

Logger On Shift		ROP (Ft/Hr) Gamma (API)		Drill Depth v. Time		Survey Data		Depth		Lithology		Lithology Percentages		Sample Photographs		Porosity		Geological Description		TG (1-8) C1 (units) C2 (units) C3 (units) C4 (units)		Total Gas, C1-C4	
								24								Oil Fair Good							
0 0		ROP (Ft/Hr) Gamma (API)		1500 350		<div>SLIDE=RED ROTATE=WHITE</div> <div>ROP SCALE: 0 TO 1500 (FT/HR)</div> <div>GAMMA SCALE: 0 TO 350 (GAMMA DATA AS RECEIVED)</div>												NOBLE ENERGY WELLS RANCH AA35-69-1AHNC 36-T6N-R63W 568' FNL, 164' FWL WELD COUNTY, CO H&P 321 LOGGERS: HANNAH BLATCHFORD JOE KLUMPSTRA CALLED OUT BY COMPANY MAN 2/5/14 COMMENCED LOGGING @ 5:30AM		-5 TG, C1-C4 45		<div>CONNECTIONS ARE MARKED WITH RED TRIANGLES</div> <div>GAS SCALE: -5 TO 45 5 UNITS/DIVISION</div> <div>DRILLING ON WATER-BASED MUD</div>	

COMMENCED LOGGING @ 2500 MD
@ 2500' MD ON 02/08/14 W/BIT # 1
8.75 Ulterra U519M S/N 22730 IN @
642' MD

PIERRE
BEFORE LOGGING DEPTH

MD 1705'
WT 8.55
VIS 29.0
PH 10.8
FIL 26.0
CL 1100
CAL 140.0
H2O 98.2
OIL 0.0
SOL 1.5
CAKE 1/0
GELS 1/23
PV 2.0
YP 2.0

CG 24u

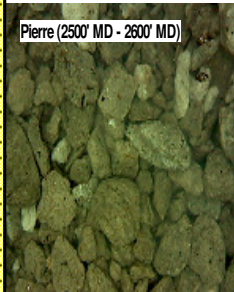
TG, C1-C4

CG 21u

2500'- 2600': SLTST: 80% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD
PYR, TRC IMBD GLAUC, IMBD SS
LAMN, INTGR POR, NO STN, NO
FLOR, NO O FLOR, NO CUT, NO
RNG

2600'- 2700': SLTST: 75% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD
PYR, TRC IMBD GLAUC, IMBD SS
LAMN, INTGR POR, NO STN, NO
FLOR, NO O FLOR, NO CUT, NO
RNG

Pierre (2500' MD - 2600' MD)

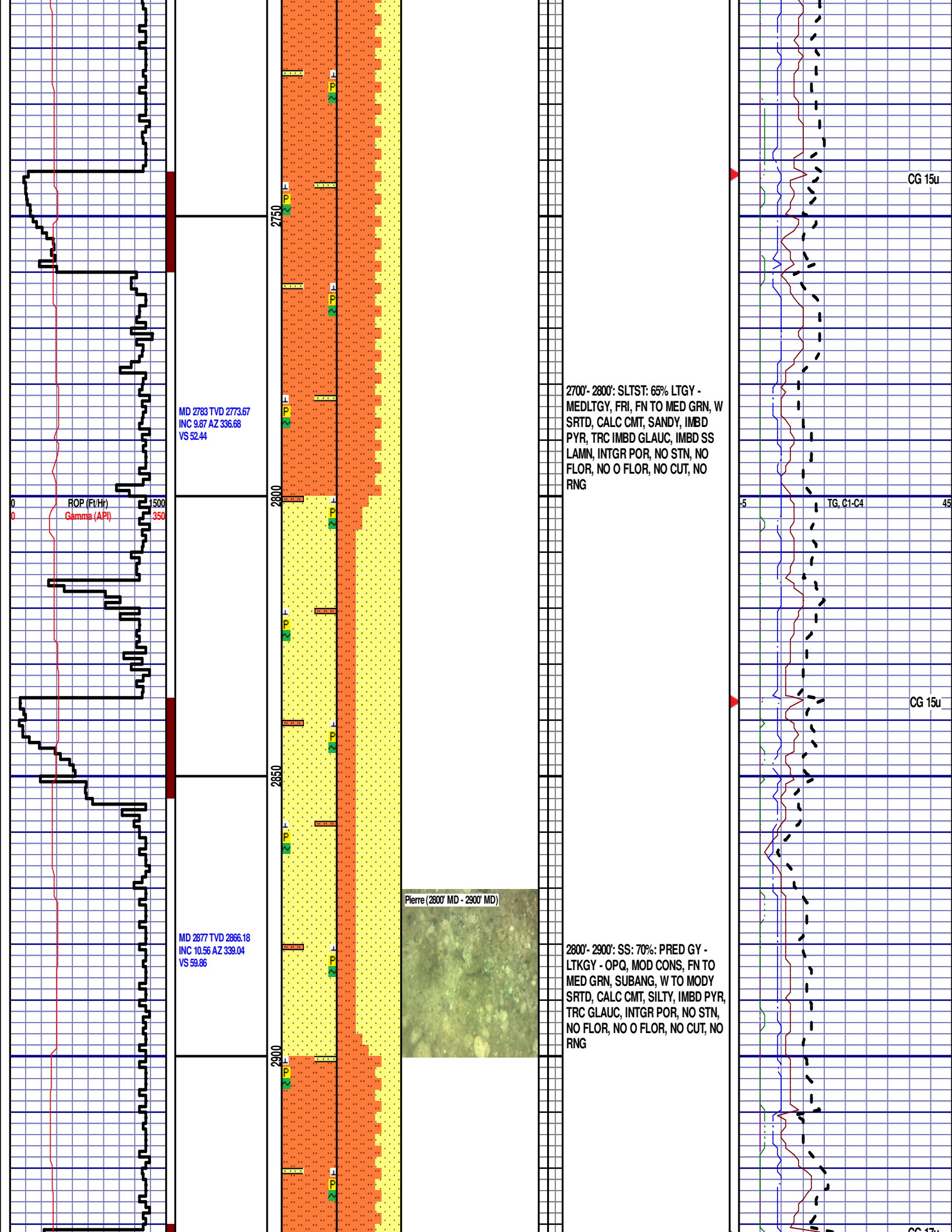


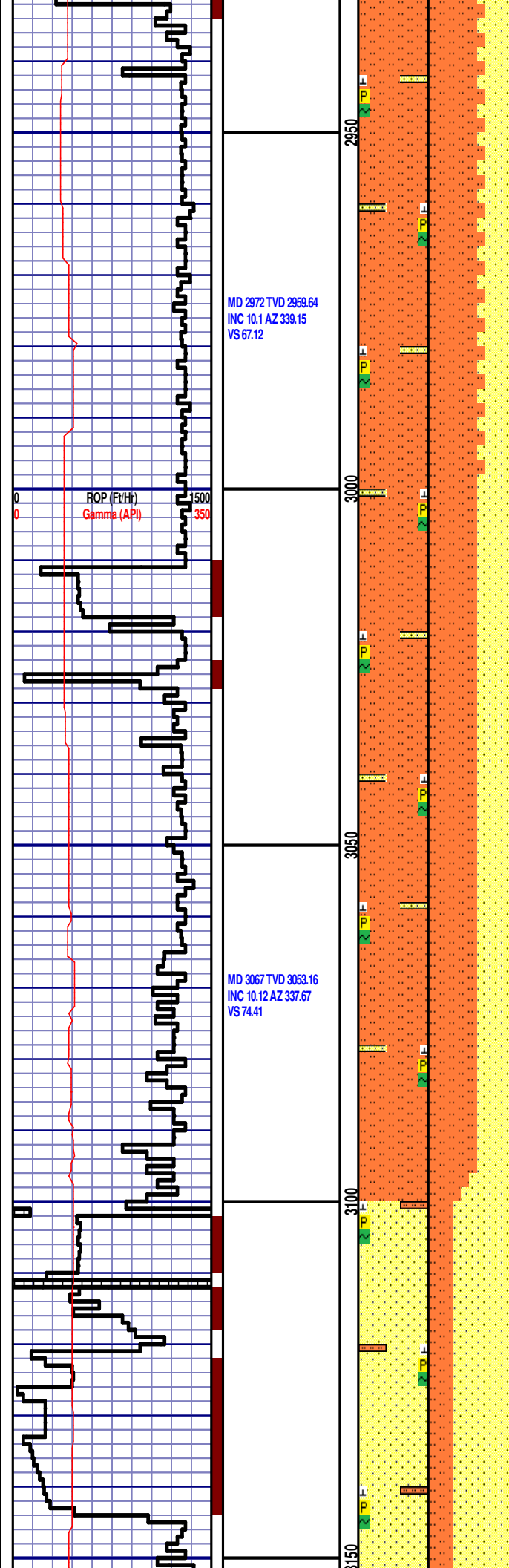
12:01 AM
2/06-08/14
0 FT/72 HRS
DAYS 02-04
WOB 13.2K
PP 2173
RPM 81
SPM 67/67

MD 2593 TVD 2586.53
INC 10.7 AZ 339.65
VS 37.98

ROP (Ft/Hr)
Gamma (API)

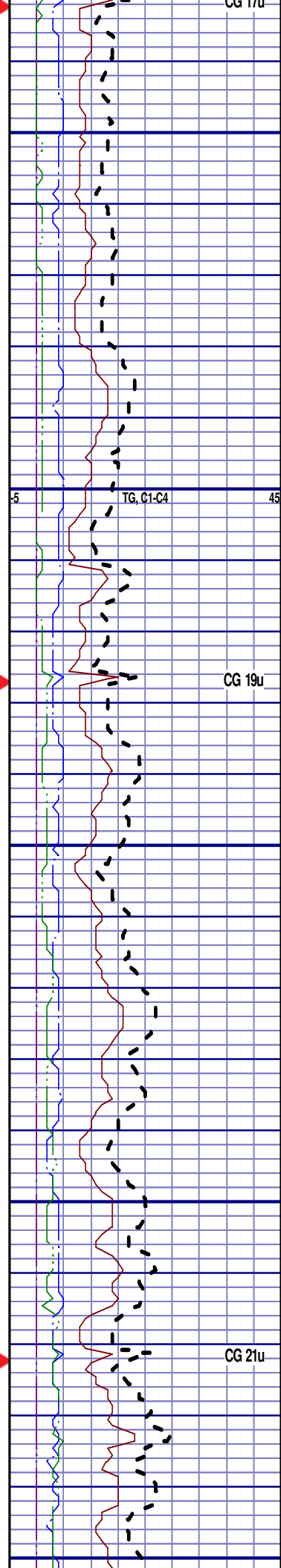
MD 2688 TVD 2680.04
INC 9.62 AZ 338.15
VS 45.16





2900'- 3000': SLTST: 65% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD
PYR, IMBD GLAUC, IMBD SS LAMN,
INTGR POR, NO STN, NO FLOR, NO
O FLOR, NO CUT, NO RNG

3000'- 3100': SLTST: 60% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD
PYR, IMBD GLAUC, IMBD SS LAMN,
INTGR POR, NO STN, NO FLOR, NO
O FLOR, NO CUT, NO RNG



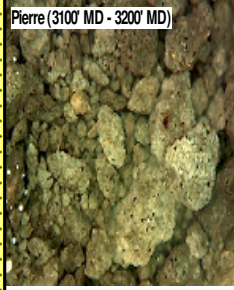
MD 3162 TVD 3146.73
INC 8.81 AZ 341.28
VS 81.32

ROP (Ft/Hr)
Gamma (API)

MD 3257 TVD 3240.31
INC 10.07 AZ 336.91
VS 88.31

MD 3352 TVD 3334.07
INC 8.39 AZ 334.92
VS 95.53

Pierre (3100' MD - 3200' MD)



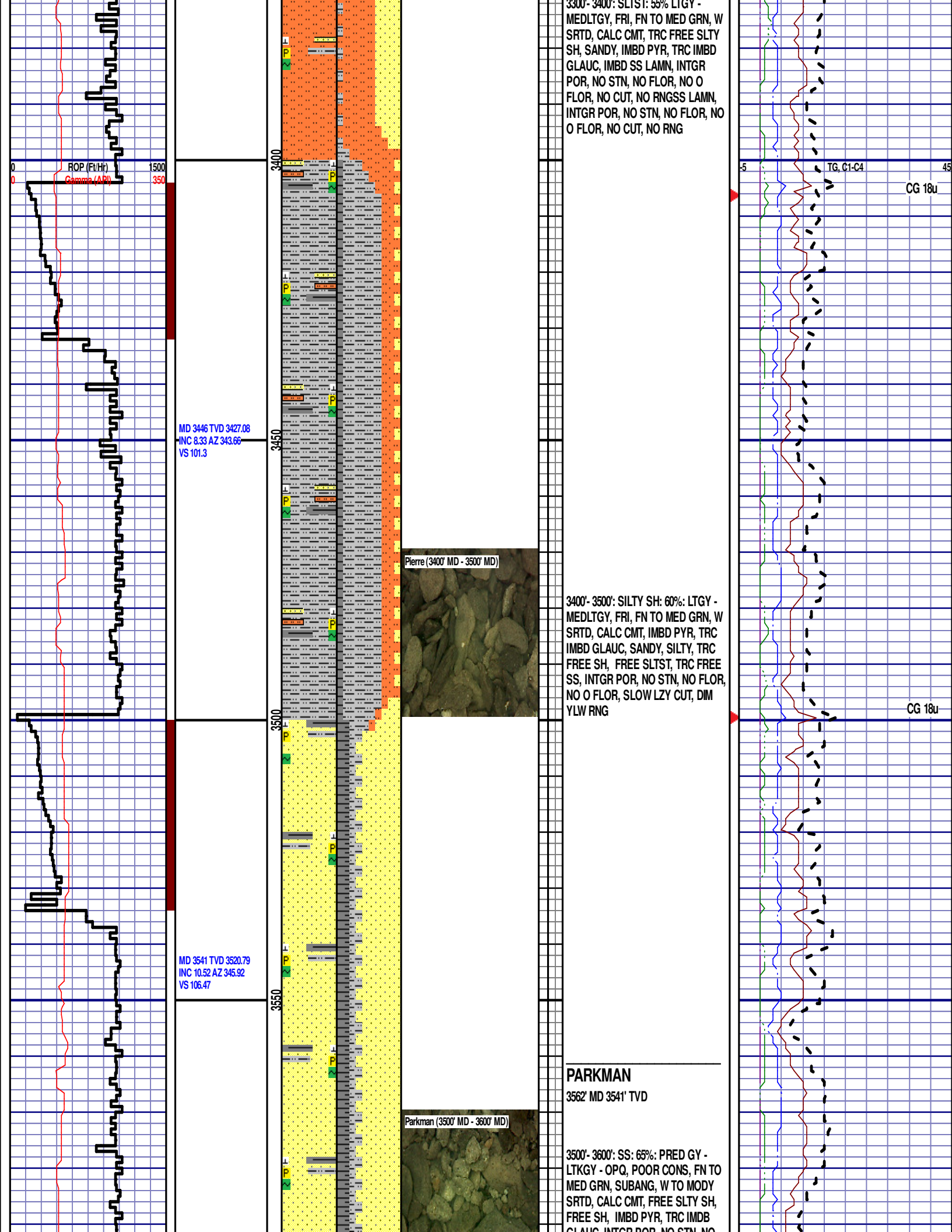
3100'- 3200': SS: 70%: PRED GY -
LTKGY - OPQ, MOD CONS, FN TO
MED GRN, SUBANG, W TO MODY
SRTD, CALC CMT, SILTY, IMBD PYR,
TRC GLAUC, INTGR POR, NO STN,
NO FLOR, NO O FLOR, NO CUT, NO
RNG

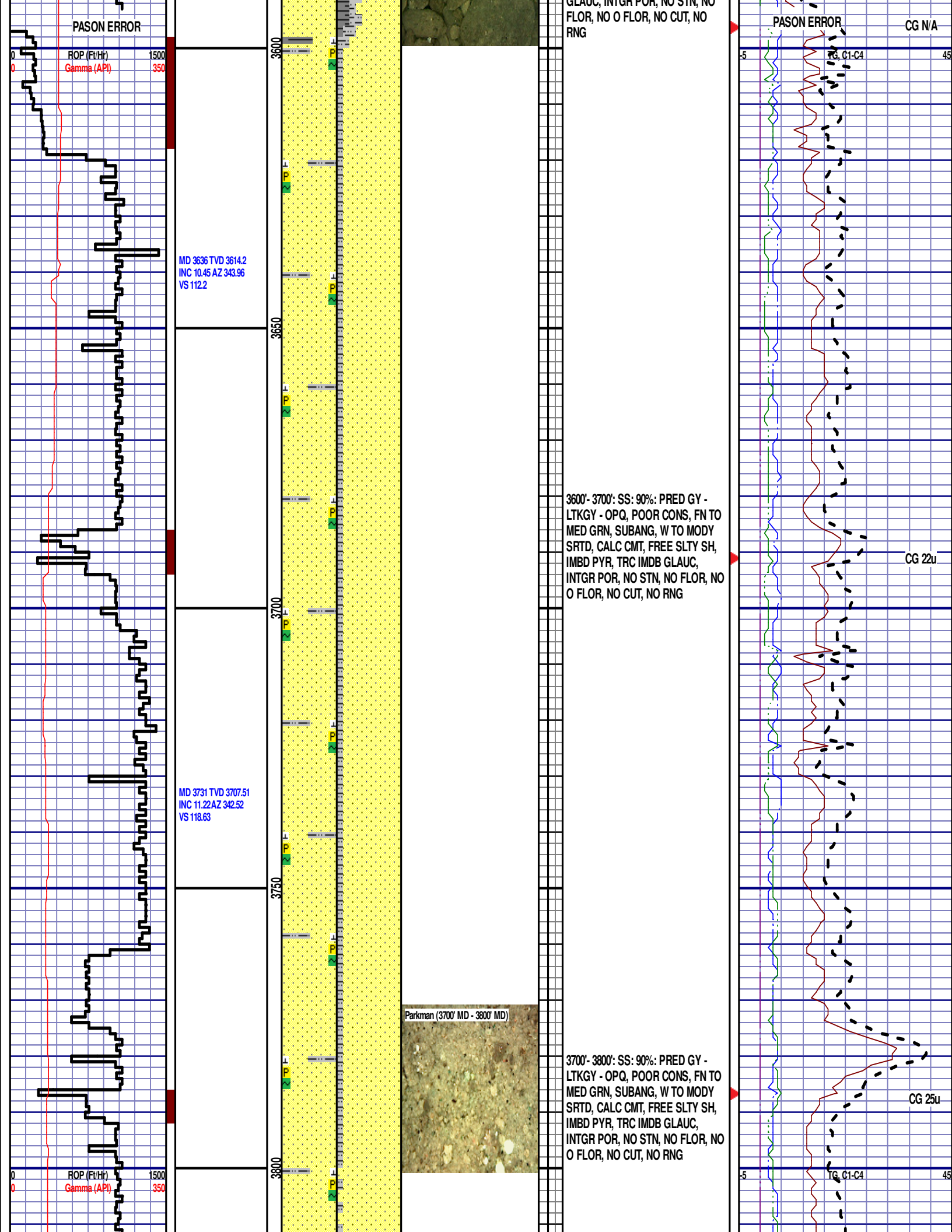
3200'- 3300': SLTST: 60% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, TRC FREE SLTY
SH, SANDY, IMBD PYR, TRC IMBD
GLAUC, IMBD SS LAMN, INTGR
POR, NO STN, NO FLOR, NO O
FLOR, NO CUT, NO RNGSS LAMN,
INTGR POR, NO STN, NO FLOR, NO
O FLOR, NO CUT, NO RNG

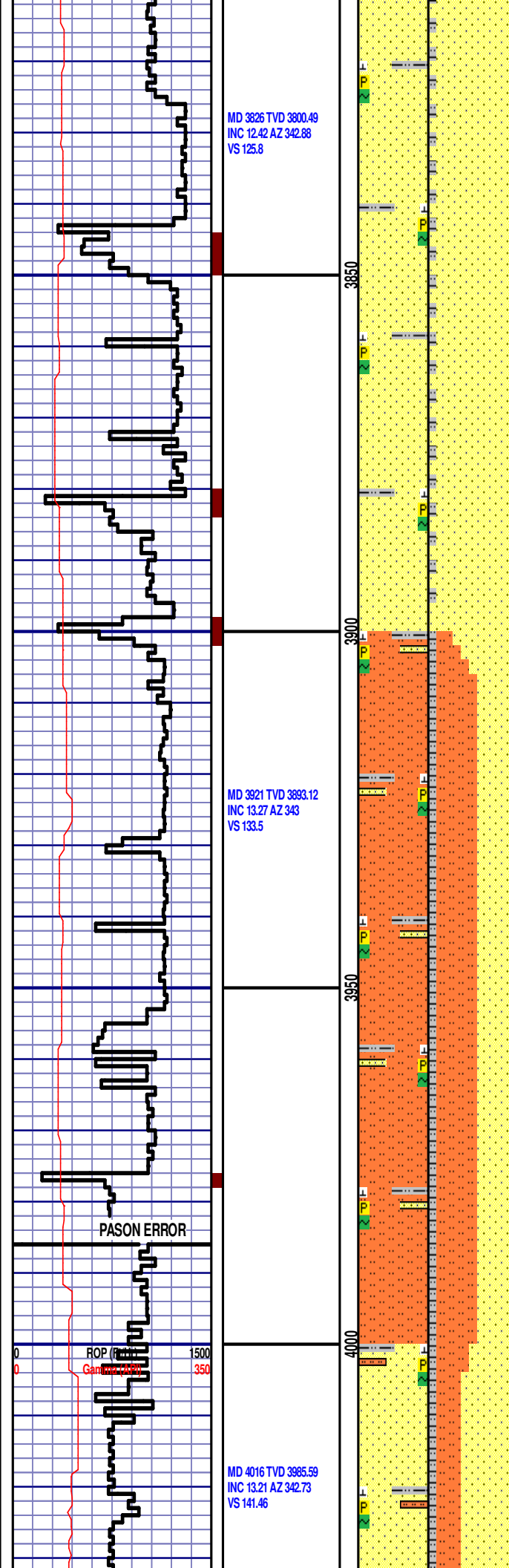
5 45

CG 25u

CG 36u

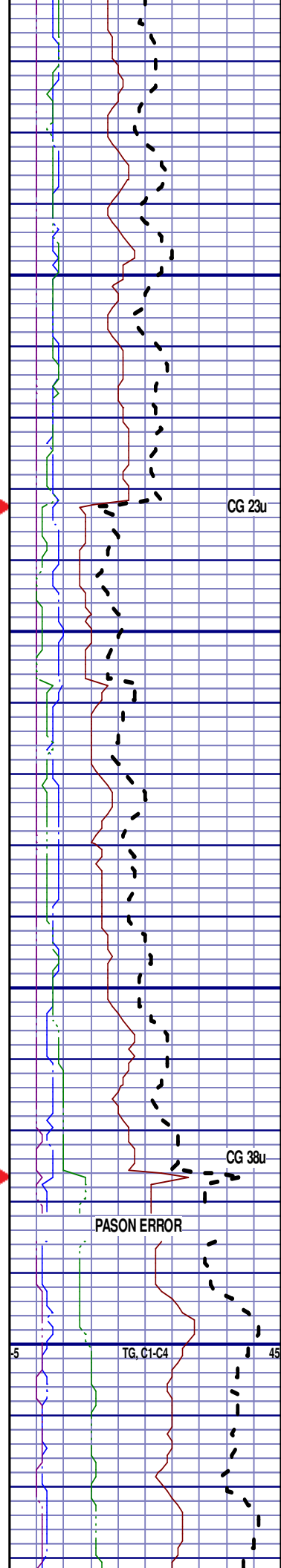


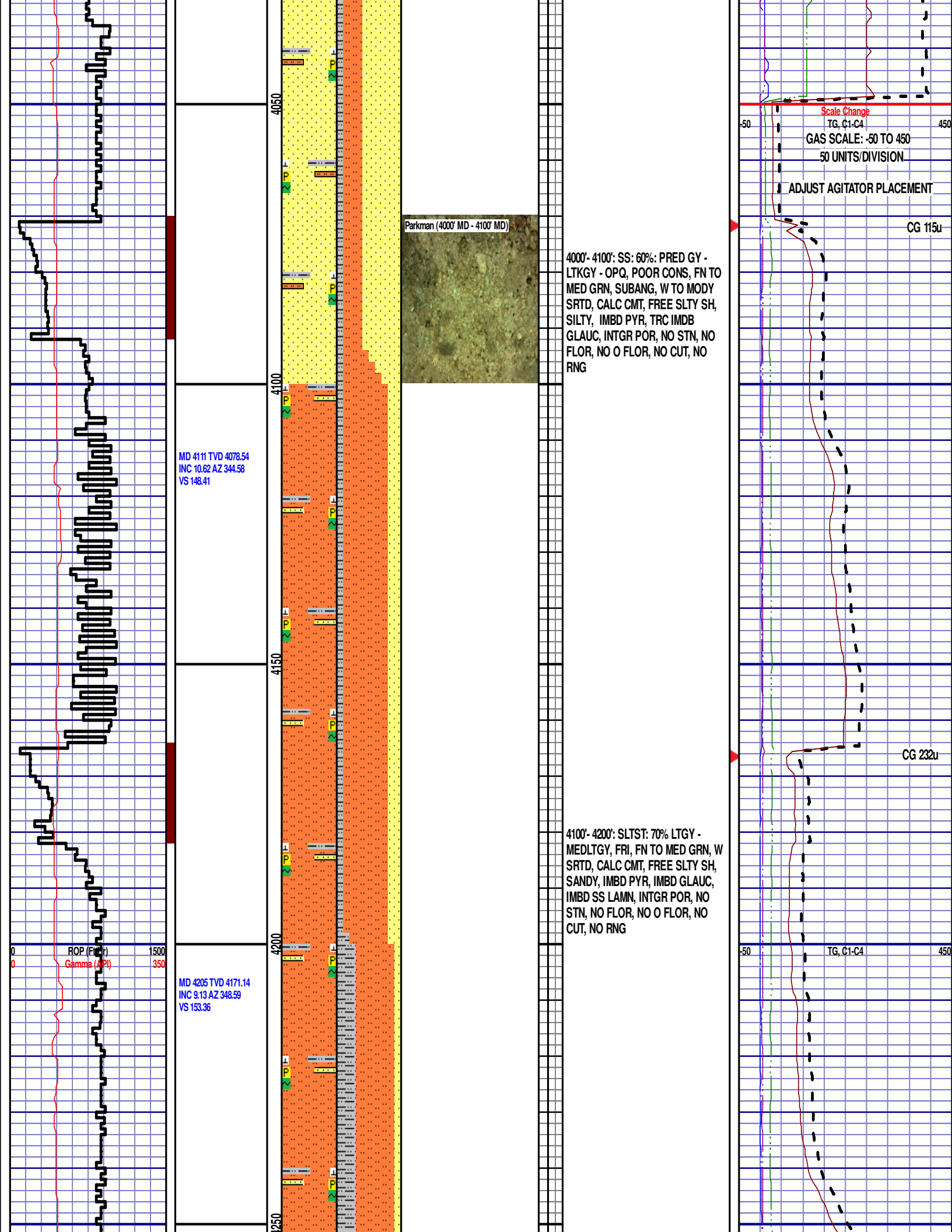


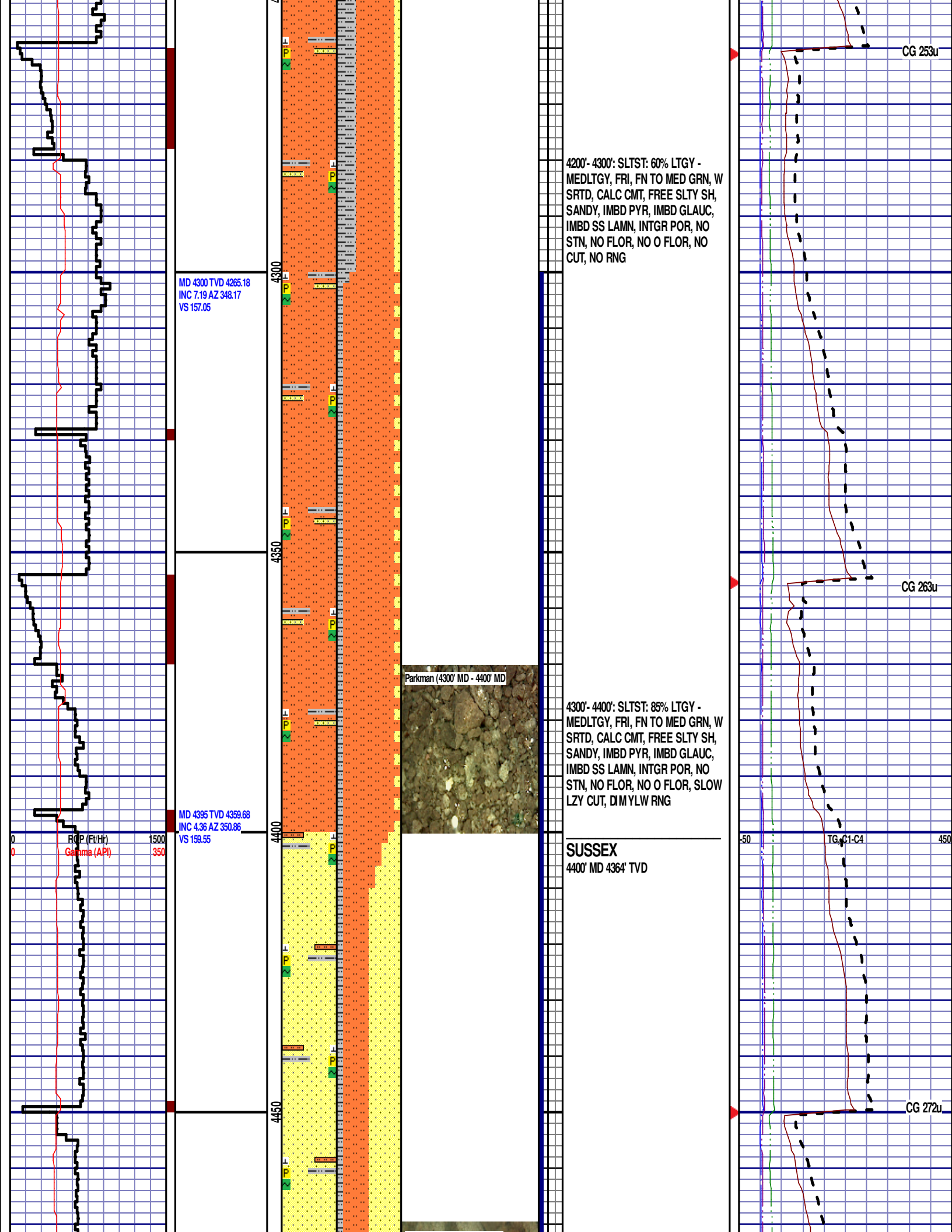


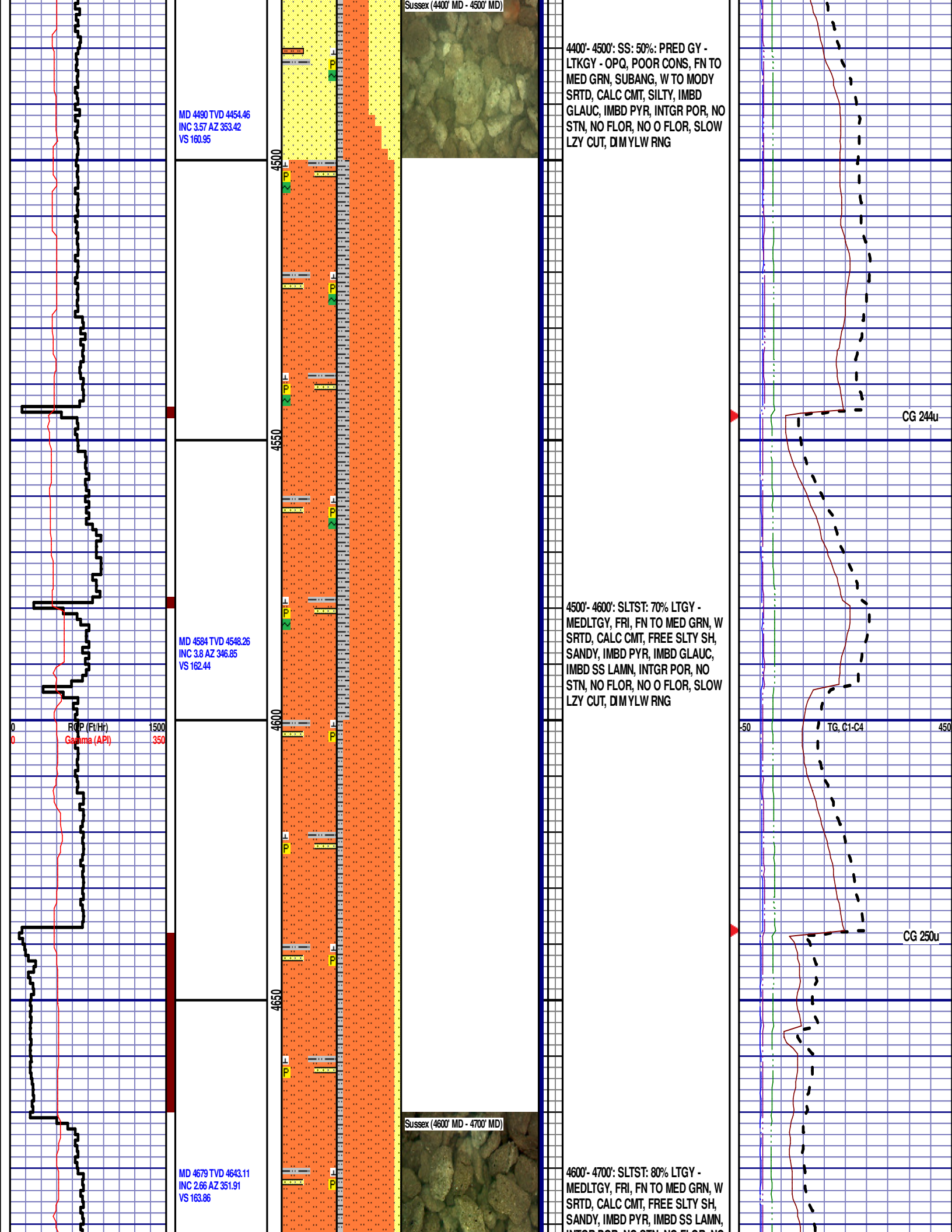
3800'- 3900': SS: 95%: PRED GY - LTKGY - OPQ, POOR CONS, FN TO MED GRN, SUBANG, W TO MODY SRTD, CALC CMT, FREE SLTY SH, IMBD PYR, IMBD PYR, TRC IMBD GLAUC, INTGR POR, NO STN, NO FLOR, NO O FLOR, NO CUT, NO RNG

3900'- 4000': SLTST: 50% LTGY - MEDLTGY, FRI, FN TO MED GRN, W SRTD, CALC CMT, FREE SLTY SH, SANDY, IMBD PYR, IMBD GLAUC, TRC FREE CALC, IMBD SS LAMN, INTGR POR, NO STN, NO FLOR, NO O FLOR, NO CUT, NO RNG









MD 4490 TVD 4454.46
INC 3.57 AZ 353.42
VS 160.95

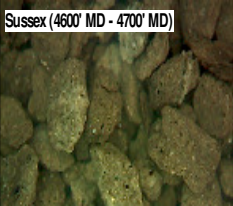
MD 4584 TVD 4548.26
INC 3.8 AZ 346.85
VS 162.44

MD 4679 TVD 4643.11
INC 2.66 AZ 351.91
VS 163.86



4400'- 4500': SS: 50%: PRED GY -
LTKGY - OPQ, POOR CONS, FN TO
MED GRN, SUBANG, W TO MODY
SRTD, CALC CMT, SILTY, IMBD
GLAUC, IMBD PYR, INTGR POR, NO
STN, NO FLOR, NO O FLOR, SLOW
LZY CUT, DIM YLW RNG

4500'- 4600': SLTST: 70% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, FREE SLTY SH,
SANDY, IMBD PYR, IMBD GLAUC,
IMBD SS LAMN, INTGR POR, NO
STN, NO FLOR, NO O FLOR, SLOW
LZY CUT, DIM YLW RNG



4600'- 4700': SLTST: 80% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, FREE SLTY SH,
SANDY, IMBD PYR, IMBD SS LAMN,
INTGR POR, NO STN, NO FLOR, NO

CG 244u

CG 250u

