

[illegible]

HR

12:01 AM
12/30/13
0 FT/24 HRS
DAY 02

WOB 13.9K
PP 3172
RPM 45
SPM 67/67

MD 2580 TVD 2579.8
INC 0.11 AZ 37.41
VS 0.99

ROP (Ft/Hr)
Gamma (API)

1500
350

MD 2675 TVD 2674.8
INC 0.43 AZ 48.36
VS 1.31

2500

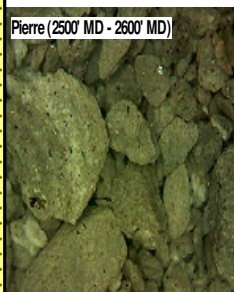
2550

2600

2650

2700

Pierre (2500' MD - 2600' MD)



PIERRE
BEFORE LOGGING DEPTH

2500'- 2600': SLTST: 60% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD
PYR, IMBD SS LAMN, INTGR POR,
NO STN, NO FLOR, NO O FLOR, NO
CUT, NO RNG

2600'- 2700': SLTST: 60% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD
PYR, IMBD SS LAMN, INTGR POR,
NO STN, NO FLOR, NO O FLOR, NO
CUT, NO RNG

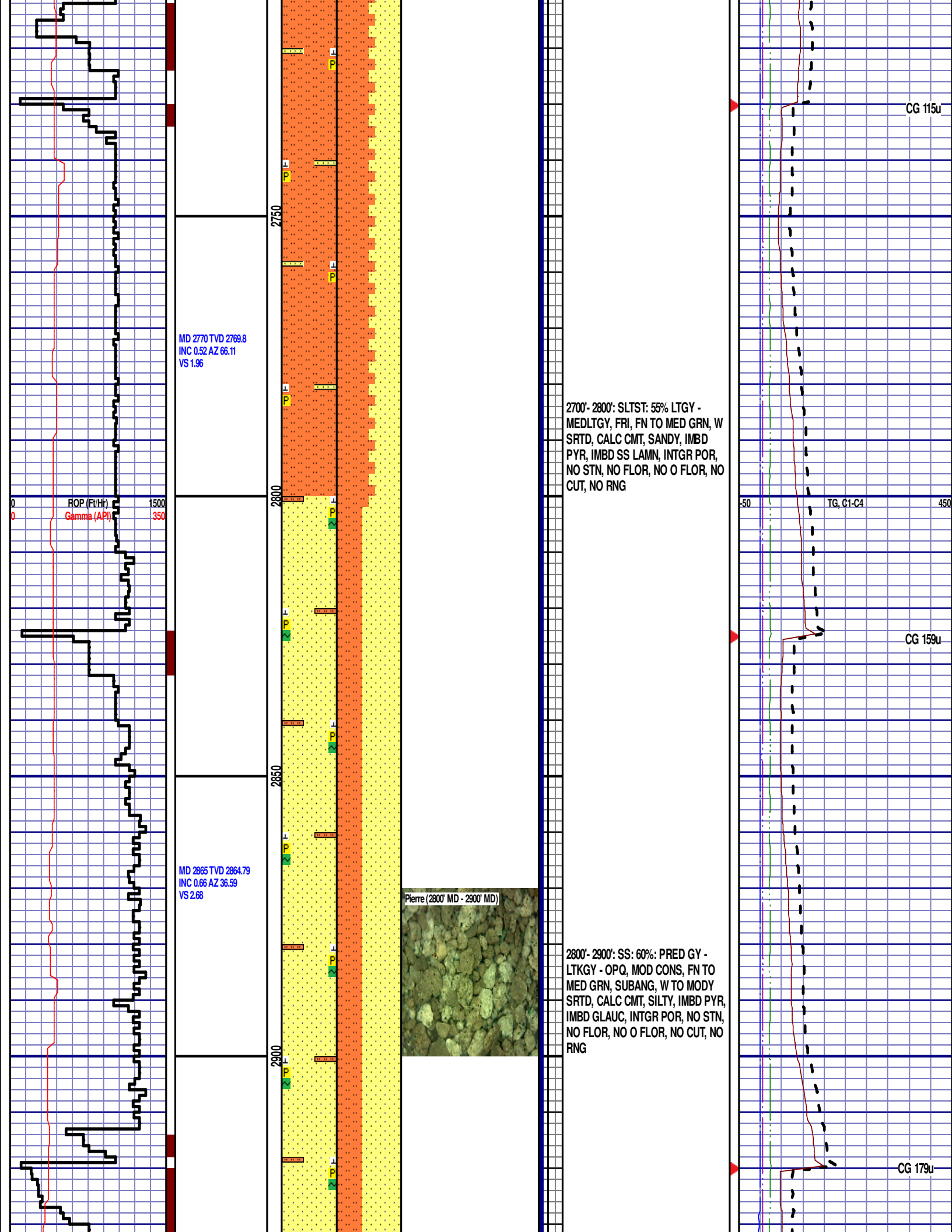
CG 80u

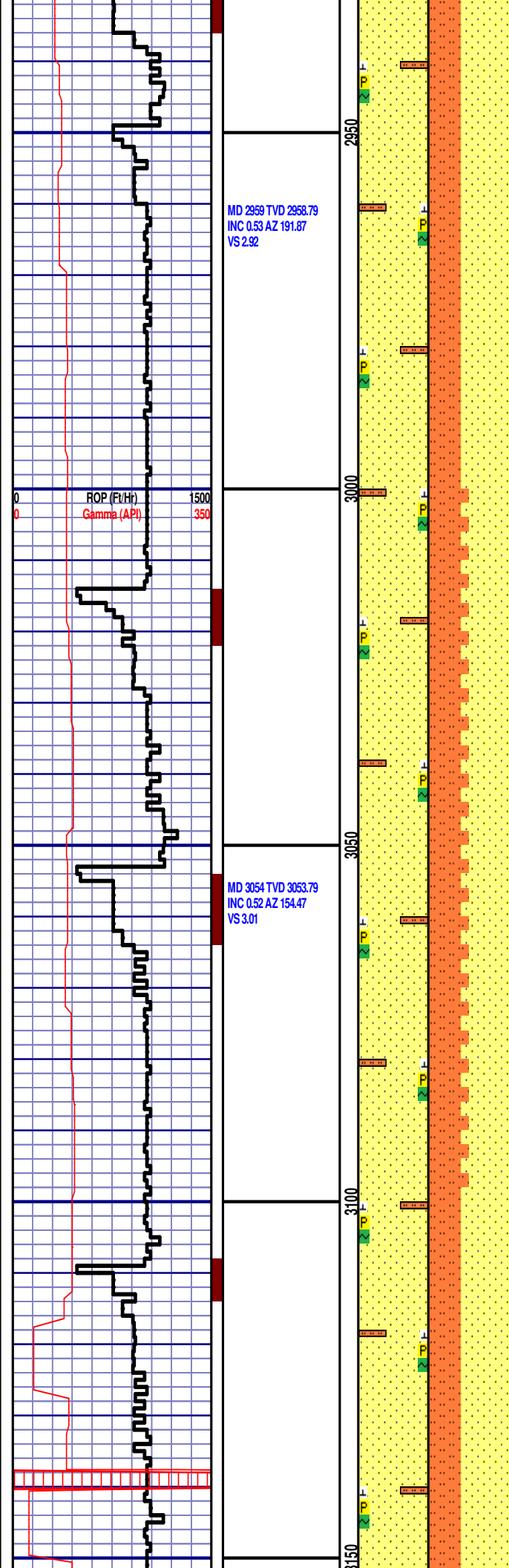
-50

TG, C1-C4

450

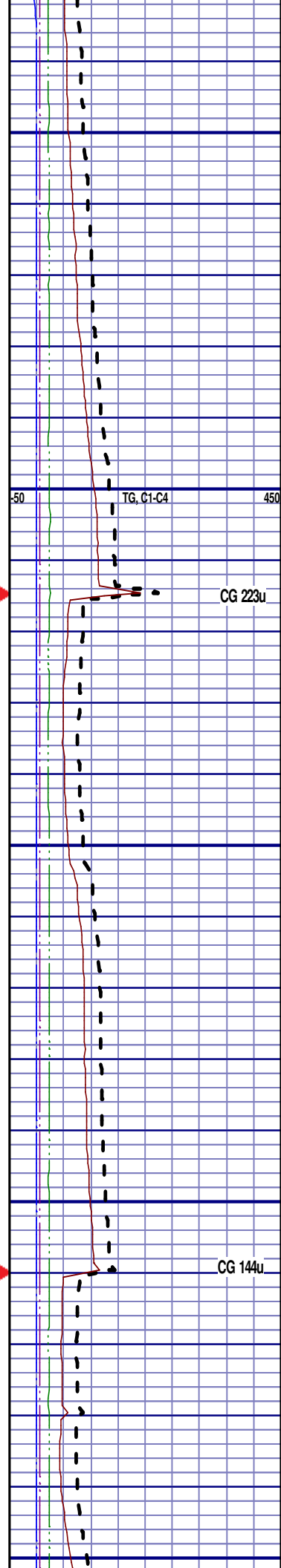
CG 129u

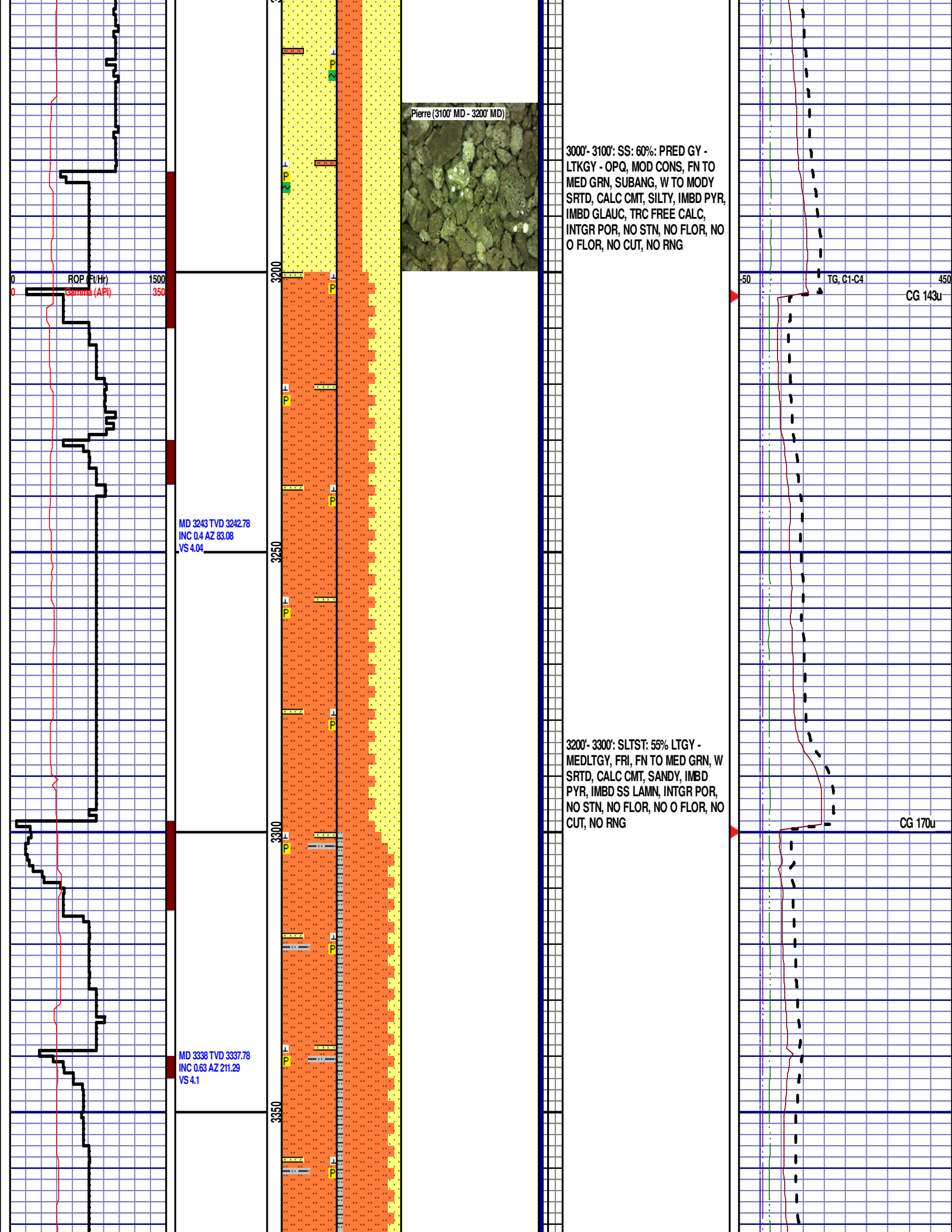


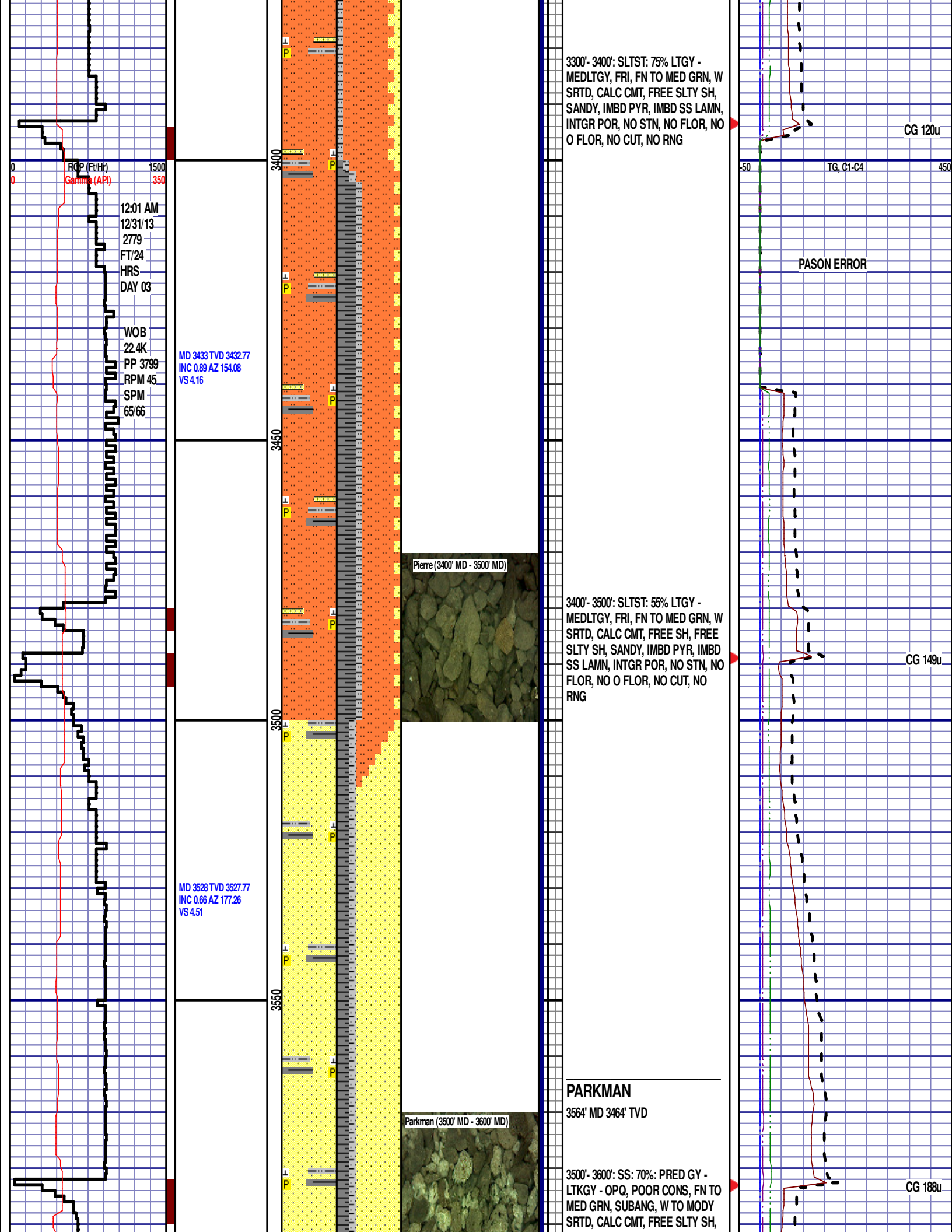


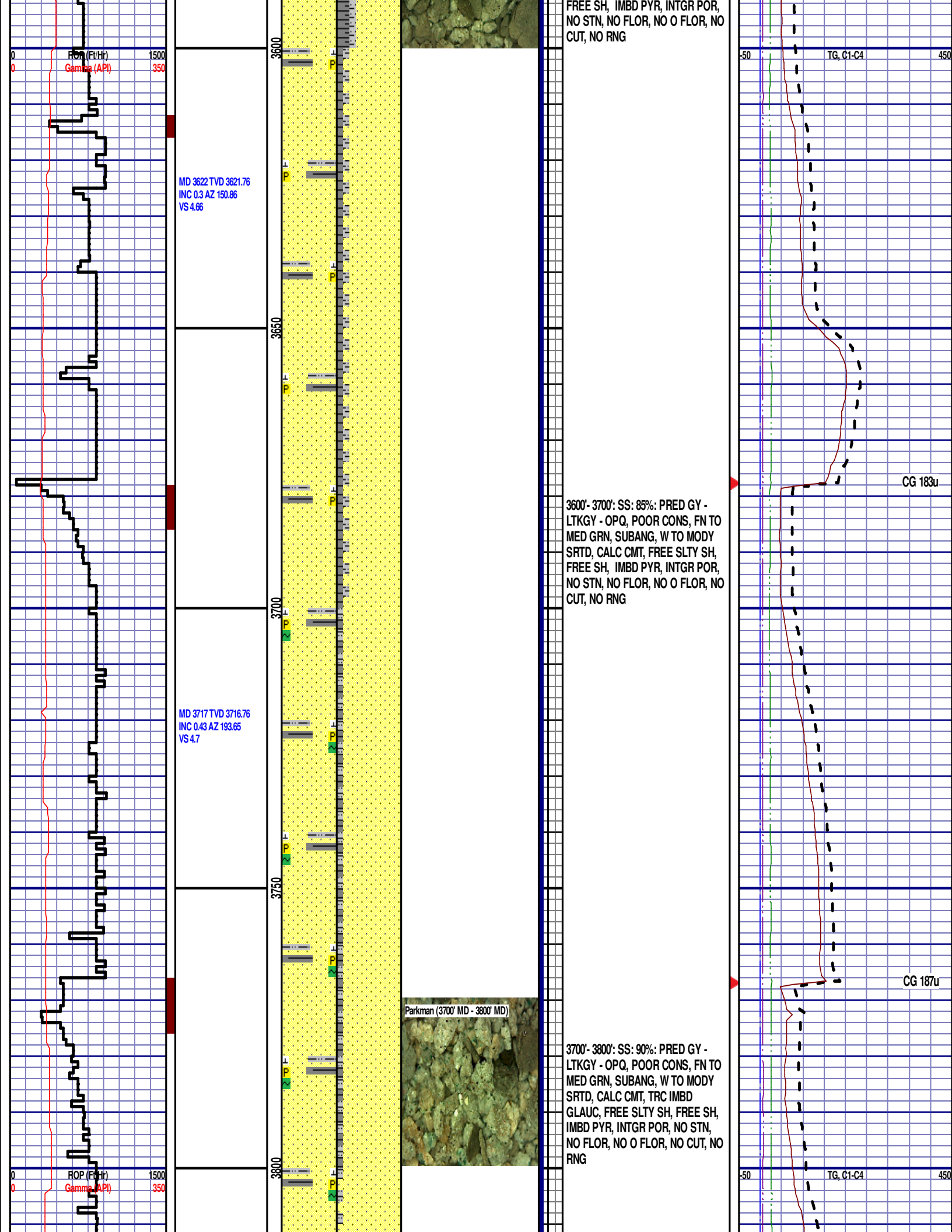
2900'- 3000': SS: 60%: PRED GY -
LTKGY - OPQ, MOD CONS, FN TO
MED GRN, SUBANG, W TO MODY
SRTD, CALC CMT, SILTY, IMBD PYR,
TRC GLAUC, INTGR POR, NO STN,
NO FLOR, NO O FLOR, NO CUT, NO
RNG

3000'- 3100': SS: 55%: PRED GY -
LTKGY - OPQ, MOD CONS, FN TO
MED GRN, SUBANG, W TO MODY
SRTD, CALC CMT, SILTY, IMBD PYR,
IMBD GLAUC, INTGR POR, NO STN,
NO FLOR, NO O FLOR, NO CUT, NO
RNG









MD 3812 TVD 3811.76
INC 0.72 AZ 220.59
VS 4.24

MD 3907 TVD 3906.75
INC 0.9 AZ 193.83
VS 3.67

MD 4001 TVD 4000.74
INC 0.55 AZ 189.77
VS 3.43

ROP (C/Hr)
Gamma (API)

1500
350

3850

3900

3950

4000

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

3900'- 4000': SLTST: 60% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD SS
LAMN, FREE SLTY SH, TRC SH,
IMBD PYR, INTGR POR, NO STN,
NO FLOR, NO O FLOR, SLOW LZY
CUT, DIM YLW RNG

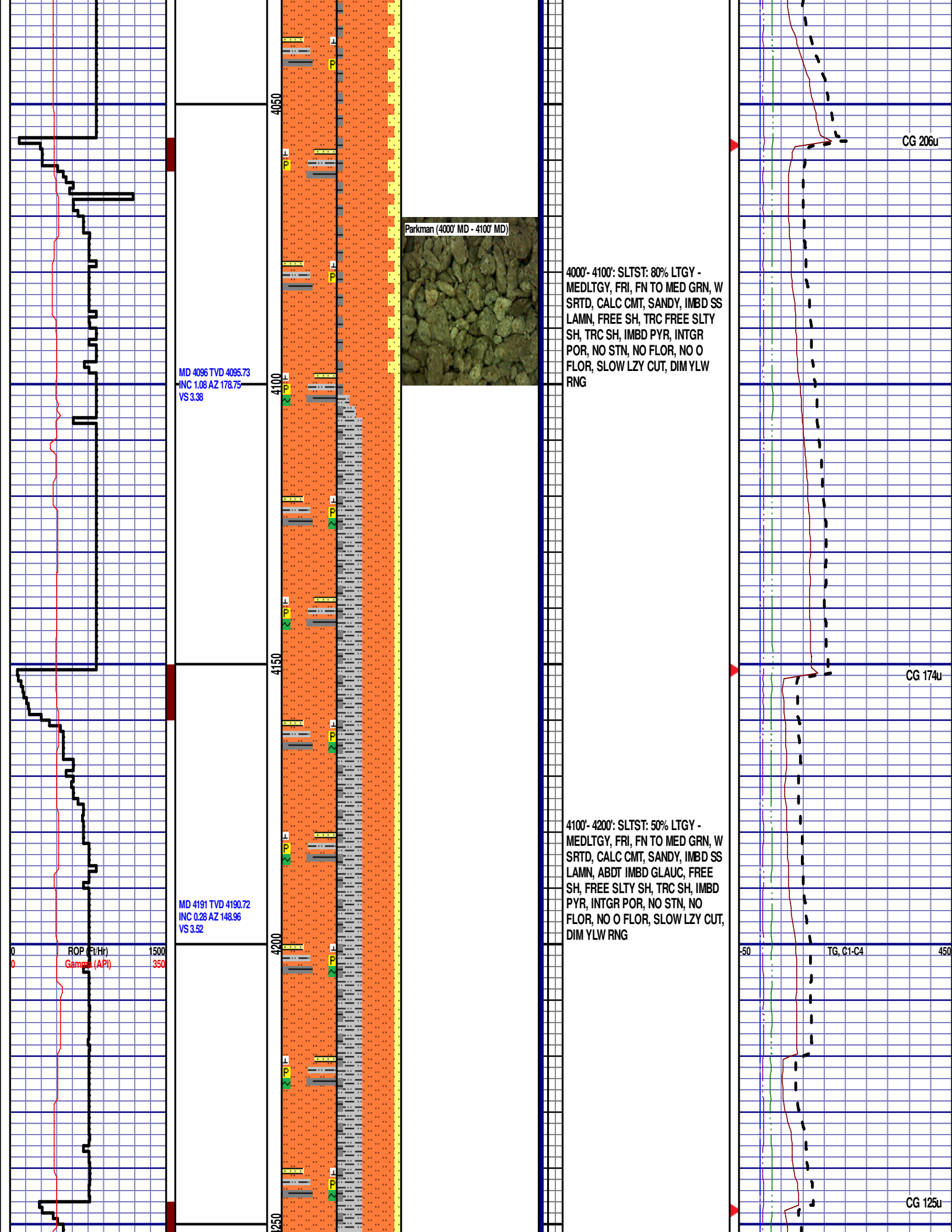
CG 176u

CG 187u

TG, C1-C4

-50

450



MD 4286 TVD 4285.72
INC 0.55 AZ 161.62
VS 3.79

4200'- 4300': SLTST: 50% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD SS
LAMN, TRC IMBD GLAUC, FREE SH,
FREE SLTY SH, TRC SH, IMBD PYR,
INTGR POR, NO STN, NO FLOR, NO
O FLOR, SLOW LZV CUT, DIM YLW
RNG

MD 4330
WT 8.7
VIS 31.0
PH 10.5
FIL 25.0
CL 1400
CAL 60.0
H2O 97.0
OIL 0.0
SOL 2.7
CAKE 1/0
GELS 1/3/4
PV 4.0
YP 2.0

CG 131u

Parkman (4300' MD - 4400' MD)

4300'- 4400': SLTST: 50% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD SS
LAMN, TRC IMBD GLAUC, FREE SH,
FREE SLTY SH, TRC SH, IMBD PYR,
INTGR POR, NO STN, NO FLOR, NO
O FLOR, SLOW LZV CUT, DIM YLW
RNG

Parkman (4400' MD - 4450' MD)

4400'- 4450': SLTST: 55% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD SS
LAMN, TRC IMBD GLAUC, FREE SH,
FREE SLTY SH, TRC SH, IMBD PYR,
INTGR POR, NO STN, NO FLOR, NO
O FLOR, SLOW LZV CUT, DIM YLW
RNG

SUSSEX
4450' MD 4450' TVD

TG, C1-C4

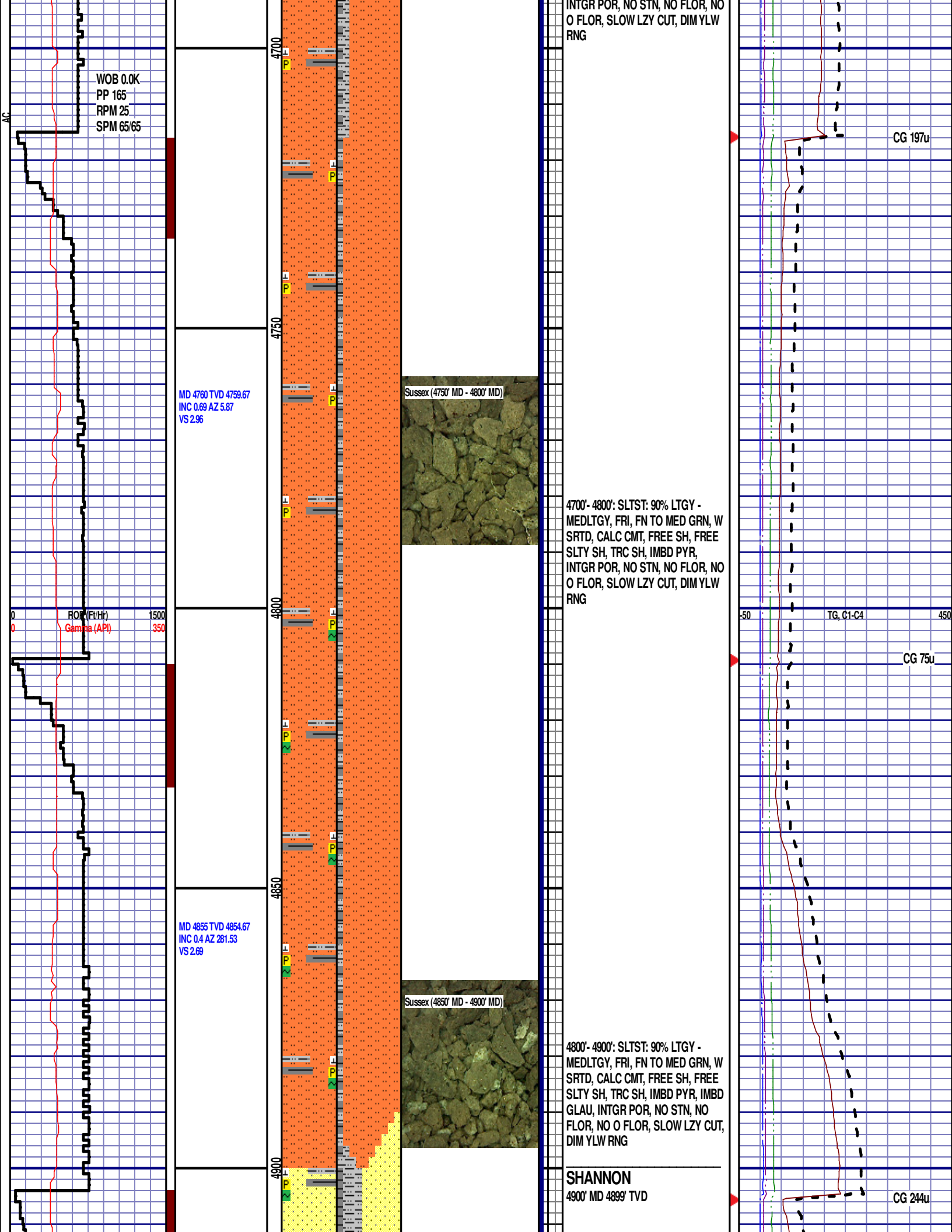
CG 207u

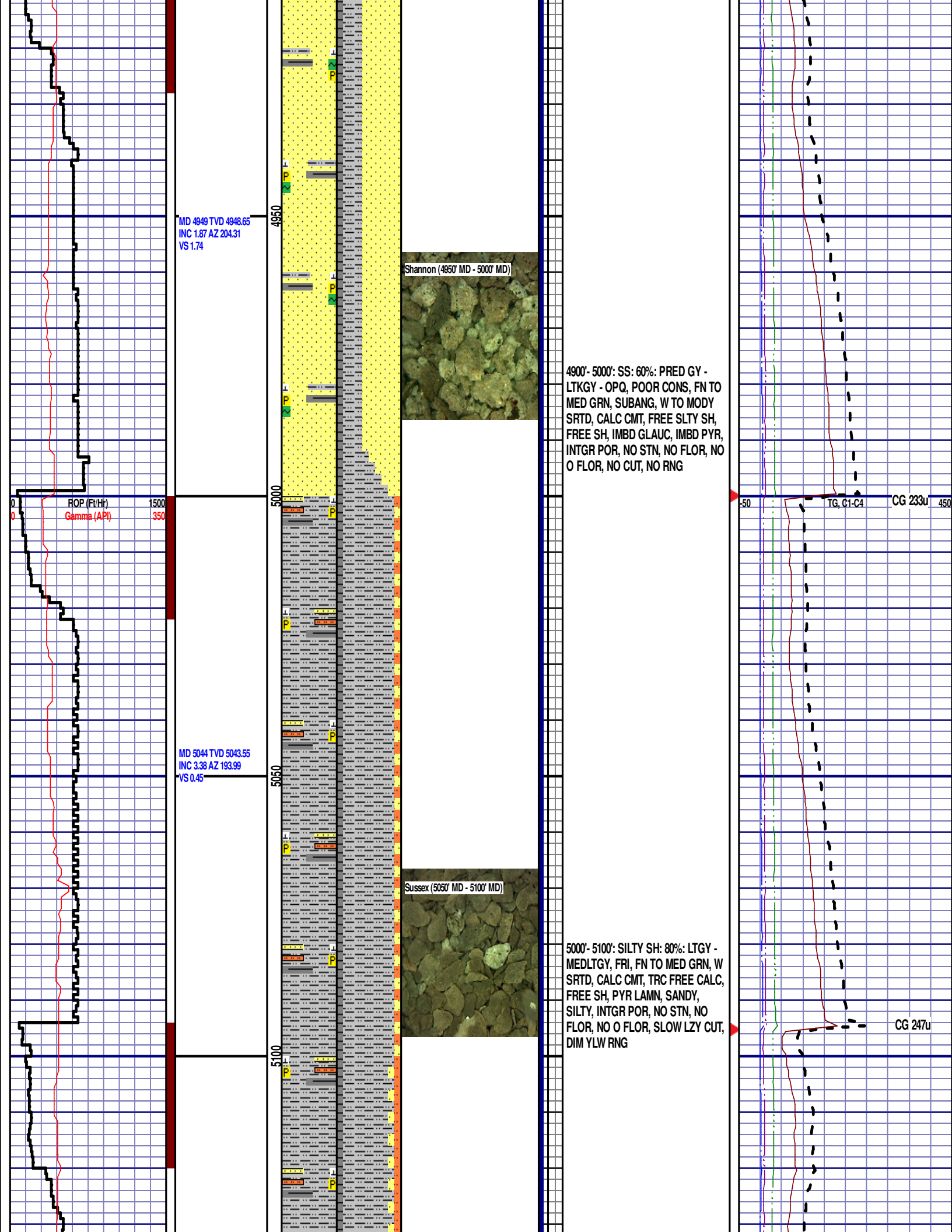
MD 4665 TVD 4664.68
INC 1.06 AZ 220.17
VS 3.46

4600'- 4700': SLTST: 80% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, FREE SH, FREE
SLTY SH, TRC SH, IMBD PYR,

CG 174u

RCP (Ft/Hr)
Gamma (API)





MD 5139 TVD 5138.28
INC 5.25 AZ 208.44
VS -2.27

5150

5200

5250

5300

5350

ROP (Ft/Hr)
Gamma (API)

1500
350

MD 5234 TVD 5232.68
INC 7.58 AZ 201.04
VS -6.54

MD 5329 TVD 5326.54
INC 10.16 AZ 199.61
VS -11.53

5100'- 5200': SILTY SH: 75%: LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, TRC FREE CALC,
FREE SH, PYR LAMN, SANDY,
SILTY, INTGR POR, NO STN, NO
FLOR, NO O FLOR, SLOW LZY CUT,
DIM YLW RNG

CG 206u

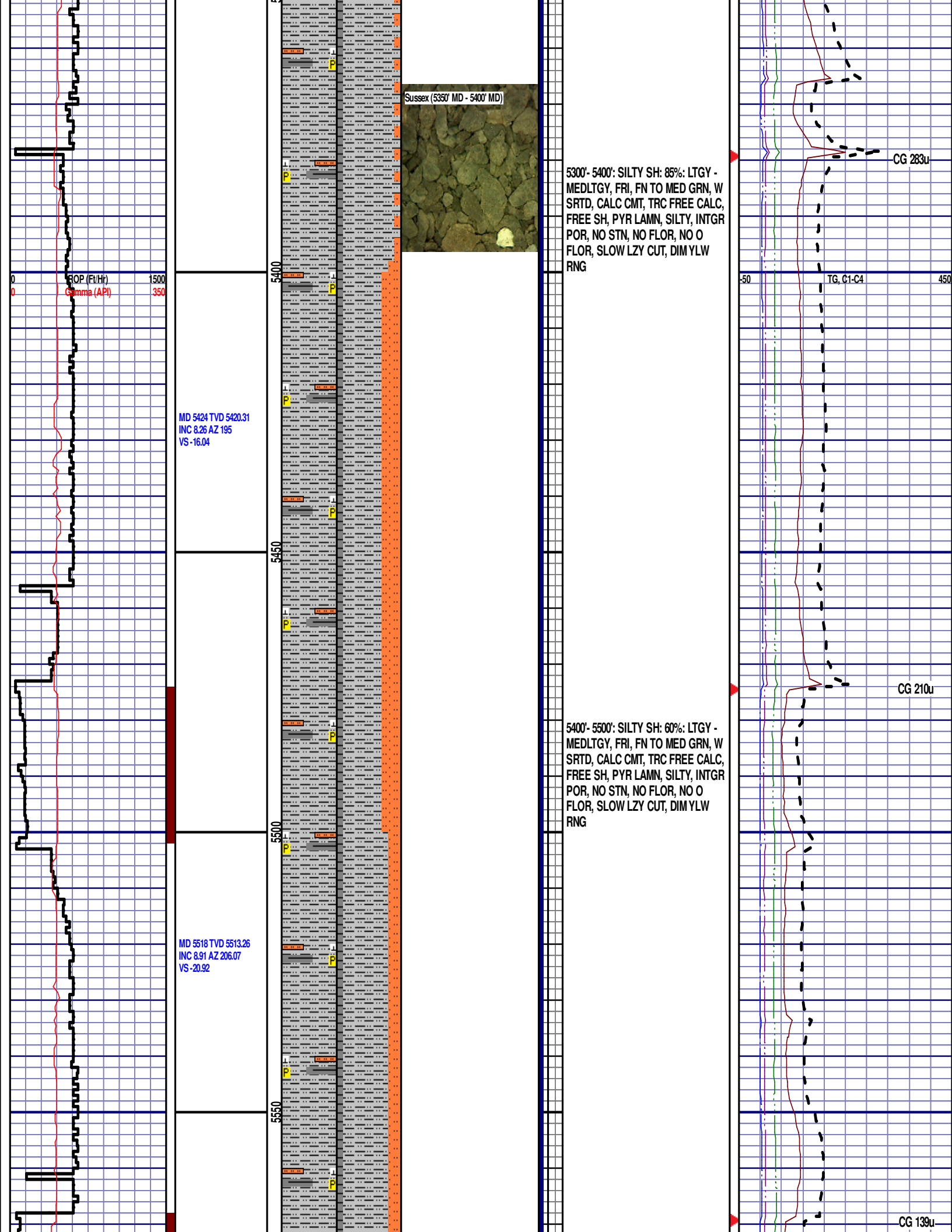
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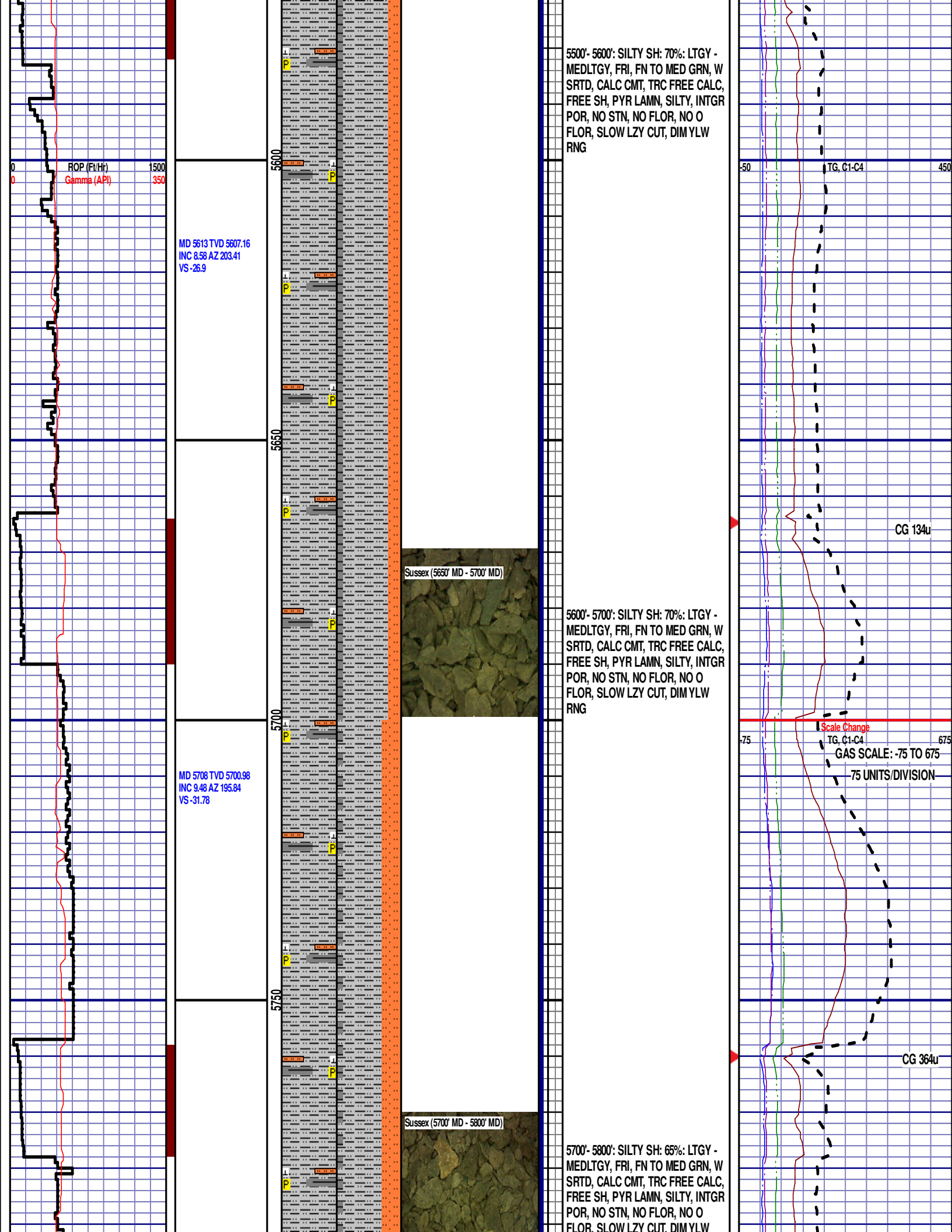
TG, C1-C4

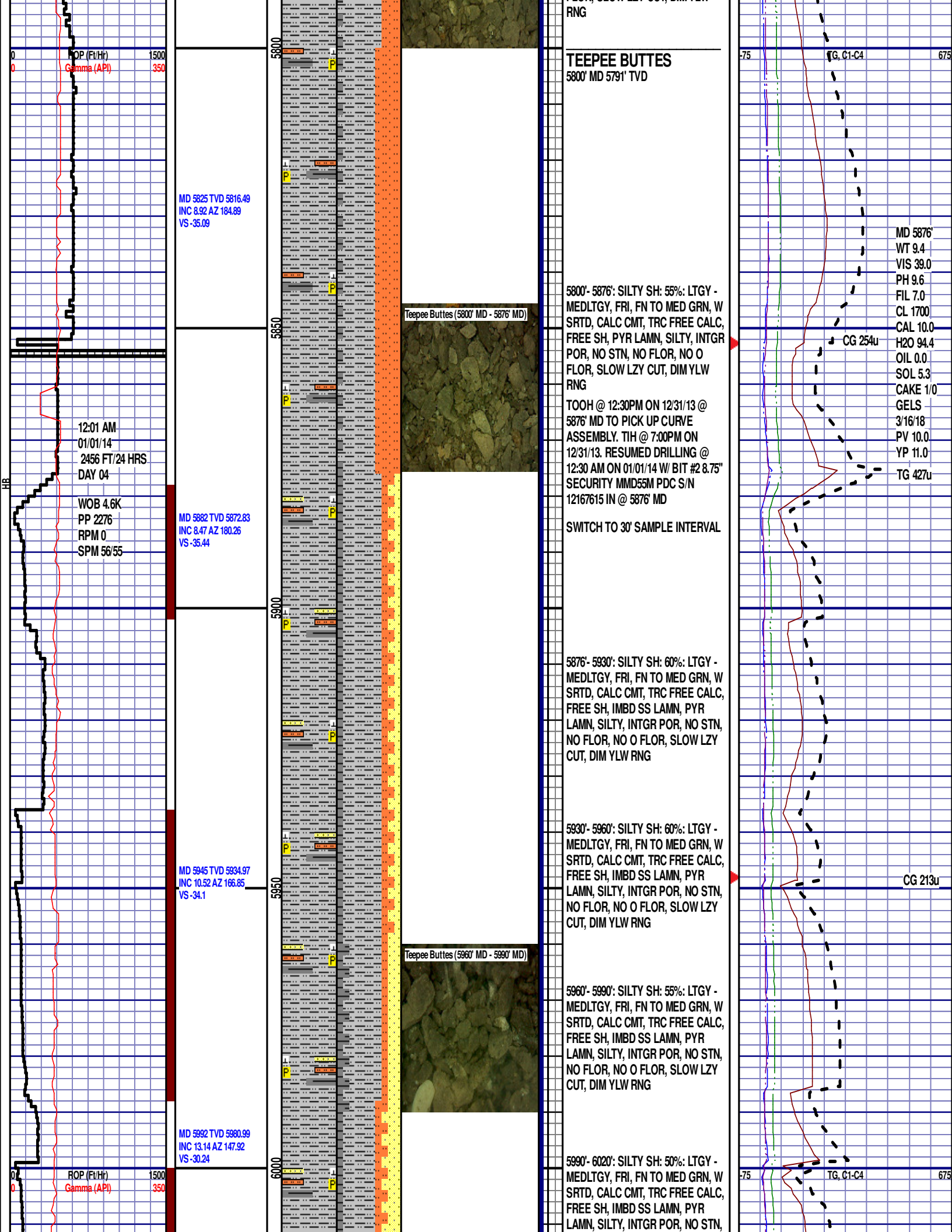
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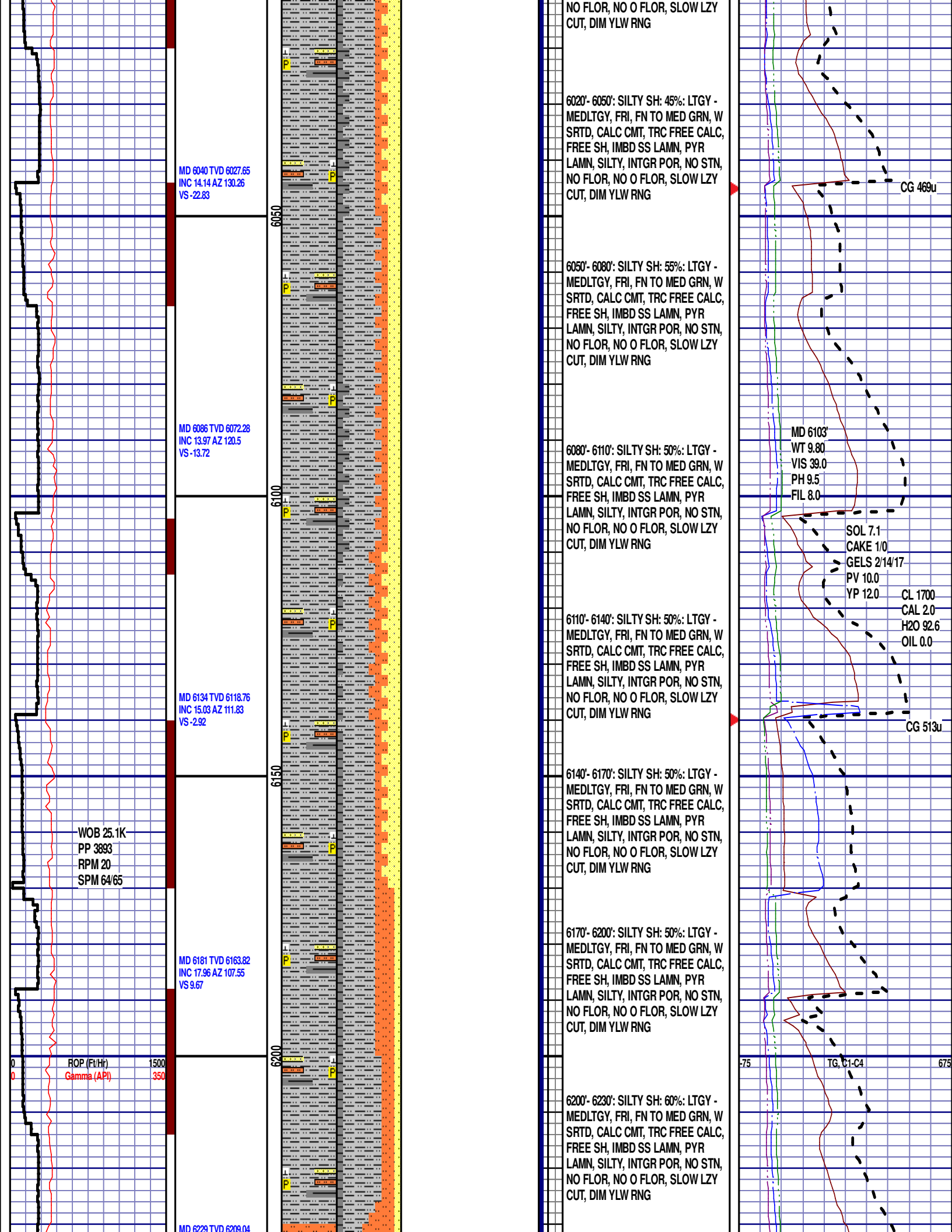
5200'- 5300': SILTY SH: 85%: LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, TRC FREE CALC,
FREE SH, PYR LAMN, SILTY, INTGR
POR, NO STN, NO FLOR, NO O
FLOR, SLOW LZY CUT, DIM YLW
RNG

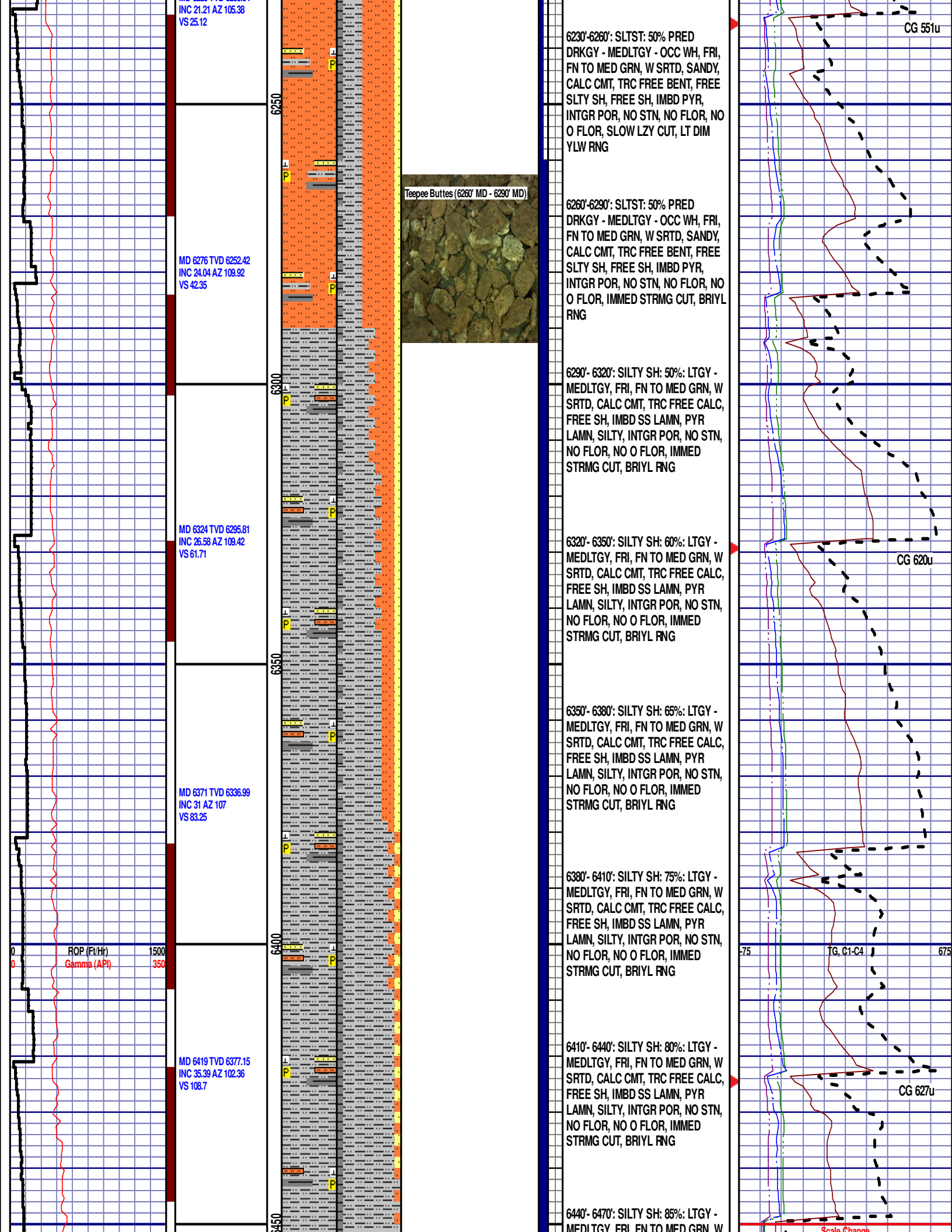
CG 264u

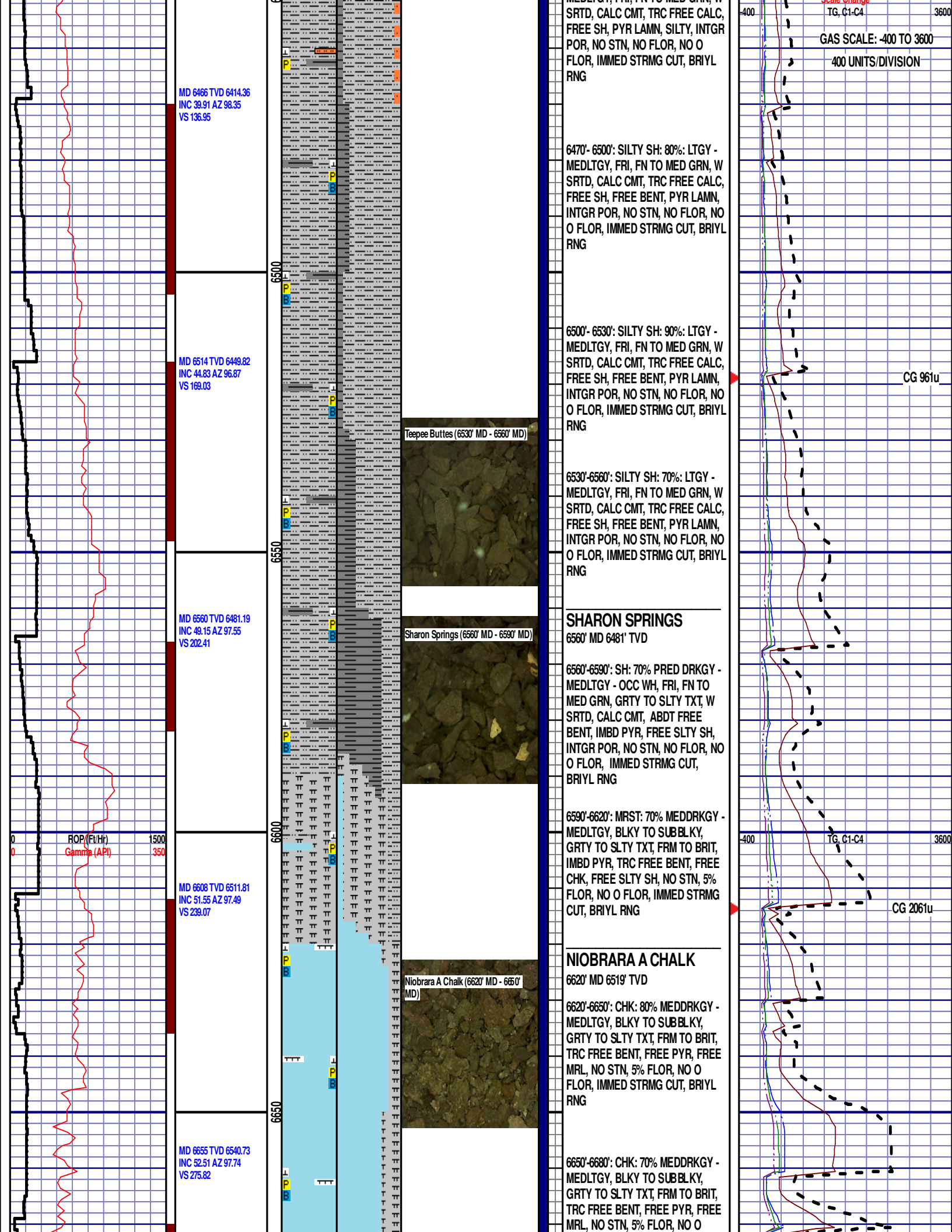


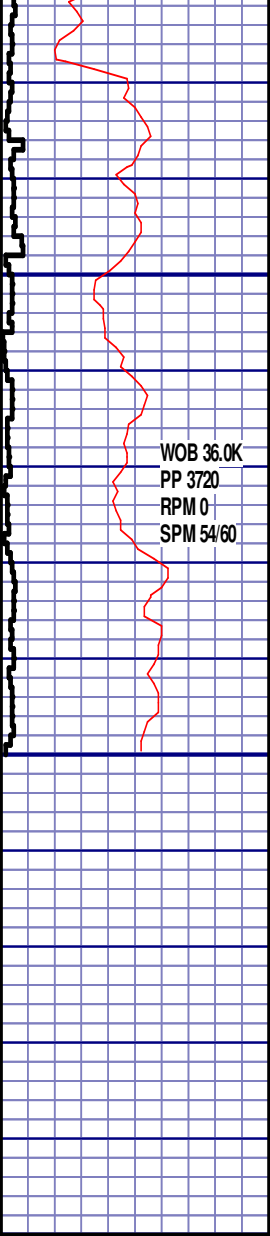








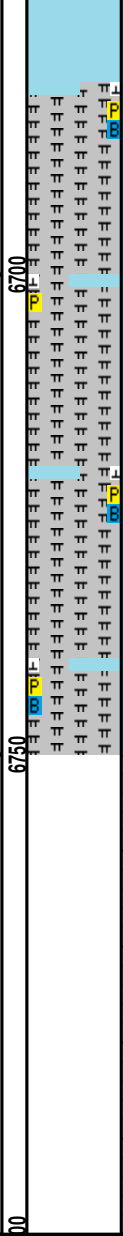




WOB 36.0K
PP 3720
RPM 0
SPM 54/60

MD 6703 TVD 6568.81
INC 55.88 AZ 95.72
VS 314.5

MD 6750 TVD 6593.35
INC 61.15 AZ 92.56
VS 354.47



Niobrara A Marl (6680' MD - 6710' MD)



FLOR, IMMED STRMG CUT, BRIYL
RNG

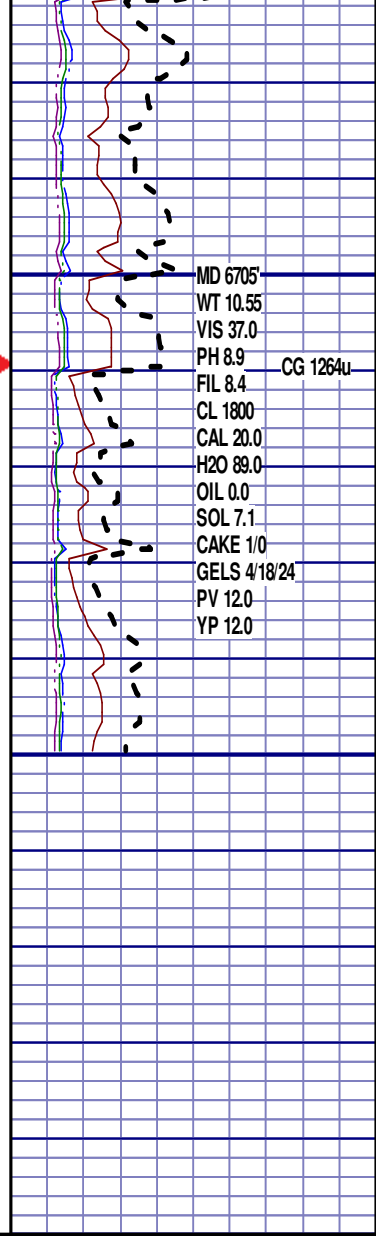
NIOBARRA A MARL

6680' MD 6555' TVD

6680'-6710': MRST: 65% MEDDRKGY -
MEDLTGY, BLKY TO SUBBLKY,
GRTY TO SLTY TXT, FRM TO BRIT,
IMBD PYR, TRC FREE BENT, FREE
CHK, NO STN, 5% FLOR, NO O
FLOR, IMMED STRMG CUT, BRIYL
RNG

6710'-6740': MRST: 80% MEDDRKGY -
MEDLTGY, BLKY TO SUBBLKY,
GRTY TO SLTY TXT, FRM TO BRIT,
IMBD PYR, TRC FREE BENT, FREE
CHK, NO STN, 5% FLOR, NO O
FLOR, IMMED STRMG CUT, BRIYL
RNG

END OF VERTICAL LOG @ 6750' MD
ON 1/1/14. CONTINUED ON
HORIZONTAL LOG.



MD 6705'
WT 10.55
VIS 37.0
PH 8.9
FIL 8.4
CL 1800
CAL 20.0
H2O 89.0
OIL 0.0
SOL 7.1
CAKE 1/0
GELS 4/18/24
PV 12.0
YP 12.0
CG 1264u