

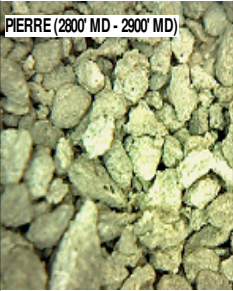
MD 2785 TVD 2768.39
INC 12.81 AZ 180.69
VS 1.71

ROP (Fe/Hr)
Gamma (API)

2700' MD-2800' MD: SLTST: 55% LTGY
- MEDGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, INTGR
POR, NO STN, NO FLOR, NO O
FLOR, NO CUT, NO RNG

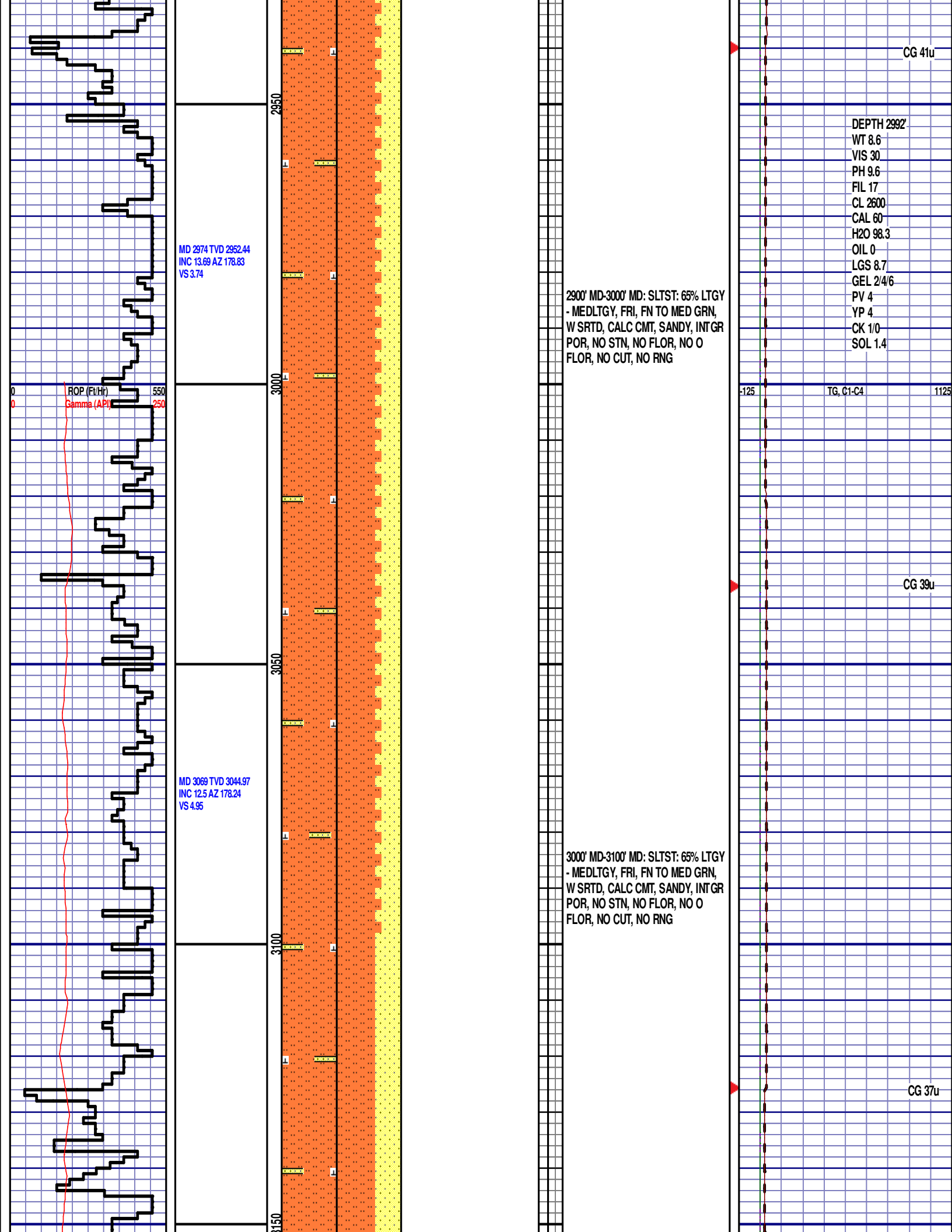
CG 45u

MD 2879 TVD 2860.01
INC 13.03 AZ 178.35
VS 2.53



2800' MD-2900' MD: SLTST: 60% LTGY
- MEDLTGY, FRI, FN TO MED GRN,
W SRTD, CALC CMT, SANDY, INTGR
POR, NO STN, NO FLOR, NO O
FLOR, NO CUT, NO RNG

CG 38u



MD 3164 TVD 3137.77
INC 12.19 AZ 179.84
VS 5.92

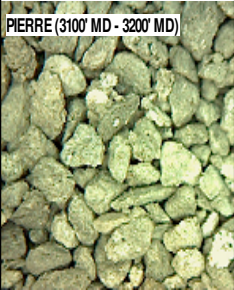
MD 3259 TVD 3230.72
INC 11.67 AZ 179.89
VS 6.57

MD 3354 TVD 3324.02
INC 10 AZ 182.65
VS 6.75

ROP (Ft/Hr)
Gamma (API)

WOB 17.8K
PP 3214
RPM 75
SPM 66/66

PIERRE (3100' MD - 3200' MD)



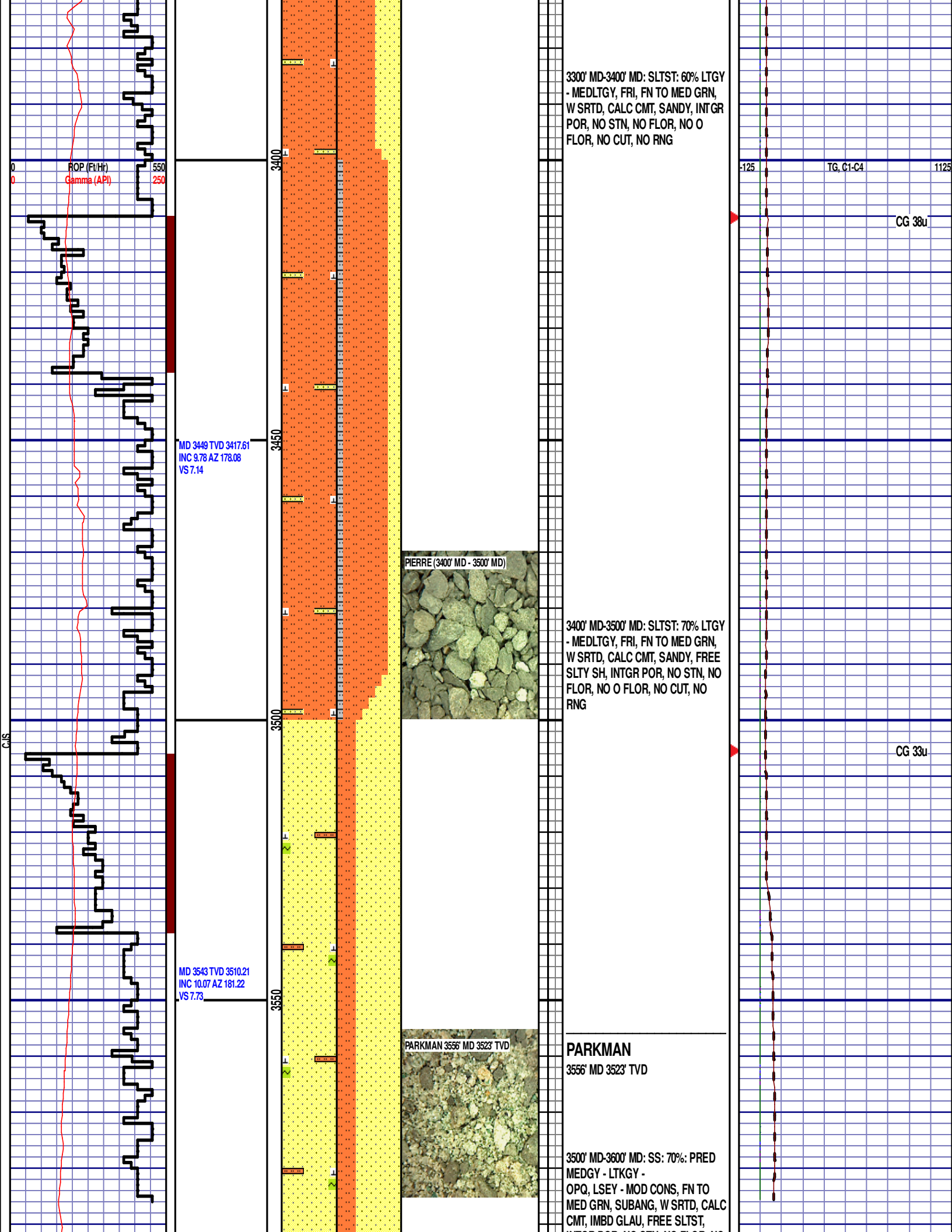
3100' MD-3200' MD: SLTST: 60% LTGY
- MEDLTGY, FRI, FN TO MED GRN,
W SRTD, CALC CMT, SANDY, INT GR
POR, NO STN, NO FLOR, NO O
FLOR, NO CUT, NO RNG

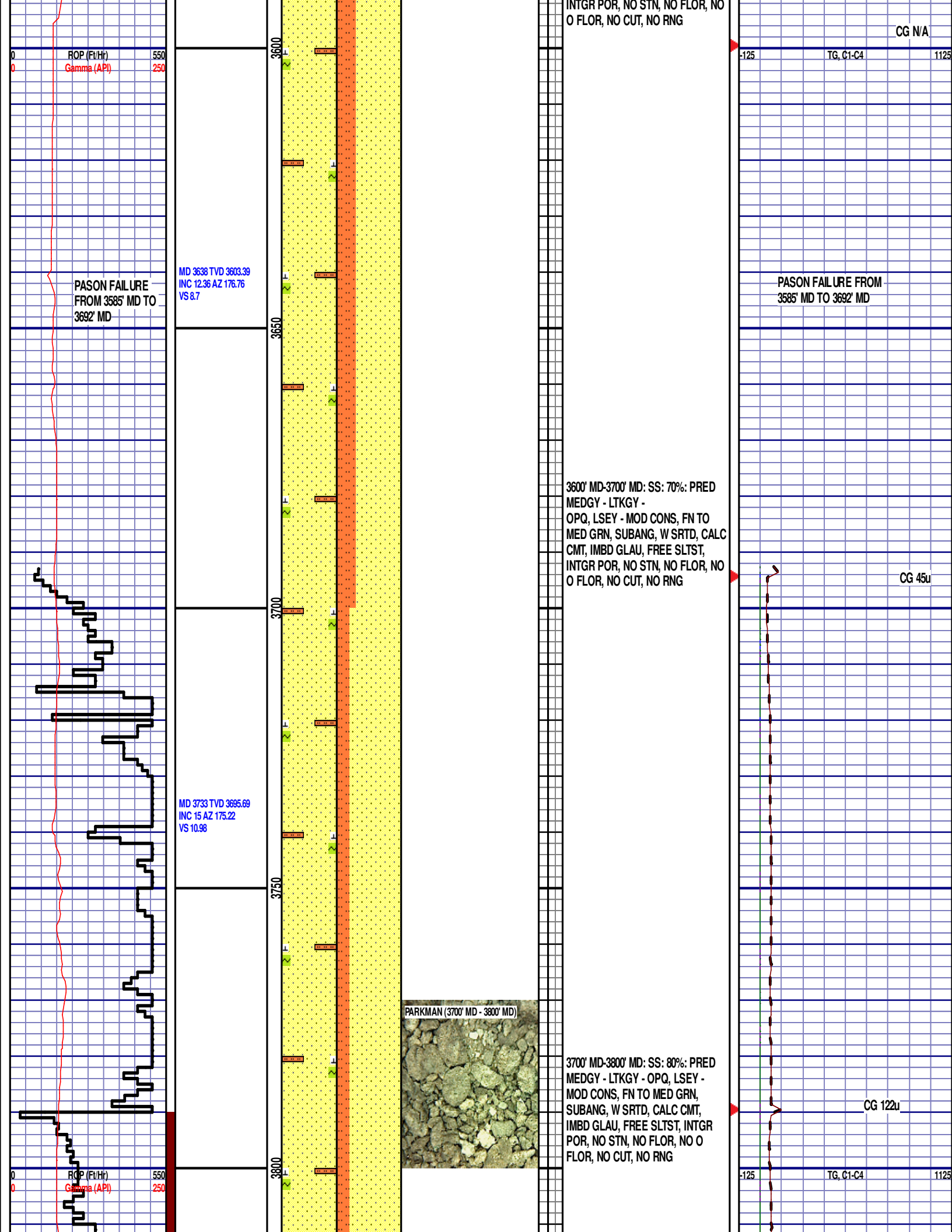
3200' MD-3300' MD: SLTST: 60% LTGY
- MEDLTGY, FRI, FN TO MED GRN,
W SRTD, CALC CMT, SANDY, INT GR
POR, NO STN, NO FLOR, NO O
FLOR, NO CUT, NO RNG

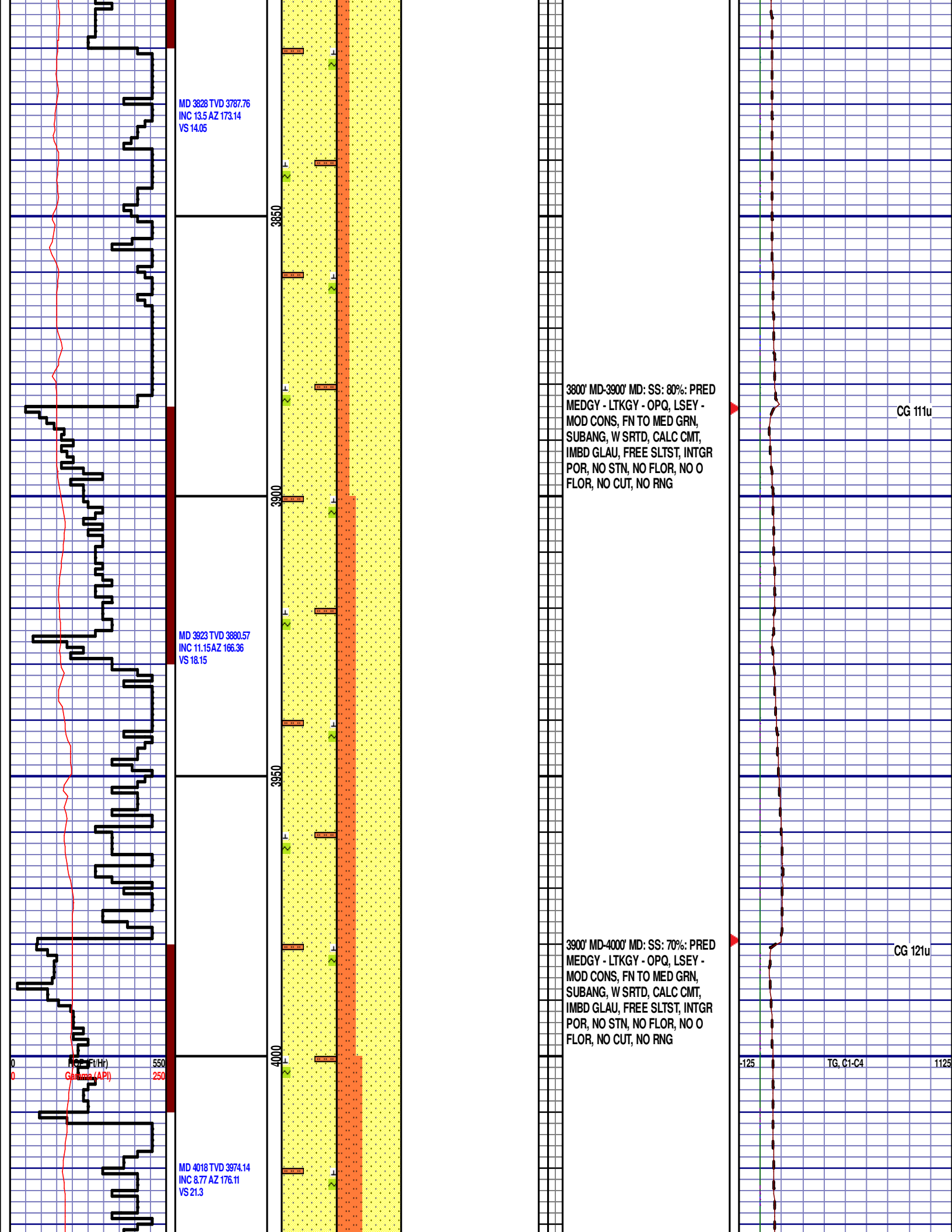
-125 TG, C1-C4 1125

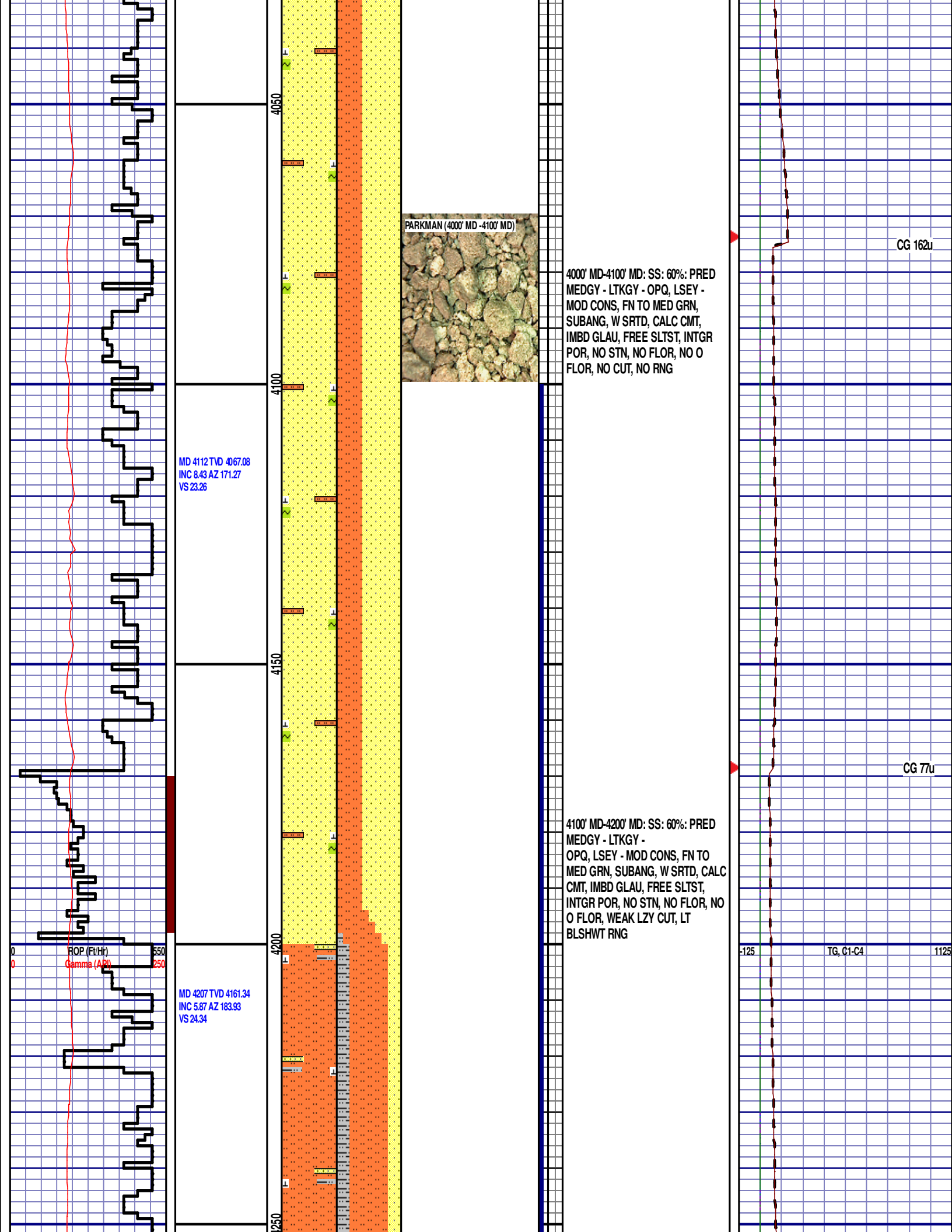
CG 39u

CG 31u









MD 4112 TVD 4067.08
INC 8.43 AZ 171.27
VS 23.26



4000' MD-4100' MD: SS: 60%: PRED
MEDGY - LTKGY - OPQ, LSEY -
MOD CONS, FN TO MED GRN,
SUBANG, W SRTD, CALC CMT,
IMBD GLAU, FREE SLTST, INTGR
POR, NO STN, NO FLOR, NO O
FLOR, NO CUT, NO RNG

CG 162u

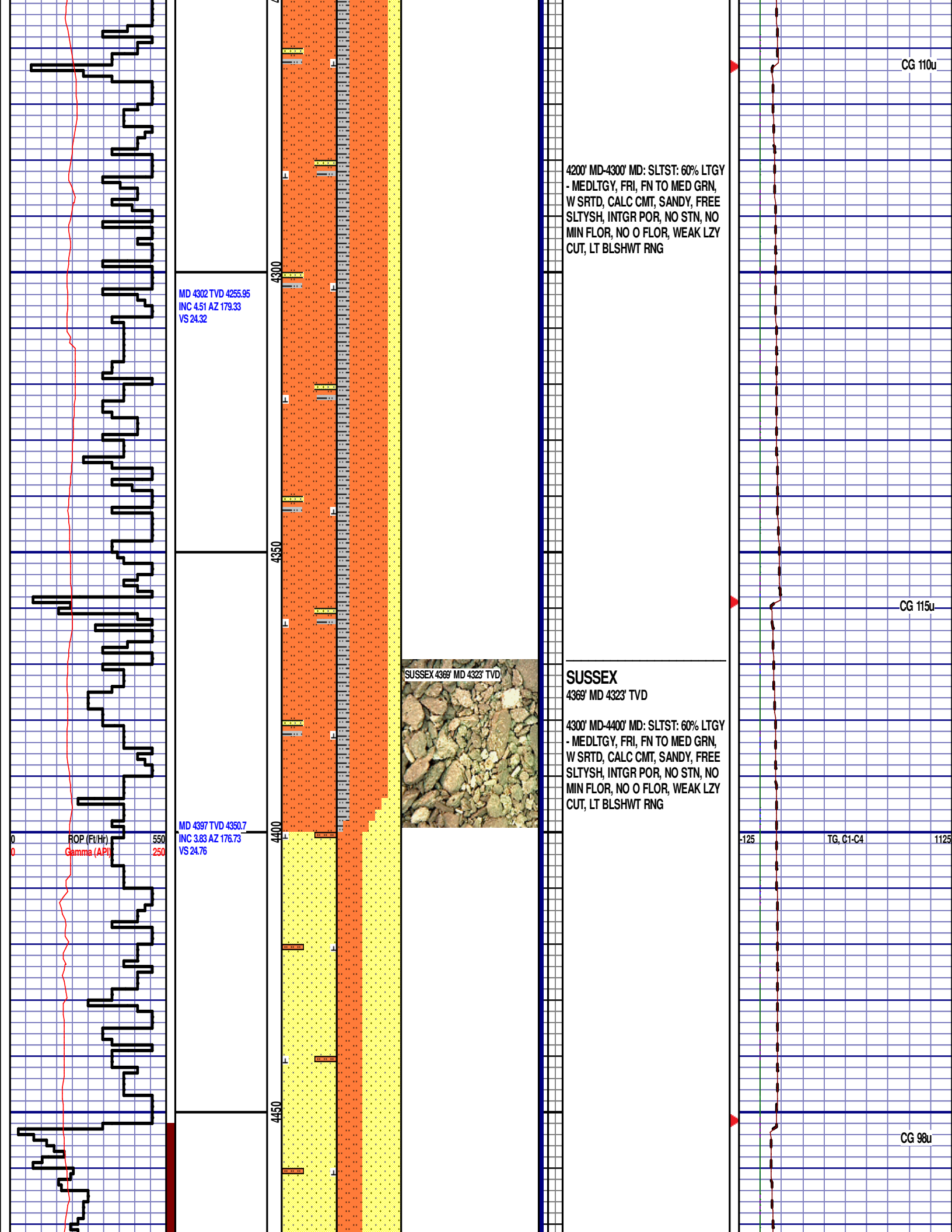
CG 77u

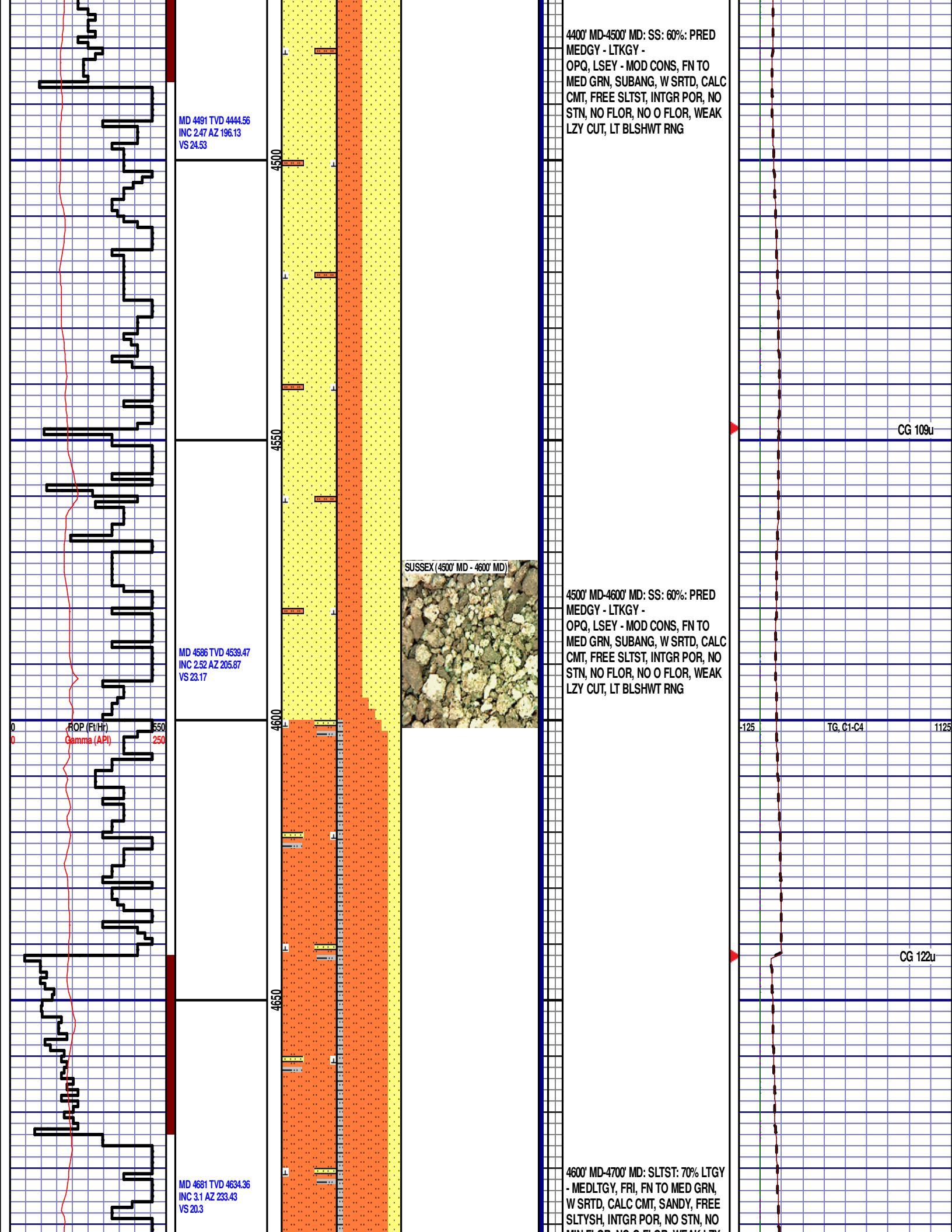
4100' MD-4200' MD: SS: 60%: PRED
MEDGY - LTKGY -
OPQ, LSEY - MOD CONS, FN TO
MED GRN, SUBANG, W SRTD, CALC
CMT, IMBD GLAU, FREE SLTST,
INTGR POR, NO STN, NO FLOR, NO
O FLOR, WEAK LZ Y CUT, LT
BLSHWT RNG

ROP (Ft/Hr)
Gamma (API)

MD 4207 TVD 4161.34
INC 5.87 AZ 183.93
VS 24.34

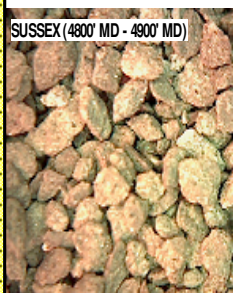
TG, C1-C4

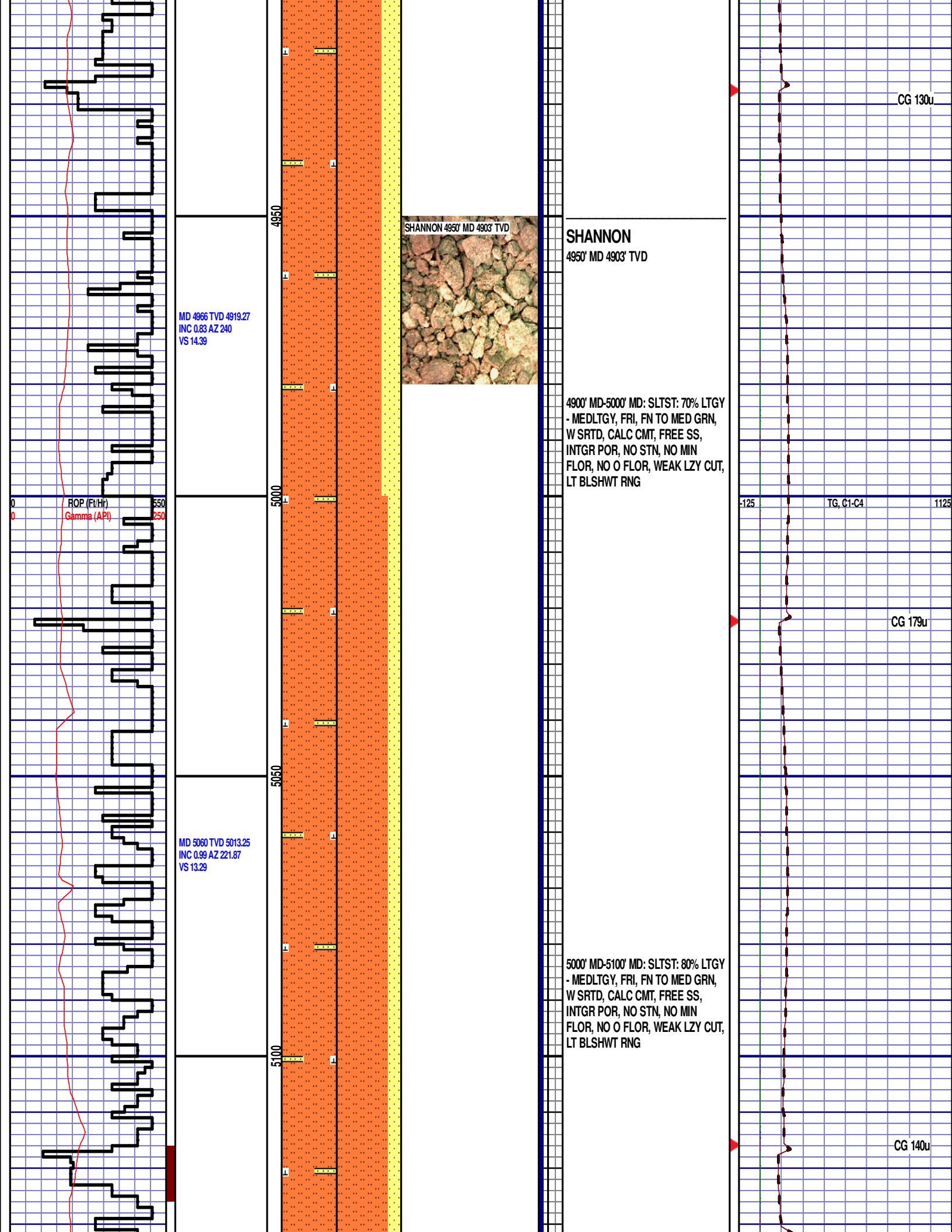




4700' MD-4800' MD: SLTST: 60% LTGY
- MEDLTGY, FRI, FN TO MED GRN,
W SRTD, CALC CMT, SANDY, FREE
SLTYSH, INTGR POR, NO STN, NO
MIN FLOR, NO O FLOR, WEAK LZ
CUT, LT BLSHW RING

4800' MD-4900' MD: SLTST: 70% LTGY
- MEDLTGY, FRI, FN TO MED GRN,
W SRTD, CALC CMT, FREE SS,
INTGR POR, NO STN, NO MIN
FLOR, NO O FLOR, WEAK LZY CUT,
LT BLSHWY RING





MD 5155 TVD 5108.24
INC 1.03 AZ 234.31
VS 12.08

ROP (Ft/H)
Gamma (API)

SHANNON (5100' MD - 5200' MD)



5100' MD-5200' MD: SLTST: 80% LTGY
- MEDLTGY, FRI, FN TO MED GRN,
W SRTD, CALC CMT, FREE SS,
INTGR POR, NO STN, NO MIN
FLOR, NO O FLOR, WEAK LZY CUT,
LT BLSHWT RNG

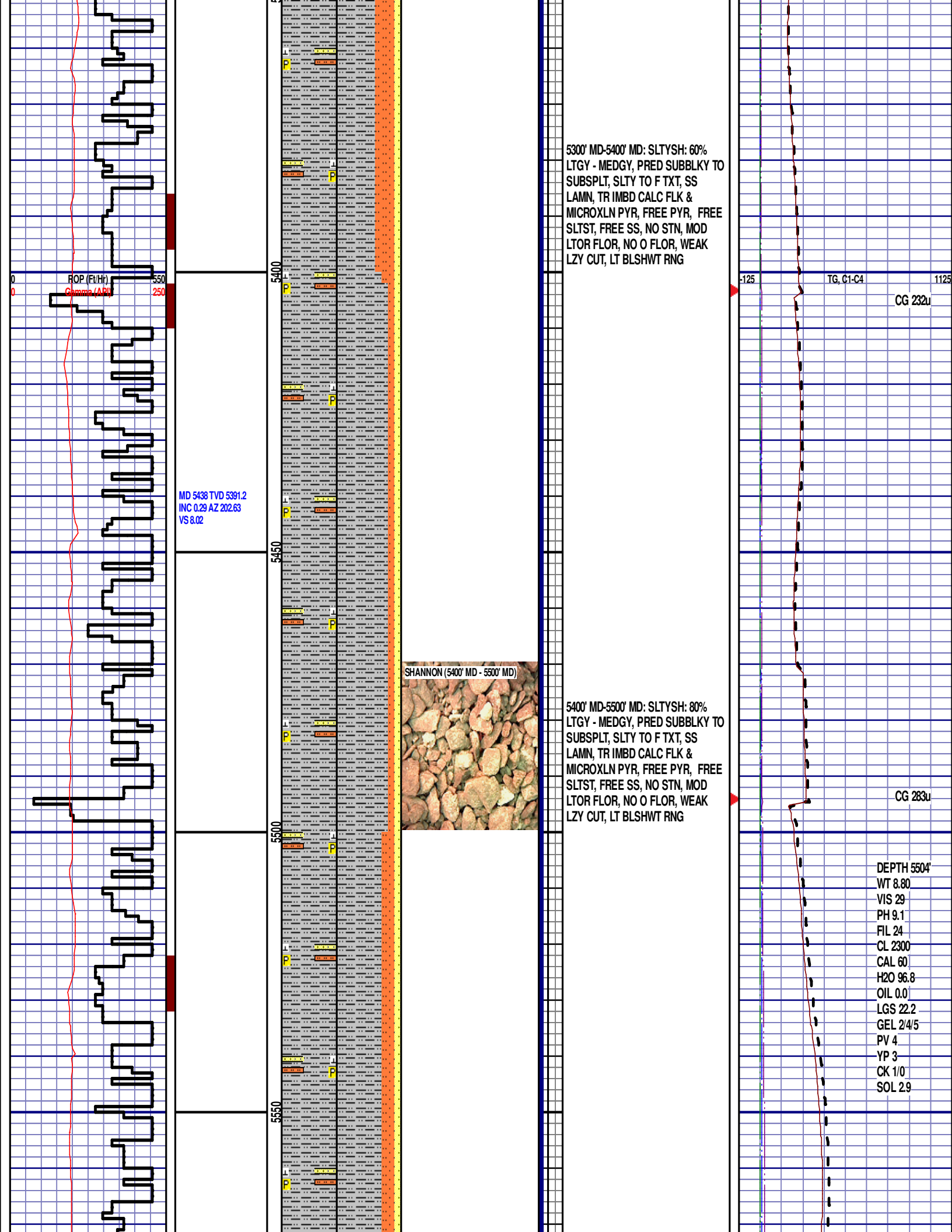
5200' MD-5300' MD: SLTYSH: 60%
LTGY - MEDGY, PRED SUBBLKY TO
SUBSPLT, SLTY TO F TXT, SS
LAMN, TR IMBD CALC FLK &
MICROXLN PYR, FREE PYR, FREE
SLTST, FREE SS, NO STN, MOD
LTOR FLOR, NO O FLOR, WEAK
LZY CUT, LT BLSHWT RNG

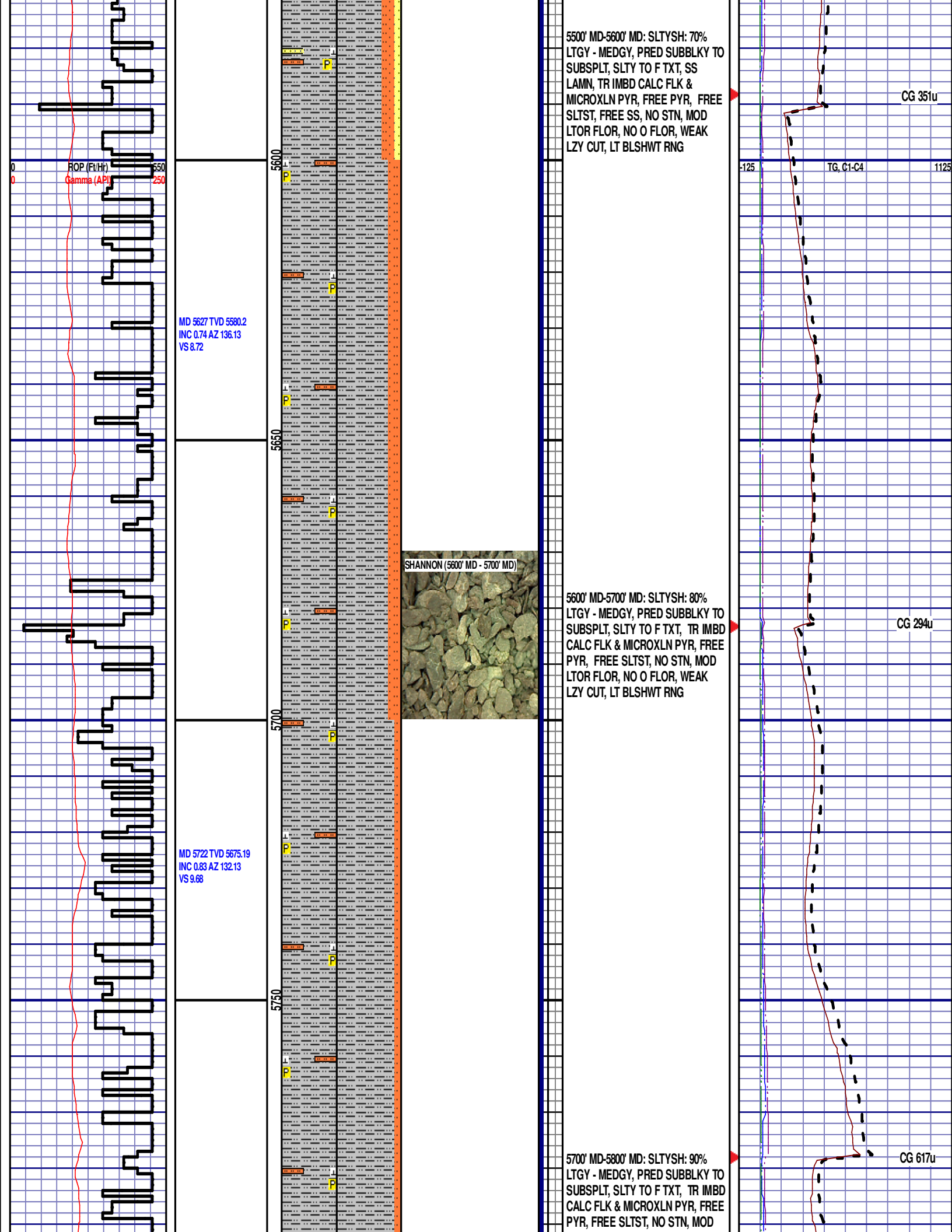
MD 5343 TVD 5296.21
INC 1.08 AZ 279.88
VS 8.99

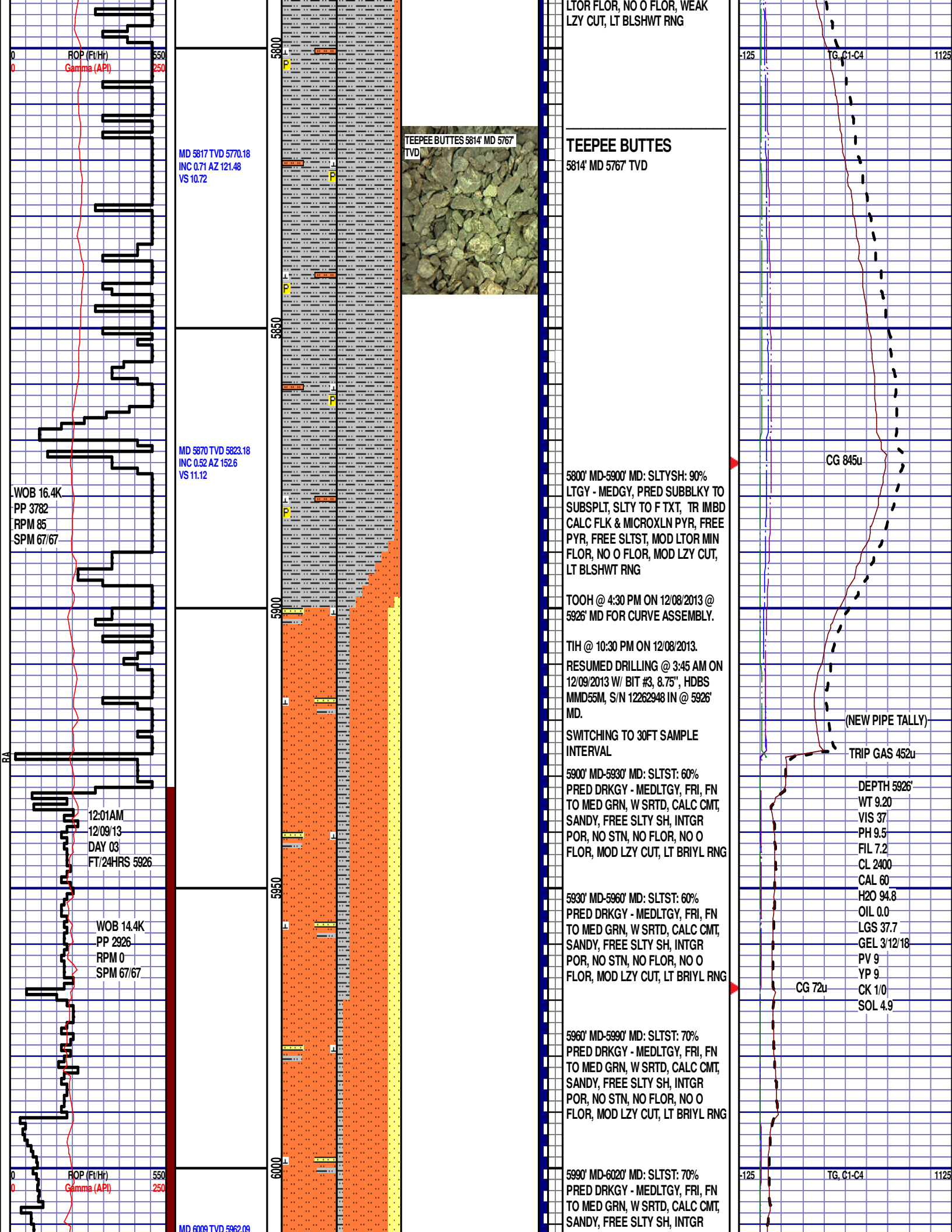
-125 TG, C1-C4 1125

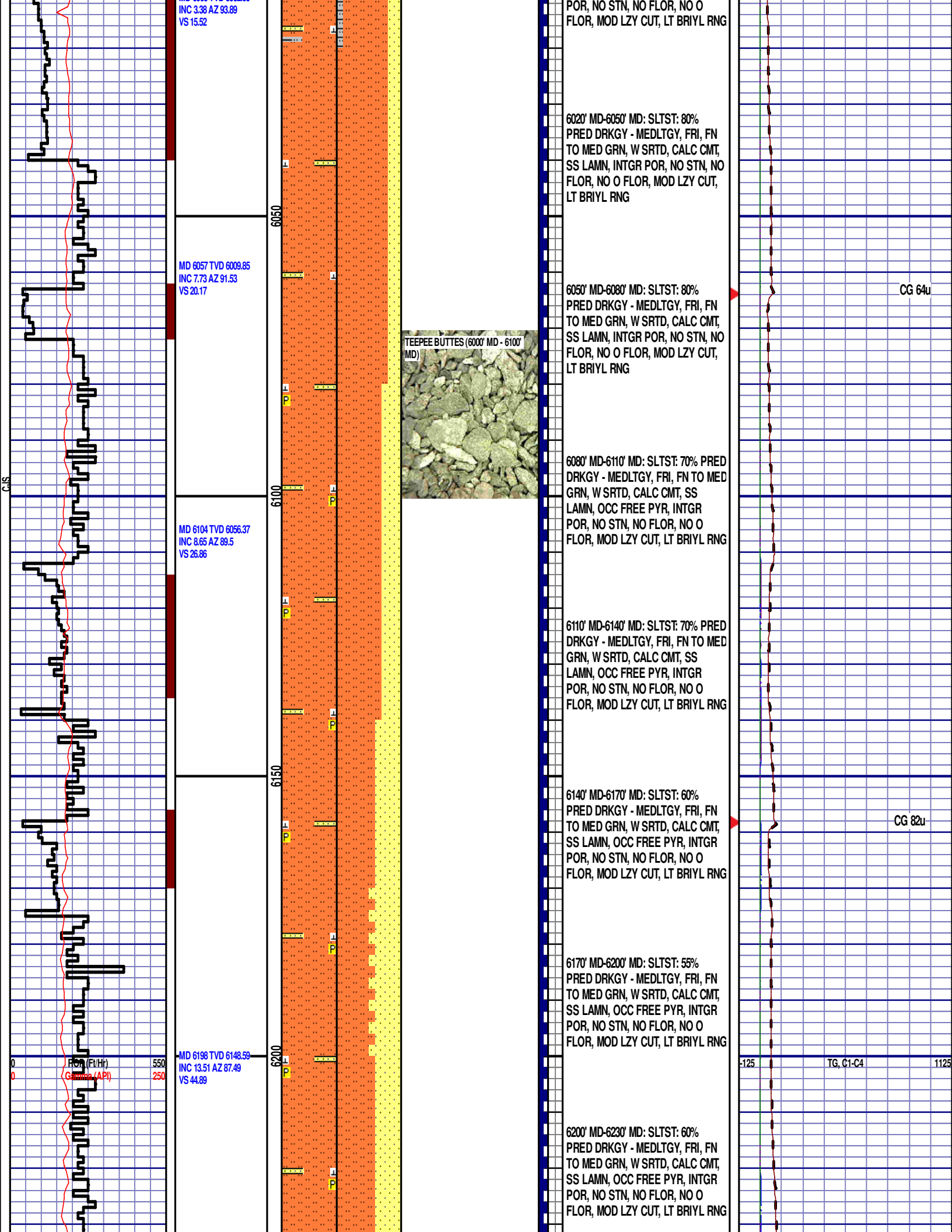
CG 221u

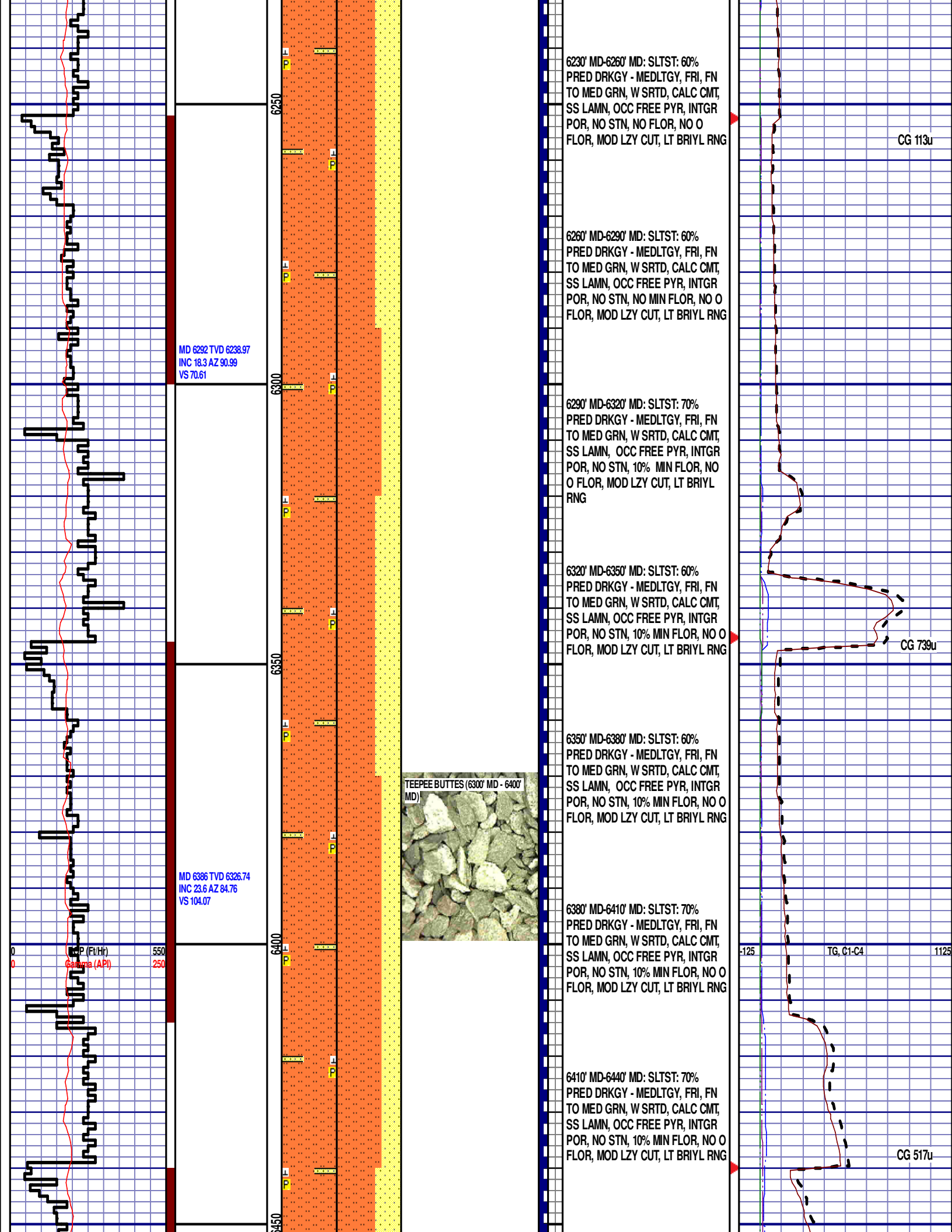
CG 211u

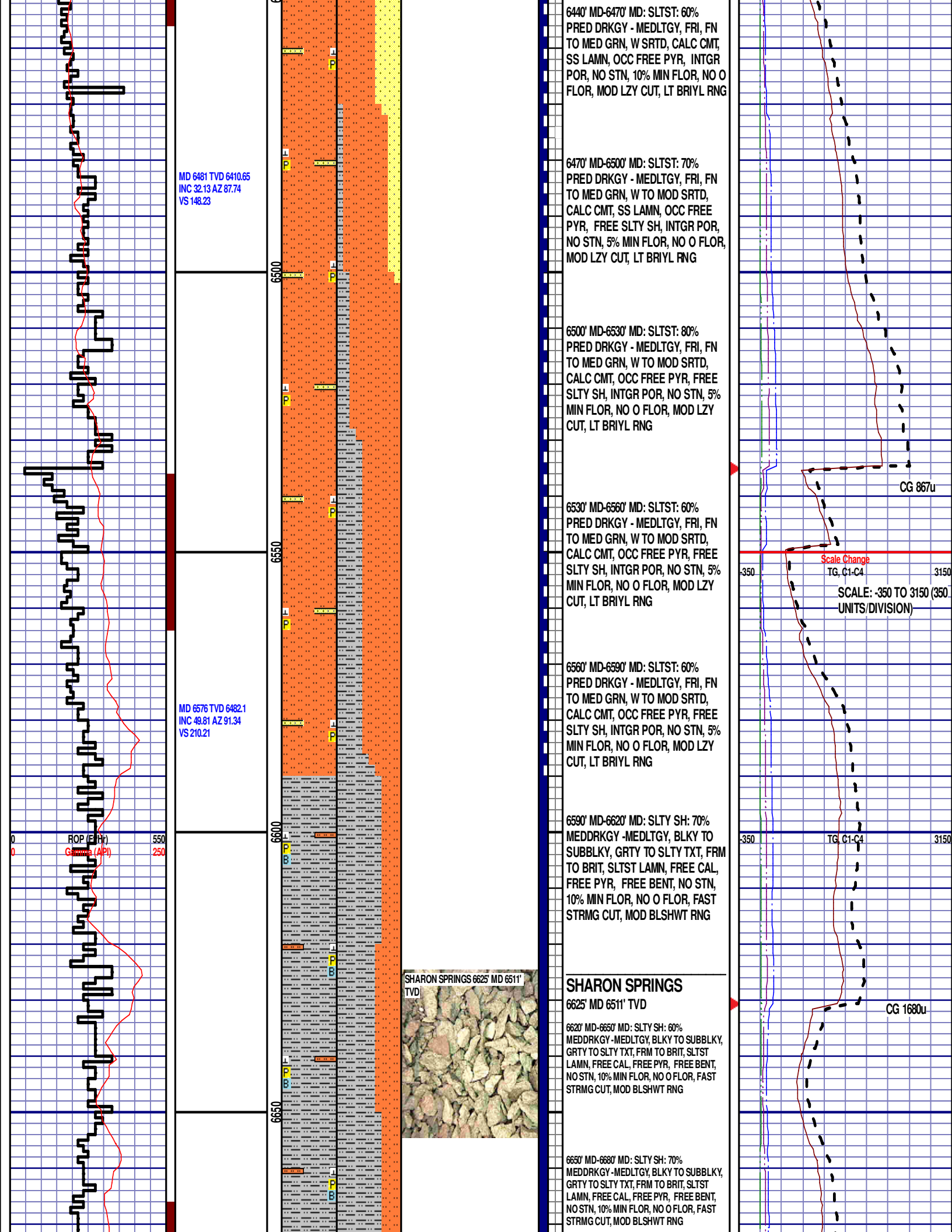












MD 6671 TVD 6536.68
INC 59.97 AZ 93.95
VS 272.23

MD 6765 TVD 6583.82
INC 59.84 AZ 91.29
VS 353.46

ROP (Ft/Hr)
Gamma (API)

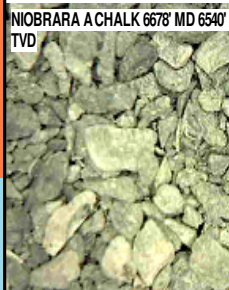
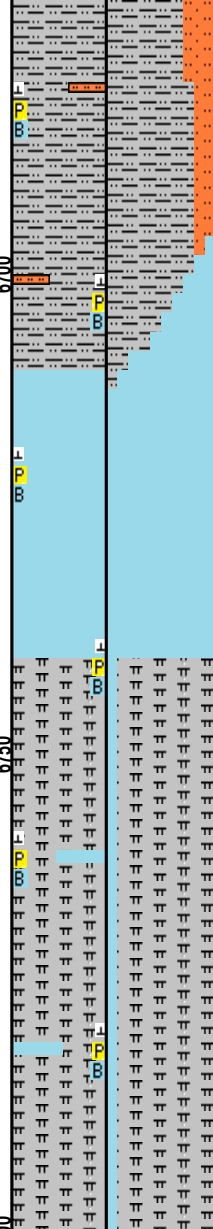
550
250

6700

6750

6800

50



NIOBRARA A CHALK

6678' MD 6540' TVD

6680' MD-6710' MD: SLTY SH: 80%
MEDDRKGY -MEDLTGY, BLKY TO
SUBBLKY, GRTY TO SLTY TXT, FRM
TO BRIT, SLTST LAMN, FREE CAL,
FREE PYR, FREE BENT, NO STN,
10% MIN FLOR, NO O FLOR, FAST
STRMG CUT, MOD BLSHWT RNG

NIOBRARA A MARL

6724' MD 6563' TVD

6740' MD-6770' MD: MRL: 90%
(CaCO₃ 45%) MEDDRKGY - DRKGY,
BLKY TO SUBBLKY, FXLN TO
CHLKY, SFT, CHK FRMWRK, IMBD
CAL, FREE PYR, FREE BENT, FREE
CHALK, NO STN, 15% LTOR MIN
FLOR, FNT BLSHWT O FLOR,
IMMED STRMG CUT

6770' MD-6800' MD: MRL: 90%
(CaCO₃ 45%) MEDDRKGY - DRKGY,
BLKY TO SUBBLKY, FXLN TO
CHLKY, SFT, CHK FRMWRK, IMBD
CAL, FREE PYR, FREE BENT, FREE
CHALK, NO STN, 15% LTOR MIN
FLOR, FNT BLSHWT O FLOR,
IMMED STRMG CUT

END OF VERTICAL LOG @ 6800' MD
ON 12/09/2013, CONTINUED ON
HORIZONTAL LOG

350 TG, C1-C4 3150