

LOG created using L PLOT VH Version 3.0, February 06, 2012, Copyright (C) 1999-2009 Pason Systems Corp.

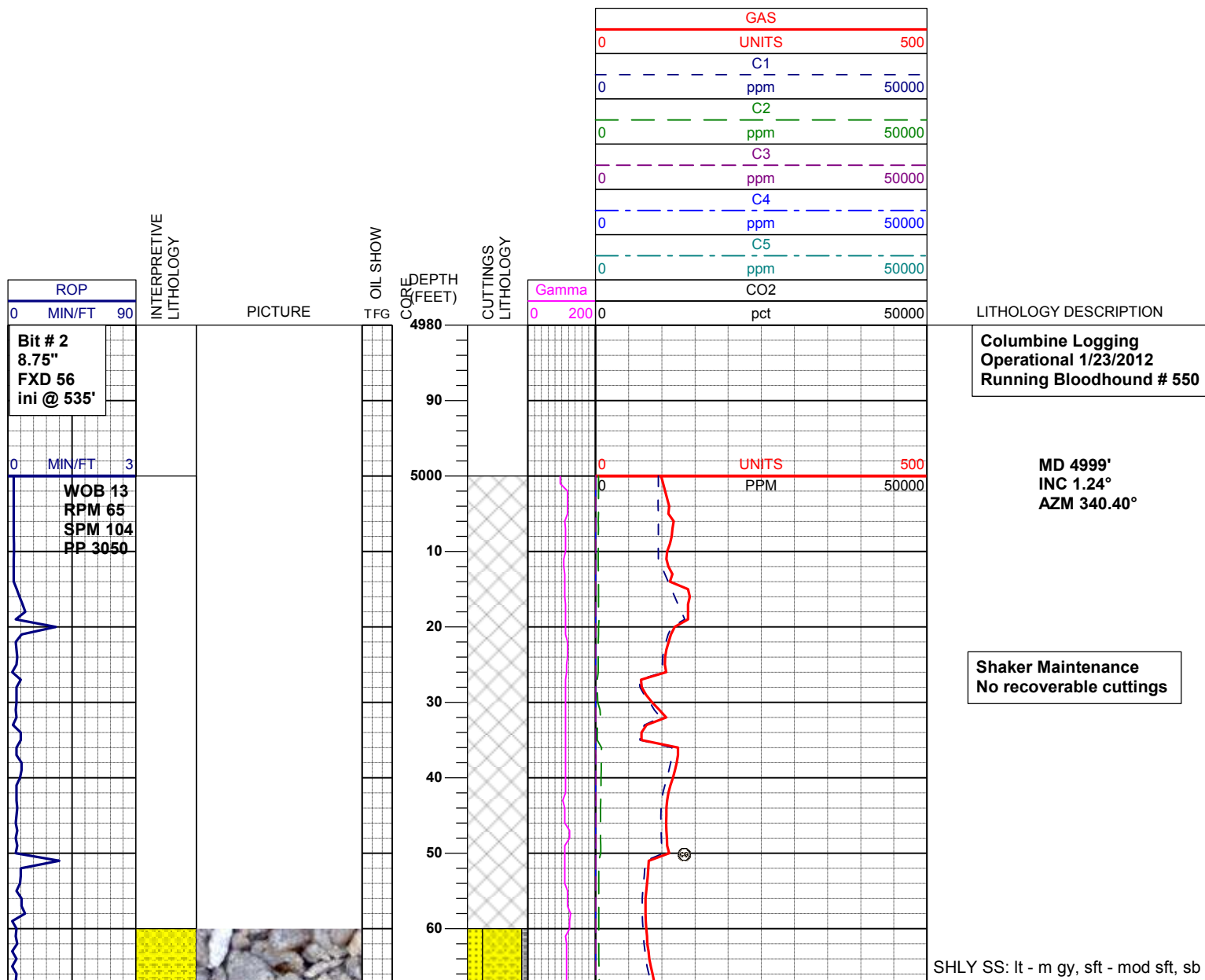
OPERATOR: CONTINENTAL RESOURCES  
WELL: PLANCK 1-14H  
PRINT DATE: 2/6/2012 7:32:54 PM

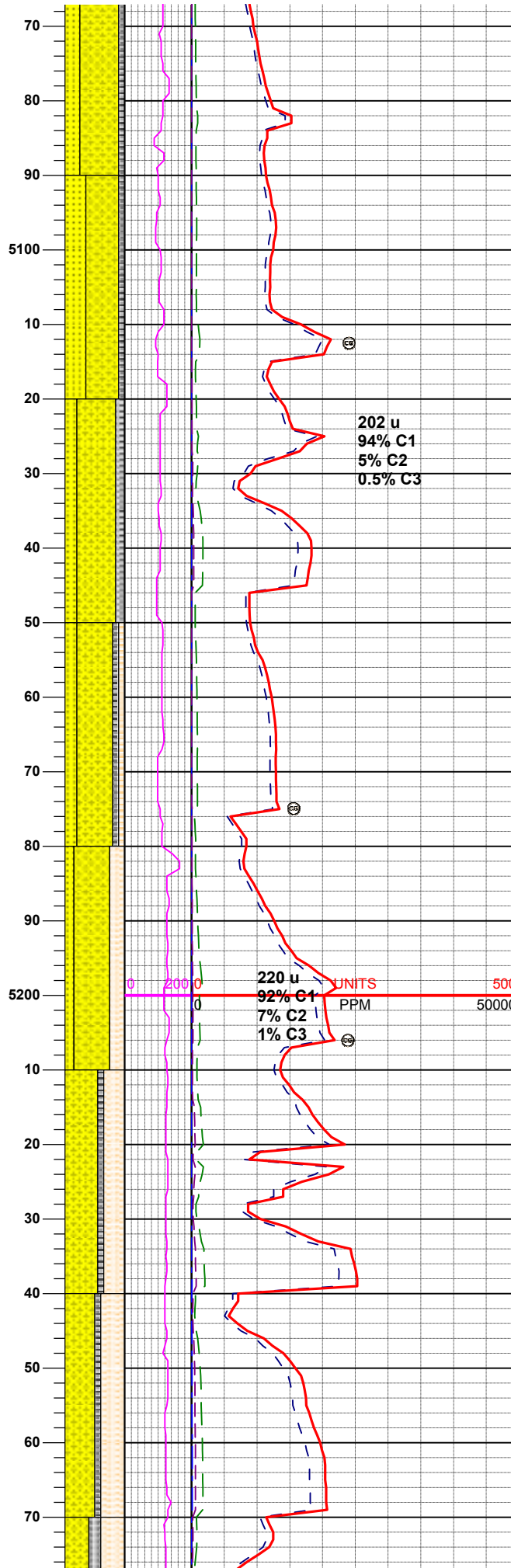
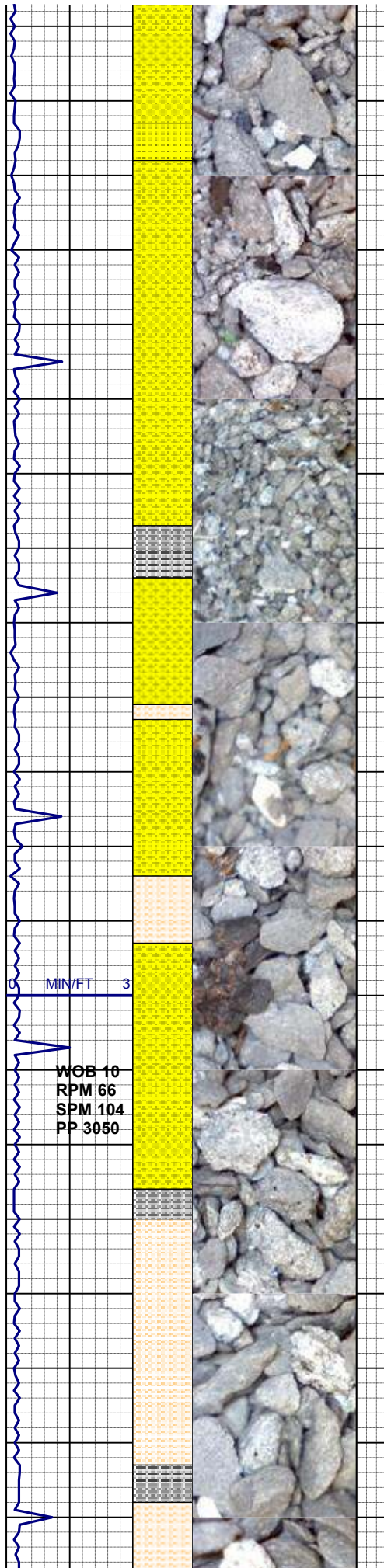
**LOCATION: SEC 14&23 8N 62W**  
**COUNTY: WELD**  
**STATE: COLORADO**

## LITHOLOGIES



## ENGINEERING SYMBOLS





blky - sub plty, vf -f gr, ang-sb rd, m-w srt, m consol, sl calc cmt,  
SS: lt gy, wh trnsl, s&p, vf-f gr, sub ang - sub rd, sl calc, tr glauc, tr sec calcite,  
SLTY SH: m-dkgy, sbplty-sbblky, n vis por, vsl aren, non calc, arg mtx

**MD 5093'**  
**INC 1.43°**  
**AZM 319.39°**

SHLY SS: lt - m gy, sft - mod sft, sb blky - sub plty, vf -f gr, ang-sb rd, m-w srt, m consol, sl calc cmt,  
SS: lt gy, wh trnsl, s&p, vf-f gr, sub ang - sub rd, sl calc, tr glauc, tr sec calcite,  
SLTY SH: m-dkgy, sbplty-sbblky, n vis por, vsl aren, non calc, arg mtx

SHLY SS: lt - m gy, sft - mod sft, sb blky - sub plty, vf -f gr, ang-sb rd, m-w srt, m consol, sl calc cmt,  
SS: lt gy, wh trnsl, s&p, vf-f gr, sub ang - sub rd, sl calc, tr glauc, tr sec calcite,  
SLTY SH: m-dkgy, sbplty-sbblky, n vis por, vsl aren, non calc, arg mtx

**MD WT 9.00/ VIS 34**

SHLY SS: lt - m gy, sft - mod sft, sb blky - sub plty, vf -f gr, ang-sb rd, m-w srt, m consol, sl calc cmt,  
SS: lt gy, wh trnsl, s&p, vf-f gr, sub ang - sub rd, sl calc, tr glauc, tr sec calcite,  
SLTY SH: m-dkgy, sbplty-sbblky, n vis por, vsl aren, non calc, arg mtx

**MD 5187'**  
**INC 1.64°**  
**AZM 320.07°**

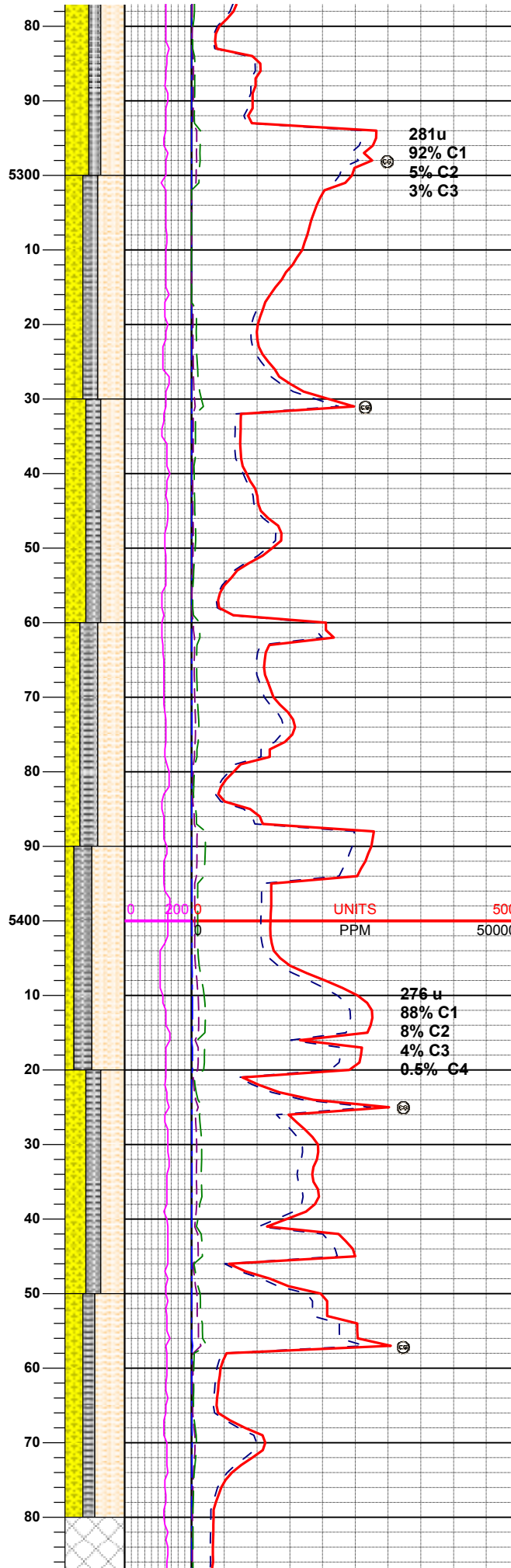
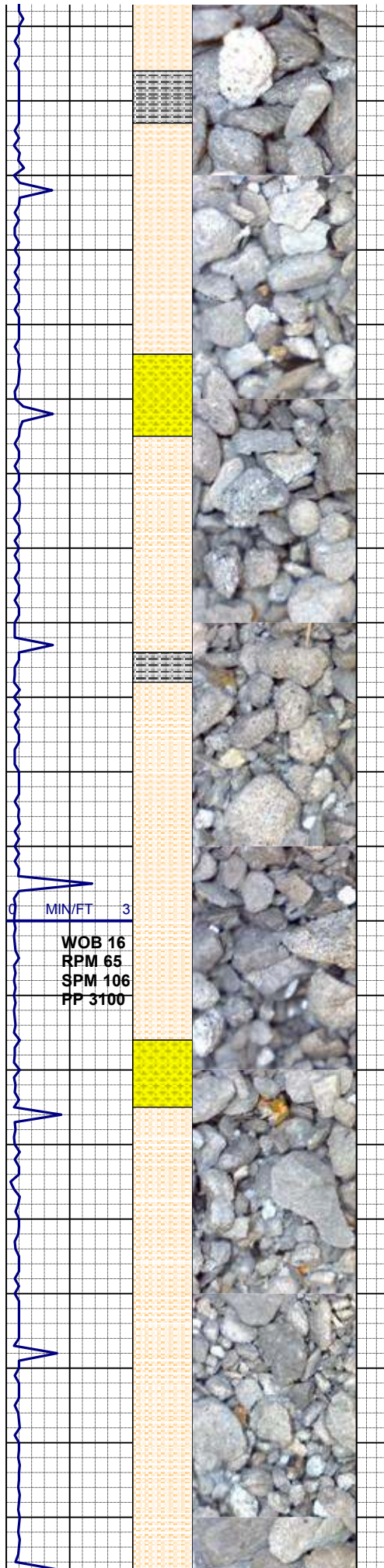
SHLY SS: lt - m gy, sft - mod sft, sb blky - sub plty, vf -f gr, ang-sb rd, m-w srt, m consol, sl calc cmt, calcite, occ SS  
SHLY SLTST: lt-m gy, sft, plty-sbblky, vf gr, non calc cmt, arg mtx; tr pyr

SHLY SS: lt - m gy, sft - mod sft, sb blky - sub plty, vf -f gr, ang-sb rd, m-w srt, m consol, sl calc cmt, tr calcite, tr SS  
SHLY SLTST: lt-m gy, sft, plty-sbblky, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dkgy, sbplty-sbblky, n vis por, vsl aren, non calc, arg mtx; tr pyr

SHLY SS: lt - m gy, sft - mod sft, sb blky - sub plty, vf -f gr, ang-sb rd, m-w srt, m consol, vsl calc cmt, tr calcite, tr SS  
SHLY SLTST: lt-m gy, sft, plty-sbblky, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dkgy, sbplty-sbblky, n vis por, vsl aren, non calc, arg mtx; tr pyr

SHLY SLTST: lt-m gy, sft, plty-





sbbly, vf gr, non calc cmt, arg mtx, SHLY SS: lt - m gy, sft - mod sft, sb bly - sub pty, vf -f gr, ang-sb rd, m-w srt, m consol, vsl calc cmt, SLTY SH: m-dkgy, sbpty-sbbly, n vis por, vsl aren, non calc, arg mtx; tr pyr

**MD 5280'**  
**INC 1.17°**  
**AZM 334.41°**

SHLY SLTST: lt-m gy, sft, pty-sbbly, vf gr, non calc cmt, arg mtx, SHLY SS: lt - m gy, sft - mod sft, sb bly - sub pty, vf -f gr, ang-sb rd, m-w srt, m consol, non calc cmt, SLTY SH: m-dkgy, sbpty-sbbly, n vis por, vsl aren, non calc, arg mtx; tr pyr

SHLY SLTST: lt-m gy, sft, pty-sbbly, vf gr, non calc cmt, arg mtx, SHLY SS: lt - m gy, occ wh, sft - mod sft, sb bly - sub pty, vf -f gr, ang-sb rd, m-w srt, m consol, sl calc cmt, SLTY SH: mgy, sbpty-sbbly, n vis por, vsl aren, non calc, arg mtx; tr pyr

**MD 5374'**  
**INC 0.75°**  
**AZM 330.36°**

SHLY SLTST: lt-m gy, sft, pty-sbbly, vf gr, non calc cmt, arg mtx, SHLY SS: lt - m gy, occ wh, sft - mod sft, sb bly - sub pty, vf -f gr, ang-sb rd, m-w srt, m consol, sl calc cmt, SLTY SH: mgy, sbpty-sbbly, n vis por, vsl aren, non calc, arg mtx; tr pyr

SHLY SLTST: lt-m gy, sft, pty-sbbly, vf gr, non calc cmt, arg mtx, SLTY SH: mgy, sbpty-sbbly, n vis por, vsl aren, non calc, arg mtx, SHLY SS: lt - m gy, occ wh, sft - mod sft, sb bly - sub pty, vf -f gr, ang-sb rd, m-w srt, m consol, sl calc cmt; tr disp pyr

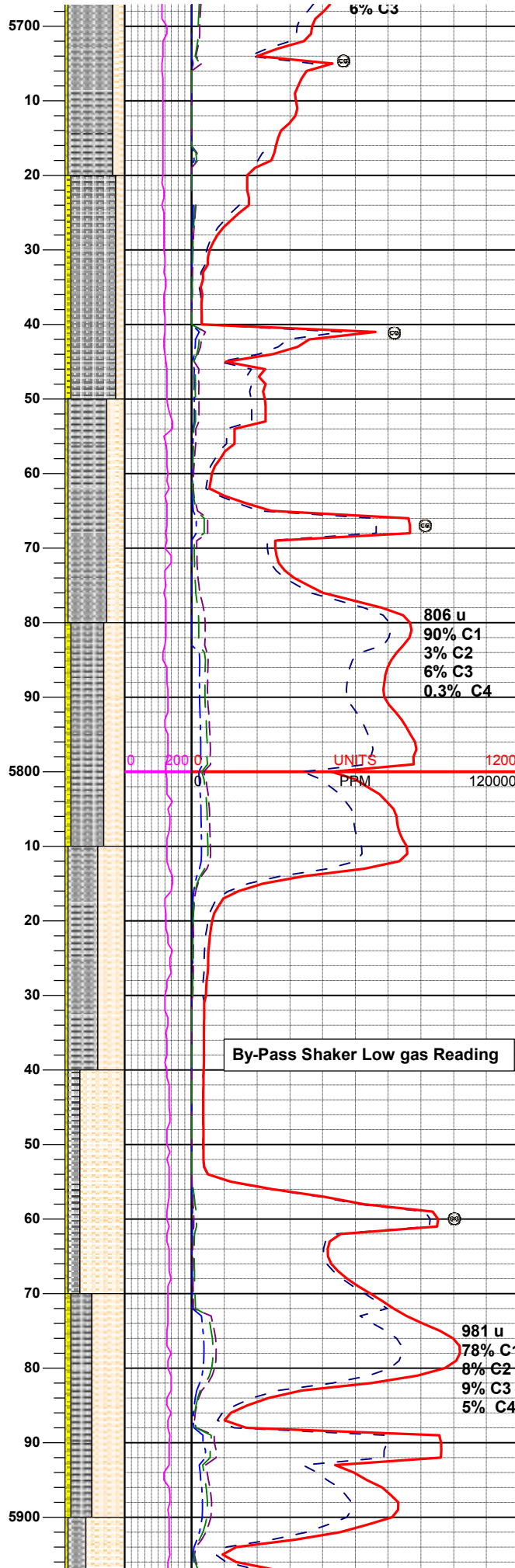
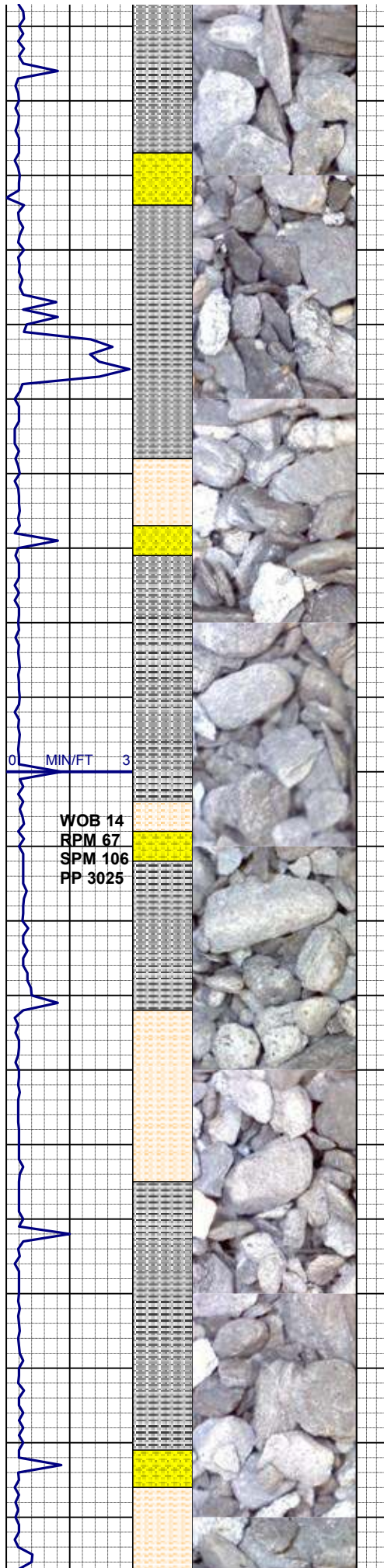
SHLY SLTST: lt-m gy, sft, pty-sbbly, vf gr, non calc cmt, arg mtx, SHLY SS: lt - m gy, sft - mod sft, sb bly - sub pty, vf -f gr, ang-sb rd, p-m srt, m consol, non calc cmt, SLTY SH: mgy, sbpty-sbbly, n vis por, vsl aren, non calc, arg mtx; tr pyr

**MD 5468'**  
**INC 0.22°**  
**AZM 20.69°**

SHLY SLTST: lt-m gy, sft, pty-sbbly, vf gr, non calc cmt, arg mtx, SHLY SS: lt - m gy, occ wh, sft - mod sft, sb bly - sub pty, vf -f gr, ang-sb rd, p-m srt, m consol, non calc cmt, SLTY SH: mgy, sbpty-sbbly, n vis por, vsl aren, non calc, arg mtx; tr pyr







vis por, sl aren, non calc, arg mtx,  
SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SHLY SS: lt - m gy, occ wh, sft -  
mod sft, sb blkly - sub plty, vf -f gr,  
ang-sb rd, p-m srt, m consol, non  
calc, tr dism pyr

SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx,  
SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SHLY SS: lt - m gy, occ wh, sft -  
mod sft, sb blkly - sub plty, vf -f gr,  
ang-sb rd, p-m srt, m consol, non  
calc, tr dism pyr

**MD WT 9.60/ VIS 37**

SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx,  
SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SHLY SS: lt - m gy, occ wh, sft -  
mod sft, sb blkly - sub plty, vf -f gr,  
ang-sb rd, p-m srt, m consol, non  
calc, tr dism pyr

SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx,  
SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SHLY SS: lt - m gy, occ wh, sft -  
mod sft, sb blkly - sub plty, vf -f gr,  
ang-sb rd, p-m srt, m consol, non  
calc, tr dism pyr

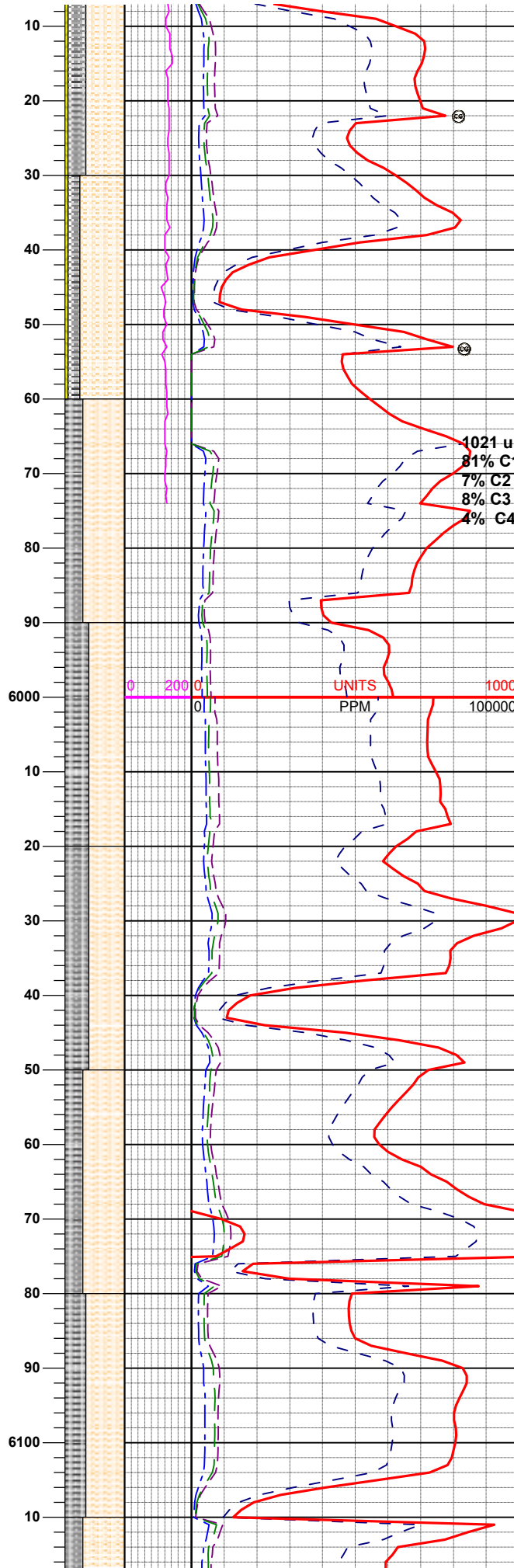
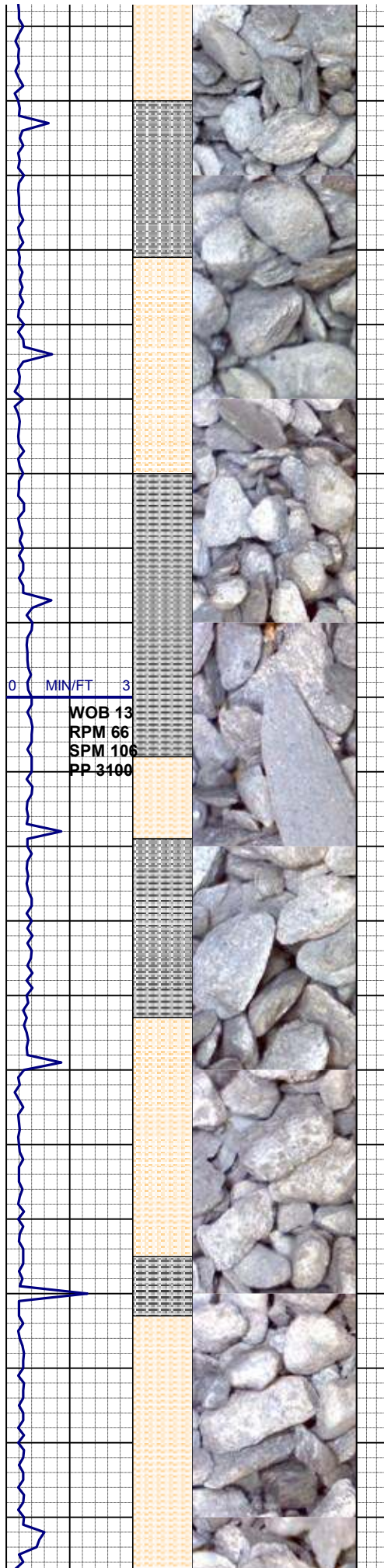
SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx,  
SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SHLY SS: lt - m gy, occ wh, sft -  
mod sft, sb blkly - sub plty, vf -f gr,  
ang-sb rd, p-m srt, m consol, non  
calc, tr dism pyr

**MD 5841'  
INC 0.50°  
AZM 114.96°**

SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx,  
SHLY SS: lt - m gy, occ wh, sft -  
mod sft, sb blkly - sub plty, vf -f gr,  
ang-sb rd, p-m srt, m consol, non  
calc, tr dism pyr

SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx,  
SHLY SS: lt - m gy, occ wh, sft -  
mod sft, sb blkly - sub plty, vf -f gr,  
ang-sb rd, p-m srt, m consol, non  
calc, tr dism pyr

SHLY SLTST: lt-m gy, sft, plty-



sbbkly, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx,  
SHLY SS: lt - m gy, occ wh, sft -  
mod sft, sb blkly - sub plty, vf -f gr,  
ang-sb rd, p-m srt, m consol, non  
calc, tr dism pyr

SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx,  
SHLY SS: lt - m gy, occ wh, sft -  
mod sft, sb blkly - sub plty, vf -f gr,  
ang-sb rd, p-m srt, m consol, non  
calc, tr dism pyr

**MD WT 9.50/ VIS 37**

SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx

SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx

**MD 6027°  
INC 0.47°  
AZM 103.38°**

**MD WT 9.6 VIS 37 IN/OUT**

SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx

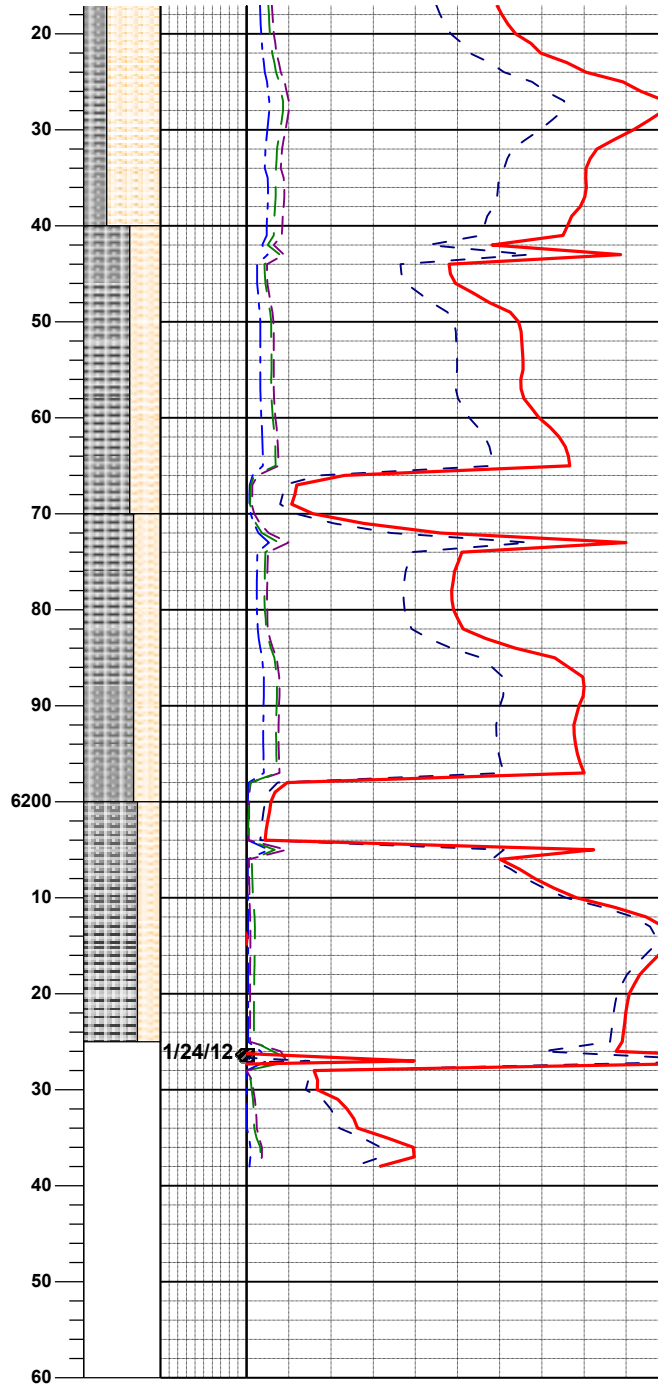
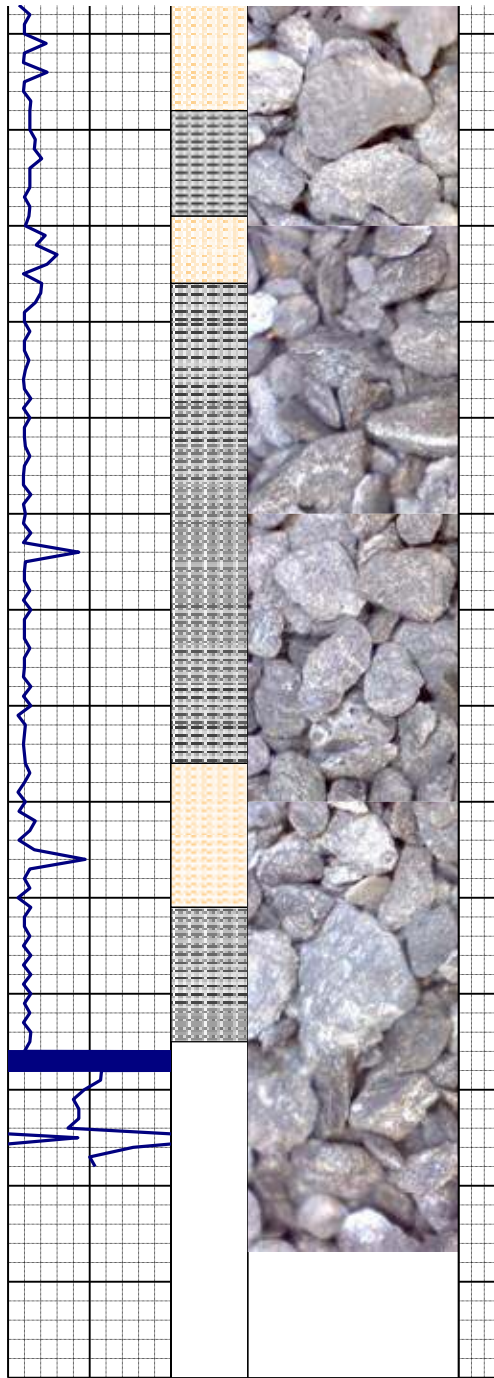
SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx

**Mud Data  
Wt. 9.6  
Vis. 37  
YP. 14  
API Filtrate 10  
CK .2  
Chloride 300  
pH 9.7**

SHLY SLTST: lt-m gy, sft, plty-  
sbbkly, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dk gy, sbplty-sbbkly, n  
vis por, sl aren, non calc, arg mtx

**MD 6121'**





INC 0.57°  
AZM 139.86°

SHLY SLTST: lt-m gy, sft, plty-sbblky, vf gr, non calc cmt, arg mtx,  
SLTY SH: m-dk gy, sbplty-sbblky, n  
vis por, sl aren, non calc, arg mtx

SLTY SH: m-dk gy, sbplty-sbblky, n  
vis por, sl aren, non calc, arg mtx  
SHLYSLTST: lt-m gy, sft, plty-sbblky, vf gr, non calc cmt, arg mtx

MD WT 9.5+ VIS 38 IN  
MD WT 9.5 VIS 37 OUT

SLTY SH: m-dk gy, sbplty-sbblky, n  
vis por, sl aren, non calc, arg mtx  
SHLYSLTST: lt-m gy, sft, plty-sbblky, vf gr, non calc cmt, arg mtx

SLTY SH: m-dk gy, sbplty-sbblky, n  
vis por, sl aren, non calc, arg mtx  
SHLYSLTST: lt-m gy, sft, plty-sbblky, vf gr, non calc cmt, arg mtx

KOP 6225' MD  
TOOH FOR CURVE BHA

THANK YOU FOR USING  
COLUMBINE LOGGING