

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

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackst

- Sltstrg
- Ssstrg

OTHER SYMBOLS

POROSITY TYPE

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint

Vuggy

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

- Spotted
- Ques
- Dead

EVENTS

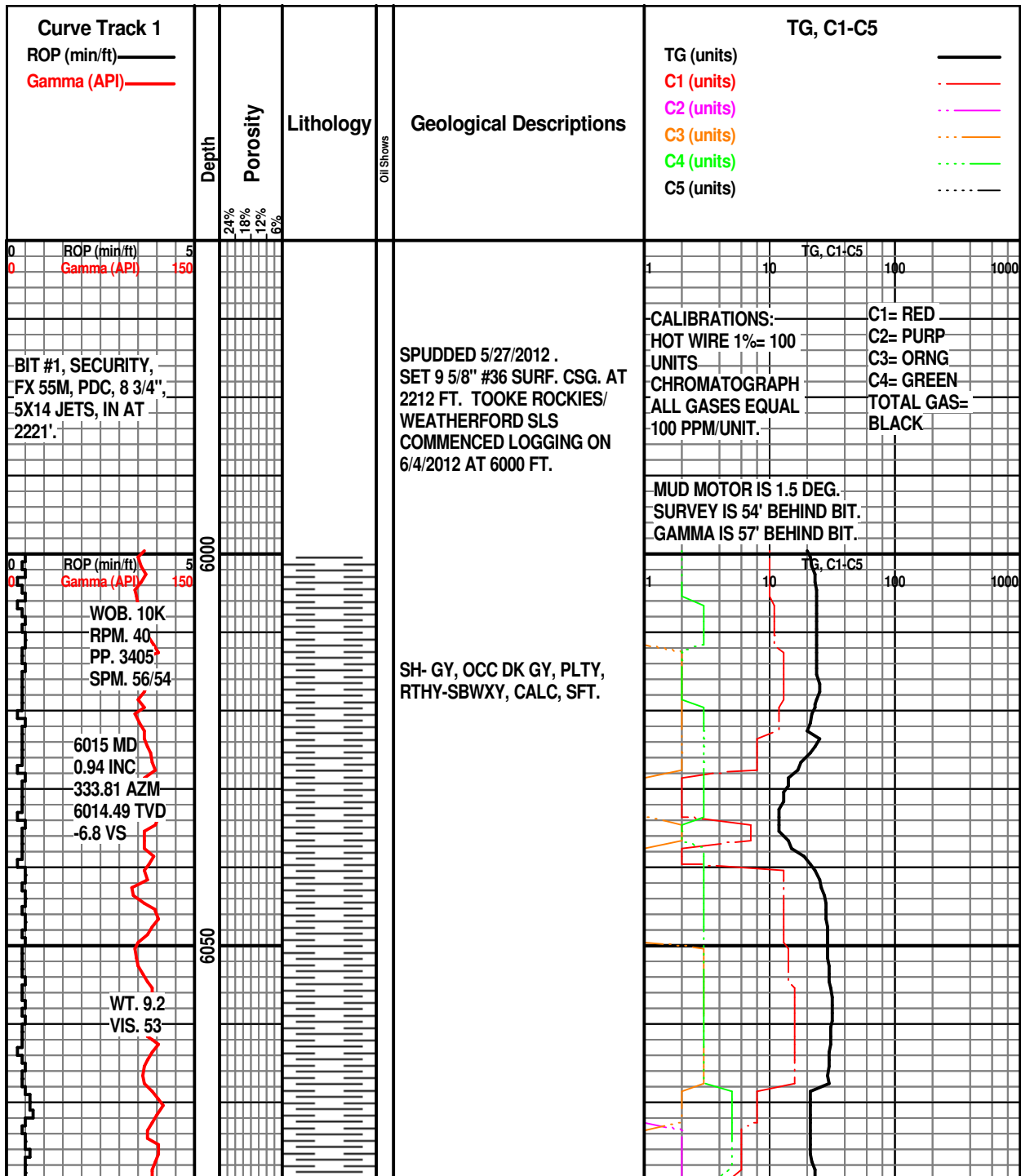
- Rft
- Sidewall

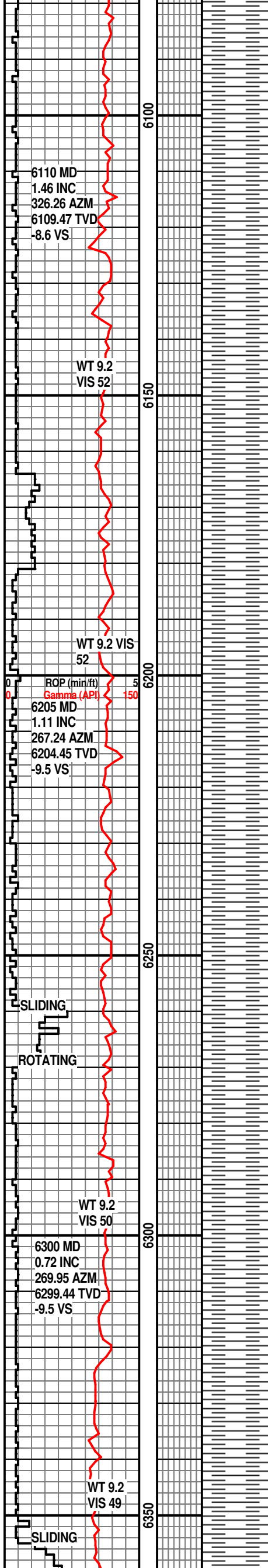
INTERVALS

- Core
- Dst

OIL SHOWS

- Even



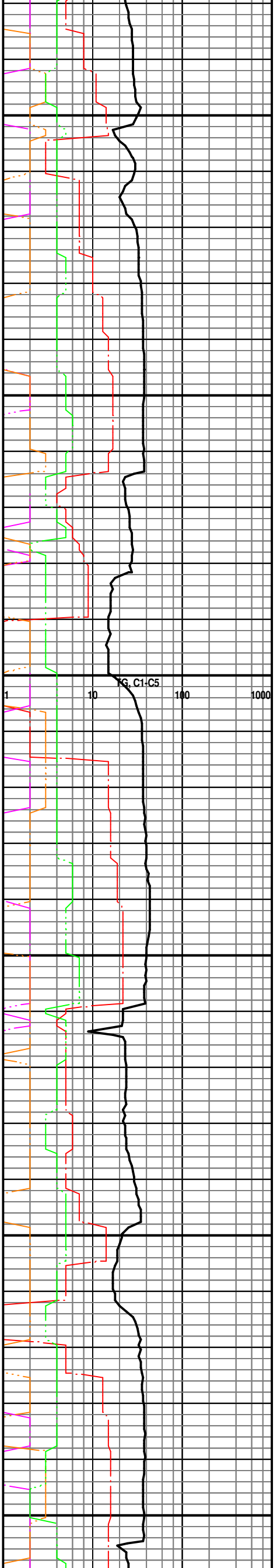


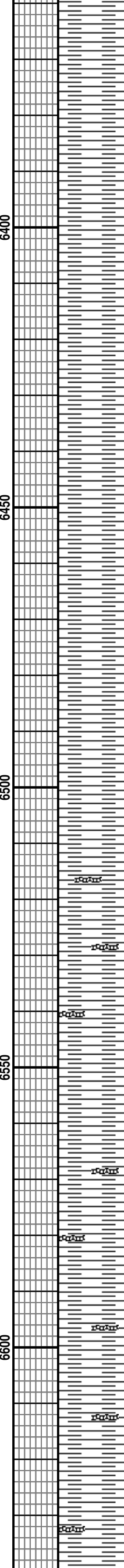
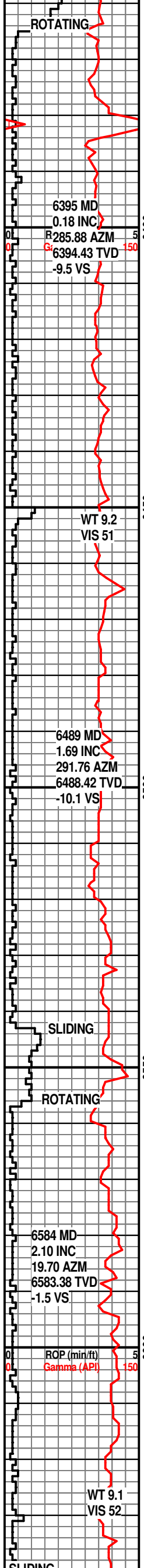
SH- GY-LT GY, OCC DK GY,
PLTY, RTHY-SBWXY, V CALC,
SFT.

SH- GY-LT GY, OCC DK GY,
PLTY, RTHY-SBWXY, V CALC,
SFT-OCC FRM.

SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC,
SFT-OCC FRM.

SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC,
SFT-OCC FRM.



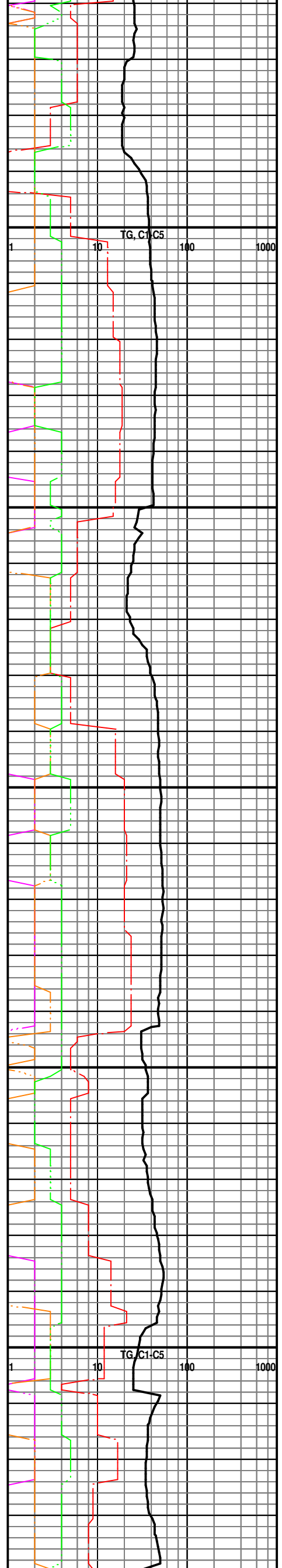


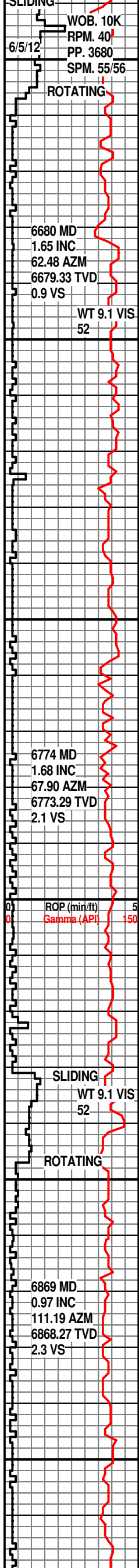
SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC,
SFT-OCC FRM.

SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC,
SFT-OCC FRM.

SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC,
SFT-OCC FRM, TR BENT

SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC, SFT-
FRM, TR BENT





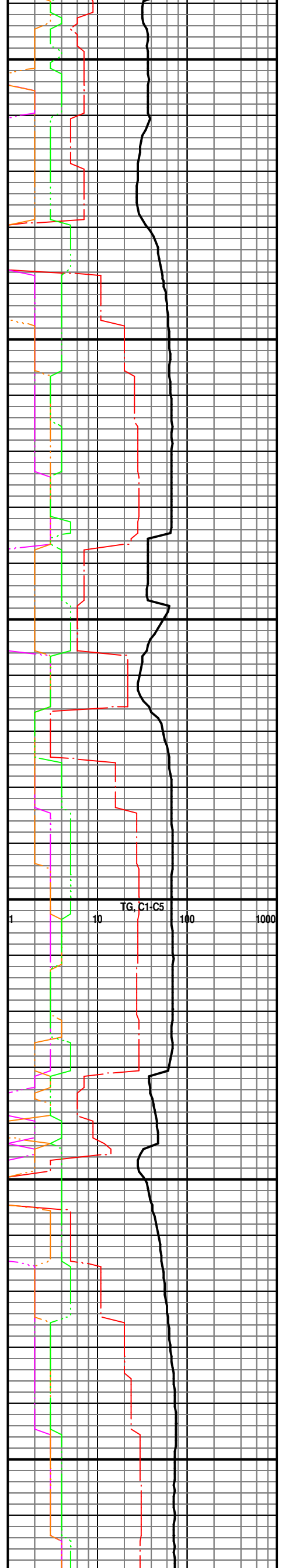
6/5/2012

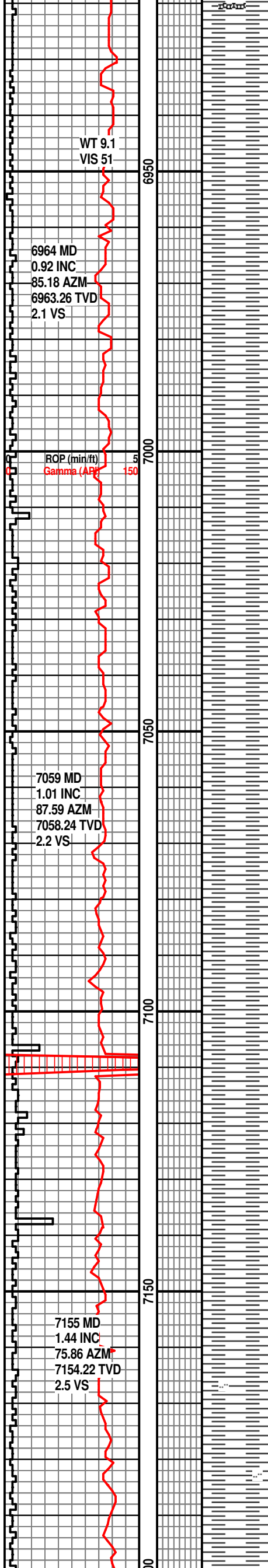
SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC, SFT-
FRM, TR BENT

SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC, SFT-
FRM, TR BENT

SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC, SFT-
FRM, TR BENT

SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC, SFT-
FRM, SM CARB LAM, TR BENT



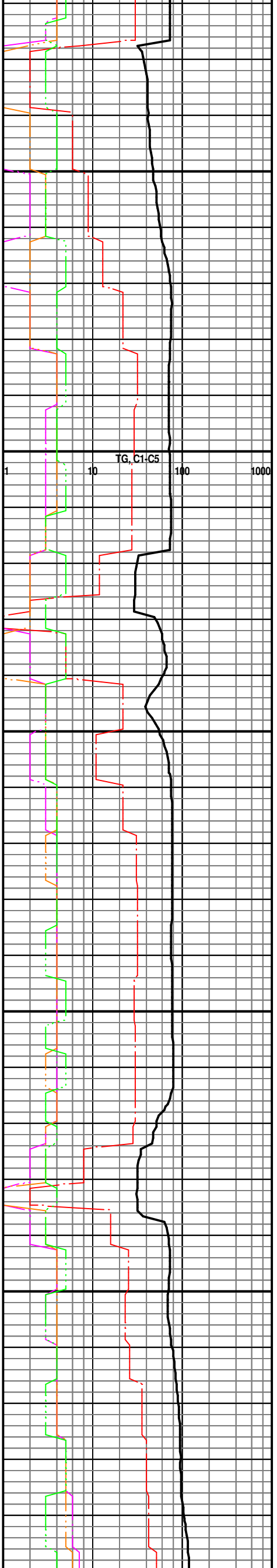


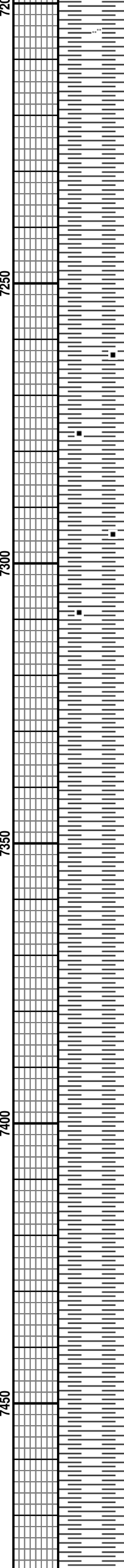
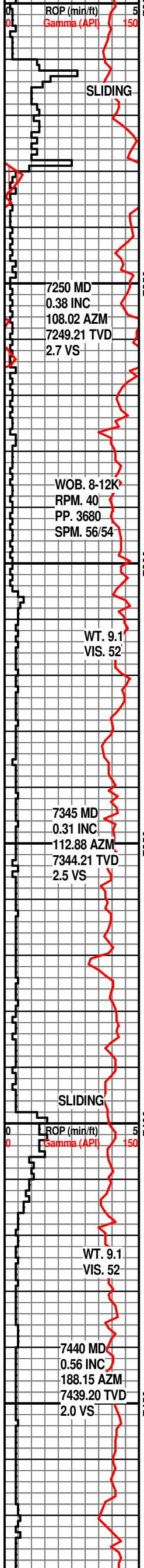
SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC, SFT-
FRM, SM CARB LAM, TR BENT

SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC, SFT-
FRM, SM CARB LAM, TR BENT

SH- DKGY- GY, BLKY- PLTY,
RTHY-SBWXY, SL CALC, SFT-
FRM, SM CARB LAM, TR BENT

SH- GY-DK GY, BLKY-PLTY,
SBWXY, SL SLTY, CALC,
SFT-FRM.



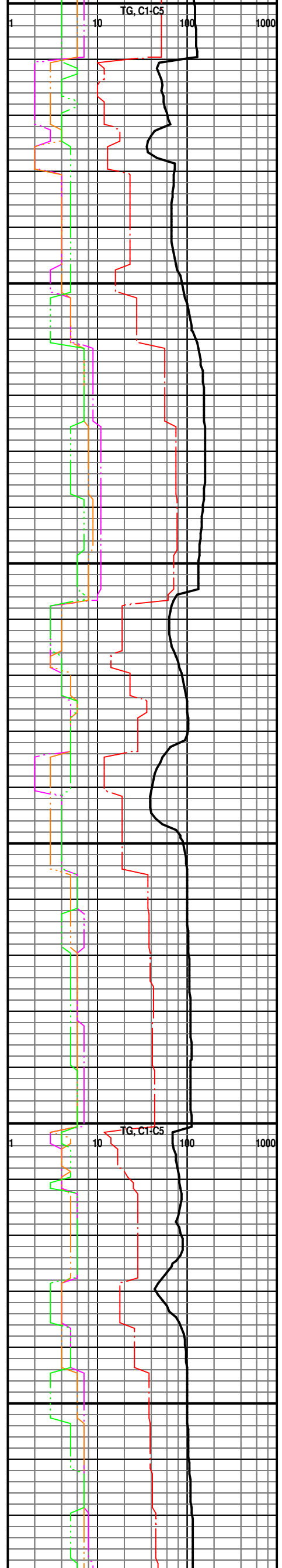


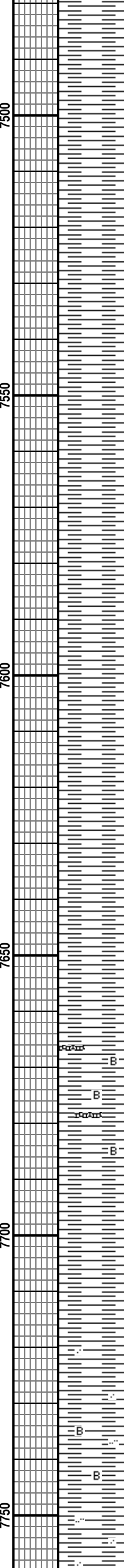
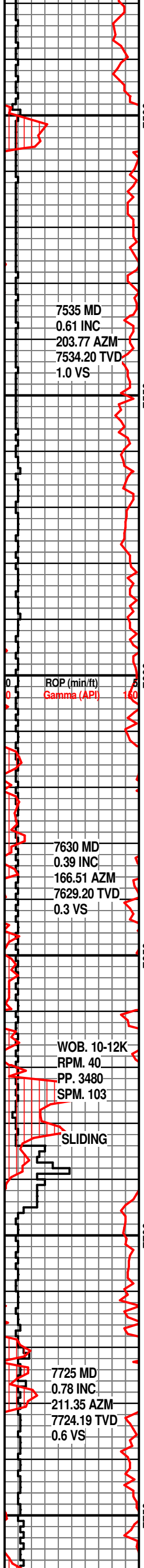
SH- DK GY-GY, BLKY-PLTY,
SBWXY, SL CALC, SFT-FRM.

SH-DK GY-BLK, BLKY-PLTY,
SBWXY, INCR CARB IN PT,
SL-NON CALC, SFT-FRM.

SH- GY-DK GY, BLKY-PLTY,
SBWXY, SL SLTY, CALC,
SFT-FRM.

SH- GY-DK GY, BLKY-PLTY,
SBWXY, SL SLTY, CALC,
SFT-FRM.





SH- DK GY-GY, BLK,
BLKY-PLTY, SBWXY, SL SLTY,
CALC IN PT, SFT-FRM.

SH- DK GY-GY, BLK,
BLKY-PLTY, SBWXY, SL SLTY,
CALC IN PT, SFT-FRM.

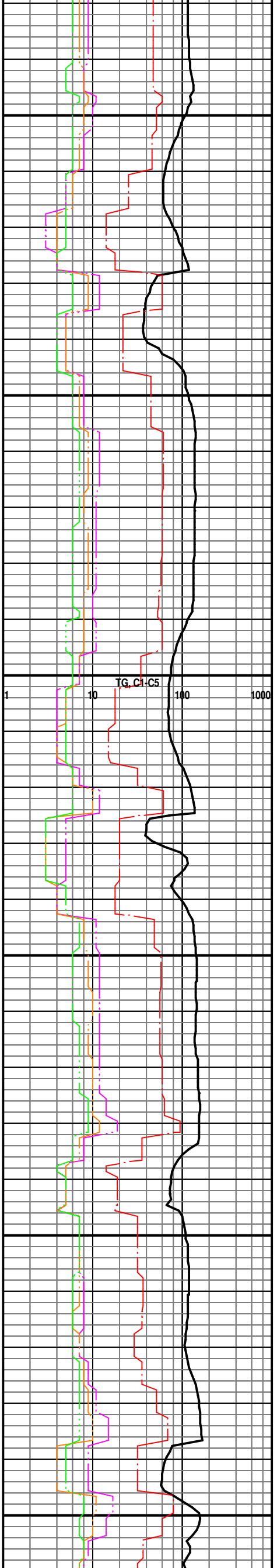
SH- DK GY-GY, BLKY-PLTY,
SBWXY, OCC SLTY IN PT,
CALC, SFT-FRM.

SH- GY-DK GY, PLTY-BLKY,
SBWXY, OCC SLTY, CALC,
SFT-FRM. W/ BENT- LT
GY-CRM/TAN.

SH- DK GY-BLK, BLKY-PLTY,
SBWXY, DECR BENT, CALC,
SFT-FRM.

SH- GY-DK GY, BLKY-PLTY,
SBWXY, CALC, SLTY IN PT,
SFT-FRM.

SH- DK GY-BLK, BLKY-PLTY,
SBWXY, CALC, SLTY-SDY IN
PT, TR SME BENT, SFT-FRM.



7535 MD
0.61 INC
203.77 AZM
7534.20 TVD
1.0 VS

7630 MD
0.39 INC
166.51 AZM
7629.20 TVD
0.3 VS

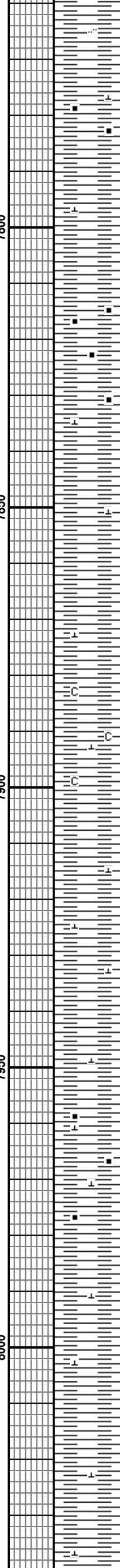
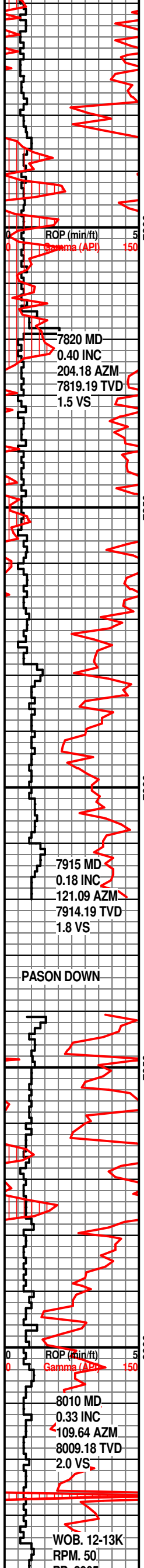
WOB. 10-12K
RPM. 40
PP. 3480
SPM. 103

7725 MD
0.78 INC
211.35 AZM
7724.19 TVD
0.6 VS

ROP (min/ft)
Gamma (API)

SLIDING

TG, C1-C5



GAMMA RAY PICKED TOP OF NIOBRARA AT 7778'.

SH- GY-DK GY, PLTY, SBWXY, SLTY, OCC CARB LAM, CALC, FRM.

SH- GY, DK GY, PLTY, SBWXY, SLTY IN PT, SME CARB LAM & SPECS, V CALC, FRM. W/ TR LT GY MUDSTN.

SH- DK GY-M GY, PLTY, RTHY-SBWXY, SLTY IN PT, V CALC, TR CALC NOD, OCC CARB LAM, SFT-FRM.

SH- GY-BLK, BLKY-PLTY, SBWXY, OCC SLTY, V CALC, CARB LAM, SME CALC NOD, SFT-FRM.

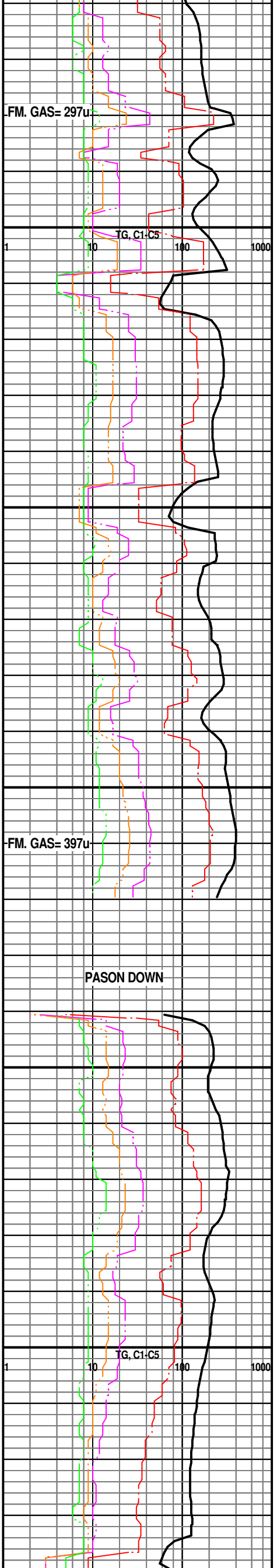
SH- DK GY-GY-BLK, BLKY-PLTY, SBWXY, V CALC, TR CHK, CARB IN PT, SFT-FRM.

SH- DK GY-GY, SME BLK, BLKY-PLTY, SBWXY, OCC CALC FL FRAC, V CALC, SFT-FRM.

SH- GY-DK GY, BLKY-PLTY, SBWXY, V CALC, CARB, SFT-FRM.

SH- DK GY-M GY, PLTY, RTHY-SBWXY, V CALC, OCC CARB LAM, SFT-FRM.

SH- GY-M GY, BLKY-PLTY, RTHY-SBWXY, V CALC, CARB IN PT, SFT-FRM.



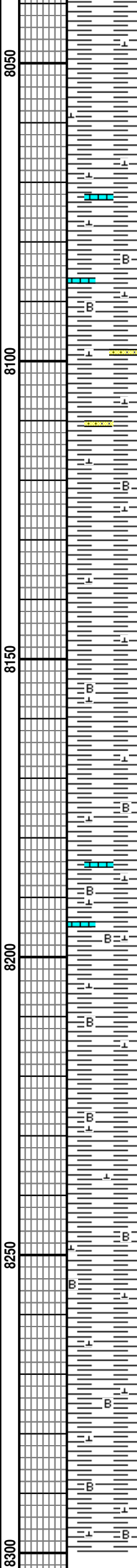
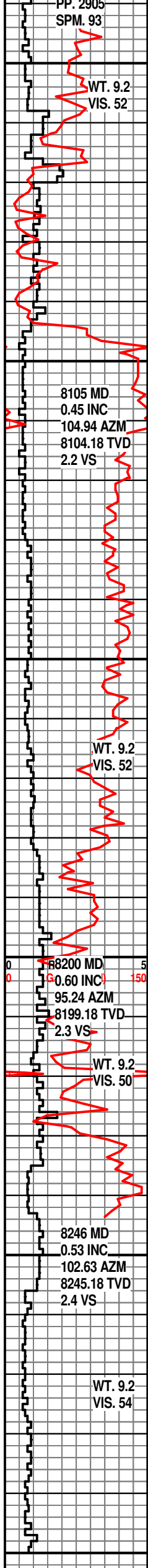
FM. GAS= 297u

TG, C1-C5

FM. GAS= 397u

PASON DOWN

TG, C1-C5



SH- GY-M GY, BLKY-PLTY,
RTHY-SBWXY, V CALC, CARB
IN PT, SFT-FRM. W/ TR LS.

**ESTIMATED FT. HAYS
AT 8066'.**

SH- GY-M GY, BLKY-PLTY,
RTHY-SBWXY, V CALC, CARB
IN PT, SFT-FRM, TR BENT &
PYR. W/ TR SS-LT-M GY/WH,
GYBRN, VF-F GR, SBANG-RD,
W SRTD, ARG, S&P, NSFOC,
FRM.

SH- GY-M GY, BLKY-PLTY,
RTHY-SBWXY, V CALC, CARB
LAM, SFT-FRM, TR BENT.

SH- GY-M GY, BLKY-PLTY,
RTHY-SBWXY, V CALC, CARB
LAM, SFT-FRM, TR BENT &
PYR.

**ESTIMATED
GREENHORN AT
8181'.**

SH- GY-M GY, BLKY-PLTY,
RTHY-SBWXY, V CALC, CARB
LAM, SFT-FRM, TR BENT &
LTBRN LS.

SH- GY-M GY, BLKY-PLTY,
RTHY-SBWXY, V CALC, CARB
LAM, SFT-FRM, TR BENT.

SH- GY-M GY, BLKY-PLTY,
RTHY-SBWXY, V CALC, CARB,
W/CARB LAM, SFT-FRM, TR
BENT.

SH- GY-M GY, BLKY-PLTY,
RTHY-SBWXY, V CALC, CARB,
W/CARB LAM, SFT-FRM, TR
BENT.

SH- GY-M GY, BLKY-PLTY,
RTHY-SBWXY, V CALC, CARB,
SFT-FRM, TR BENT.

**PILOT HOLE TD 22:40
HRS ON 6/5/12.**

