Scale 1:240 (5"=100') Imperial

Well Name: Goodman point #15 Vertical
Location: SHL; 660 FNL & 1978 FEL, Section 18 T36N R17W NMPM
Licence Number:
Region: Colorado
Spud Date: 05AUG08
Drilling Completed: 08/25/08
Surface Coordinates: SHL; 660 FNL & 1978 FEL, Section 18 T36N R17W NMPM

Bottom Hole Coordinates: Horizontal Well,2066 FNL & 1902 FWL,Section 18 T36N,R17W. 225 deg azimuth from SHL (2000'max lateral extension)
Ground Elevation (ft): 7012'
K.B. Elevation (ft): 7032'
Logged Interval (ft): 5000' **To:** 8107'
Total Depth (ft): 8107'
Formation: Leadville dolomite Limestone
Type of Drilling Fluid: Fresh Water

OPERATOR

Company: KINDER MORGAN CO2 Company, L.P.
Address: 17801 Hwy 491
Colorado

GEOLOGIST

Name: LEON WALTERS
Company: ABOVE ENTERPRISE, A Mud Logging Company
Address: 510 Old Lubbock Hwy
Snyder, Texas 79549

Cores

DSTs

Comments

ROCK TYPES

Anhy
Bent
Brec
Cht
Clyst
Coal
Congl
Dol
Gyp
Igne
Lmst
Meta
Mrlst
Salt
Shale
Shcol
Shgy
Sltst
Ss
Till

ACCESSORIES

MINERAL

Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk
Chtlt
Dol
Feldspar
Ferrpel
Ferr
Glau
Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff

FOSSIL

Algae
Amph
Belm
Bioclst
Brach
Bryozoa
Cephal
Coral
Crin
Echin
Fish
Foram
Fossil
Gastro
Oolite
Ostra
Pelec
Pellet
Pisolite
Plant
Strom

STRINGER

Anhy
Arg
Bent
Coal
Dol
Gyp
Ls
Mrst
Sltstrg
Ssstrg

TEXTURE

Boundst
Chalky
Cryxln
Earthy
Finexln
Grainst
Lithogr
Microxln
Mudst
Packst
Wackest

OTHER SYMBOLS

POROSITY

Earthy
Fenest
Fracture
Inter
Moldic
Organic
Pinpoint
Vuggy

SORTING

Well
Moderate
Poor

ROUNDING

Rounded
Subrnd
Subang
Angular

OIL SHOW

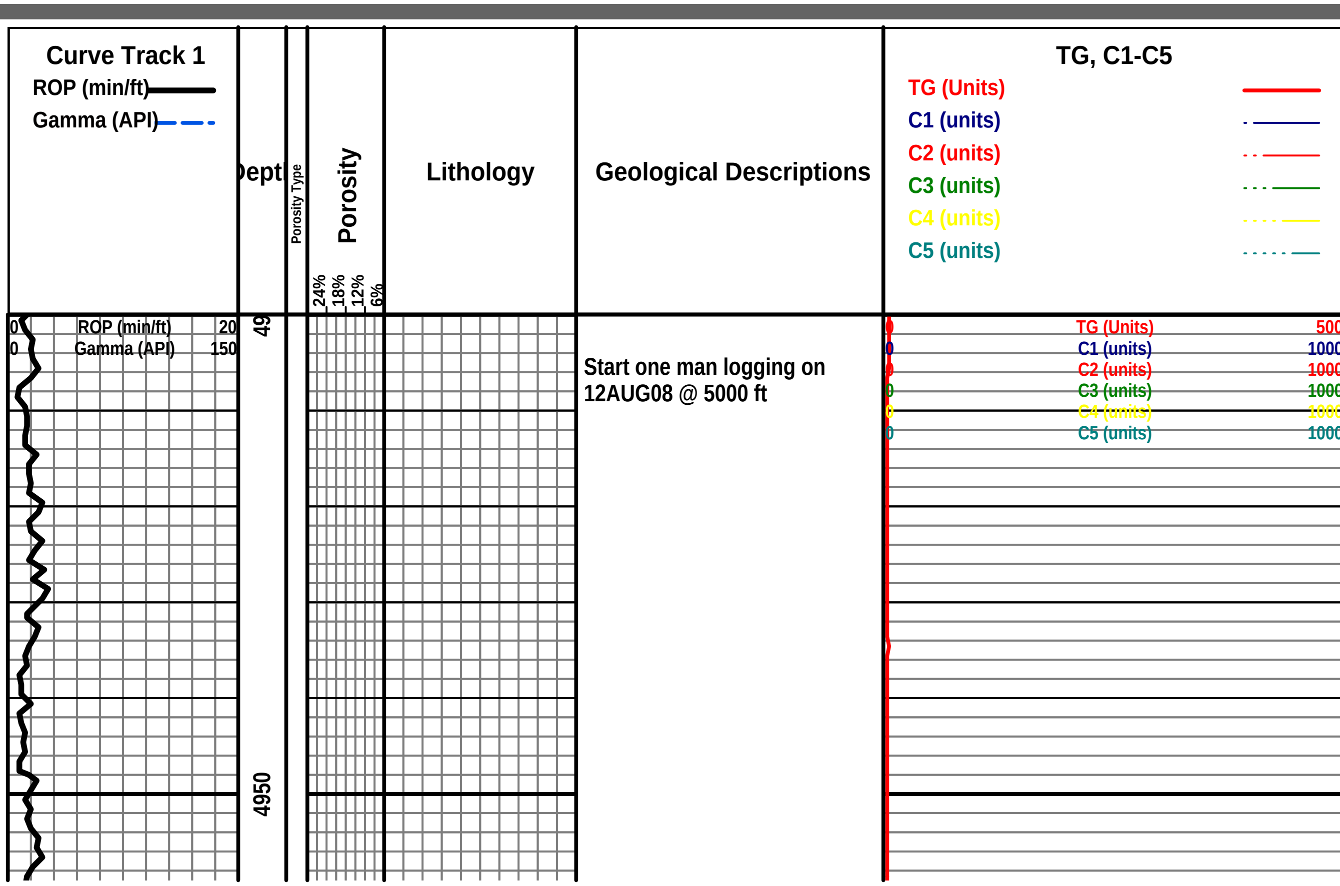
Even
Spotted
Ques
Dead

INTERVAL

Core
Dst

EVENT

Rft
Sidewall



SURFACE CSNG
@ 3117' BIT
# 2 8.75"
STC/MSI 616 JETS
3X18 & 3X13

4 1/2' DP

0 ROP (min/ft) 20
0 Gamma (API) 150

5000

START LOGGING

0 TG (Units) 500
0 C1 (units) 1000
0 C2 (units) 1000
0 C3 (units) 1000
0 C4 (units) 1000
0 C5 (units) 1000

LS: OFFWH-GY-BRWN, SHALEY, FRM-HD, XLN-MXLN, GRNY TXT, SH: RDBD, BRWN RED SLTY CALC

DOL/LS: OFFWH-GY-BRWN, FRM-HD, XLN-MXLN, GRNY TXT, SH: GY CALC

5050

DOL/LS: OFFWH-GY-BRWN, FRM-HD, XLN-MXLN, GRNY TXT,

5100

DOL/LS: OFFWH-GY-BRWN, FRM-HD, XLN-MXLN, GRNY TXT, SH: BRWN RED SLTY CALC

DOL/LS: OFFWH-GY-BRWN, SHALEY, FRM-HD, XLN-MXLN, GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY

5150

DOL/LS: OFFWH-GY, FRM-HD, XLN-MXLN, GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY

DOL/LS: OFFWH-GY-BRWN, SHALEY, FRM-HD, XLN-MXLN, GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY

5200

0	ROP (min/ft)	20	
0	Gamma (API)	150	

0	TG (Units)	500
0	C1 (units)	1000
0	C2 (units)	1000
0	C3 (units)	1000
0	C4 (units)	1000
0	C5 (units)	1000

DOL/LS: OFFWH-GY-BRWN, SHALEY, FRM-HD, XLN-MXLN, GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY

5250

DOL/LS: OFFWH-GY, FRM-HD, GRNY-XLN-MXLN, GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY

DOL/LS: OFFWH-GY-BRWN, SHALEY, FRM-HD, XLN-MXLN, GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY

LS: WH-OFFWH-GY, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY, BKY, SPLINTRY

5300

TOP OF PARADOX @ 5322'

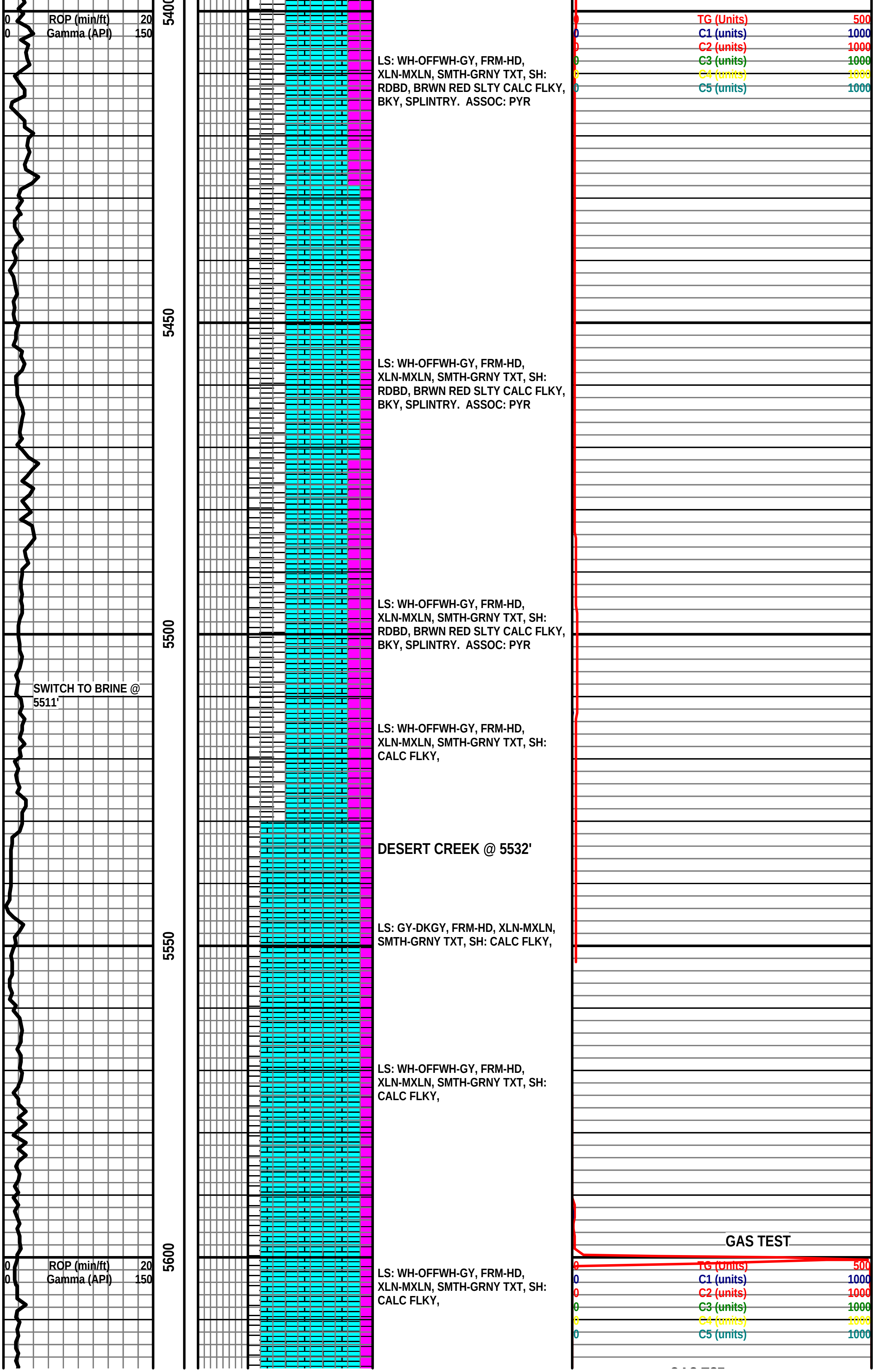
LS: WH-OFFWH-GY, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY, BKY, SPLINTRY. PYF

DEPTH-5350' MW-8.4 ppg VIS-31 PH-9.6 pp-1176psig

5350

6AM 13AUG08 DRLG @ 5350'

LS: WH-OFFWH-GY, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY, BKY, SPLINTRY. ASSOC: PYR



0 ROP (min/ft) 20
0 Gamma (API) 150
5400
TG (Units) 500
C1 (units) 1000
C2 (units) 1000
C3 (units) 1000
C4 (units) 1000
C5 (units) 1000
LS: WH-OFFWH-GY, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY, BKY, SPLINTRY. ASSOC: PYR
5450
LS: WH-OFFWH-GY, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY, BKY, SPLINTRY. ASSOC: PYR
LS: WH-OFFWH-GY, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: RDBD, BRWN RED SLTY CALC FLKY, BKY, SPLINTRY. ASSOC: PYR
5500
SWITCH TO BRINE @ 5511'
LS: WH-OFFWH-GY, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC FLKY,
DESERT CREEK @ 5532'
LS: GY-DKGY, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC FLKY,
5550
LS: WH-OFFWH-GY, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC FLKY,
GAS TEST
5600
0 ROP (min/ft) 20
0 Gamma (API) 150
TG (Units) 500
C1 (units) 1000
C2 (units) 1000
C3 (units) 1000
C4 (units) 1000
C5 (units) 1000
LS: WH-OFFWH-GY, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC FLKY,

GAS TST

LS: WH-OFFWH-GY-BLK, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC

5650

LS: WH-OFFWH-GY-BLK, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC

LS: WH-OFFWH-GY-BLK, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC, CARB BLK SLTY,

5700

LS: WH-OFFWH-GY-BLK, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC, CARB BLK SLTY,

LS: WH-OFFWH-GY-BLK, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC, CARB BLK SLTY,

5750

LS: WH-OFFWH-GY-BLK, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC, CARB BLK SLTY,

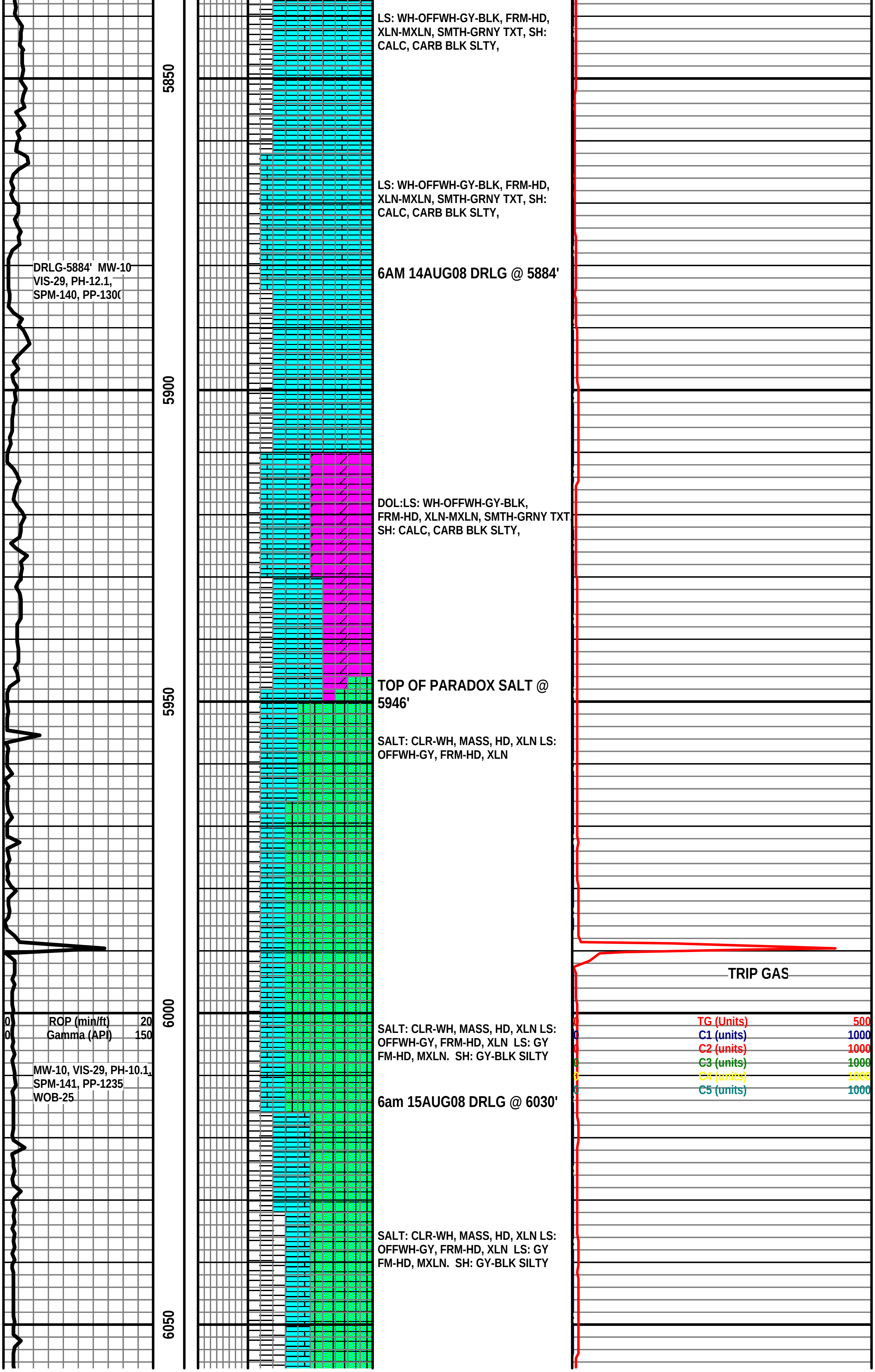
LS: WH-OFFWH-GY-BLK, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC, CARB BLK SLTY,

5800

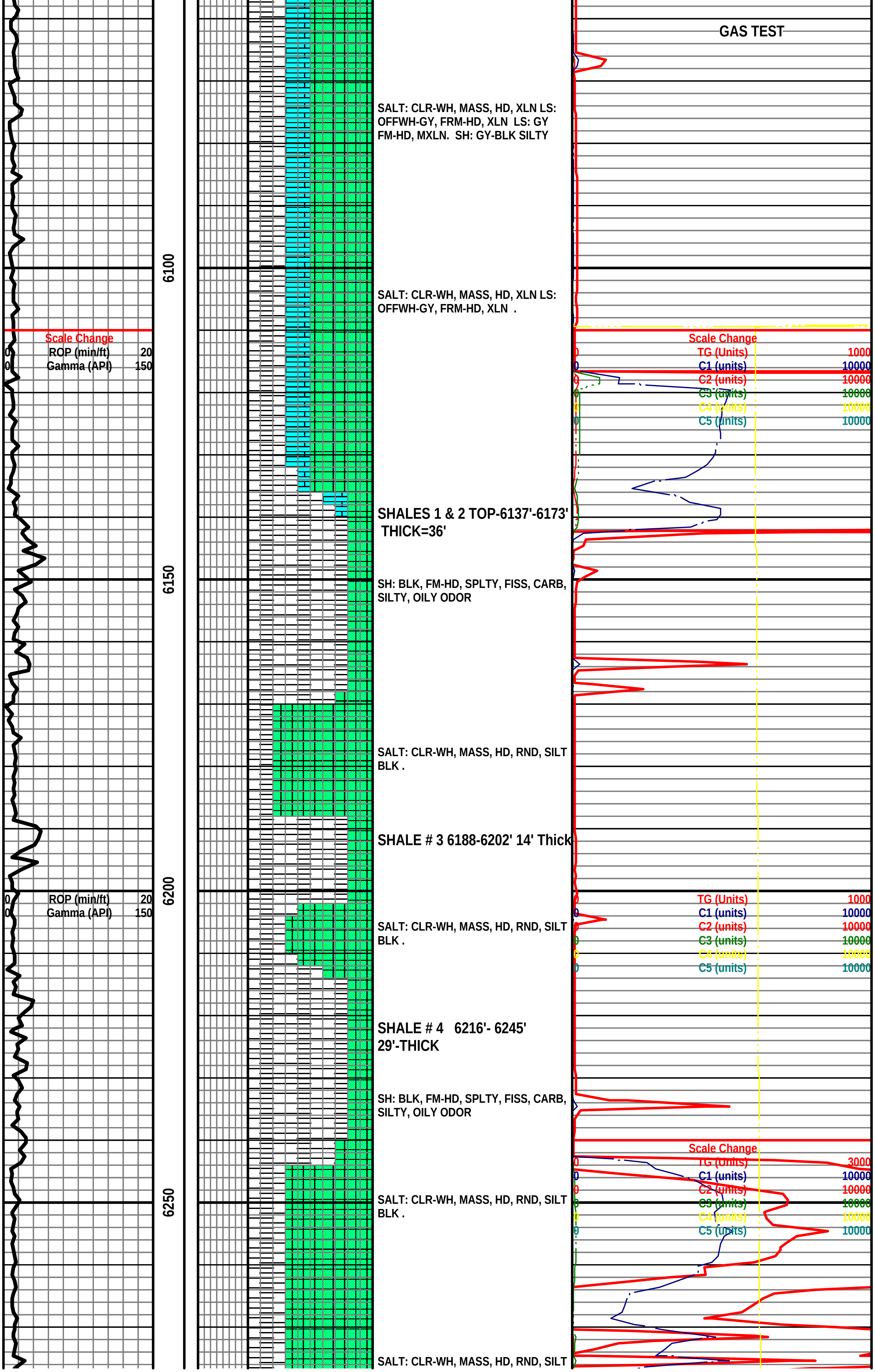
0	ROP (min/ft)	20
0	Gamma (API)	150

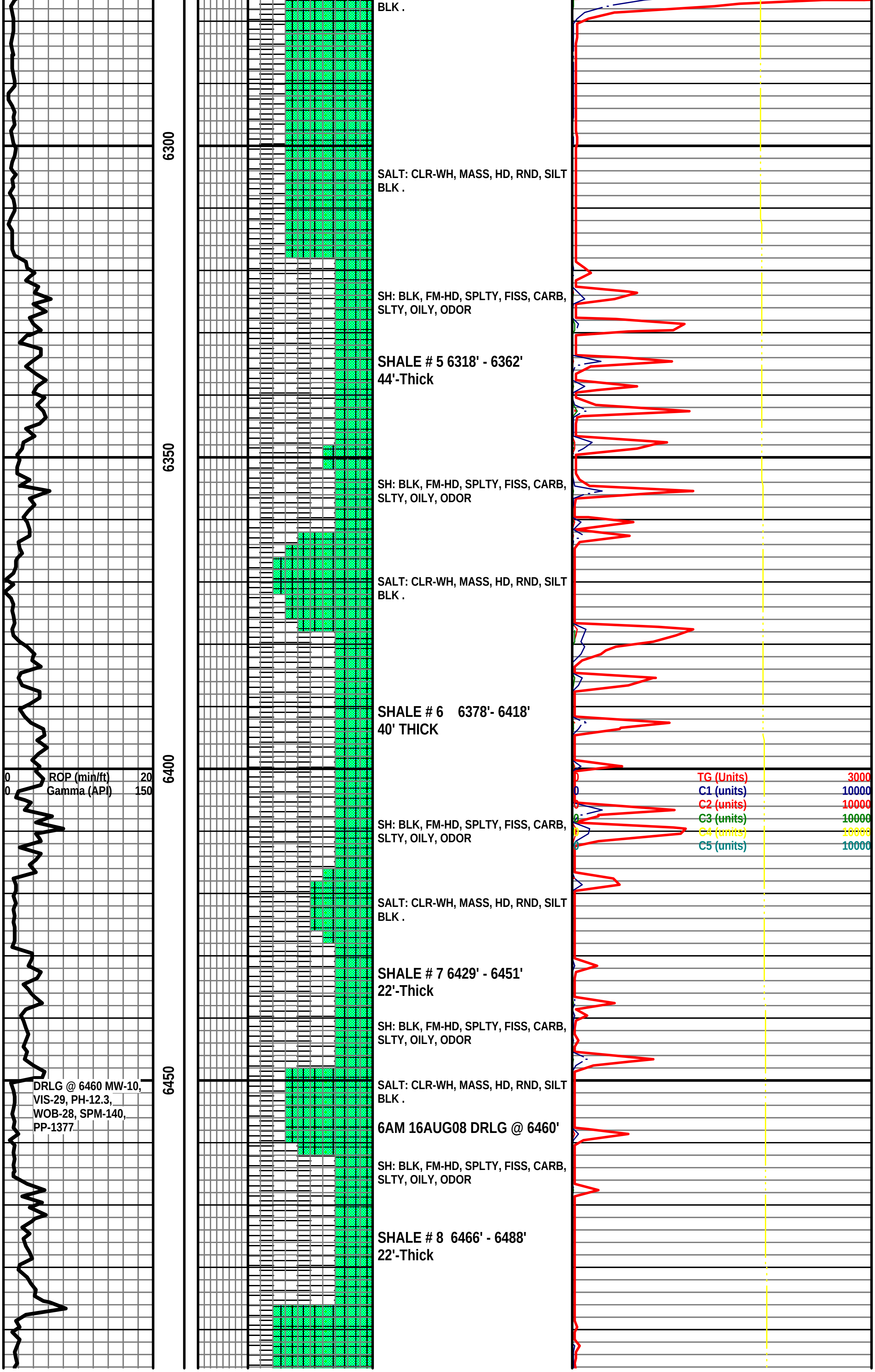
0	TG (Units)	500
0	C1 (units)	1000
0	C2 (units)	1000
0	C3 (units)	1000
0	C4 (units)	1000
0	C5 (units)	1000

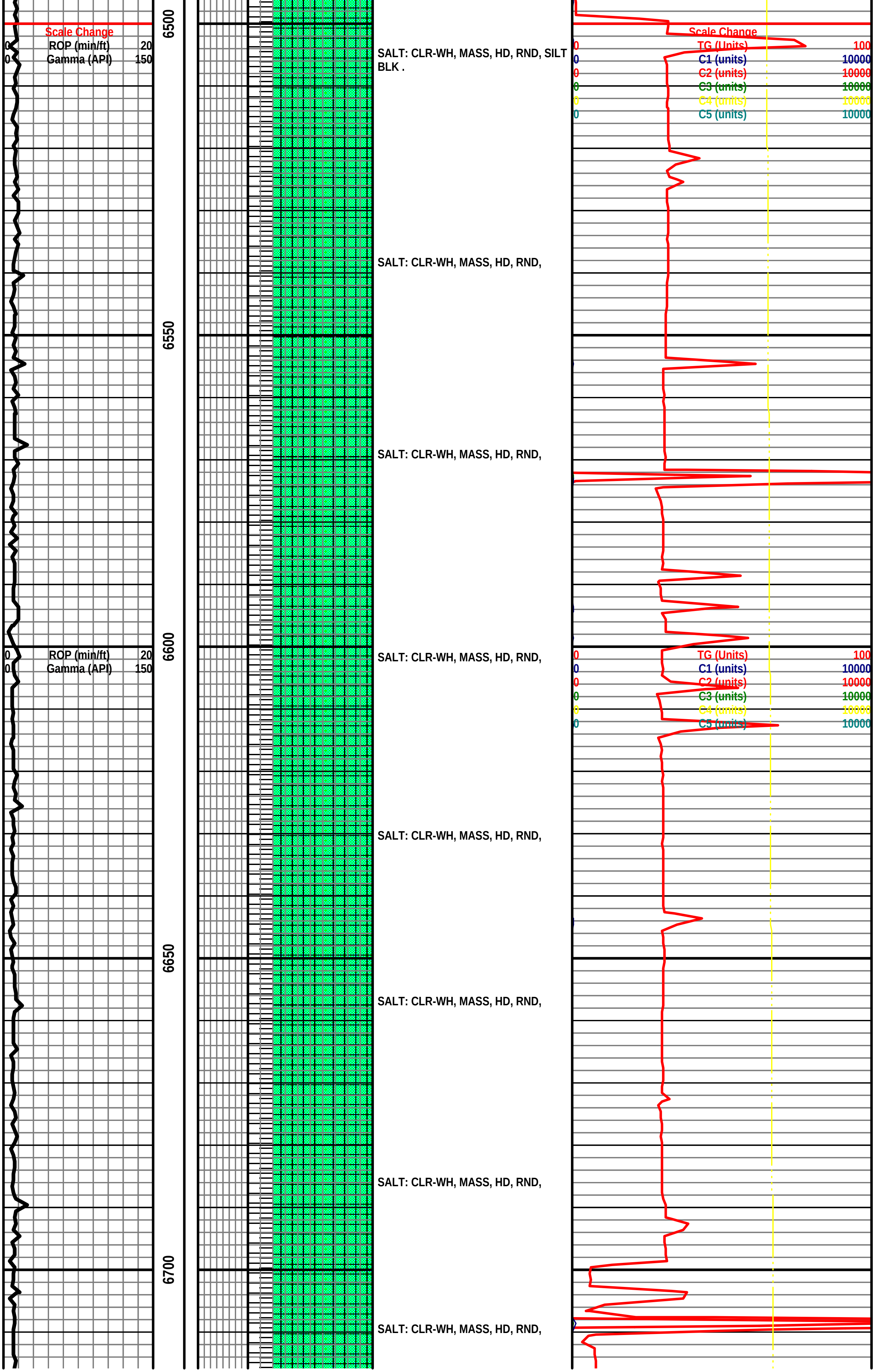
LS: WH-OFFWH, SFT-FRM, XLN-MXLN, SMTH-GRNY TXT,



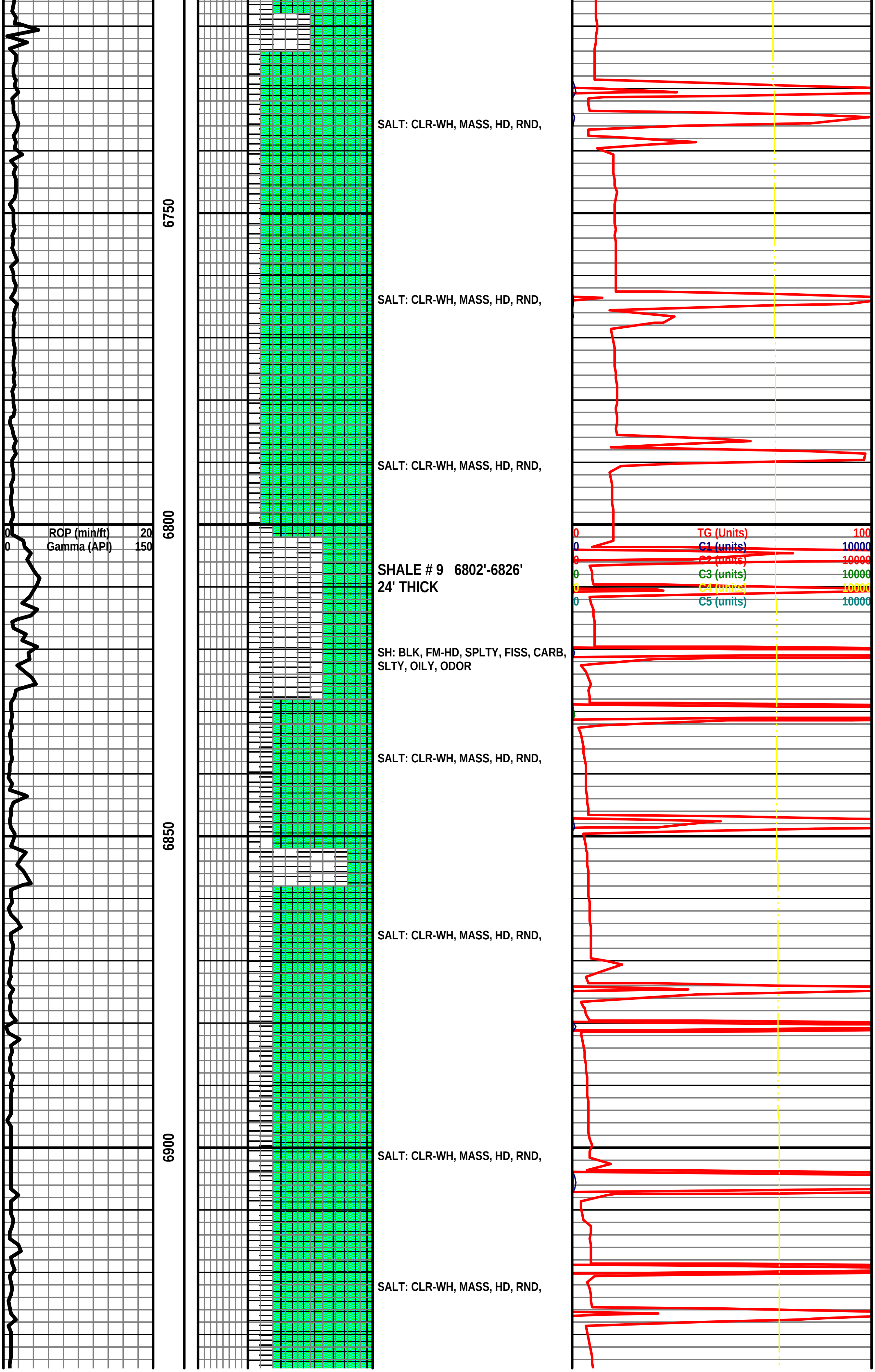
LS: WH-OFFWH-GY-BLK, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC, CARB BLK SLTY,
5850
LS: WH-OFFWH-GY-BLK, FRM-HD, XLN-MXLN, SMTH-GRNY TXT, SH: CALC, CARB BLK SLTY,
DRLG-5884' MW-10 VIS-29, PH-12.1, SPM-140, PP-1300
6AM 14AUG08 DRLG @ 5884'
5900
DOL:LS: WH-OFFWH-GY-BLK, FRM-HD, XLN-MXLN, SMTH-GRNY TXT SH: CALC, CARB BLK SLTY,
TOP OF PARADOX SALT @ 5946'
5950
SALT: CLR-WH, MASS, HD, XLN LS: OFFWH-GY, FRM-HD, XLN
TRIP GAS
0 ROP (min/ft) 20
0 Gamma (API) 150
6000
0 TG (Units) 500
0 C1 (units) 1000
0 C2 (units) 1000
0 C3 (units) 1000
0 C4 (units) 1000
0 C5 (units) 1000
SALT: CLR-WH, MASS, HD, XLN LS: OFFWH-GY, FRM-HD, XLN LS: GY FM-HD, MXLN. SH: GY-BLK SILTY
MW-10, VIS-29, PH-10.1, SPM-141, PP-1235 WOB-25
6am 15AUG08 DRLG @ 6030'
SALT: CLR-WH, MASS, HD, XLN LS: OFFWH-GY, FRM-HD, XLN LS: GY FM-HD, MXLN. SH: GY-BLK SILTY
6050


GAS TEST
SALT: CLR-WH, MASS, HD, XLN LS: OFFWH-GY, FRM-HD, XLN LS: GY FM-HD, MXLN. SH: GY-BLK SILTY
6100
SALT: CLR-WH, MASS, HD, XLN LS: OFFWH-GY, FRM-HD, XLN .
Scale Change
0 ROP (min/ft) 20
0 Gamma (API) 150
Scale Change
0 TG (Units) 1000
0 C1 (units) 10000
0 C2 (units) 10000
0 C3 (units) 10000
0 C4 (units) 10000
0 C5 (units) 10000
SHALES 1 & 2 TOP-6137'-6173' THICK=36'
6150
SH: BLK, FM-HD, SPLTY, FISS, CARB, SILTY, OILY ODOR
SALT: CLR-WH, MASS, HD, RND, SILT BLK .
SHALE # 3 6188-6202' 14' Thick
6200
0 ROP (min/ft) 20
0 Gamma (API) 150
0 TG (Units) 1000
0 C1 (units) 10000
0 C2 (units) 10000
0 C3 (units) 10000
0 C4 (units) 10000
0 C5 (units) 10000
SALT: CLR-WH, MASS, HD, RND, SILT BLK .
SHALE # 4 6216'- 6245' 29'-THICK
SH: BLK, FM-HD, SPLTY, FISS, CARB, SILTY, OILY ODOR
Scale Change
0 TG (Units) 3000
0 C1 (units) 10000
0 C2 (units) 10000
0 C3 (units) 10000
0 C4 (units) 10000
0 C5 (units) 10000
6250
SALT: CLR-WH, MASS, HD, RND, SILT BLK .
SALT: CLR-WH, MASS, HD, RND, SILT

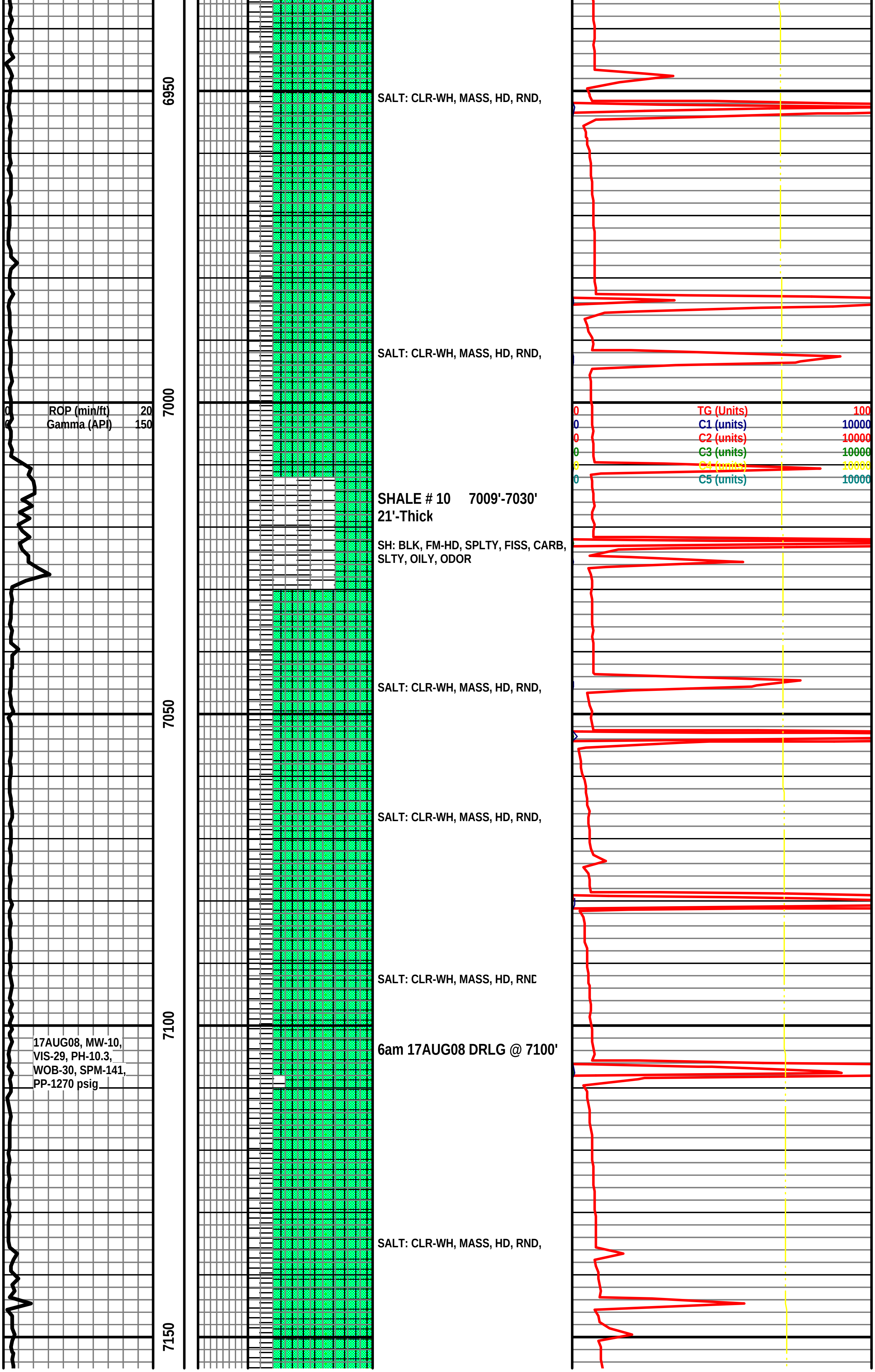

BLK .
6300
SALT: CLR-WH, MASS, HD, RND, SILT BLK .
SH: BLK, FM-HD, SPLTY, FISS, CARB, SLTY, OILY, ODOR
SHALE # 5 6318' - 6362'
44'-Thick
6350
SH: BLK, FM-HD, SPLTY, FISS, CARB, SLTY, OILY, ODOR
SALT: CLR-WH, MASS, HD, RND, SILT BLK .
SHALE # 6 6378'- 6418'
40' THICK
0 ROP (min/ft) 20
0 Gamma (API) 150
6400
0 TG (Units) 3000
0 C1 (units) 10000
0 C2 (units) 10000
0 C3 (units) 10000
0 C4 (units) 10000
0 C5 (units) 10000
SH: BLK, FM-HD, SPLTY, FISS, CARB, SLTY, OILY, ODOR
SALT: CLR-WH, MASS, HD, RND, SILT BLK .
SHALE # 7 6429' - 6451'
22'-Thick
SH: BLK, FM-HD, SPLTY, FISS, CARB, SLTY, OILY, ODOR
6450
DRLG @ 6460 MW-10, VIS-29, PH-12.3, WOB-28, SPM-140, PP-1377
SALT: CLR-WH, MASS, HD, RND, SILT BLK .
6AM 16AUG08 DRLG @ 6460'
SH: BLK, FM-HD, SPLTY, FISS, CARB, SLTY, OILY, ODOR
SHALE # 8 6466' - 6488'
22'-Thick

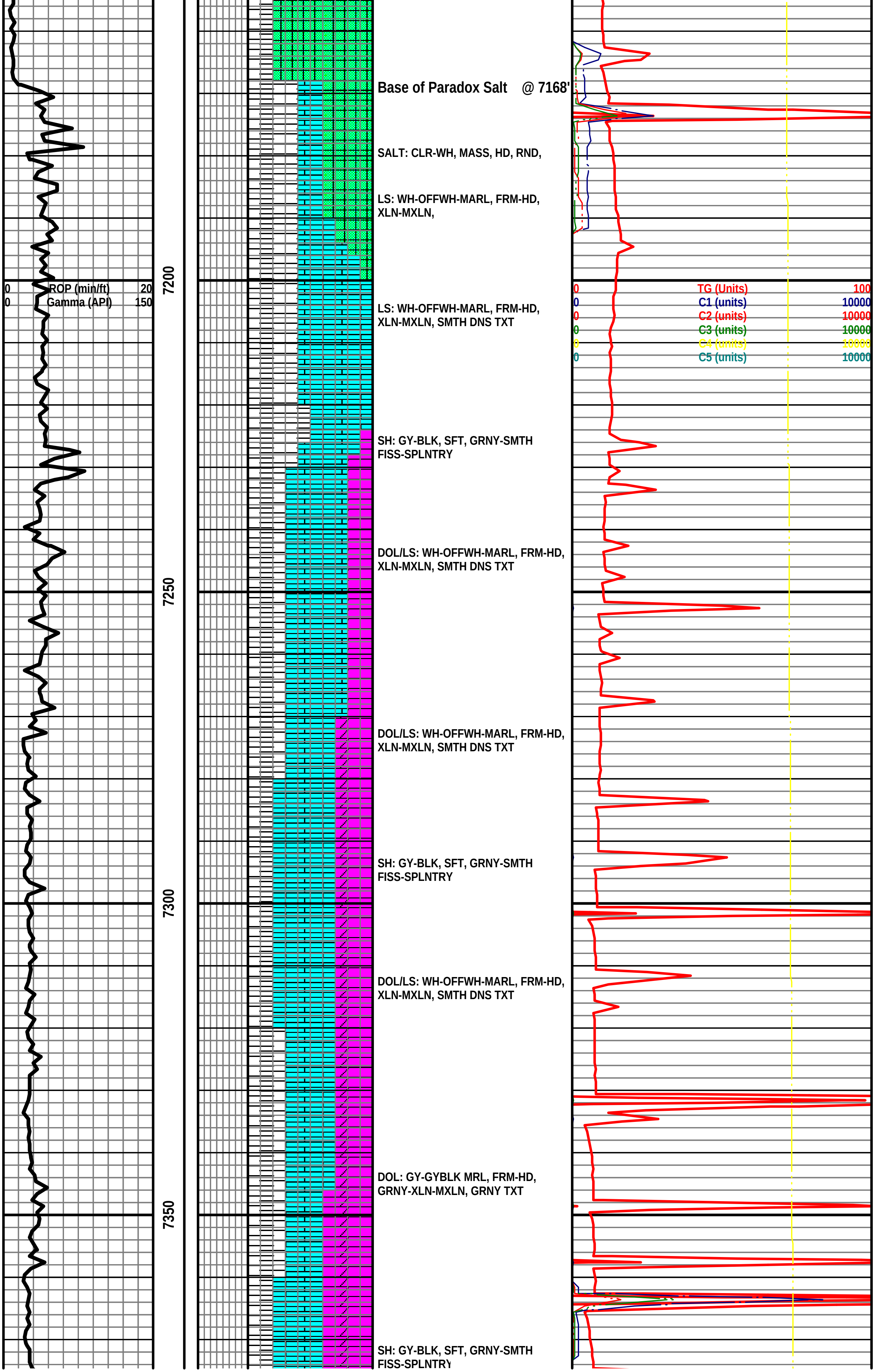


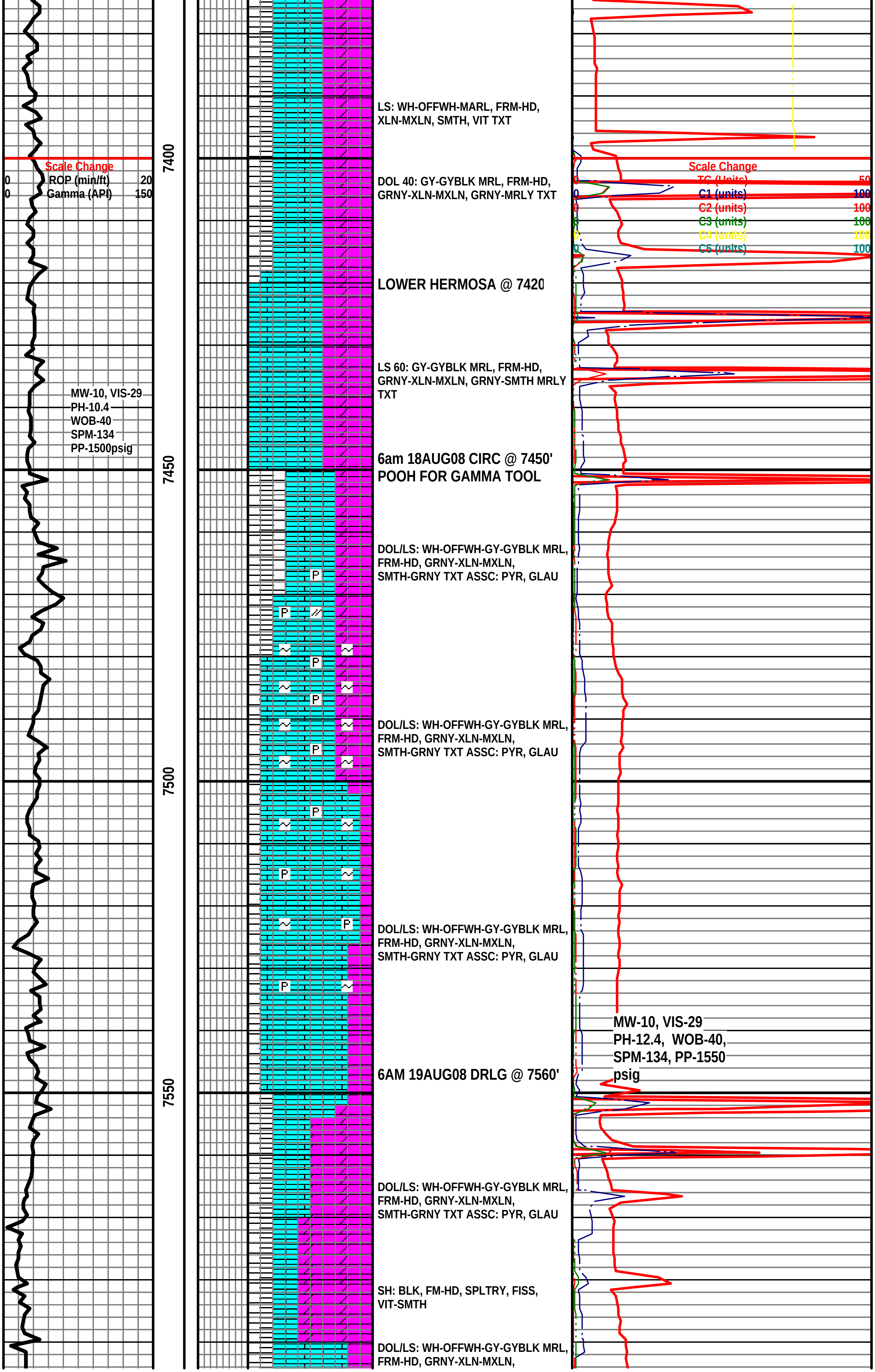
Scale Change
0 ROP (min/ft) 20
0 Gamma (API) 150
6500
SALT: CLR-WH, MASS, HD, RND, SILT BLK .
Scale Change
0 TG (Units) 100
0 C1 (units) 10000
0 C2 (units) 10000
0 C3 (units) 10000
0 C4 (units) 10000
0 C5 (units) 10000
SALT: CLR-WH, MASS, HD, RND,
6550
SALT: CLR-WH, MASS, HD, RND,
0 ROP (min/ft) 20
0 Gamma (API) 150
6600
SALT: CLR-WH, MASS, HD, RND,
0 TG (Units) 100
0 C1 (units) 10000
0 C2 (units) 10000
0 C3 (units) 10000
0 C4 (units) 10000
0 C5 (units) 10000
SALT: CLR-WH, MASS, HD, RND,
6650
SALT: CLR-WH, MASS, HD, RND,
SALT: CLR-WH, MASS, HD, RND,
6700
SALT: CLR-WH, MASS, HD, RND,



SALT: CLR-WH, MASS, HD, RND,
6750
SALT: CLR-WH, MASS, HD, RND,
SALT: CLR-WH, MASS, HD, RND,
6800
0 ROP (min/ft) 20
0 Gamma (API) 150
0 TG (Units) 100
0 C1 (units) 10000
0 C2 (units) 10000
0 C3 (units) 10000
0 C4 (units) 10000
0 C5 (units) 10000
SHALE # 9 6802'-6826'
24' THICK
SH: BLK, FM-HD, SPLTY, FISS, CARB,
SLTY, OILY, ODOR
SALT: CLR-WH, MASS, HD, RND,
6850
SALT: CLR-WH, MASS, HD, RND,
6900
SALT: CLR-WH, MASS, HD, RND,
SALT: CLR-WH, MASS, HD, RND,


6950
SALT: CLR-WH, MASS, HD, RND,
SALT: CLR-WH, MASS, HD, RND,
7000
0 ROP (min/ft) 20
0 Gamma (API) 150
0 TG (Units) 100
0 C1 (units) 10000
0 C2 (units) 10000
0 C3 (units) 10000
0 C4 (units) 10000
0 C5 (units) 10000
SHALE # 10 7009'-7030'
21'-Thick
SH: BLK, FM-HD, SPLTY, FISS, CARB,
SLTY, OILY, ODOR
SALT: CLR-WH, MASS, HD, RND,
7050
SALT: CLR-WH, MASS, HD, RND,
SALT: CLR-WH, MASS, HD, RND
7100
17AUG08, MW-10,
VIS-29, PH-10.3,
WOB-30, SPM-141,
PP-1270 psig
6am 17AUG08 DRLG @ 7100'
SALT: CLR-WH, MASS, HD, RND,
7150


0 ROP (min/ft) 20
0 Gamma (API) 150
7200
7250
7300
7350
Base of Paradox Salt @ 7168'
SALT: CLR-WH, MASS, HD, RND,
LS: WH-OFFWH-MARL, FRM-HD, XLN-MXLN,
LS: WH-OFFWH-MARL, FRM-HD, XLN-MXLN, SMTH DNS TXT
SH: GY-BLK, SFT, GRNY-SMTH FISS-SPLNTRY
DOL/LS: WH-OFFWH-MARL, FRM-HD, XLN-MXLN, SMTH DNS TXT
DOL/LS: WH-OFFWH-MARL, FRM-HD, XLN-MXLN, SMTH DNS TXT
SH: GY-BLK, SFT, GRNY-SMTH FISS-SPLNTRY
DOL/LS: WH-OFFWH-MARL, FRM-HD, XLN-MXLN, SMTH DNS TXT
DOL: GY-GYBLK MRL, FRM-HD, GRNY-XLN-MXLN, GRNY TXT
SH: GY-BLK, SFT, GRNY-SMTH FISS-SPLNTRY
0 TG (Units) 100
0 C1 (units) 10000
0 C2 (units) 10000
0 C3 (units) 10000
0 C4 (units) 10000
0 C5 (units) 10000


LS: WH-OFFWH-MARL, FRM-HD, XLN-MXLN, SMTH, VIT TXT
7400
Scale Change
0 ROP (min/ft) 20
0 Gamma (API) 150
DOL 40: GY-GYBLK MRL, FRM-HD, GRNY-XLN-MXLN, GRNY-MRLY TXT
Scale Change
TC (Units) 50
0 C1 (units) 100
0 C2 (units) 100
0 C3 (units) 100
0 C4 (units) 100
0 C5 (units) 100
LOWER HERMOSA @ 7420
LS 60: GY-GYBLK MRL, FRM-HD, GRNY-XLN-MXLN, GRNY-SMTH MRLY TXT
MW-10, VIS-29
PH-10.4
WOB-40
SPM-134
PP-1500psig
7450
6am 18AUG08 CIRC @ 7450'
POOH FOR GAMMA TOOL
DOL/LS: WH-OFFWH-GY-GYBLK MRL, FRM-HD, GRNY-XLN-MXLN, SMTH-GRNY TXT ASSC: PYR, GLAU
DOL/LS: WH-OFFWH-GY-GYBLK MRL, FRM-HD, GRNY-XLN-MXLN, SMTH-GRNY TXT ASSC: PYR, GLAU
7500
DOL/LS: WH-OFFWH-GY-GYBLK MRL, FRM-HD, GRNY-XLN-MXLN, SMTH-GRNY TXT ASSC: PYR, GLAU
MW-10, VIS-29
PH-12.4, WOB-40,
SPM-134, PP-1550
psig
6AM 19AUG08 DRLG @ 7560'
7550
DOL/LS: WH-OFFWH-GY-GYBLK MRL, FRM-HD, GRNY-XLN-MXLN, SMTH-GRNY TXT ASSC: PYR, GLAU
SH: BLK, FM-HD, SPLTRY, FISS, VIT-SMTH
DOL/LS: WH-OFFWH-GY-GYBLK MRL, FRM-HD, GRNY-XLN-MXLN,

SMTH-GRNY TXT ASSC: PYR, ANHY

0 ROP (min/ft) 20
0 Gamma (API) 150

7600

TG (Units) 50
C1 (units) 100
C2 (units) 100
C3 (units) 100
C4 (units) 100
C5 (units) 100

SH: GY-BLK,SFT-FM-HD, GRNY-SPLTRY, FISS, VIT-SMTH

LS: WH-OFFWH-GY-GY MRL, FRM-HD, GRNY-XLN-MXLN, SMTH-GRNY TXT ASSC: PYR, ANHY. SH: TR OF SFT ORNG SHALE

7650

LS; WH-OFFWH-GY-GY MRL, SFT-FRM-HD, GRNY-XLN-MXLN, SMTH-GRNY TXT ASSC: PYR, ANHY. TR: PNK LS

LS; WH-OFFWH-GY-GY MRL, SFT-FRM-HD, GRNY-XLN-MXLN, SMTH-GRNY TXT ASSC: PYR, ANHY. TR: PNK LS

7700

LS/DOL; WH-OFFWH-GY-GY-BRN MRL, SFT-FRM-HD, GRNY-XLN-MXLN, SMTH-GRNY TXT ASSC: PYR, ANHY.

LS/DOL; WH-OFFWH-GY-GY-BRN MRL, SFT-FRM-HD, GRNY-XLN-MXLN, SMTH-GRNY TXT ASSC: PYR, ANHY. TR: PNK LS

TOP OF LEADVILLE @ 7732'

LS/DOL; PINK-ORNG LS WH-OFFWH-GY-GY-BRN MRL, SFT-FRM-HD, GRNY-XLN-MXLN, SMTH-GRNY TXT

LS; PINK-ORNG WH-OFFWH-GY-GY-BRN MRL, SFT-FRM-HD, GRNY-XLN-MXLN, SMTH-GRNY TXT

7750

MW-10 VIS-29
PH-12.3
WOB-40
SPM-141
PP-1550

6AM 20AUG08 DEPTH 7762'

8/21/08 - 8/23/08 RUN and CMT 7in OD CSNG @ 7760'

DRLG W/31/2' DF

CMT = 10%

LS: WH-OFFWH, FRM-HD, VITRS SMTH, XLN-MXLN CPTOXLN

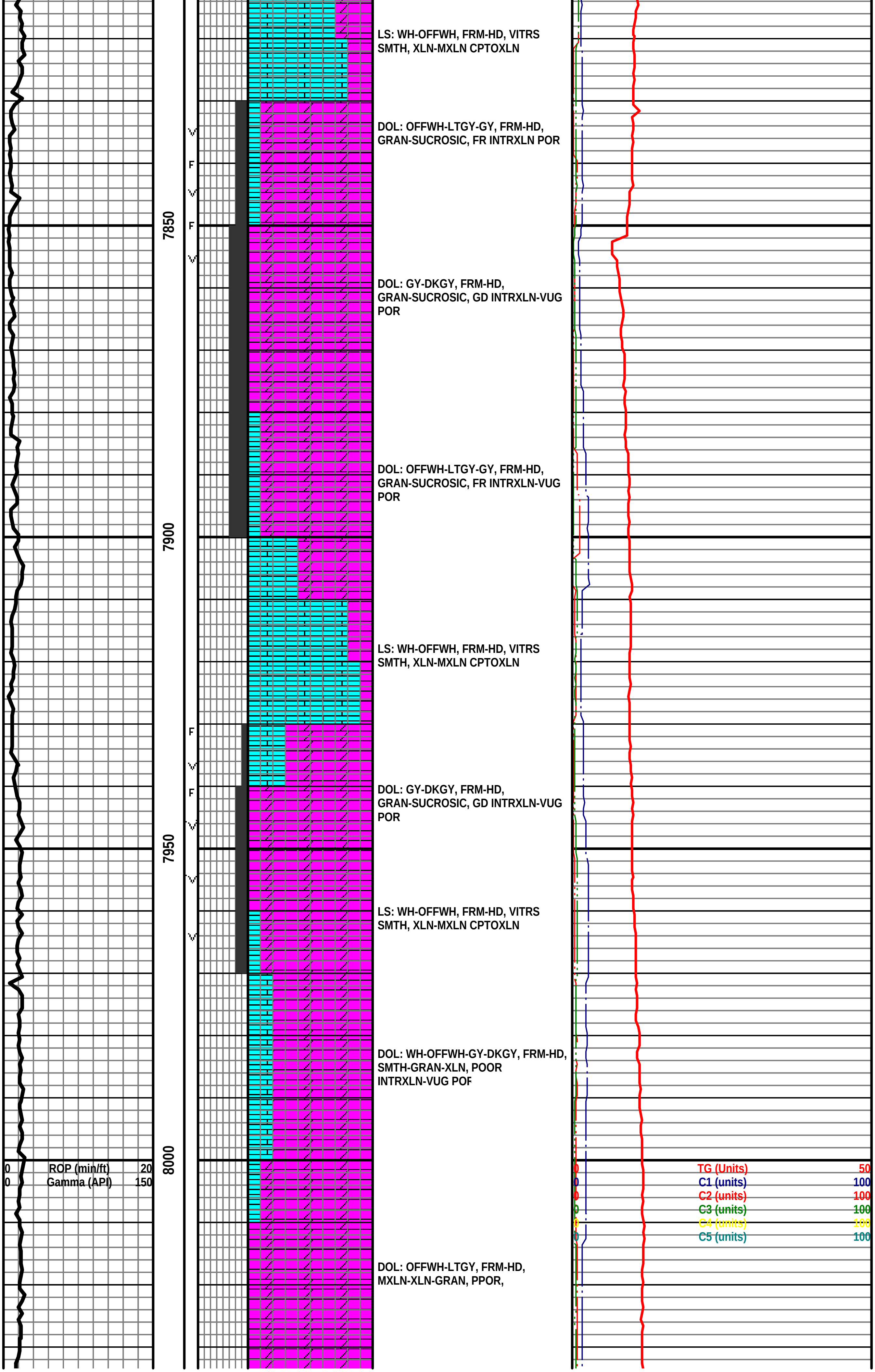
LS: WH-OFFWH, FRM-HD, VITRS SMTH, XLN-MXLN CPTOXLI

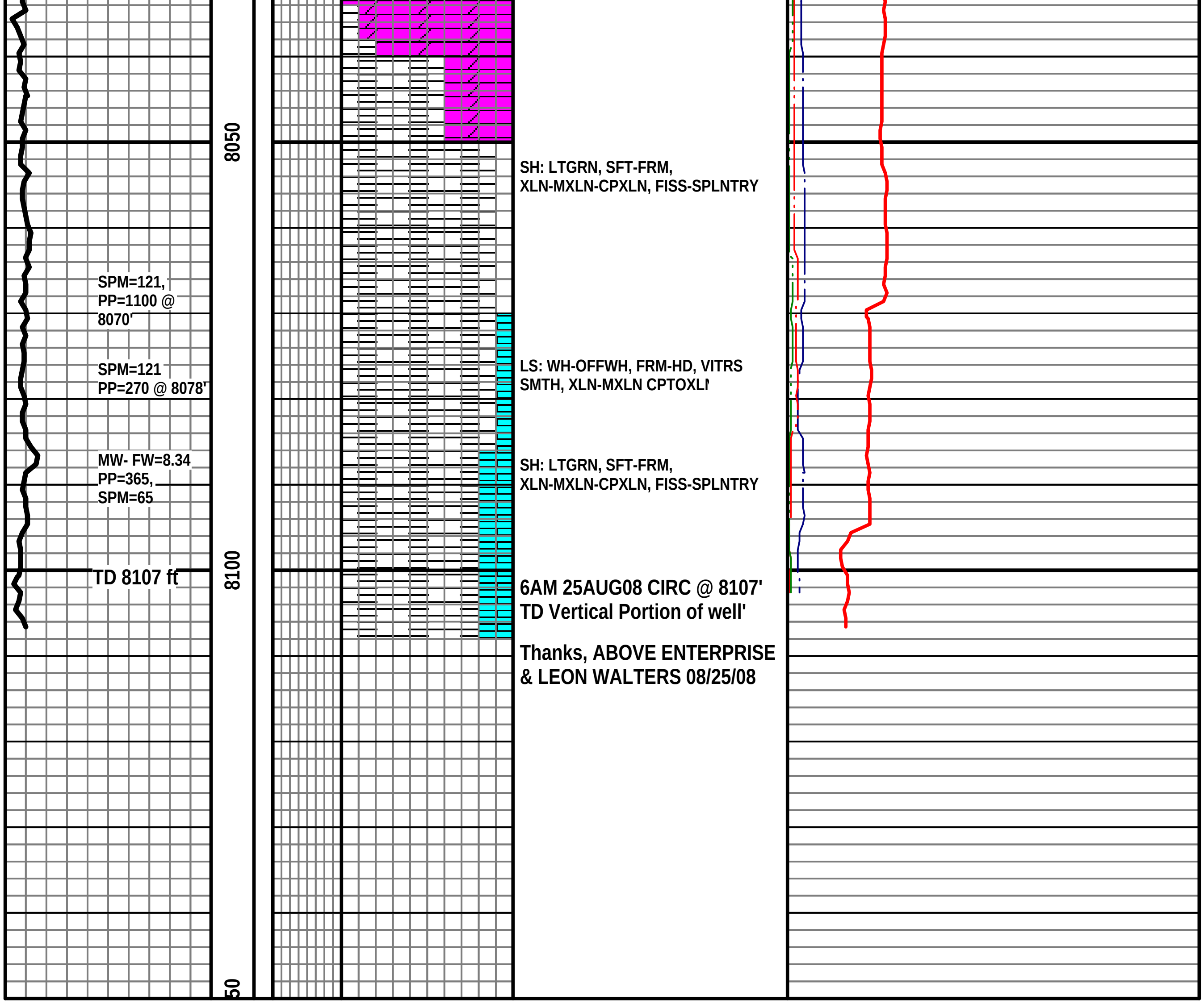
DOL: OFFWH-LTGY-GY, FRM-HD, GRAN-SUCROSIC, FR INTRXLN POR

7800

0 ROP (min/ft) 20
0 Gamma (API) 150

TG (Units) 50
C1 (units) 100
C2 (units) 100
C3 (units) 100
C4 (units) 100
C5 (units) 100


LS: WH-OFFWH, FRM-HD, VITRS SMTH, XLN-MXLN CPTOXLN
DOL: OFFWH-LTGY-GY, FRM-HD, GRAN-SUCROSIC, FR INTRXLN POR
F
F
7850
DOL: GY-DKGY, FRM-HD, GRAN-SUCROSIC, GD INTRXLN-VUG POR
DOL: OFFWH-LTGY-GY, FRM-HD, GRAN-SUCROSIC, FR INTRXLN-VUG POR
7900
LS: WH-OFFWH, FRM-HD, VITRS SMTH, XLN-MXLN CPTOXLN
F
F
DOL: GY-DKGY, FRM-HD, GRAN-SUCROSIC, GD INTRXLN-VUG POR
7950
LS: WH-OFFWH, FRM-HD, VITRS SMTH, XLN-MXLN CPTOXLN
DOL: WH-OFFWH-GY-DKGY, FRM-HD, SMTH-GRAN-XLN, POOR INTRXLN-VUG POF
8000
0 ROP (min/ft) 20
0 Gamma (API) 150
0 TG (Units) 50
0 C1 (units) 100
0 C2 (units) 100
0 C3 (units) 100
0 C4 (units) 100
0 C5 (units) 100
DOL: OFFWH-LTGY, FRM-HD, MXLN-XLN-GRAN, PPOR,


SPM=121,
PP=1100 @
8070'
SPM=121
PP=270 @ 8078'
MW- FW=8.34
PP=365,
SPM=65
TD 8107 ft
8050
8100
50
SH: LTGRN, SFT-FRM,
XLN-MXLN-CPXLN, FISS-SPLNTRY
LS: WH-OFFWH, FRM-HD, VITRS
SMTH, XLN-MXLN CPTOXLN
SH: LTGRN, SFT-FRM,
XLN-MXLN-CPXLN, FISS-SPLNTRY
6AM 25AUG08 CIRC @ 8107'
TD Vertical Portion of well'
Thanks, ABOVE ENTERPRISE
& LEON WALTERS 08/25/08