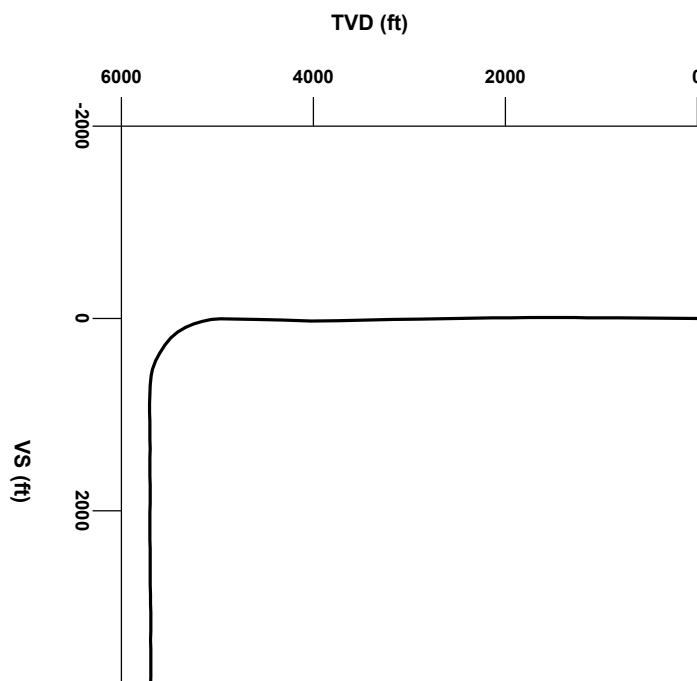


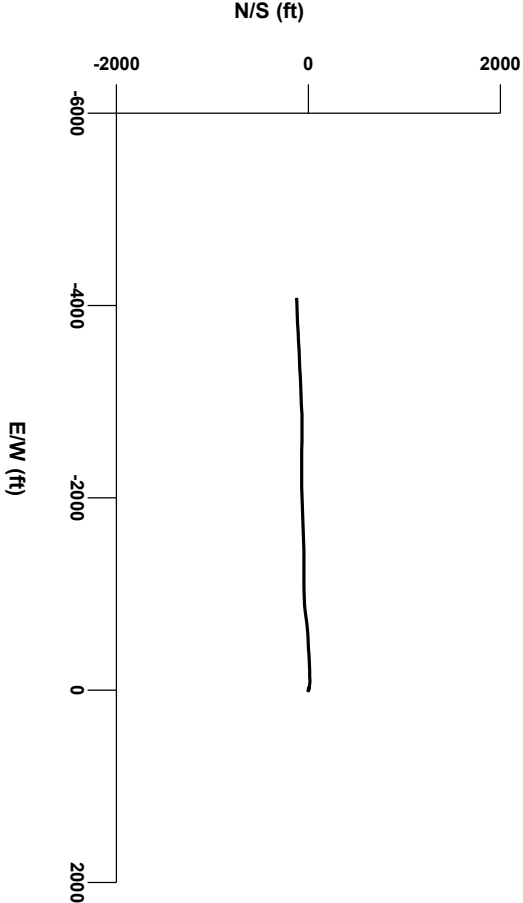
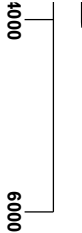
LOG created using LPLOT VH Version 3.0, August 14, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC
WELL: ROHN STATE LD04-64HN
LOCATION: SEC 4 T9N R58W
COUNTY: WELD
STATE: COLORADO
SPOT: 2,027' FSL; 480' FEL
ELEVATION: 4,706' GL; 4,728' KB
FIELD: WILDCAT
SPUD DATE: 08/09/2013
TD DATE: 08/13/2013
DATES LOGGED: 08/10/2013 - 08/13/2013
DEPTHS LOGGED: 1,223' - 9,476' MD
LOGGERS: BRAD WILSON; CONOR PESICKA
DRILLING FLUID: LSND
DRILLING RIG: H&P 273
API: 05-123-37463
LOG TYPE: HORIZONTAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE GEOLOGICAL SERVICES
 PROVIDED BY COLUMBINE LOGGING INC.



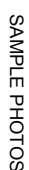
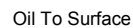
Survey Elevation

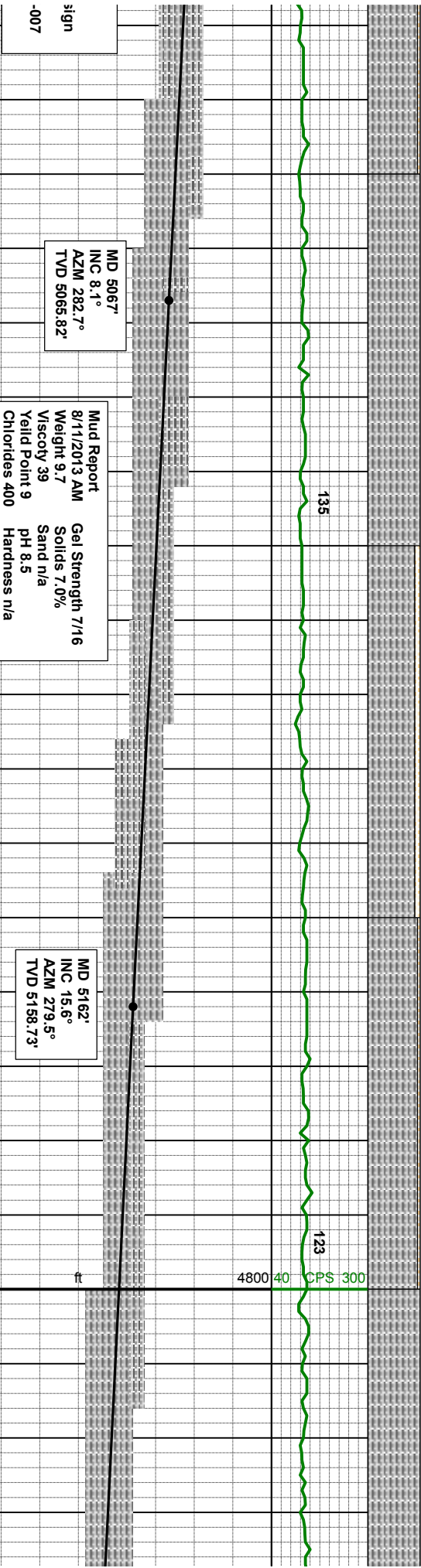
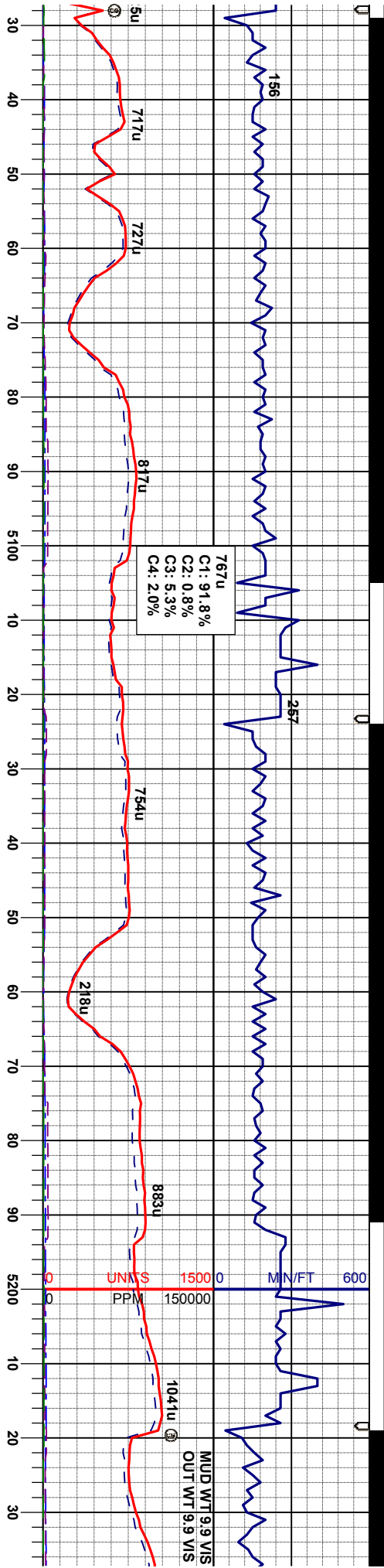
Survey Plan



Silty Shale

Connection





100% SILTY SH: m-dkgy -mgybm occ brn, firm -
hd occ sft, sbblky - spbly, rthy, silty - v silty tex,
v sl calc; tr shaly siltst

90% SILTY SH: m-dkgy -mgybm occ brn, firm -
hd occ sft, sbblky - spbly, rthy, silty - v silty tex,
v sl calc

10% SHALY SILTY: m-lt-gy-gybm, sbblky, firm -
mod hd, v silty tex, arg mnx

95% SILTY SH: m-dkgy -mgybm occ brn, firm -
hd occ sft, sbblky - spbly, rthy, silty - v silty tex,
v sl calc

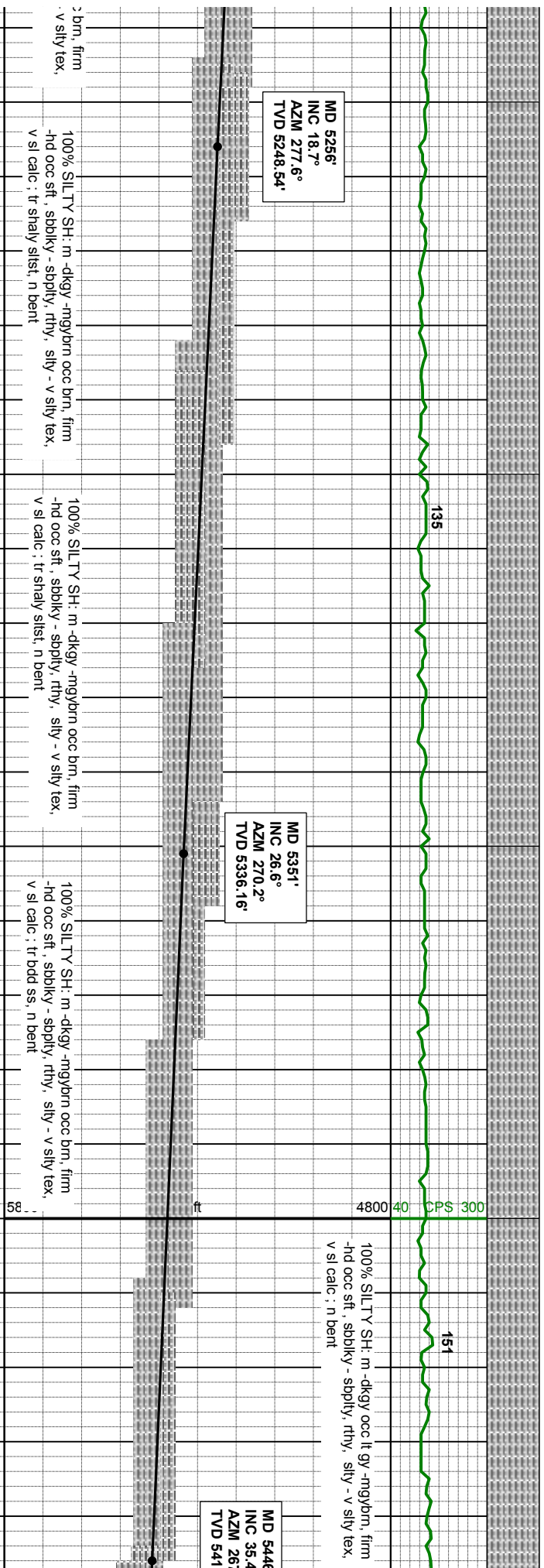
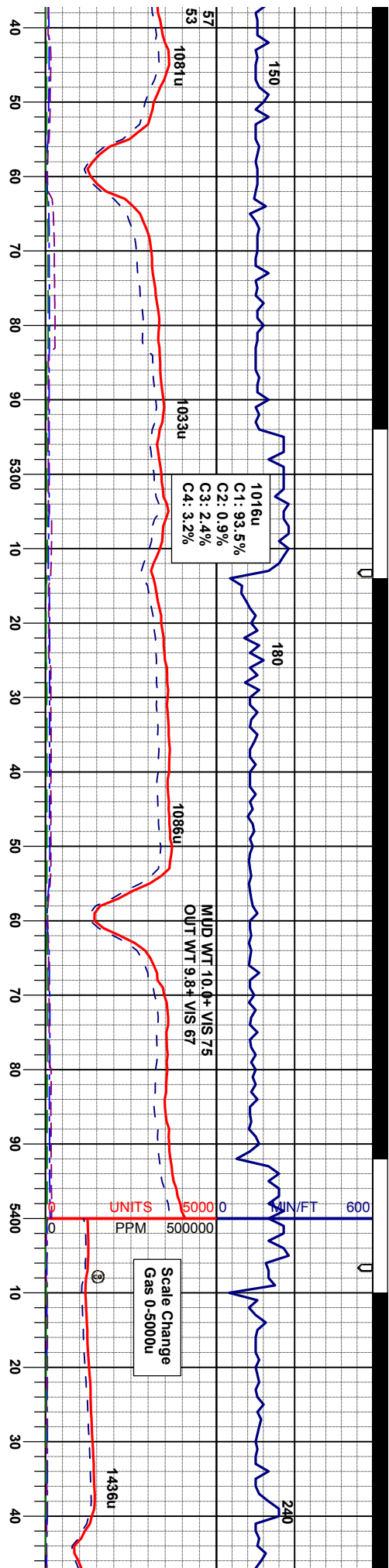
5% SHALY SILTY: m-lt-gy-gybm, sbblky, firm -
mod hd, v silty tex, arg mnx

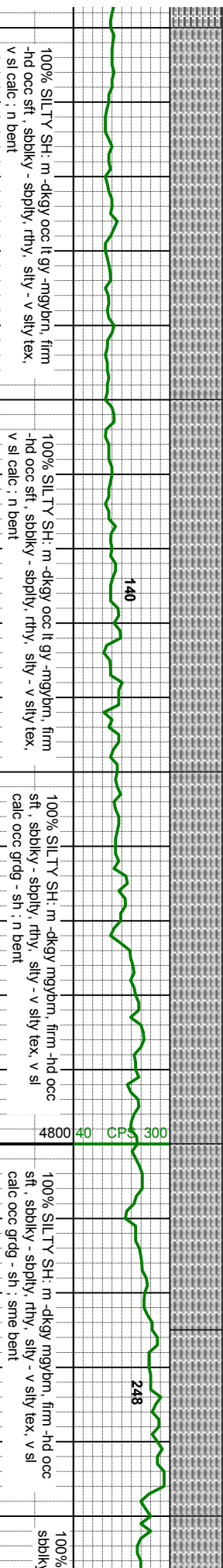
MD 5067'
INC 8.1°
AZM 282.7°
TVD 5065.82'

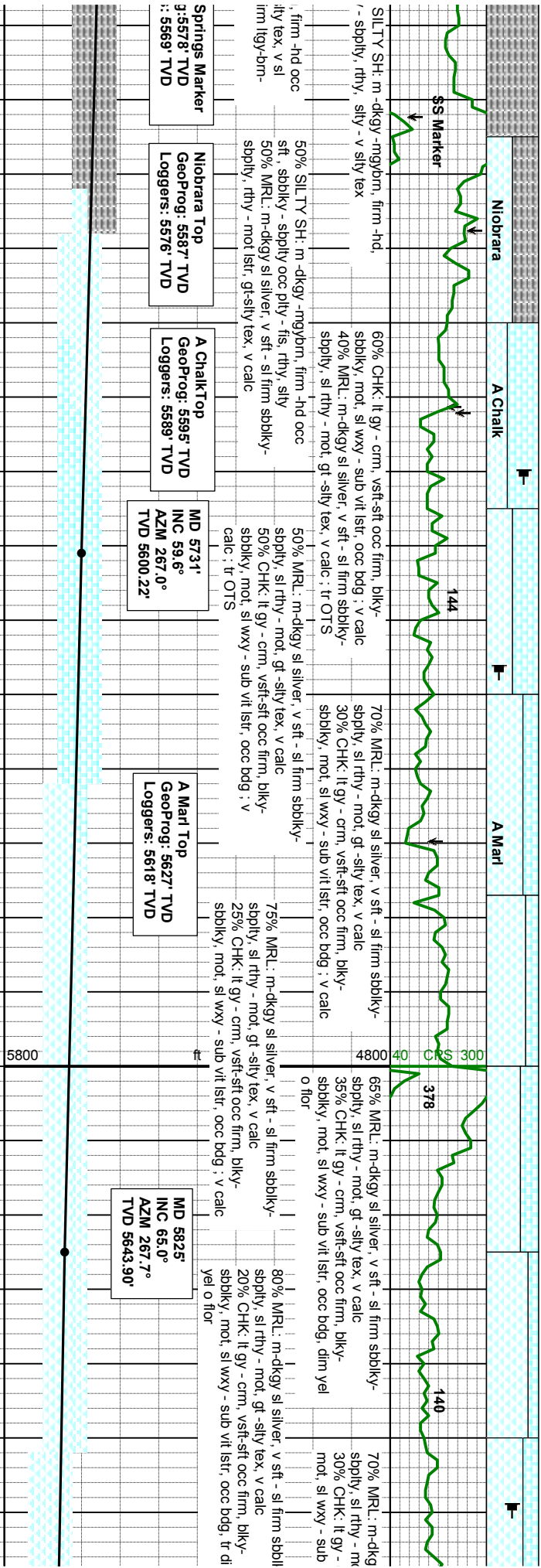
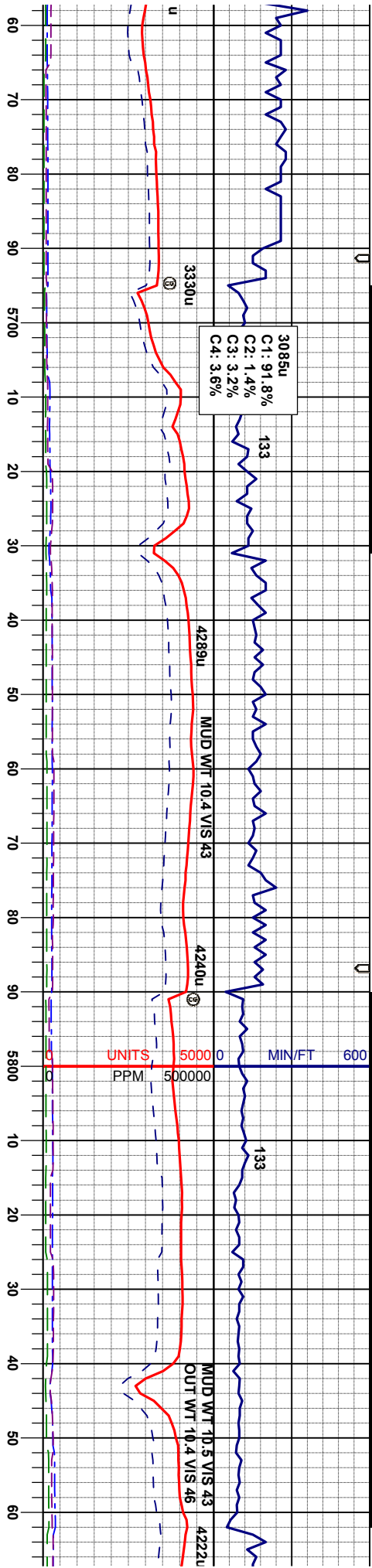
Mud Report
8/11/2013 AM
Weight 9.7
Viscosity 39
Yield Point 9
Chlorides 400
Gel Strength 7/16
Solids 7.0%
Sand n/a
pH 8.5
Hardness n/a

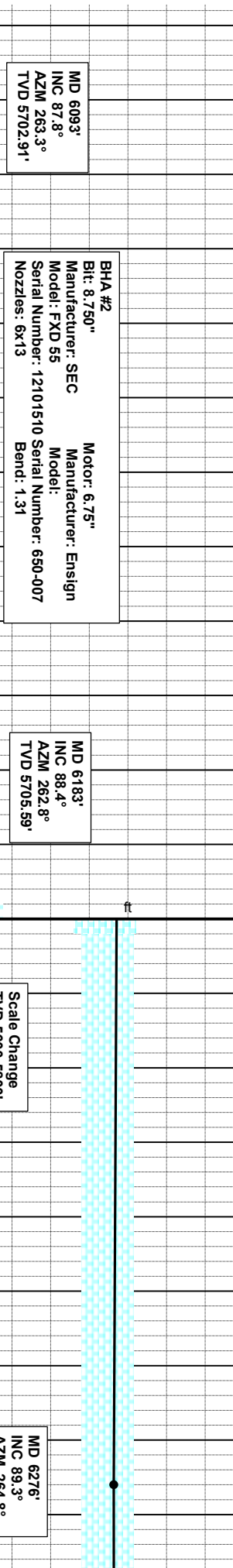
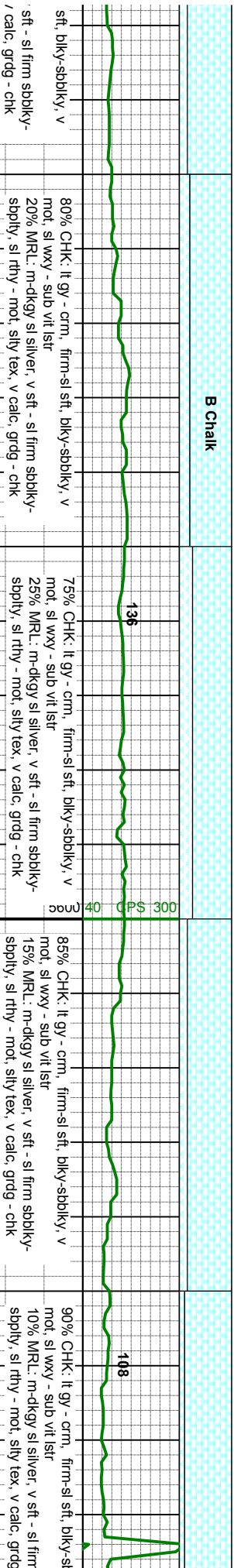
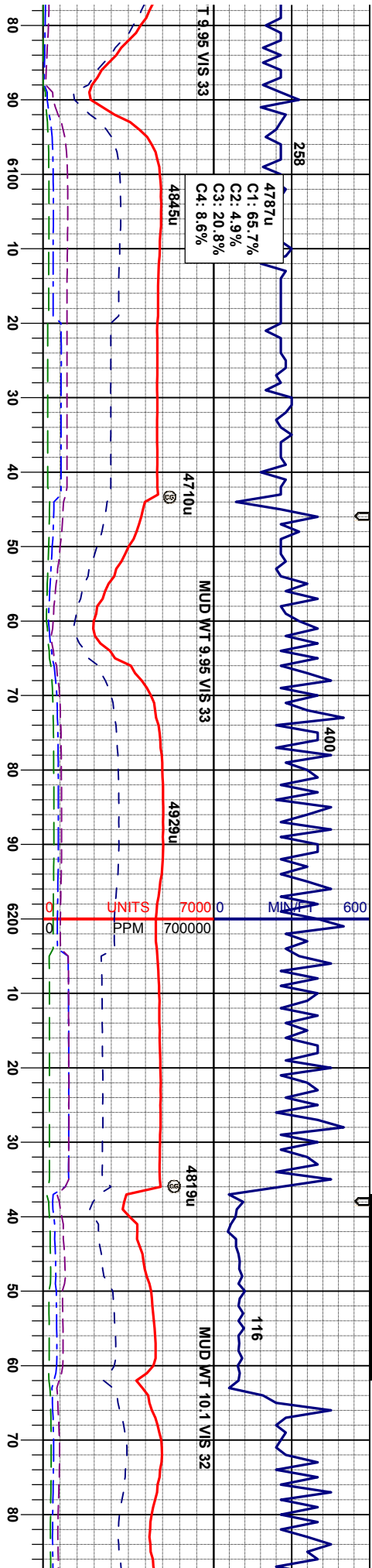
MD 5162'
INC 15.6°
AZM 279.5°
TVD 5158.73'

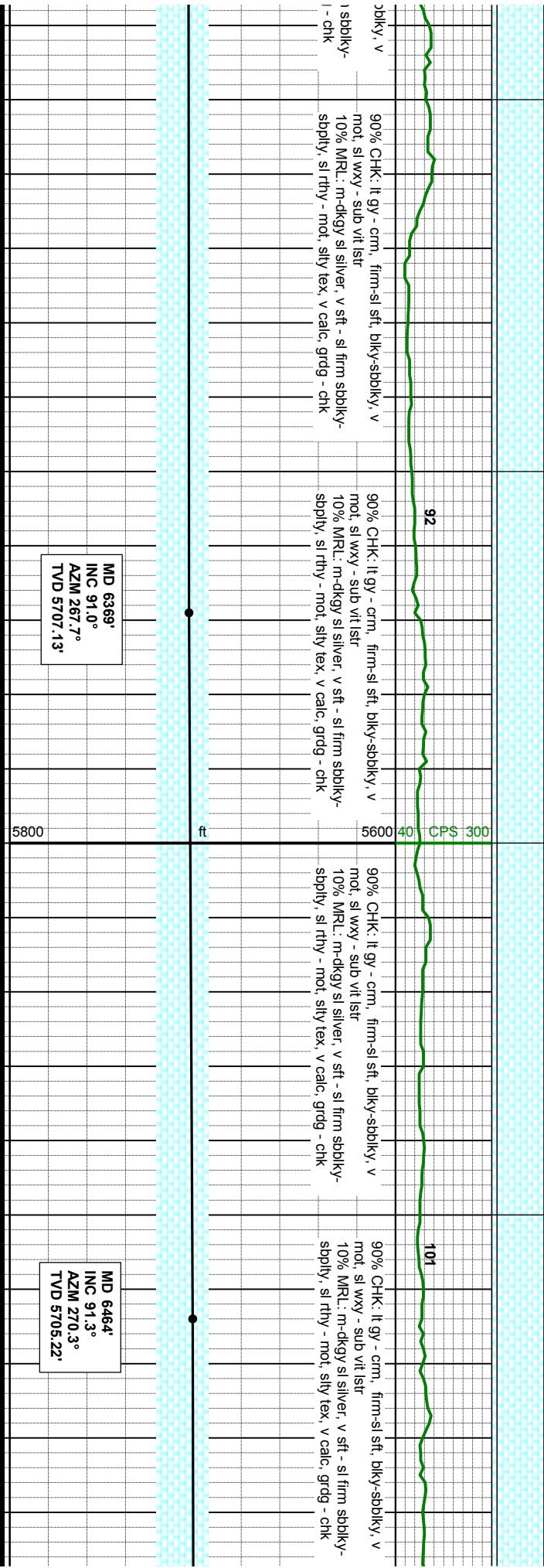
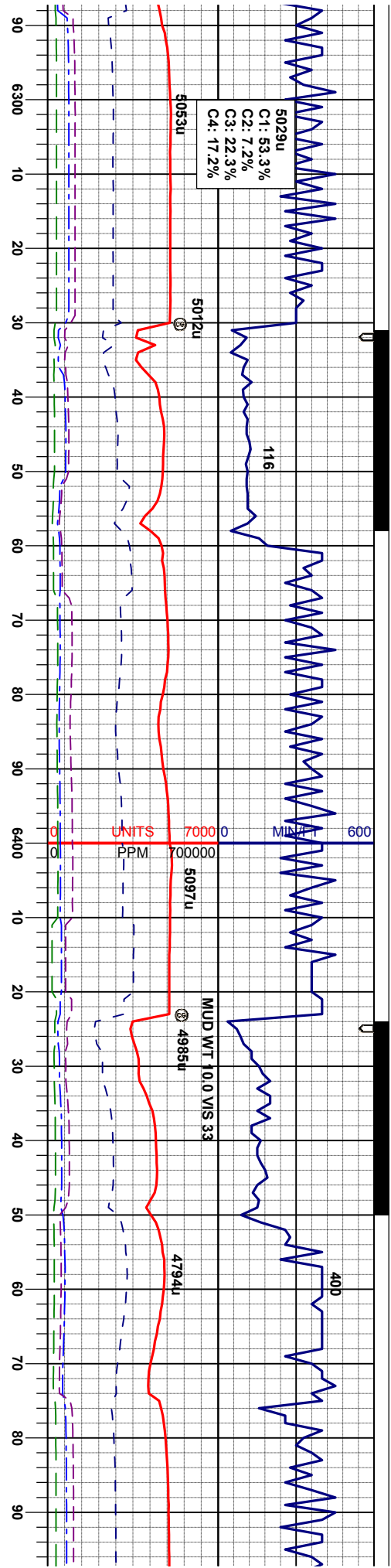


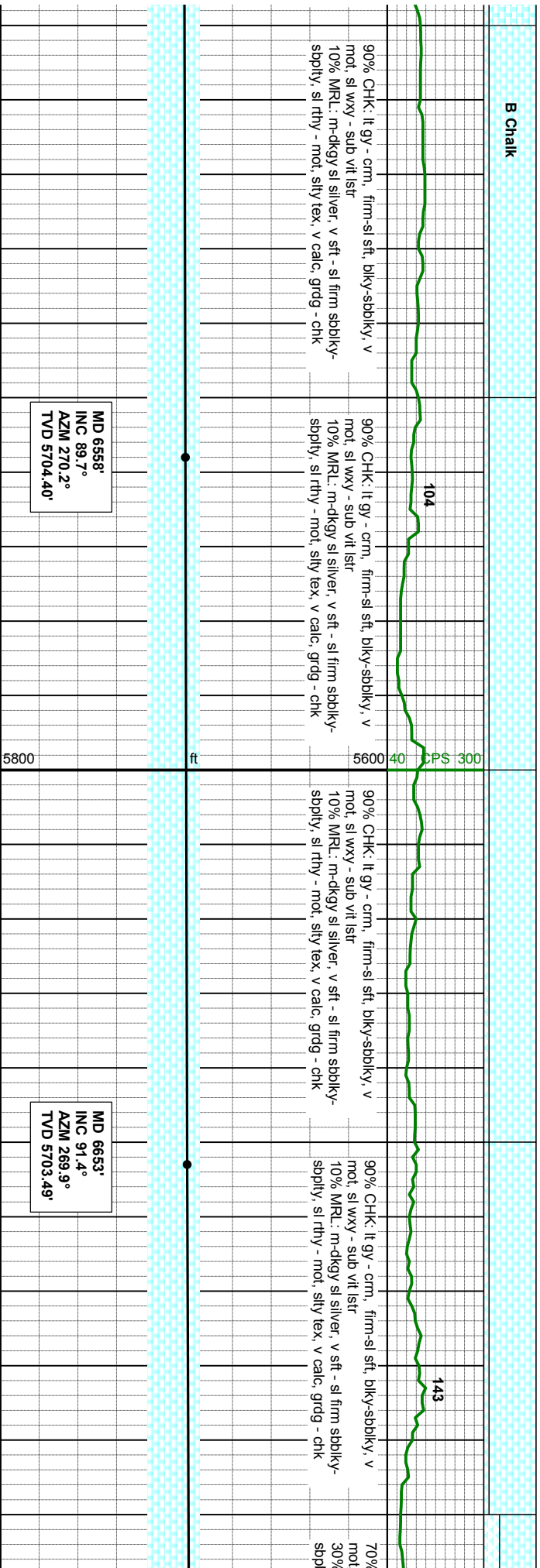
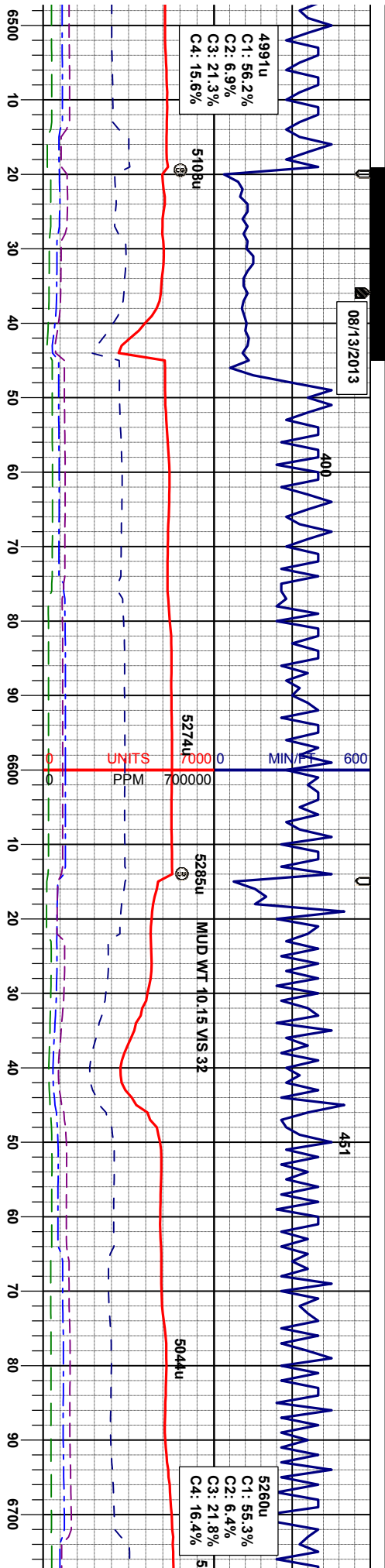


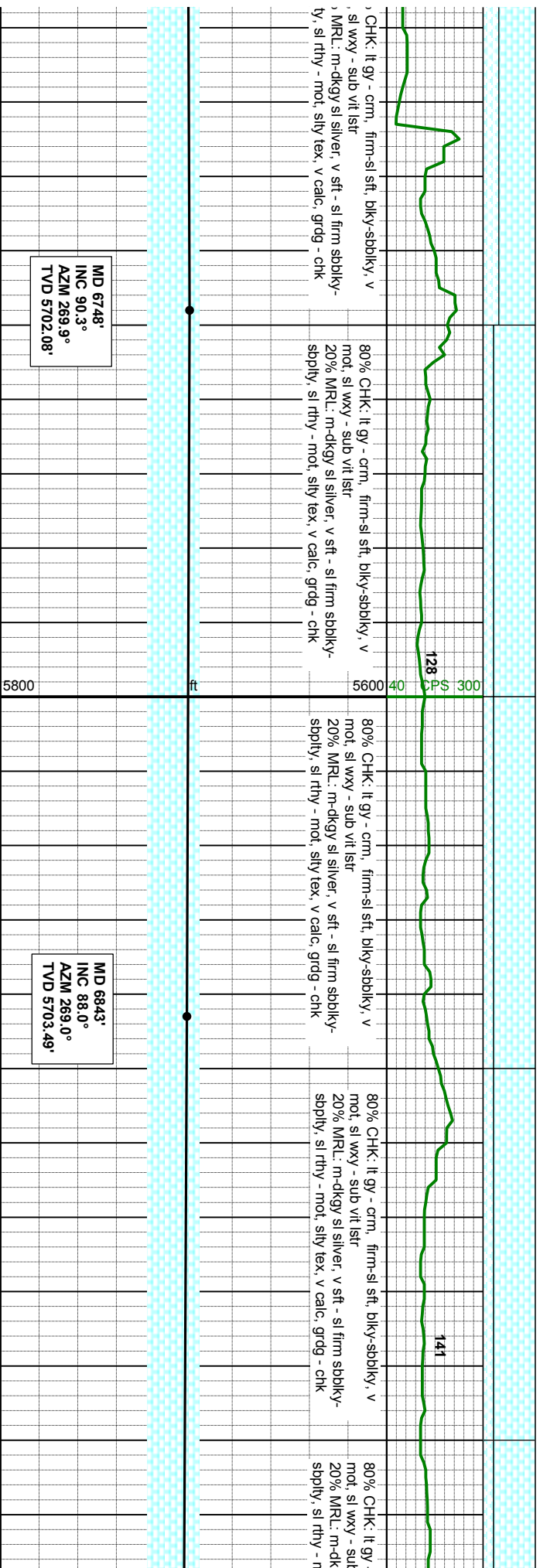
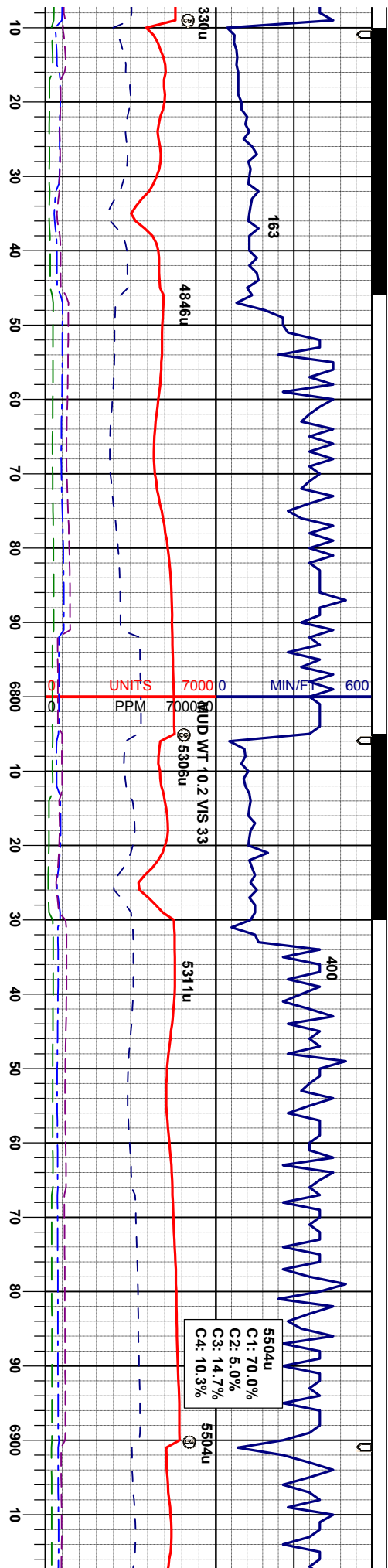


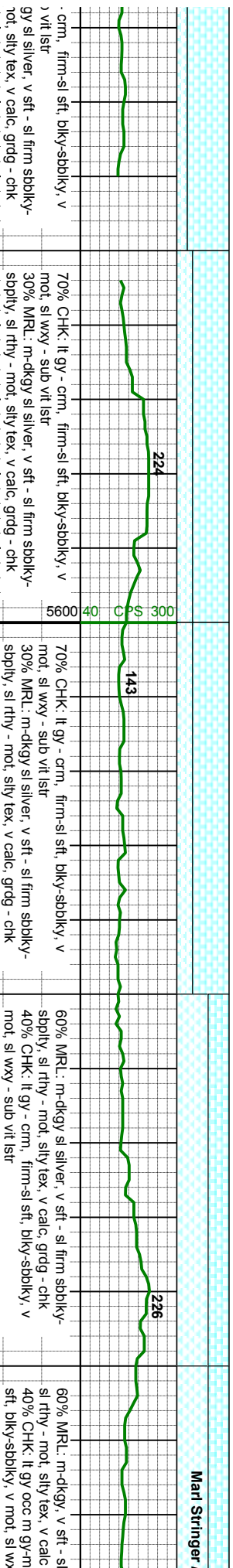


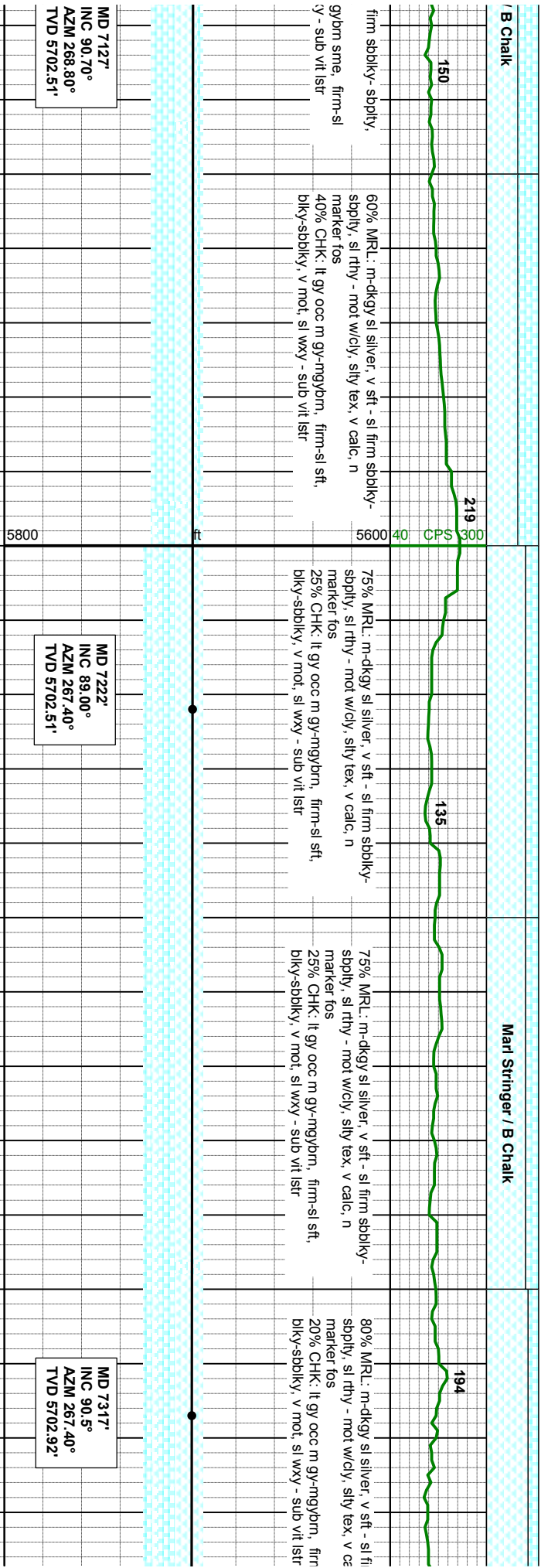
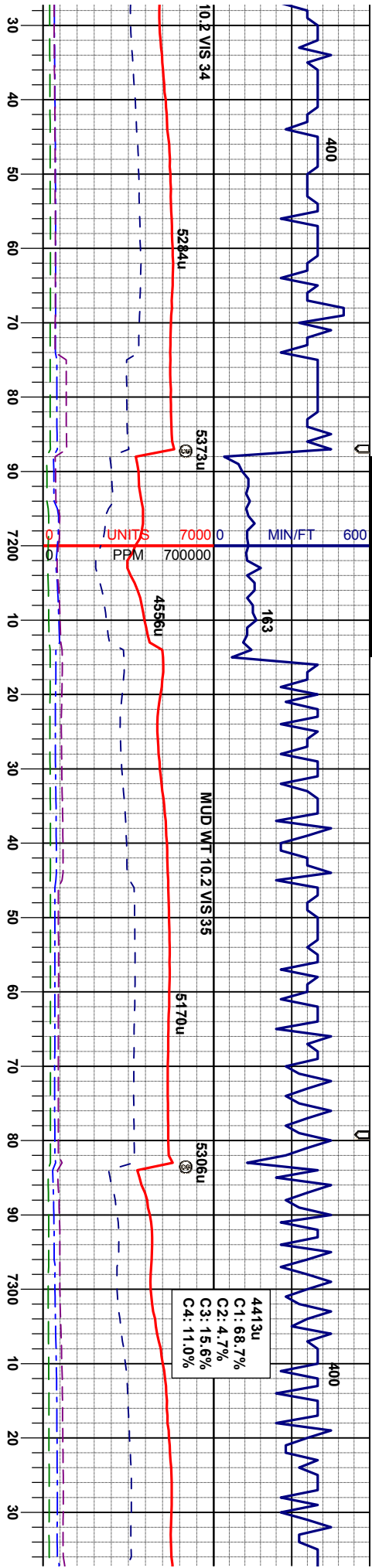


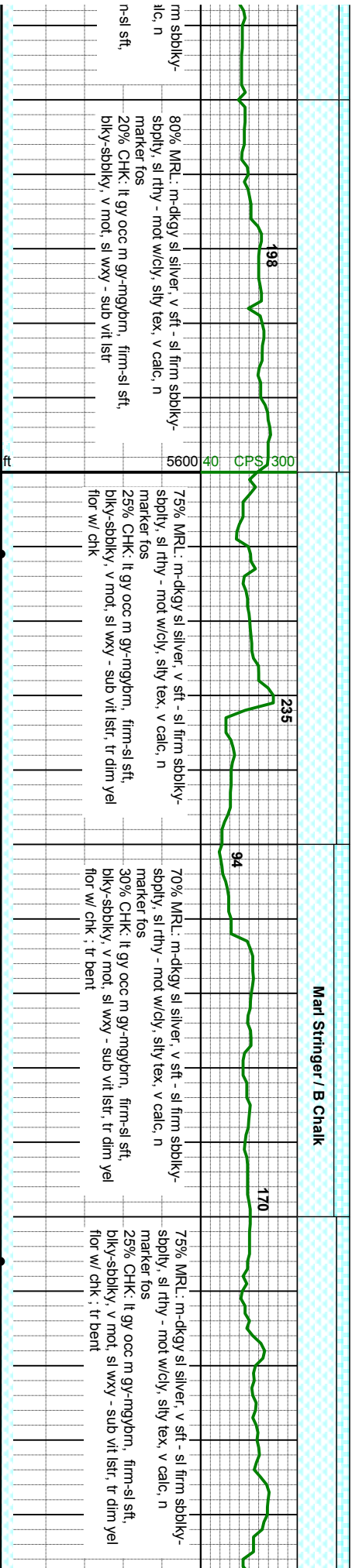
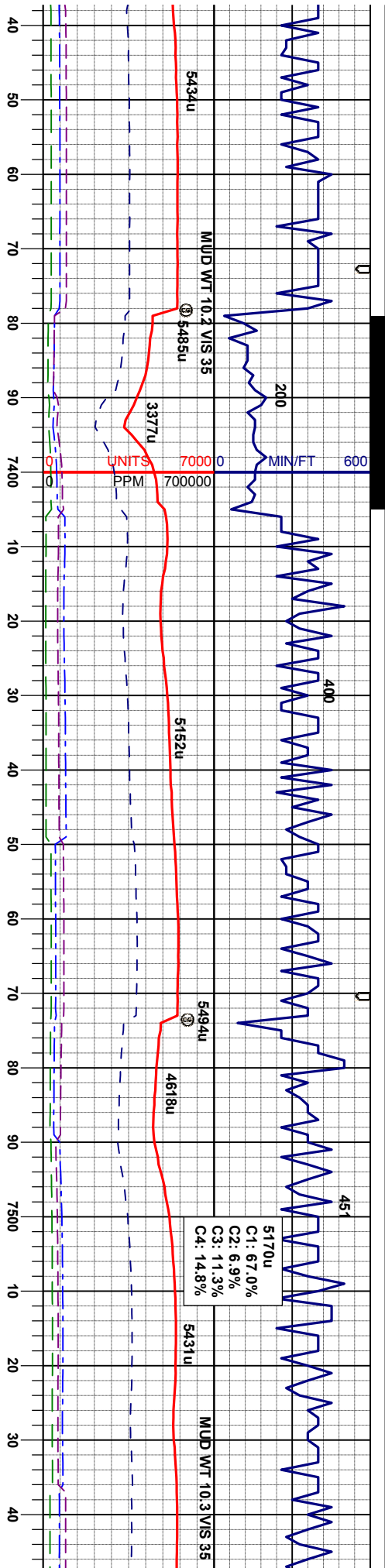


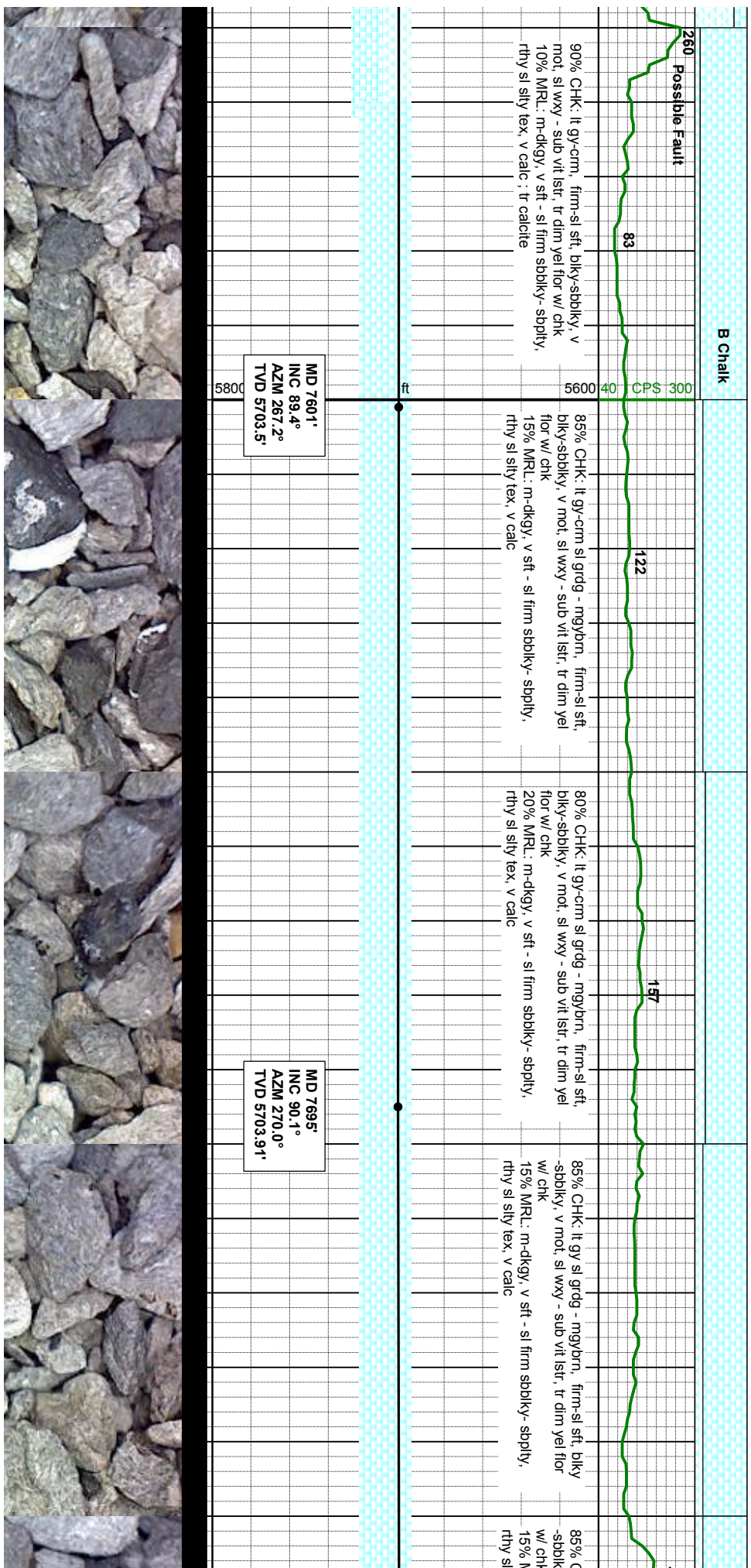
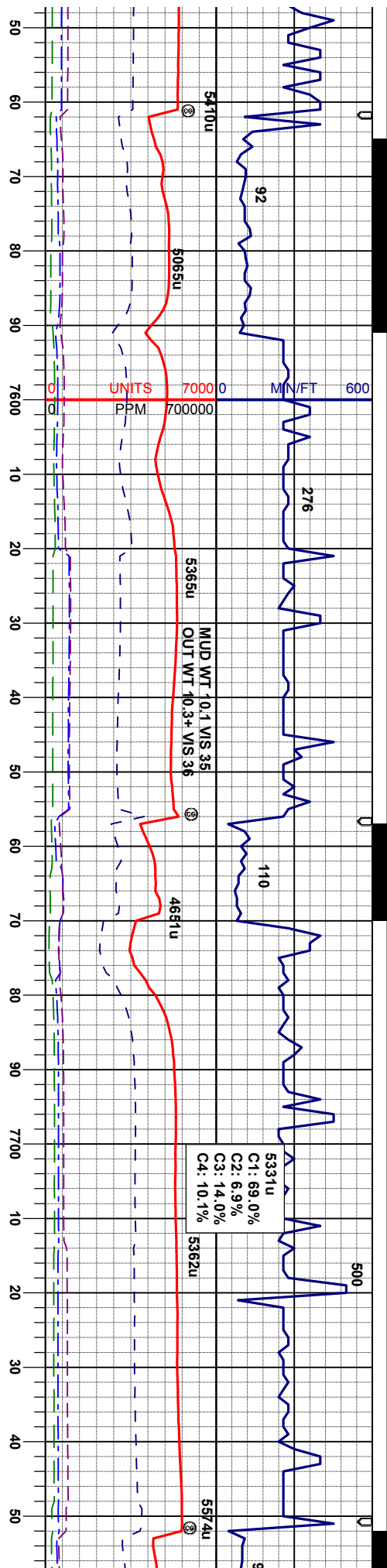


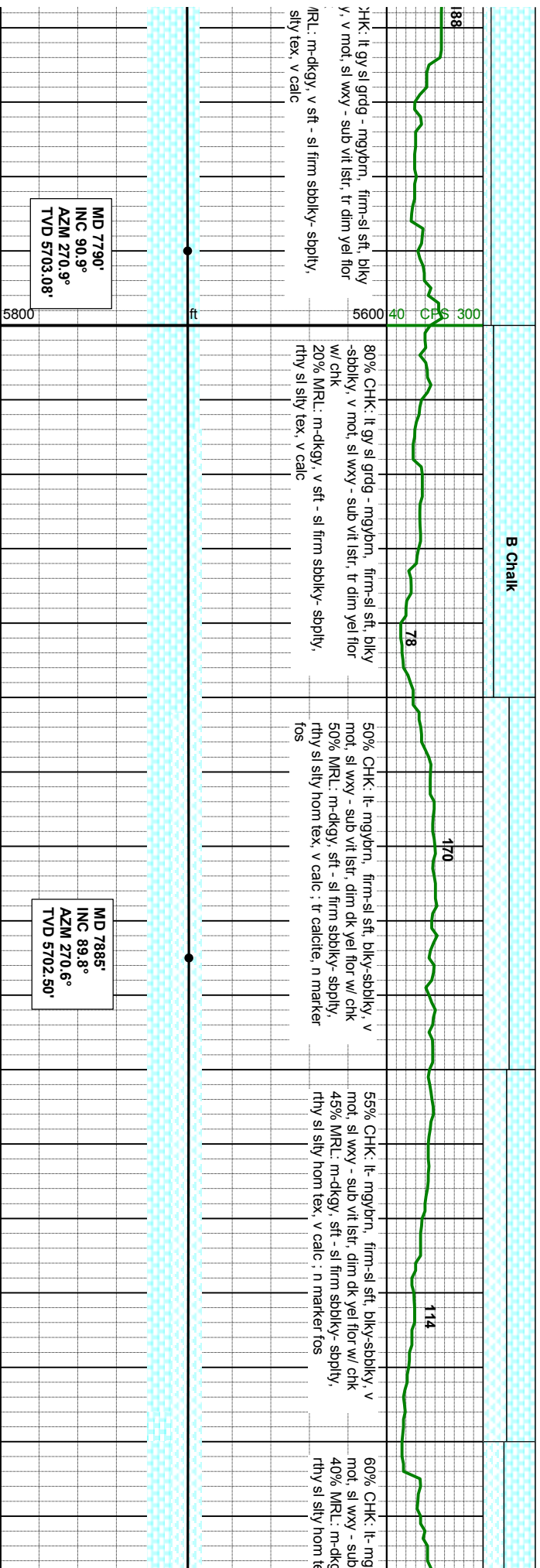
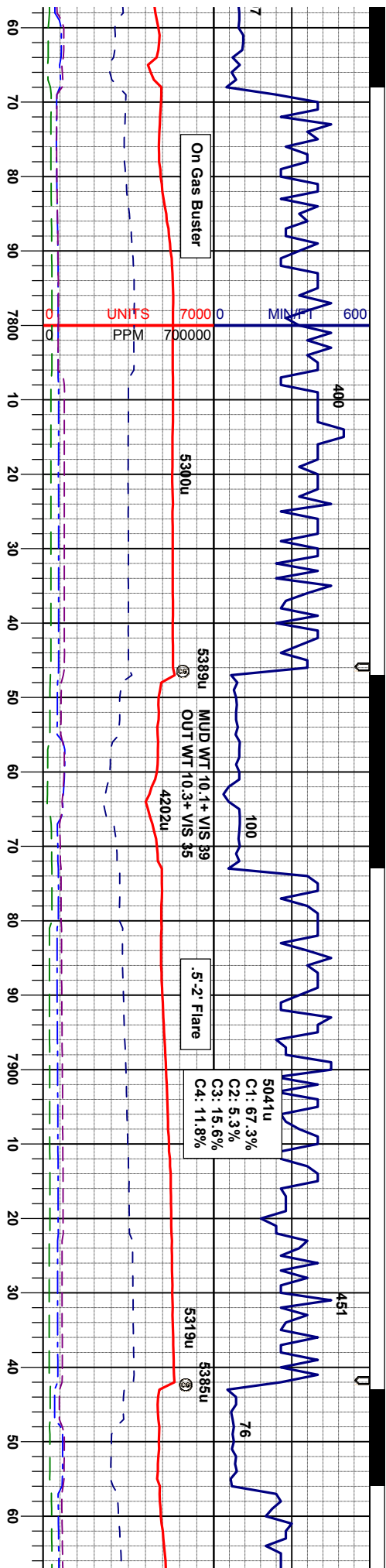


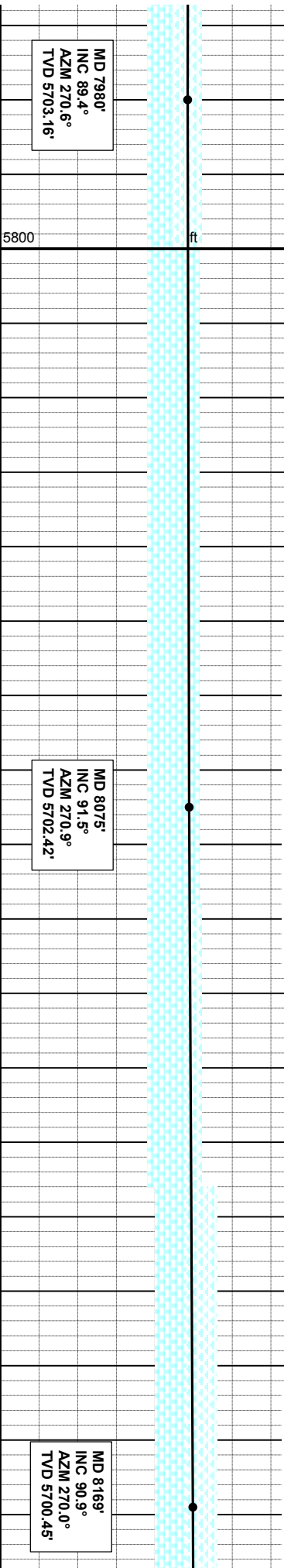
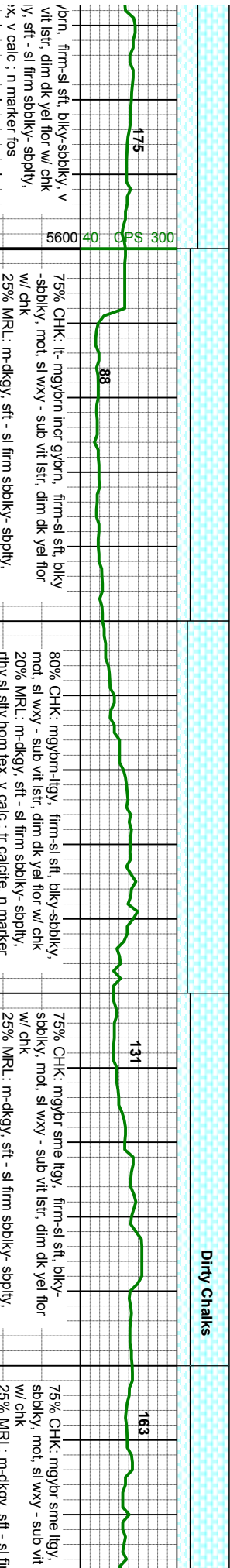
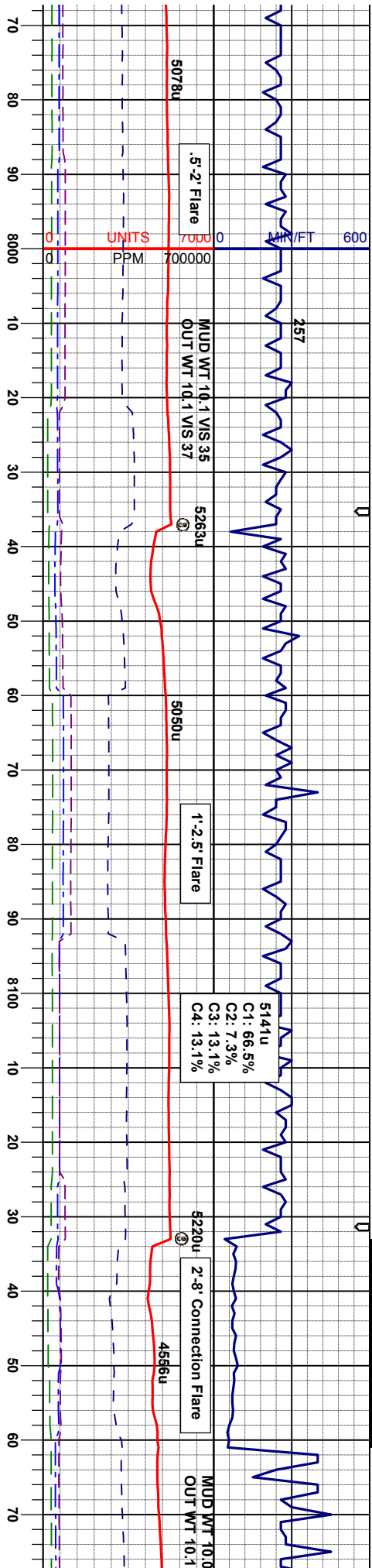


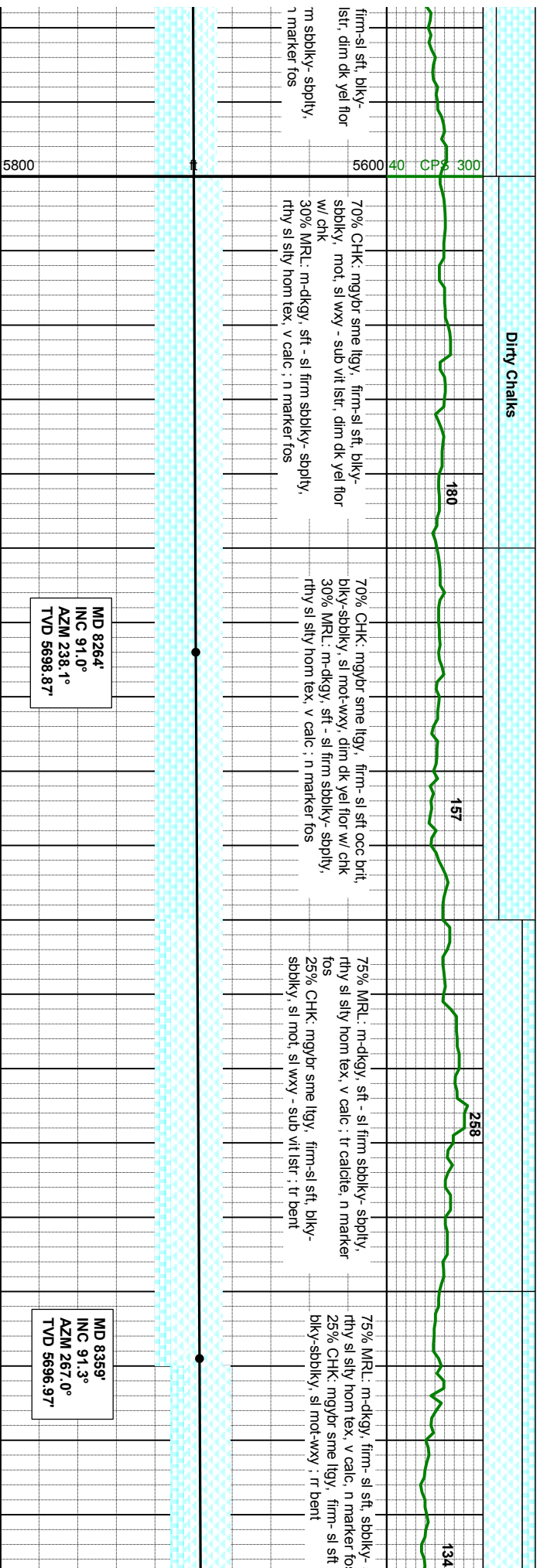
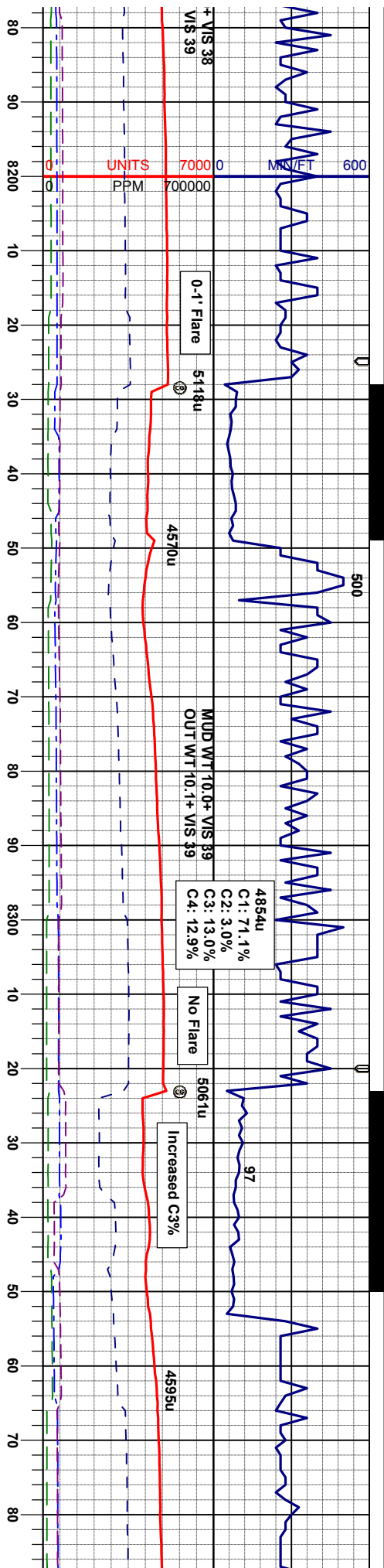


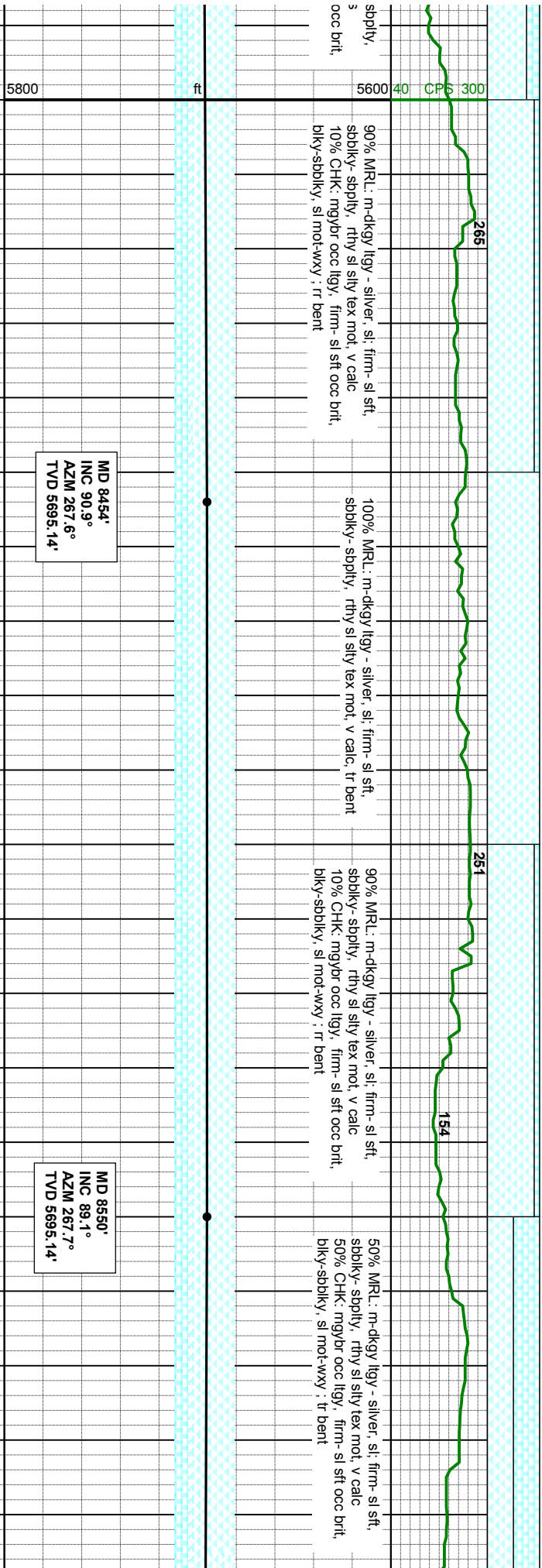
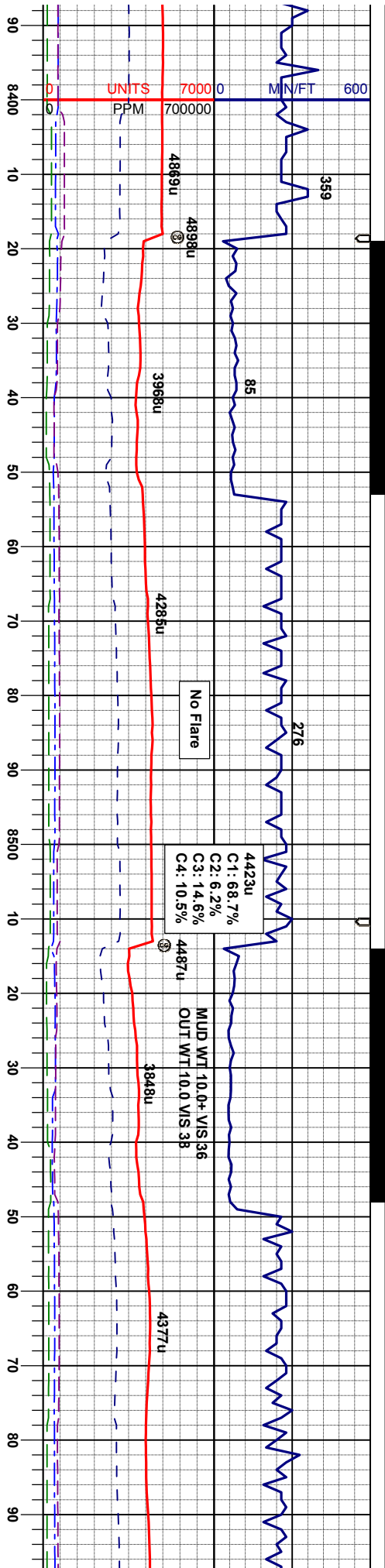


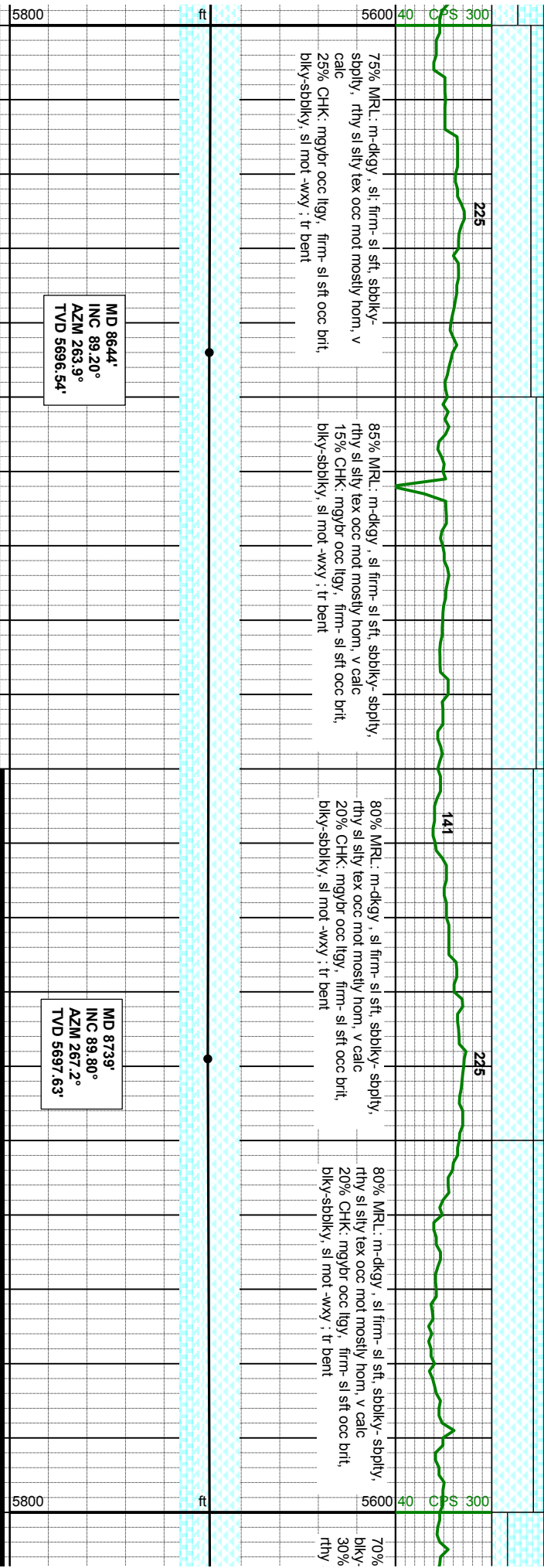
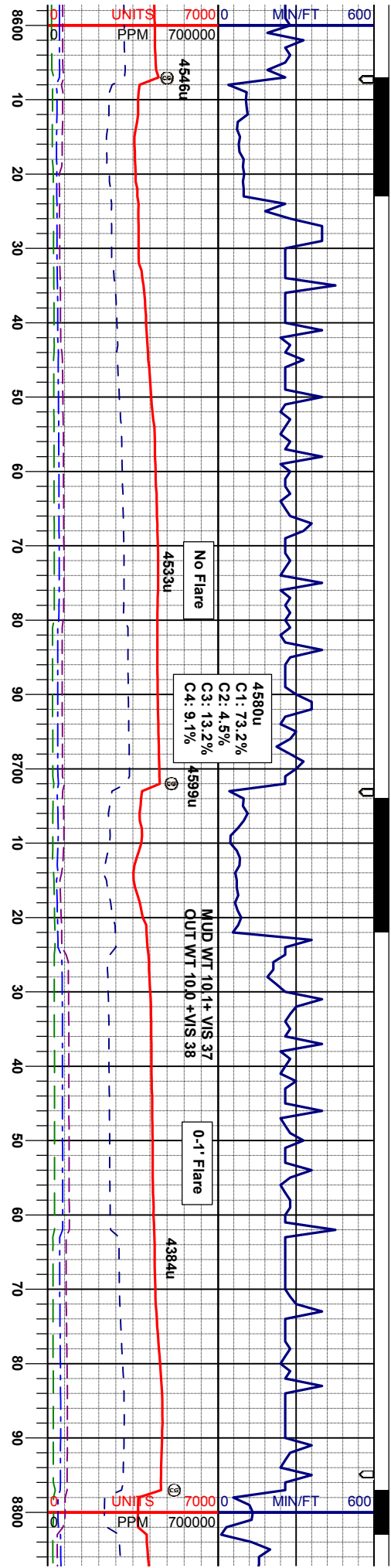


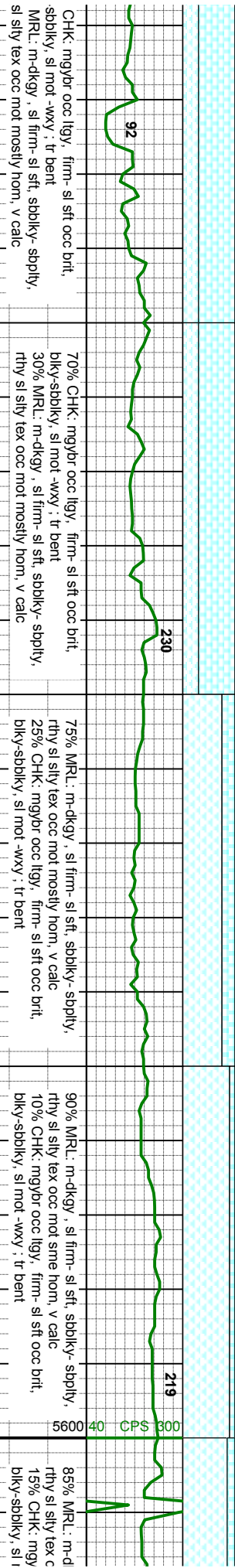
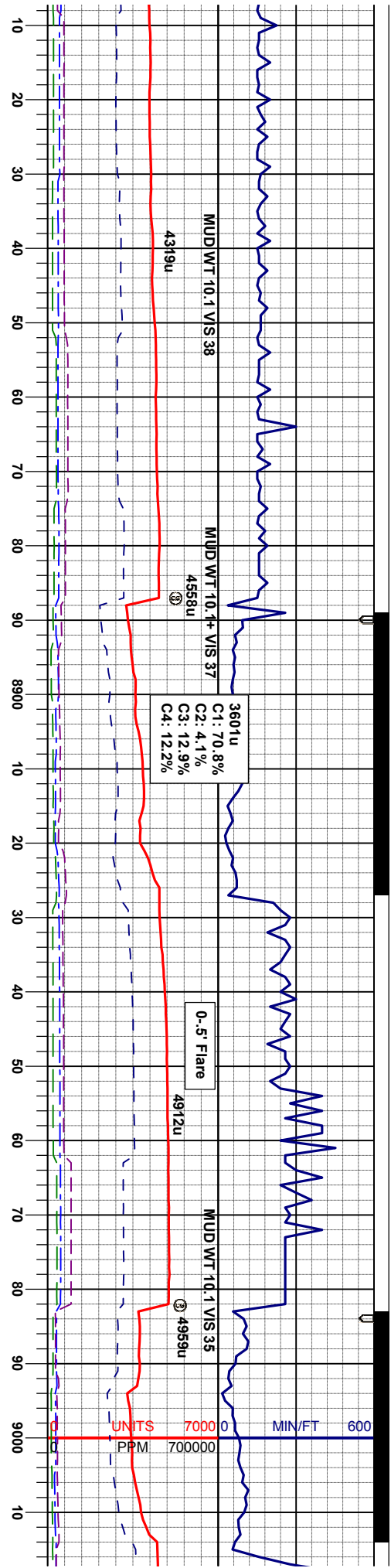










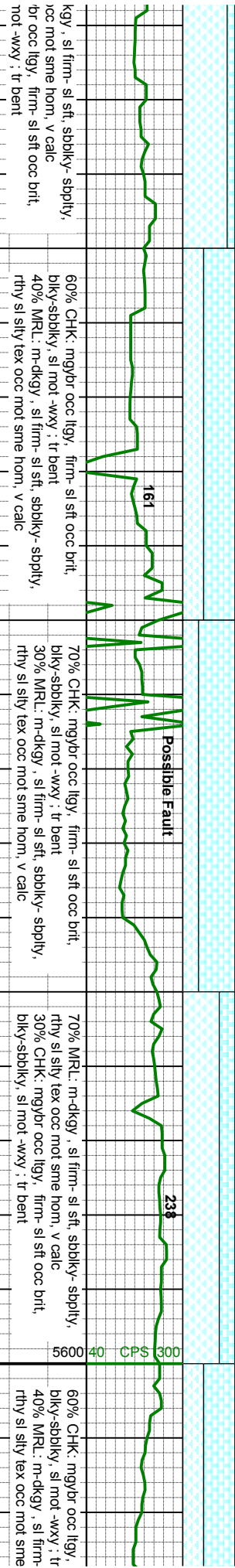
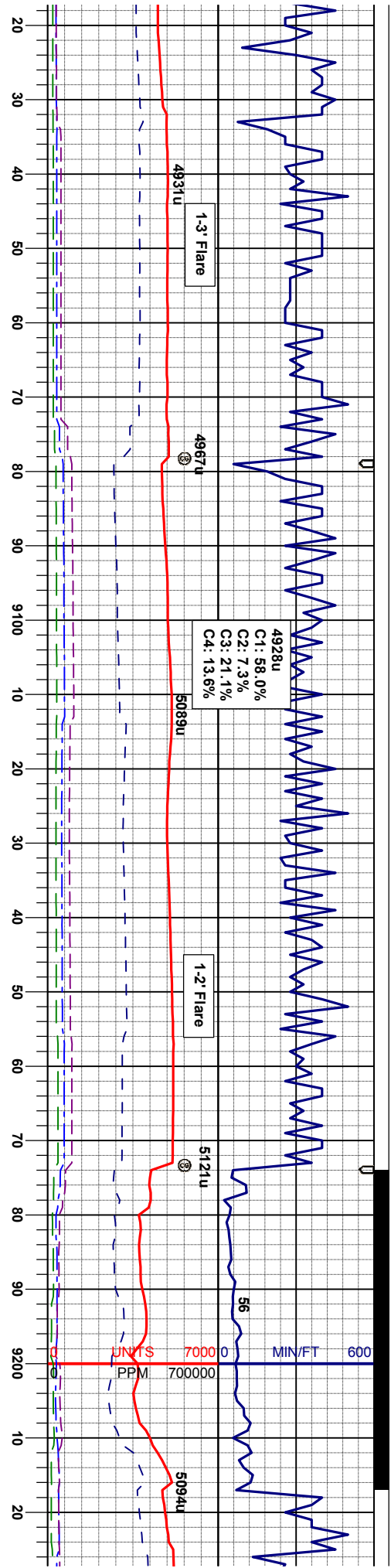


MD 8833'
INC 91.90°
AZM 267.9°
TVD 5695.97'

MD 8928'
INC 89.90°
AZM 267.4°
TVD 5694.48'

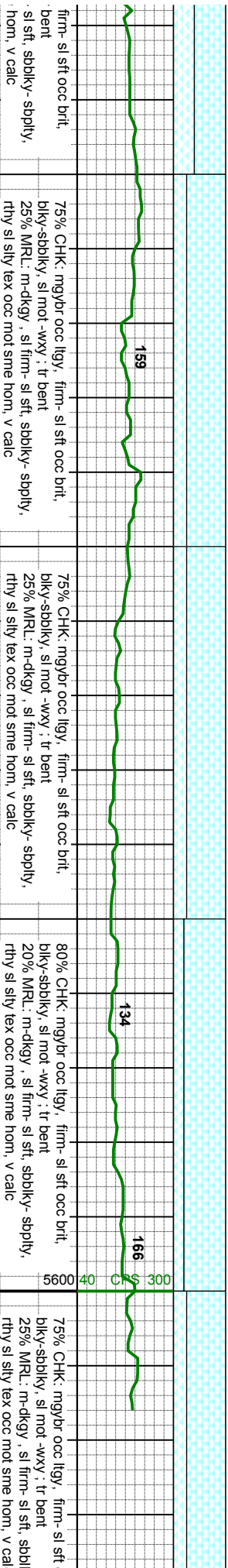
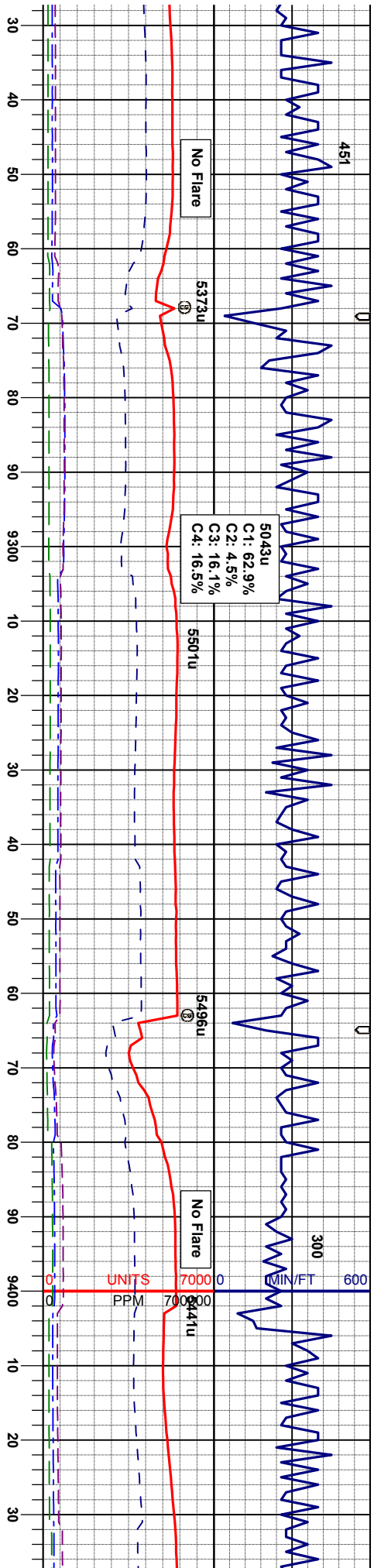
M
I
N
A
T





ID 9023' NC 89.10° ZM 267.0° VD 5695.31'	MD 9118' INC 90.50° AZM 267.0° TVD 5693.13'	MD 9212' INC 88.00° AZM 267.4° TVD 5696.87'
---------------------------------------------------	------------------------------------------------------	------------------------------------------------------





firm- sl sft occ brt.
bent
sl sft, sbblky- sbply,
hom, v calc

75% CHK: mgybr occ lgy, firm- sl sft occ brt,
bly- sbblky, sl mot -wxy ; tr bent
25% MRL: m-dgy , sl firm- sl sft, sbblky- sbply,
rthy sl silty tex occ mot sme hom, v calc

75% CHK: mgybr occ lgy, firm- sl sft occ brt,
bly- sbblky, sl mot -wxy ; tr bent
25% MRL: m-dgy , sl firm- sl sft, sbblky- sbply,
rthy sl silty tex occ mot sme hom, v calc

80% CHK: mgybr occ lgy, firm- sl sft occ brt,
bly- sbblky, sl mot -wxy ; tr bent
20% MRL: m-dgy , sl firm- sl sft, sbblky- sbply,
rthy sl silty tex occ mot sme hom, v calc

75% CHK: mgybr occ lgy, firm- sl sft
bly- sbblky, sl mot -wxy ; tr bent
25% MRL: m-dgy , sl firm- sl sft, sbbl
rthy sl silty tex occ mot sme hom, v cal

MD 9307'
INC 89.10°
AZM 266.9°
TVD 5699.28'

MD 9421'
INC 92.8°
AZM 268.4°
TVD 5697.36'



