



Scale: 5" / 100'
Measured Depth Log

Well Name Troudt 2

Location S 32 T2N R67W

State Colorado

County Weld

Country USA

Rig Number Savanna 802

API Number 05-123-41432

Field Wattenberg

Region DJ Basin

Drilling Completed 9/9/2015

Spud Date 9/4/2015

Surface Coordinates Lat: 40° 5' 20.634"N
Long: 104° 54' 31.734"W

Bottom Hole Coordinates Lat: 40° 6' 59.169"N
Long: 104° 54' 22.697"W

Ground Elevation 5,079'

K.B. Elevation 5,094'

Logged Interval 5,000' To 7,100'

Total Depth 18,150'

Formation Codell

Type of Drilling Fluid Invert

Operator

Company Extraction Oil & Gas

Address 1888 Sherman St., Suite 200
Denver, CO 80203










Geologist

Name Jared Rouse

Company Extraction Oil & Gas

Address 1888 Sherman St., Suite 200
Denver, CO 80203

Zone Color Coding

 Oil	 Condensate	 Gas
 Note	 Core	 Pressure
 Error	 Water	 Seal

Other

Equipment ML 197

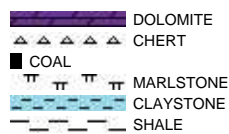
Comments Start: 9-4-15
TD: 9-9-15

Logger Names Nicholas Watkins / Mark Gross

Services Provided 2-man Logging

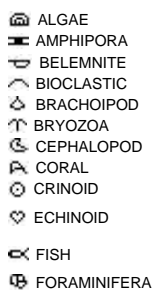
Address Empirica, LLC.
6360 W Sam Houston Pkwy N
Suite 100
Houston, TX 77041

Rock Types



Accessories

Fossils



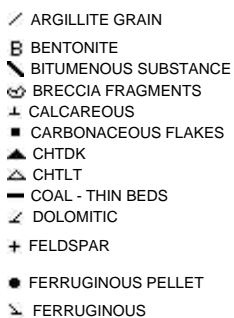
F FOSSIL



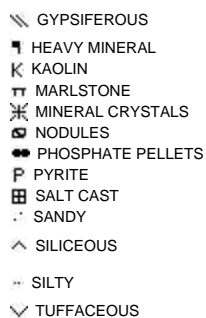
Minerals



ARGILLACEOUS



GLAUCONITE

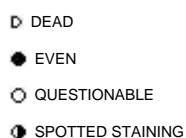


Stringer

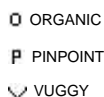


Other Symbols

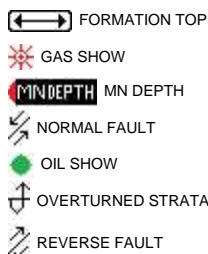
Oil Show



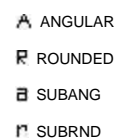
Porosity



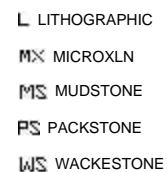
Engineering



Rounding



Textures



Sorting



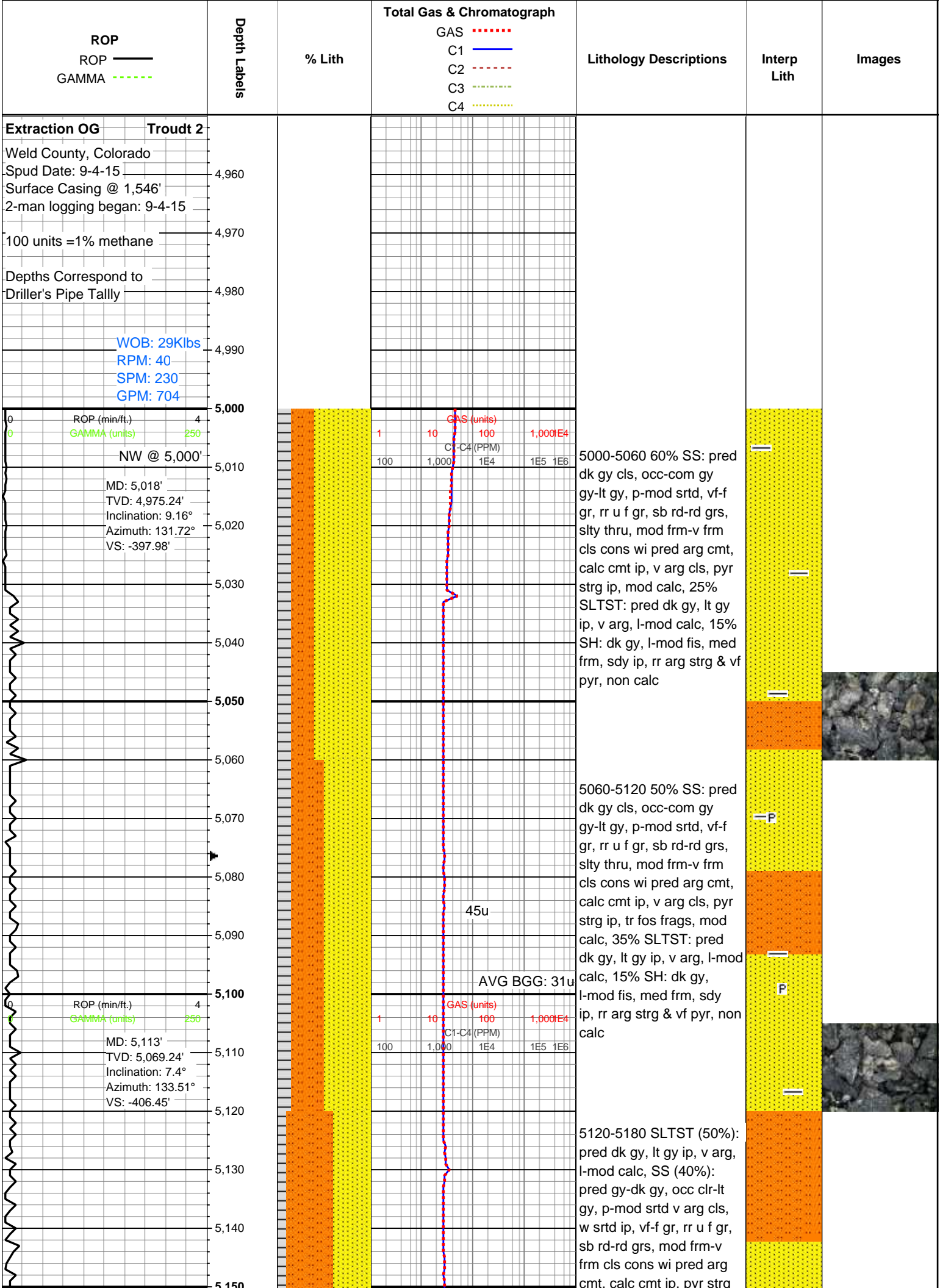
E EARTHY
F FENESTRAL
F FRACTURE
X INTERCRYSTALLINE
Φ INTEROOLITIC
MOLDIC

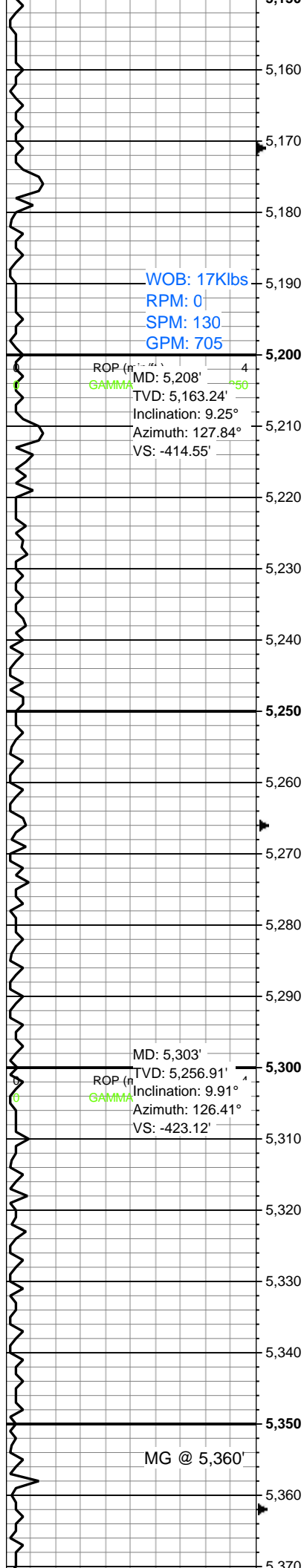
CONNECTION (LEFT)
CONNECTION (RIGHT)
CONNECTION GAS
CORE - LOST
CORE - RECOVERED
DST INTERVAL
FAULT

SIDEWALL CORE (LEFT)
SIDEWALL CORE (RIGHT)
SLIDE
SURVEY
TRIP GAS
WIRELINE TESTED - LEFT
WIRELINE TESTED - RT

BOUNDSTONE
CHALKY
CRYPTOXLN
E EARTHY
FINELYXLN
GRAINSTONE

MODERATE
POOR
WELL



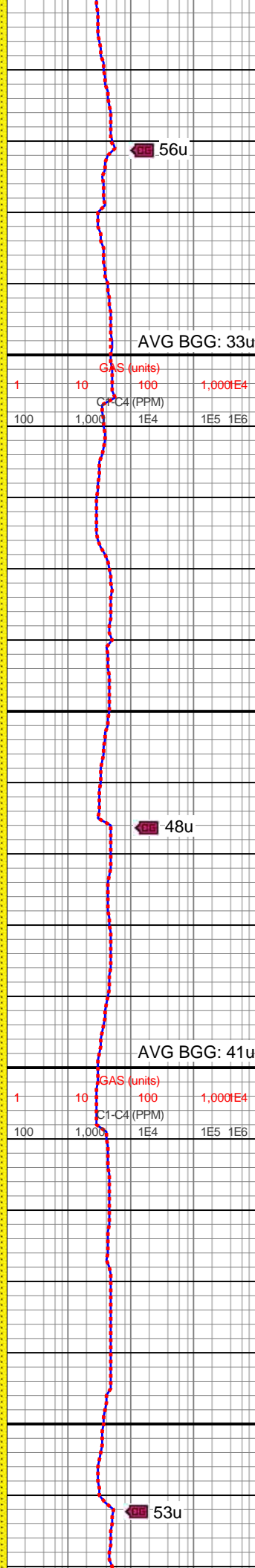


WOB: 17Klbs
RPM: 0
SPM: 130
GPM: 705

ROP (ft/min)
MD: 5,208'
TVD: 5,163.24'
Inclination: 9.25°
Azimuth: 127.84°
VS: -414.55'

ROP (ft/min)
MD: 5,303'
TVD: 5,256.91'
Inclination: 9.91°
Azimuth: 126.41°
VS: -423.12'

MG @ 5,360'



AVG BGG: 33u

GAS (units)
C1-C4 (PPM)
1 10 100 1,000
100 1,000 1E4 1E5 1E6

AVG BGG: 41u

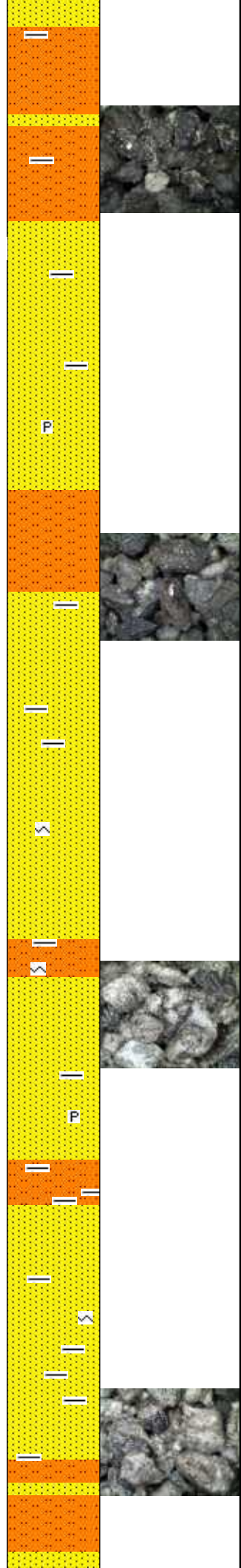
GAS (units)
C1-C4 (PPM)
1 10 100 1,000
100 1,000 1E4 1E5 1E6

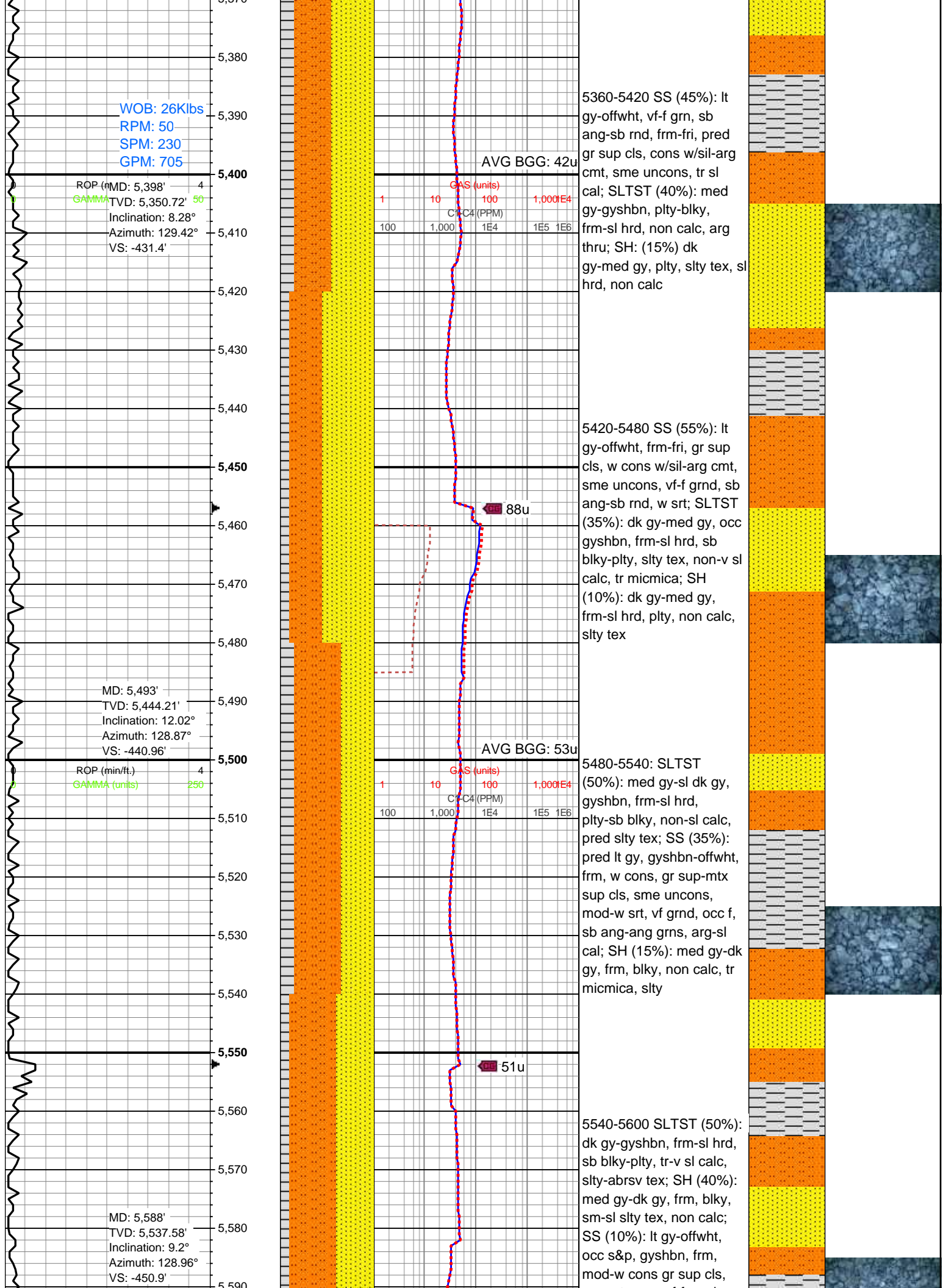
ip, mod calc, 10% SH: dk
gy, l-mod fis, med frm,
sdy ip, rr arg strg & vf pyr,
non calc

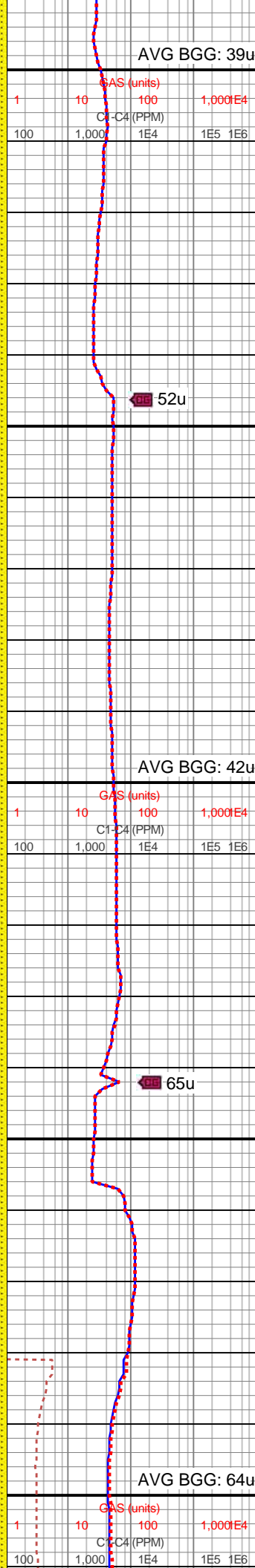
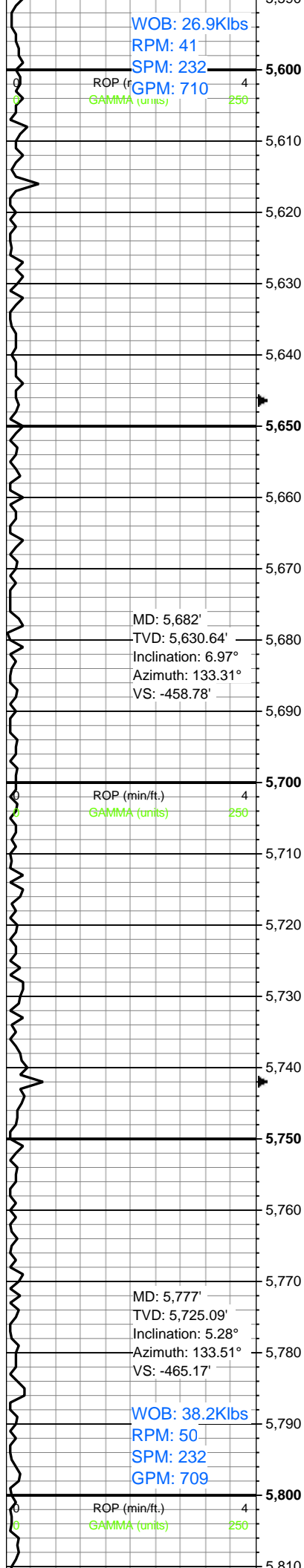
5180-5240 SLTST (50%):
pred dk gy, lt gy ip, v arg,
l-mod calc, SS (40%):
pred gy-dk gy, occ clr-lt
gy, p-mod srted v arg cls,
w srted ip, vf-f gr, rr u f gr,
sb rd-rd grs, mod frm-v
frm cls cons wi pred arg
cmt, calc cmt ip, pyr strg
ip, mod calc, 10% SH: dk
gy, l-mod fis, med frm,
sdy ip, rr arg strg & vf pyr,
non calc

5240-5300 70% SS: off
wh-v lt gy, gy-dk gy ip,
p-mod srted, vf-f gr, sb
rd-rd grs, v arg sft-med
frm cls, crunchy hd cls ip,
cons wi pred arg cmt,
calc cmt ip, tr vf pyr, tr gn
glau, mod calc, wi occ
SLTST intbds (20%):
pred dk gy, lt gy ip, sl arg,
l-mod calc, 10% SH: dk
gy, l-mod fis, med frm,
sdy ip, rr arg strg & vf pyr,
non calc

5300-5360 70% SS: off
wh-v lt gy, gy-dk gy ip,
p-mod srted, vf-f gr, sb
rd-rd grs, v arg sft-med
frm cls, crunchy hd cls ip,
cons wi pred arg cmt,
calc cmt ip, tr vf pyr, tr gn
glau, mod calc, wi occ
SLTST intbds (20%):
pred dk gy, lt gy ip, sl arg,
l-mod calc, 10% SH: dk
gy, l-mod fis, med frm,
sdy ip, rr arg strg & vf pyr,
non calc







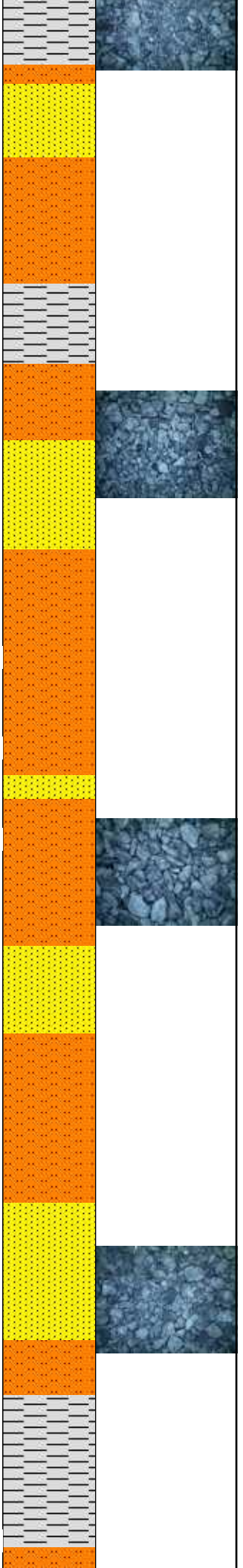
occ mtx sup, vf-f grnd,
mod srt, sb ang-ang
grns, sl calc-arg cmt

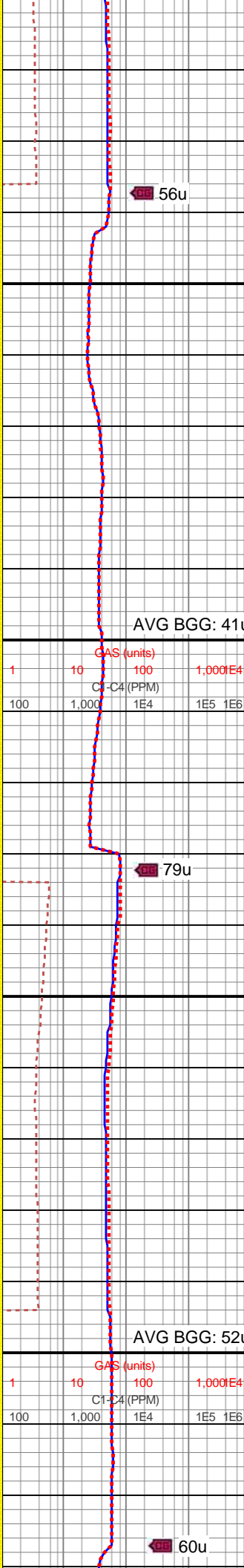
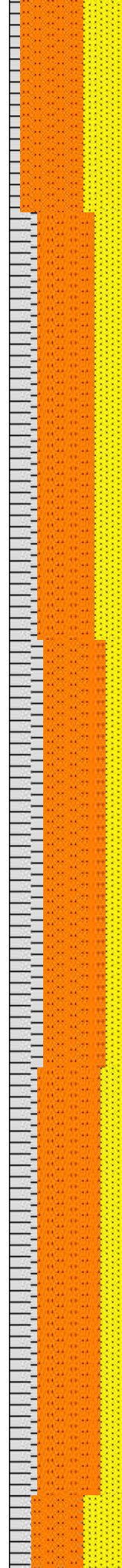
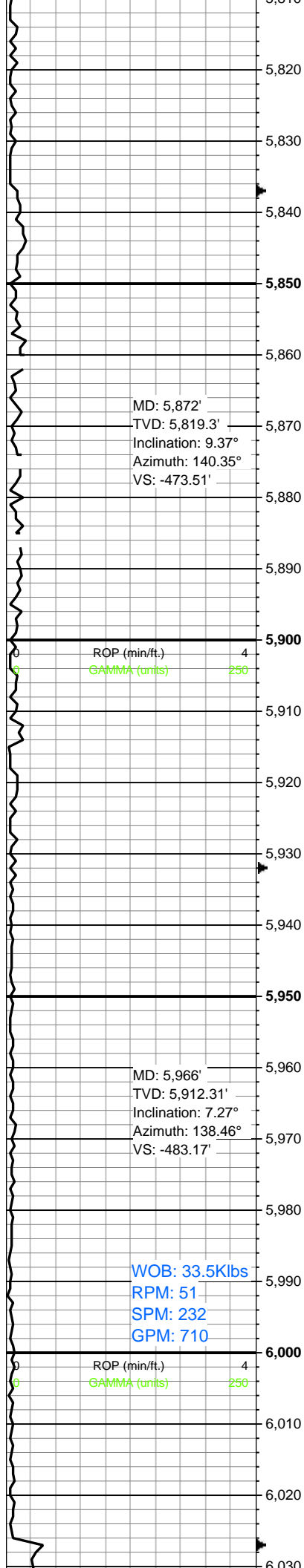
5600-5660 SLTST
(55%):pred med
gy-gyshbn, frm-sl hrd, sb
blky-plty, v arg, occ sdy,
predy non calc; SS
(35%): predy lt gy, occ
offwht-clr sd grs, mod w
srted, vf-f grs, frm-sl fri,
sil-arg cmt, sl slty thru;
SH (10%): dk gy-med gy,
frm, plty-sb blky,
sm-abrsv tex, micmica,
non calc

5660-5720 SLTST (55%):
pred med gy-gyshbn,
frm-sl hrd, sb blky, non
calc, arg thru; SS (25%):
med gy-lt gy-offwh, frm-fri,
pred gr sup cls, cons wi
sil-arg cmt, tr sl cal, occ
uncons, pred vf-f sb ang
qtz sd grs, slty; SH (20%):
dk gy-med gy, sl hrd,
blky-sb plty, non calc, rgh
tex, slty

5720-5780 SLTST
(45%):pred med
gy-gyshbn, frm-sl hrd, sb
blky-plty, v arg, occ sdy,
predy non calc; SS
(45%): predy lt gy, occ
offwht-clr sd grs, mod w
srted, vf-f grs, frm-sl fri,
sil-arg cmt, sl slty thru;
SH (10%): dk gy-med gy,
frm, plty-sb blky,
sm-abrsv tex, micmica,
non calc

5780-5840 SLTST (55%):
med av-avshbn, dk av, sh



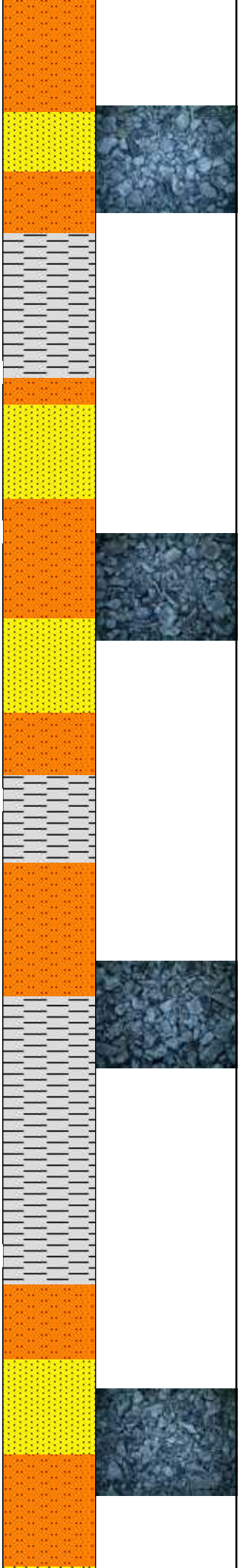


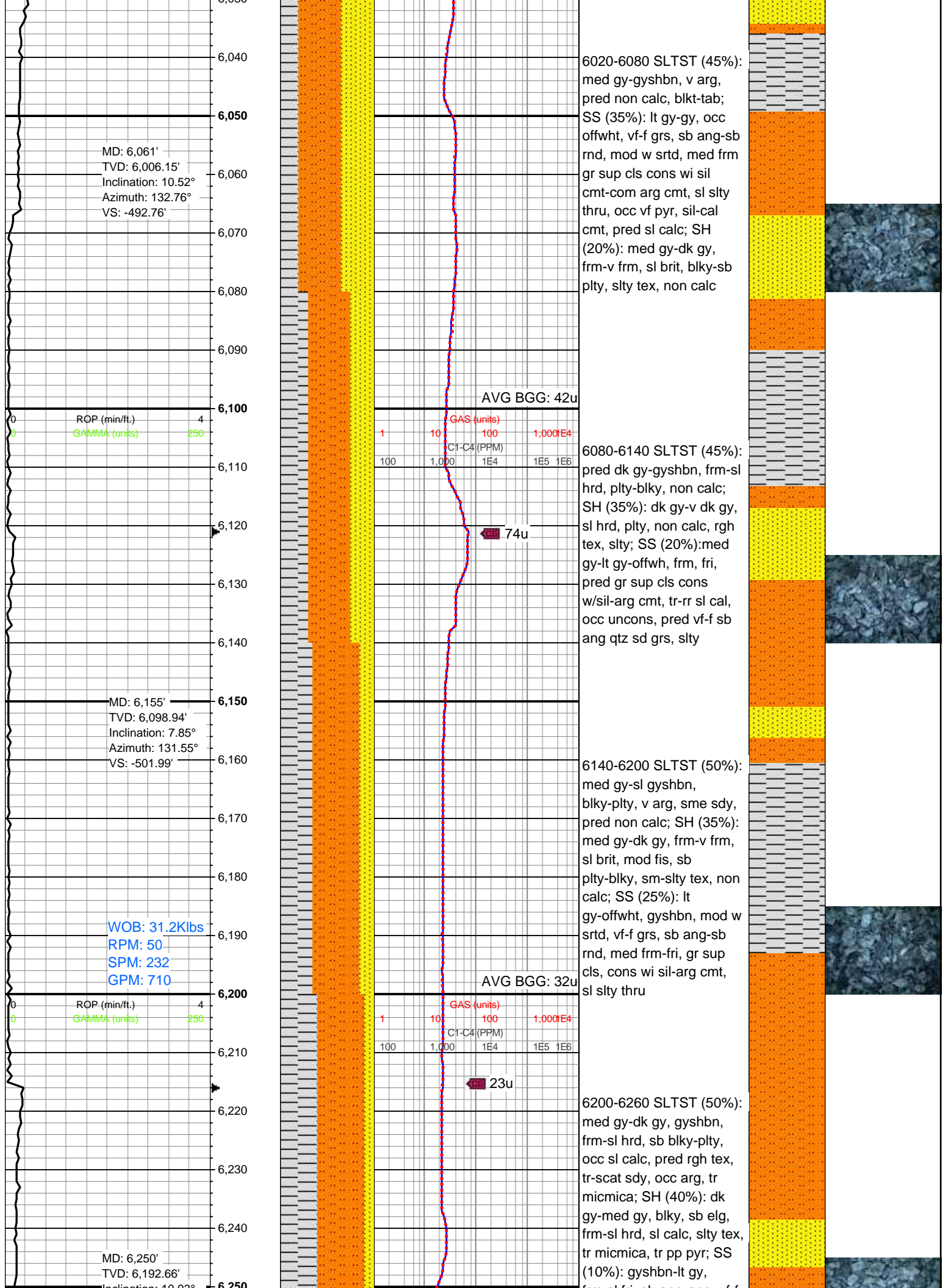
med gy gyshbn, dk gy, sb
blky-sb plty, frm-sl hrd, v
sl calc, slty-rgh tex; SS
(35%): lt gy-offwht,
gyshbn, vf-f grnd, mod-w
srt, frm, sb ang-ang grs,
mod-w cons gr sup cls,
pred arg cmt; SH (10%):
med gy-lt gy, blky, frm,
sm-sl abrsv tex, non calc

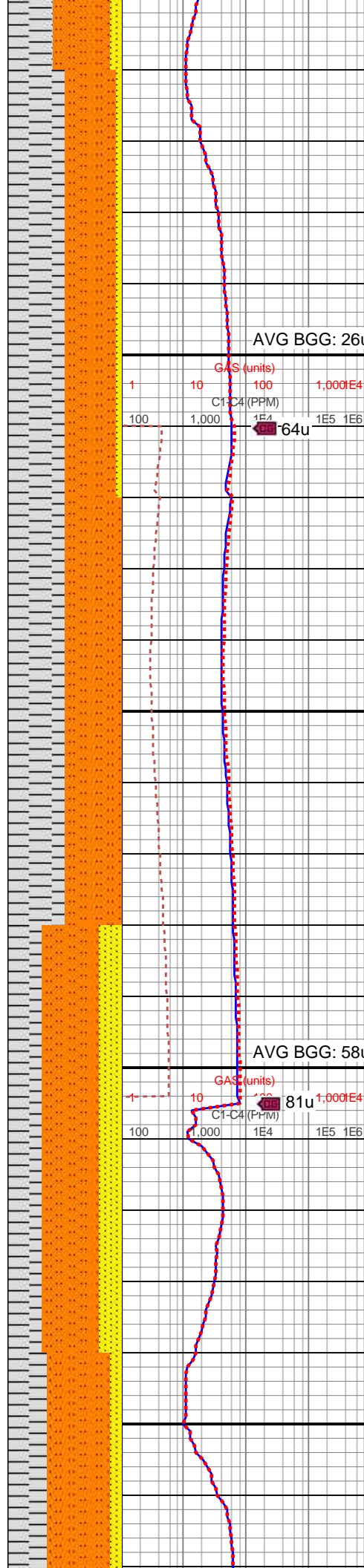
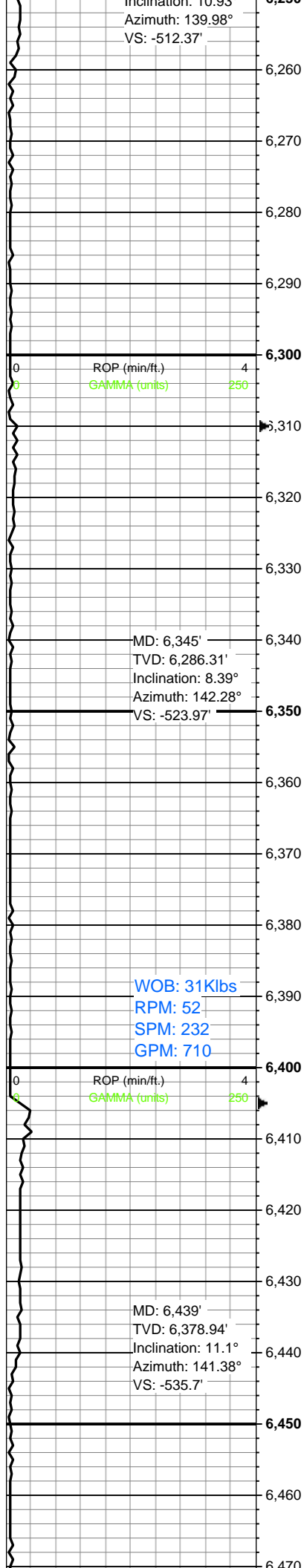
5840-5900 SLTST (50%):
pred med gy-gyshbn,
frm-sl hrd, sb blky, non
calc, arg thru; SH (25%):
dk gy-med gy, sl hrd,
blky-sb plty, non calc, rgh
tex, slty; SS (25%): med
gy-lt gy-offwh, frm-fri, pred
gr sup cls, cons wi
sil-arg cmt, tr sl cal, occ
uncons, pred vf-f sb ang
qtz sd grs, slty

5900-5960 SLTST (55%):
med gy-gyshbn, blky-plty,
v arg, sme sdy, pred non
calc; SH (30%): med
gy-dk gy, frm-v frm, sl brit,
mod fis, plty-blky, slty tex,
non calc; SS (15%): lt
gy-offwht, gyshbn, mod w
srt, vf-f grs, sb ang-sb
rnd, med frm-fri, gr sup
cls, cons wi sil-arg cmt,
sl slty thru

5960-6020 SLTST (55%):
gy-sl gyshbn, v arg, occ
sdy, pred non calc, blky;
SH (25%): med gy-dk gy,
frm-v frm, sb plty-blky,
slty-abrsv tex, non calc;
SS (20%): pred lt
gy-offwht, clr sd grs, mod
w srt, vf-f grs, med frm,
gr sup cls, cons wi
sil-arg cmt, sil-calc cmt







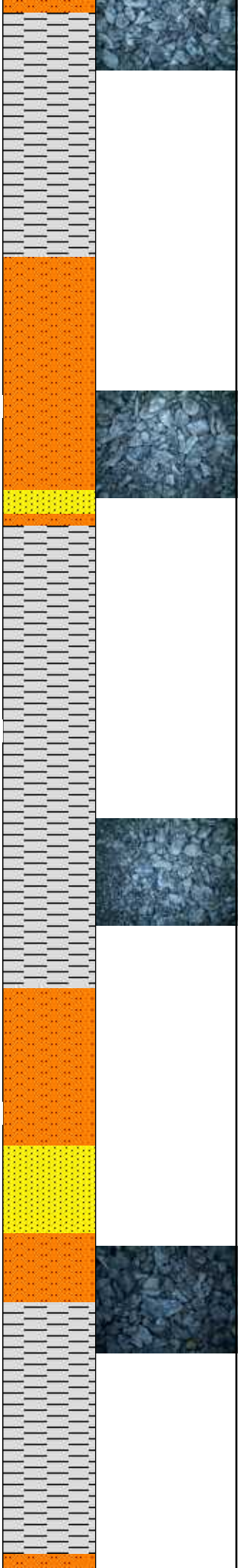
frm-sil frn, sb ang-ang, vf-f
grn, cons wi sil-arg cmt,
sl calc

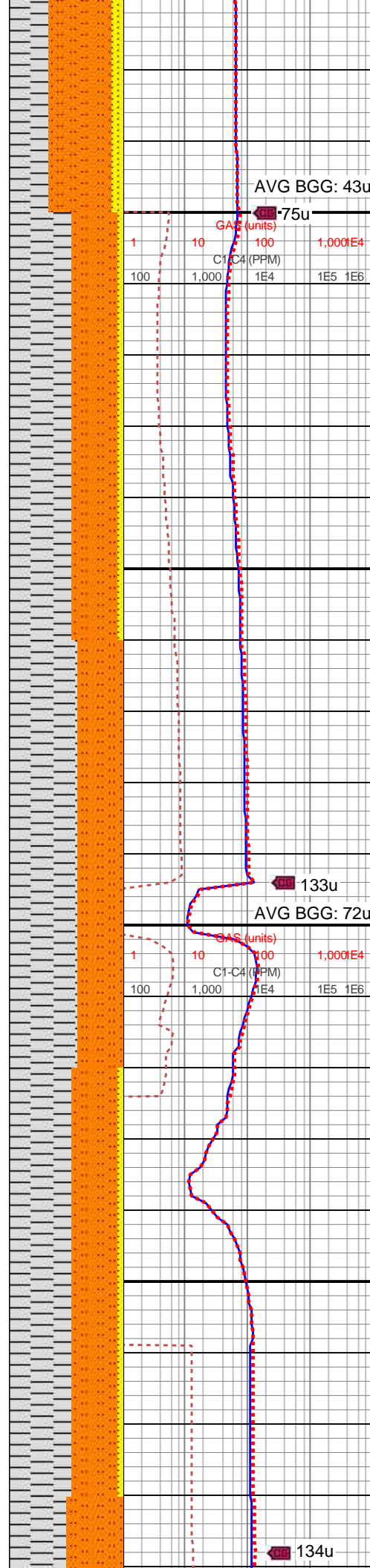
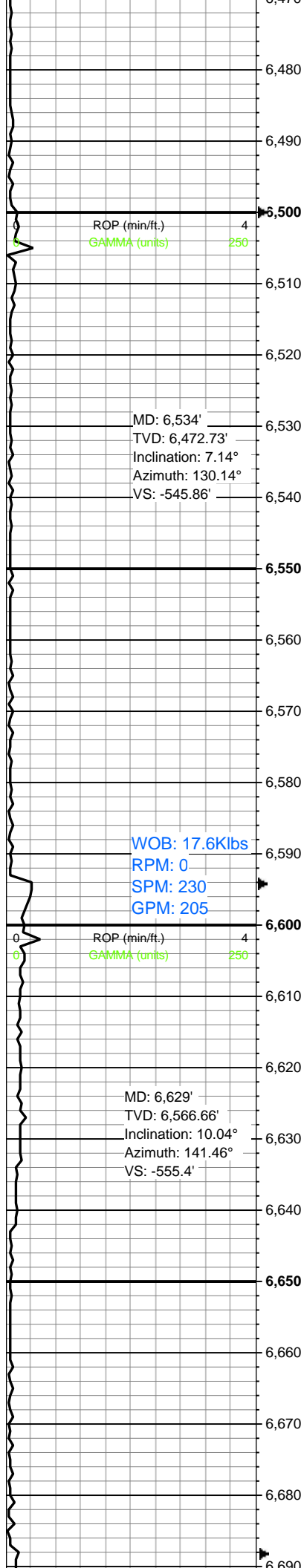
6260-6320 SH (50%):
pred dk gy-med gy,
gyshbn ip, plty-sb blk,
frm-sil hrd, non-sl calc, sl
silty tex, tr micmica, tr pp
pyr; SLTST (45%): med
gy-dk gy, gyshbn, v arg,
occ sdy, pred non calc, tr
f lamn; SS (5%): lt
gy-gyshbn, offwht, vf-f grn,
sb ang-ang, cons wi
arg-sil cmt, sl calc, grdg
sltst

6320-6380 SLTST (50%):
dk gy-med gy, occ sk
gyshbn, frm-sil hrd, sb
blk-plty, silty tex, non-v sl
calc, tr micmica; SH
(50%): med gy-dk gy,
frm-v frm, sl brit, mod fis,
sb plty-blky, sm-silty tex,
non calc

6380-6440 SLTST (50%):
med gy-dk gy, v arg thru,
sb blk, frm-sil hd, sl calc;
SH (33%): med gy-dk gy,
sl frm-hrd, sme fis, sb
plty-plty, sm-abrsv tex,
grdg sltst, sme f lamn;
SS (20%): lt gy-gyshbn,
offwht, frm-sil hrd, fri, vf-f
grn, sb ang-sb rnd, cons
wi sil-arg cmt, sl calc

6440-6500 SH (55%): dk
gy-med gy, frm-hrd, sb
plty, sm-abrsv tex, grdg





pty, sm arg sil tex, grg
sltst, sme f lamn; SLTST
(35%): med gy-gyshbn,
dk gy, v arg thru, sb tab,
frm-sl hd, sl calc; SS
(10%): lt gy-offwht,
gyshbn, vf-f grn, frm-sl
hrd, sb ang-sb rnd, fri,
cons wi sil-arg cmt, sl
calc

6500-6560 SH (55%): dk
gy-med gy, pred plty-blky,
frm-sl hrd, non-sl calc,
sm-sl slty tex, tr pp pyr;
SLTST (40%): pred med
gy-dk gy, gyshbn, v arg,
occ sdy, pred non calc, tr
f lamn; SS (5%): lt
gy-offwht, vf-f grn, sb
ang-ang, cons wi arg-sil
cmt, sl calc, grdg sltst,
mnr lse qtz grns

6560-6620 SH (60%): dk
gy-med gy, frm-v frm, sl
brit, sb tab-plty, sm-slty
tex, pred non calc; SLTST
(40%): med gy-gyshbn, v
arg, pred non calc;
slty-grty tex, mnr ss lamn

6560-6620 SH (50%): dk
gy-med gy, sl hrd,
plty-blky, non calc, rgh
tex, slty; SLTST (45%):
med gy-gyshbn, v arg,
blky-plty, sdy, non calc;
SS (5%):lt gy-offwh,
gyshbn, frm-fri, pred gr
sup cls, cons wi sil-arg
cmt, occ uncons, pred
vf-f, sb ang, qtz sd grs,
slty

