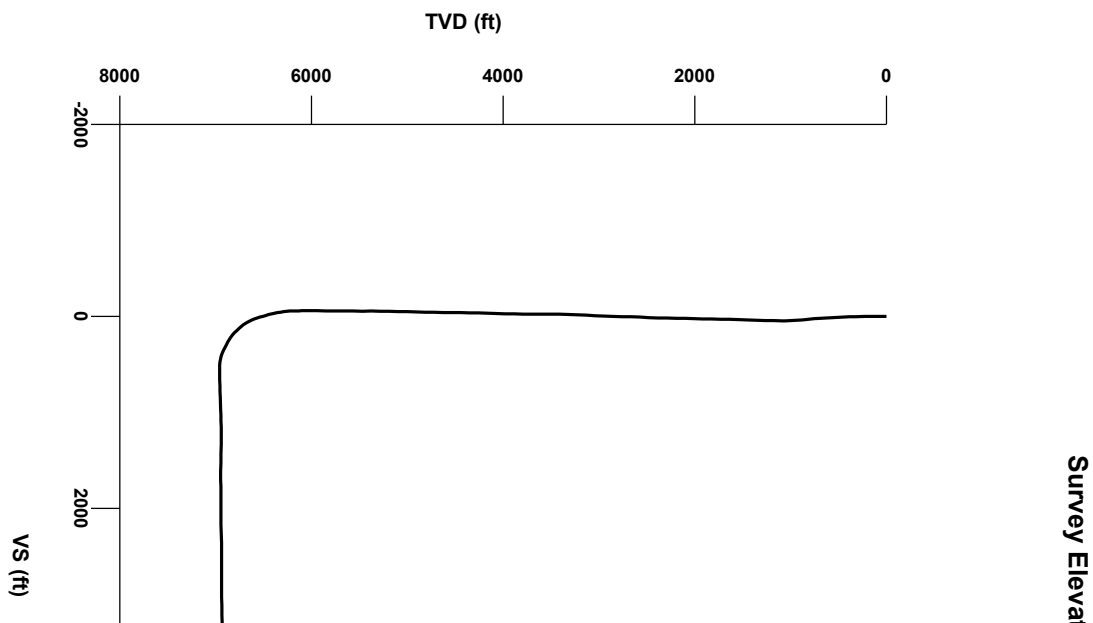
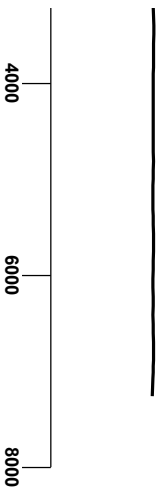


LOG created using LPLOT VH Version 3.0, December 10, 2012, Copyright (C) 1999-2009 Pason Systems Corp.

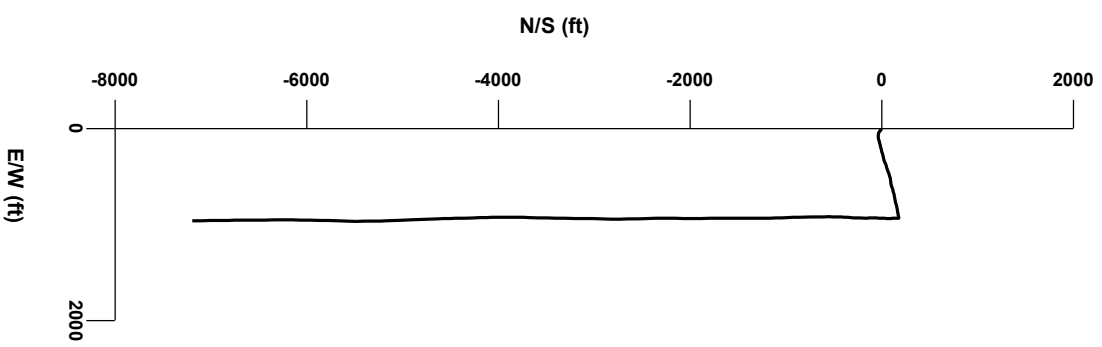
OPERATOR: ENCANA OIL & GAS (USA), INC.
WELL: GURTLE 2A-30H
LOCATION: NWNW S30 T2N R64W
COUNTY: WELD
STATE: COLORADO
SPOT: 210' FNL, 868' FWL
ELEVATION: GL 4928', KB 4941'
FIELD: WATTENBERG
SPUD DATE: 11/25/2012
TD DATE: 12/10/2012
DATES LOGGED: 11/29/2012 - 12/10/2012
DEPTHS LOGGED: 5,000' - 14,182'
LOGGERS: RUSSELL FROMMER, SETH CHAMBERLAIN
DRILLING FLUID: H2O, LSND
DRILLING RIG: ENSIGN 124
API: 05-123-35980
LOG TYPE: HORIZONTAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: ALL DEPTH MEASUREMENTS ARE FROM KELLY BUSHING AND ARE BASED OFF OF THE DRILLER'S PIPE TALLY; ROCK SAMPLES ARE DESCRIBED WHILE WET UNLESS OTHERWISE NOTED; COLORS ARE BASED ON THE GEOLOGICAL ROCK-COLOR CHART (ed. 2009) WITH STANDARDS SET BY GSA, AAPG & SPWLA. <<LOG CONTINUED FROM GURTLE 2A-30H VERTICAL>> MUD LOGGING SERVICES PROVIDED BY COLUMBINE LOGGING, INC.

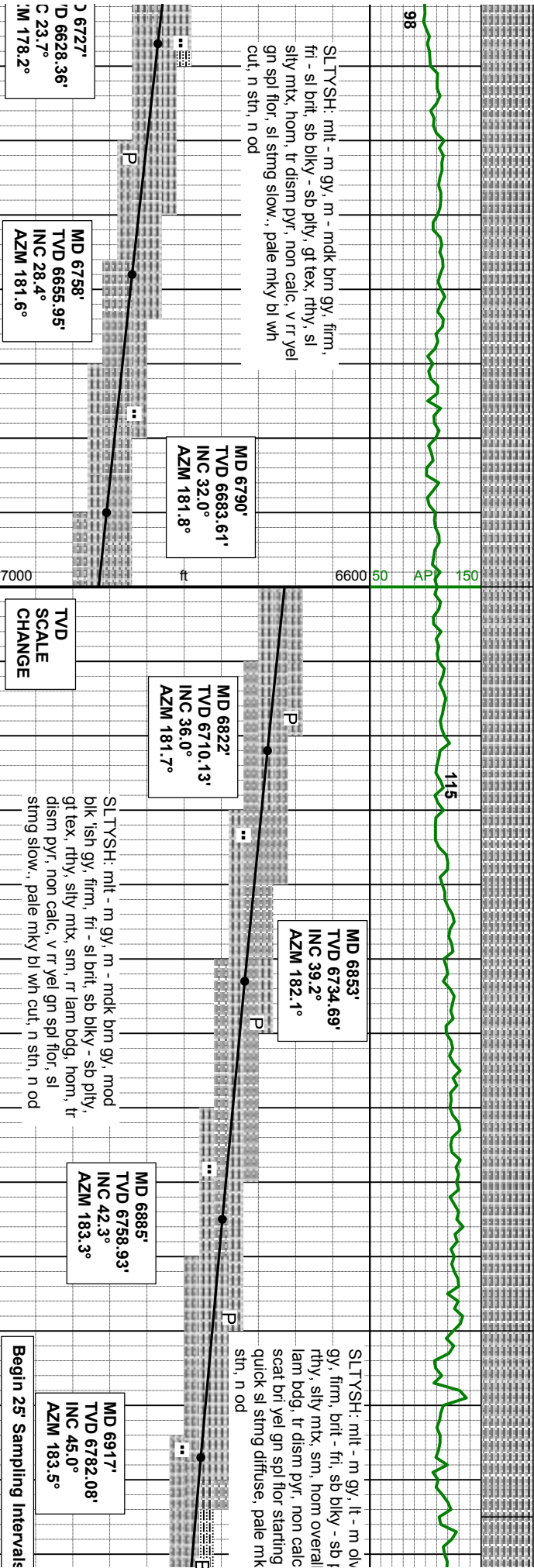
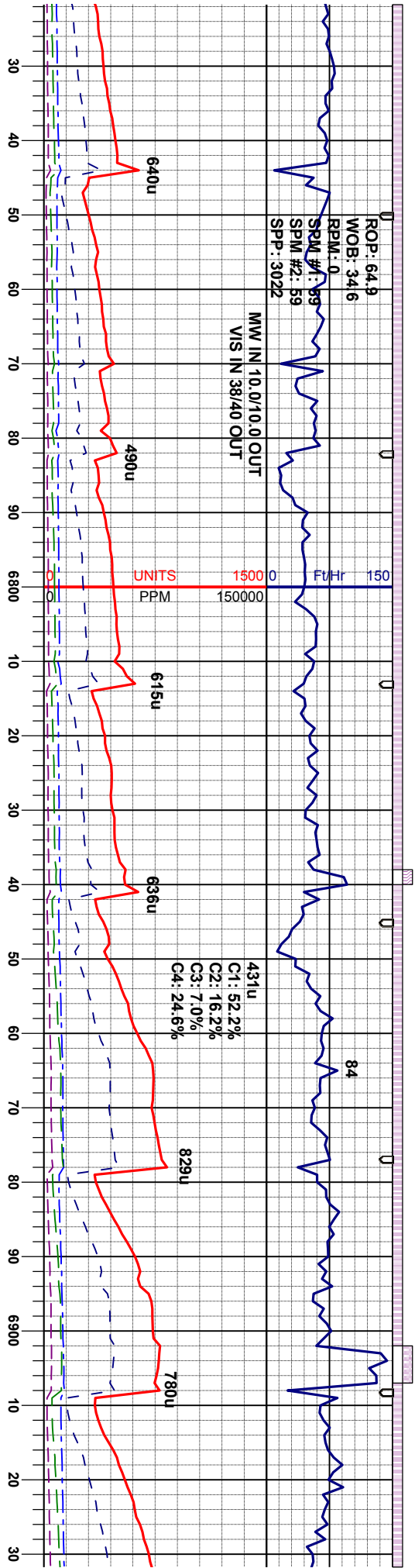


ion



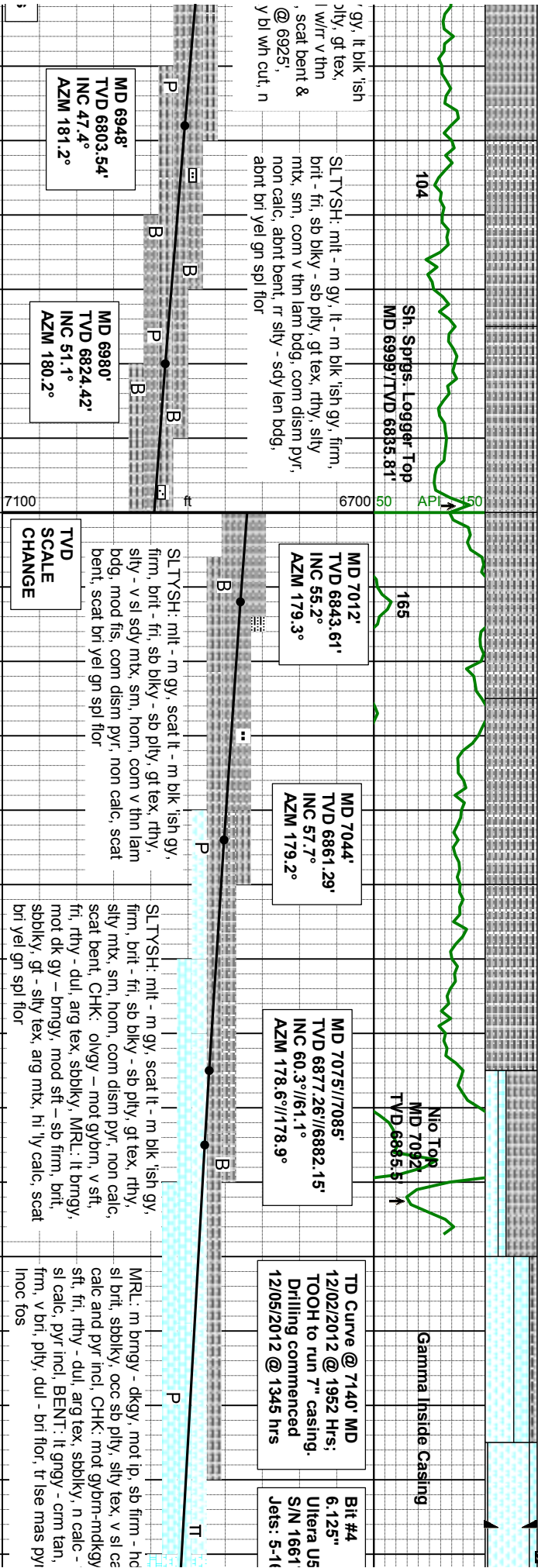
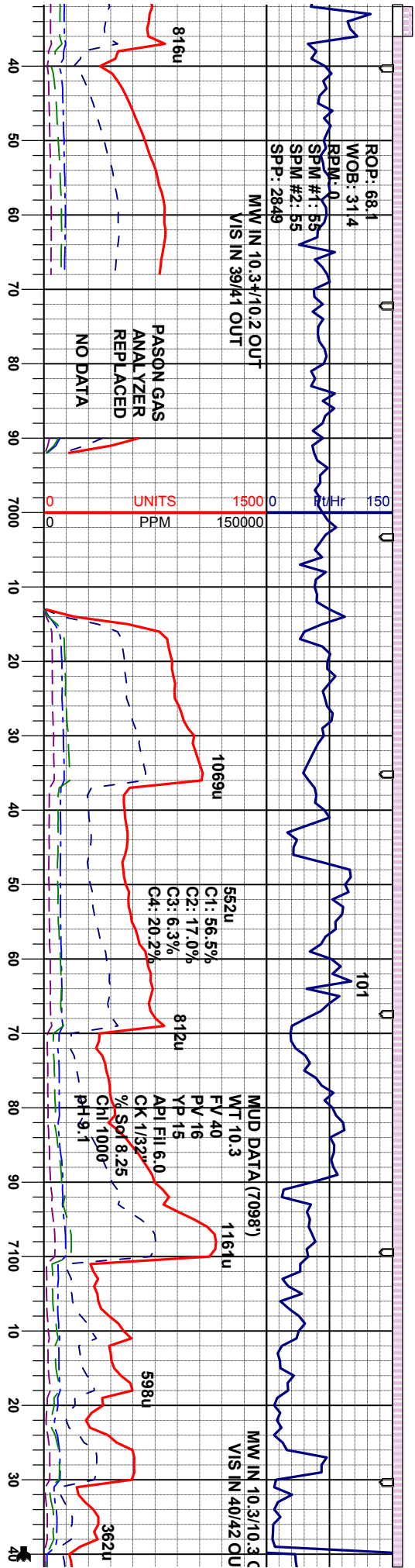
Survey Plan



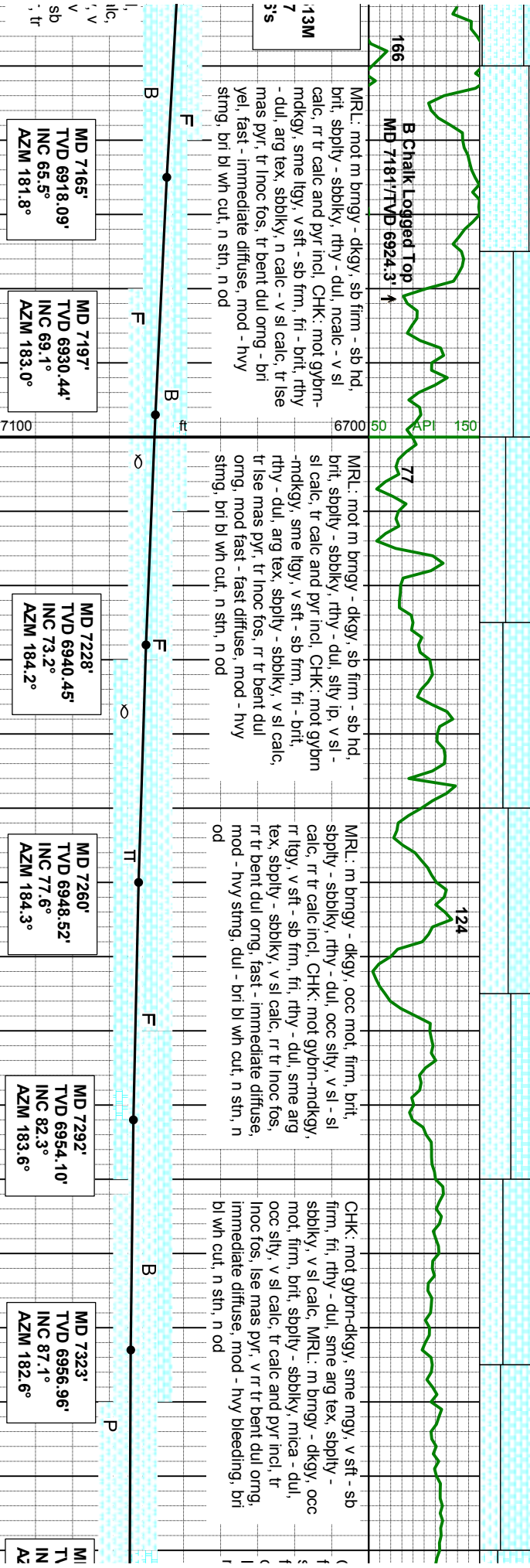
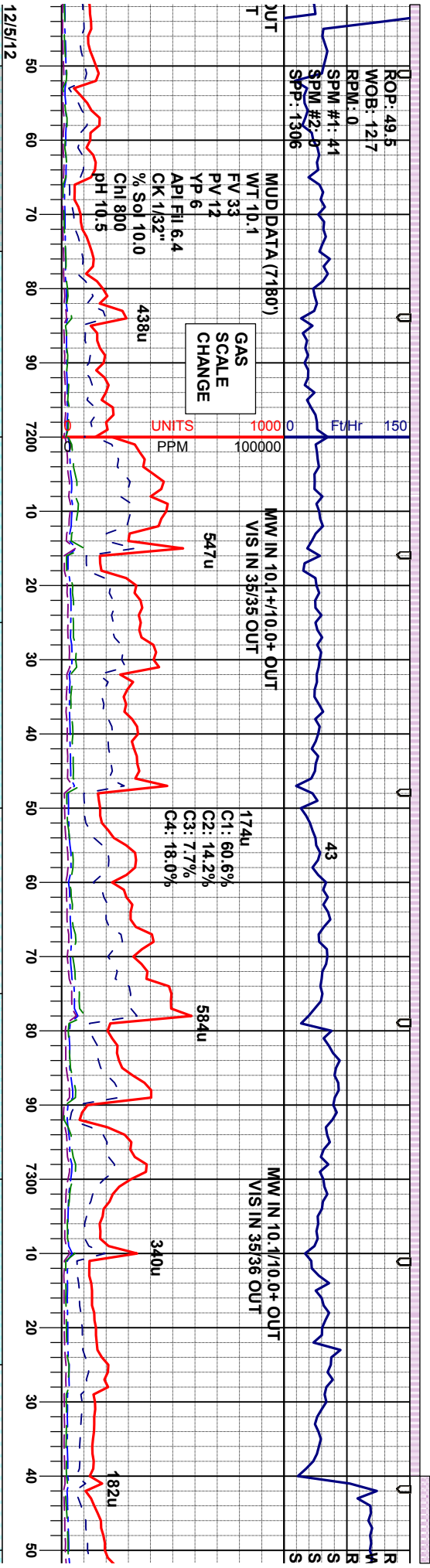


Moderate

Moderate

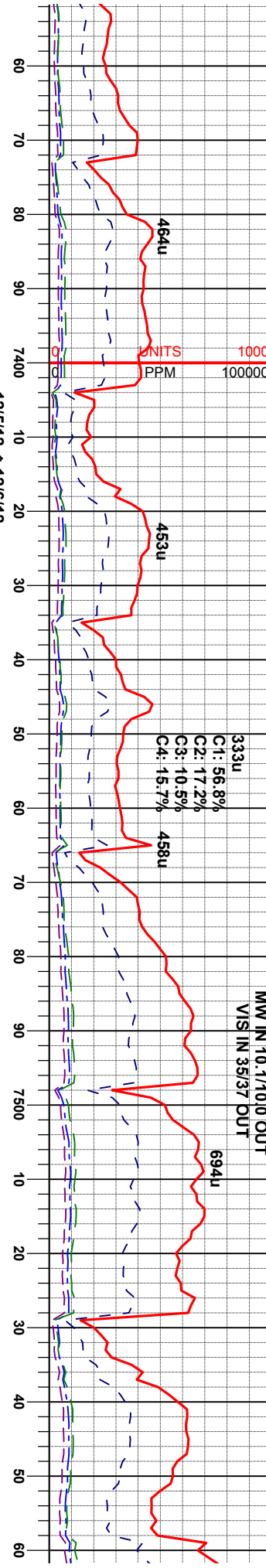


Moderate



OP: 102.5
108-181
PM: 45
PM #1: 60
PM #2: 0
PP: 2209

ROP: 73.1
WOB: 19.4
RPM: 49
SPM #1: 60
SPM #2: 0
SPP: 2148



12/5/12 12/6/12

CHK: mot gybm-dkgy, mgy ip, v sft - sft, v fri, rthy - dul, sme arg tex, sbply - sbply, v sl calc, MRL: m brngy - dkgy, occ mot, mod frm - frm, brt, sbply - sbply, mica - dul, occ silty, v sl calc, tr calc and pyr incl, sme noc fos, lse mas pyr, mod bcn fast diffuse, mod stng, bri bl wh cut, n stn, n od

CHK: mot gybm-dkgy, mgy ip, v sft - sft, v fri, rthy - dul, sme arg tex, sbply - sbply, v sl calc, MRL: m brngy - dkgy, occ mot, mod frm - frm, brt, sbply - sbply, mica - dul, occ silty, v sl calc, tr calc and pyr incl, tr inoc fos, tr tr dul omg bent, fast diffuse, good stng - mod bleeding, bri bl wh - bri yel cut, n stn, n od

CHK: mot gybm-dkgy, mgy ip, frm, fri, rthy - dul, sme arg tex, sbply - sbply, sl calc, tr calc incl, MRL: m brngy - dkgy, occ mot, frm - hd, brt, sbply - sbply, mica - dul, occ silty, sl calc, tr calc and pyr incl, tr inoc fos, fast diffuse, g stng - mod bleeding, bri bl wh - sl yel cut, n stn, n od

CHK: mot gybm-dkgy, mgy ip, fir rthy - dul, sl arg - sl lam tex, sbply sl calc, tr calc incl, MRL: m brngy occ mot, frm - hd, brt, sbply - sb - dul, occ silty, sl calc, tr calc incl, fos, mod fast - imm diffuse, g stn bleeding, bri bl wh cut, n stn, n o

F B P TT B F TT P F

D 7355' /D 6958.16' C 88.6° ZM 182.2°

TVD SCALE CHANGE

6980

MD 7418' TVD 6958.82' INC 90.2° AZM 181.1°

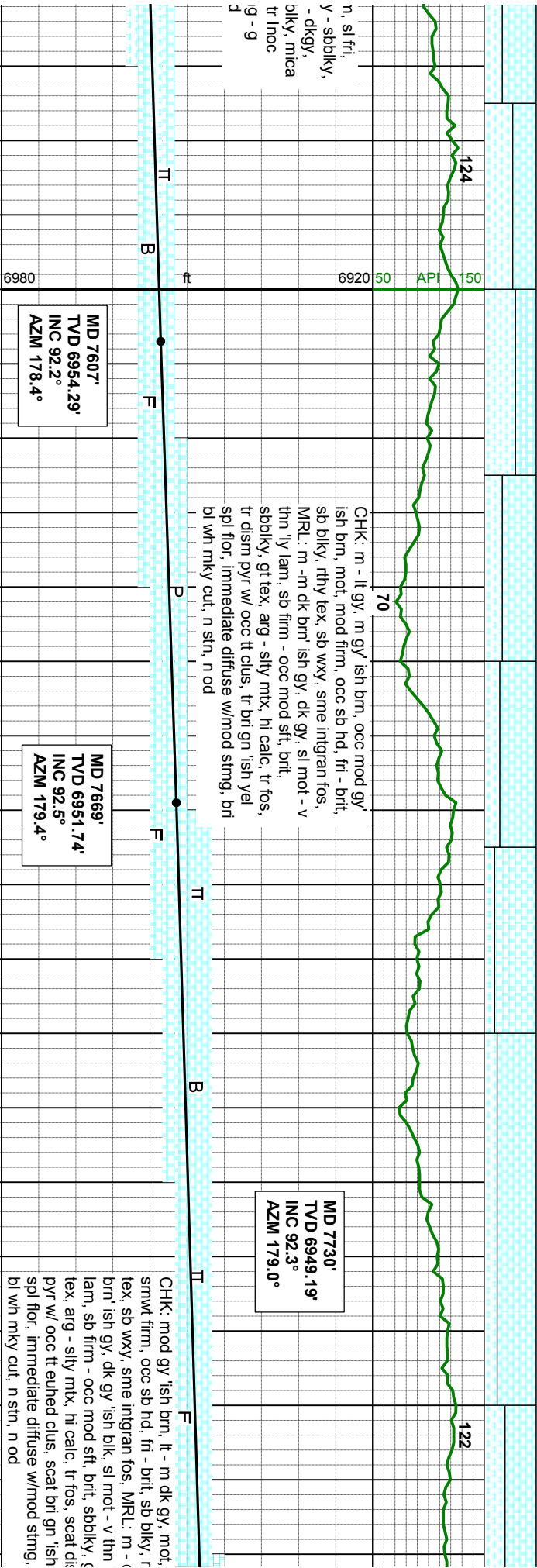
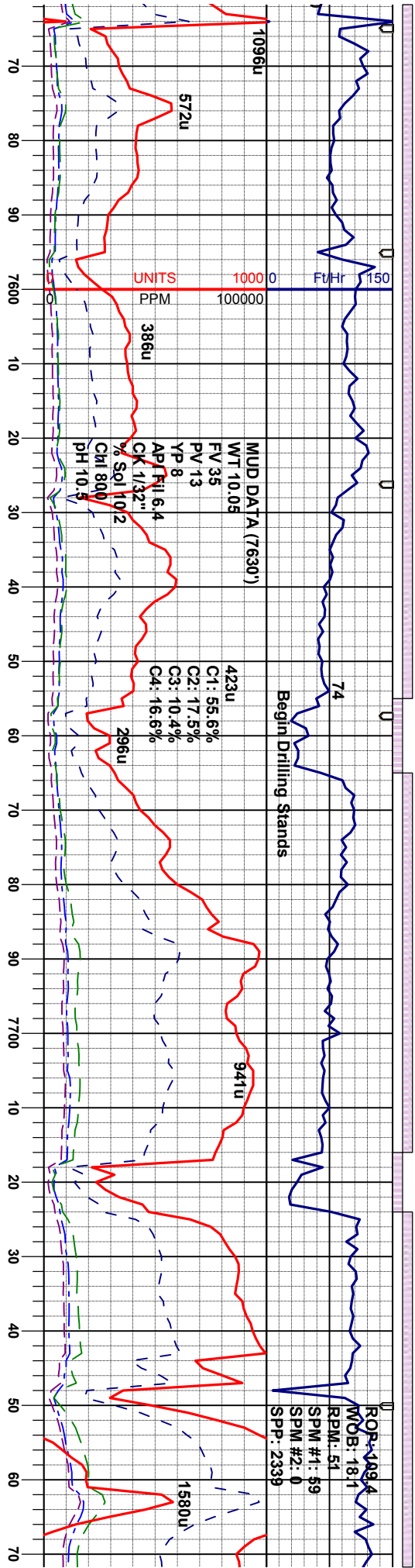
MD 7450' TVD 6958.46' INC 91.1° AZM 181.1°

MD 7482' TVD 6957.99' INC 90.6° AZM 180.0°

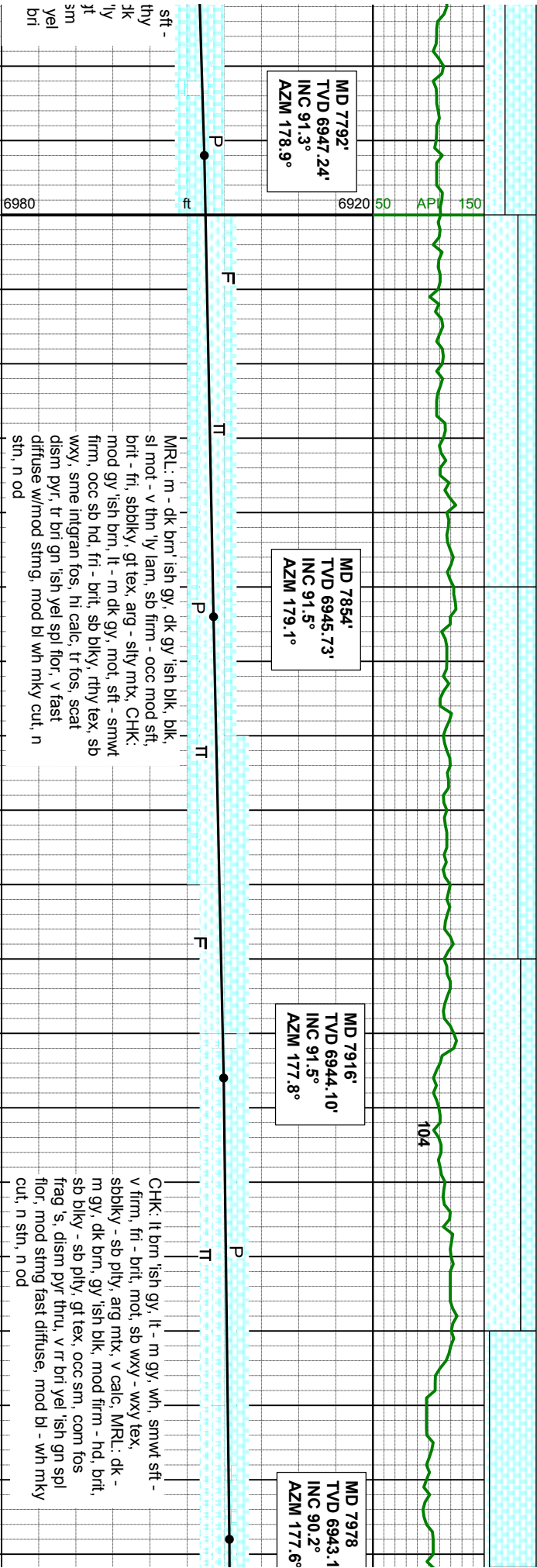
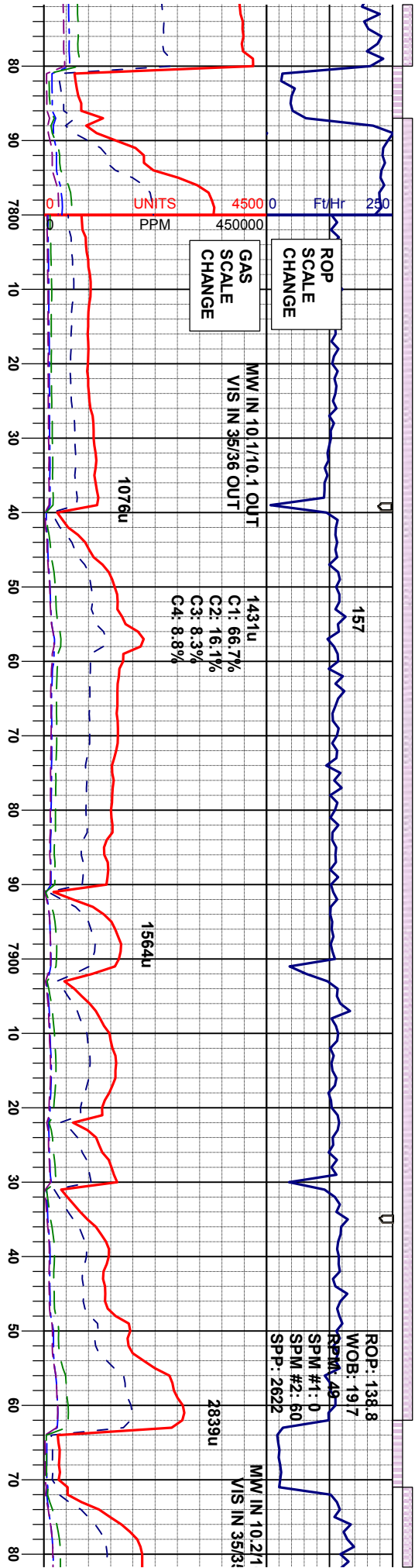
MD 7545' TVD 6956.56' INC 92.0° AZM 179.2°

Moderate

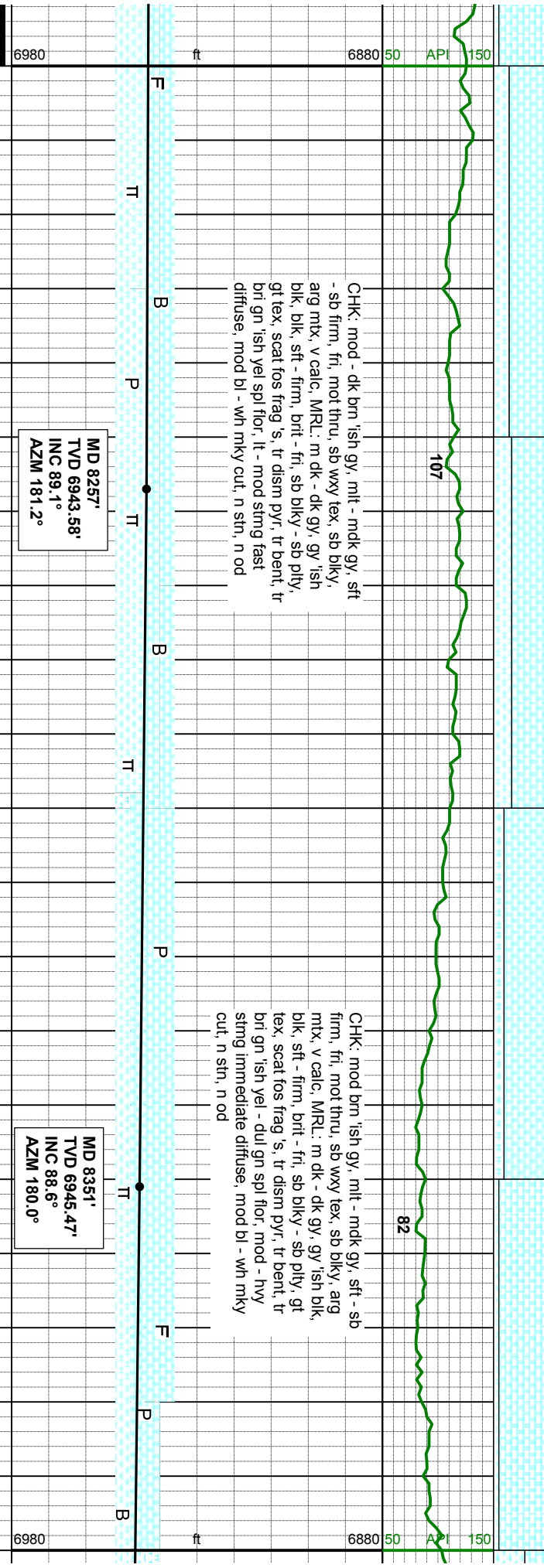
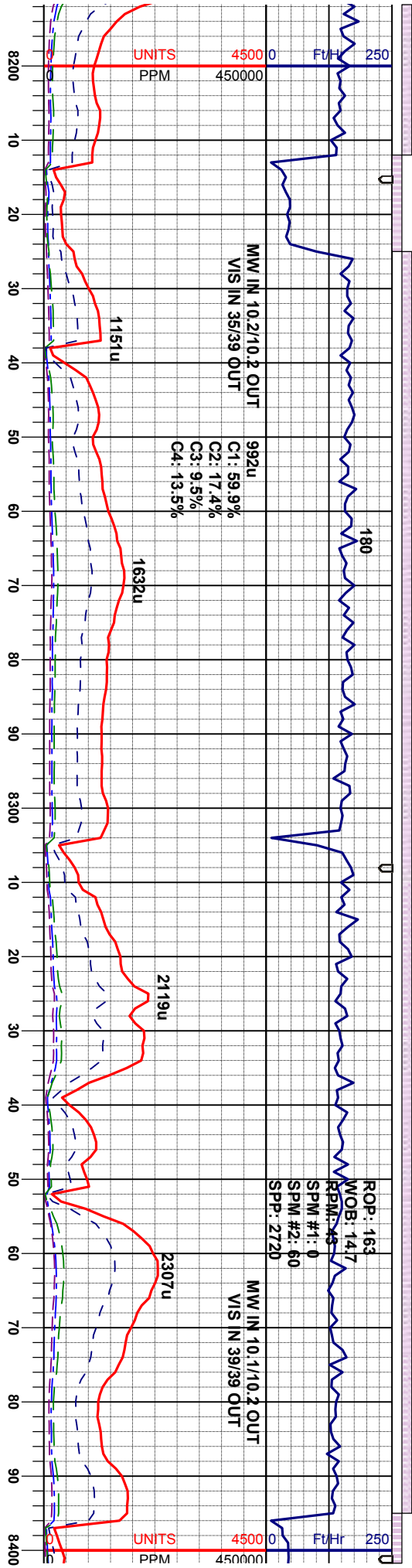




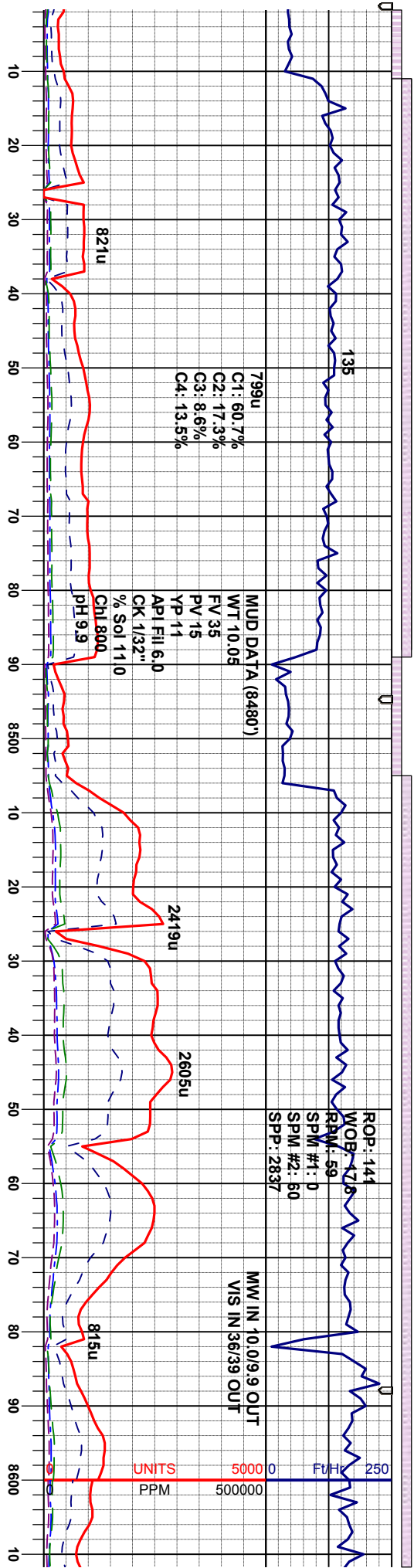
Moderate



Moderate



Moderate



CHK: mot gybm-dkgy, occ mgy, sft - firm, fri, rthy - dul, arg tex, sbply - sbblky, v sl calc, tr calc incl, MRL: m brngy - dkgy, occ mot, frm - hd, brt, sbply - sbblky, mica - dul, occ slty, sl calc, tr calc incl, sme inoc fos, lse mas pyr, mod slow, - fast diffuse, mod stng, wk bl wh cut, n stn, n od

MRL: m brngy - dkgy, occ mot, v firm - hd, brt, sbply - sbblky, mica - dul, occ slty, v sl calc, tr calc incl, CHK: mot gybm-dkgy, occ mgy, firm, fri, rthy - dul, arg tex, sbply - sbblky, v sl calc, tr calc and dk carb incl, sme inoc fos, fast diffuse, good stng, bri bl wh - bri yel cut, n - mod stn, n od

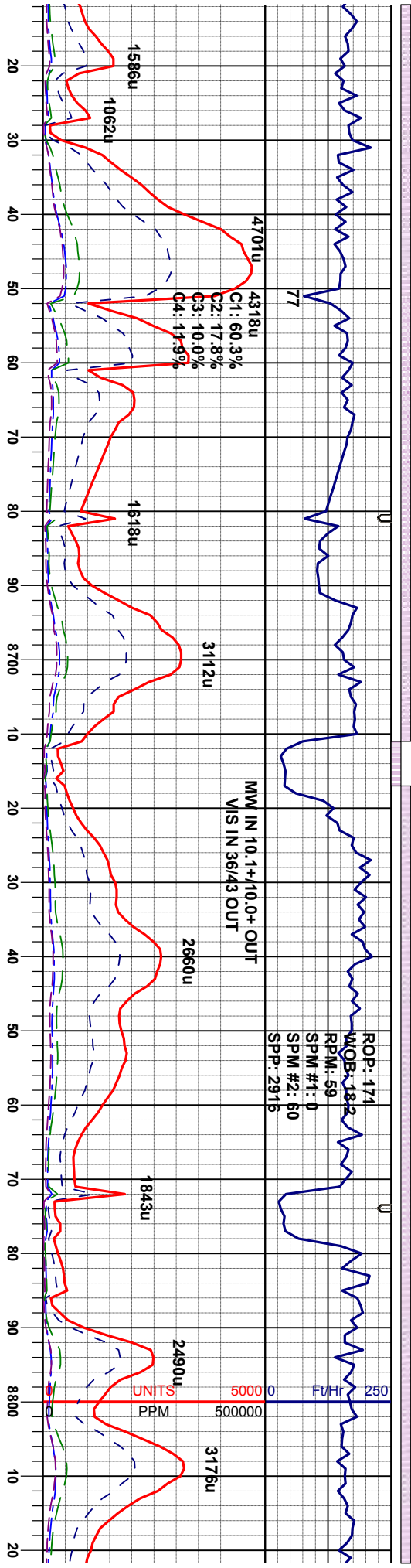
MD 8444'
TVD 6947.66'
INC 88.7°
AZM 180.6°

MD 8537'
TVD 6947.66'
INC 91.3°
AZM 180.0°

MD 8599'
TVD 6946.63'
INC 90.6°
AZM 179.2°

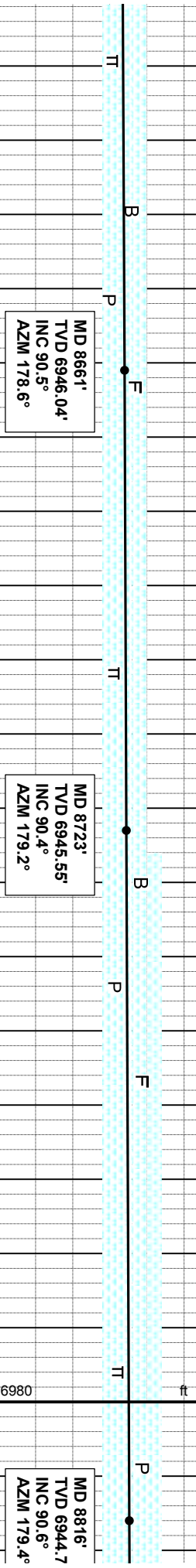
Moderate



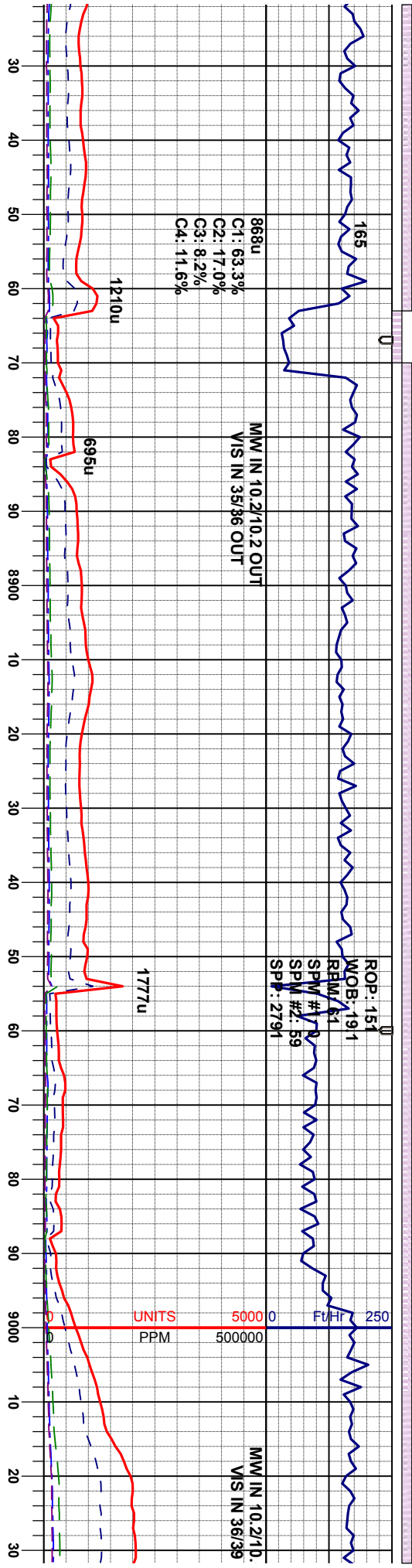


MRL: m brngy - dkgy, occ mot, v firm - hd, brit, sbply - sbblky, mica - dul, occ silty, sl calc, tr calc incl, CHK: mot gybm-dkgy, occ mgy, firm, fri, rthy - dul, arg tex, sbply - sbblky, sl calc, tr calc and pyr incl, sme inoc fos, tr dul org bent, slow - imm diffuse, mod - good stng, bri yel bcm bri - dul bl wh cut, n stn, n od

MRL: m brngy - dkgy, occ mot, firm, brit, sbply - sbblky, mica - rthy, silty ip, ncalc - v sl calc, CHK: mot gybm-dkgy, sft - firm, fri, rthy - dul, arg tex, sbply - sbblky, v sl calc, tr pyr incl, lse mas pyr, tr tr inoc fos, tr dul org - bri yel bent, mod fast - fast diffuse, good bleeding, dul - bri bl wh cut, n stn, n od



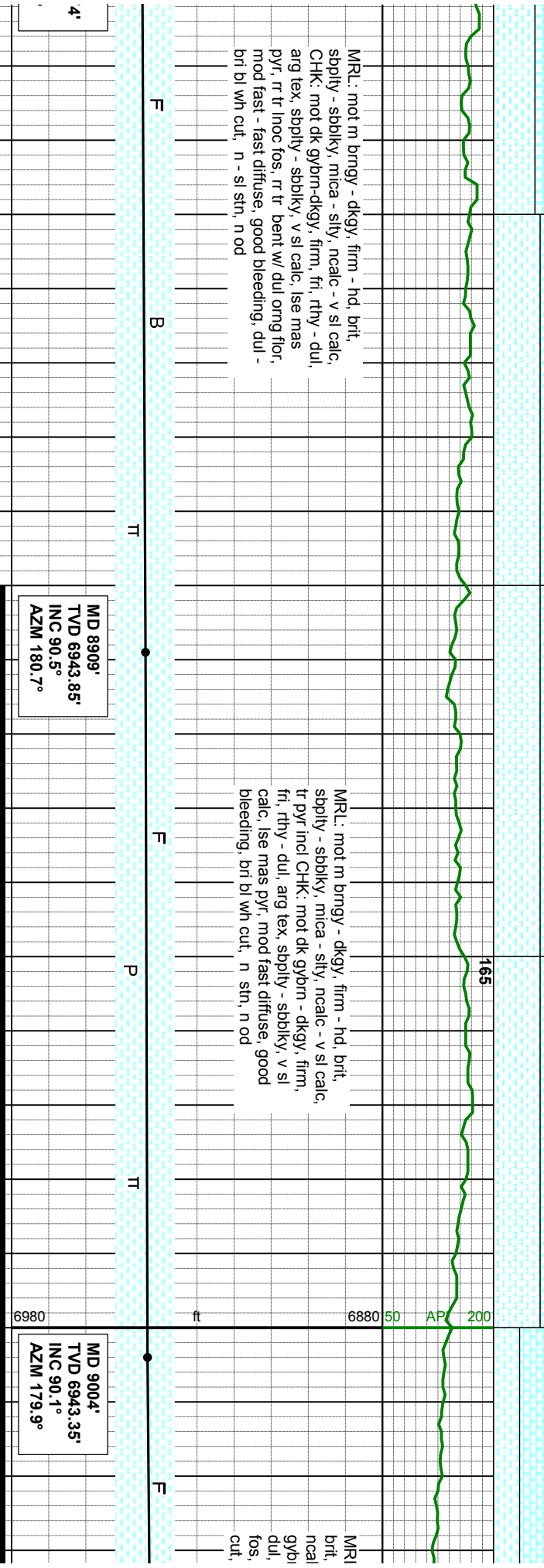
Moderate



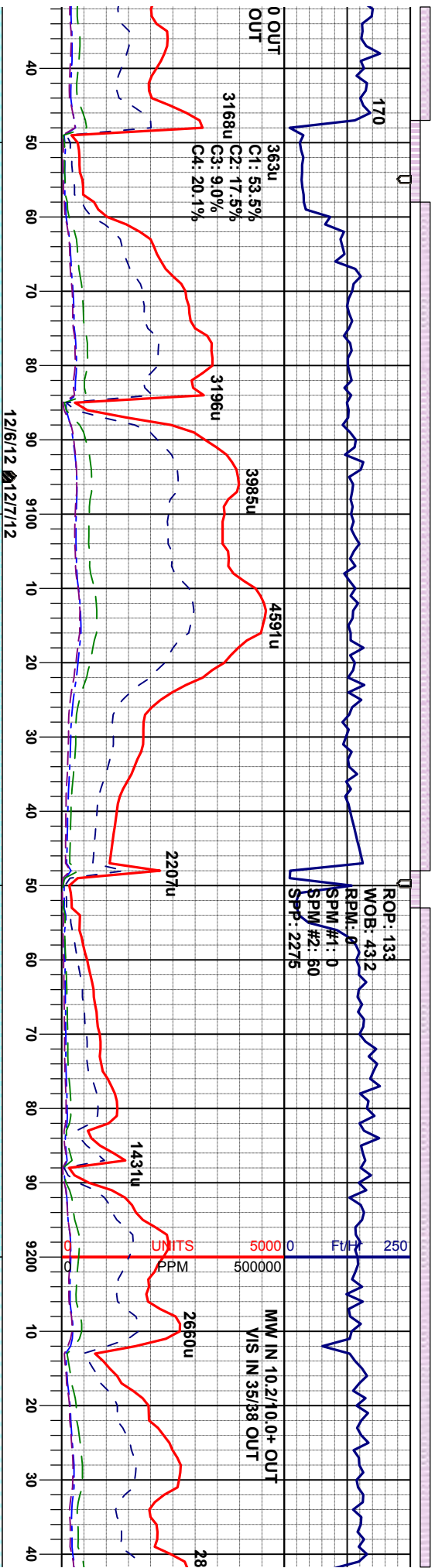
MRL: mot m brngy - dkgy, firm - hd, brt,
sbply - sdbkly, mica - slty, ncalc - v sl calc,
CHK: mot dk gybm-dkgy, firm, fti, rthy - dul,
arg tex, sbply - sdbkly, v sl calc, lse mas
pyr, rr tr inoc fos, rr tr bent w/ dul org flor,
mod fast - fast diffuse, good bleeding, dul -
brt bl wh cut, n - sl stn, n od

MRL: mot m brngy - dkgy, firm - hd, brt,
sbply - sdbkly, mica - slty, ncalc - v sl calc,
tr pyr incl CHK: mot dk gybm - dkgy, firm,
fti, rthy - dul, arg tex, sbply - sdbkly, v sl
calc, lse mas pyr, mod fast diffuse, good
bleeding, brt bl wh cut, n stn, n od

MRI
brt,
ncal
gybi
dul,
fos,
cut,



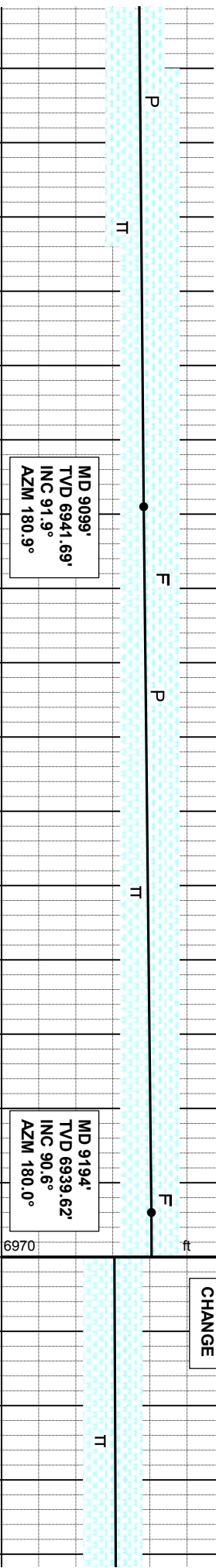
Good

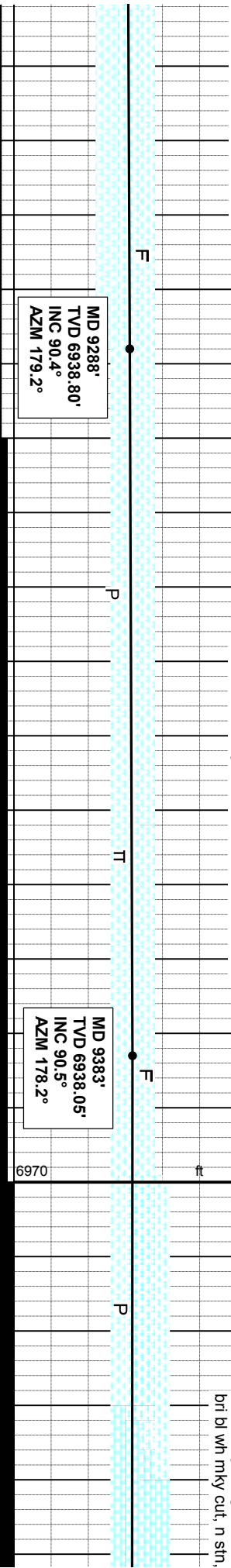
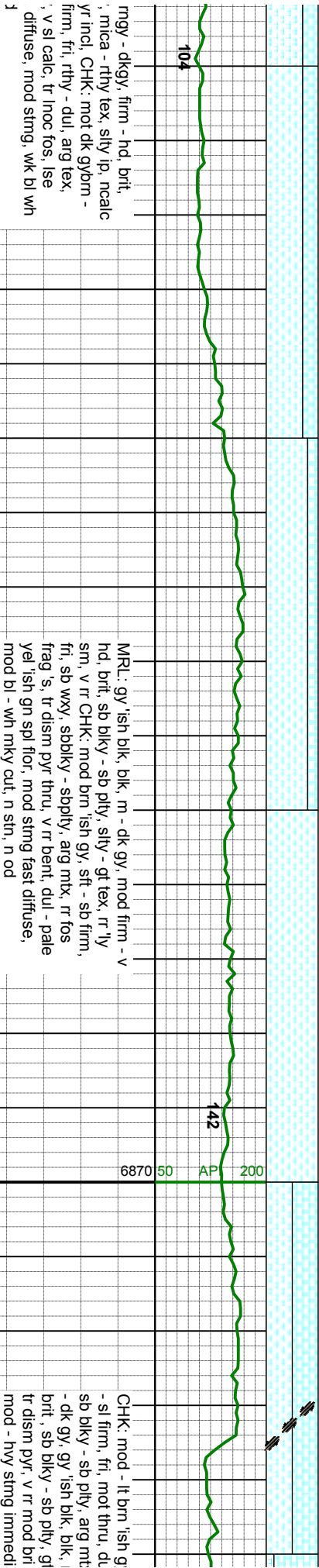
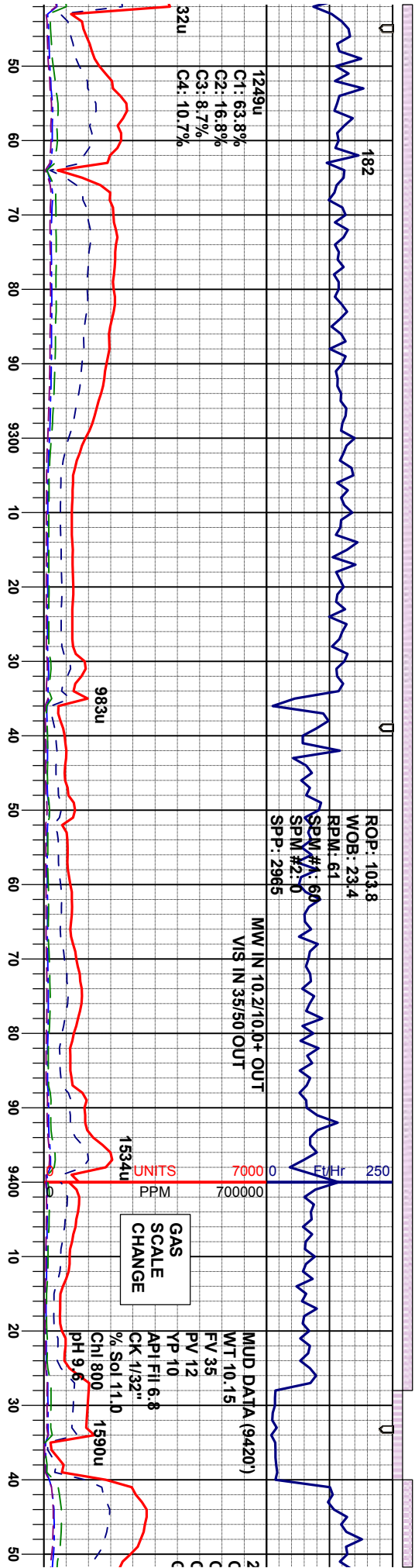


.: m brngy - dkgy, occ mot, firm - hd,
sbply - sbblky, mica - rthy, silty ip,
c - v sl calc, tr calc incl CHK: mot dk
n - dkgy, mgy ip, mod firm, fi, rthy -
arg tex, sbply - sbblky, v sl calc, tr inoc
fast - imm diffuse, good sting, bri bl wh
n stn, n od

MRL: m brngy - dkgy, occ mot, firm - hd,
brit, sbply - sbblky, mica - silty tex, ncalc - v
sl calc, tr calc and pyr incl, CHK: mot dk
gybrn - dkgy, mgy ip, mod firm, fi, rthy -
dul, arg - lam tex, sbply - sbblky, v sl calc,
tr inoc fos, fast diffuse, good sting, bri bl wh
cut, n stn, n od

MRL: mot m b
sbply - sbblky
- v sl calc, tr p
dkgy, mgy ip,
sbply - sbblky
mas pyr, slow
cut, n stn, n oc

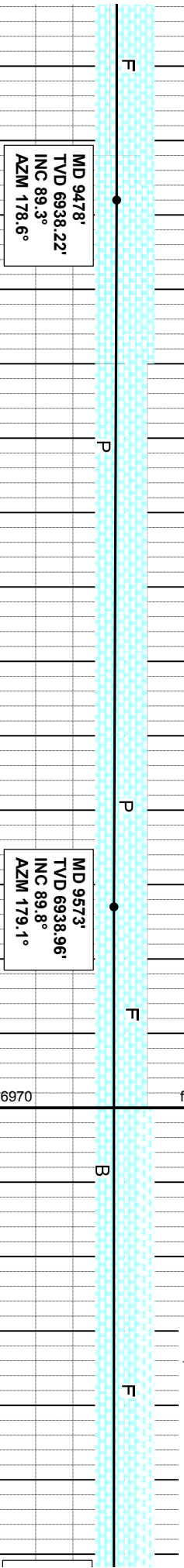
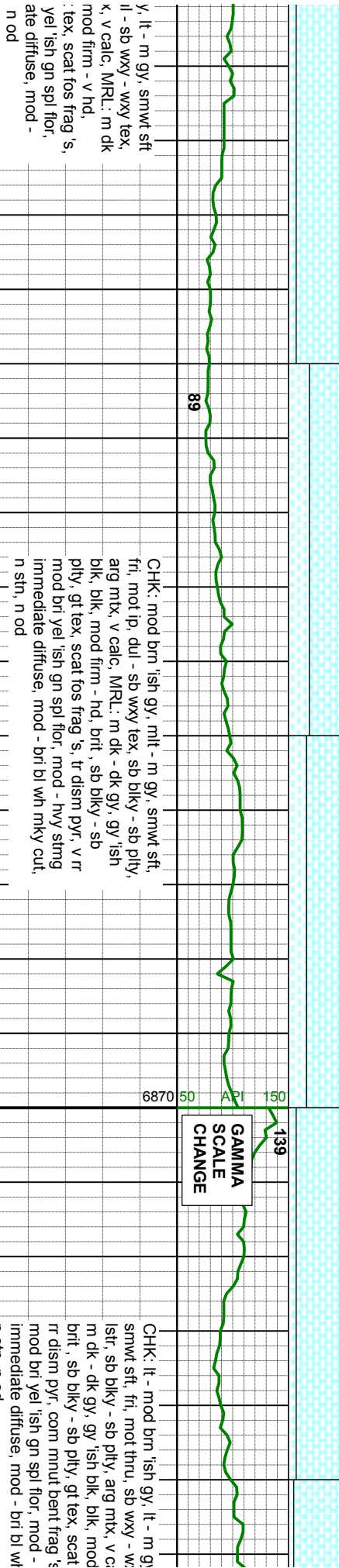
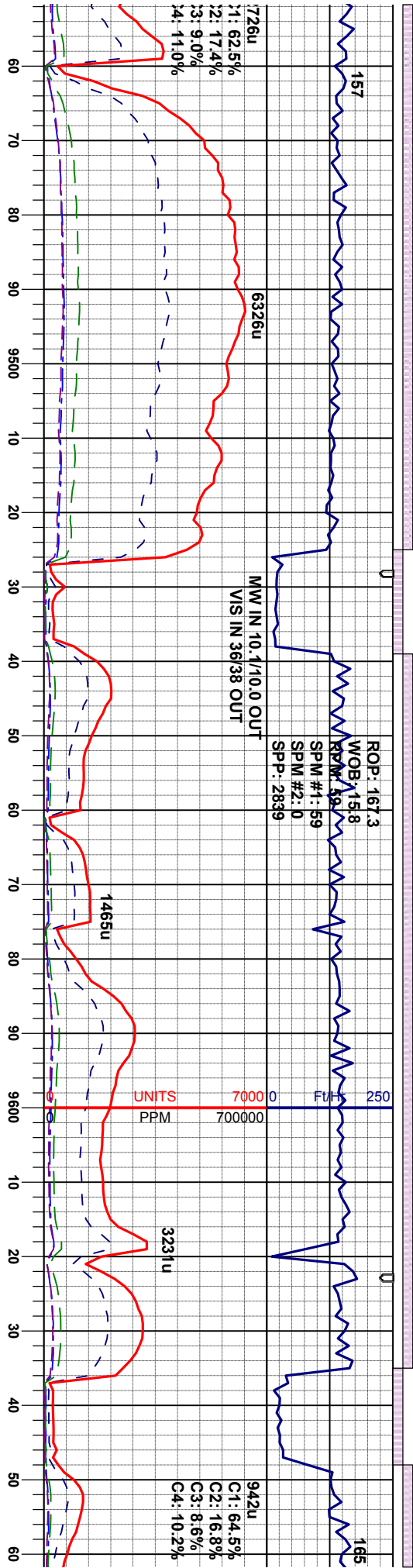




Moderate

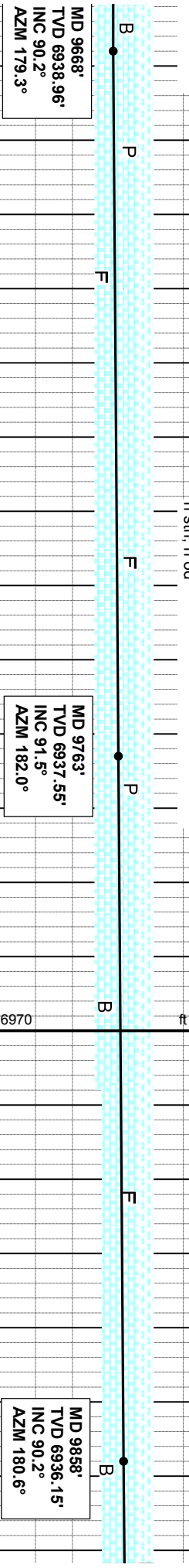
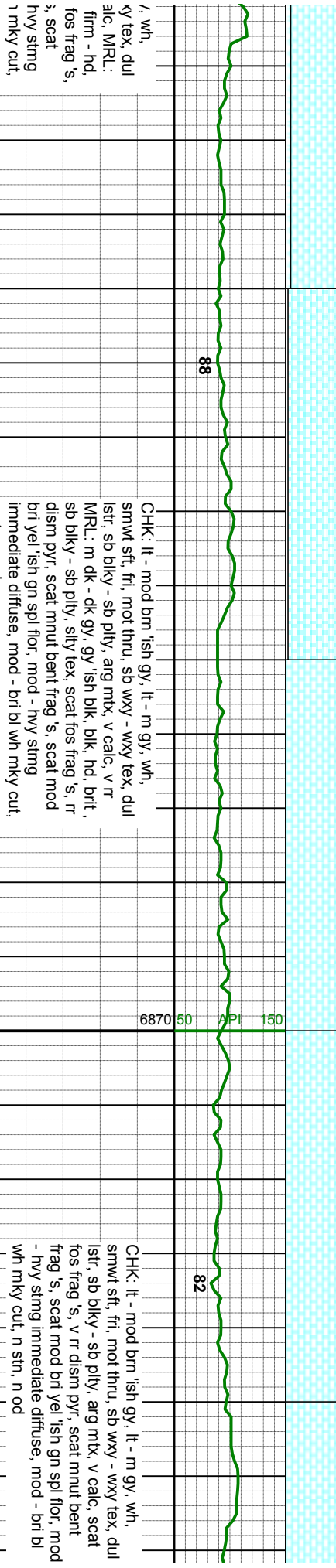
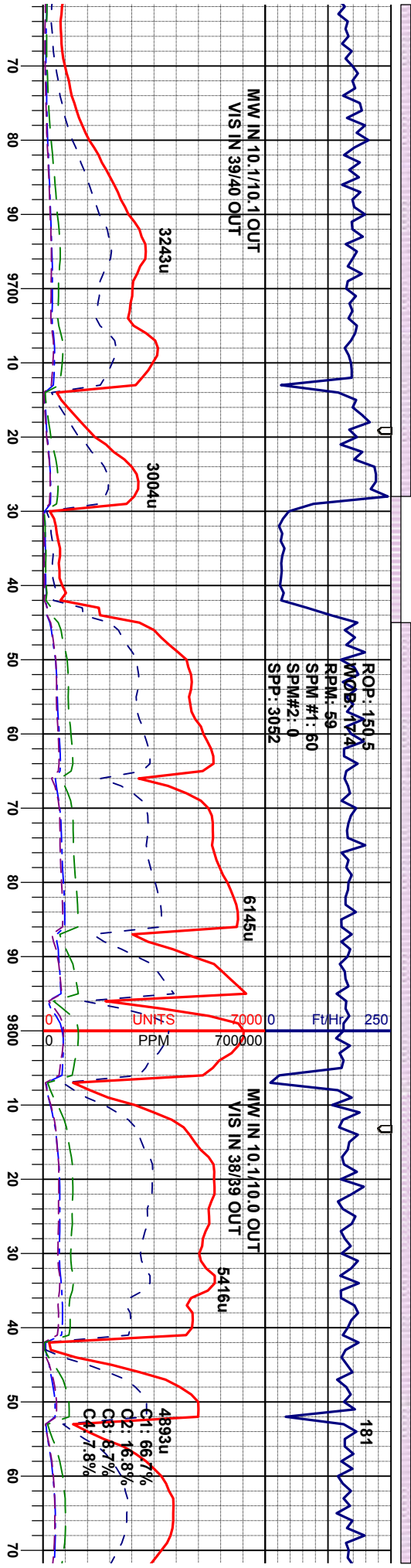
Good

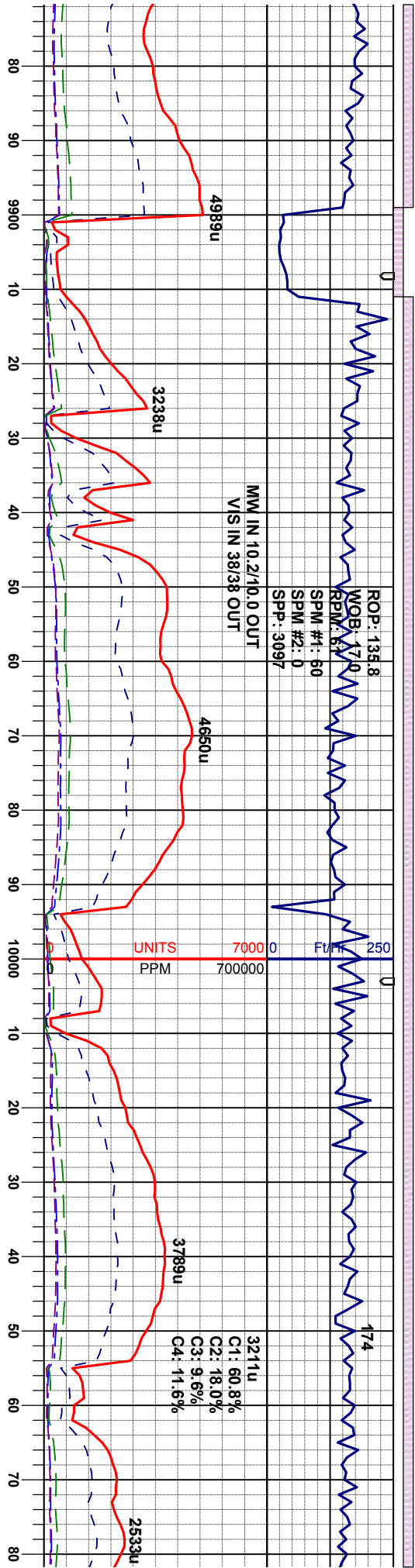




Excellent





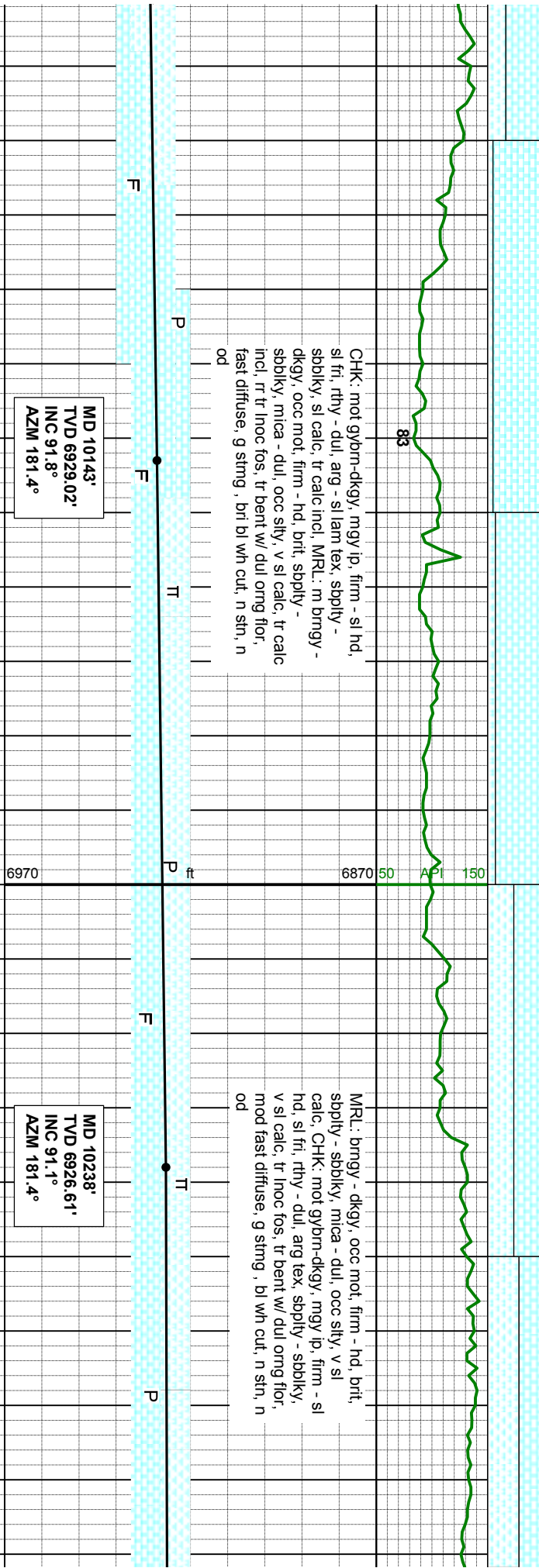
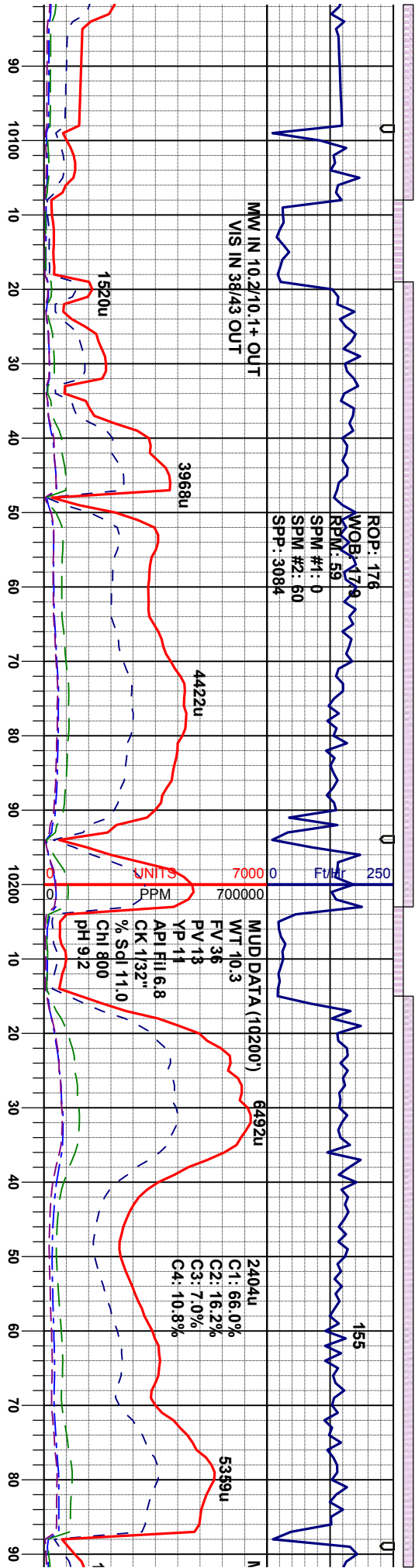


CHK: mod brn 'ish gy, mlt - m gy, smwt sft, fri, mot ip, dul - sb wxy tex, sb blk - sb ply, arg mt, v calc, MRL: m dk - dk gy, gy 'ish blk, blk, mod firm - hd, brit, sb blk - sb ply, gt tex, scat fos frag 's, tr dism pyr, scat bent, scat mod br yel 'ish gn spl flor, mod stmg fast diffuse, mod bl wh mky cut, n stn, n od

CHK: lt - mod brn 'ish gy, lt - m gy, smwt sft, fri, mot thru, sb wxy - wxy tex, sb blk - sb ply, arg mt, v calc, MRL: m dk - dk gy, gy 'ish blk, blk, mod firm - hd, brit, sb blk - sb ply, gt tex, scat fos frag 's, tr dism pyr, scat bent, scat mod br yel 'ish gn spl flor, fast diffuse mod stmg, mod bl wh mky cut, n stn, n od

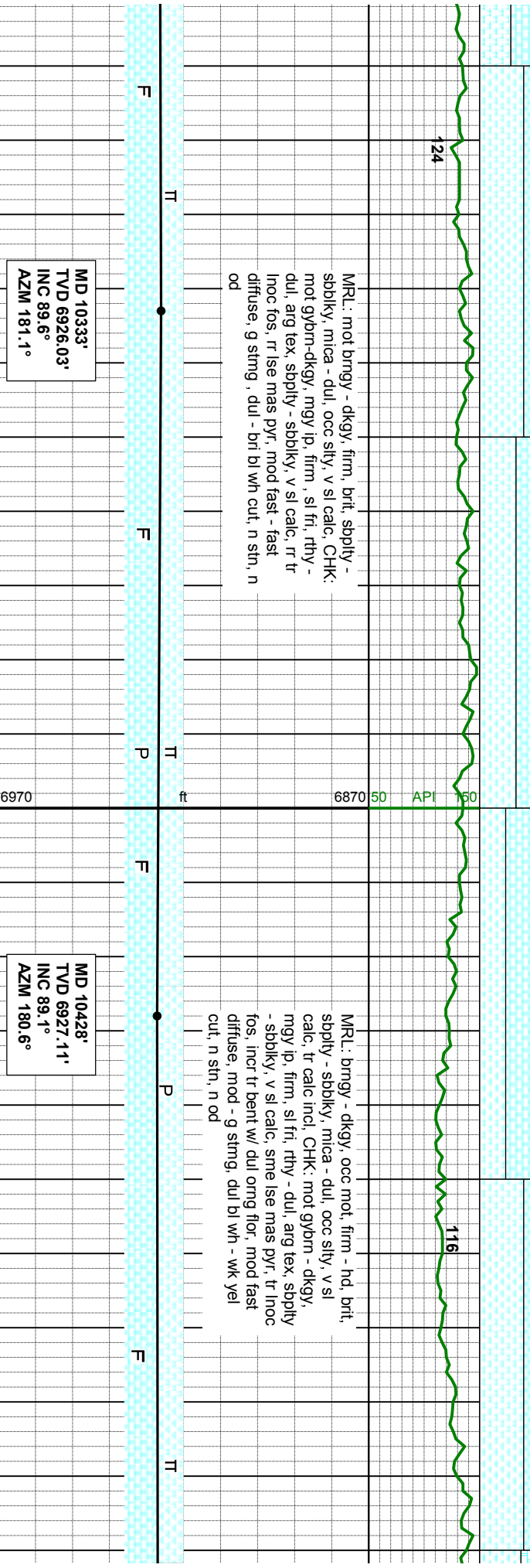
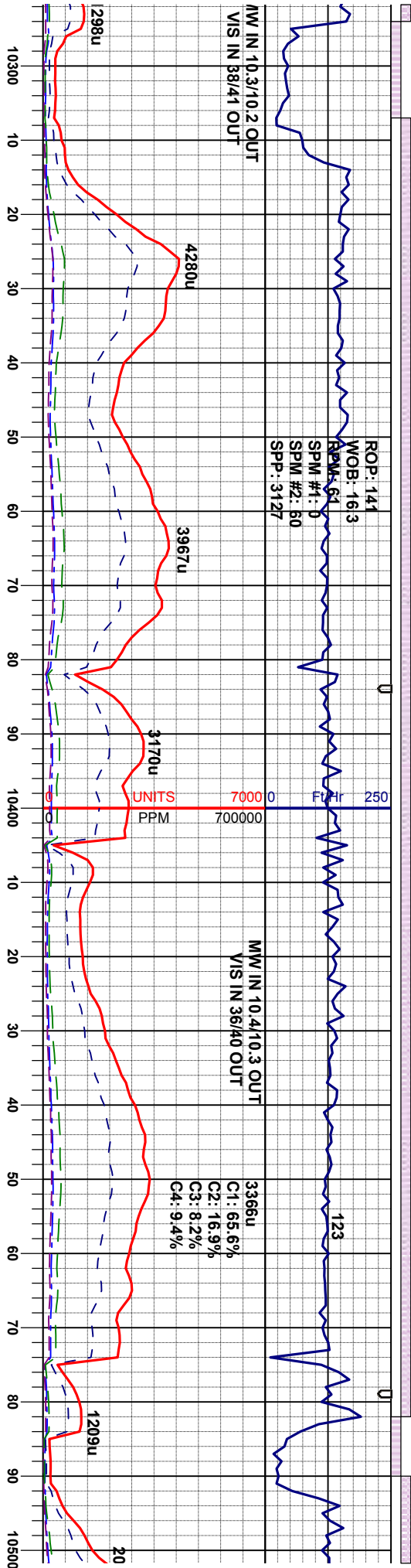
MD 9953'
TVD 6934.49'
INC 91.8°
AZM 181.2°

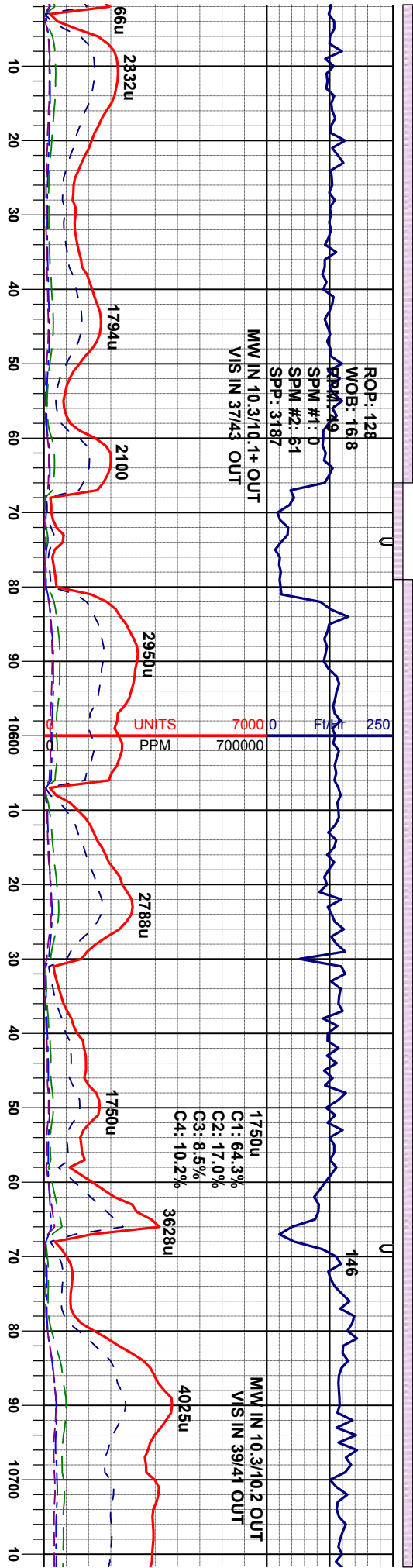
MD 10048'
TVD 6931.75'
INC 91.5°
AZM 179.7°



Good

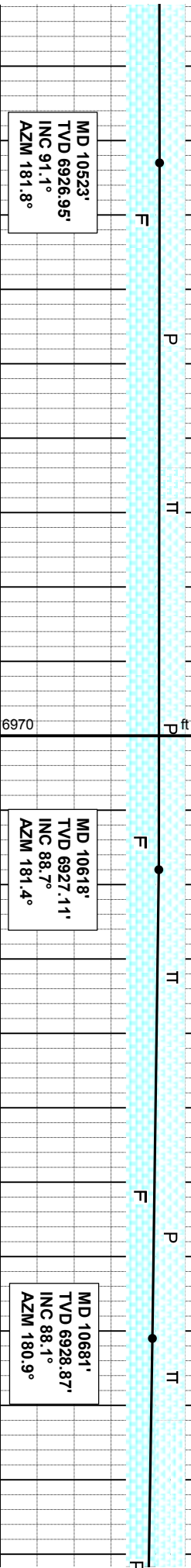




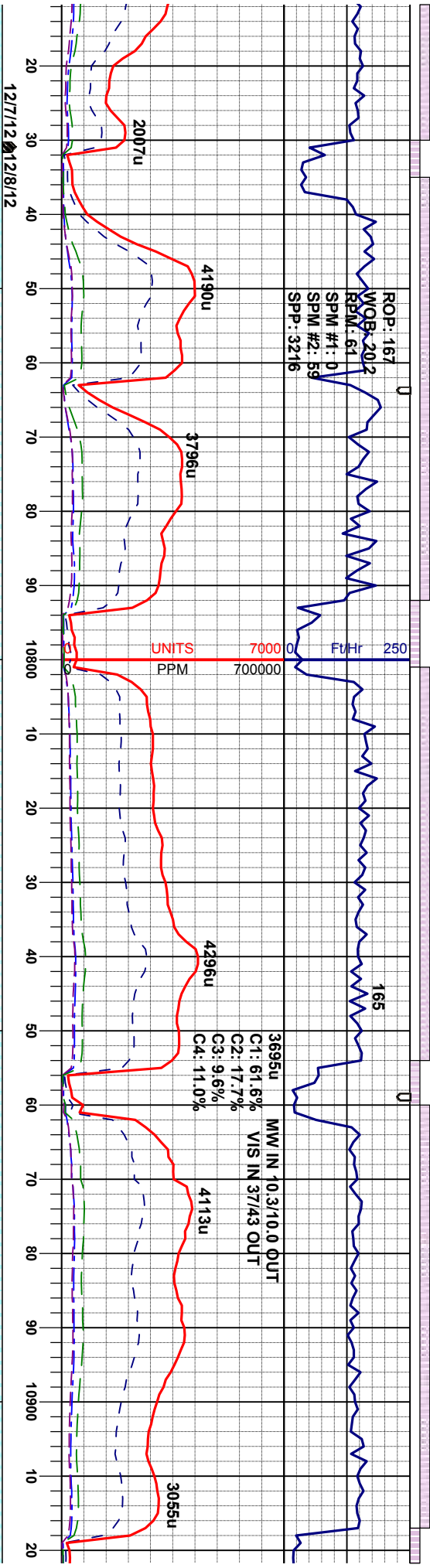


MRU: mot brngy - dkgy, firm, brt, sb ply -
sb blk, mica - dul, occ silty, sl calc, CHK:
mot gybm - dkgy, mgy ip, sft - mod firm, sl
fri, rthy - dul, lam and arg tex, sb ply - sb
blk, sl calc, mod fast diffuse, mod - g
string, dul bl wh cut, n str, n od

CHK: mot gybm-dkgy, mgy ip, mod firm, fri,
rthy - dul, arg - sl lam tex, spbly - sbblk, sl
calc, tr calc incl, MRU: brngy - dkgy, occ
mot, firm, brt, spbly - sbblk, mica - silty
tex, v sl calc, tr calc and pyr incl, tr inoc fos,
fast diffuse, g string - g bleeding, bri bl wh
cut, n str, n od

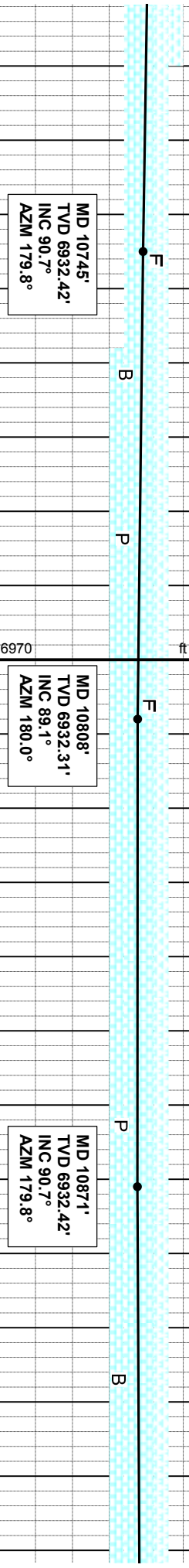


Good

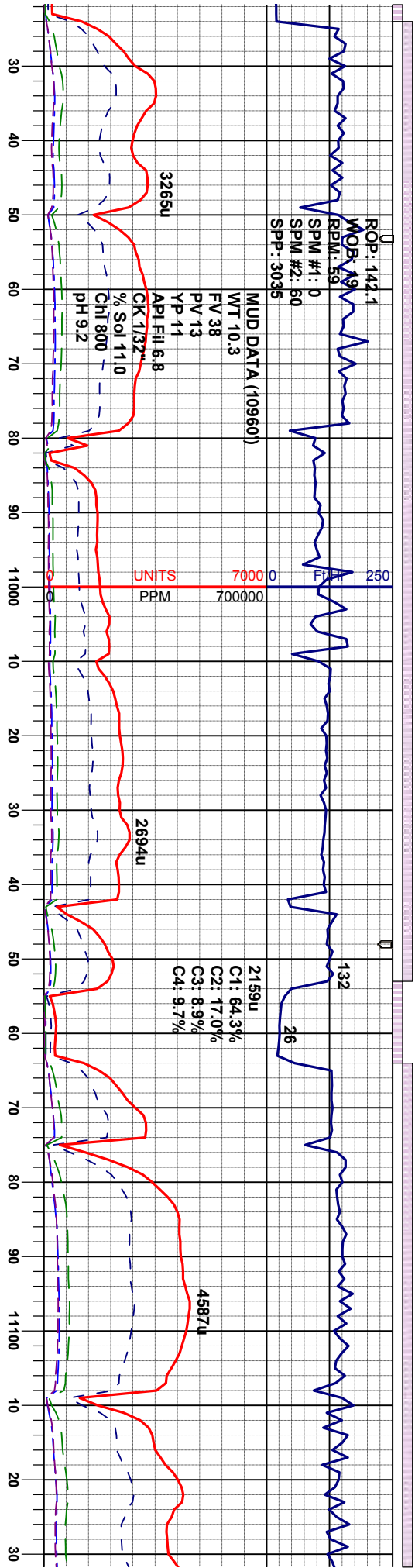


CHK: mot gybrn-dkgy, mgy ip, sft - mod firm, fri, rthy - dul, arg - sl lam tex, spbly - sbbiky, sl calc, tr calc incl, MRL: brngy - dkgy, occ mot, mod firm, brit, spbly - sbbiky, mica - silty tex, v sl calc, tr calc and pyr incl, tr inoc fos, tr bent w/ dul org flor, mod fast - fast diffuse, g string, bri bl wh cut, n stn, n od

CHK: mot gybrn-dkgy, mgy ip, mod firm, fri, rthy - dul, arg - lam tex, sb ply - sb biky, sl calc, tr calc and dk carb incl, MRL: brngy - dkgy, mot ip, firm, brit, sb ply - sb biky, mica - silty tex, v sl calc, tr calc, tr inoc fos, mod fast - immediate diffuse, g string, bri bl wh - bri yel cut, n stn, n od



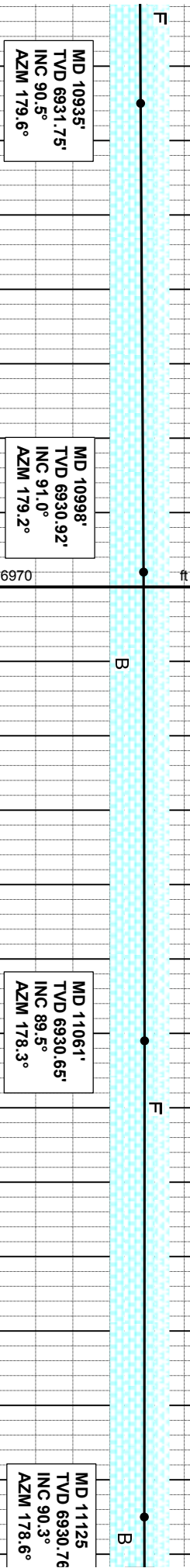
Good



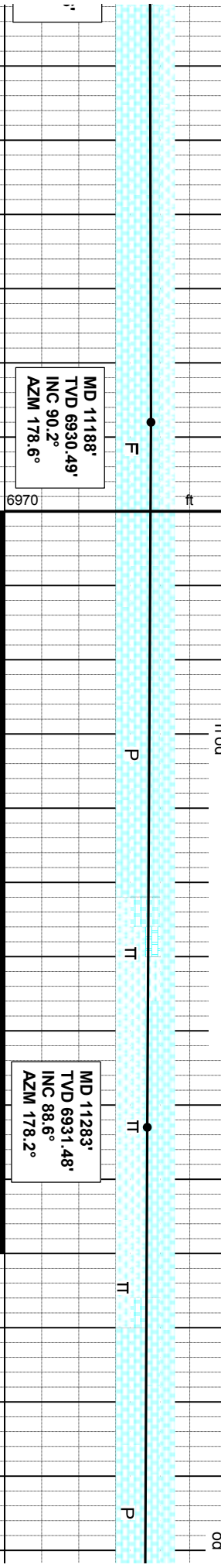
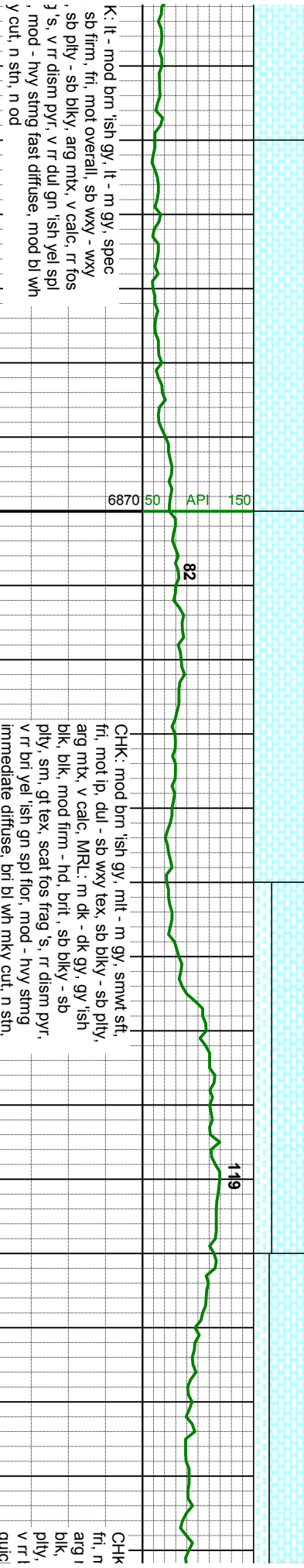
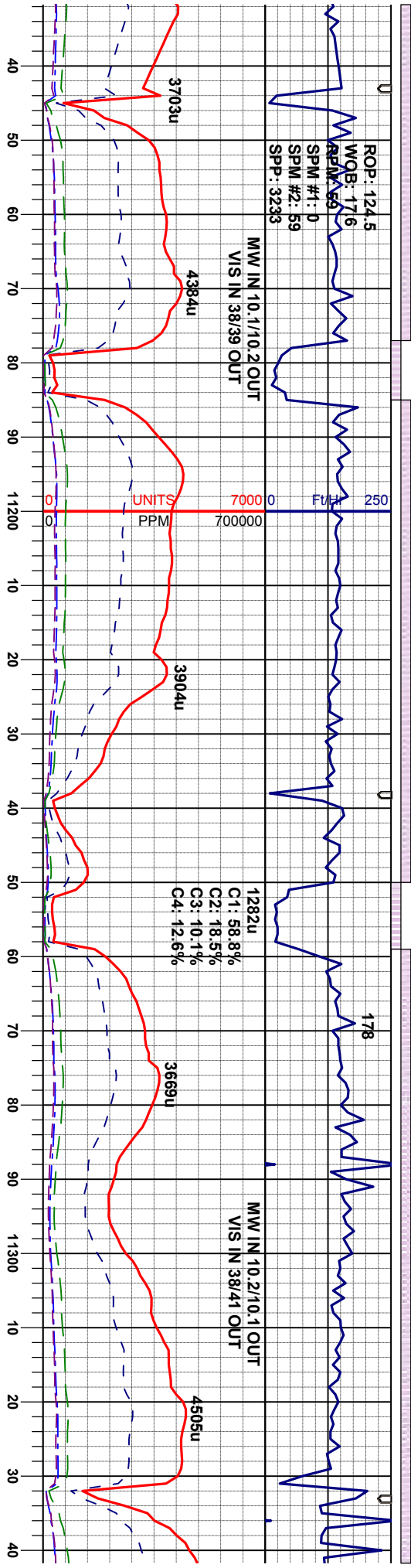
CHK: lt - mod brn 'ish gy, lt - m gy, sft - sb
firm, fri, mot thru, sb wxy - wxy tex, sb ply -
sb blk, arg mt, v calc, MRL: m dk - dk gy,
gy 'ish blk, blk, mod firm - hd, brt, sb ply -
sb bid, gt - silty tex, scat fos frag's, tr dism
pyr, v rr bent, rr du gn 'ish yel spl flor, mod
- hvy stmg fast diffuse, mod bl wh mky cut,
n str, n od

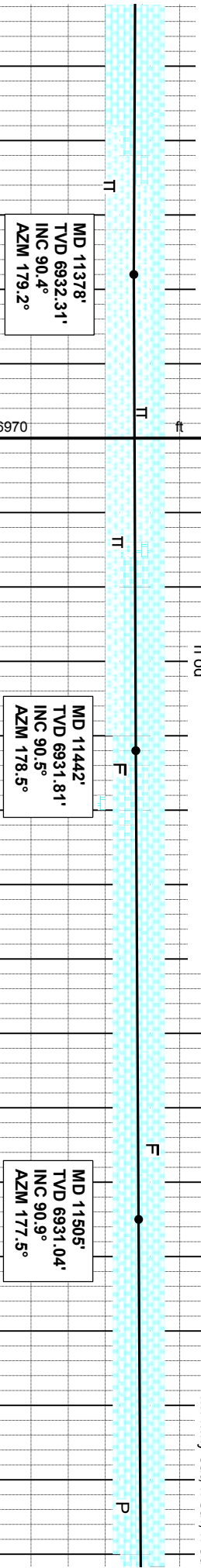
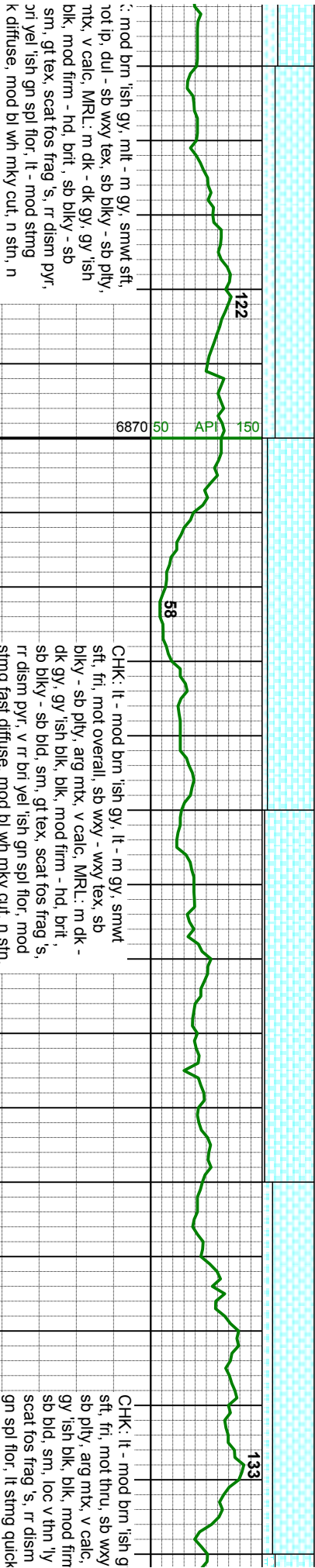
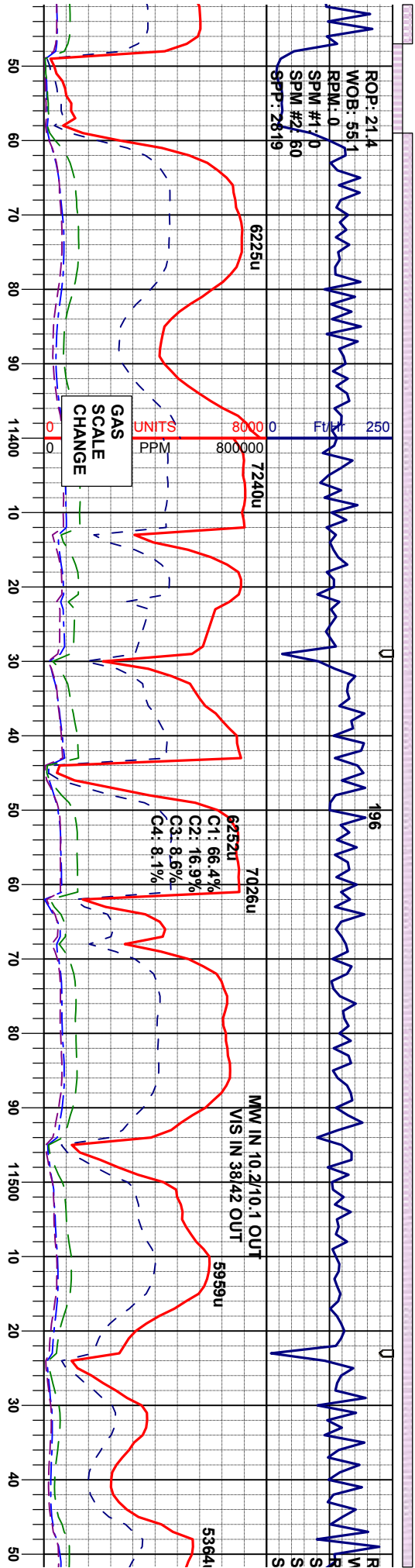
CHK: lt - mod brn 'ish gy, lt - m gy, wh, sb
firm, fri, mot ip, sb wxy - wxy tex, sb ply -
sb blk, arg mt, v calc, tr fos frag's, rr
dism pyr, v rr du gn 'ish yel spl flor, mod -
hvy stmg fast diffuse, mod bl wh mky cut, n
str, n od

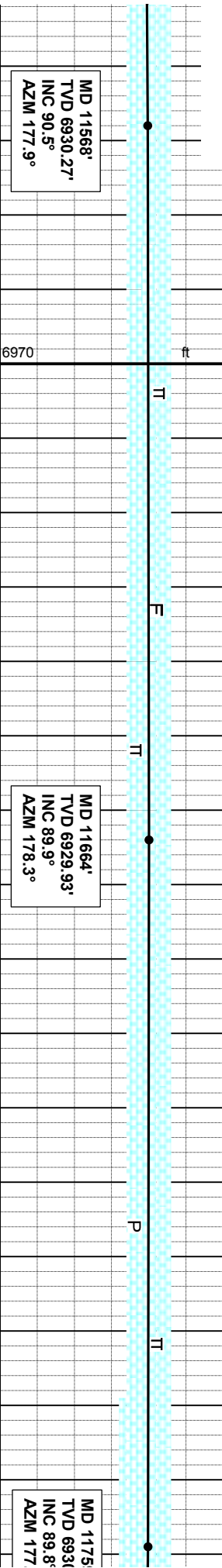
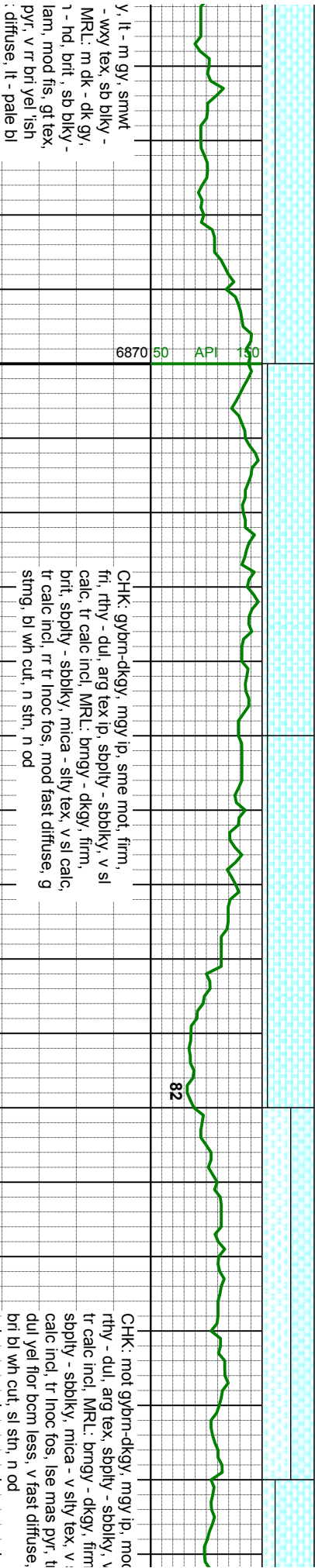
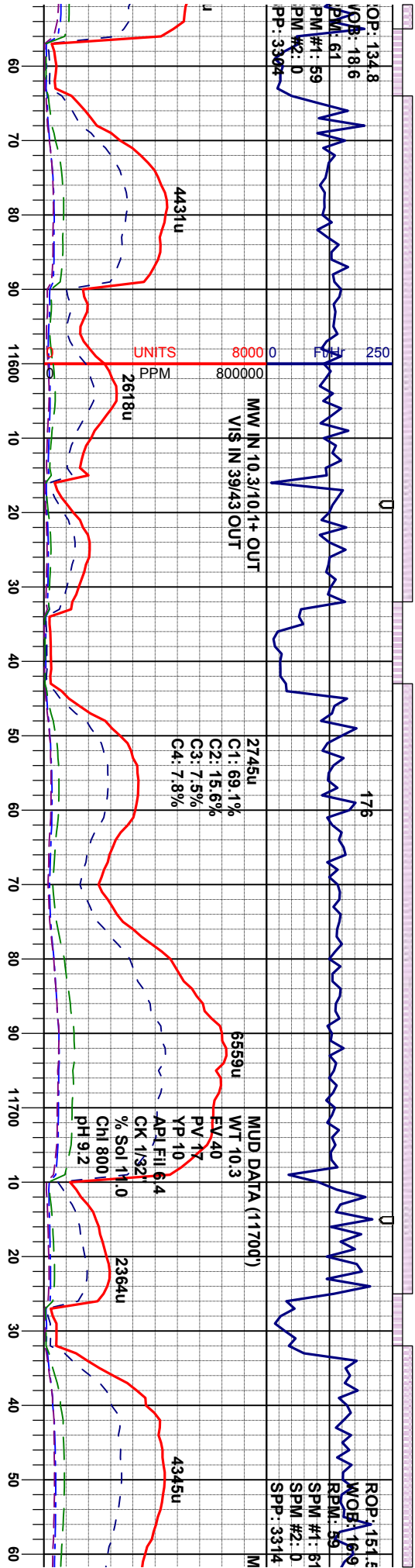
CH
wh,
tex
frac
flor
mk



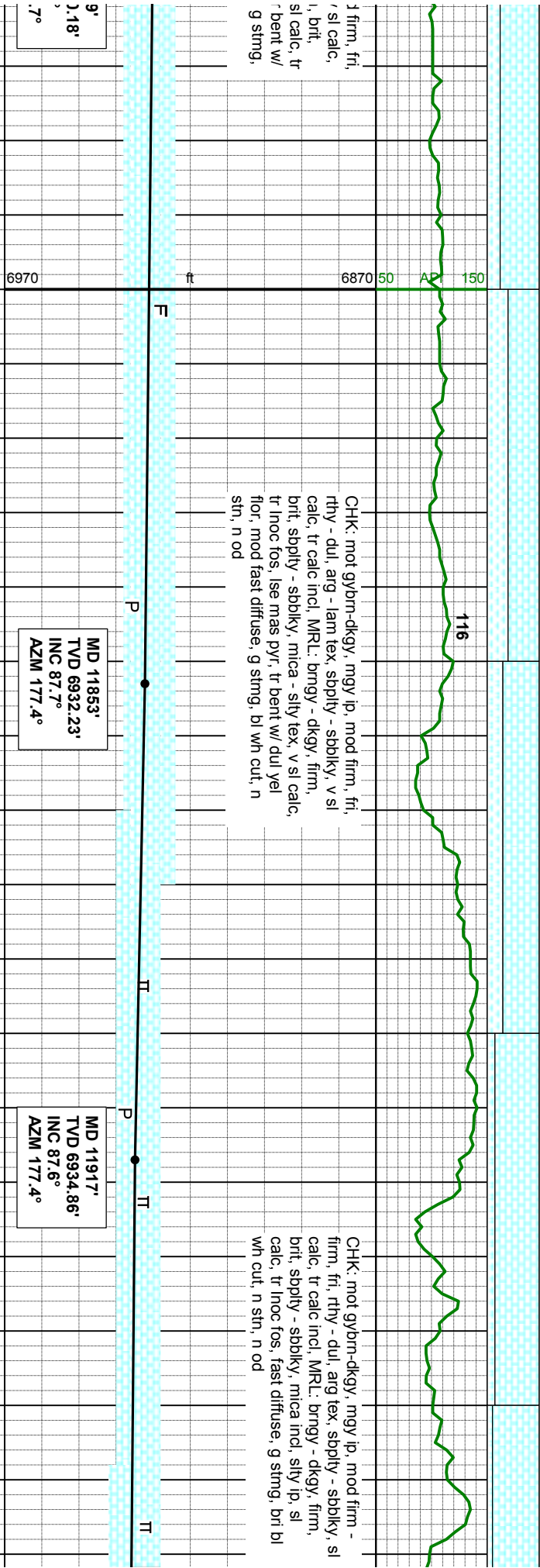
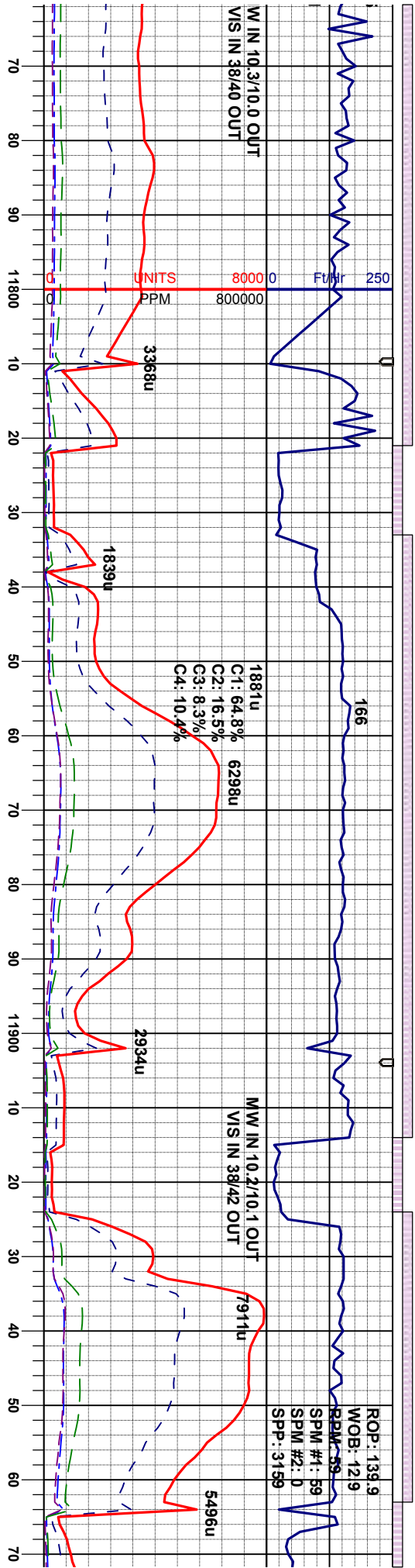
Good

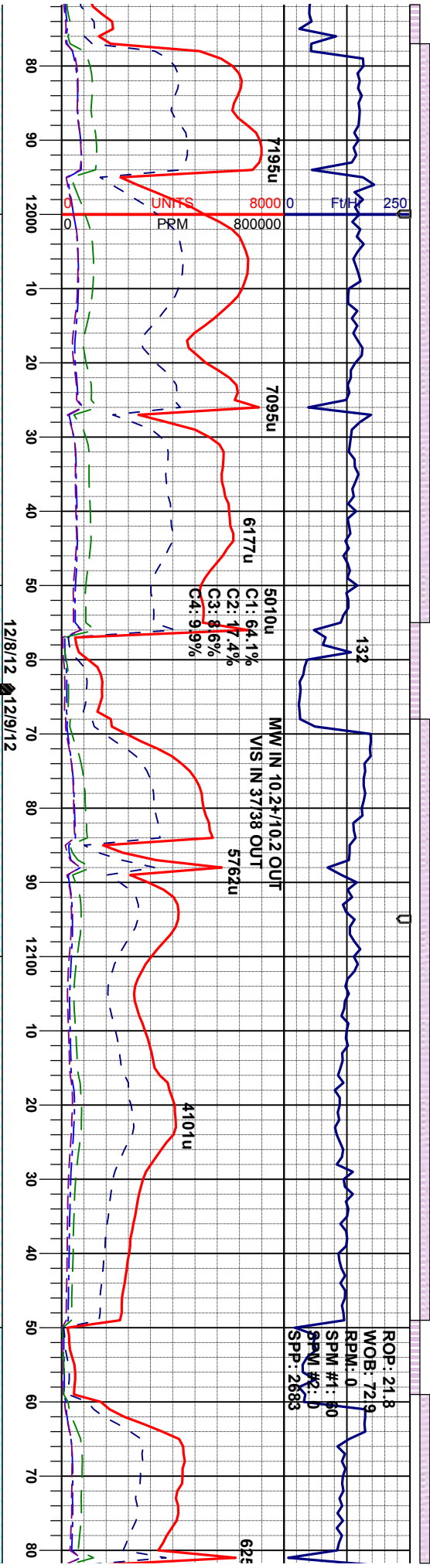






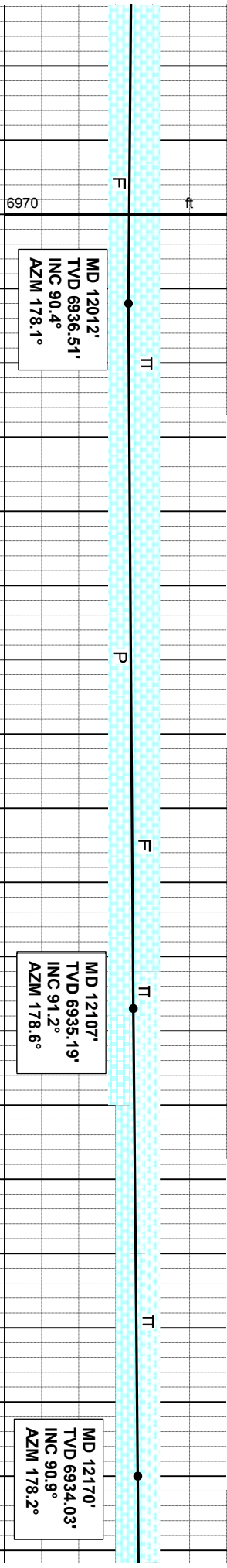
Good



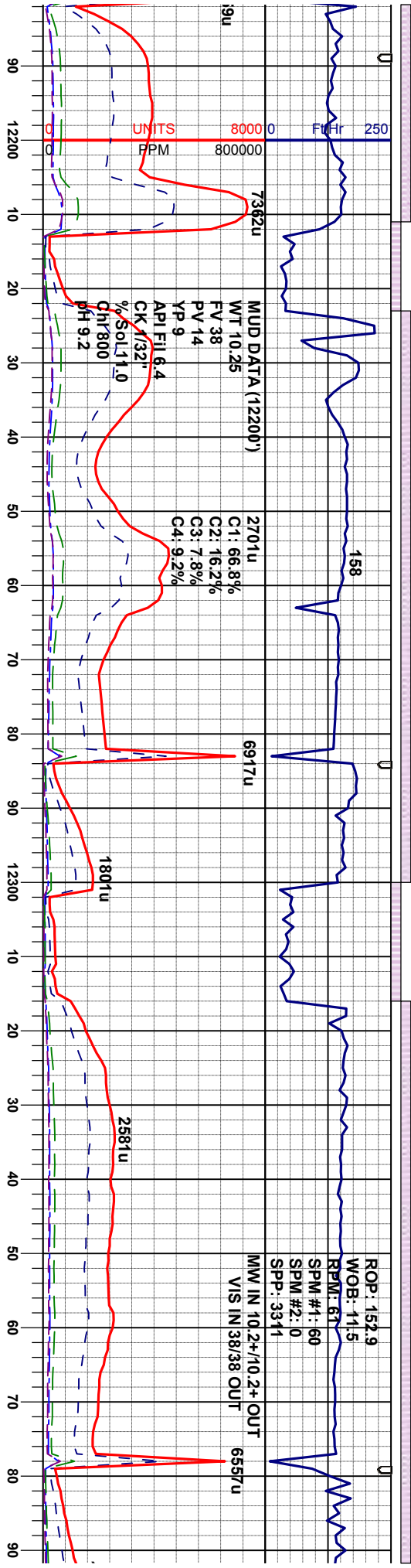


CHK: mot gybrn-dkgy, mgy ip, mod firm -
firm, fri, rthy - dul, arg - lam tex, sbply -
sbply, sl calc, tr calc and pyr incl, MRL:
brngy - dkgy, firm, brt, sbply - sbply, mica
and silty tex, v sl calc, tr inoc fos, fast
diffuse, g string, bri bl wh - bri yel cut, sl sin,
n od

CHK: mot gybrn-dkgy, mgy ip, mod firm, fri,
rthy - dul, arg - lam tex, sbply - sbply, sl
calc, tr calc incl, occ s vn mrl, MRL: brngy -
dkgy, firm - mod hd, brt, sbply - sbply,
mica and silty tex, sl calc, tr inoc fos, mod
fast diffuse, g string, bri bl wh cut, n sin, n
od

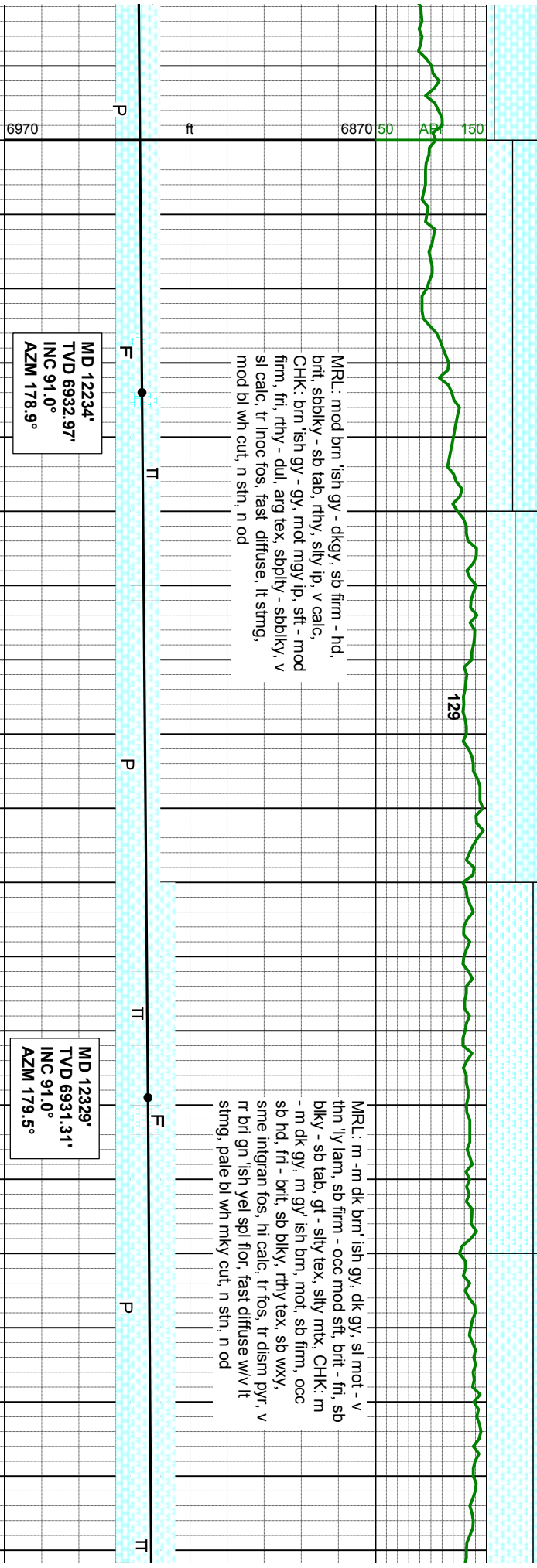


Good

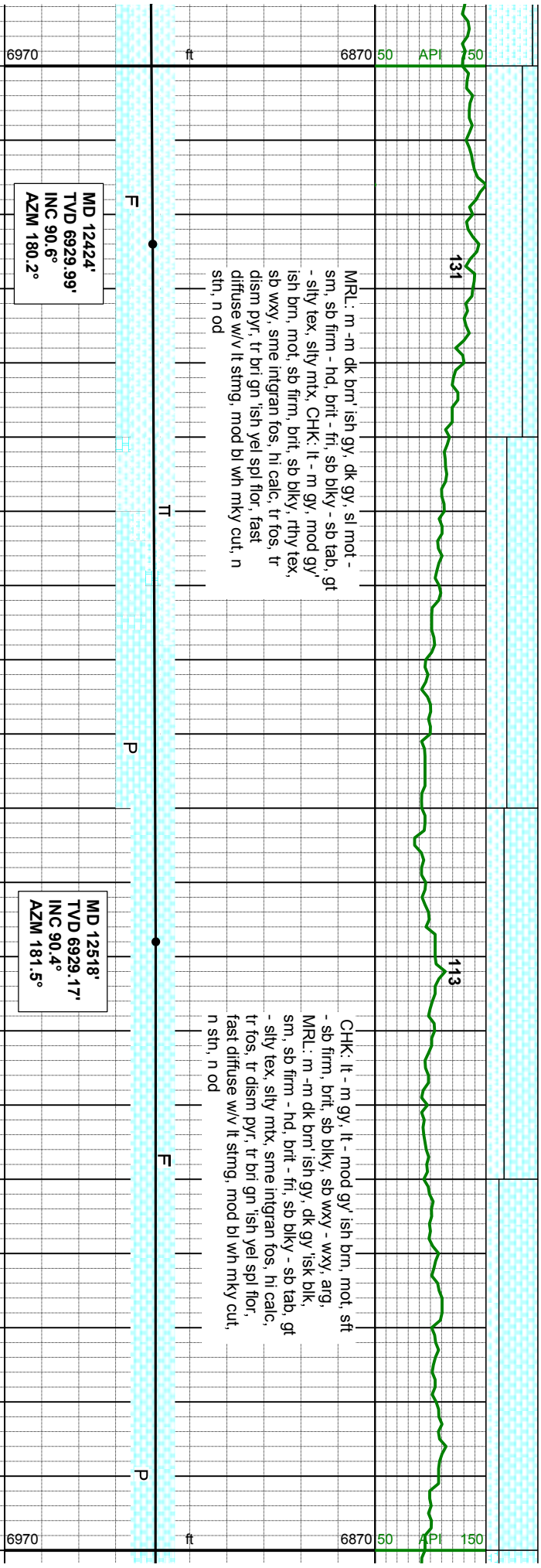
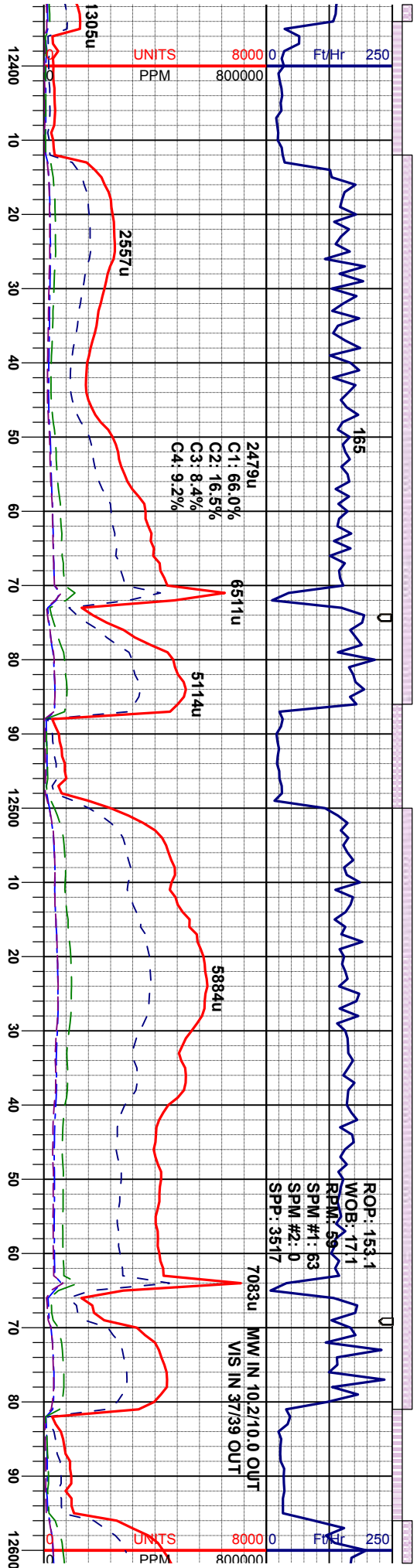


MRL: mod brn 'ish gy - dkgy, sb firm - hd, brit, sbblky - sb tab, rthy, silty ip, v calc, CHK: brn 'ish gy - gy, mot mgy ip, sft - mod firm, fri, rthy - dul, arg tex, sbply - sbblky, v sl calc, tr inoc fos, fast diffuse, lt stng, mod bl wh cut, n stn, n od

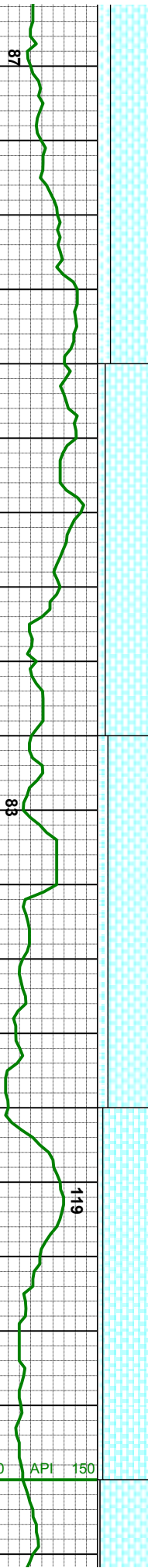
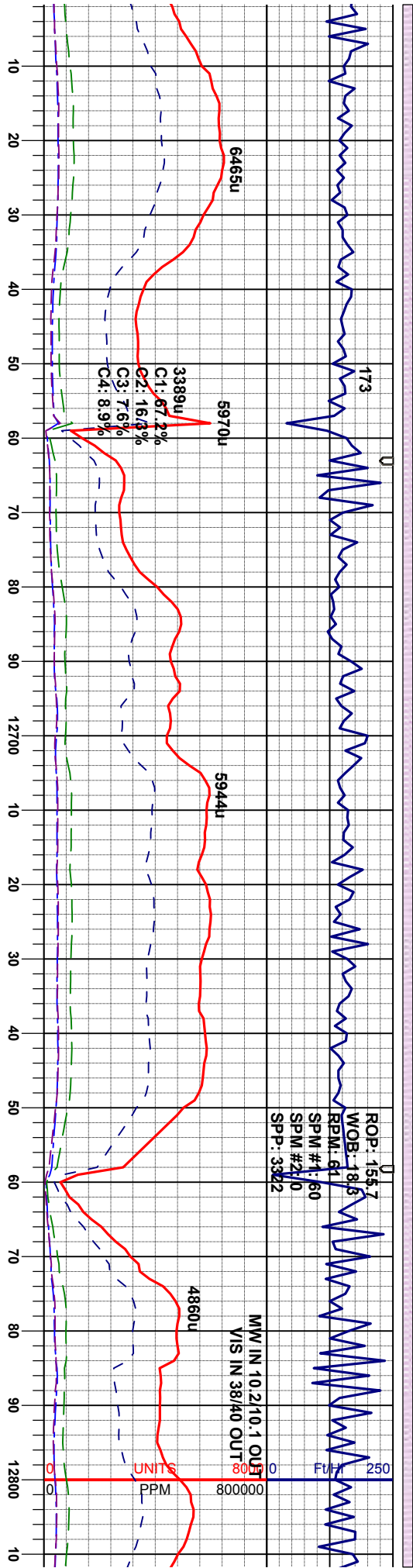
MRL: m -m dk brn' ish gy, dk gy, sl mot - v thn ly lam, sb firm - occ mod sft, brt - fri, sb bly - sb tab, gt - silty tex, silty mt, CHK: m - m dk gy, m gy' ish brn, mot, sb firm, occ sb hd, fri - brt, sb bly, rthy tex, sb wxy, sme in gran fos, hi calc, tr fos, tr dism pyr, v tr brt gn 'ish yel spl flor, fast diffuse w/v tr stng, pale bl wh mky cut, n stn, n od



Good

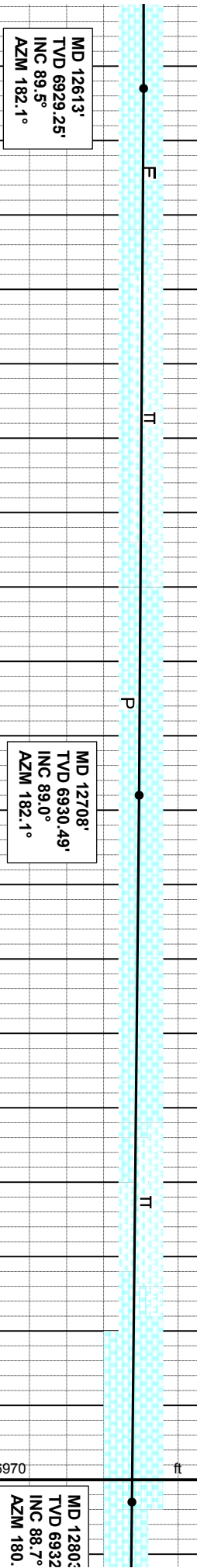


Good



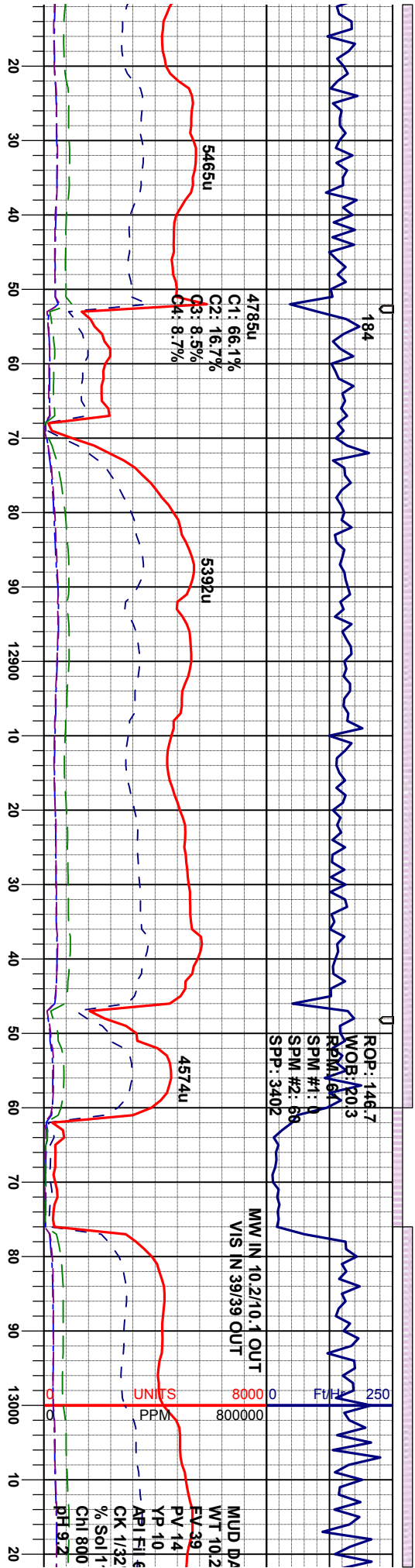
CHK: It - mod gy' ish brn, lt - m gy, sft, fri,
sb ply - sb blk, sb wxy - wxy, arg mt, MRL:
dk gy' isk blk, sb firm - hd, brt - fri, sb
blk - sb tab, sm - sl lam, g fis, gt tex, silty
mtx, sme intgran fos, hi calc, tr dism pyr, r
bri gn' ish yel spi flor, fast diffuse wv lt
sting, mod bl wh mky cut, n stn, n od

CHK: It gy' ish brn, v lt - m gy, sft, fri, sb
ply - sb blk, sb wxy - wxy, arg mt, MRL:
dk gy' isk blk, blk, firm - hd, brt - fri, sb blk
- sb tab, sm - sl lam, g fis, gt tex, silty mt,
sme intgran fos, hi calc, tr dism pyr, v rr bri
gn' ish yel spi flor, fast diffuse w/mod sting,
mod bl wh mky cut, n stn, n od



Good





CHK: It gy' ish brn, v lt - m gy, sft, fri, sb
ply - sb blk, sb wxy - wxy, arg mtx, MRL:
dk gy' isk blk, blk, firm - hd, brt - fri, sb blk
- sb tab, sm - sl lam, g fis, gt tex, stly mtx, v
calc, v r r fos frag's, v r r dism pyr, n - v mtr
gn' ish spl flor, fast diffuse w/mod stmg,
mod bl wh mky cut, n stn, n od

CHK: mot gybm beam dky, sme mgy, sft -
mod firm, fri, rthy - dul, arg - lam tex, sbply
- sbply, sl calc, tr calc incl, occ s vn mtr,
MRL: brngy - dky, mod firm, brt, sbply -
sbply, mica and stly tex, sme lam tex, tr
calc incl, v sl calc, r r tr inoc fos, tr lse mas
pyr, fast diffuse, g stmg, bri bl wh cut, n stn,
n od

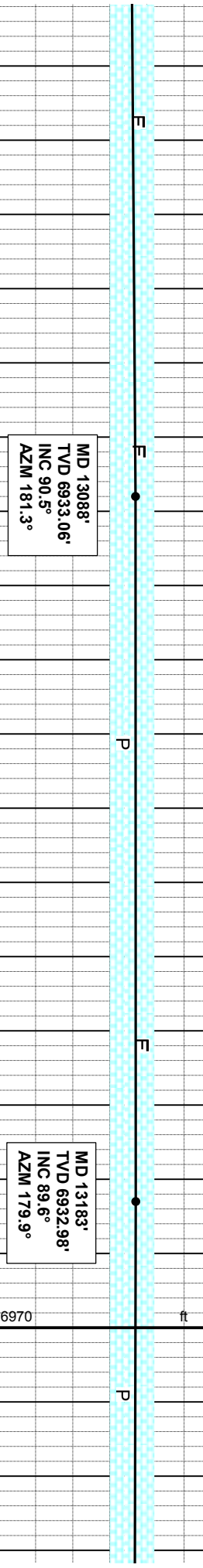
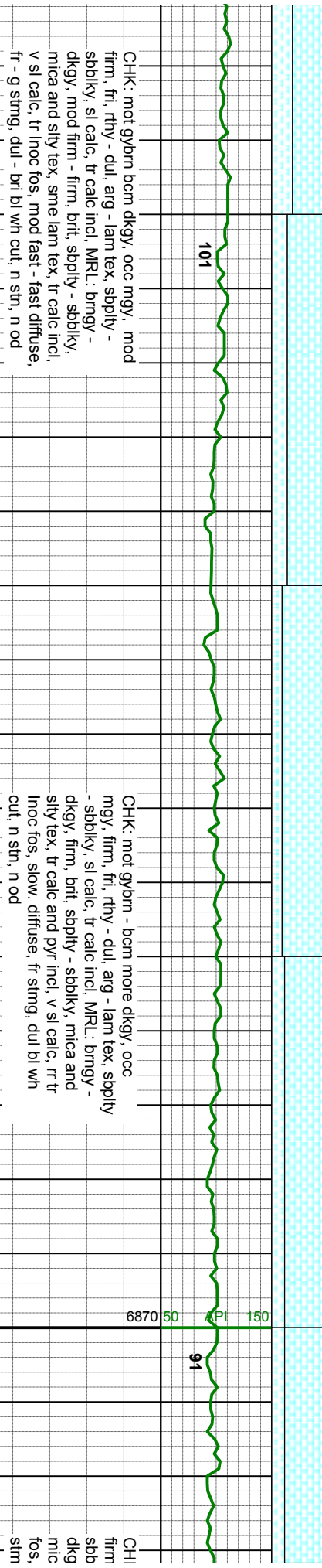
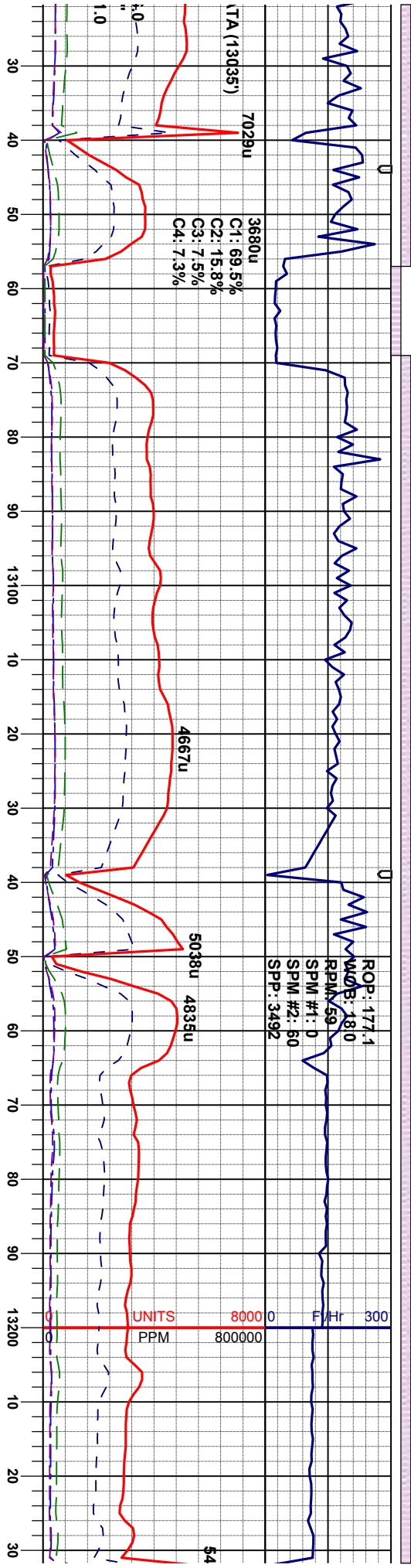
3' .40'

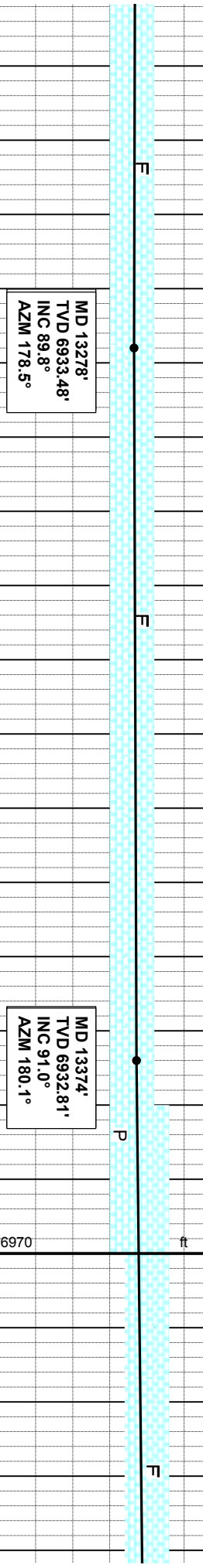
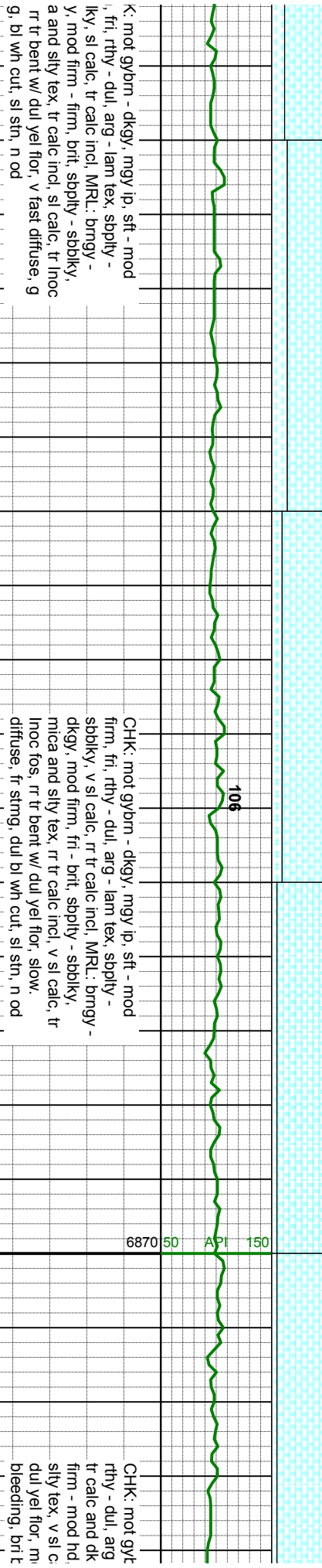
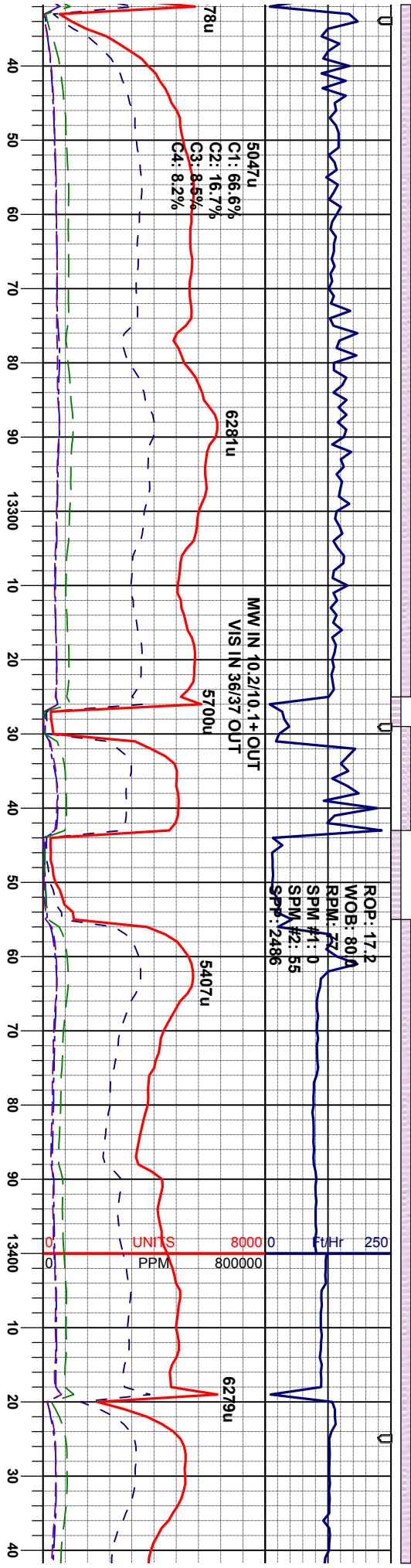
MD 12898'
TVD 6934.39'
INC 88.9°
AZM 179.8°

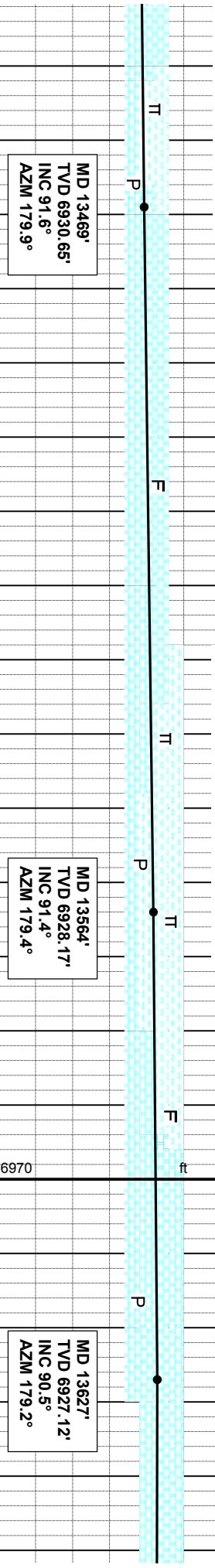
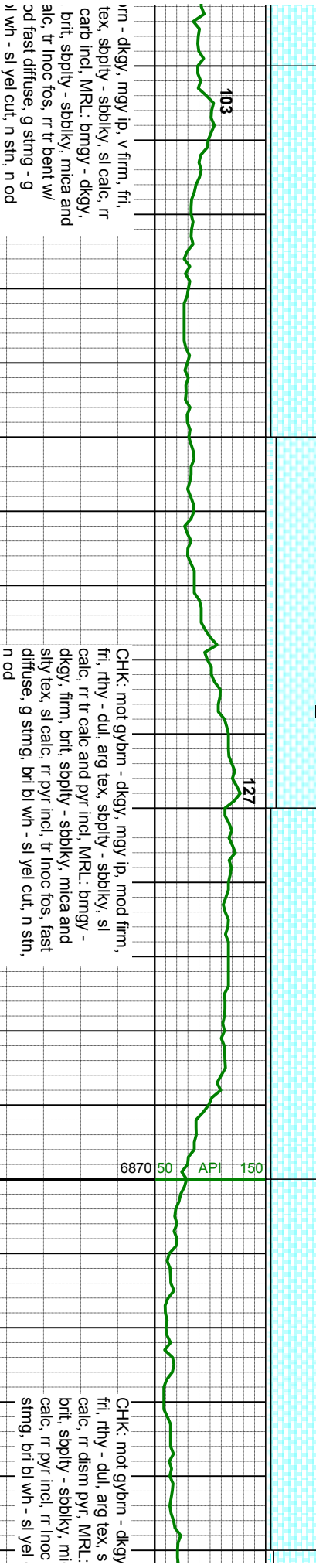
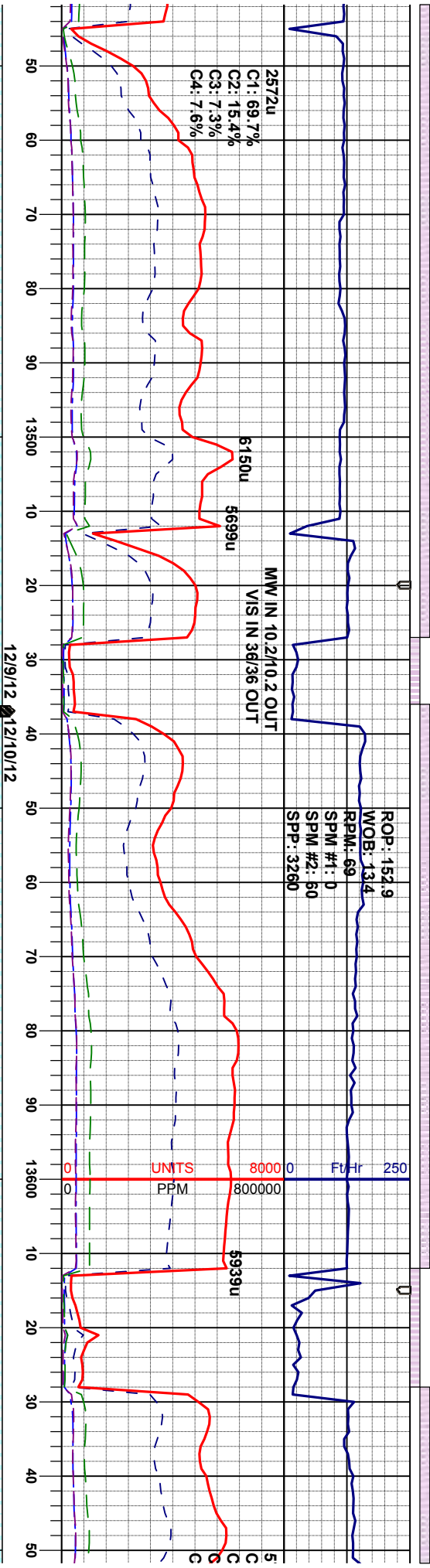
MD 12993'
TVD 6934.39'
INC 91.1°
AZM 181.5°

Good



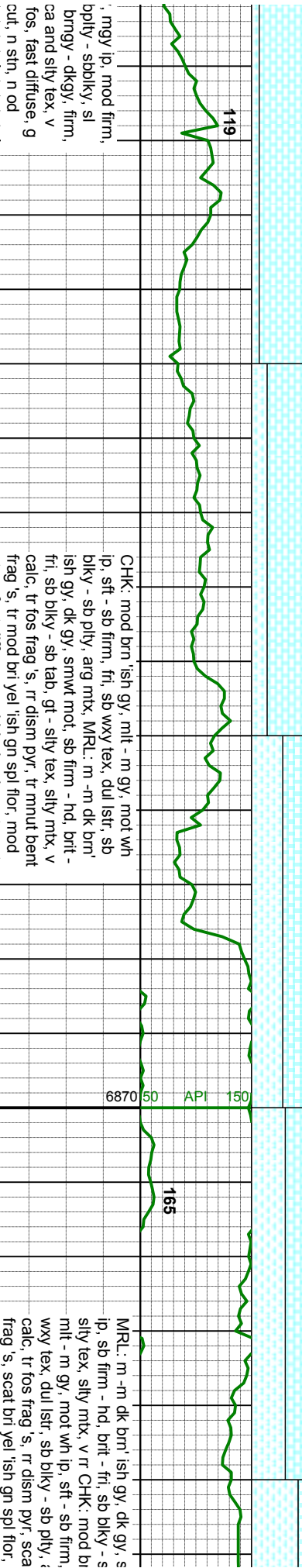
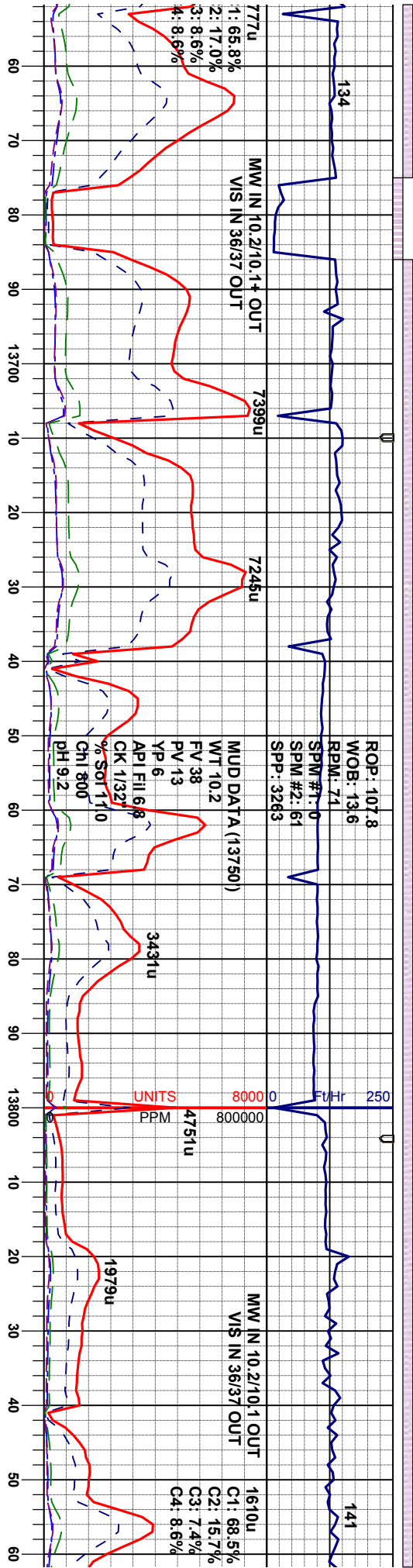






Good





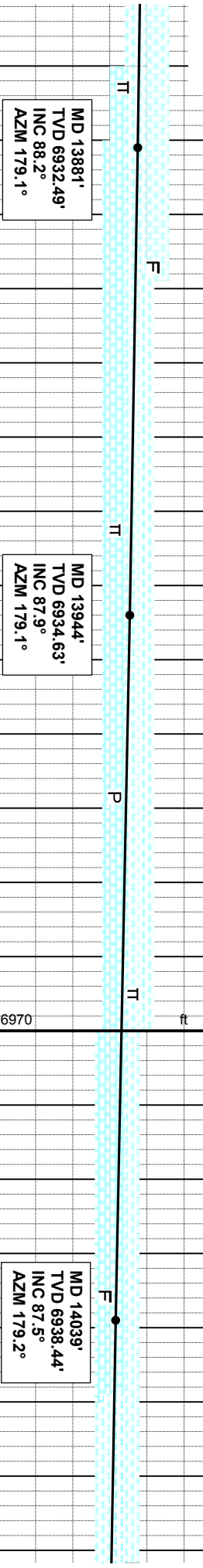
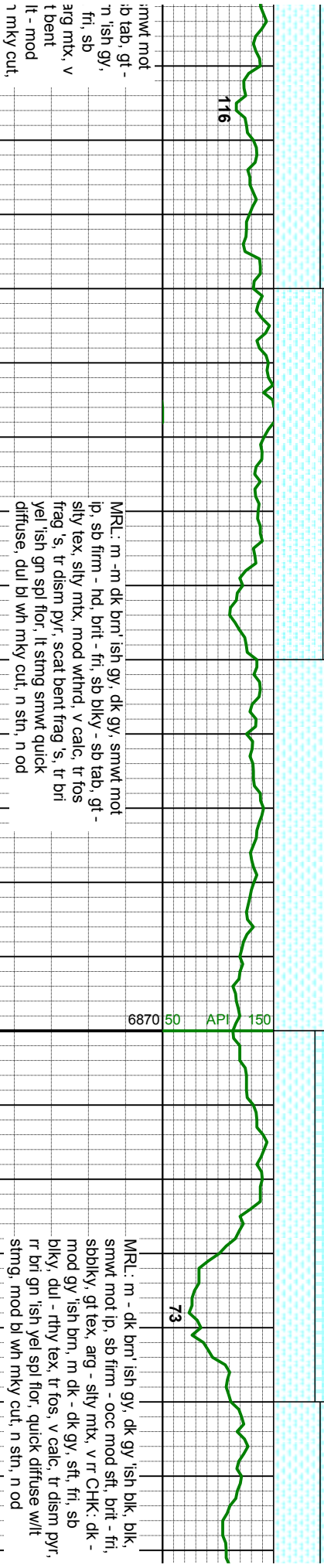
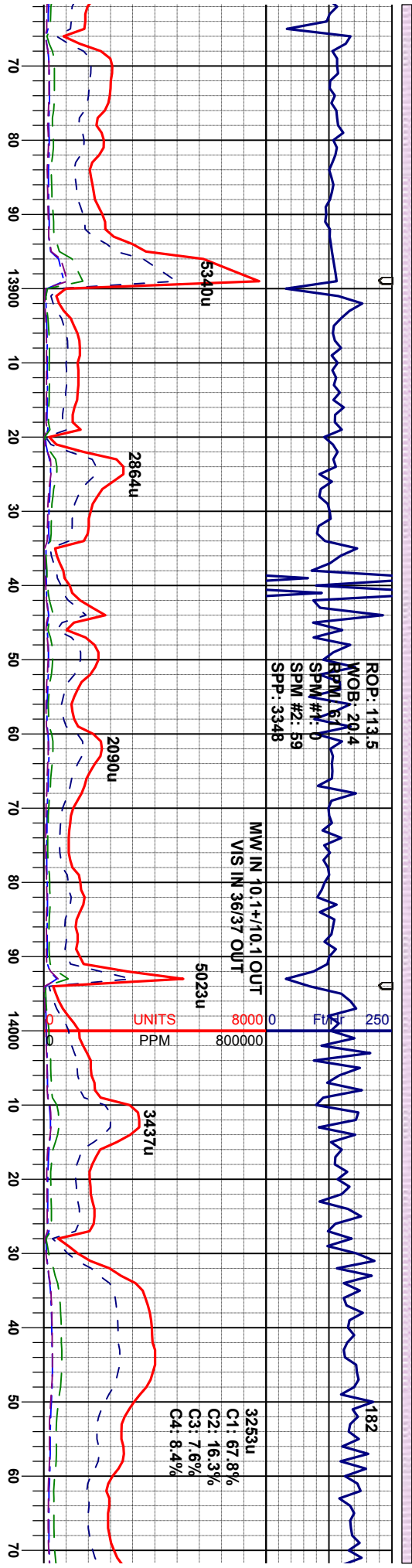
MD 13691'
TVD 6927.4'
INC 89.0°
AZM 179.5°

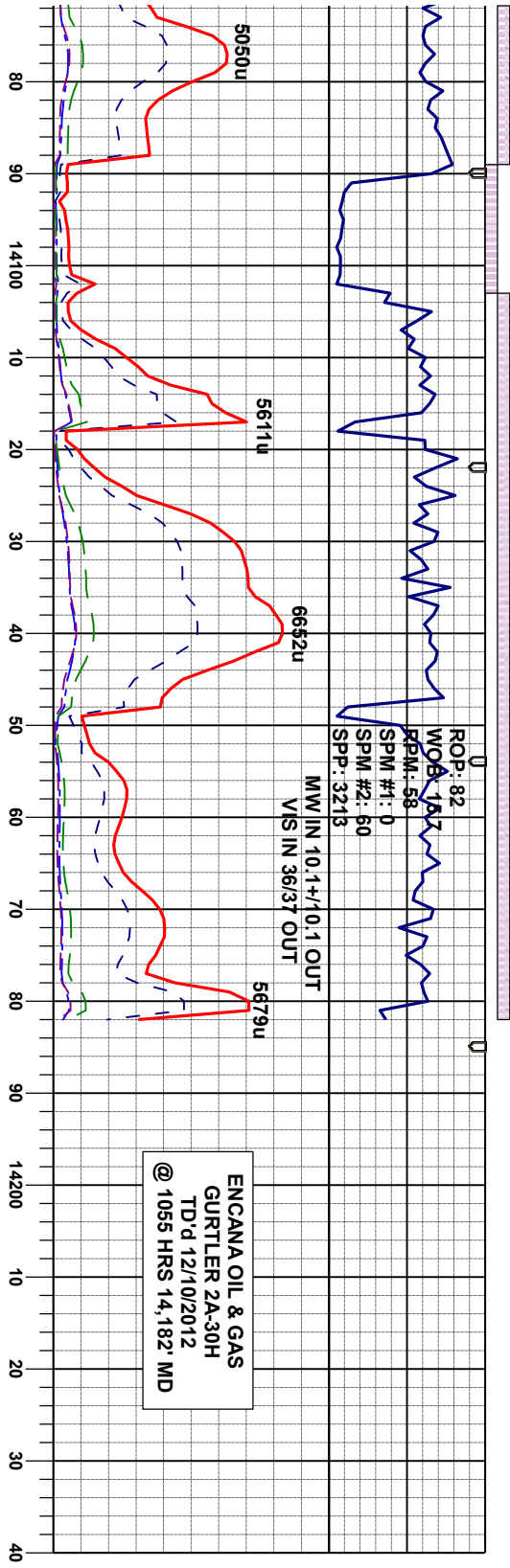
MD 13754'
TVD 6928.83'
INC 88.4°
AZM 179.4°

MD 13817'
TVD 6930.59'
INC 88.4°
AZM 179.3°

Good







MRL: m - dk brn' ish gy, dk gy 'ish blk, blk, smwt mot ip, sb firm - occ mod sft, brit - fri, sdbiky, gt' tex, arg - silty mtz. CHK: dk - mod gy 'ish brn, m dk - dk gy, sl mot, sft, fri, sb blk'y, dul - rthy tex, v calc, tr fos, tr dism pyr, rr bri gn 'ish yet sp flor, quick diffuse w/lt sting, mod bl wh mky cut, n stn, n od

MD 14132'
TVD 6941.69'
INC 88.5°
AZM 180.0°

MD: 14182'
TVD 6942'
INC 88.5°
AZM 180°

THANK YOU FOR USING
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Good