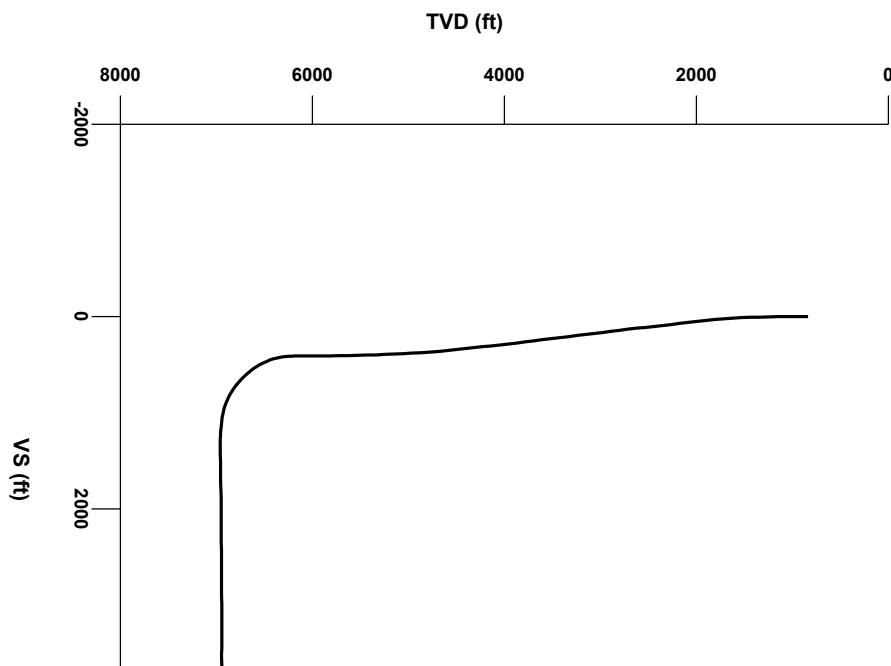




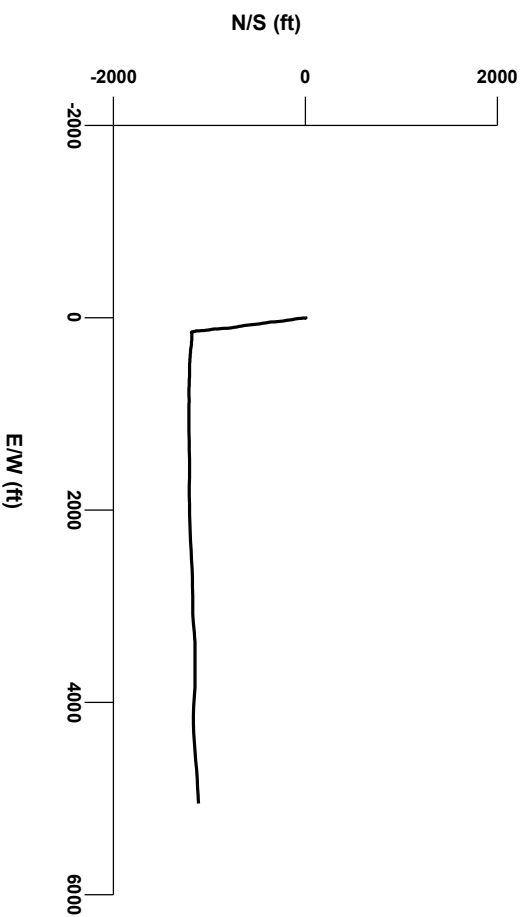
LOG created using Lplot VH Version 3.0, March 28, 2012, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY, INC
WELL: DYER USX AB35-67-1HN
LOCATION: SEC34 7N 64W
COUNTY: WELD
STATE: COLORADO
SPOT: 352 FNL 296 FEL
ELEVATION: GL 4871'; KB 4895'
FIELD: WATTENBERG
SPUD DATE: 3-19-12
TD DATE: 3-27-12
DATES LOGGED: 3-20-12 to 3-27-12
DEPTHS LOGGED: 1,000' - 11,707'
LOGGERS: BRAD WILSON, JAKOB PAMMER
DRILLING FLUID: WATER, WATER BASED MUD, POLY
DRILLING RIG: HP 323
API: 05-123-34772-00
LOG TYPE: HORIZONTAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS:



Survey Elevation

Survey Plan

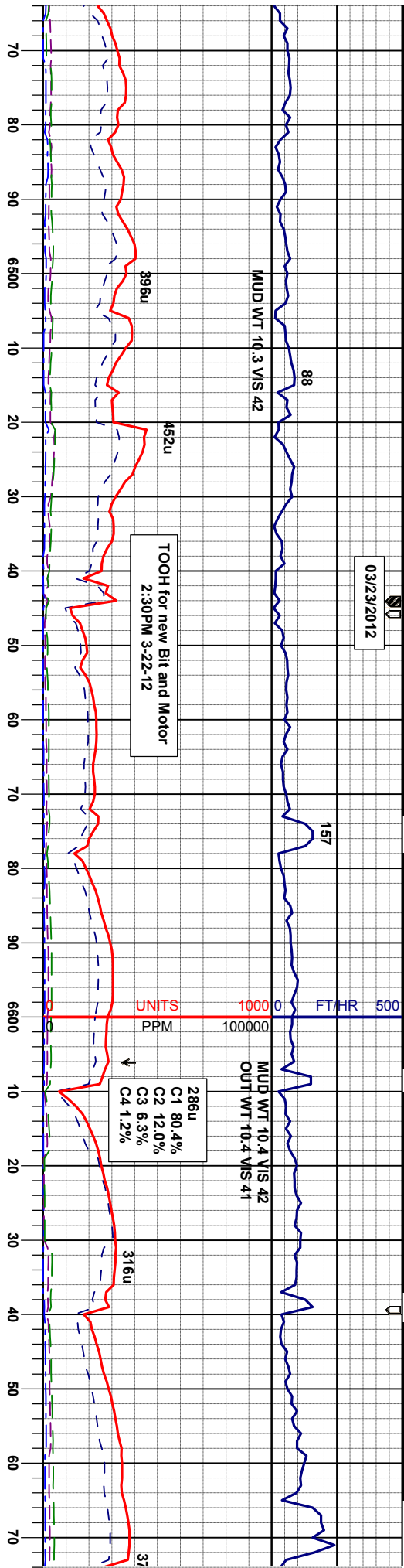


Silty Shale

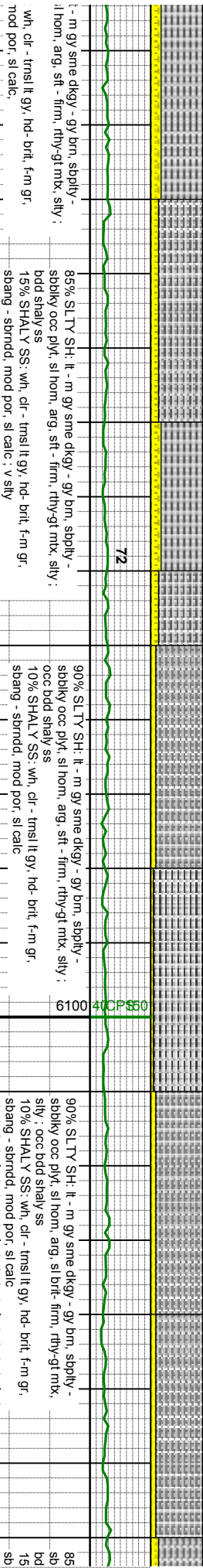
Arrow



03/23/2012



286u
C1 80.4%
C2 12.0%
C3 6.3%
C4 1.2%



MD 6469'
C 7.0
INC 92.9
AZM 92.6
TVD 6317.13

MD 6500'
INC 9.5
AZM 92.6
TVD 6317.13

MD 6532'
INC 11.6
AZM 90.5
TVD 6348.59

MD 6564'
INC 14.2
AZM 88.2
TVD 6379.78

MD 6595'
INC 17.1
AZM 87.7
TVD 6409.63

MD 6627'
INC 20.2
AZM 90.8
TVD 6439.94

MD 6659'
INC 22.6
AZM 94.5
TVD 6469.74

gy brn, sbply -
lt, rthy-gt mtx, sily;
hd- brt, f-m gr,
slau

85% SLTY SH: lt - m gy sme dkg - gy brn, sbply -
sbply occ plyt, sl hom, arg, stf - firm, rthy-gt mtx, sily;
bodd shaly ss
15% SHALY SS: wh, cl - tmsl lt gy, hd- brt, f-m gr,
sbang - sbndd, mod por, sl calc, v sily

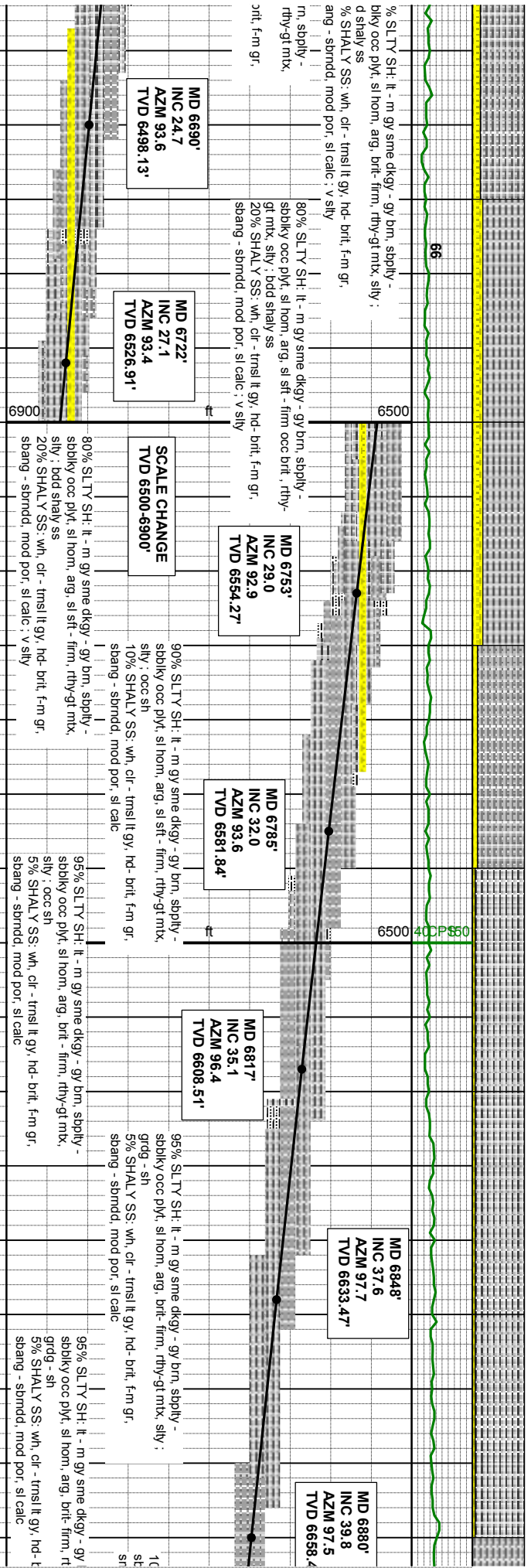
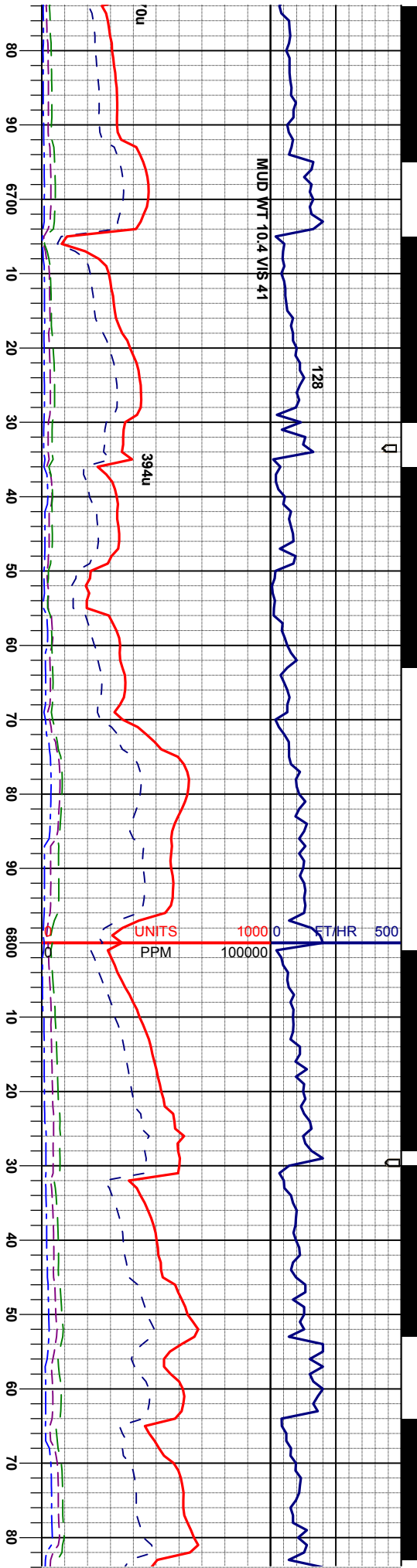
80% SLTY SH: lt - m gy sme dkg - gy brn, sbply -
sbply occ plyt, sl hom, arg, stf - firm, rthy-gt mtx, sily;
bodd shaly ss
20% SHALY SS: wh, cl - tmsl lt gy, hd- brt, f-m gr,
sbang - sbndd, mod por, sl calc, v sily

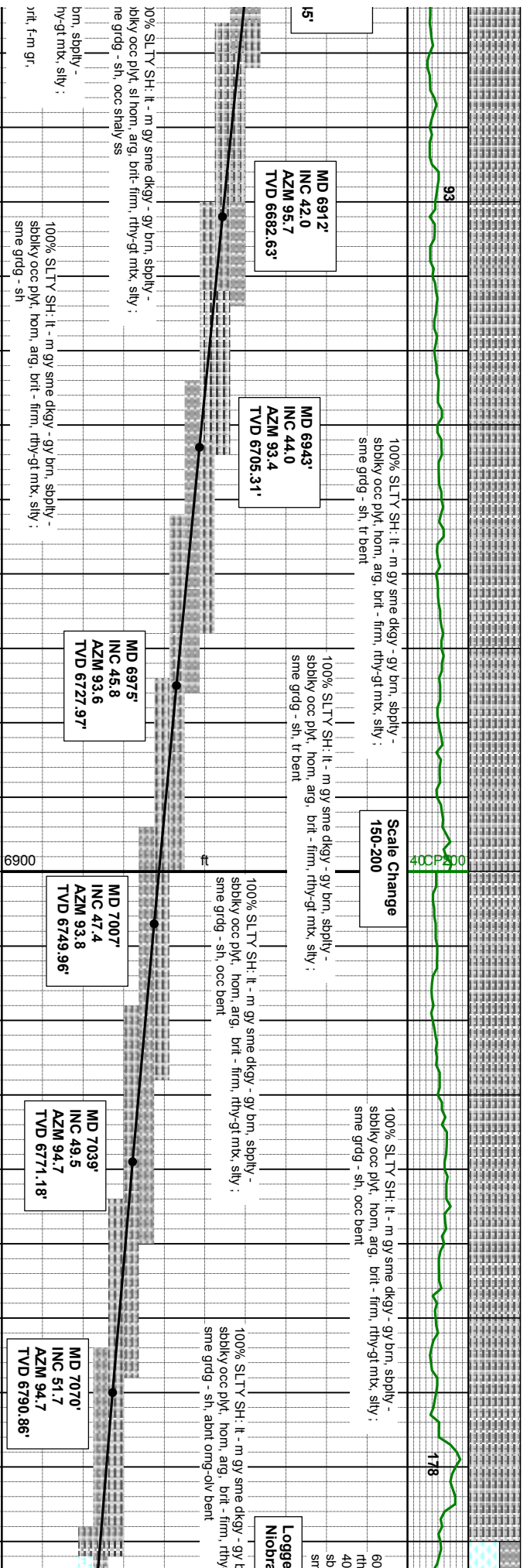
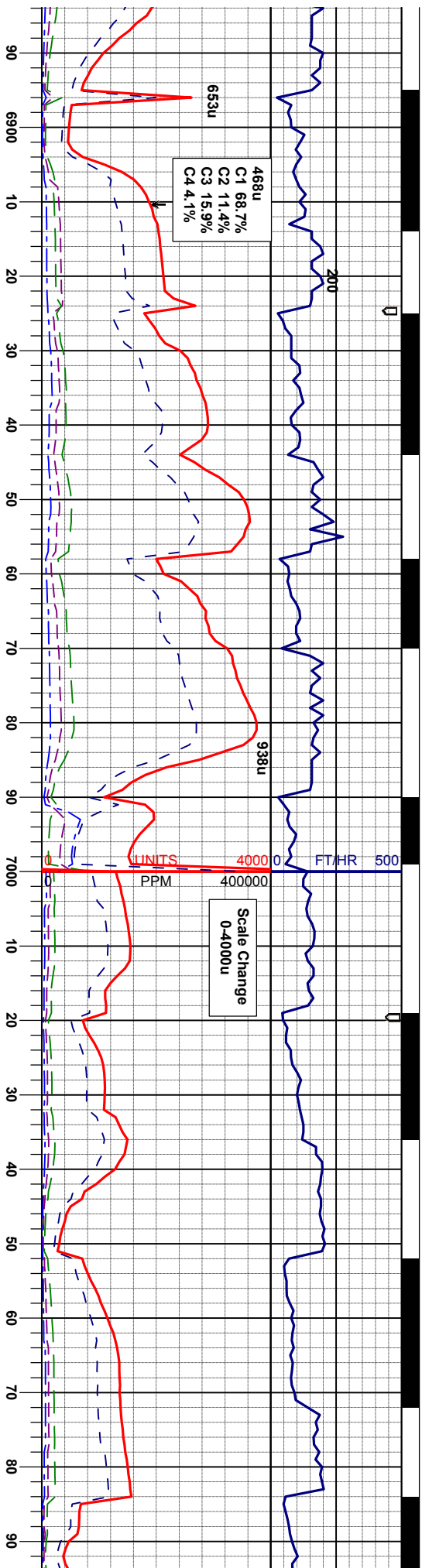
90% SLTY SH: lt - m gy sme dkg - gy brn, sbply -
sbply occ plyt, sl hom, arg, stf - firm, rthy-gt mtx, sily;
occ bodd shaly ss
10% SHALY SS: wh, cl - tmsl lt gy, hd- brt, f-m gr,
sbang - sbndd, mod por, sl calc

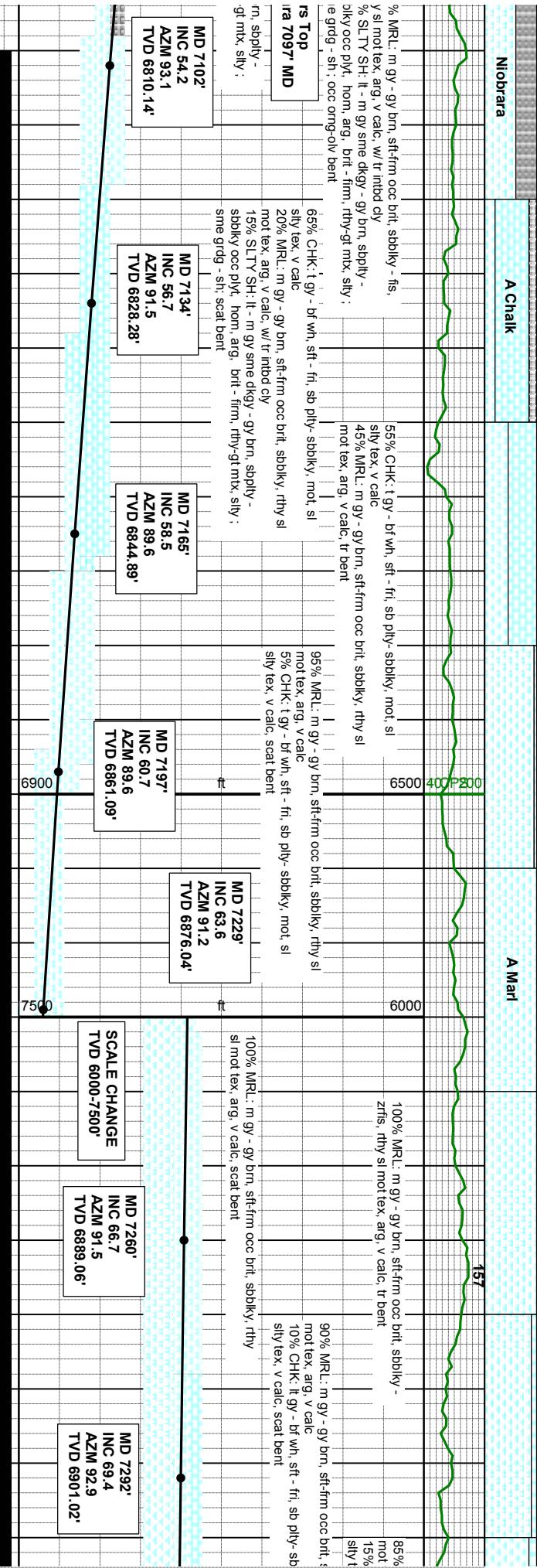
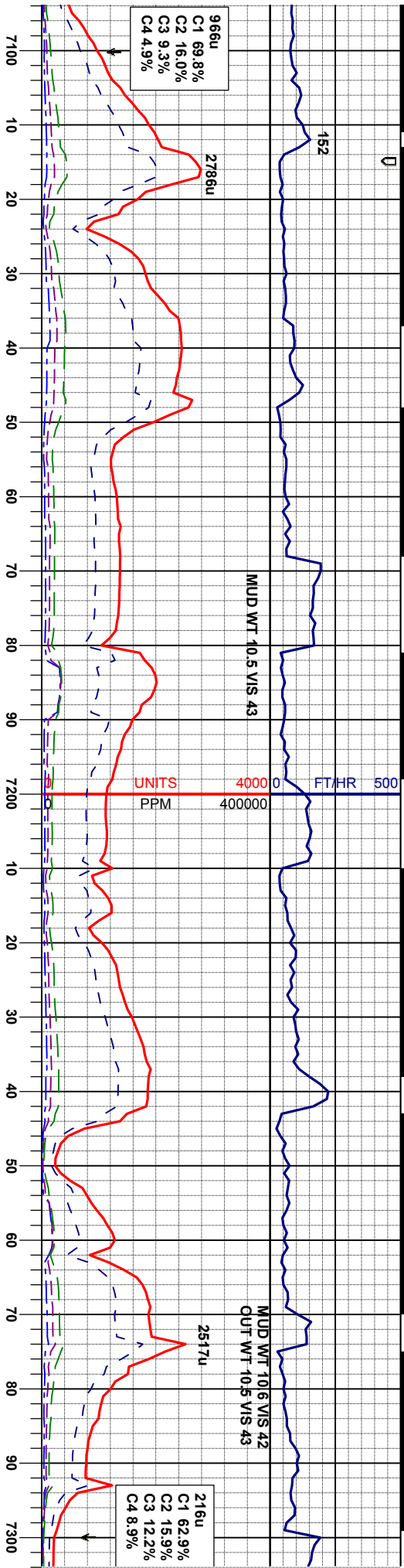
95% SLTY SH: lt - m gy sme dkg - gy brn, sbply -
sbply occ plyt, sl hom, arg, stf - firm, rthy-gt mtx, sily;
occ bodd shaly ss
5% SHALY SS: wh, cl - tmsl lt gy, hd- brt, f-m gr,
sbang - sbndd, mod por, sl calc

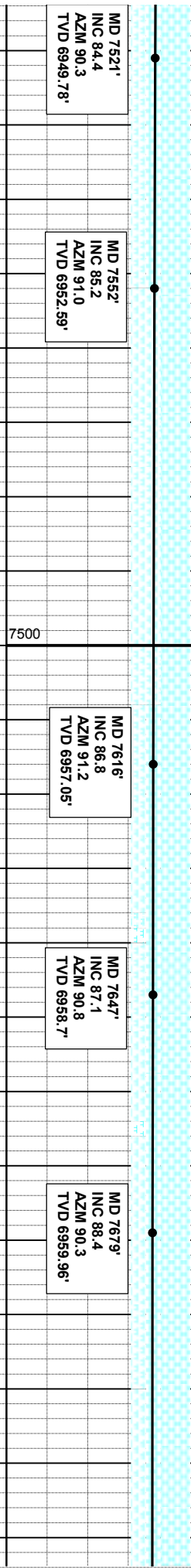
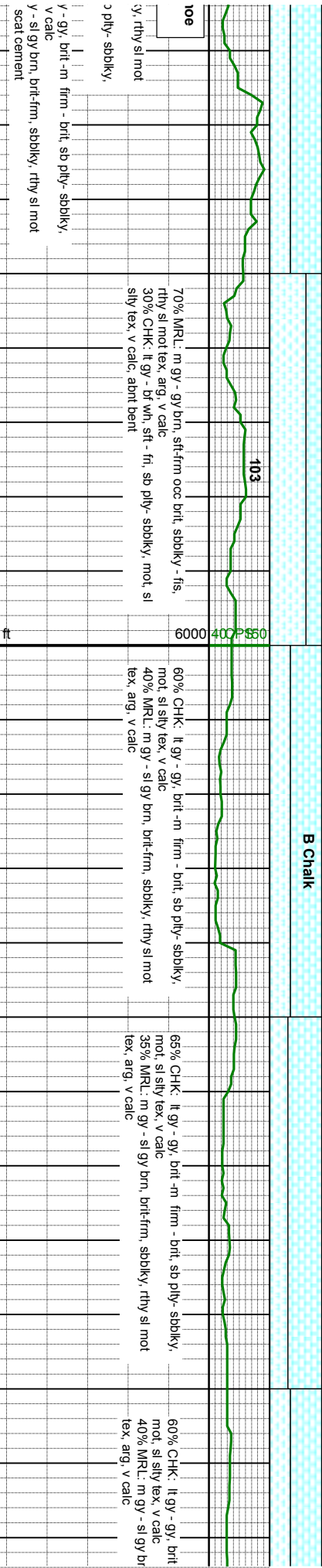
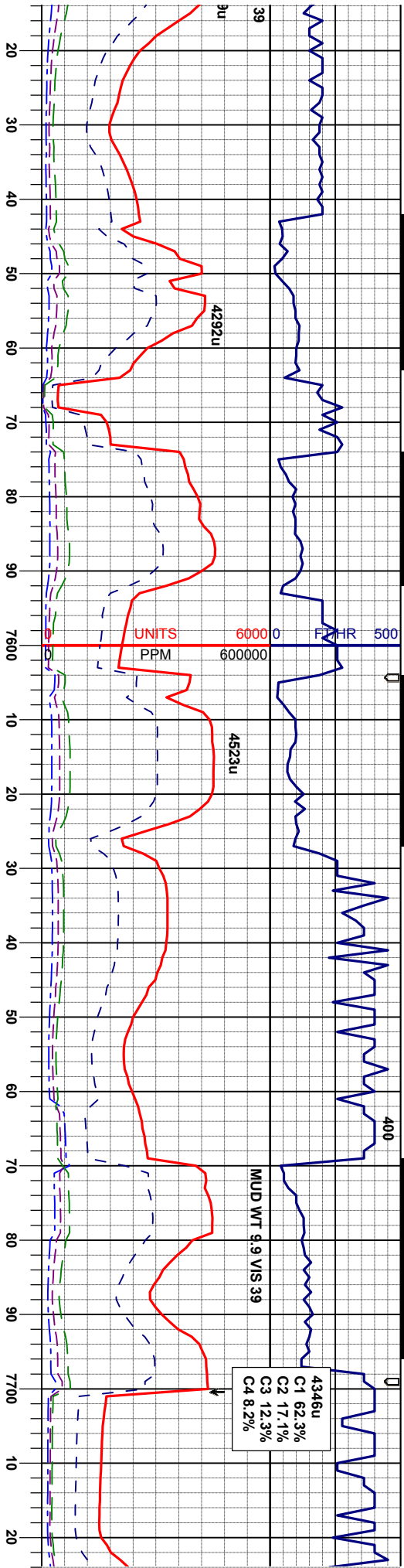
90% SLTY SH: lt - m gy sme dkg - gy brn, sbply -
sbply occ plyt, sl hom, arg, stf - firm, rthy-gt mtx, sily;
occ bodd shaly ss
10% SHALY SS: wh, cl - tmsl lt gy, hd- brt, f-m gr,
sbang - sbndd, mod por, sl calc

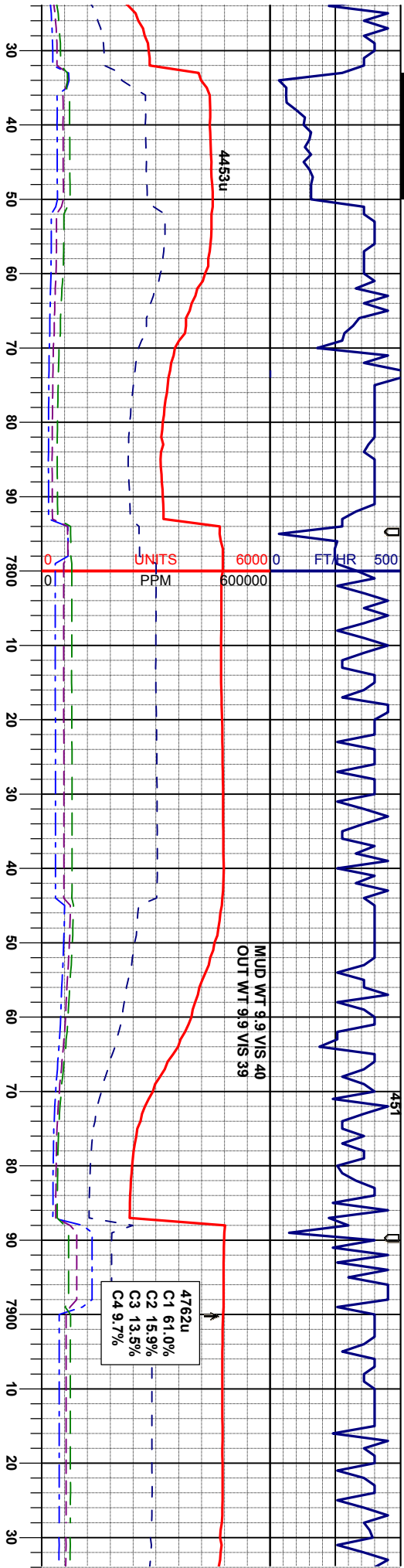












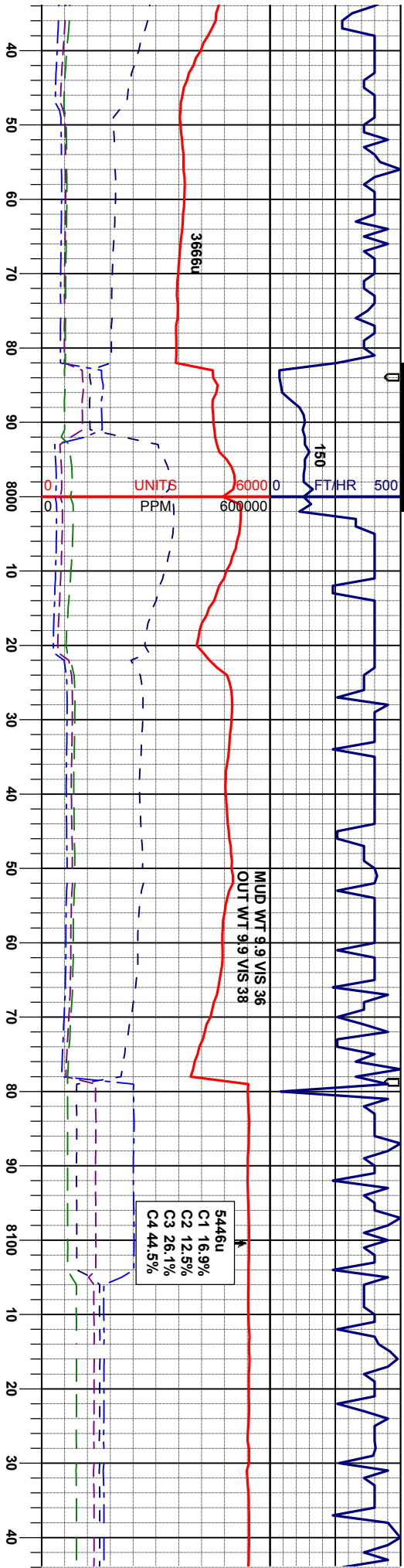
73		6000 40 CP 650				80	
-m firm - brt, sb ply- sbbky, n, brt-fm, sbbky, rthy sl mot	70% CHK: lt gy - gy, brt -m firm - brt, sb ply- sbbky, mot, sl stly tex, v calc 30% MRL: m gy - sl gy brn, brt-fm, sbbky, rthy sl mot tex, arg, v calc; tr calc	65% MRL: m gy - gy brn, sft-fm occ brt, sbbky - zfts, rthy sl mot tex, arg, v calc 35% CHK: lgy - bf wh, sft - fr; sb ply- sbbky, mot, sl stly tex, v calc	55% CHK: lt gy - gy, brt -m firm - brt, sb ply- sbbky, mot, sl stly tex, v calc 45% MRL: m gy - sl gy brn, brt-fm, sbbky, rthy sl mot tex, arg, v calc	65% MRL: m gy - gy brn, sft-fm occ mot tex, arg, v calc 35% CHK: lt gy - bf wh, sft - fr; sb ply- stly tex, v calc			

MD 7742'
INC 90.2
AZM 89.6
TVD 6960.73'

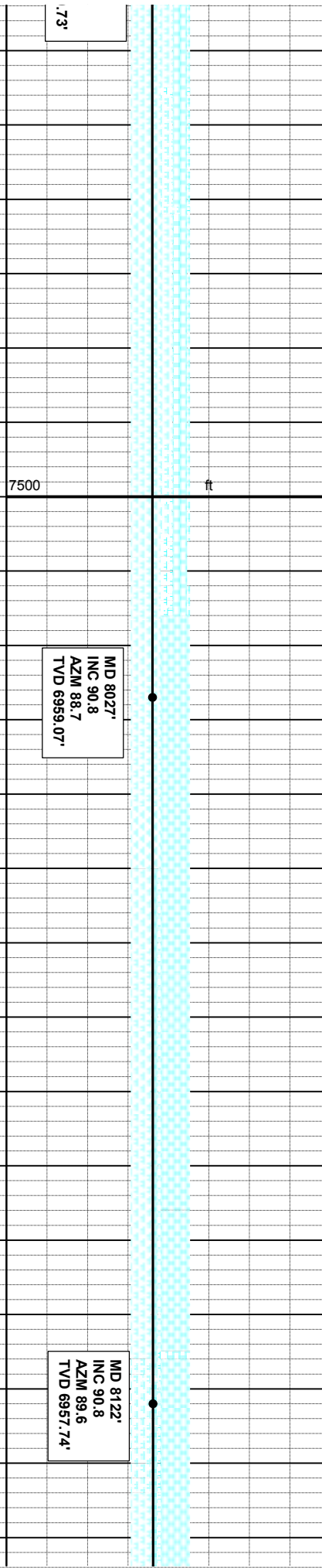
MD 7837'
INC 90.5
AZM 89.6
TVD 6960.15'

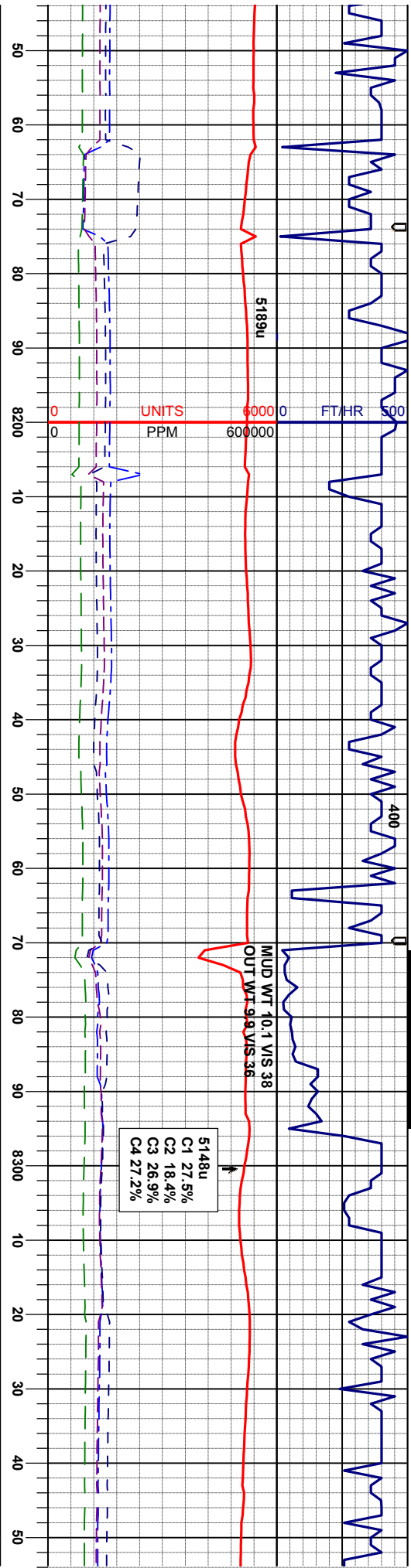
MD 7932'
INC 90.0
AZM 88.3
TVD 6959



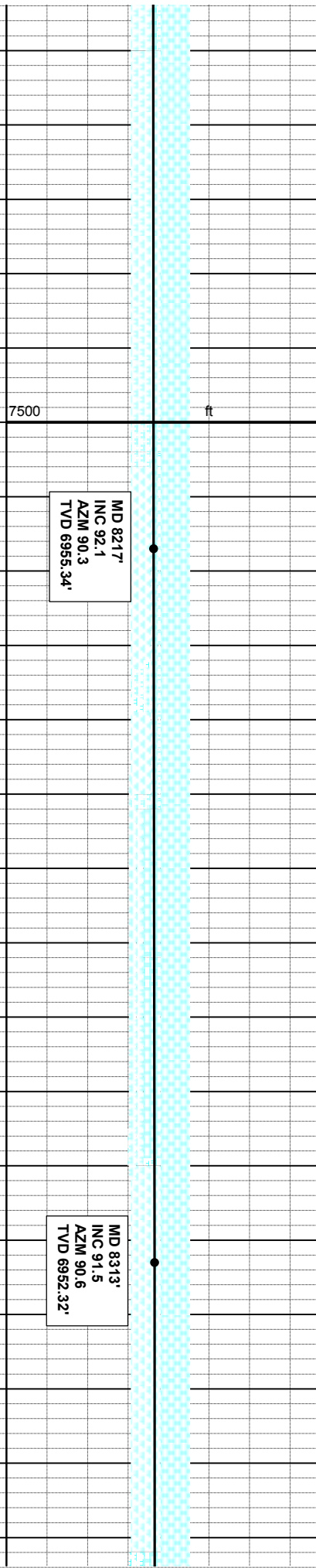


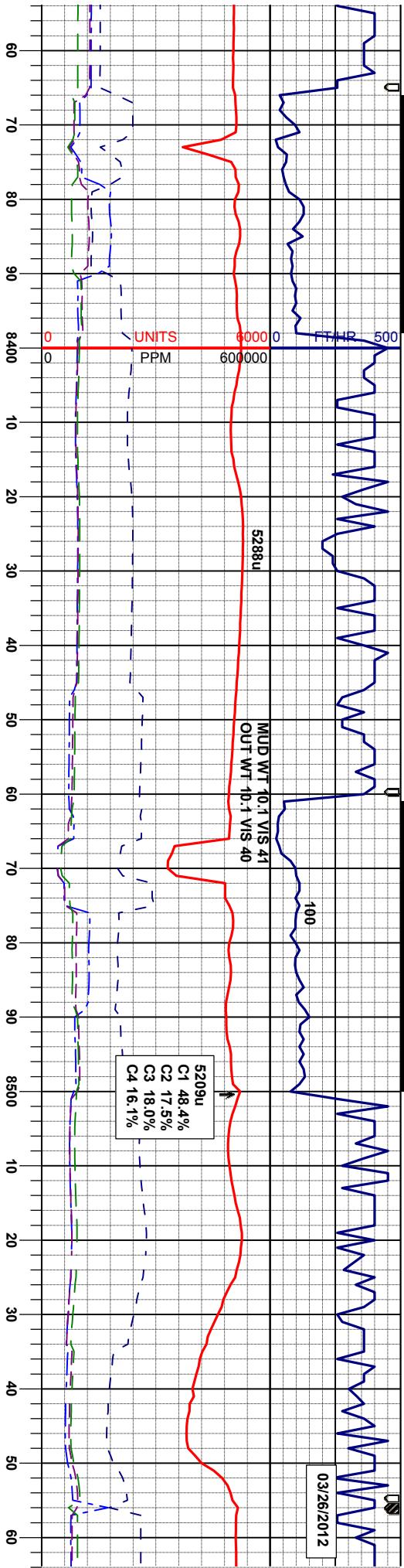
brt, sbbky, rthy sl	75% MRU: m gy - gy brn, sft-firm occ brt, sbbky, rthy sl mot tex, arg, v calc	60% CHK: lt gy - gy, brt - m firm - brt, sb ply- sbbky, mot, sl sily tex, v calc	65% CHK: lt gy - gy, m firm - brt, sb ply- sbbky, mot, sl sily tex, v calc	65% CHK: lt gy - gy, m firm - brt, sb ply- sbbky, m sl sily tex, v calc
gy- sbbky, mot, sl	25% CHK: lt gy - brt wh, sft - fri, sb ply- sbbky, mot, sl sily tex, v calc; tr calc	40% MRU: m gy - sl gy brn, brt-firm, sbbky, rthy sl mot tex, arg, v calc	35% MRU: m gy - sl gy brn, brt-firm, sbbky, rthy sl mot tex, arg, v calc	35% MRU: m gy - sl gy brn, brt-firm, sbbky, rthy sl m tex, arg, v calc





55% CHK: lt gy - gy, m firm - brt, sb ply- sbbky, mot, sl silty tex, v calc	60% CHK: lt gy - gy, m firm - brt, sb ply- sbbky, mot, sl silty tex, v calc	80% CHK: lt gy - gy, m firm - brt, sb ply- sbbky, mot, sl silty tex, v calc	65% CHK: lt gy - gy, m firm - brt, sb ply- sbbky, mot, sl silty tex, v calc
45% MRL: m gy - sl gy brn, brt-firm, sbbky, rthy sl mot tex, arg, v calc	40% MRL: m gy - sl gy brn, brt-firm, sbbky, rthy sl mot tex, arg, v calc	20% MRL: m gy - sl gy brn, brt-firm, sbbky, rthy sl mot tex, arg, v calc	35% MRL: m gy - sl gy brn, brt-firm, sbbky, rthy sl mot tex, arg, v calc





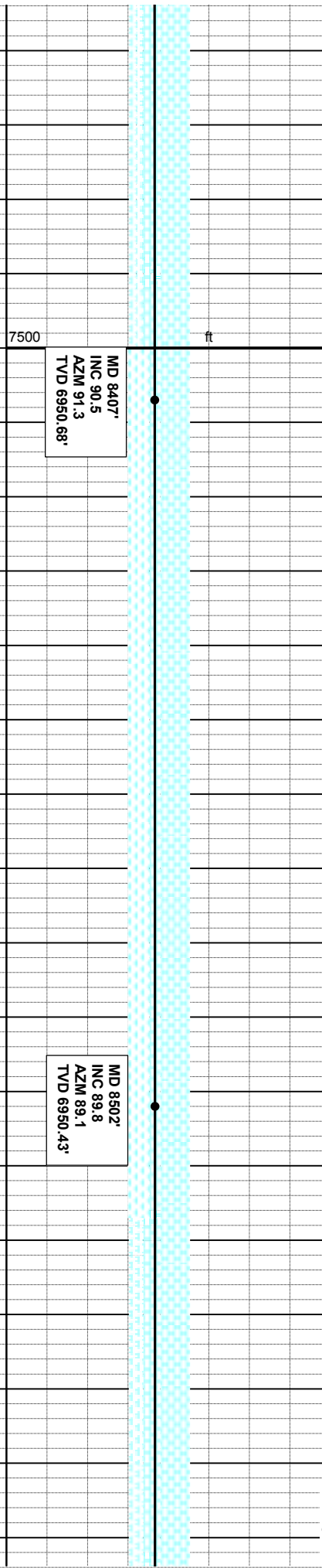
35% CHK: lt gy - gy, m firm - brt, sb ply-sbbky, mot, sl silty tex, v calc
15% MRL: m gy - sl gy brn, brt-firm, sbbky, rthy sl mot
ex. arg, v calc, occ bent

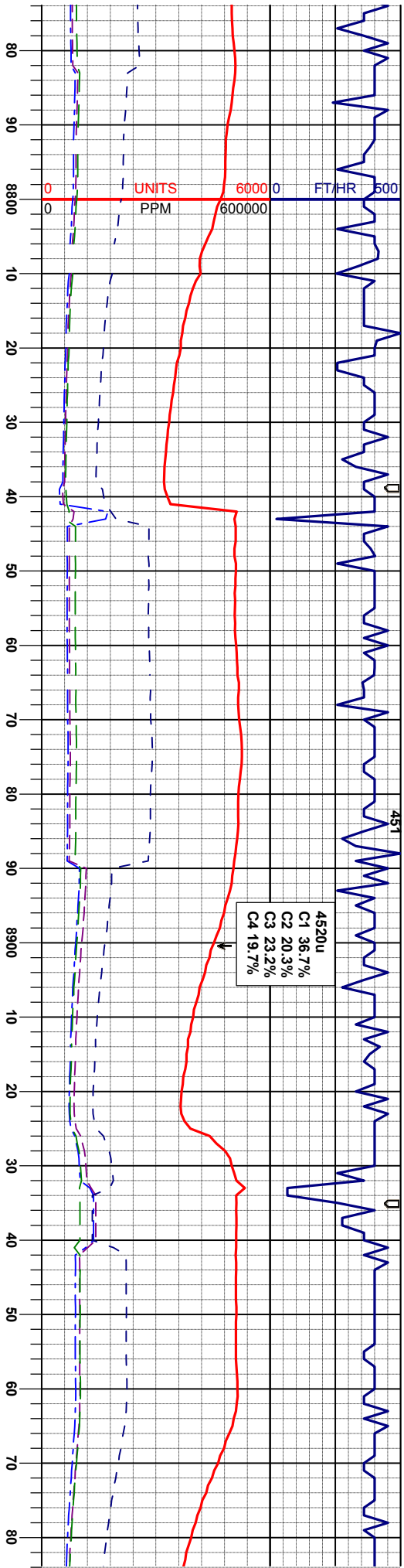
75% CHK: lt gy - gy, brt -m firm - brt, sb ply-sbbky, mot, sl silty tex, v calc
25% MRL: m gy - sl gy brn, brt-firm, sbbky, rthy sl mot
tex. arg, v calc, tr bent

70% CHK: lt gy - gy, m firm - brt, sb ply-sbbky, mot, sl silty tex, v calc
30% MRL: m gy - sl gy brn, brt-firm, sbbky, rthy sl mot
tex. arg, v calc

80% CHK: lt gy - gy, m firm - brt, sb ply-sbbky, mot, sl silty tex, v calc
20% MRL: m gy - sl gy brn, brt-firm, sbbky, rthy sl mot
tex. arg, v calc

85% CHK: lt silty tex, v calc
15% MRL: m tex. arg, v calc





n - brtl, sb pily- sbbkly, mot, sl		60% CHK: lt gy - gy, brt -m - firm - brtl, sb pily- sbbkly, mot, sl silty tex, v calc		65% CHK: lt gy - gy, brt -m - firm - brtl, sb pily- sbbkly, mot, sl silty tex, v calc		60% MRL: m gy - gy brn, sft-firm occ brtl, sbbkly - zrlts, rthy sl mot tex, arg, v calc		55% MRL: m-dk gy - gy brn occ blk, fir sbbkly, rthy tex, arg, v calc	
brn, brt-firm, sbbkly, rthy sl mot		40% MRL: m gy - sl gy brn, brt-firm, sbbkly, rthy sl mot tex, arg, v calc		35% MRL: m gy - sl gy brn, brt-firm, sbbkly, rthy sl mot tex, arg, v calc		40% CHK: l gy - bf wh, sft - fri, sb pily- sbbkly, mot, sl silty tex, v calc		45% CHK: gy- lt gy lt wh, brtl -firm, sbl mot, sl silty tex : sme calcite	

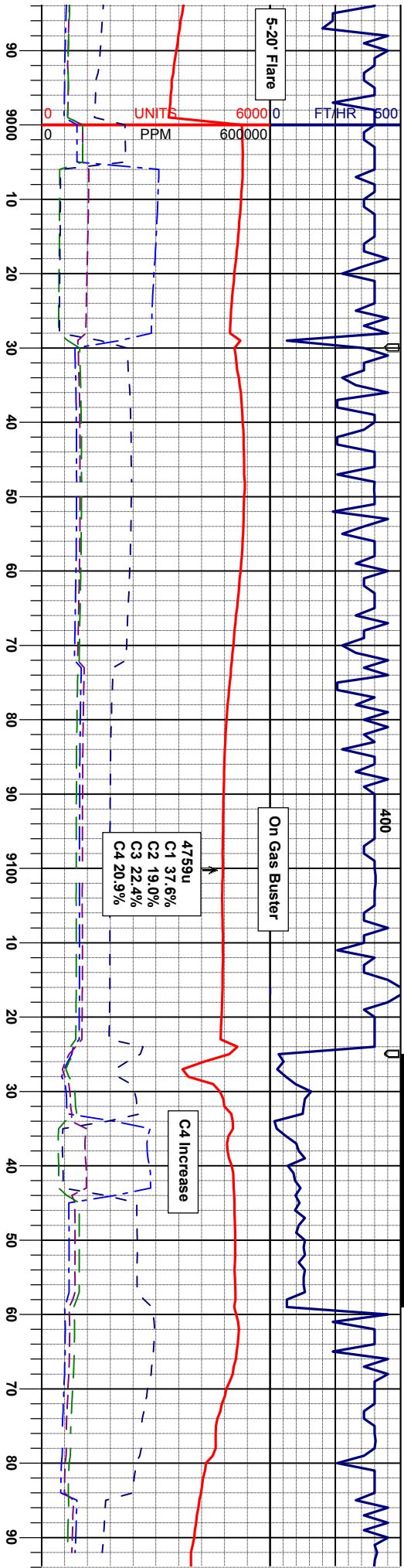
Metal Shavings Collected 2:00AM
85% Metal Shaving
15% Trapped Sample

MD 8787'
INC 90.6
AZM 88.7
TVD 6950.27'

MD 8882'
INC 90.3
AZM 87.8
TVD 6949.52'

MD 8977'
INC 90.0
AZM 87.3
TVD 6949.27'





70% MR.L: m-dk gy - gy brn occ blk, firm - hd occ brtl, sbbky, rthy tex, arg, v calc
30% CHK: gy- lt gy tr wh, brtl - firm, sbbky occ sbply, mod, sl stly tex : sme calcite

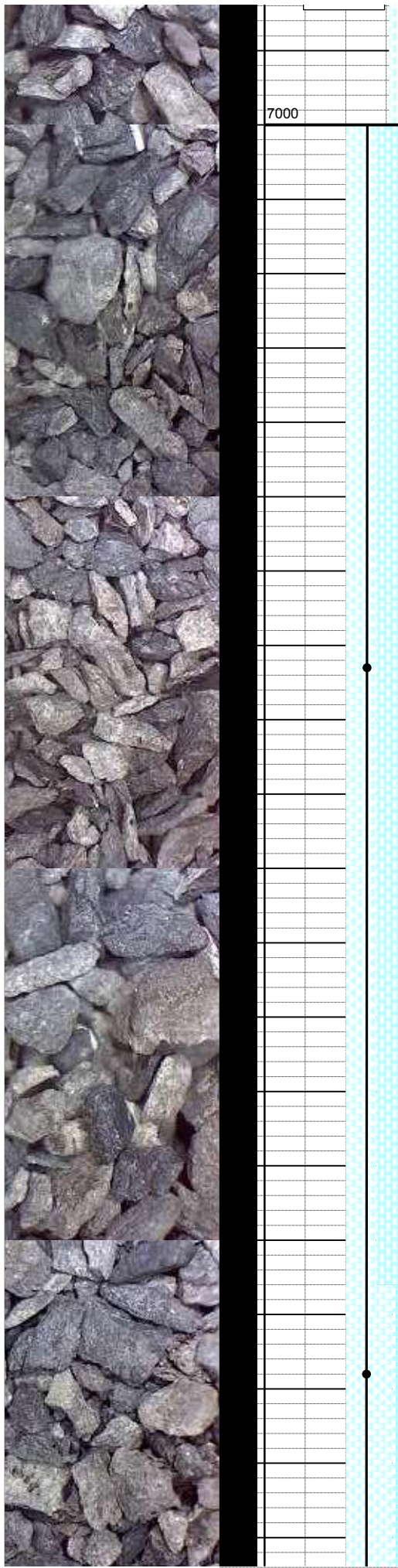
65% MR.L: m-dk gy - gy brn occ blk, firm - hd occ brtl, sbbky, rthy tex, arg, v calc
35% CHK: gy- lt gy tr wh, brtl - firm, sbbky occ sbply, mod, sl stly tex : sme calcite

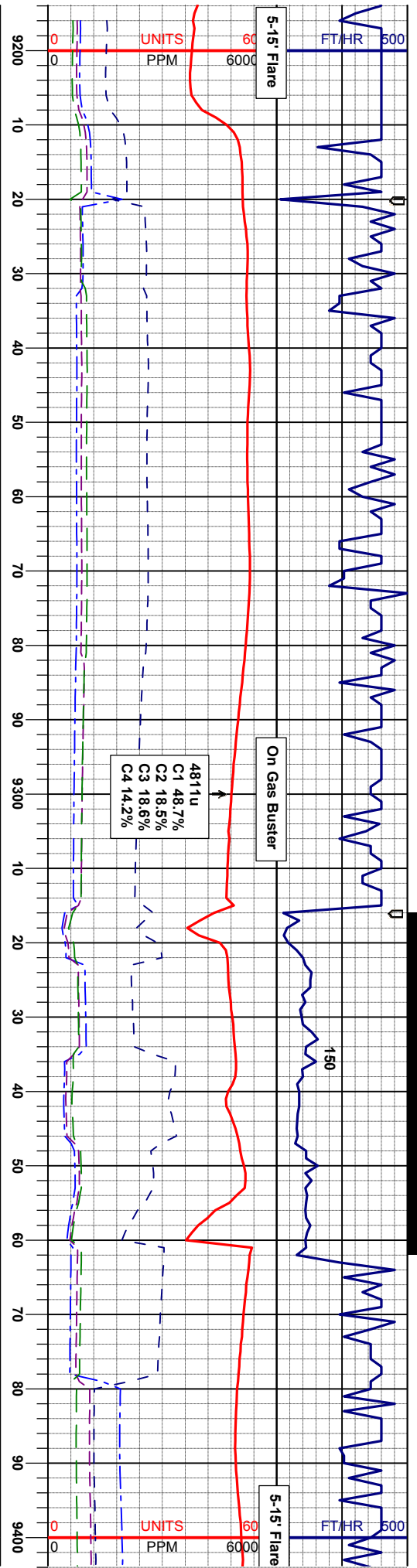
60% MR.L: m-dk gy - gy brn occ blk, firm - hd occ brtl, sbbky, rthy tex, arg, v calc
40% CHK: gy- lt gy tr wh, brtl - firm, sbbky occ sbply, mod, sl stly tex, fos, tr calcite

75% MR.L: m-dk gy - gy brn occ blk, firm - hd occ brtl, sbbky, rthy tex, arg, v calc
35% CHK: gy- lt gy tr wh, brtl - firm, sbbky occ sbply, mod, sl stly tex, fos, tr calcite

SCALE CHANGE
TVD 6800 - 7000'

MD 9073'
INC 89.7
AZM 86.4
TVD 6949.52'





6800 40CP 550

70% MRL: m-dk gy - gy brn occ blk, frm - hd occ brlt, sbblky, rthy tex, arg, v calc
30% CHK: gy - lt gy tr wh, brlt - frm, sbblky occ sbply, mot, sl sily tex

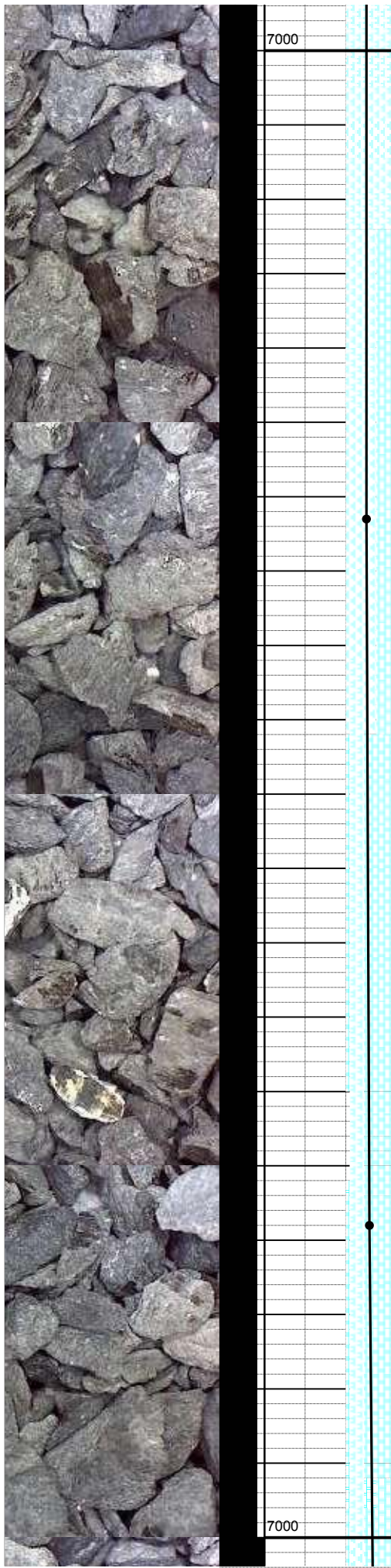
50% MRL: m-dk gy - gy brn occ blk, frm - hd occ brlt, sbblky, rthy tex, arg, v calc
50% CHK: gy - lt gy occ wh- bf, brlt - frm, sbblky occ sbply, mot, sl sily tex

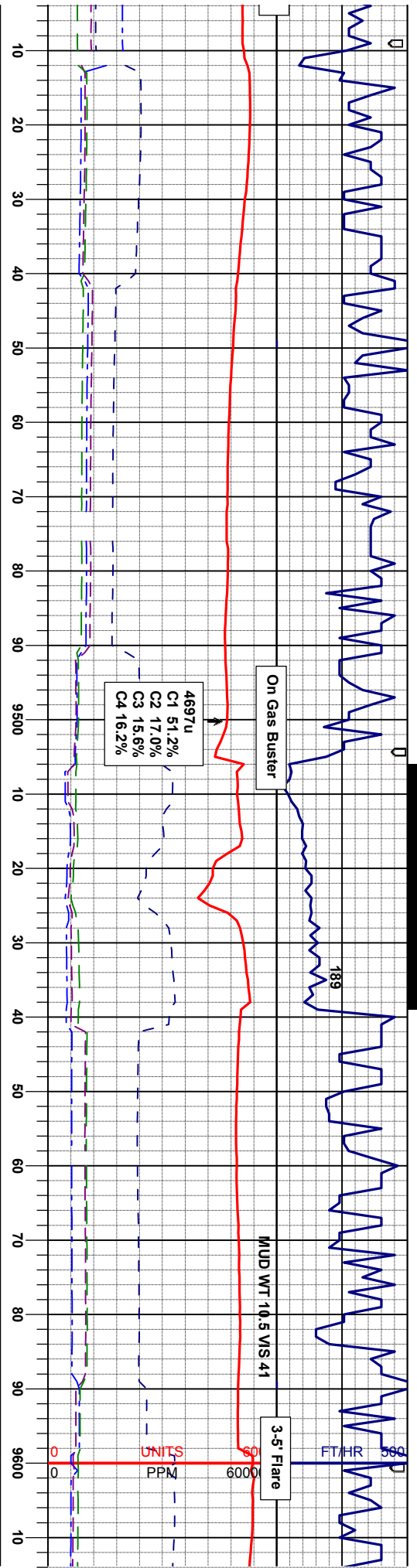
80% CHK: lt gy - wh, brlt - frm, sbblky occ sbply, wax, mot, sme sily tex
20% MRL: m-dk gy - gy brn occ blk, frm - hd occ brlt, sbblky, rthy tex, arg, v calc

75% CHK: lt gy - wh, brlt - frm, sbblky occ sbply, mot, wax, sme sily tex
25% MRL: m-dk gy - gy brn occ blk, frm - hd occ brlt, sbblky, rthy tex, arg, v calc

MD 9263'
INC 90.0
AZM 86.1
TVD 6949.77'

MD 9358'
INC 91.8
AZM 89.4
TVD 6948.28'





65% CHK: lt gy - wh, brt - firm, sbbly occ sbbly, mot, sme sily tex.
35% MRL: m-dk gy - gy brn occ blk, frm - hd occ brt, sbbly, rthy tex, arg, v calc

50% CHK: lt gy w/ decr wh, brt - firm, sbbly occ sbbly, mot, sme sily tex.
50% MRL: m-dk gy - gy brn occ blk, frm - hd occ brt, sbbly, rthy tex, arg, v calc; tr OTS

55% MRL: m-dk gy - gy brn occ blk, frm - hd occ brt, sbbly, rthy tex, arg, v calc
45% CHK: lt gy w/ decr wh, brt - firm, sbbly occ sbbly, mot, sme sily tex; tr OTS

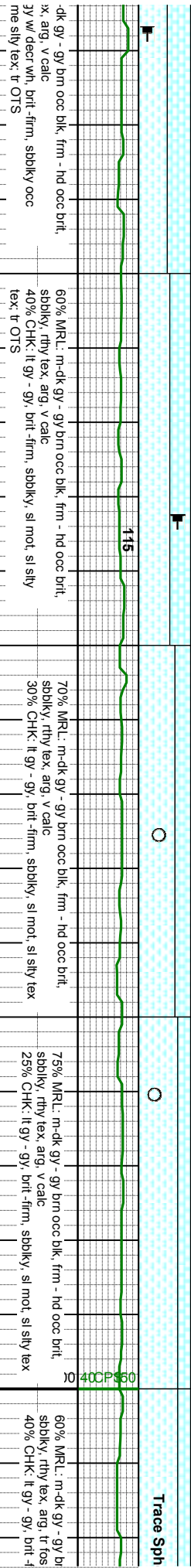
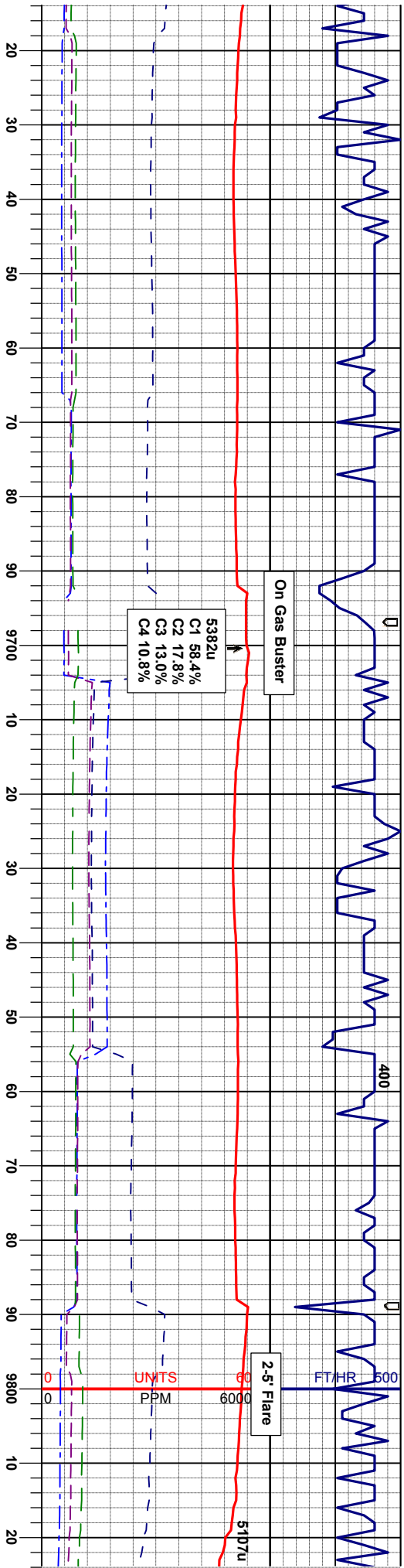
60% MRL: m-dk gy - gy brn occ blk, frm - hd occ brt, sbbly, rthy tex, arg, v calc
44% CHK: lt gy w/ decr wh, brt - firm, sbbly occ sbbly, mot, sme sily tex; tr OTS

55% MRL: m-dk gy - gy brn occ blk, frm - hd occ brt, sbbly, rthy tex, arg, v calc
45% CHK: lt gy w/ decr wh, brt - firm, sbbly occ sbbly, mot, sme sily tex; tr OTS

MD 9453'
INC 92.2
AZM 88.9
TVD 6944.96'

MD 9548'
INC 89.2
AZM 90.1
TVD 6943.8'

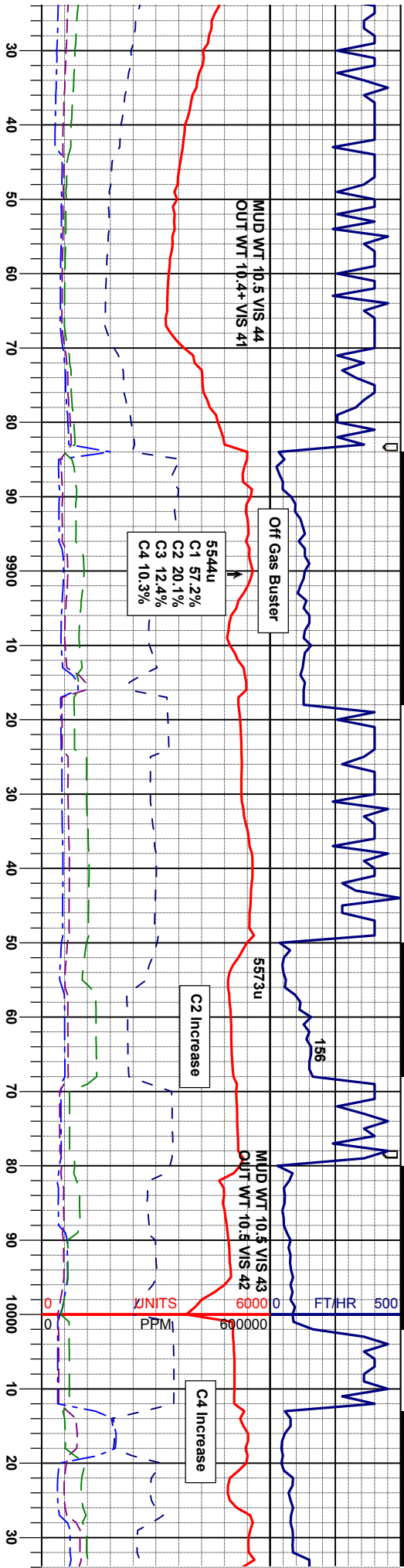




MID 9642'
INC 90.1
AZM 89.9
TVD 6944.38'

MD 9737'
INC 90.2
AZM 87.3
TVD 6944.13'





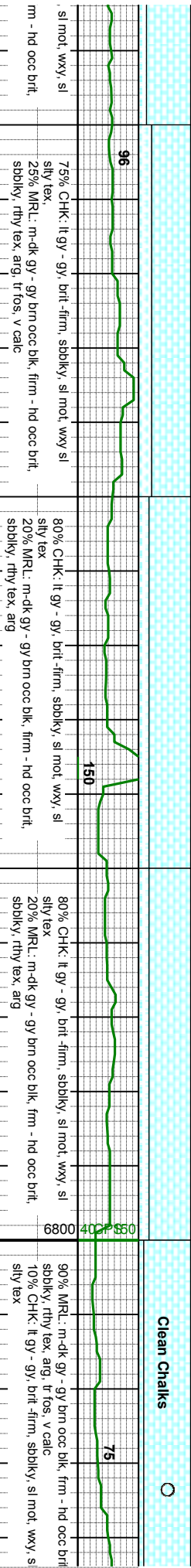
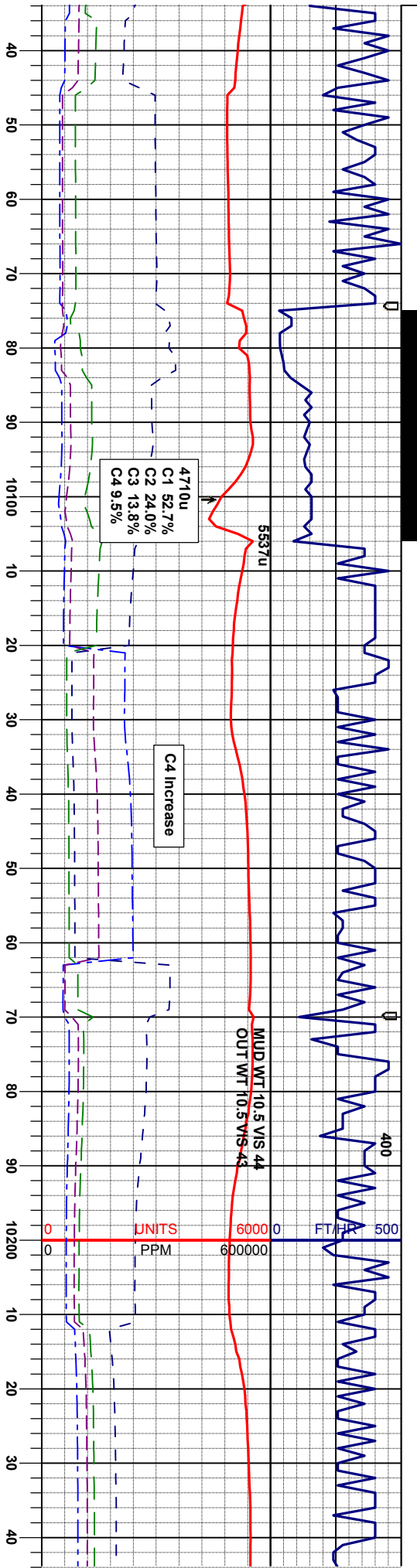
Vertical Fossils

n occ blk, firm - hd occ brt, v calc	80% MRL: m-dk gy - gy brn occ blk, firm - hd occ brt, sbbky, rthy tex, arg, tr fos, v calc	75% MRL: m-dk gy - gy brn occ blk, firm - hd occ brt, sbbky, rthy tex, arg, tr fos, v calc	75% MRL: m-dk gy - gy brn occ blk, firm - hd occ brt, sbbky, rthy tex, arg, tr fos, v calc	85% CHK: lt gy - gy - brt -firm, sbbky sily tex, 15% MRL: m-dk gy - gy brn occ blk, f sbbky, rthy tex, arg, tr fos, v calc
firm, sbbky, sl mot, sl sily tex	20% CHK: lt gy - gy, brt -firm, sbbky, sl mot, sl sily tex	25% CHK: lt gy - gy, brt -firm, sbbky, sl mot, sl sily tex		

MD 9832' INC 89.5 AZM 85.2 TVD 6944.38'	MD 9927' INC 88.6 AZM 84.5 TVD 6945.95'	MD 9991' INC 89.4 AZM 86.9 TVD 6947.07'	MD 10022' INC 90.3 AZM 88.3 TVD 6947.15'
--------------------------------------------------	--------------------------------------------------	--------------------------------------------------	---------------------------------------------------

Clean Chalks



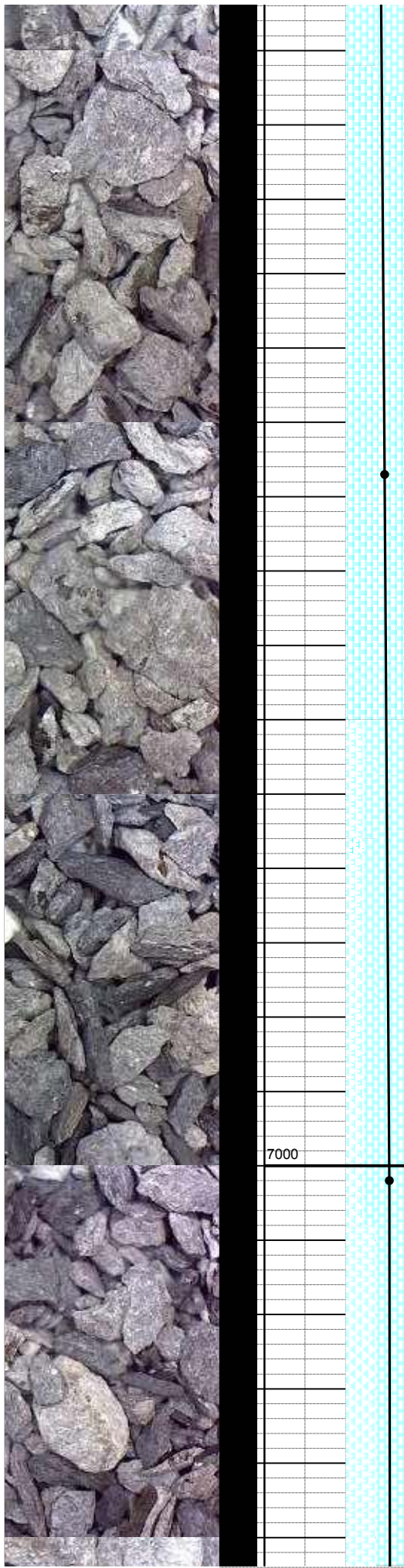
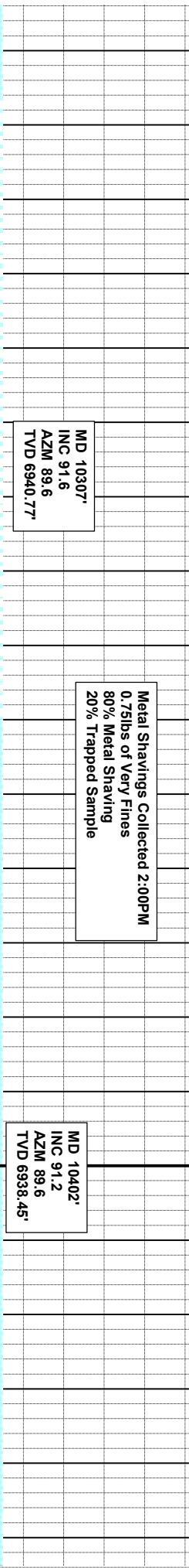
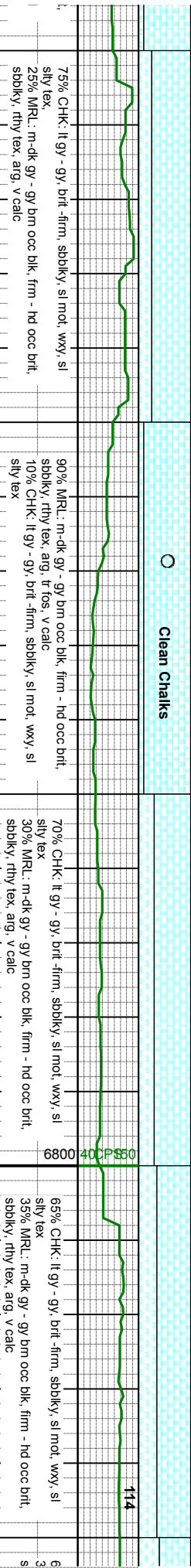
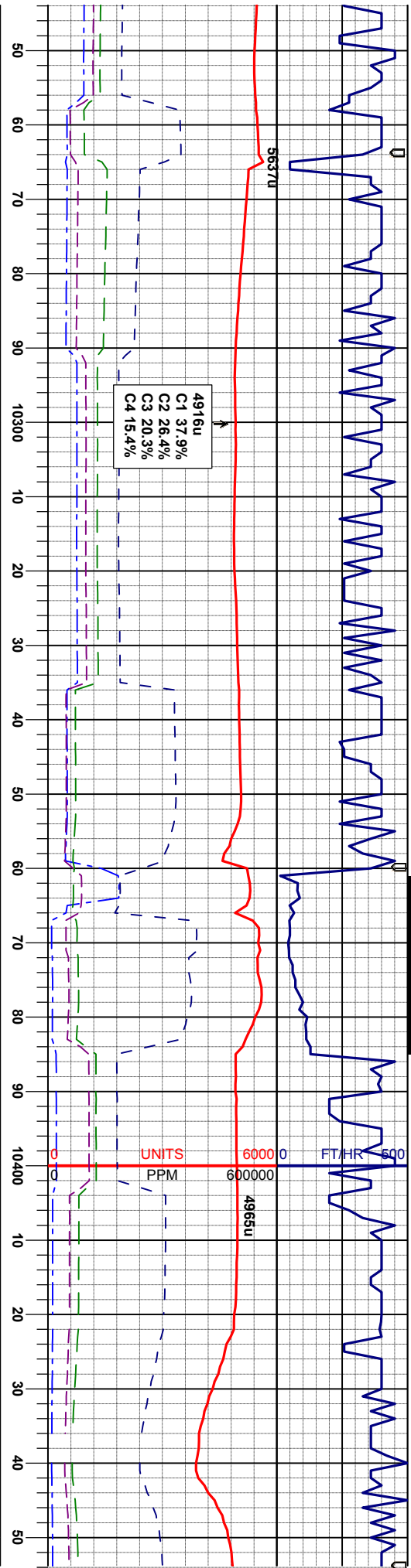


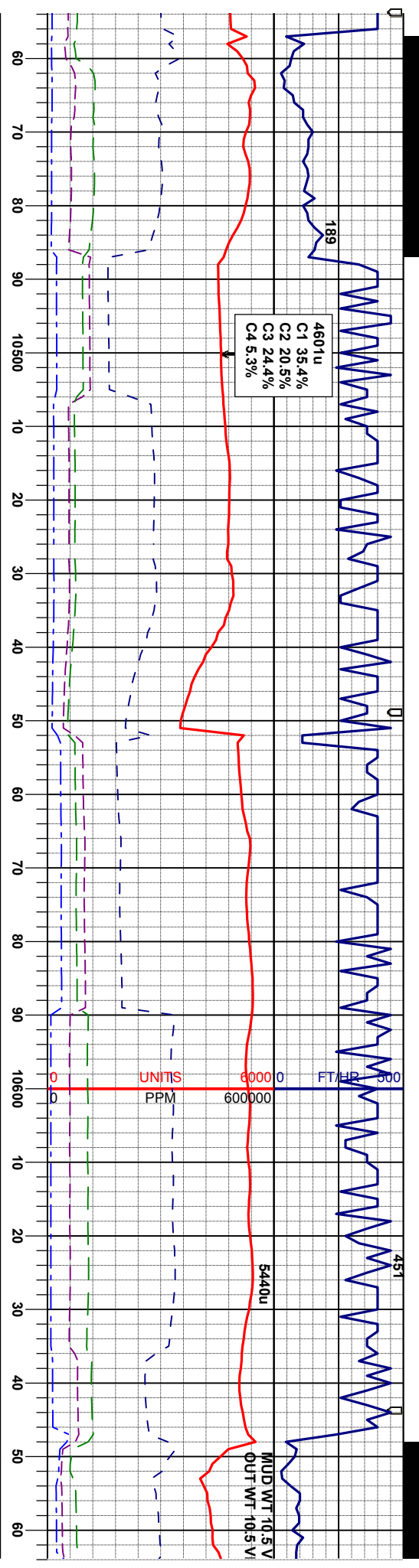
MD 10117'
INC 91.4
AZM 89.9
TVD 6945.74'

MD 10212'
INC 91.5
AZM 90.6
TVD 6943.34'

Clean Chalks







55% CHK: lt gy - gy, brlt - firm, sbbkly, sl mot, sl stly tex
15% MRU: m-dk gy - gy brn ooc blk, firm - hd ooc brlt,
bbkly, rthy tex, arg, v calic

90% MRU: m-dk gy - gy brn ooc blk, firm - hd ooc brlt,
sbbkly, rthy tex, arg, v calic
10% CHK: lt gy - gy, brlt - firm, sbbkly, sl mot, sl stly tex

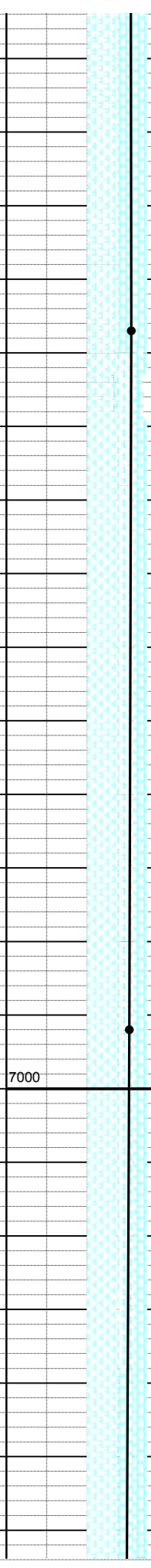
90% MRU: m-dk gy - gy brn ooc blk, firm - hd ooc brlt,
sbbkly, rthy tex, arg, v calic
10% CHK: lt gy - gy, brlt - firm, sbbkly, sl mot, sl stly
tex, lt pyr

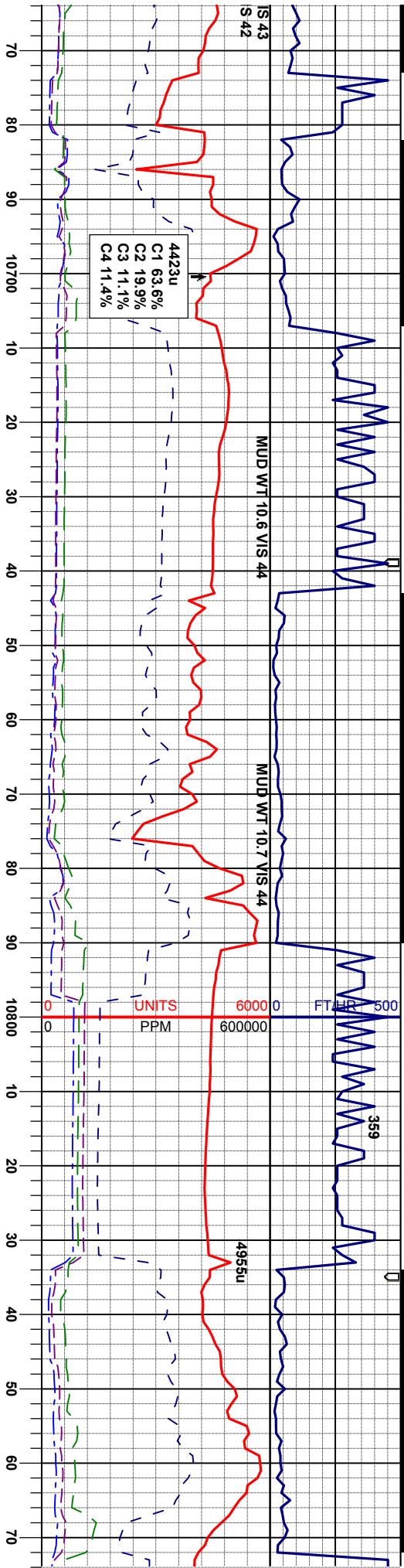
70% MRU: m-dk gy - gy brn ooc blk, firm - hd ooc brlt,
sbbkly, rthy tex, arg, v calic
30% CHK: lt gy - gy, brlt - firm, sbbkly, sl mot, sl stly tex

65% MRU: m
sbbkly, rthy t
35% CHK: lt

MD 10497'
INC 89.5
AZM 92.2
TVD 6937.87'

MD 10592'
INC 89.2
AZM 95.0
TVD 6938.94'





MD 10687
INC 88.9
AZM 93.3
TVD 6940.52'

Metal Shavings Collected 8:00PM
1.3lbs of Very Fines
35% Metal Shaving
65% Trapped Sample

MD 10782
INC 88.0
AZM 90.6
TVD 6943.09'

-dk gy - gy brn occ blk, firm - nd occ brlt,
x, arg, v calc
gy - gy, brlt -firm, sdbkly, sl mot, sl sily tex

60% CHK: lt gy - gy, brlt -firm, sdbkly, sl mot, sl sily tex
40% MRL: m-dk gy - gy brn occ blk, firm - nd occ brlt,
sdbkly, rthy tex, arg, v calc

85% CHK: lt gy - gy, brlt -firm, sdbkly, sl mot, sl sily tex
15% MRL: m-dk gy - gy brn occ blk, firm - nd occ brlt,
sdbkly, rthy tex, arg, v calc

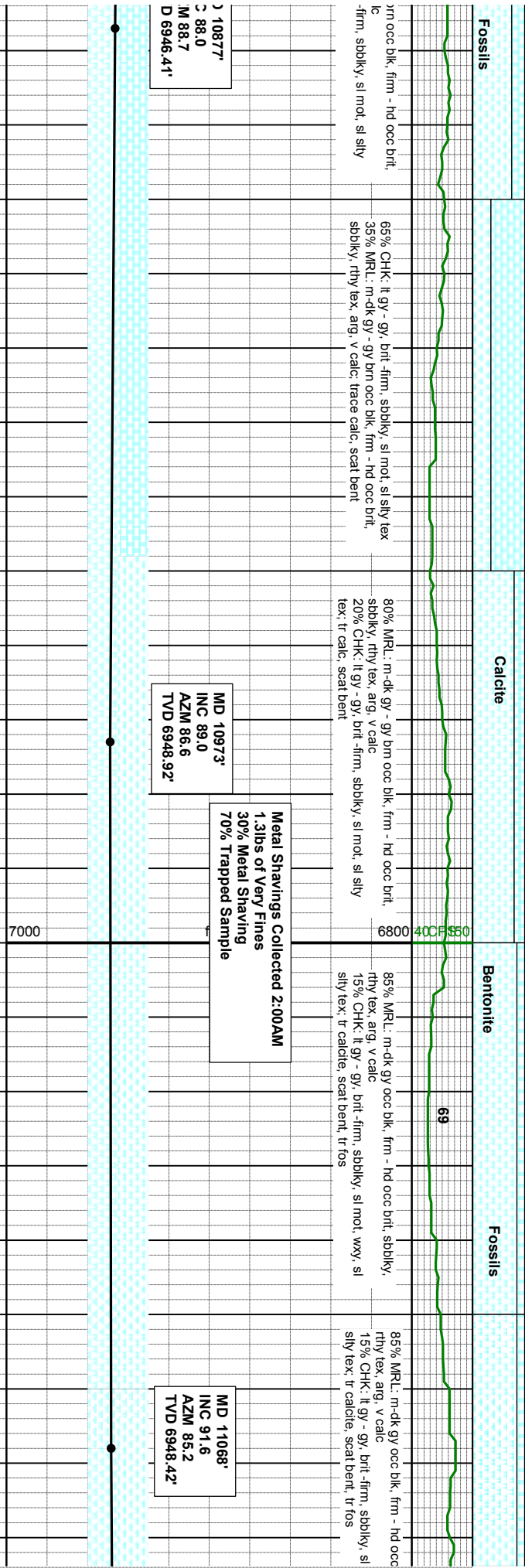
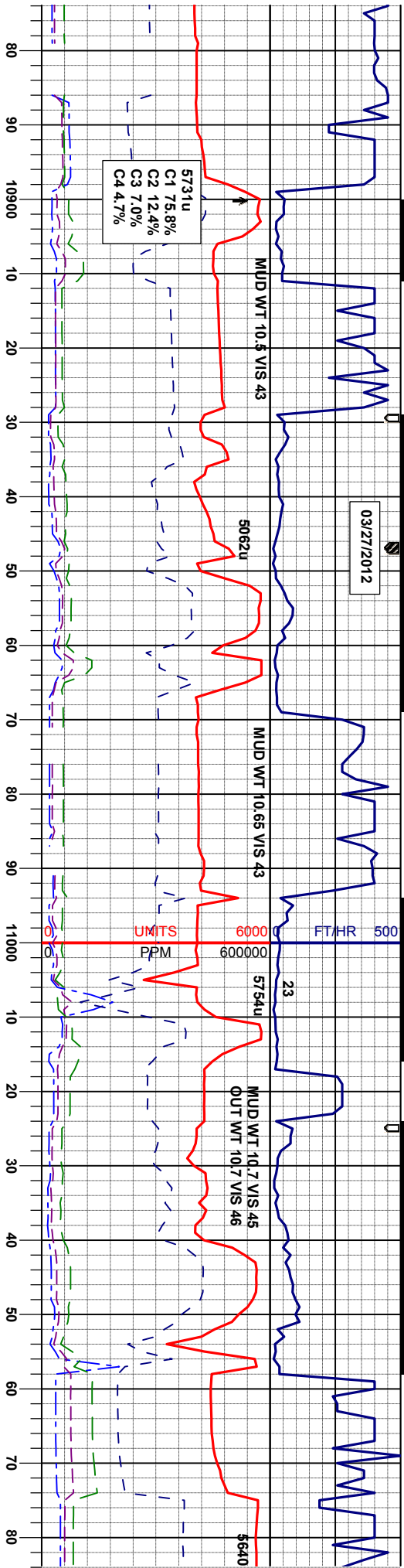
60% MRL: m-dk gy - gy brn occ blk, firm - nd occ brlt,
sdbkly, rthy tex, arg, v calc
40% CHK: lt gy - gy, brlt -firm, sdbkly, sl mot, sl sily
tex, lt tos, lt bent

75% MRL: m-dk gy - gy t
sdbkly, rthy tex, arg, v ca
25% CHK: lt gy - gy, brlt
tex, lt tos, scat bent

Bentonite

MC
INC
AZ
TV





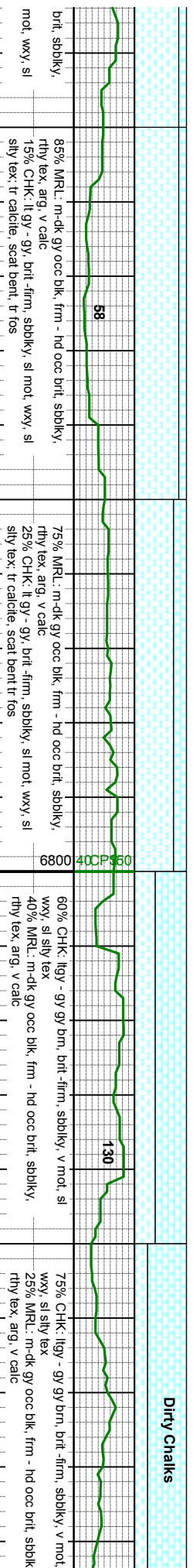
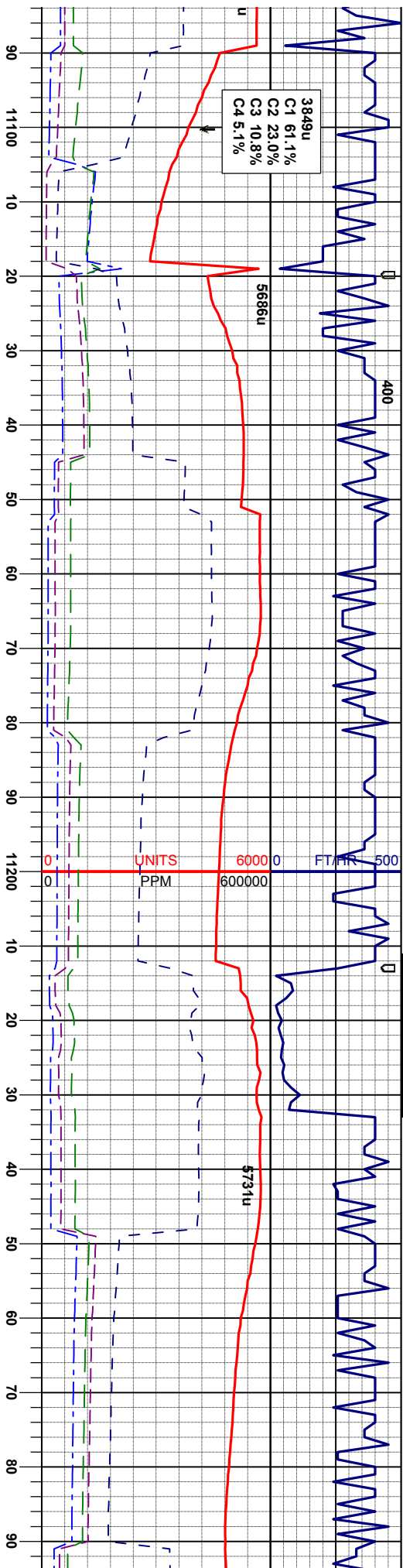
10877'
C 88.0
M 88.7
D 6946.41'

MD 10973'
INC 89.0
AZM 86.6
TVD 6948.92'

Metal Shavings Collected 2:00AM
1.3lbs of Very Fines
30% Metal Shaving
70% Trapped Sample

MD 11068'
INC 91.6
AZM 85.2
TVD 6948.42'

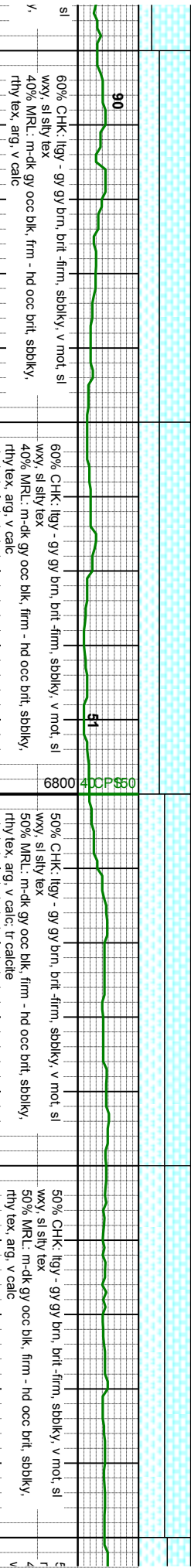
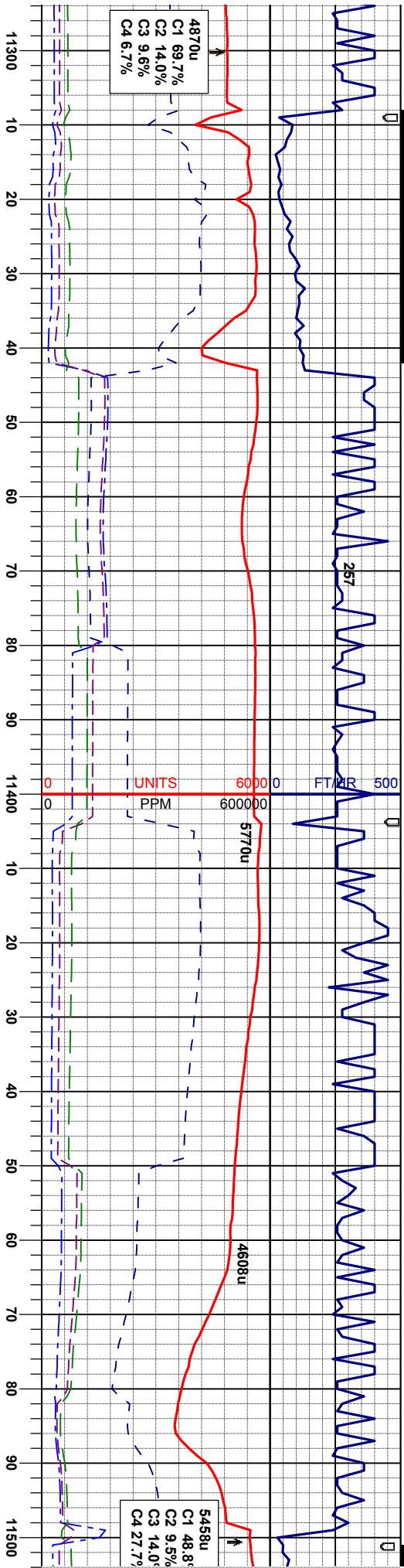




MD 11163'
INC 91
AZM 86.1
TVD 6946.27'

MD 11258'
INC 90.7
AZM 85.4
TVD 6944.86'

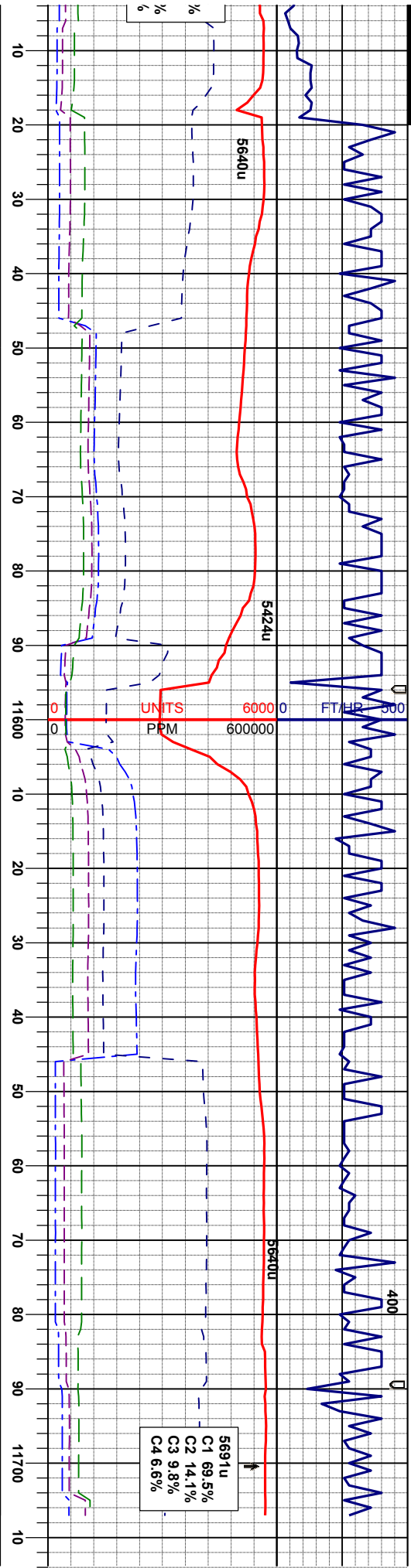




MD 11353'
INC 92.3
AZM 85.7
TVD 6942.37'

MD 11448'
INC 92.9
AZM 86.1
TVD 6938.06'





55% MRL: m-dk gy occ blk, firm - hd occ brlt, sbblky, rthy tex, arg, v calc
45% CHK: lgy - gy gy brn, brlt-firm, sbblky, v mot, sl wxy, sl silty tex, tr bent, tr calcite

55% MRL: m-dk gy occ blk, firm - hd occ brlt, sbblky, rthy tex, arg, v calc
45% CHK: lgy - gy gy brn, brlt-firm, sbblky, v mot, sl wxy, sl silty tex, occ bent

55% MRL: m-dk gy occ blk, firm - hd occ brlt, sbblky, rthy tex, arg, v calc
45% CHK: lgy - gy gy brn, brlt-firm, sbblky, v mot, sl wxy, sl silty tex, tr bent, tr calcite

MD 11543'
INC 91.8
AZM 87.1
TVD 6934.17'

MD 11638'
INC 90.8
AZM 87.3
TVD 6932.01'

MD 11656'
INC 90.9
AZM 88
TVD 6931.74'

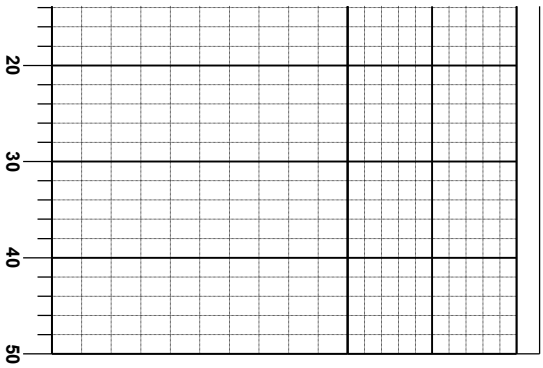
MD 11707'
INC 90.9
AZM 88
TVD 6930.94'

Thank You for
Columbine Lo

TD @ 11707'
on 3-27-12 at

Projected





1D
10:00AM

using
gging Inc.