



Scale: 5" / 100'  
Measured Depth Log

**Well Name** Johnson Trust 4

**Location** Sec. 13-T2N-R68W

**State** Colorado

**County** Weld

**Country** USA

**Rig Number** Patterson UTI 346

**API Number** 05-123-42320-00

**AFE #** NA

**Geographic Region** DJ Basin

**Field** Wattenberg

**Spud Date** 1/22/2016

**Drilling Completed** 1/24/2016

**Surface Coordinates** SHL: 2181' FSL, 389' FWL Sec. 13 T2N R68W

Lat: 40° 8' 14.697 N  
Long: 104° 57' 34.632 W

**Bottom Hole Coordinates** PBHL:

Lat: 40° 7' 31.181 N  
Long: 104° 57' 15.980 W

**Ground Elevation** 4,926'

**K.B. Elevation** 4,950.5'

**Logged Interval** 5,000' **To** 6,860'

**Total Depth** 12,206'

**Formation** Niobrara B Chalk

**Type of Drilling Fluid** Oil Based - invert

## Operator

**Company** Extaction Oil & Gas

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

## Geologist

**Name** Vivian Spiess / Jared Rouse

## Zone Color Coding

Oil Condensate Gas

Name Vivian Express / Sured Road

Company Extraction Oil & Gas

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

Note

Error

Core

Water

Pressure

Seal

## Other

Equipment ML-113

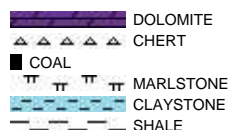
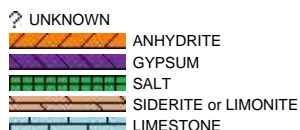
Comments Start: 1-xx-16  
TD: TBD  
Standby: TBD

Services Provided 2-man Logging  
On Site Geosteering

Logger Names Dominic Pitre / Nicholas Watkiins

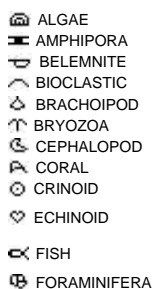
Address Empirica, LLC.  
6360 W Sam Houston Pkwy N  
Suite 100  
Houston, TX 77041

## Rock Types



## Accessories

### Fossils



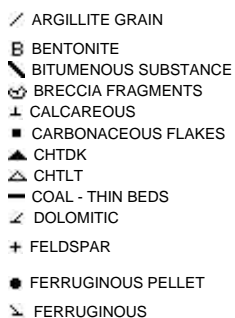
### Fossil



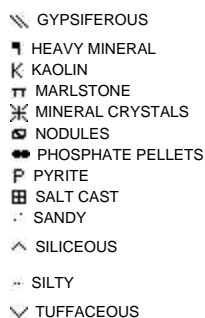
### Minerals



### Argillaceous



### Glauconite

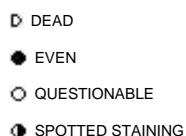


### Stringer



## Other Symbols

### Oil Show



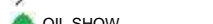
### Organic



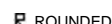
### Engineering



### Formation Top



### Rounding




### Lithographic




### Sorting

Porosity

- E EARTHY
- ▣ FENESTRAL
- F FRACTURE
- ✕ INTERCRYSTALLINE
- ⊕ INTEROOLITIC
- ✂ MOLDIC

-  CASING
- ◀ CONNECTION (LEFT)
- ▶ CONNECTION (RIGHT)
- ⬮ CONNECTION GAS
- ⬇ CORE - LOST
- CORE - RECOVERED
- ⋮ DST INTERVAL
- ⬇/⬆ FAULT

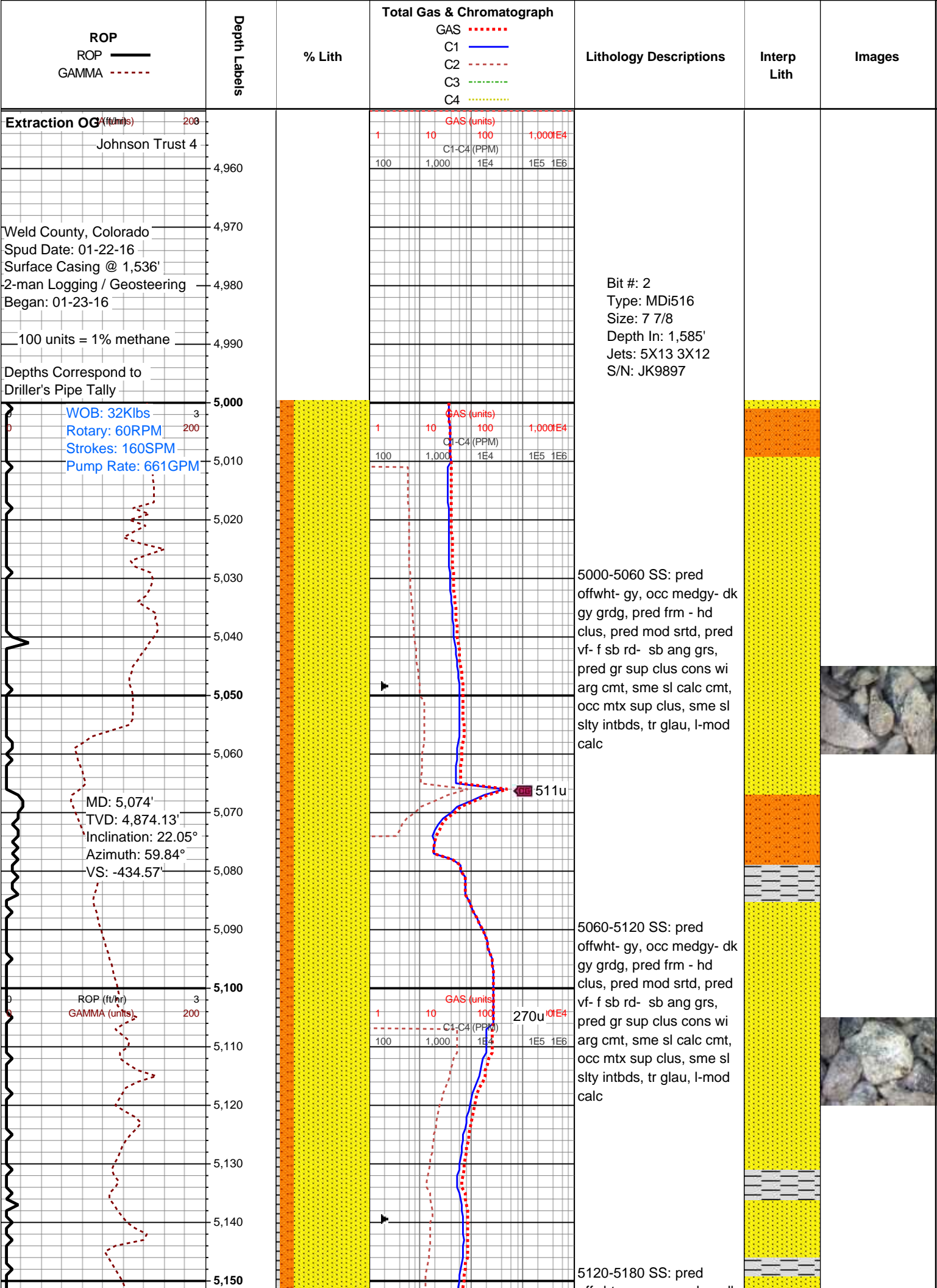
-  REVERSE FAULT
- ◀ SIDEWALL CORE (LEFT)
- ▶ SIDEWALL CORE (RIGHT)
- ▨ SLIDE
- DS SURVEY
- ⬮ TRIP GAS
- ◀ WIRELINE TESTED - LEFT
- ▶ WIRELINE TESTED - RT

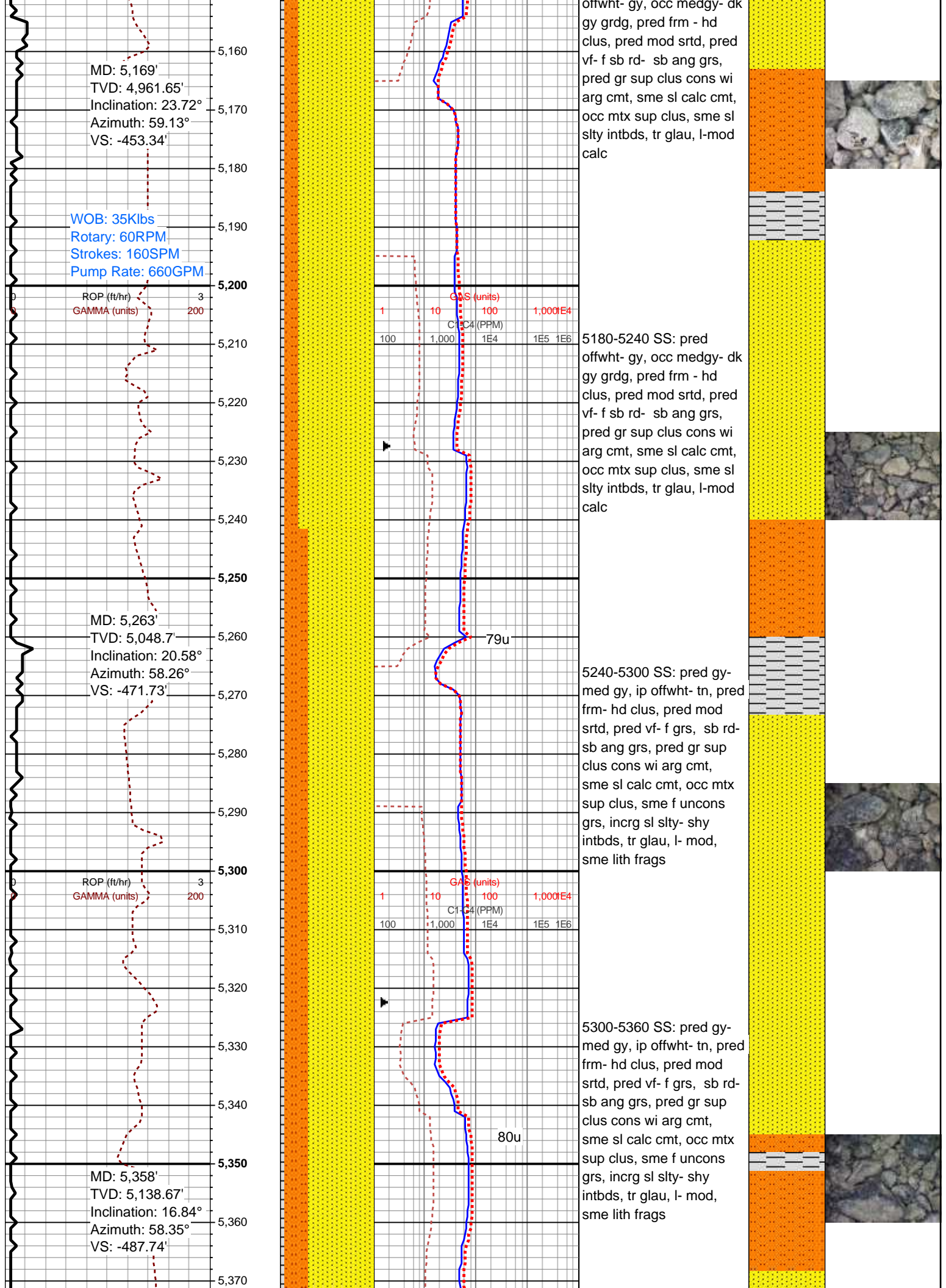
Textures

- BS BOUNDSTONE
- C CHALKY
- ✕ CRYPTOXLN
- E EARTHY
- FX FINELYXLN
- GS GRAINSTONE

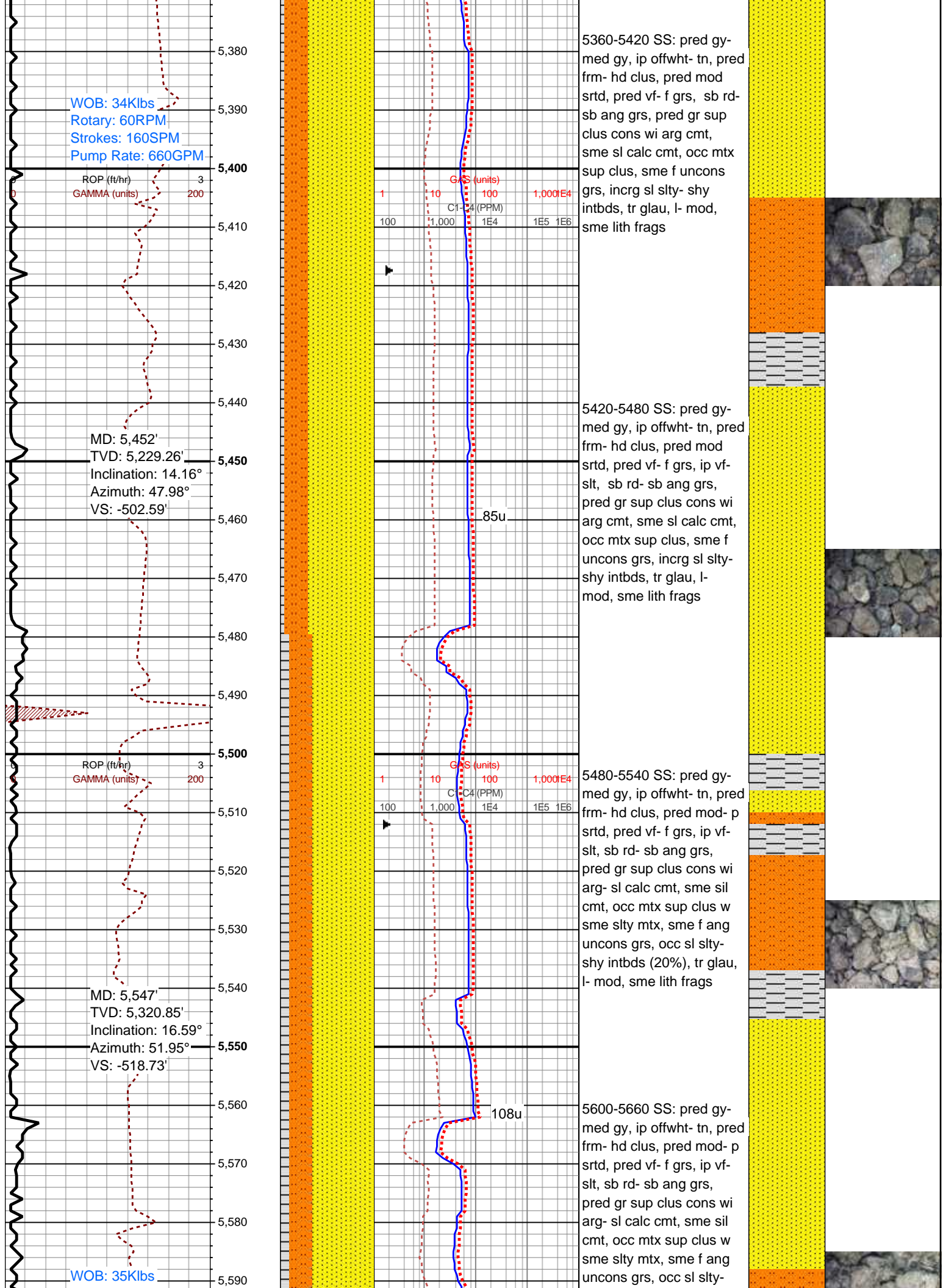
Sorting

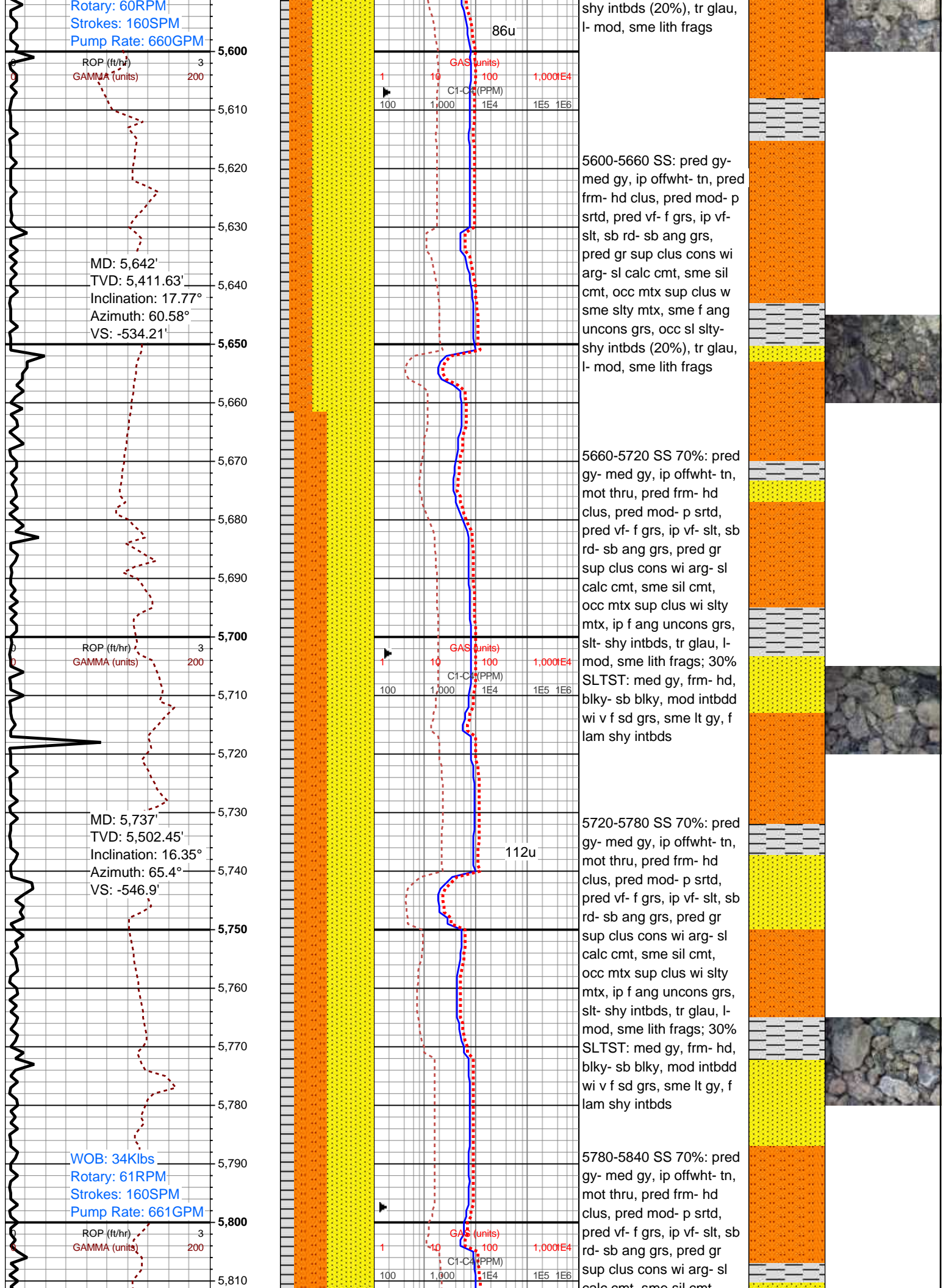
- M MODERATE
- P POOR
- W WELL



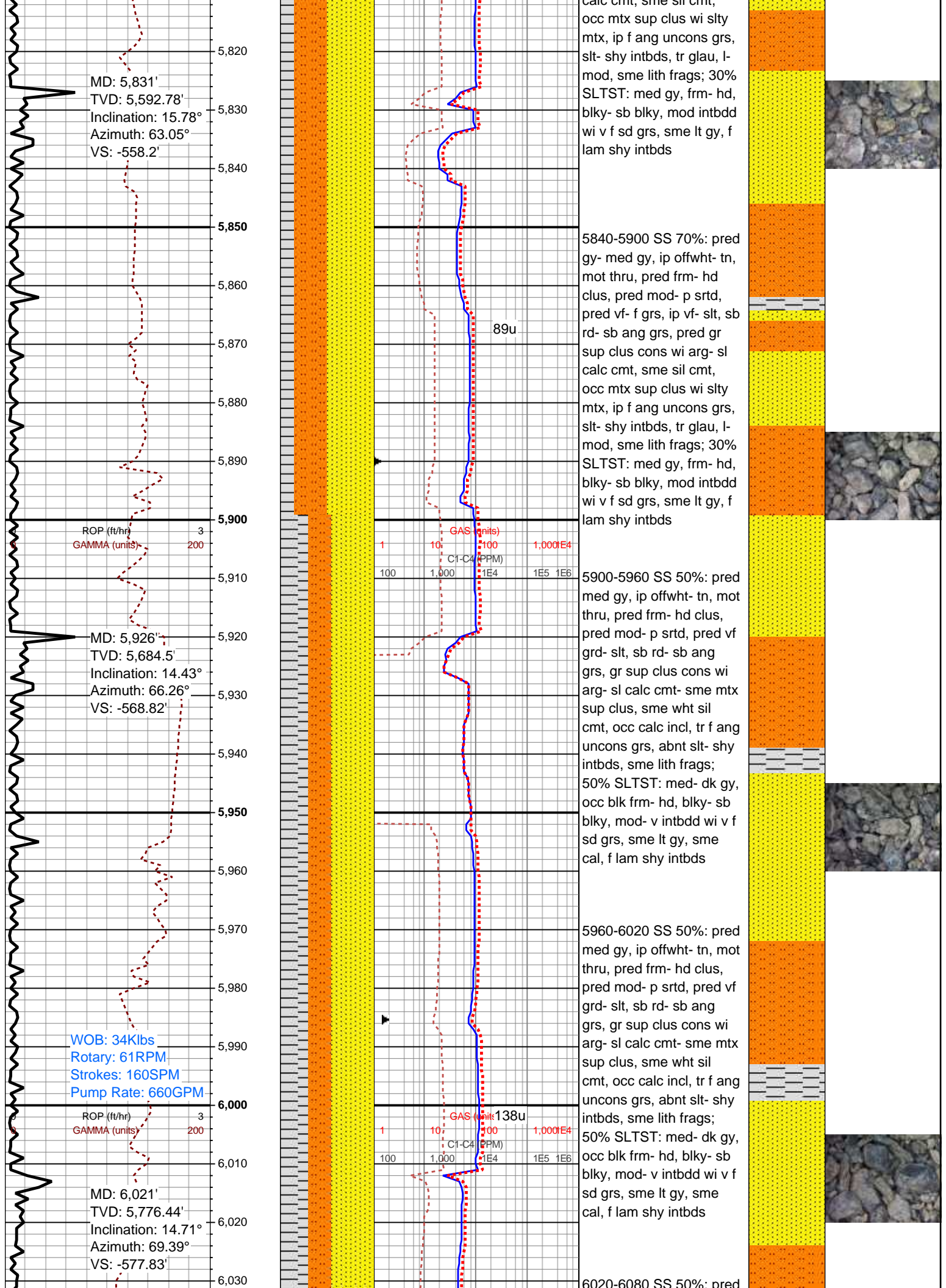




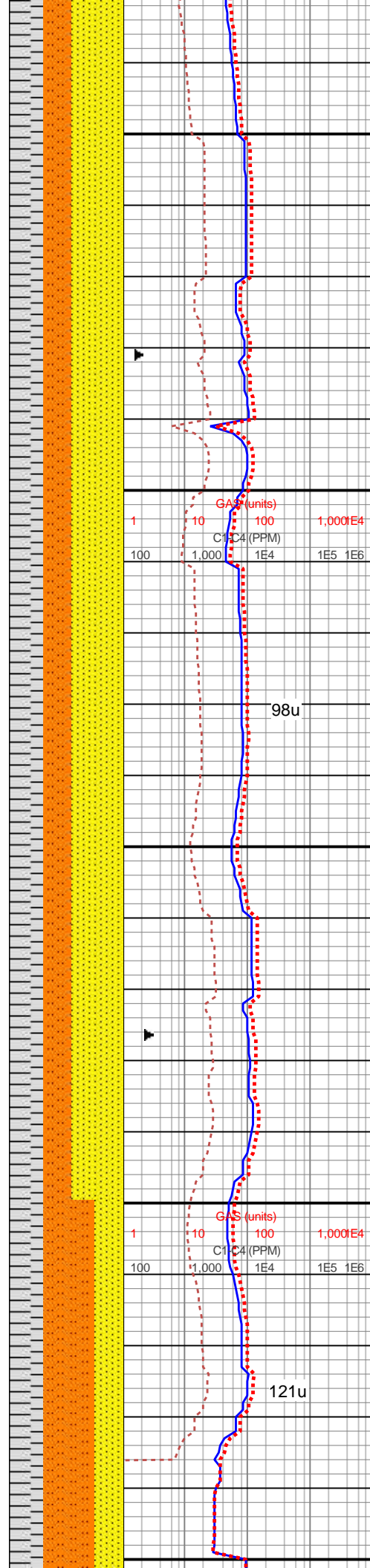
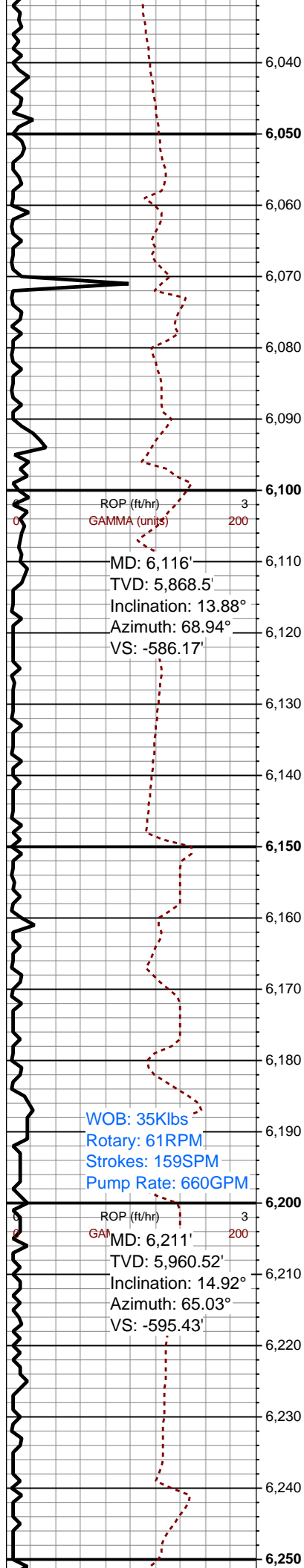








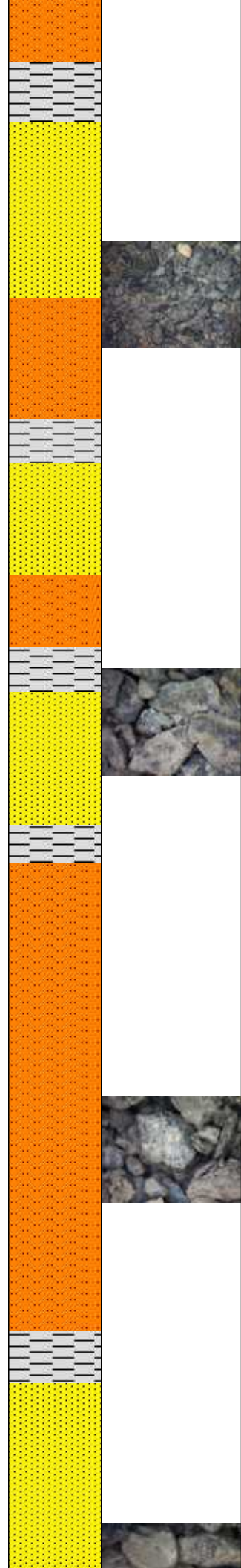


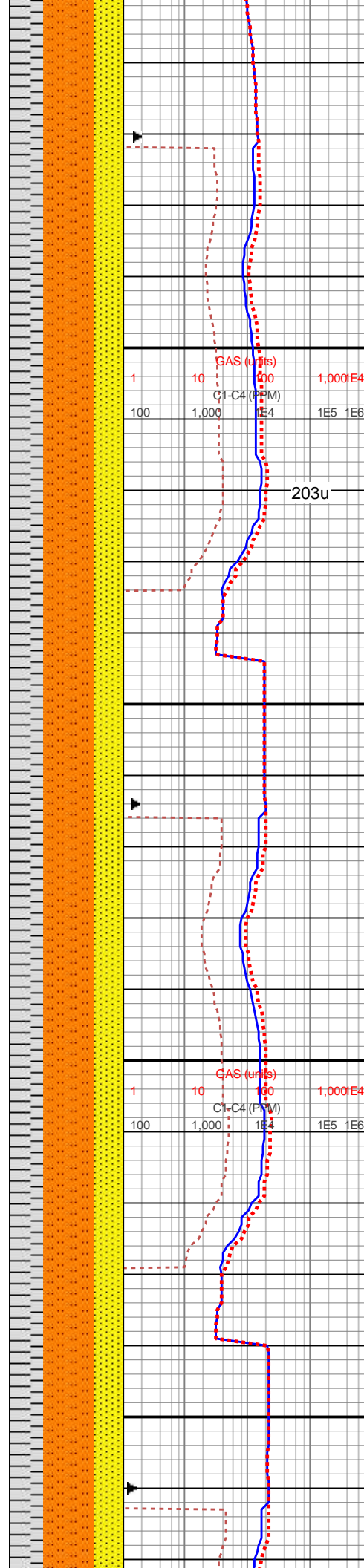
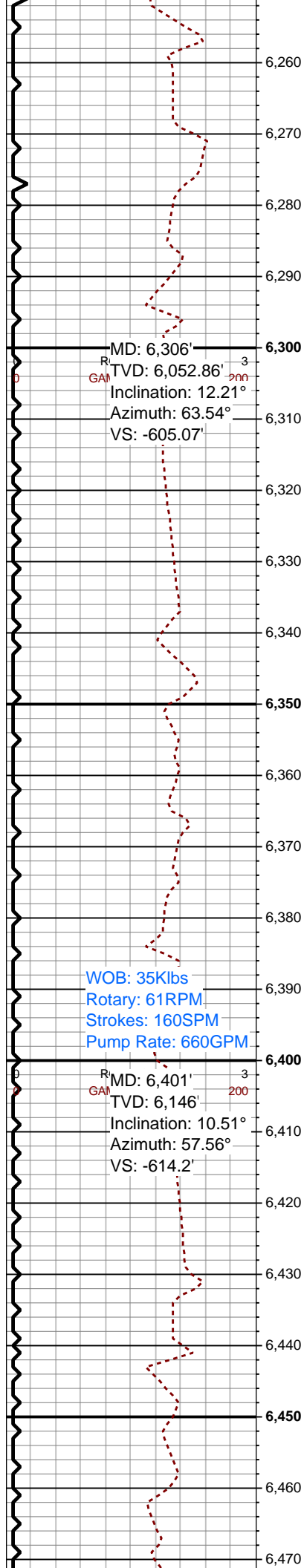


med gy, ip offwht- tn, mot thru, pred frm- hd clus, pred mod- p srted, pred vf grd- slt, sb rd- sb ang grs, gr sup clus cons wi arg- sl calc cmt- sme mtx sup clus, sme wht sil cmt, occ calc incl, tr f ang uncons grs, abnt slt- shy intbds, sme lith frags; 50% SLTST: med- dk gy, occ blk frm- hd, blk- sb blk, mod- v intbdd wi v f sd grs, sme lt gy, sme cal, f lam shy intbds

6080-6140 SS 50%: pred med gy, ip offwht- tn, mot thru, pred frm- hd clus, pred mod- p srted, pred vf grd- slt, sb rd- sb ang grs, gr sup clus cons wi arg- sl calc cmt- sme mtx sup clus, sme wht sil cmt, occ calc incl, tr f ang uncons grs, abnt slt- shy intbds, sme lith frags; 50% SLTST: med- dk gy, occ blk frm- hd, blk- sb blk, mod- v intbdd wi v f sd grs, sme lt gy, sme cal, f lam shy intbds

6140-6200 SS 60%: pred med gy, ip offwht- tn, mot thru, pred frm- hd clus, pred mod- p srted, pred vf grd- slt, sb rd- sb ang grs, gr sup clus cons wi arg- sl calc cmt- sme mtx sup clus, sme wht sil cmt, occ calc incl, tr f ang uncons grs, abnt slt- shy intbds, sme lith frags; 40% SLTST: med- dk gy, occ blk frm- hd, blk- sb blk, mod- v intbdd wi v f sd grs, sme lt gy, sme cal, f lam shy intbds





6200-6320 60% SLTST:  
med- dk gy, occ blk frm-  
hd, blk- sb blk, mod- v  
intbdd wi v f sd grs, sme  
lt gy, sme cal, sme f lam  
shy intbds; SS 20%: pred  
med gy, ip offwht- tn, mot  
thru, pred frm- hd clus,  
pred mod- p srted, pred vf  
grd- slt, sb rd- sb ang  
grs, gr sup clus cons wi  
arg- sl calc cmt- sme mtx  
sup clus, sme wht sil  
cmt, abnt v f ang uncon  
grs, abnt slt- shy intbds,  
sme lith frags; 20% SLTY  
SH: lt gy- gy, sl frm- frm,  
sb plty, sme f lam, wtr  
reac

6320-6380 60% SLTST:  
med- dk gy, occ blk frm-  
hd, blk- sb blk, mod- v  
intbdd wi v f sd grs, sme  
lt gy, sme cal, sme f lam  
shy intbds; SS 20%: pred  
med gy, ip offwht- tn, mot  
thru, pred frm- hd clus,  
pred mod- p srted, pred vf  
grd- slt, sb rd- sb ang  
grs, gr sup clus cons wi  
arg- sl calc cmt- sme mtx  
sup clus, sme wht sil  
cmt, abnt v f ang uncon  
grs, abnt slt- shy intbds,  
sme lith frags; 20% SLTY  
SH: lt gy- gy, sl frm- frm,  
sb plty, sme f lam, wtr  
reac

6380-6500 60% SLTST:  
med- dk gy, occ blk frm-  
hd, blk- sb blk, mod  
intbd v f sd grs, sme cal,  
sme f lam shy intbds; SS  
20%: pred med gy, ip  
offwht- tn, mot thru, pred  
frm- hd clus, pred mod- p  
srted, pred vf grd- slt, sb  
rd- sb ang grs, gr sup

