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WWW.HZMUD.COM/25

Customer Information

Operator: Noble Energy Inc.
1625 Broadway
Suite 2200
Denver, Colorado 80202

Geologist: Renee Clackler
Noble Energy Inc.

Mud Logging Details

Logger: Kevin Brooks &
Kaitlyn Bertram

Log Interval: 2500' MD to 6980' MD

Start Date: December 16, 2014

Release Date: December 28, 2014

Well Information

Well Name: Oscar Y11-79HN

Location: 10,3-T2N-R64W
2380' FSL, 710' FEL

County: Weld
State: Colorado

Drilling Rig: H&P 277

Total Depth: 14458' MD

TD Date: December 28, 2014

Formation: Niobrara B

KB Elevation: 4953'

GR Elevation: 4929'

API Number: 05-123-37943-0000

ROCK TYPES

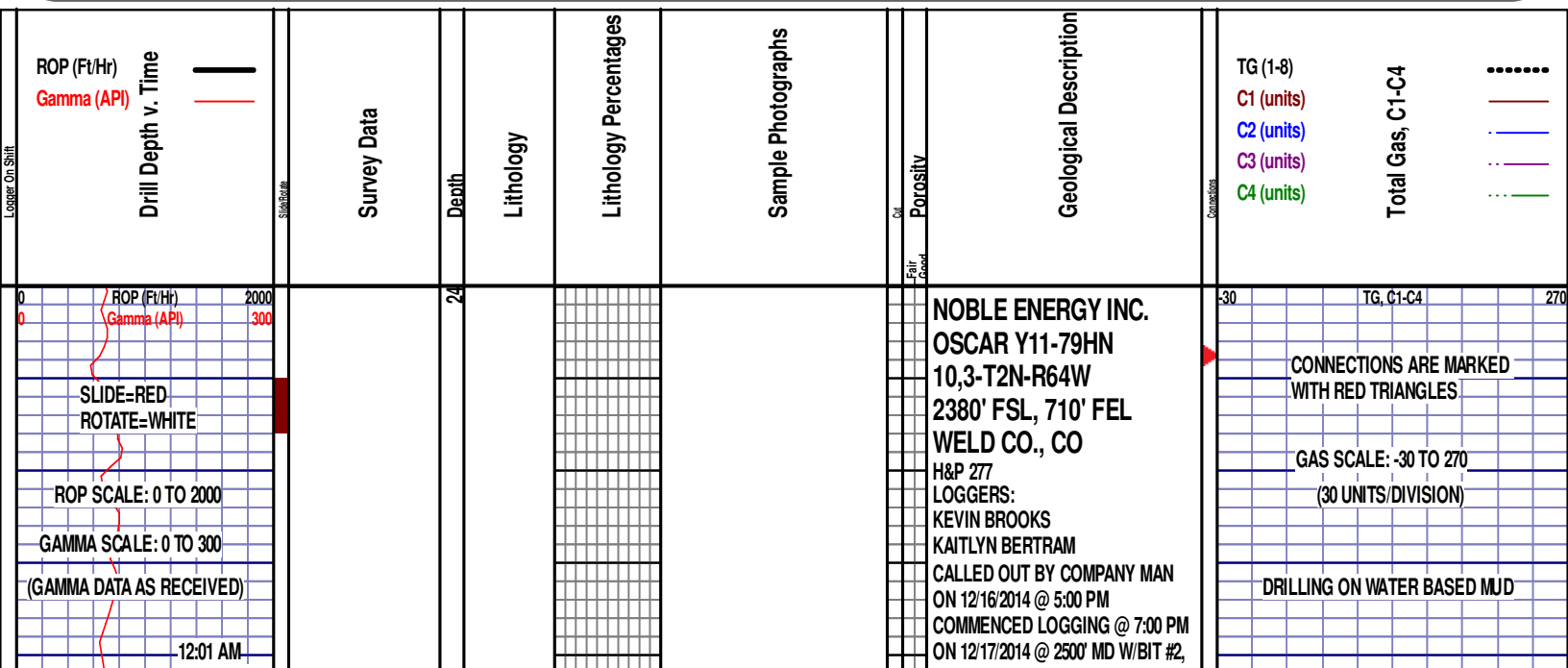
Siltysh
Anhy
Bent
Cht
Clyst
Coal
Congl

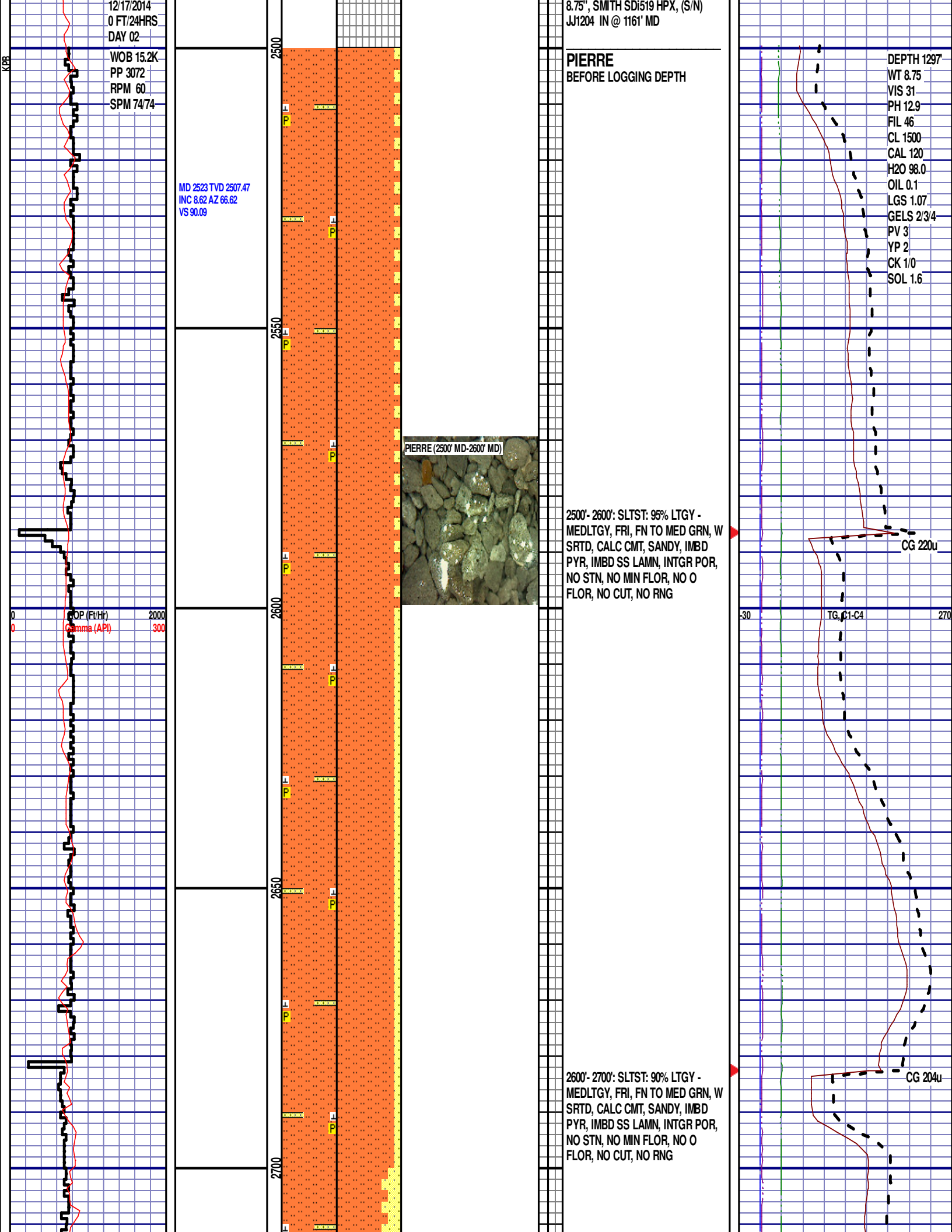
Dol
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Sltst
Ss
Till
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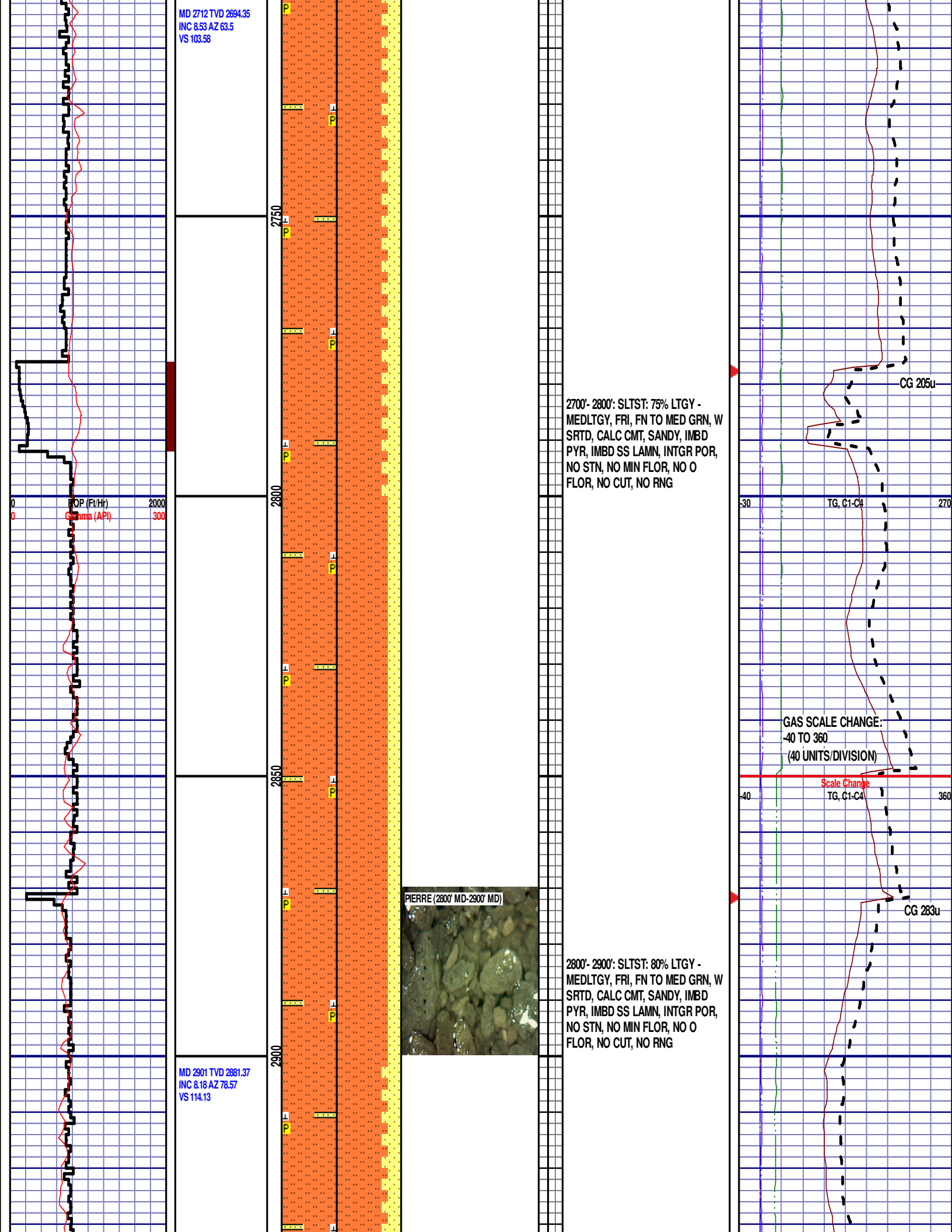
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ogw
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oshly gw
shly gw
sdygw
hvyrcbsh

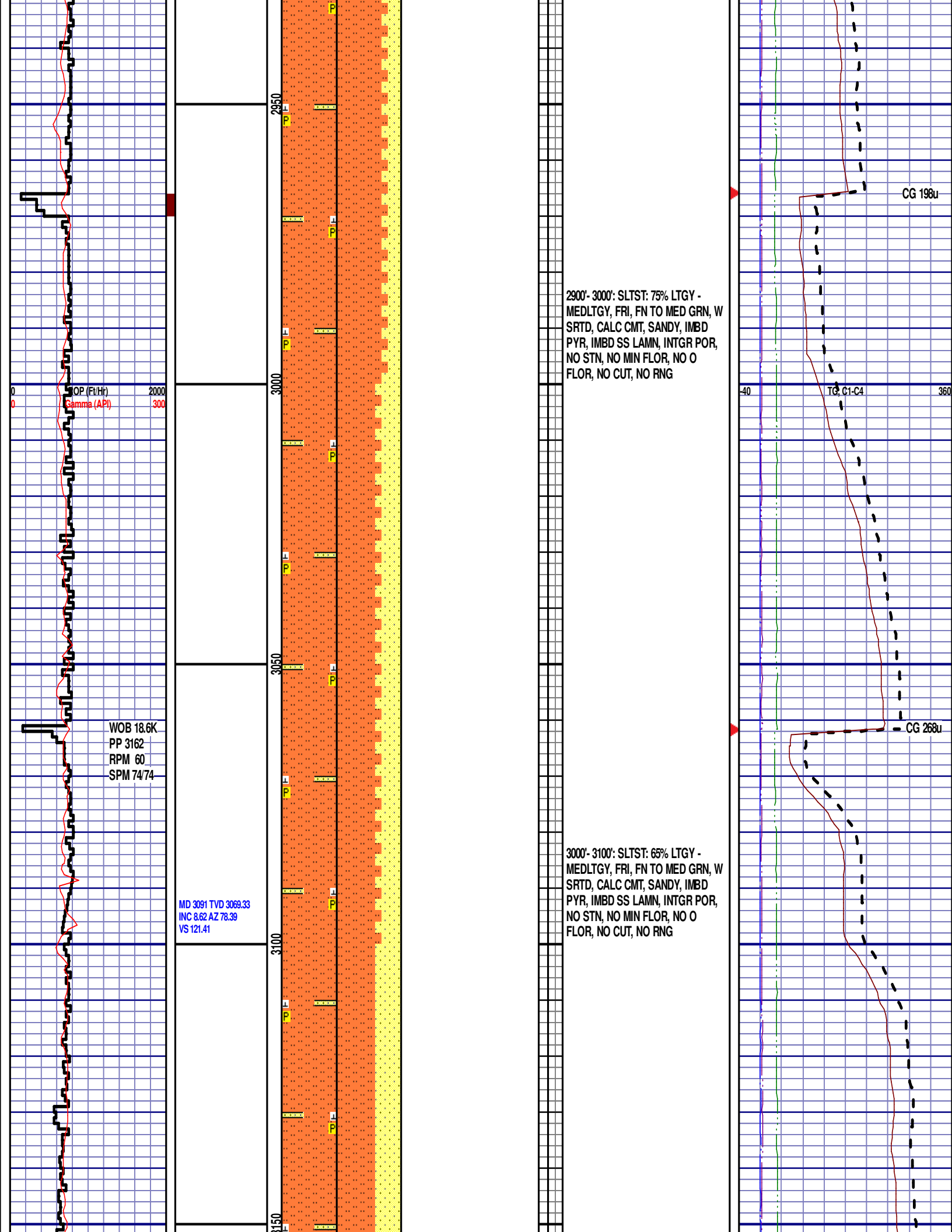
NO SMPL nosmpl
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sltst
sdy sh

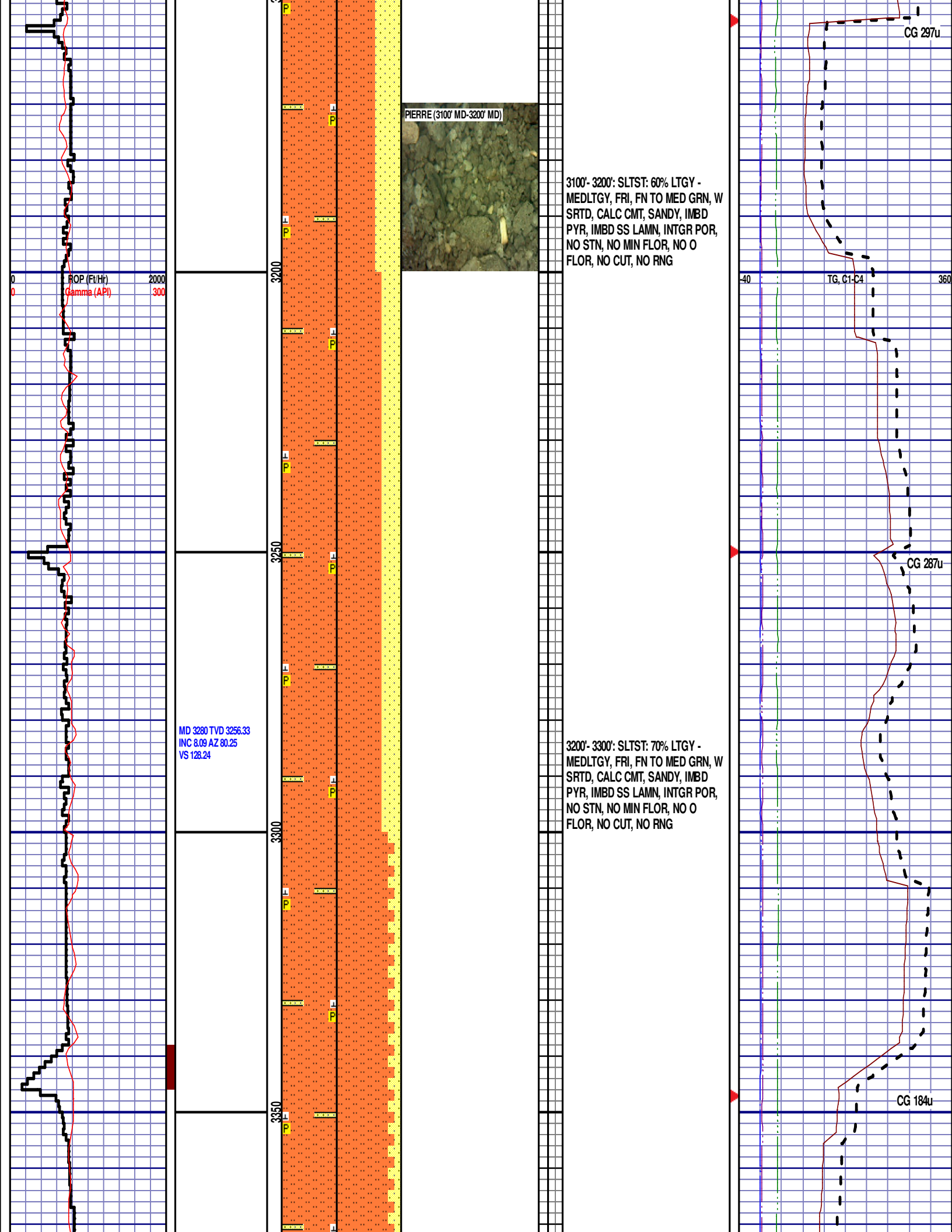


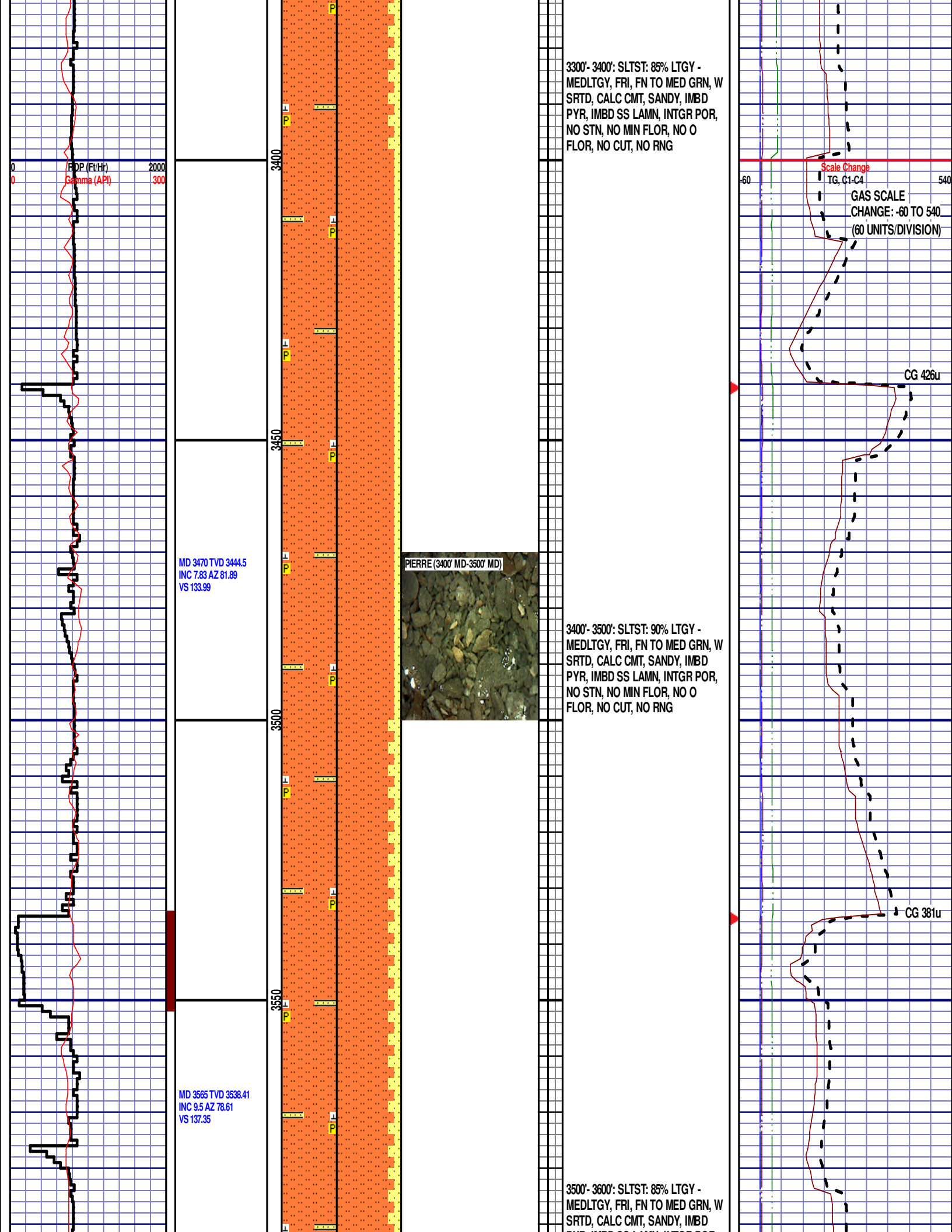


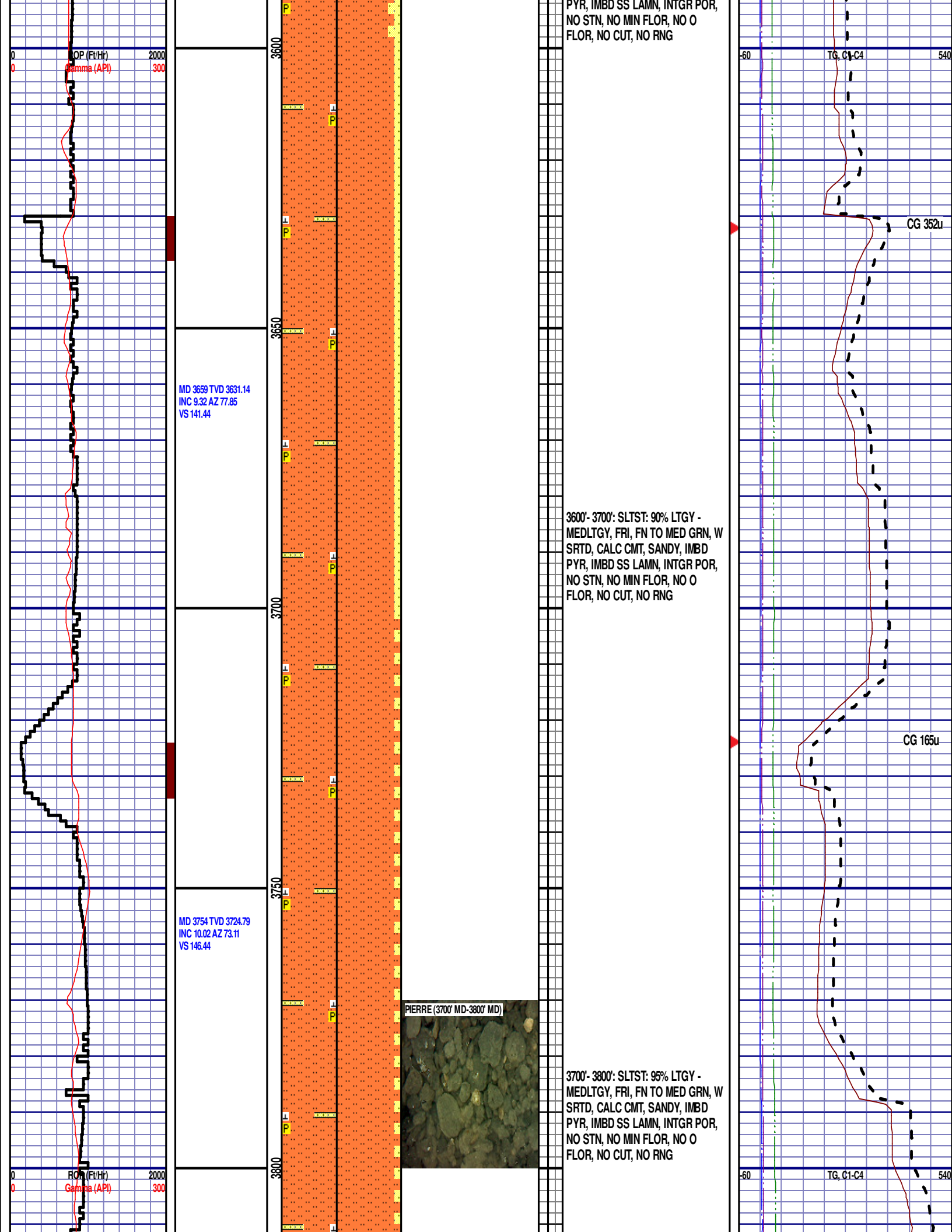
MD 2712 TVD 2694.35
INC 8.53 AZ 63.5
VS 103.58







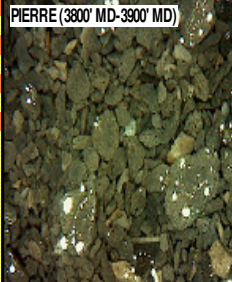




MD 3848 TVD 3817.38
INC 9.85 AZ 74.37
VS 151.97

MD 3943 TVD 3910.84
INC 10.82 AZ 72.96
VS 157.82

ROP (Ft/Hr) 2000
Gamma (API) 300
12:01 AM
12/18/2014
1506 FT/24HRS
DAY 03



3800'- 3900': 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

PARKMAN
3930' MD 3898' TVD

3900'- 4000': SS: 80% PRED WHT -
LTGY - OPQ, FRI, VFN GRN,
VWSRTD, CALC CMT, IMBD PYR,
SILTY, INTGR POR, NO STN, NO
MIN FLOR, NO O FLOR, NO CUT, NO
RNG

CG 472u

CG 385u

CG 293u

TG, C1-C4

MD 4038 TVD 4004
INC 11.78 AZ 73.08
VS 164.38

4050

4100

MD 4132 TVD 4096.14
INC 11.08 AZ 68.36
VS 171.62

4150

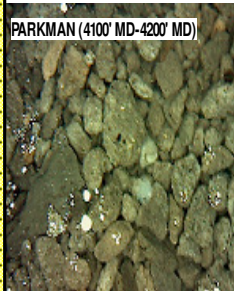
4200

MD 4227 TVD 4189.41
INC 10.82 AZ 68.3
VS 179.35

4250

4000'- 4100': SS: 90% PRED WHT -
LTGY - OPQ, FRI, VFN GRN,
VWSRTD, CALC CMT, IMBD PYR,
SILTY, INTGR POR, NO STN, NO
MIN FLOR, NO O FLOR, NO CUT, NO
RNG

PARKMAN (4100' MD-4200' MD)

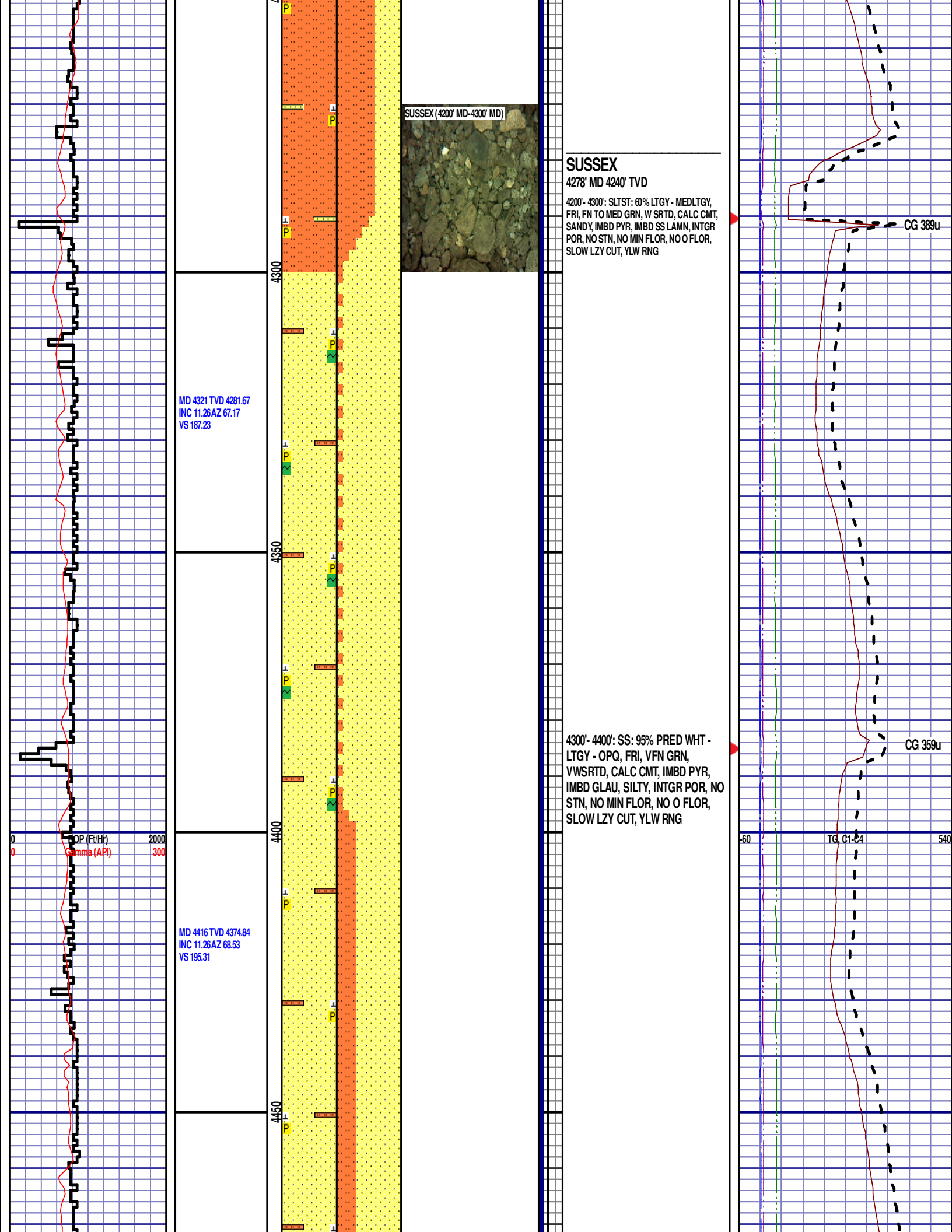


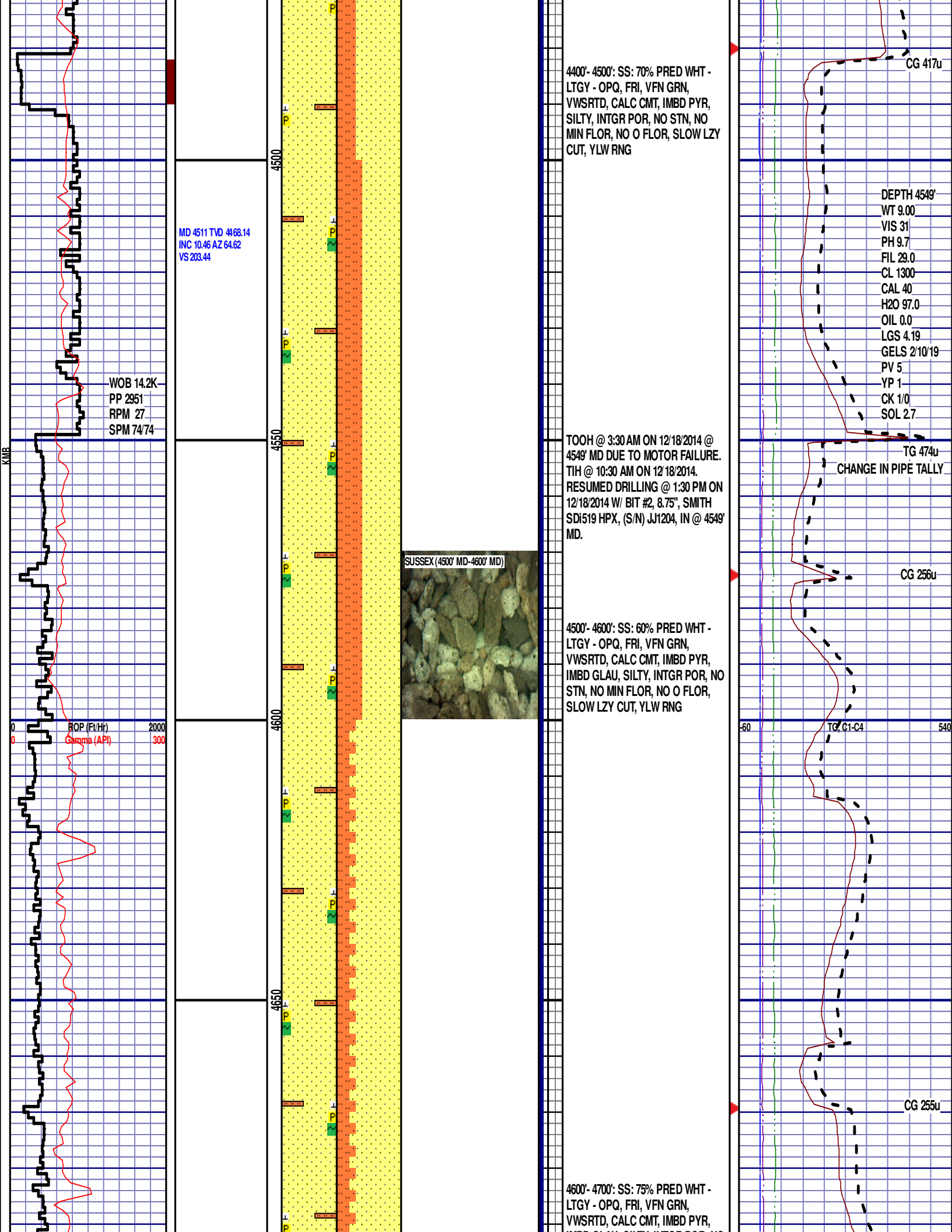
4100'- 4200': SLTST: 80% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD
PYR, IMBD SS LAMN, INTGR POR,
NO STN, NO MIN FLOR, NO O
FLOR, NO CUT, NO RNG

CG 489u

CG 451u

TG, C1-C4





MD 4511 TVD 4168.14
INC 10.46 AZ 64.62
VS 203.44

WOB 14.2K
PP 2951
RPM 27
SPM 74/74

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

SUSSEX (4500' MD-4600' MD)



4400'- 4500': SS: 70% PRED WHT -
LTGY - OPQ, FRI, VFN GRN,
VWSRTD, CALC CMT, IMBD PYR,
SILTY, INTGR POR, NO STN, NO
MIN FLOR, NO O FLOR, SLOW LZ
CUT, YLW RNG

TOOH @ 3:30 AM ON 12/18/2014 @
4549' MD DUE TO MOTOR FAILURE.
TIH @ 10:30 AM ON 12/18/2014.
RESUMED DRILLING @ 1:30 PM ON
12/18/2014 W/ BIT #2, 8.75", SMITH
SDi519 HPX, (S/N) JJ1204, IN @ 4549'
MD.

4500'- 4600': SS: 60% PRED WHT -
LTGY - OPQ, FRI, VFN GRN,
VWSRTD, CALC CMT, IMBD PYR,
IMBD GLAU, SILTY, INTGR POR, NO
STN, NO MIN FLOR, NO O FLOR,
SLOW LZ CUT, YLW RNG

4600'- 4700': SS: 75% PRED WHT -
LTGY - OPQ, FRI, VFN GRN,
VWSRTD, CALC CMT, IMBD PYR,

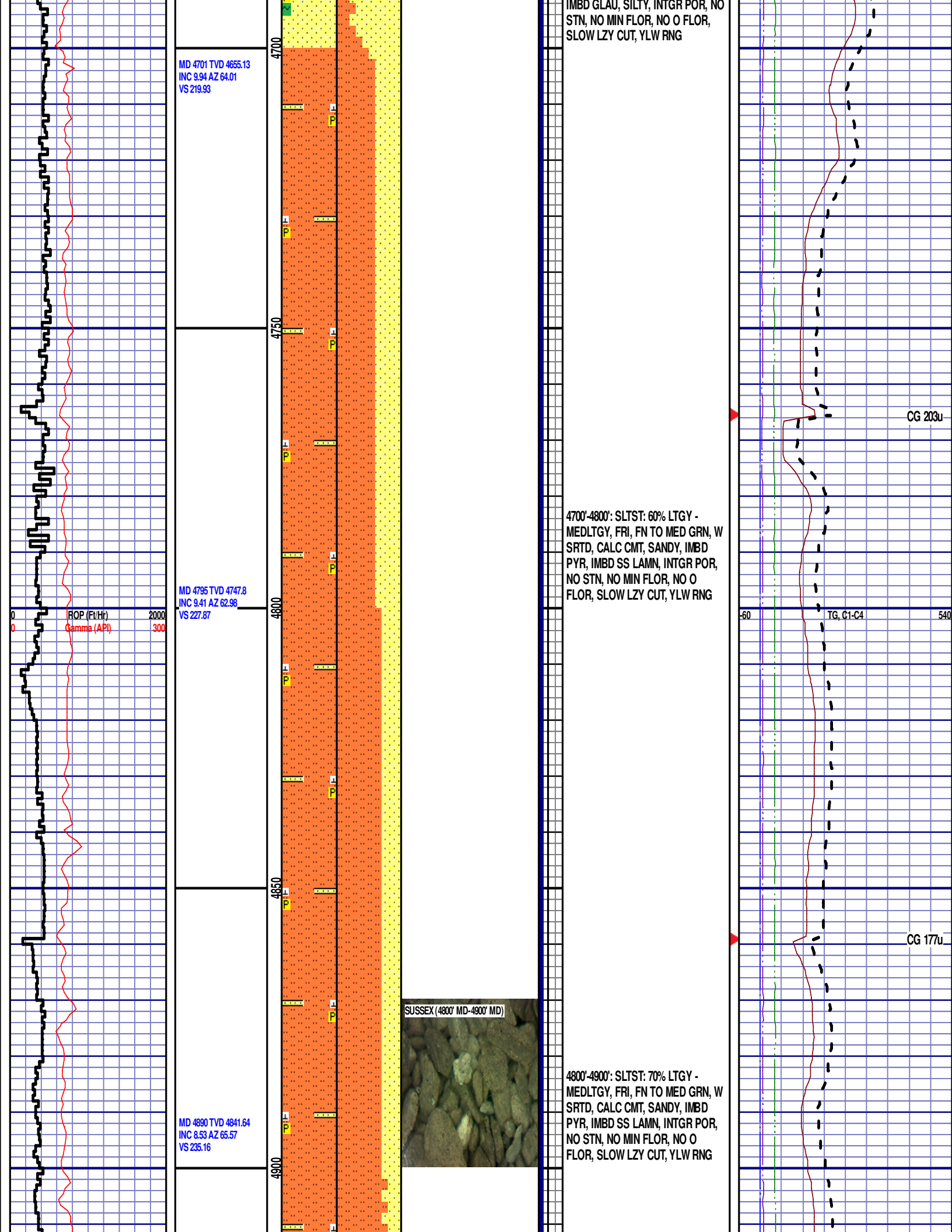
DEPTH 4549'
WT 9.00
VIS 31
PH 9.7
FIL 29.0
CL 1300
CAL 40
H2O 97.0
OIL 0.0
LGS 4.19
GELS 2'10"/19
PV 5
YP 1
CK 1/0
SOL 2.7

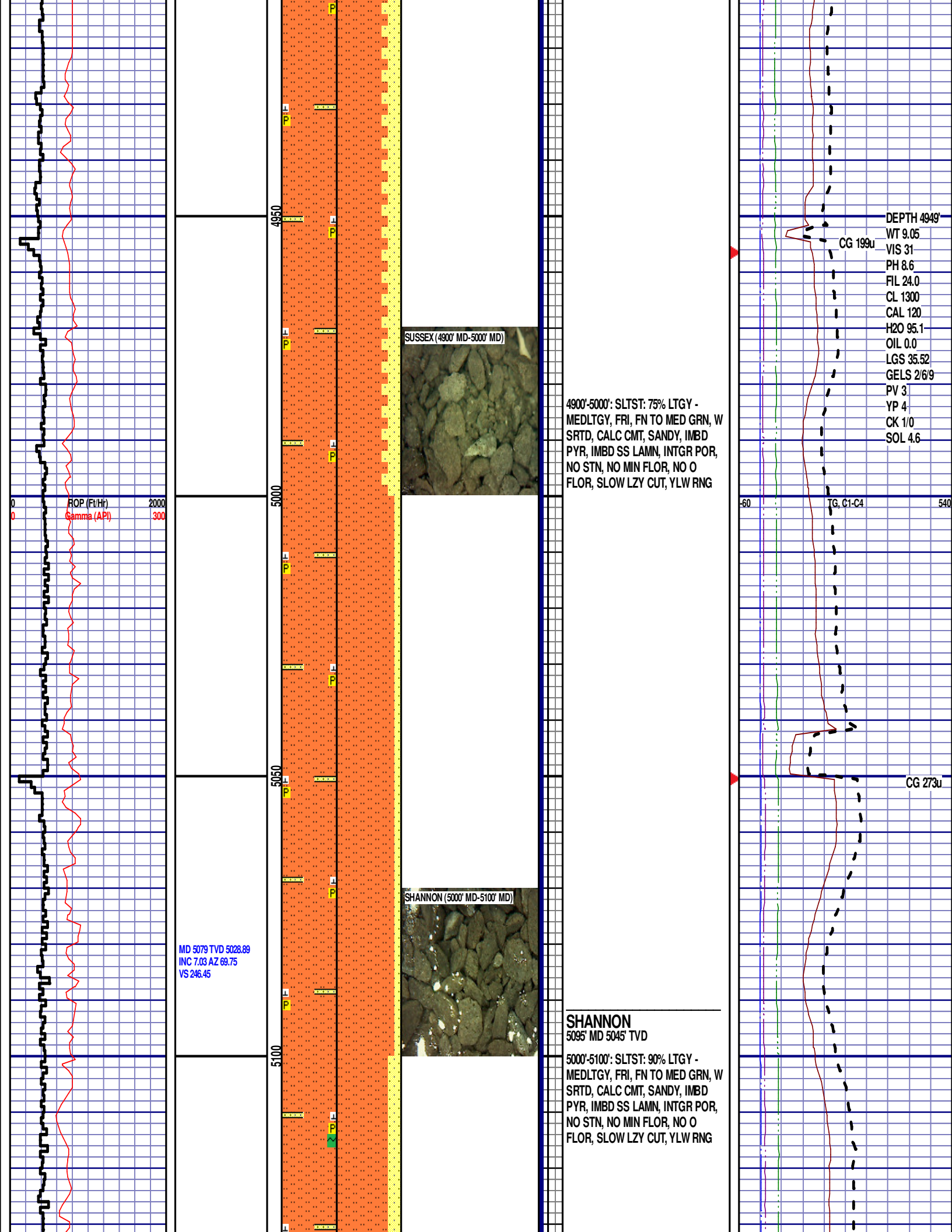
TG 474u
CHANGE IN PIPE TALLY

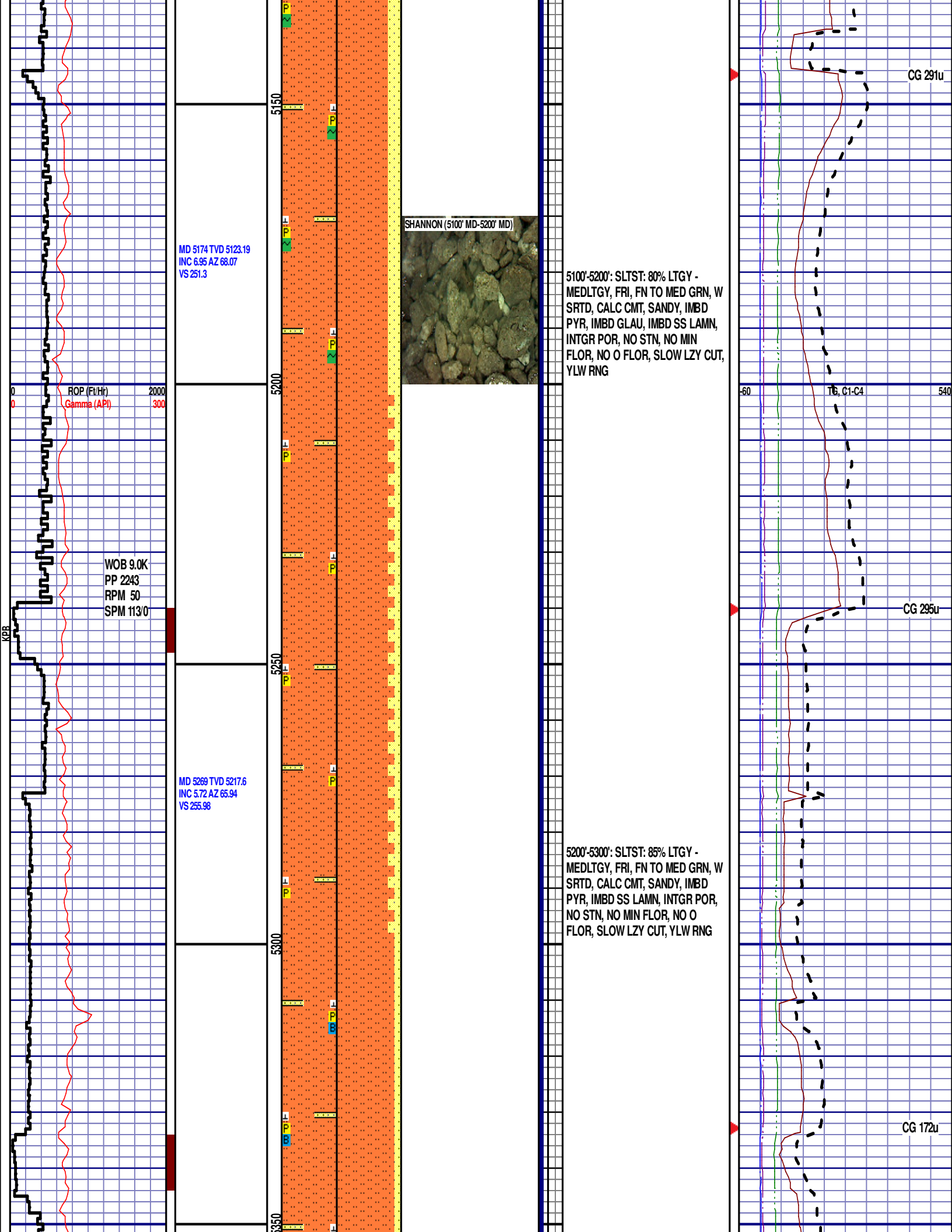
CG 256u

-60 TO, C1-C4 540

CG 255u







MD 5363 TVD 5311.24
INC 4.31 AZ 54.74
VS 260.38

ROP (Ft/Hr)
Gamma (API)

2000
300

5400

5450

MD 5458 TVD 5406.06
INC 2.9 AZ 41.51
VS 264.53

5500

5550

MD 5553 TVD 5500.99
INC 1.49 AZ 4.49
VS 267.66

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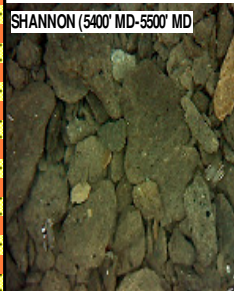
P

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SHANNON (5400' MD-5500' MD)



5300'-5400': SLTST: 90% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD
PYR, TRC FREE BENT, IMBD SS
LAMN, INTGR POR, NO STN, TRC
MIN FLOR, NO O FLOR, SLOW LZ
CUT, YLW RNG

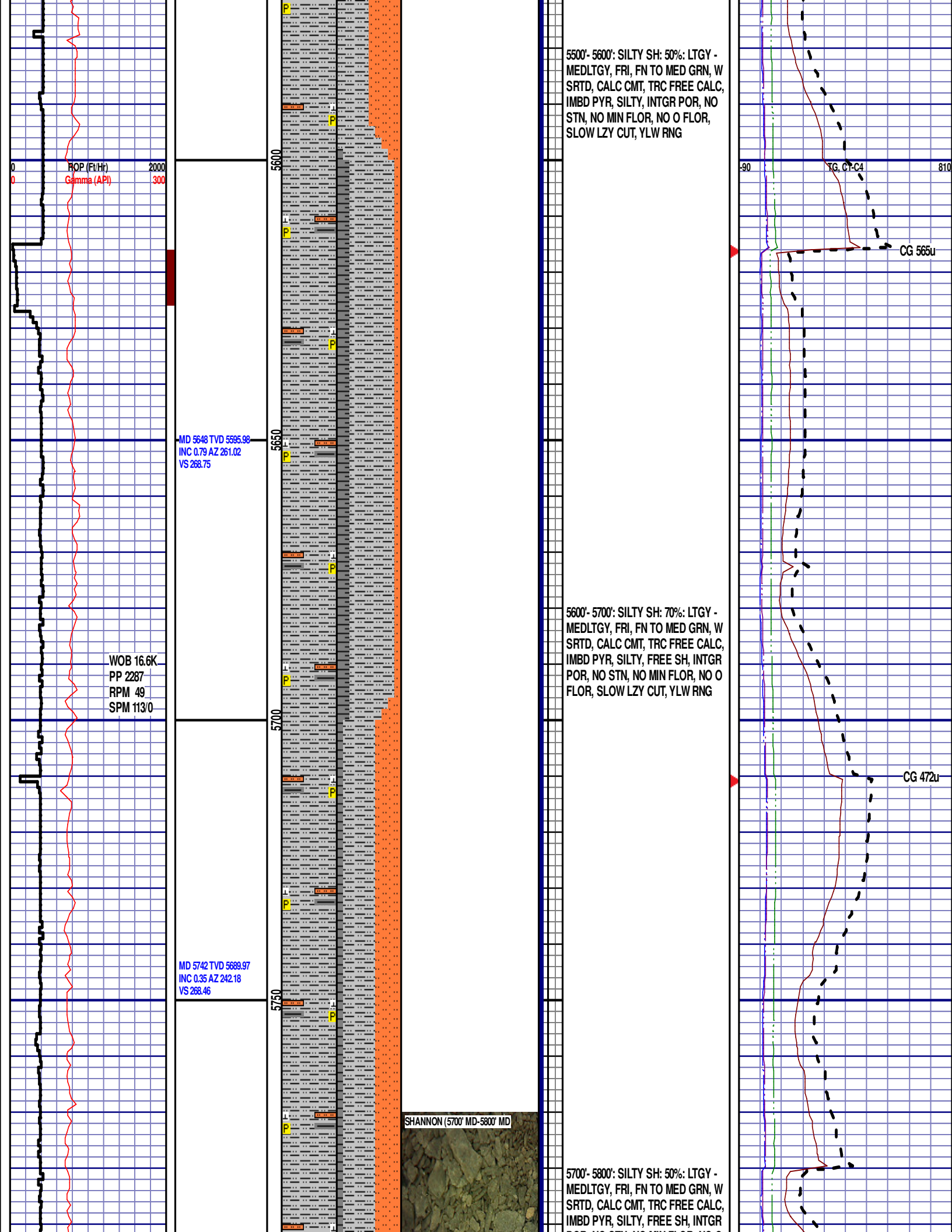
5400'-5500': SLTST: 95% LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, SANDY, IMBD
PYR, TRC FREE BENT, IMBD SS
LAMN, INTGR POR, NO STN, TRC
MIN FLOR, NO O FLOR, SLOW LZ
CUT, YLW RNG

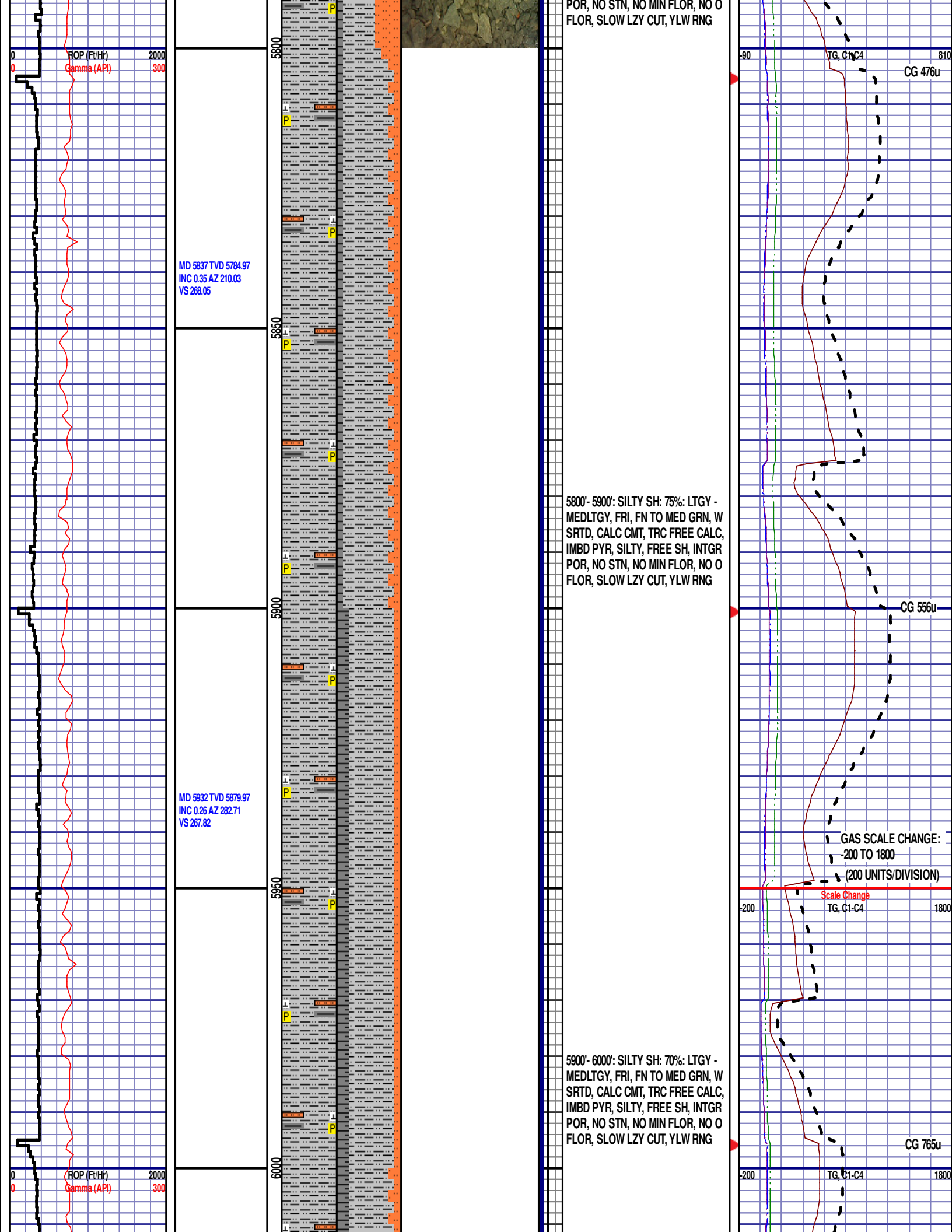
GAS SCALE
CHANGE:

Scale Change
TG, C1-C4
(90 UNITS/DIVISION)

CG 544u

CG 435u





MD 6026 TVD 5973.97
INC 0.44 AZ 316.04
VS 268.1

MD 6121 TVD 6068.96
INC 0.18 AZ 331.71
VS 268.47

MD 6216 TVD 6163.96
INC 0.26 AZ 29.58
VS 268.79

6050

6100

6150

6200

SHANNON (6000' MD- 6100' MD)

TEEPEE BUTTES (6100' MD- 6200' MD)

6000'- 6100': SILTY SH: 65%: LTGY - MEDLTGY, FRI, FN TO MED GRN, W SRTD, CALC CMT, TRC FREE CALC, IMBD PYR, SILTY, FREE SH, INTGR POR, NO STN, NO MIN FLOR, NO O FLOR, SLOW LZY CUT, YLW RNG

TEEPEE BUTTES
6119' MD 6066' TVD

6100'- 6200': SILTY SH: 80%: LTGY - MEDLTGY, FRI, FN TO MED GRN, W SRTD, CALC CMT, TRC FREE CALC, IMBD PYR, TRC FREE BENT, SILTY, FREE SH, INTGR POR, NO STN, TRC MIN FLOR, NO O FLOR, SLOW LZY CUT, YLW RNG

SWITCH TO 30' SAMPLES

6200'- 6230': SILTY SH: 70%: LTGY - MEDLTGY, FRI, FN TO MED GRN, W SRTD, CALC CMT, TRC FREE CALC, IMBD PYR, TRC FREE BENT, SILTY, FREE SH, INTGR POR, NO STN, TRC MIN FLOR, NO O FLOR, SLOW LZY CUT, YLW RNG

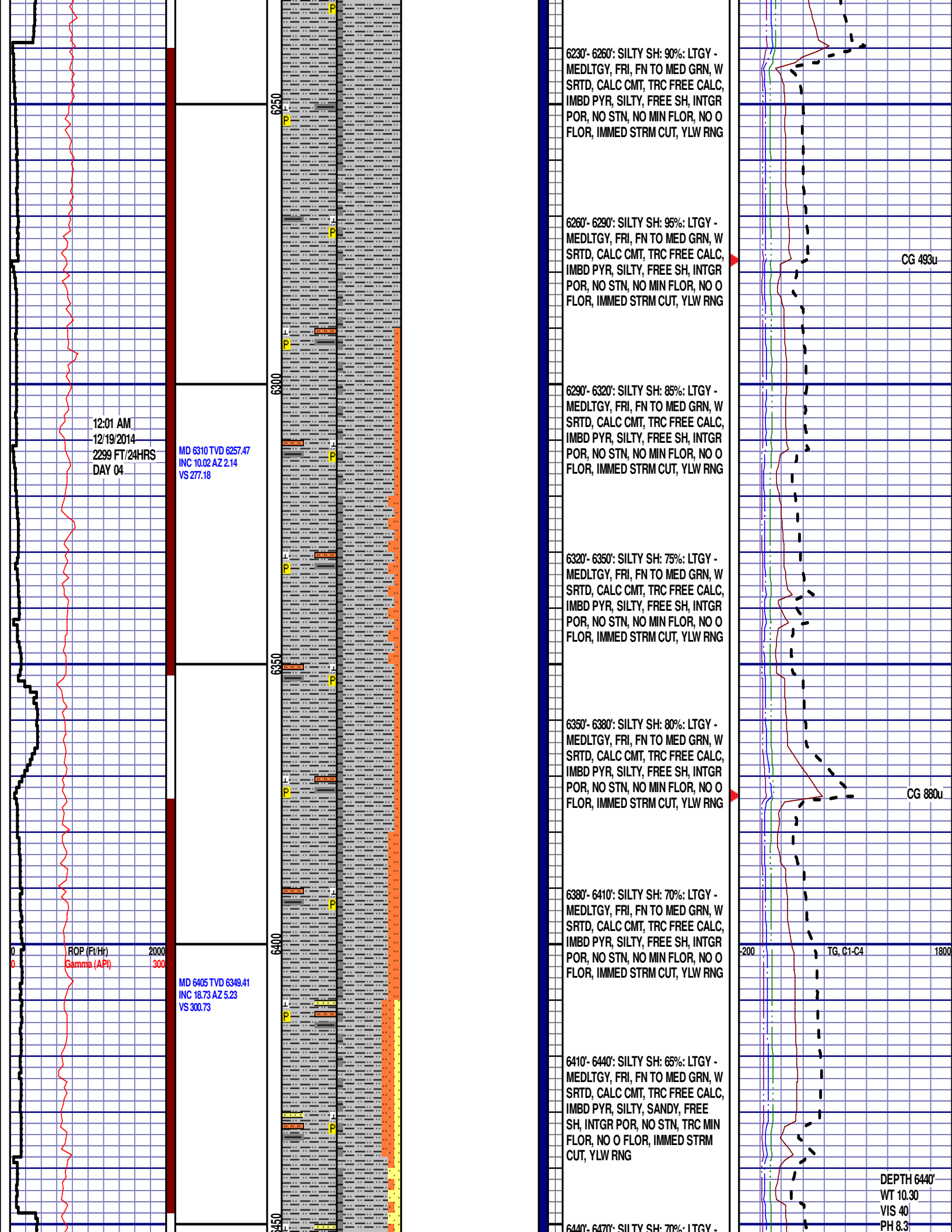
CG 1389u

CG 1002u

-200 TG, C1-C4 1800

ROP (Ft/Hr)
Gamma (API)

2000
300



12:01 AM
12/19/2014
2299 FT/24HRS
DAY 04

MD 6310 TVD 6257.47
INC 10.02 AZ 2.14
VS 277.18

ROP (Ft/Hr)
Gamma (API)

MD 6405 TVD 6349.41
INC 18.73 AZ 5.23
VS 300.73

6230'- 6260': SILTY SH: 90%: LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, TRC FREE CALC,
IMBD PYR, SILTY, FREE SH, INTGR
POR, NO STN, NO MIN FLOR, NO O
FLOR, IMMED STRM CUT, YLW RNG

6260'- 6290': SILTY SH: 95%: LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, TRC FREE CALC,
IMBD PYR, SILTY, FREE SH, INTGR
POR, NO STN, NO MIN FLOR, NO O
FLOR, IMMED STRM CUT, YLW RNG

6290'- 6320': SILTY SH: 85%: LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, TRC FREE CALC,
IMBD PYR, SILTY, FREE SH, INTGR
POR, NO STN, NO MIN FLOR, NO O
FLOR, IMMED STRM CUT, YLW RNG

6320'- 6350': SILTY SH: 75%: LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, TRC FREE CALC,
IMBD PYR, SILTY, FREE SH, INTGR
POR, NO STN, NO MIN FLOR, NO O
FLOR, IMMED STRM CUT, YLW RNG

6350'- 6380': SILTY SH: 80%: LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, TRC FREE CALC,
IMBD PYR, SILTY, FREE SH, INTGR
POR, NO STN, NO MIN FLOR, NO O
FLOR, IMMED STRM CUT, YLW RNG

6380'- 6410': SILTY SH: 70%: LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, TRC FREE CALC,
IMBD PYR, SILTY, FREE SH, INTGR
POR, NO STN, NO MIN FLOR, NO O
FLOR, IMMED STRM CUT, YLW RNG

6410'- 6440': SILTY SH: 65%: LTGY -
MEDLTGY, FRI, FN TO MED GRN, W
SRTD, CALC CMT, TRC FREE CALC,
IMBD PYR, SILTY, SANDY, FREE
SH, INTGR POR, NO STN, TRC MIN
FLOR, NO O FLOR, IMMED STRM
CUT, YLW RNG

6440'- 6470': SILTY SH: 70%: LTGY -

CG 493u

CG 880u

TG, C1-C4

DEPTH 6440'
WT 10.30
VIS 40
PH 8.3

