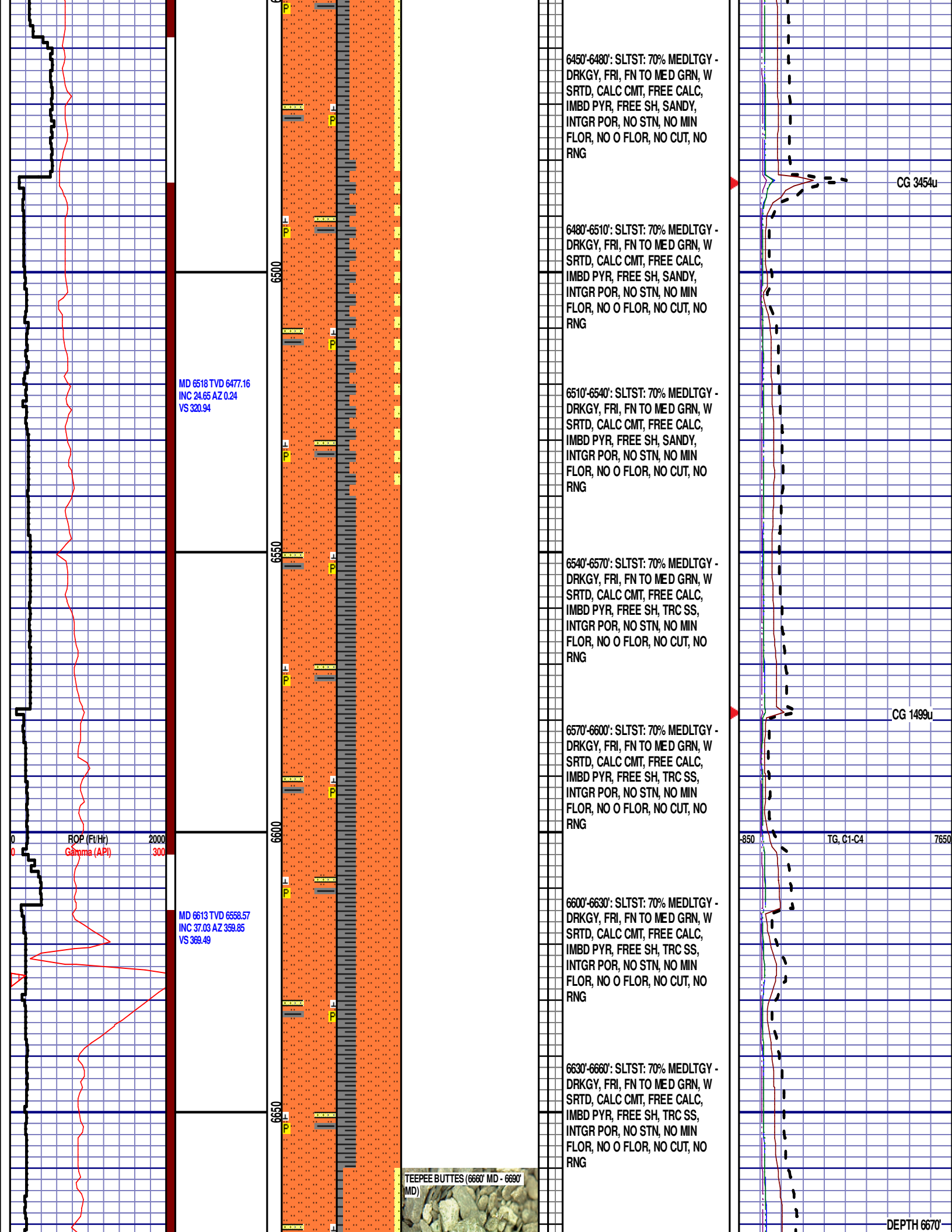
ROP (Ft/Hr)  
Gamma (API)

2000  
300

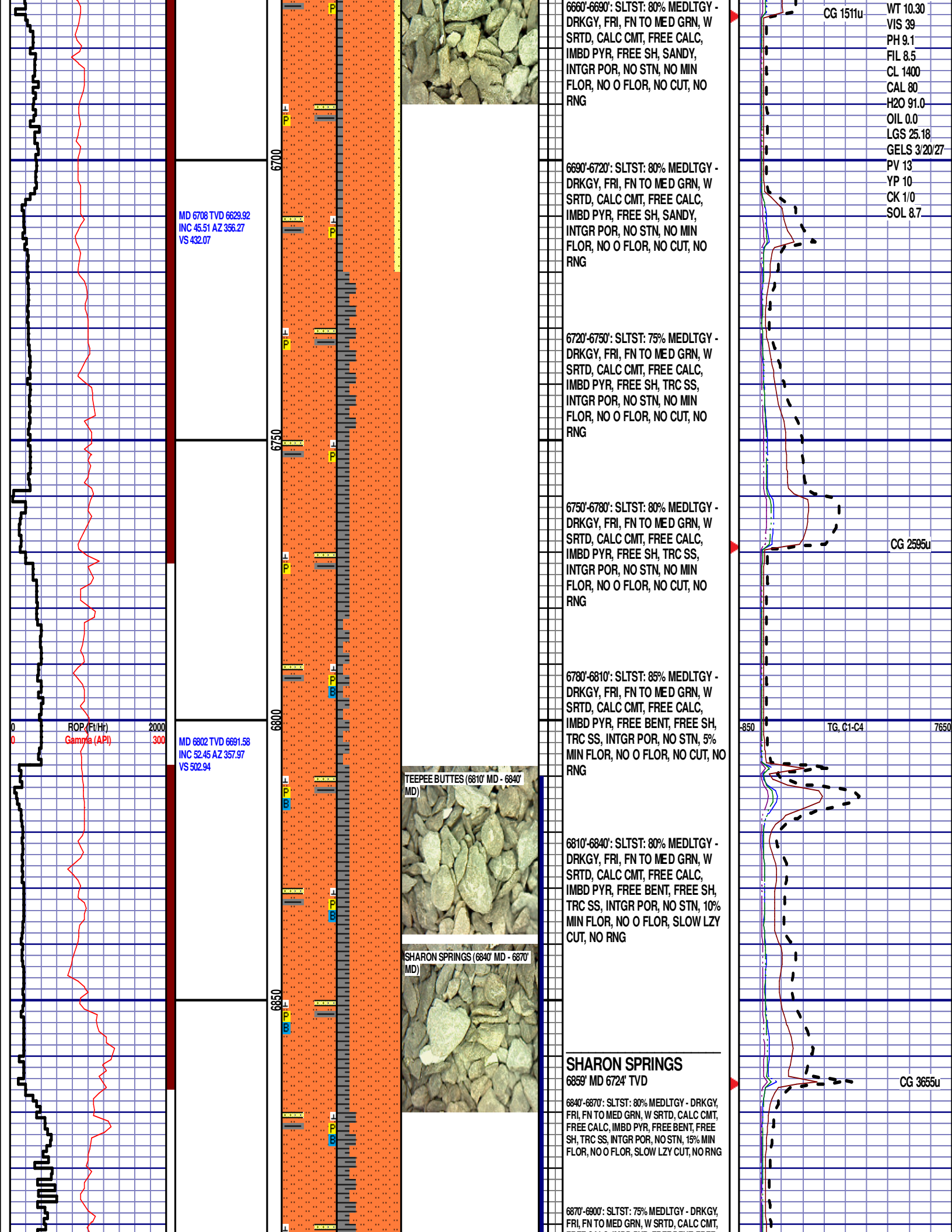
850

7650









MD 6708 TVD 6629.92  
INC 45.51 AZ 356.27  
VS 432.07

ROP (Ft/Hr)  
Gamma (API)

MD 6802 TVD 6691.58  
INC 52.45 AZ 357.97  
VS 502.94

TEEPEE BUTTES (6810' MD - 6840' MD)

SHARON SPRINGS (6840' MD - 6870' MD)

### SHARON SPRINGS

6859' MD 6724' TVD

6840'-6870': SLTST: 80% MEDLTGY - DRKGY, FRI, FN TO MED GRN, W SRTD, CALC CMT, FREE CALC, IMBD PYR, FREE BENT, FREE SH, TRC SS, INTGR POR, NO STN, 15% MIN FLOR, NO O FLOR, SLOW LZ CUT, NO RNG

6870'-6900': SLTST: 75% MEDLTGY - DRKGY, FRI, FN TO MED GRN, W SRTD, CALC CMT,

CG 1511u WT 10.30  
VIS 39  
PH 9.1  
FIL 8.5  
CL 1400  
CAL 80  
H2O 91.0  
OIL 0.0  
LGS 25.18  
GELS 3/20/27  
PV 13  
YP 10  
CK 1/0  
SOL 8.7

CG 2595u

TG, C1-C4

CG 3655u

MD 6897 TVD 6743.69  
INC 60.94 AZ 358.89  
VS 582.25

6900

50

FREE CALC, IMBD PYR, FREE BENT, FREE  
SH, TRC SS, INTGR POR, NO STN, 10% MIN  
FLOR, NO O FLOR, SLOW LZY CUT, NO RNG

END OF VERTICAL LOG @ 6900' MD  
ON 10/18/2014, CONTINUED ON  
HORIZONTAL LOG.

