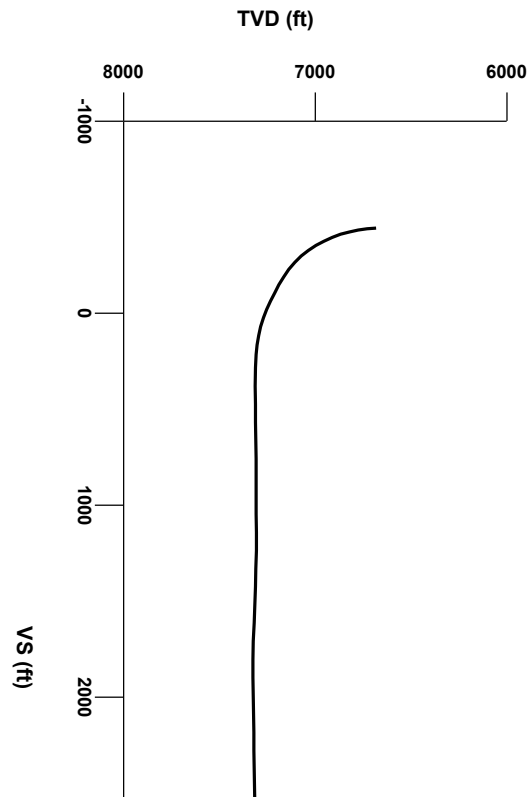




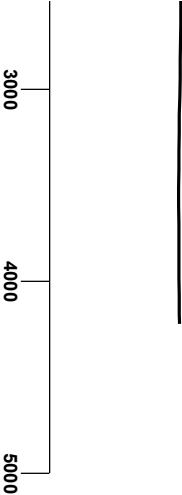
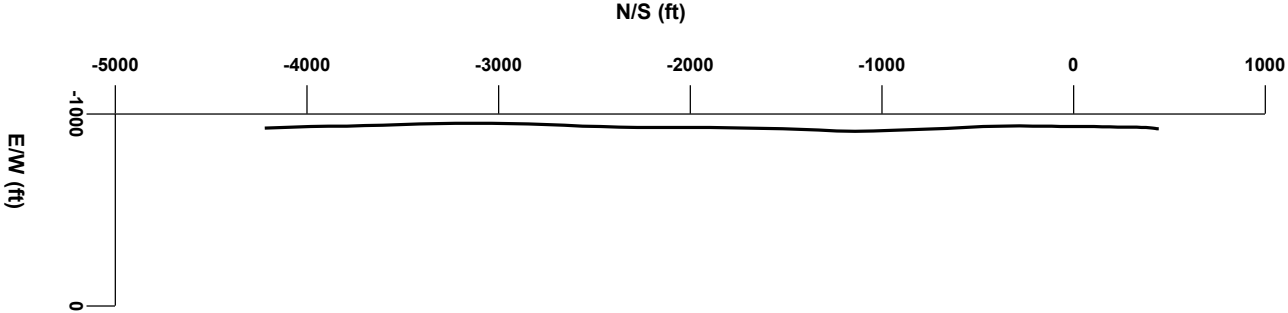
LOG created using LPLOT VH Version 3.0, June 23, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: ANADARKO PETROLEUM CORPORATION
WELL: CANNON 15N-3HZ
LOCATION: NENE SEC 3, T2N, R66W
COUNTY: WELD
STATE: COLORADO
SPOT: 516' FNL X 904' FEL
ELEVATION: 5022' GL - 5039' KB
FIELD: WATTENBERG
SPUD DATE: 6/16/2013
TD DATE: 6/23/2013
DATES LOGGED: 6/18/2013 -6/23/2013
DEPTHS LOGGED: 6777' - 11878'
LOGGERS: ZACH UBER & JEREMY LOFTNESS
DRILLING FLUID: LSND
DRILLING RIG: ENSIGN 138
API: 05-123-36730
LOG TYPE: HORIZONTAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: Wellsite Geological Services Provided By Columbine Logging Inc.



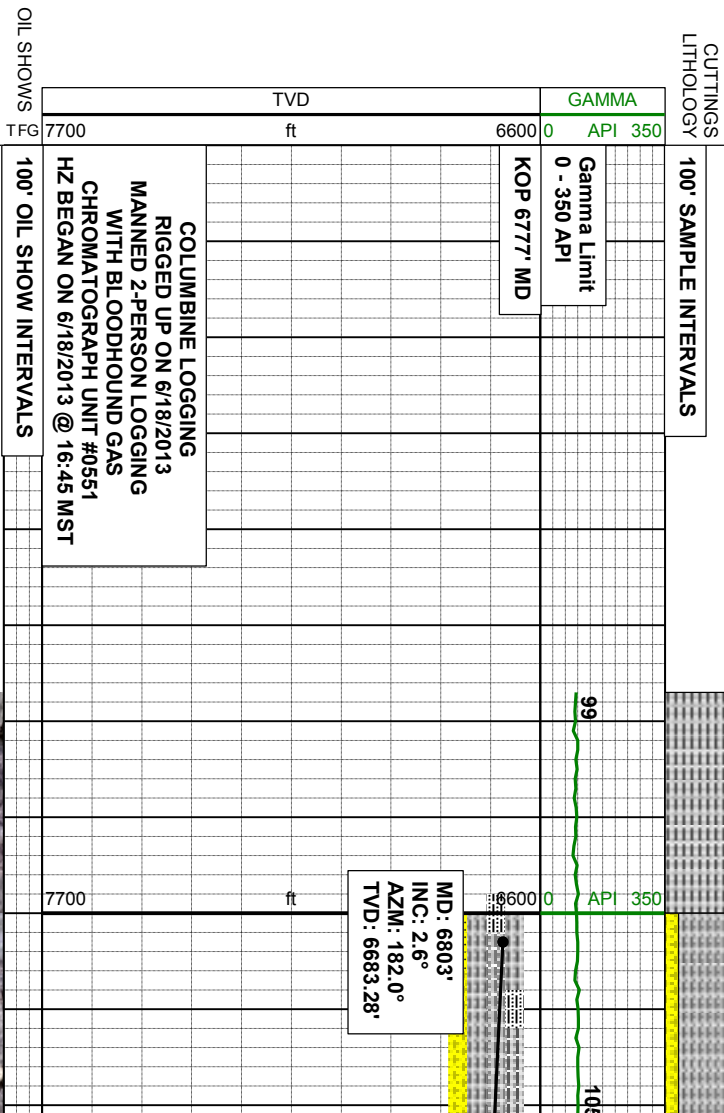
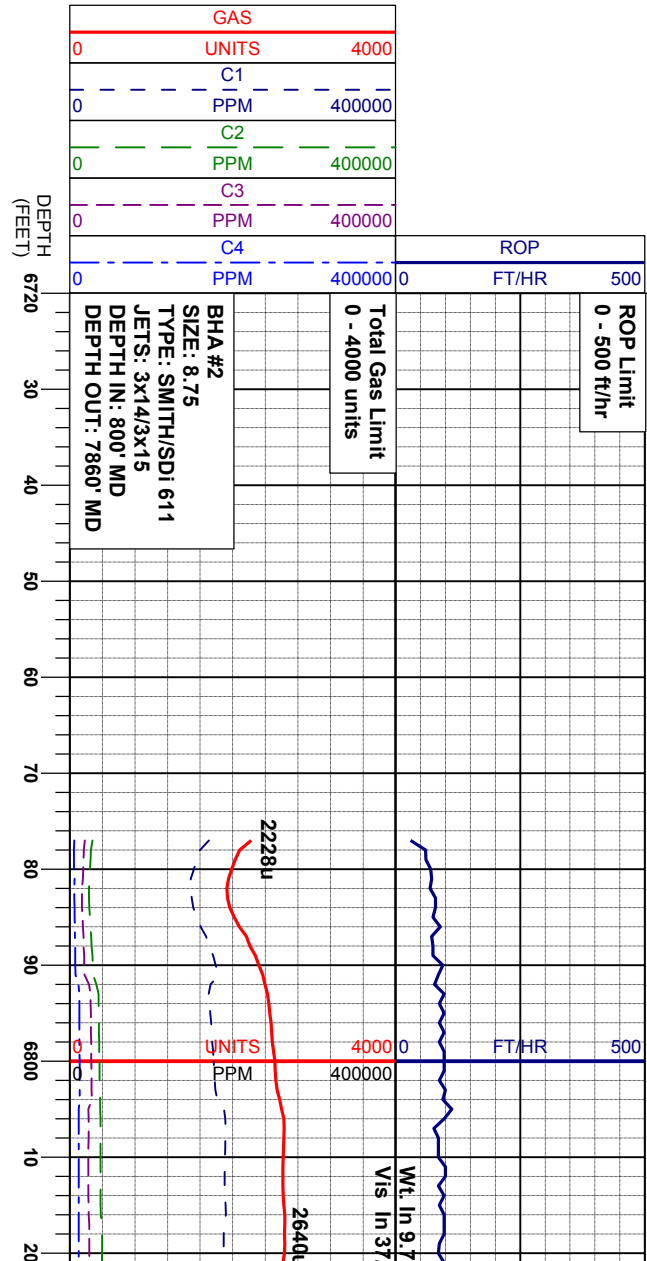
Survey Elevation

Survey Plan

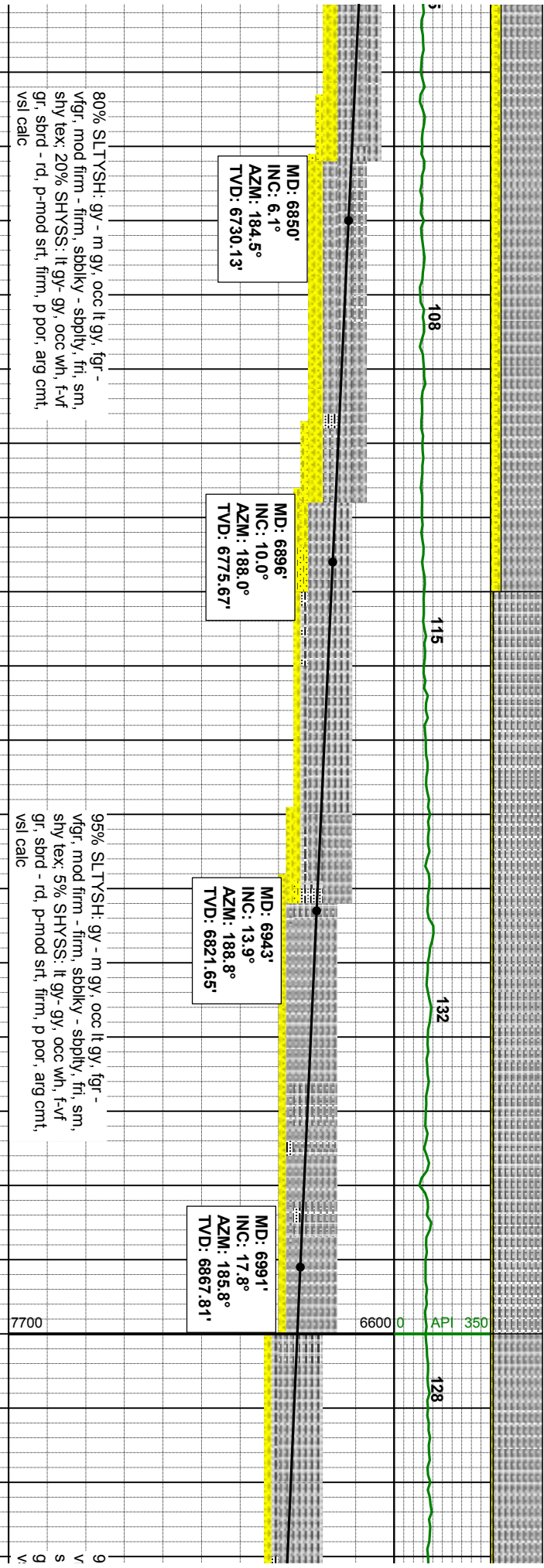
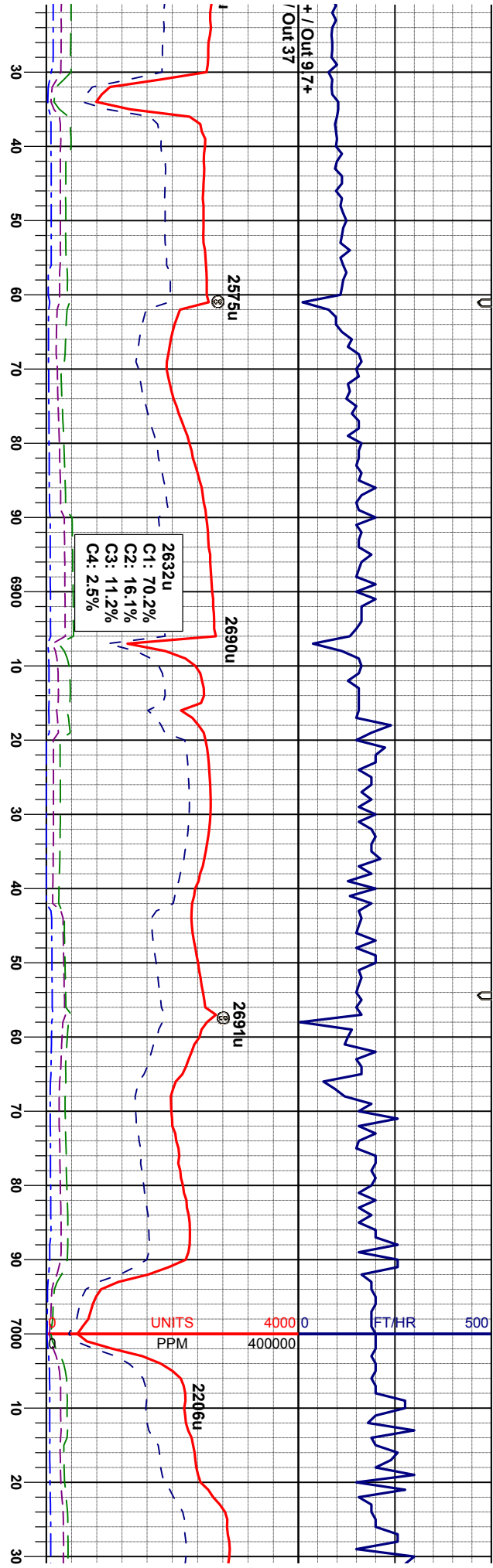


Chalk Marl Shaly Sandstone Silty Shale

 Connection
 Connection Gas
 Midnight Depth
 Normal Fault



SAMPLE PHOTOS

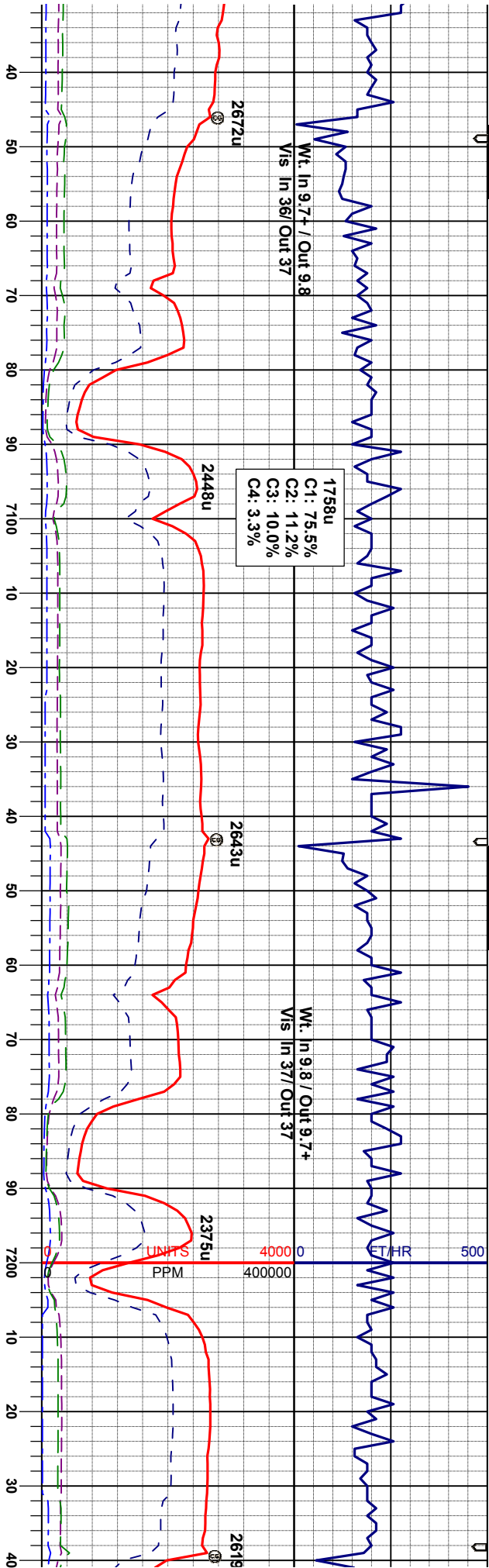
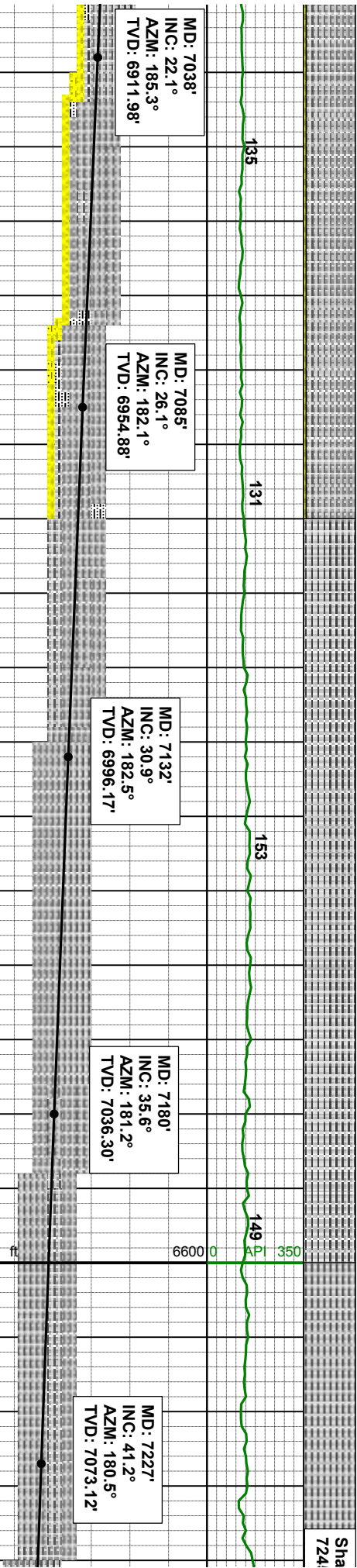


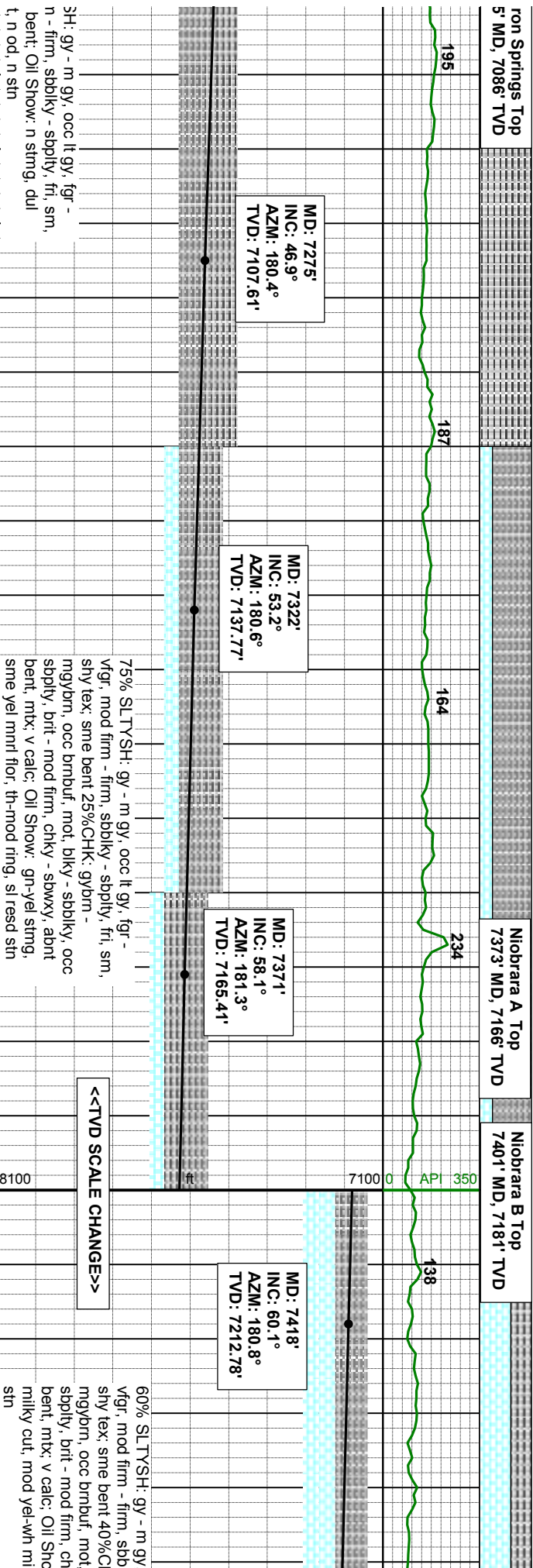
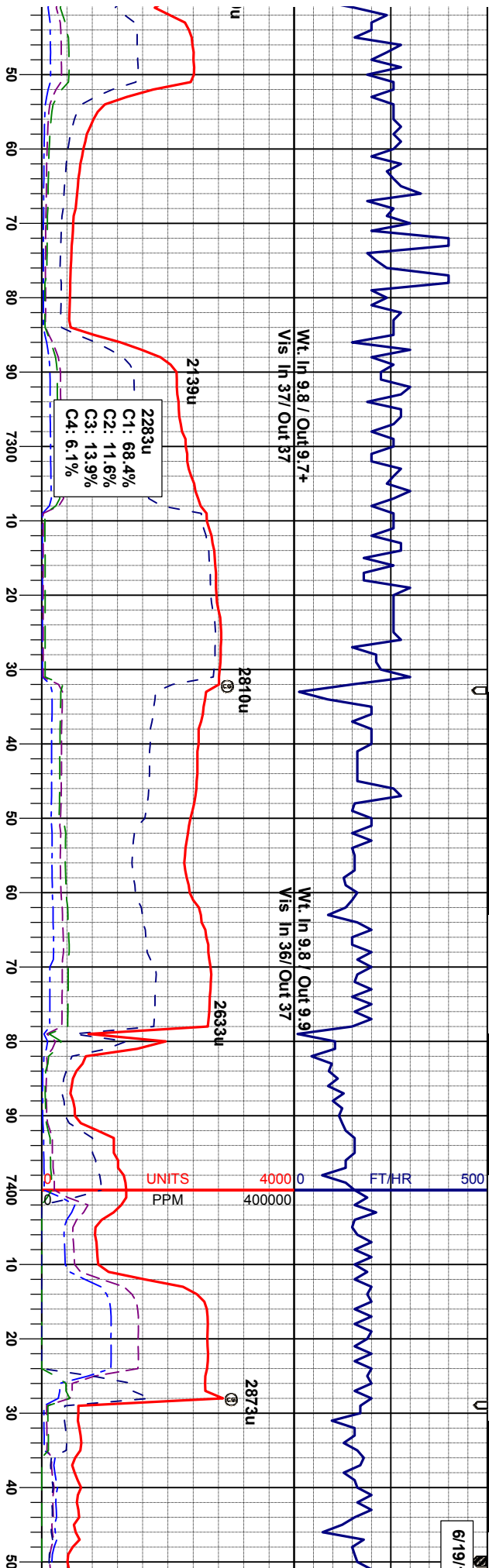


5% SLTYSH: gy - m gy, occ lt gy, fgr -
fgr, mod firm - firm, sbblky - sbply, fr, sm,
hy tex: 5% SHYSS: lt gy- gy, occ wh, f-vf
r, sbdr - rd, p-mod srl, firm, p por, arg cntl,
sl calc

100% SLTYSH: gy - m gy, occ lt gy, fgr -
vfgr, mod firm - firm, sbblky - sbply, fr, sm,
shy tex, tr shyss

100% SLTY:
vfgr, mod fir
shy tex: sme
yel gn flr cu



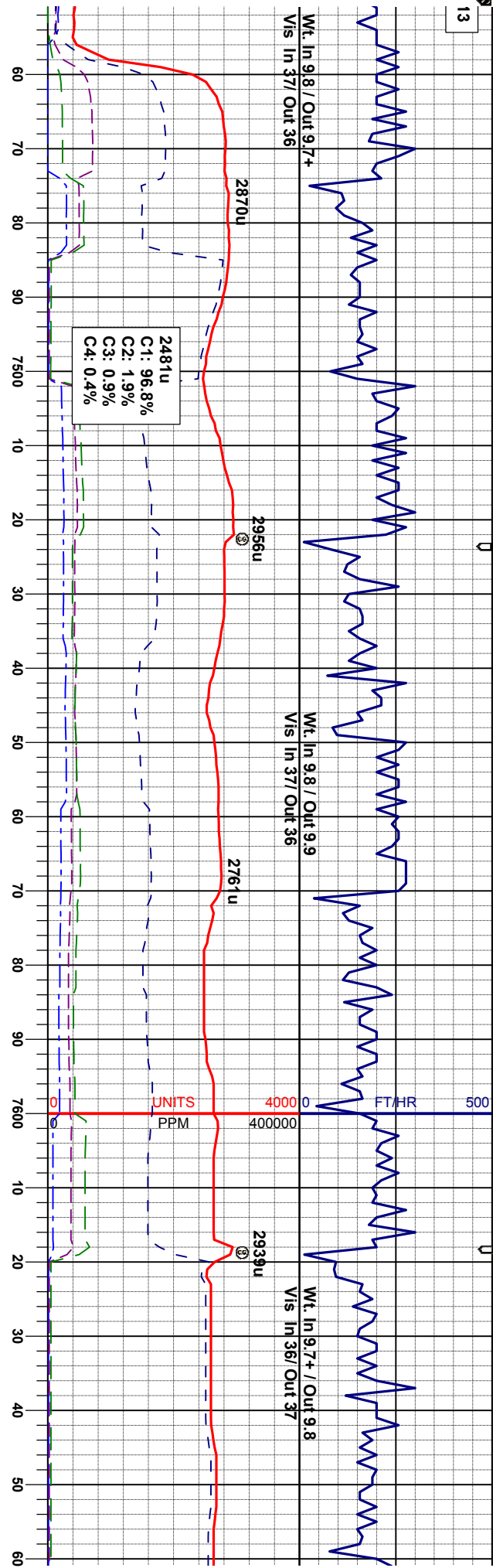


75% SLTYSH: gy - m gy, occ lt gy, fgr -
vfg, mod firm - firm, sbdky - sbdky, fri, sm,
shy tex: sme bent 25%CHK, gybm -
mgybm, occ brmbuf, mot, bky - sbdky, occ
sbdky, brt - mod firm, chky - sbwxy, abnt
bent, mtx: v calc: Oil Show: gr-yel stng,
sme yel mnd flr, th-mod ring, sl resd stn

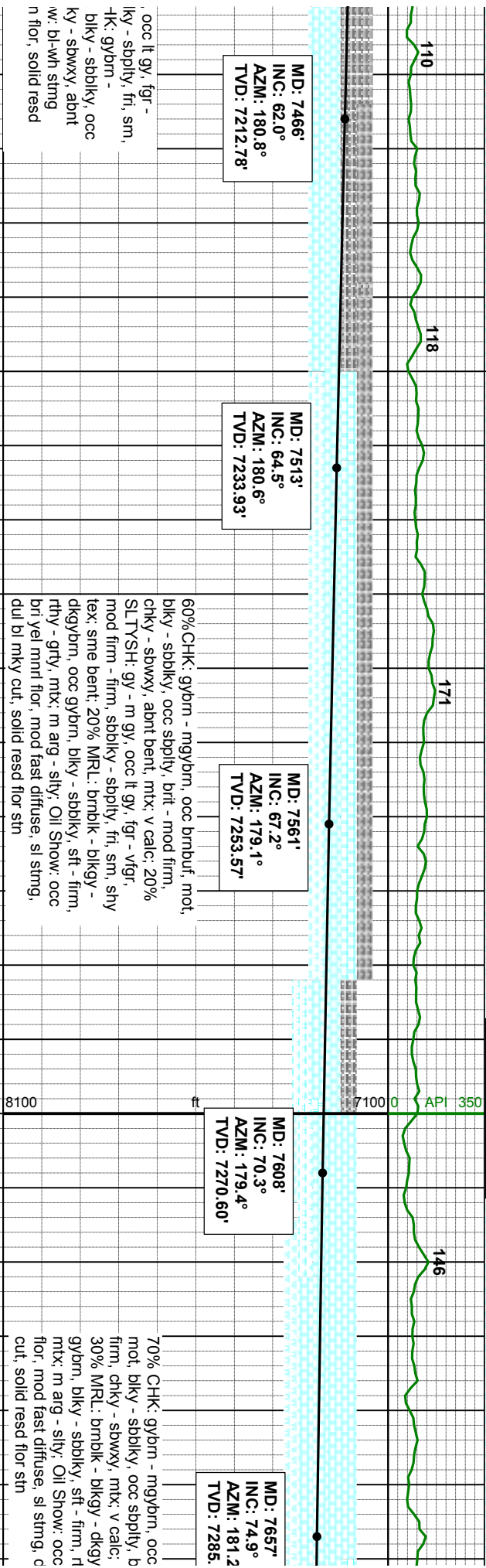
<<TVD SCALE CHANGE>>

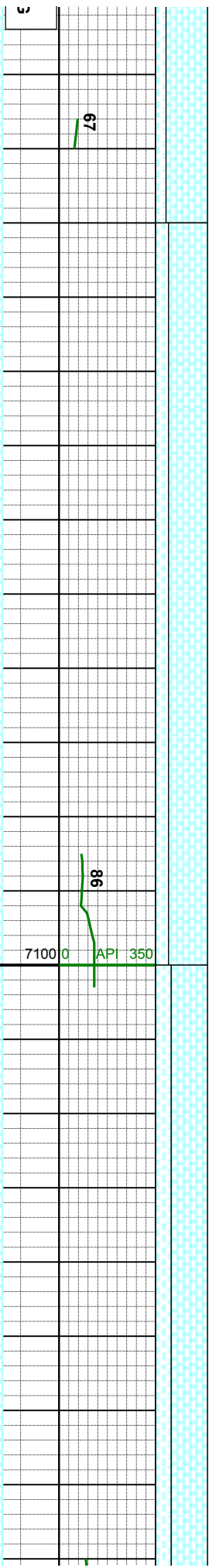
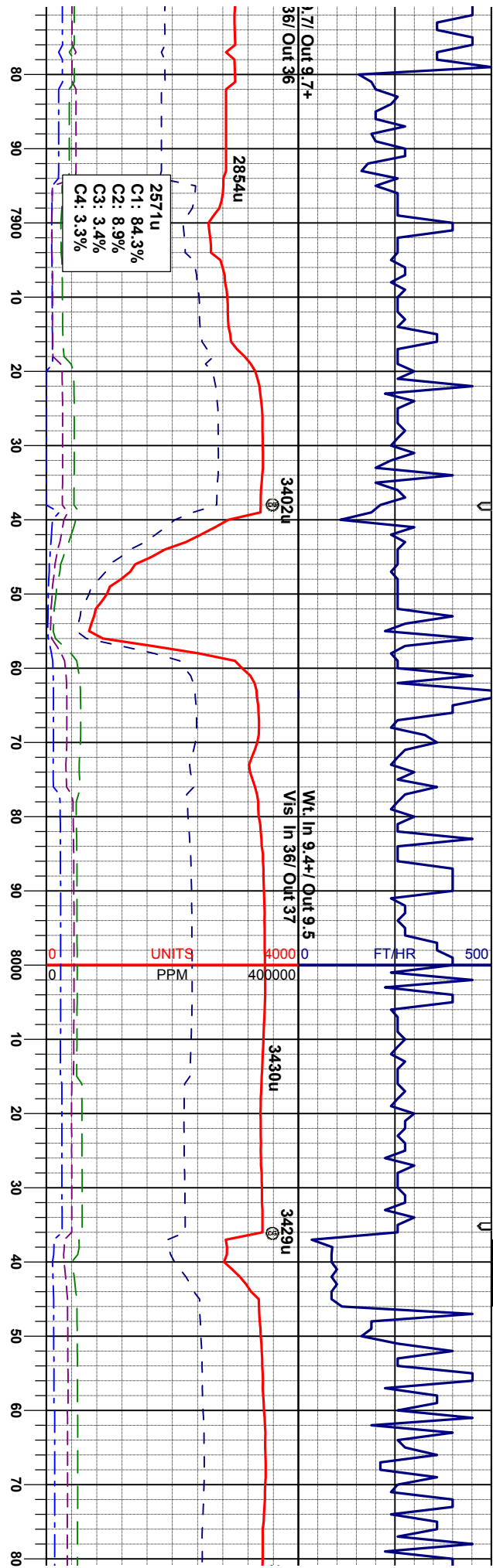
60% SLTYSH: gy - m gy,
vfg, mod firm - firm, sbdky - sbdky, fri, sm,
shy tex: sme bent 40%Cl
mgybm, occ brmbuf, mot,
sbdky, brt - mod firm, ch
bent, mtx: v calc: Oil Shro
milky cut, mod yel-wh mil
stn





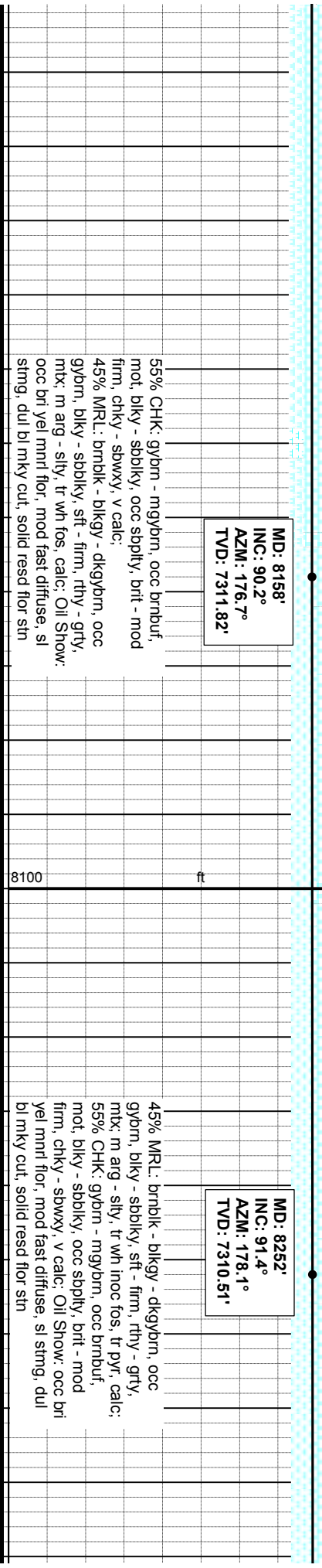
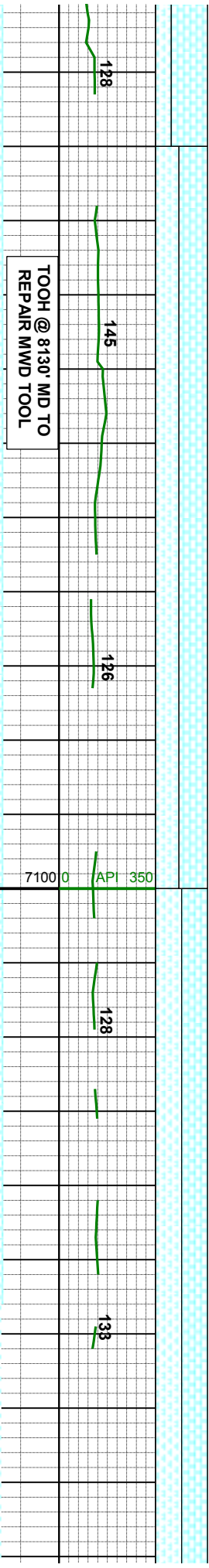
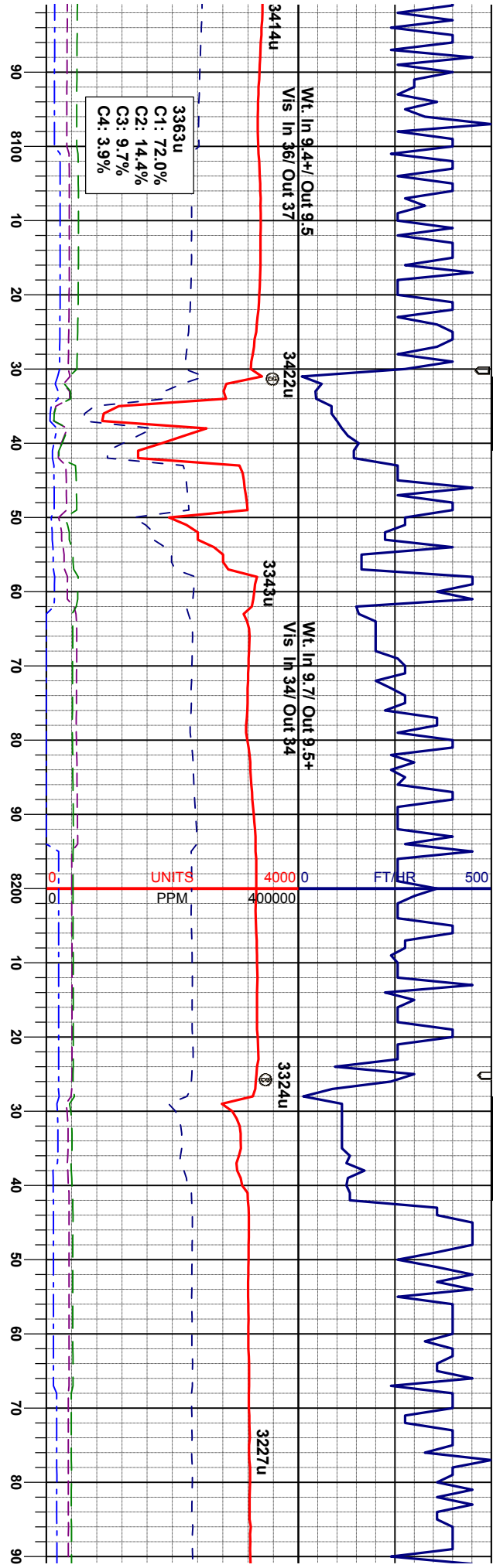
Niobrara C Top
7601' MD, 7268' TVD

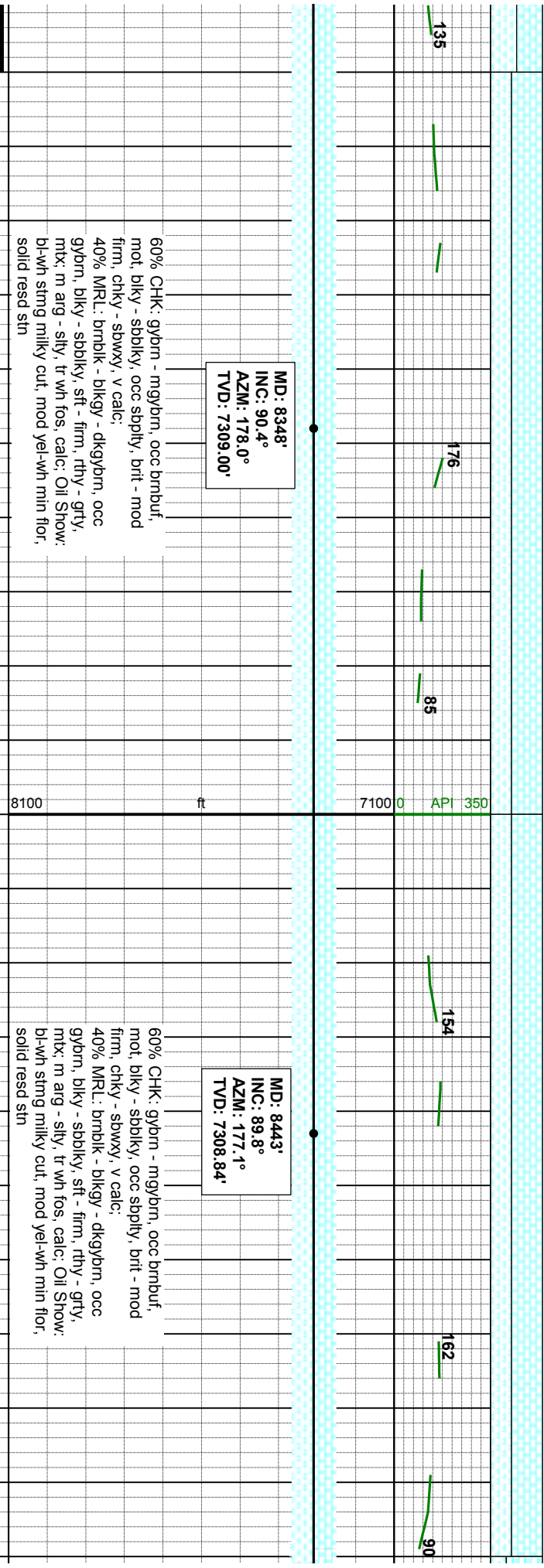
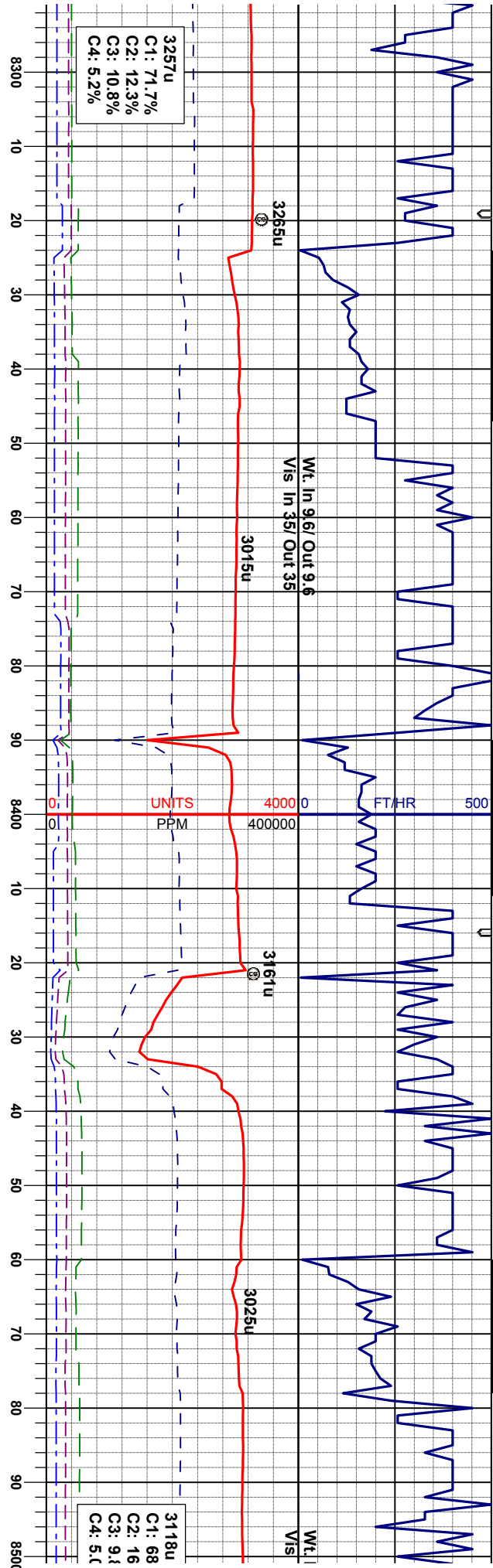


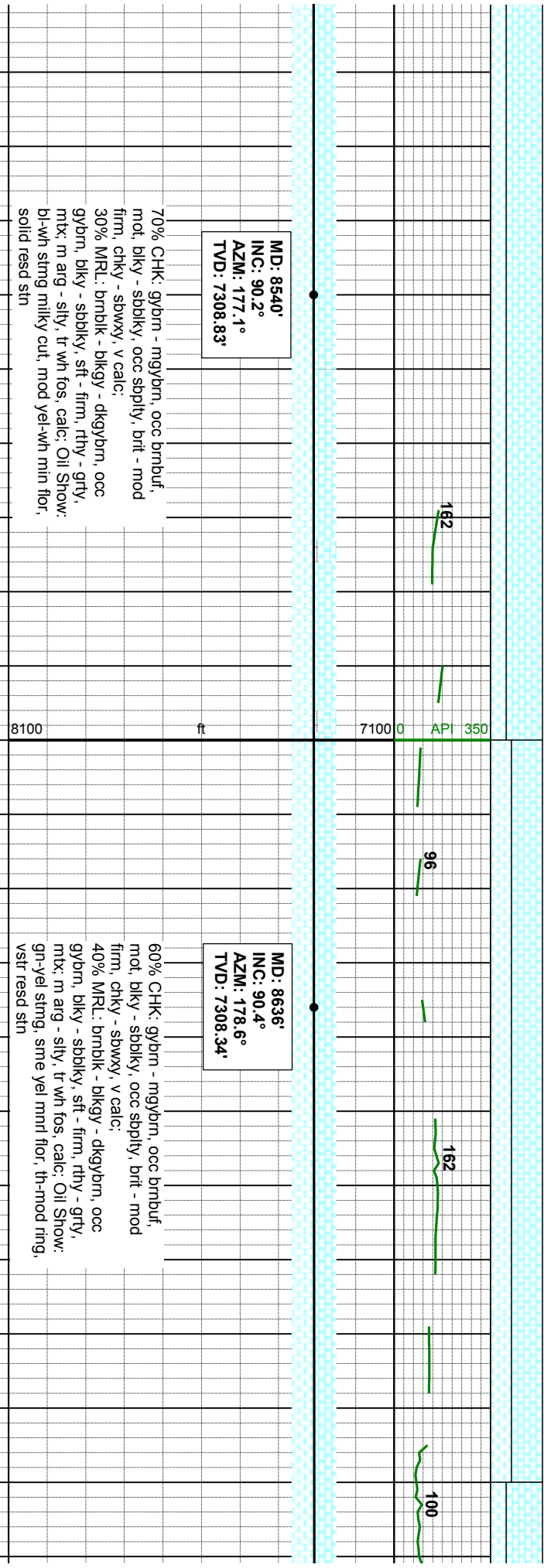
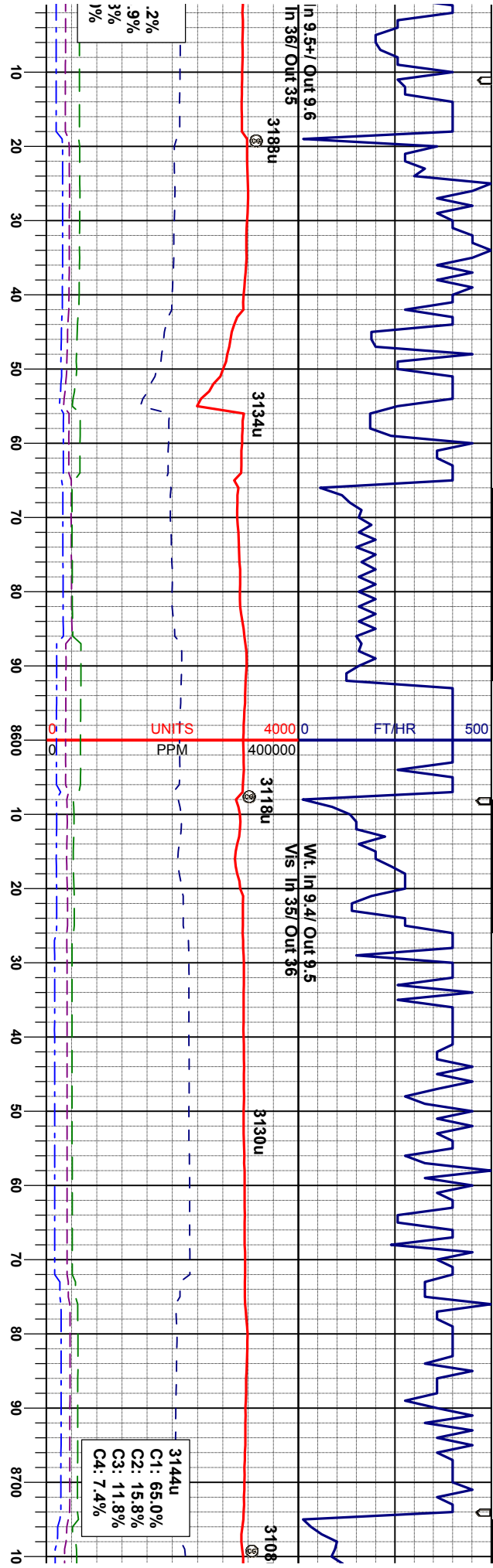


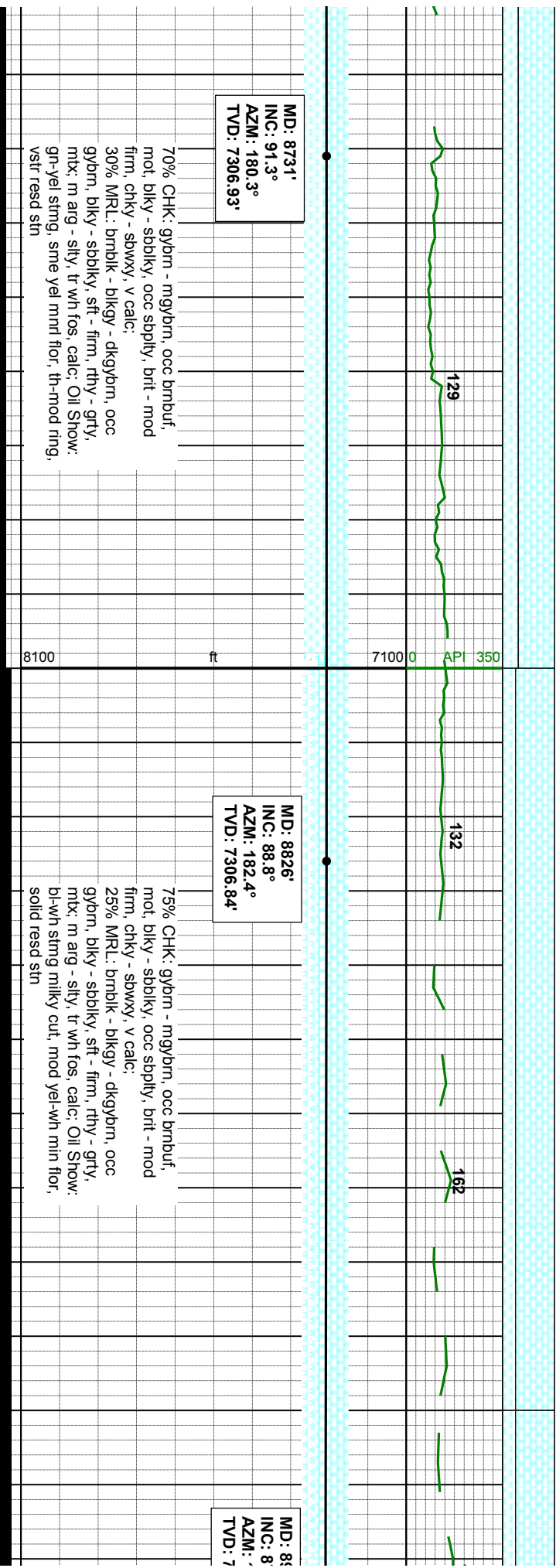
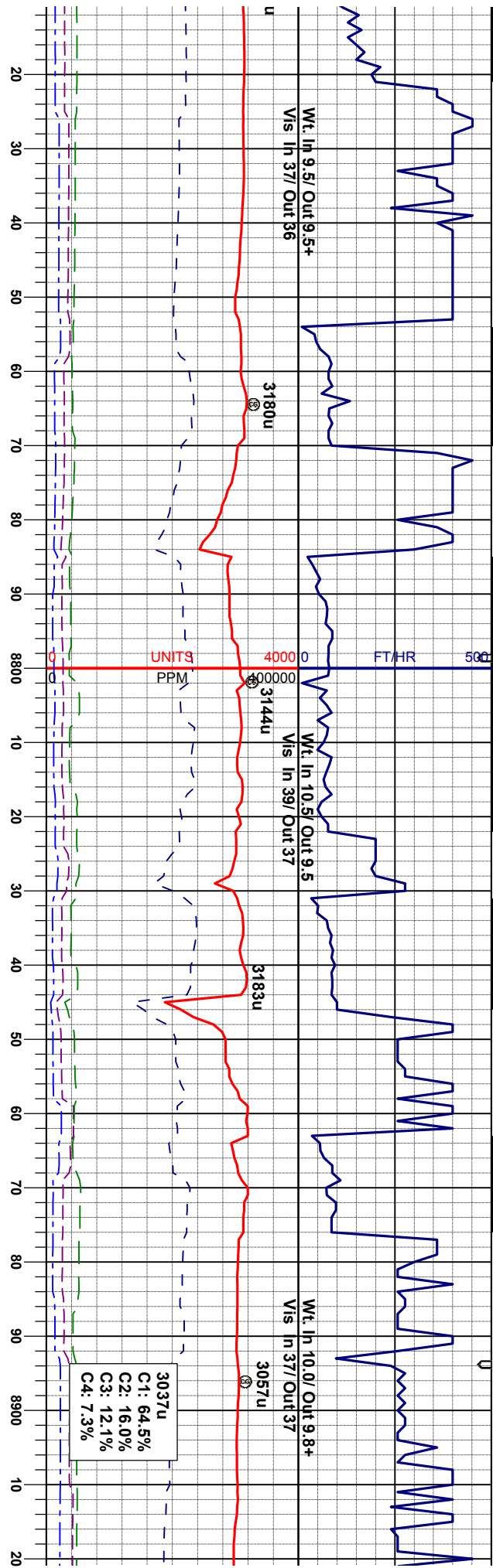
| | | | |
|---|-------|--------|----------|
| 860' | 9.90° | 180.6° | 7311.62' |
| <div>BHA #3 SIZE: 6.125 TYPE: VM513/VM513 JETS: 5x16 DEPTH IN: 7860' MD DEPTH OUT: 11878' MD</div> | | | |
| <div>75% CHK: gybrn - mgybrn, occ brnbuf, mot, blkly - sbblkly, occ spbply, brt - mod firm, chky - sbwxy, tr wh fos, v calc: 25% MRL: brmbk - blkgy - dkgybrn, occ gybrn, blkly - sbblkly, sft - firm, rthy - grty, mtk: m arg - slty, calc: Oil Show: occ br yel mnrl flr, mod fast diffuse, sl string, dul bl mky cut, solid read flr str</div> | | | |
| <div>MD: 7969' INC: 90.4° AZM: 179.0° TVD: 7312.98'</div> | | | |
| 8100 | ft | | |
| <div>70% CHK: gybrn - mgybrn, occ brnbuf, mot, blkly - sbblkly, occ spbply, brt - mod firm, chky - sbwxy, v calc: 30% MRL: brmbk - blkgy - dkgybrn, occ gybrn, blkly - sbblkly, sft - firm, rthy - grty, mtk: m arg - slty, tr wh fos, calc: Oil Show: occ br yel mnrl flr, mod fast diffuse, sl string, dul bl mky cut, solid read flr str</div> | | | |
| <div>MD: 8063' INC: 90.3° AZM: 177.7° TVD: 7312.32'</div> | | | |

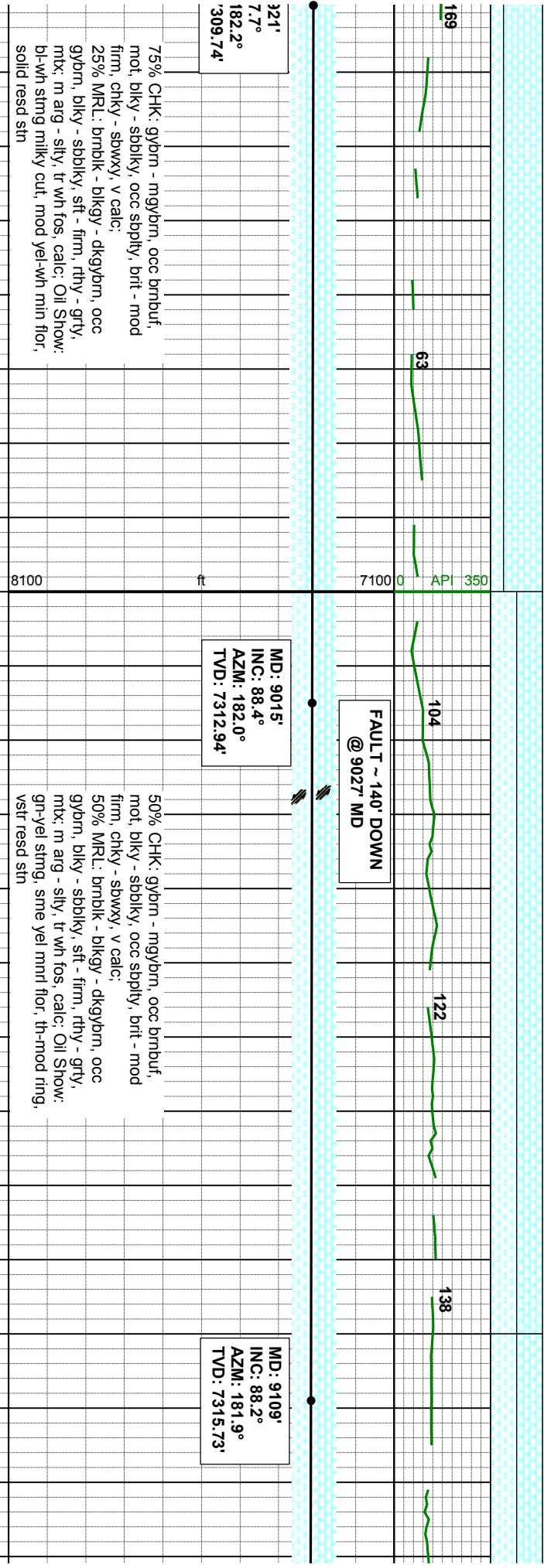
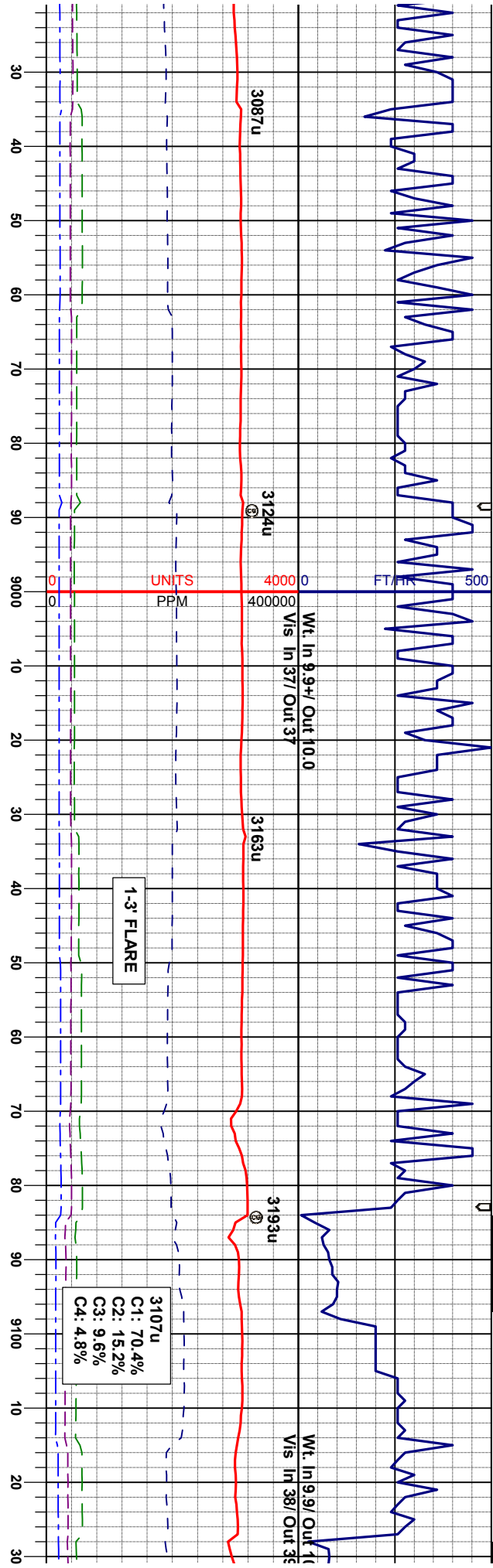


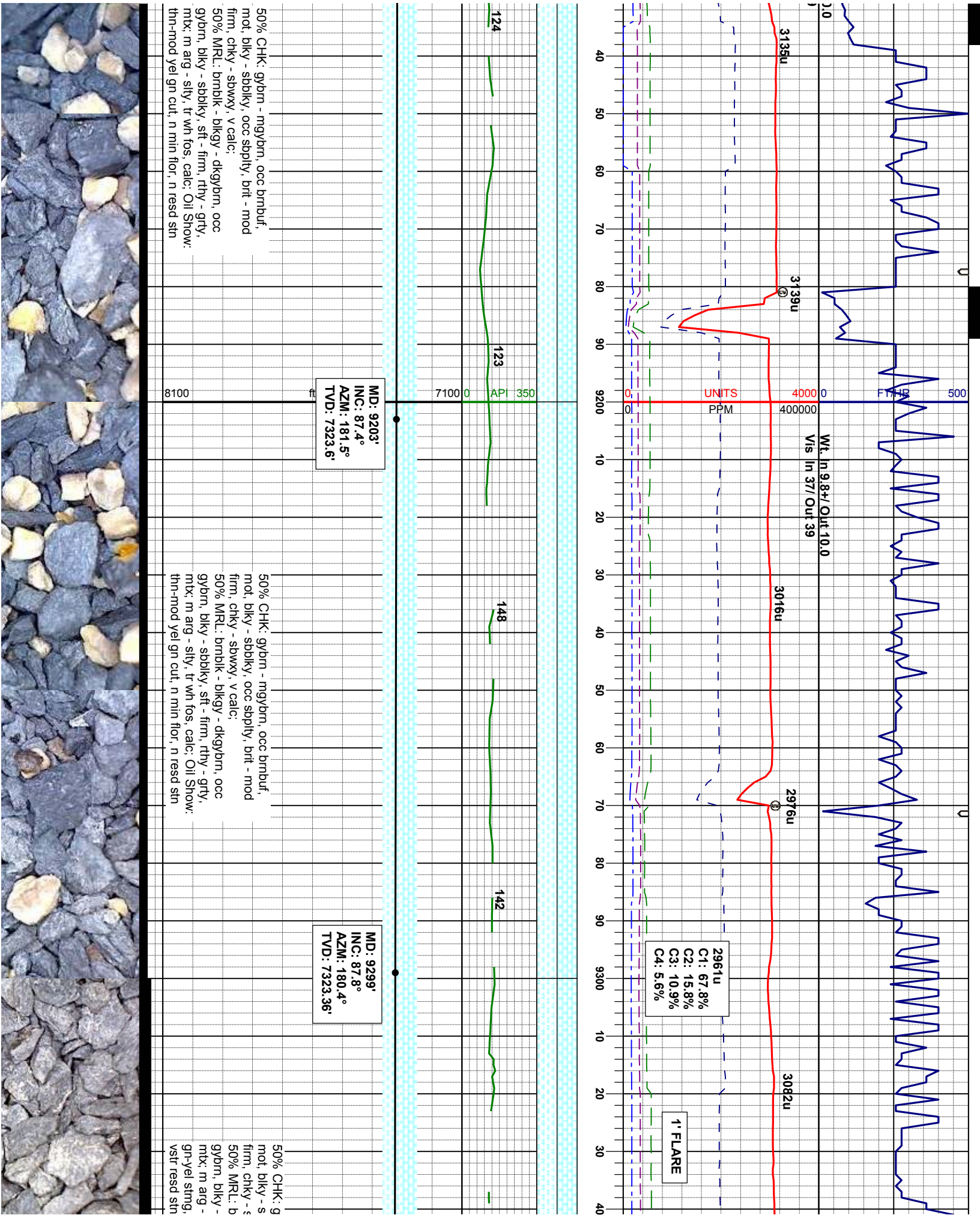


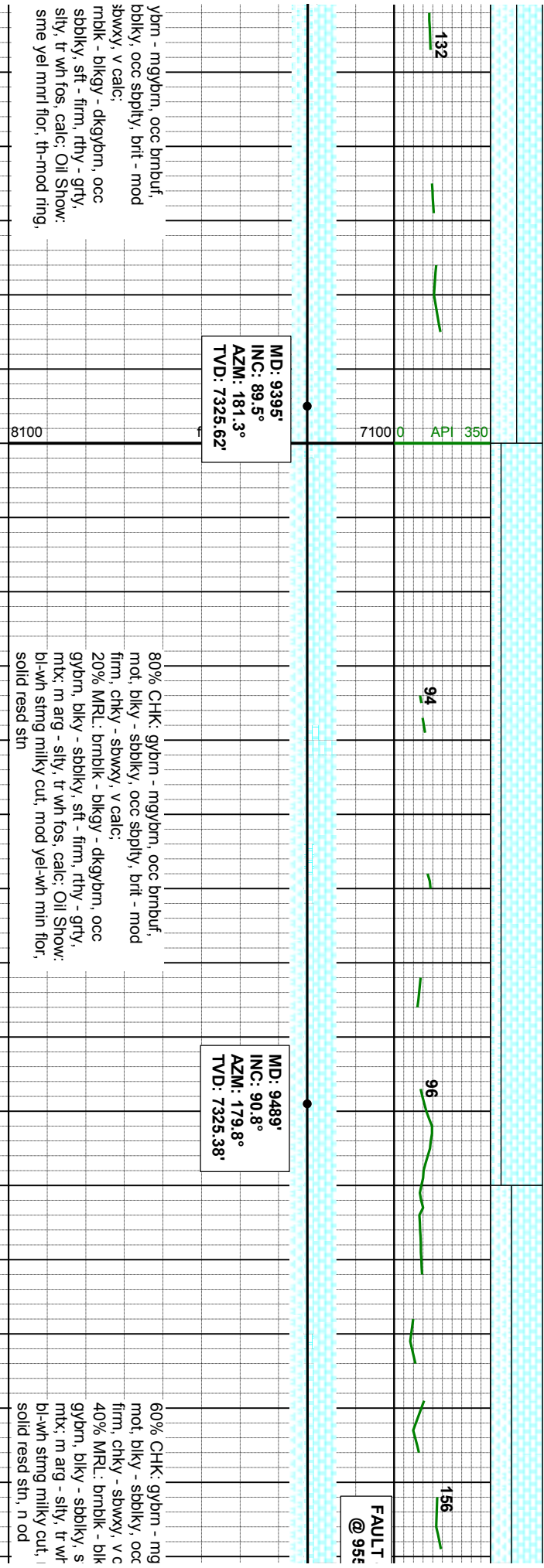
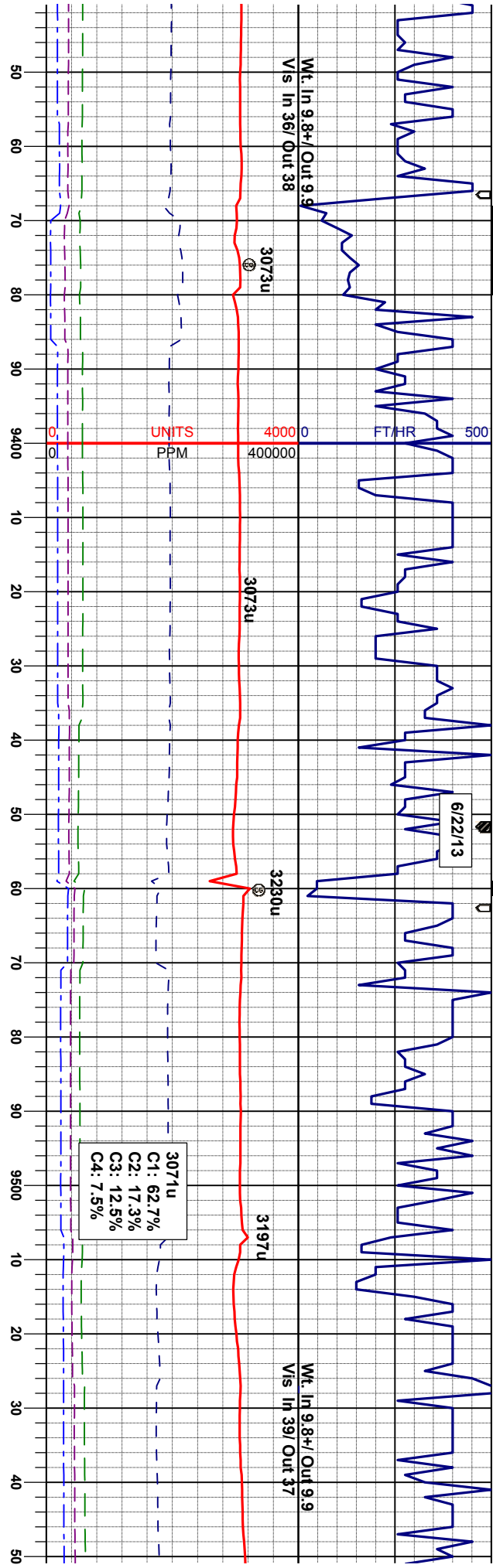


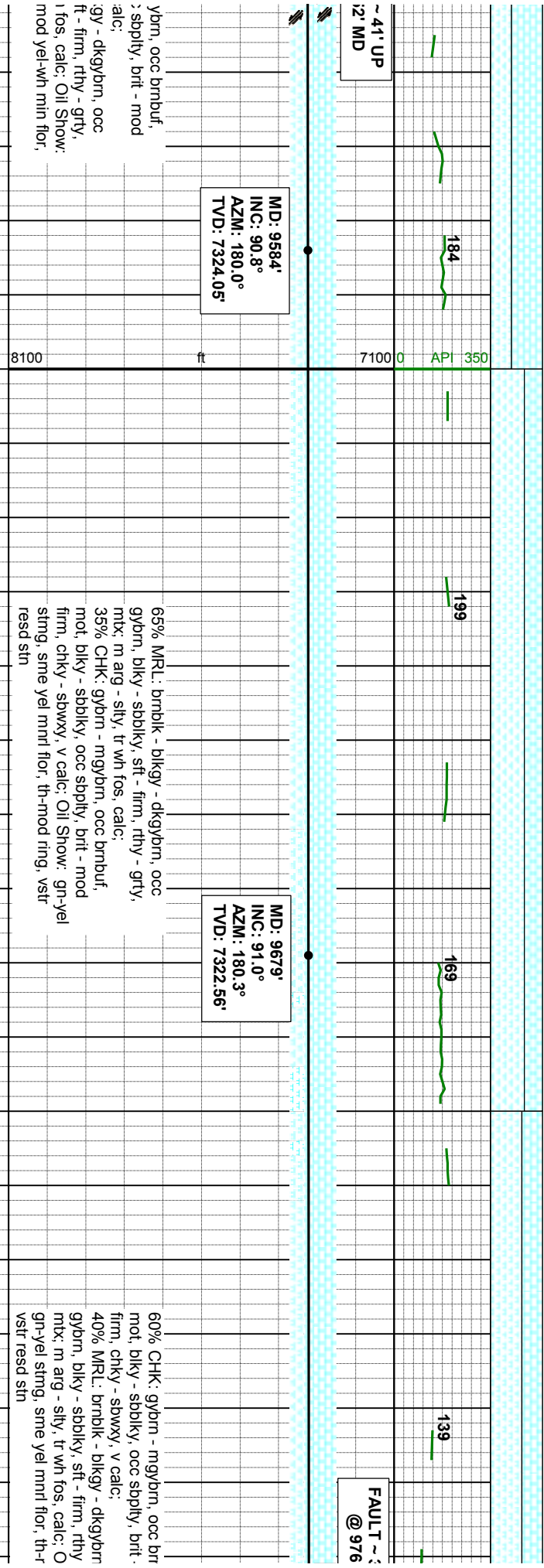
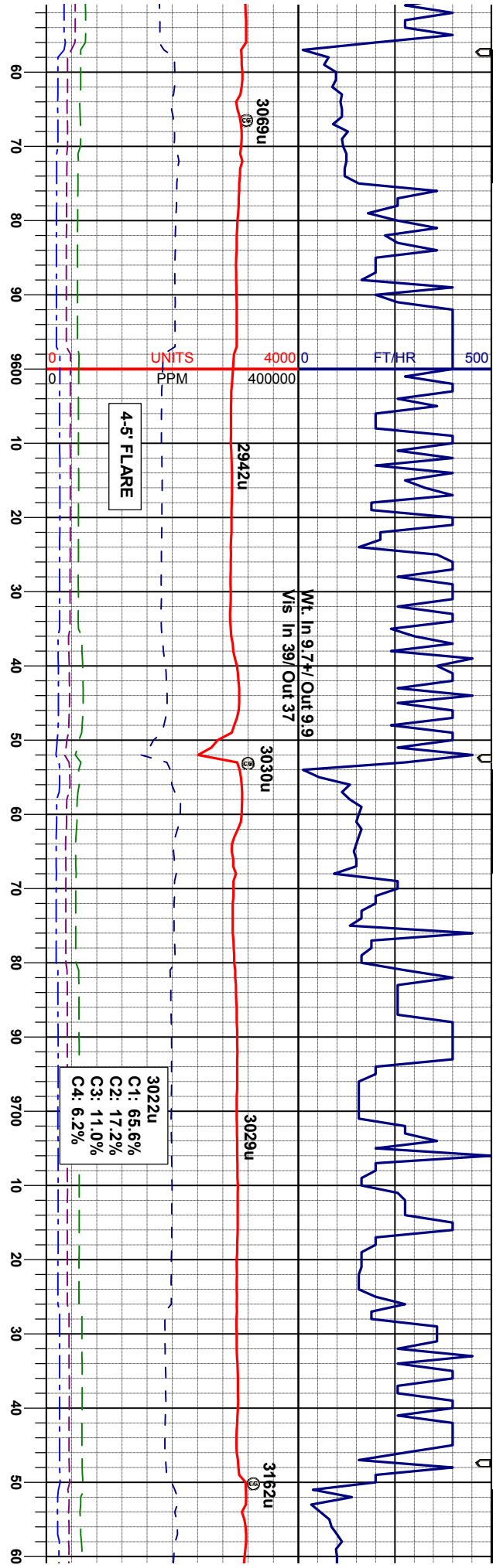


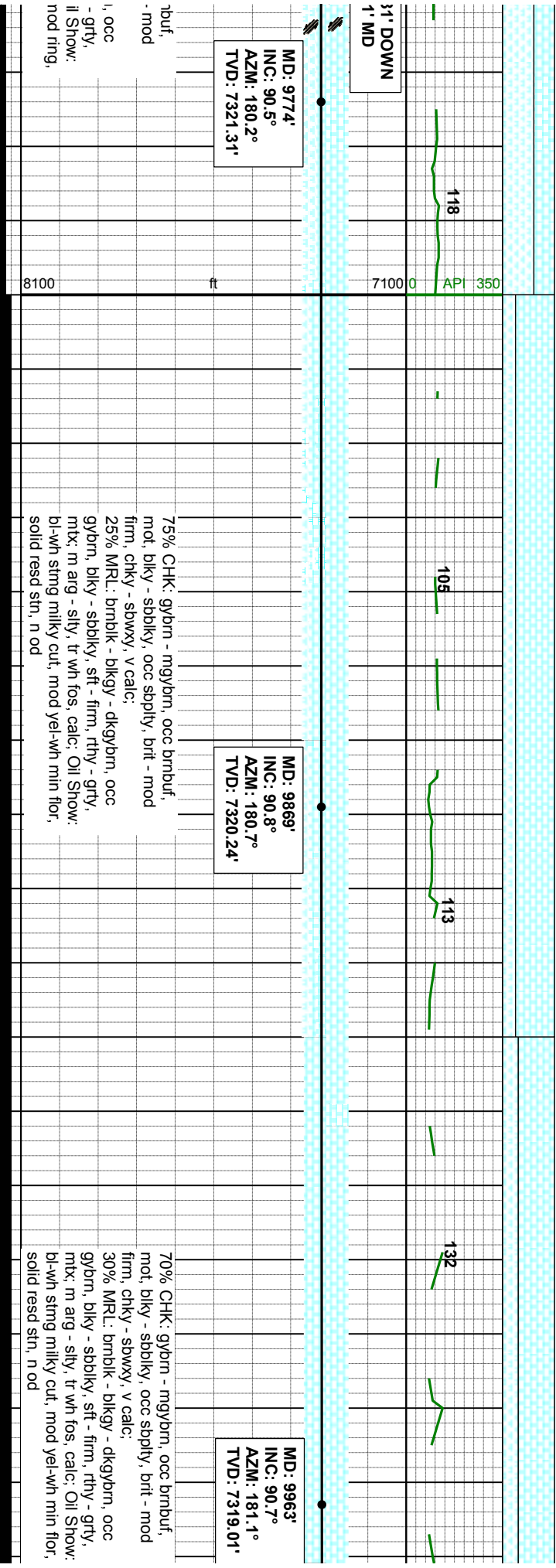
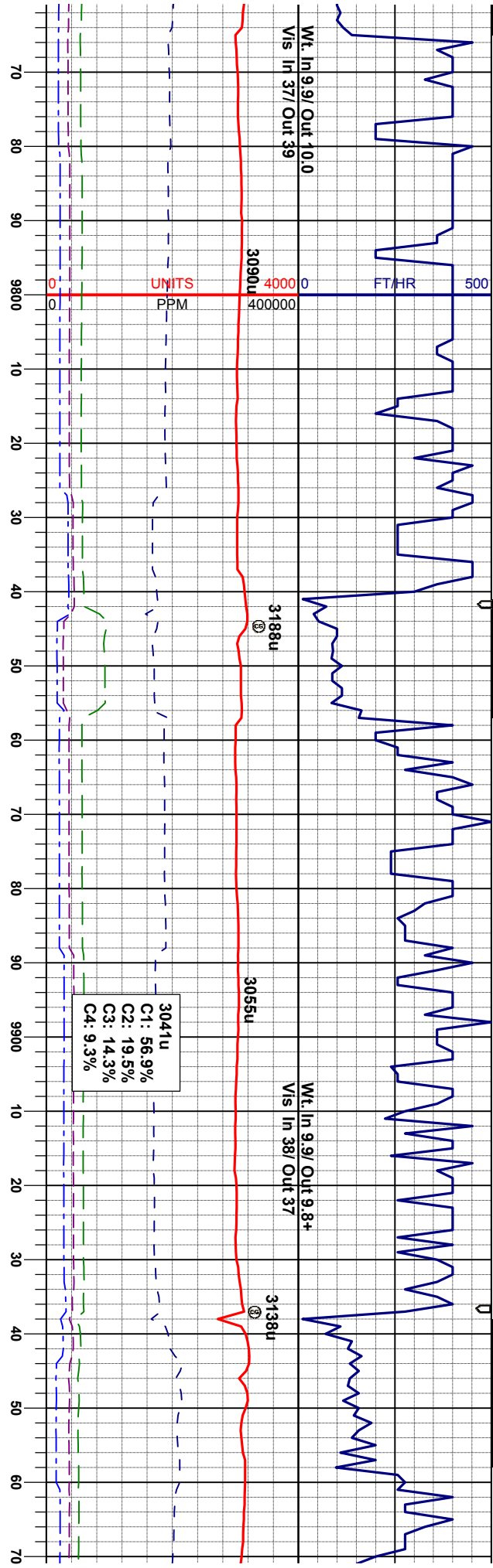


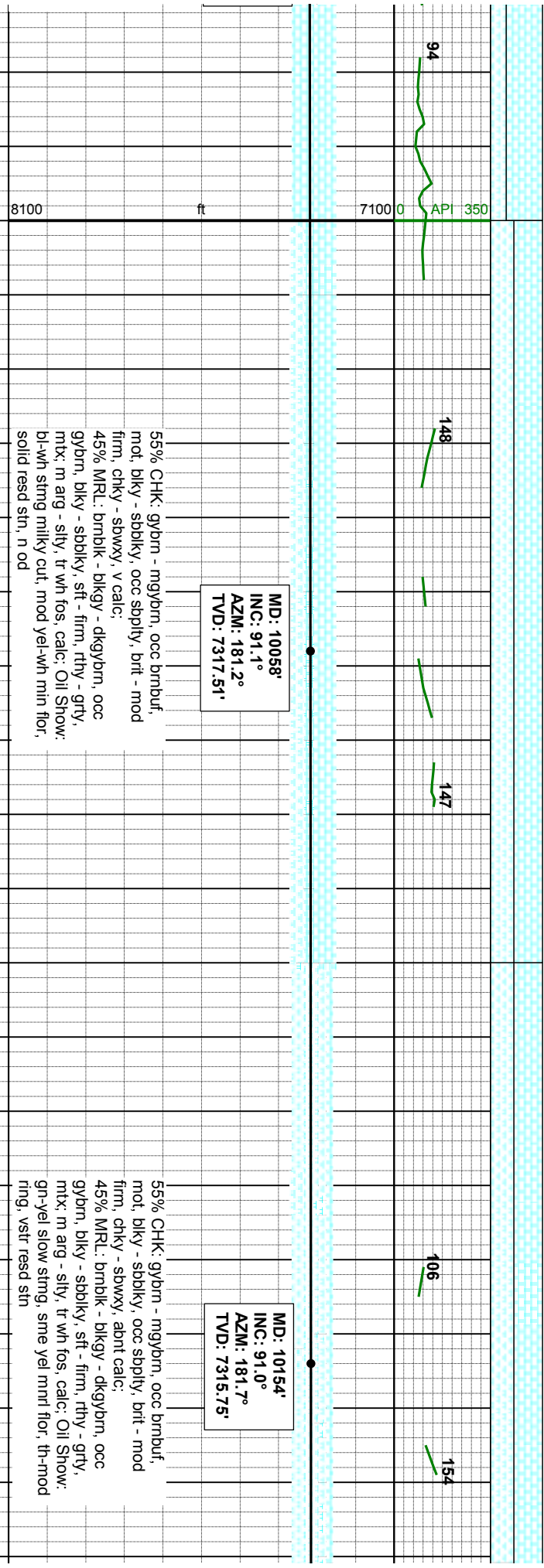
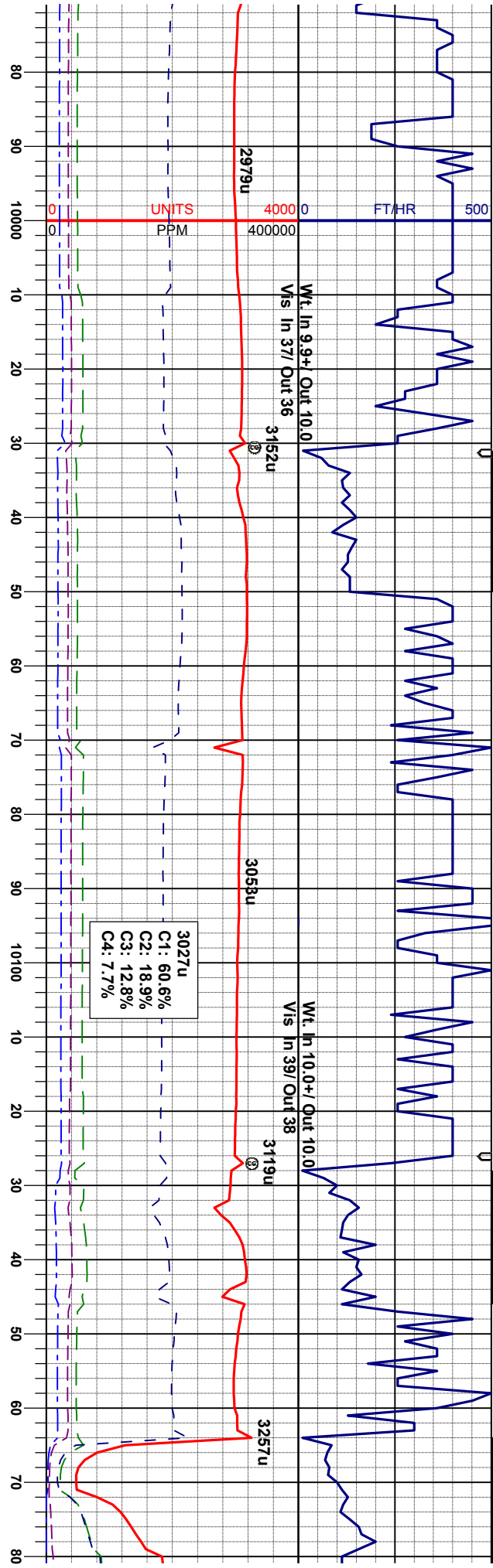


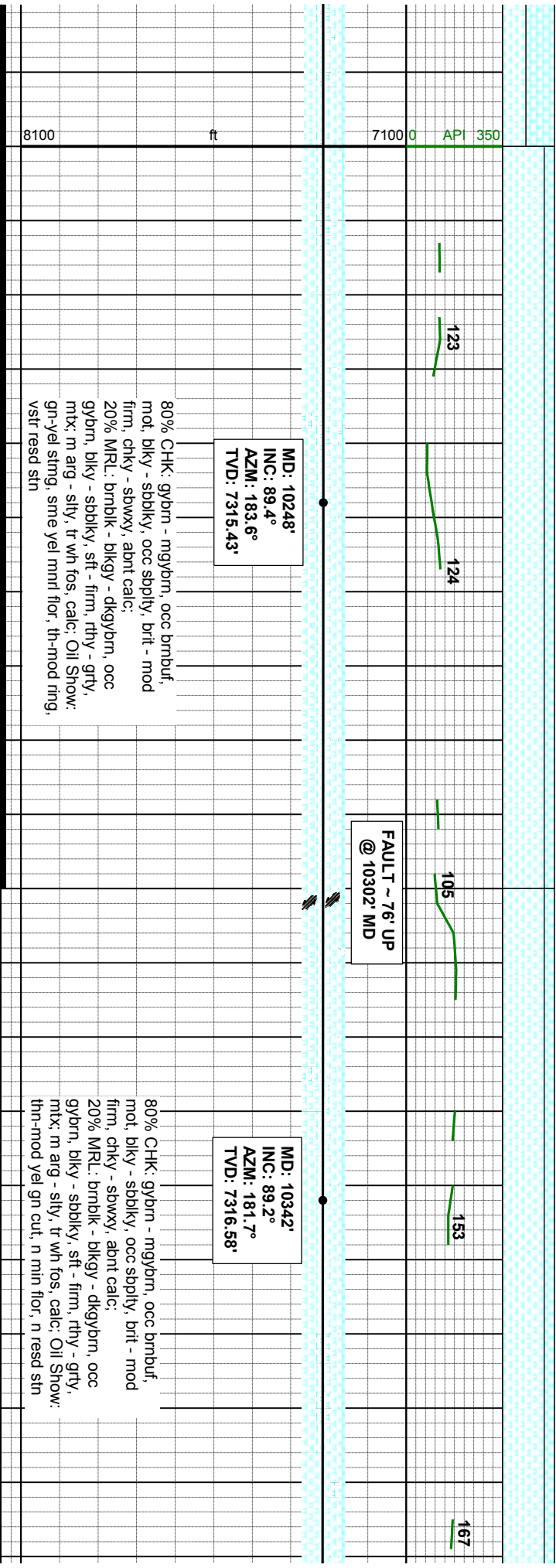
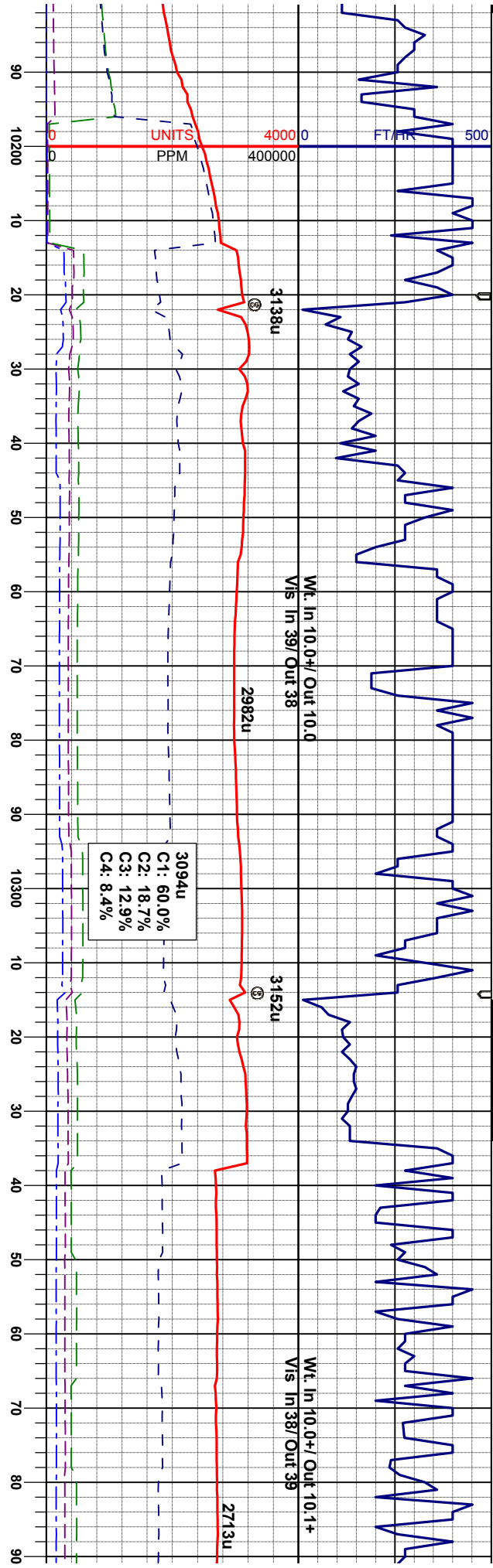


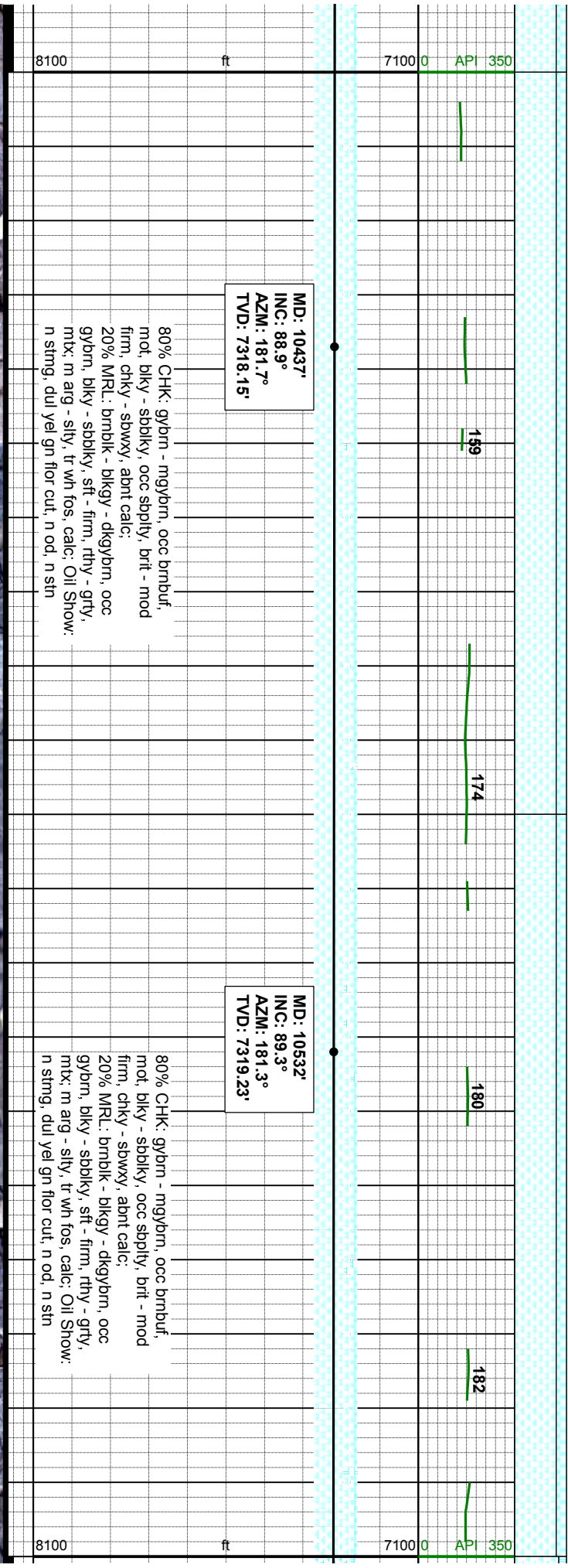
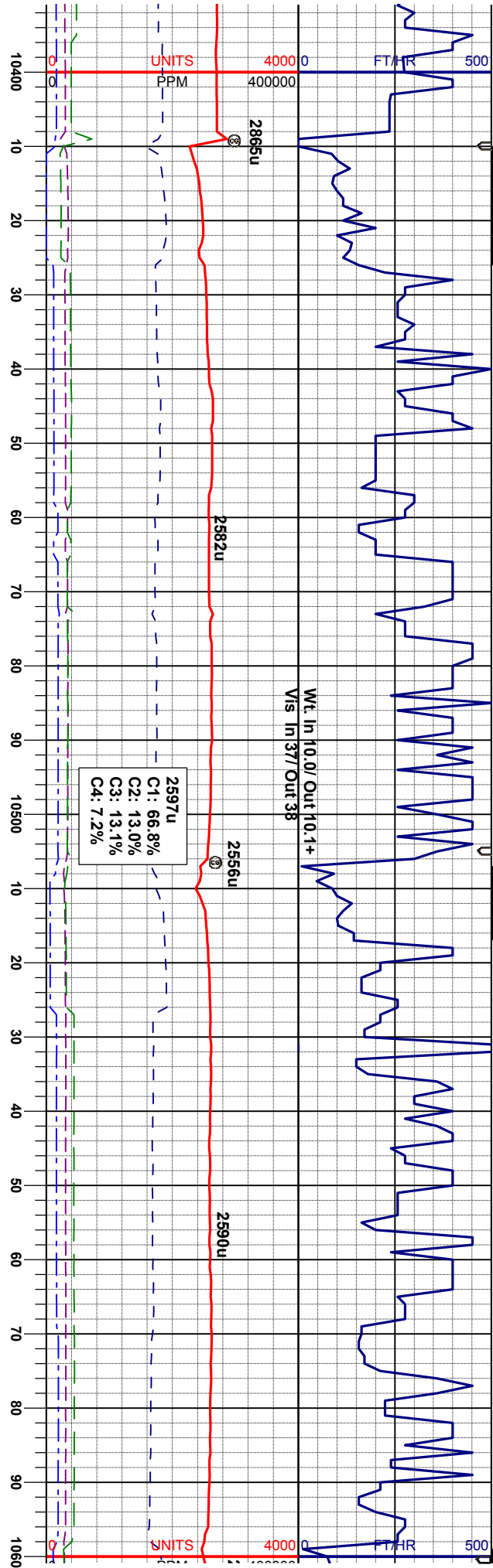


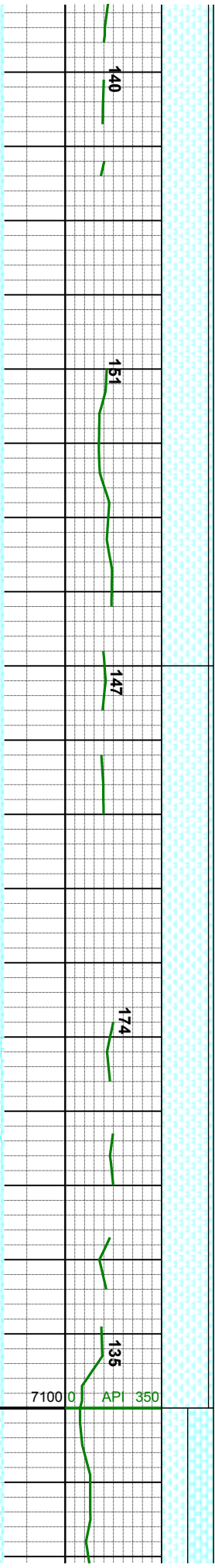
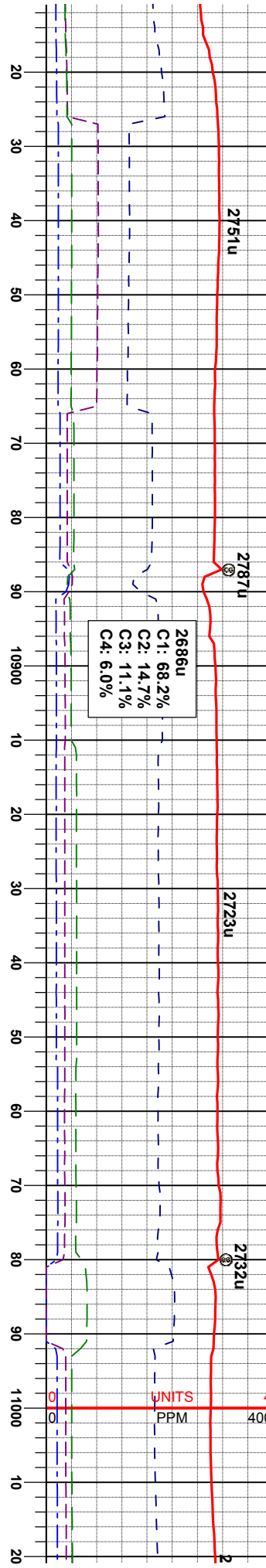
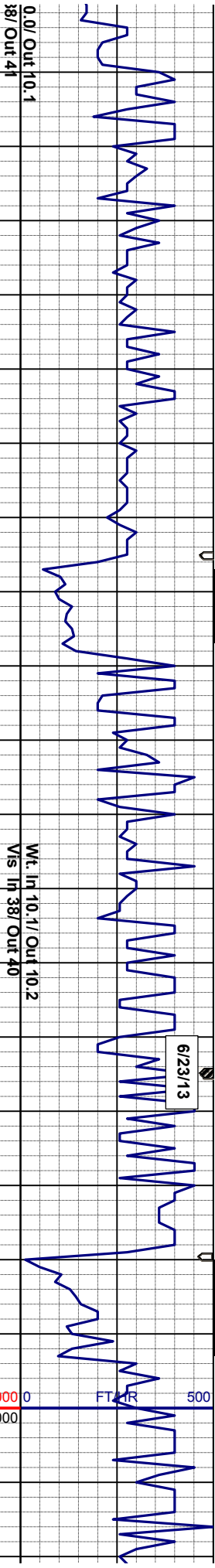












ID: 10817'
NC: 89.7°
ZM: 179.5°
VD: 7324.29'

MD: 10912'
INC: 89.4°
AZM: 179.3°
TVD: 7325.04'

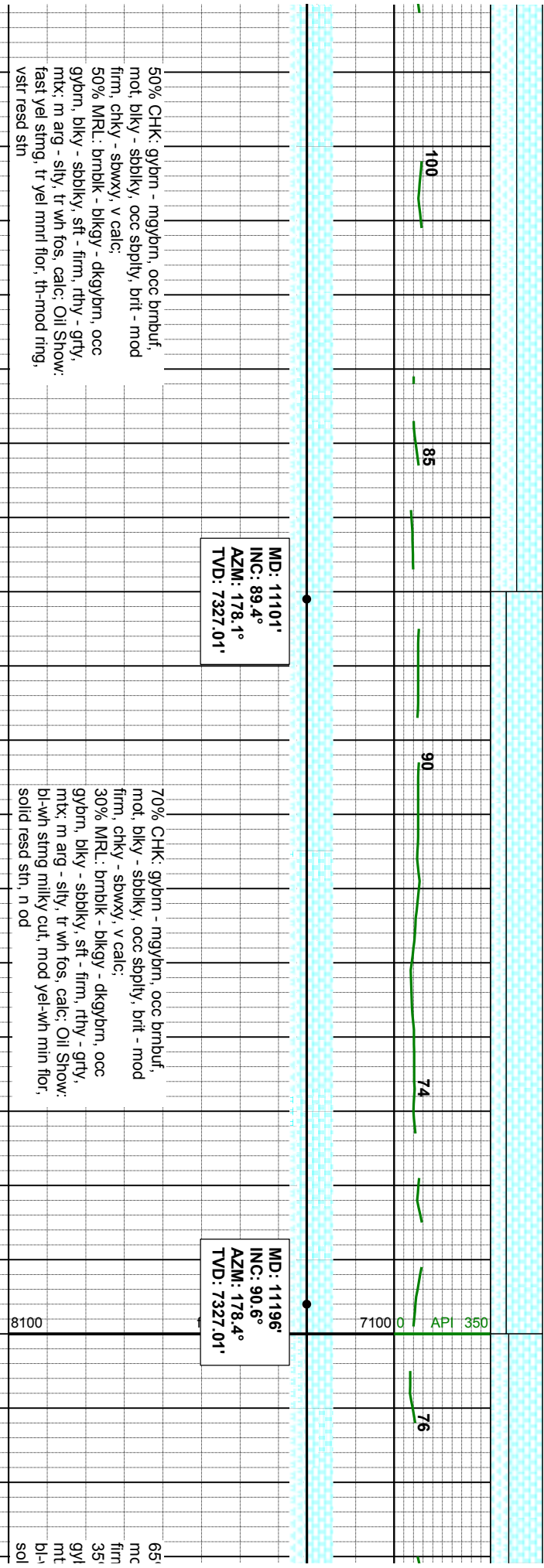
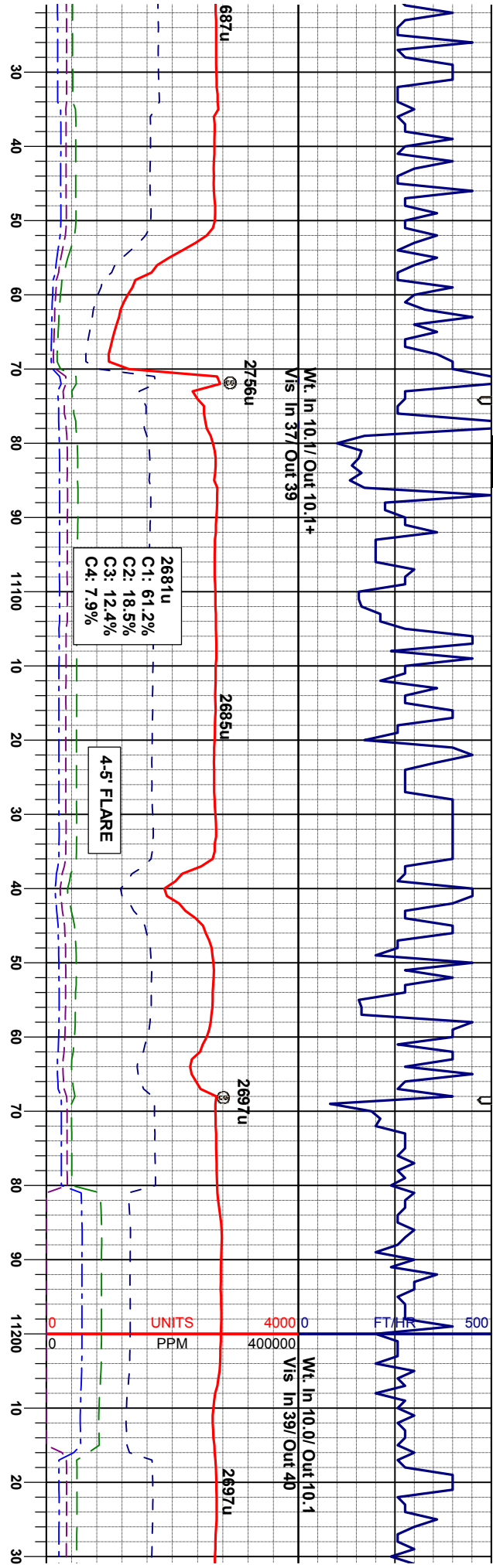
MD: 11006'
INC: 89.4°
AZM: 178.4°
TVD: 7326.02'

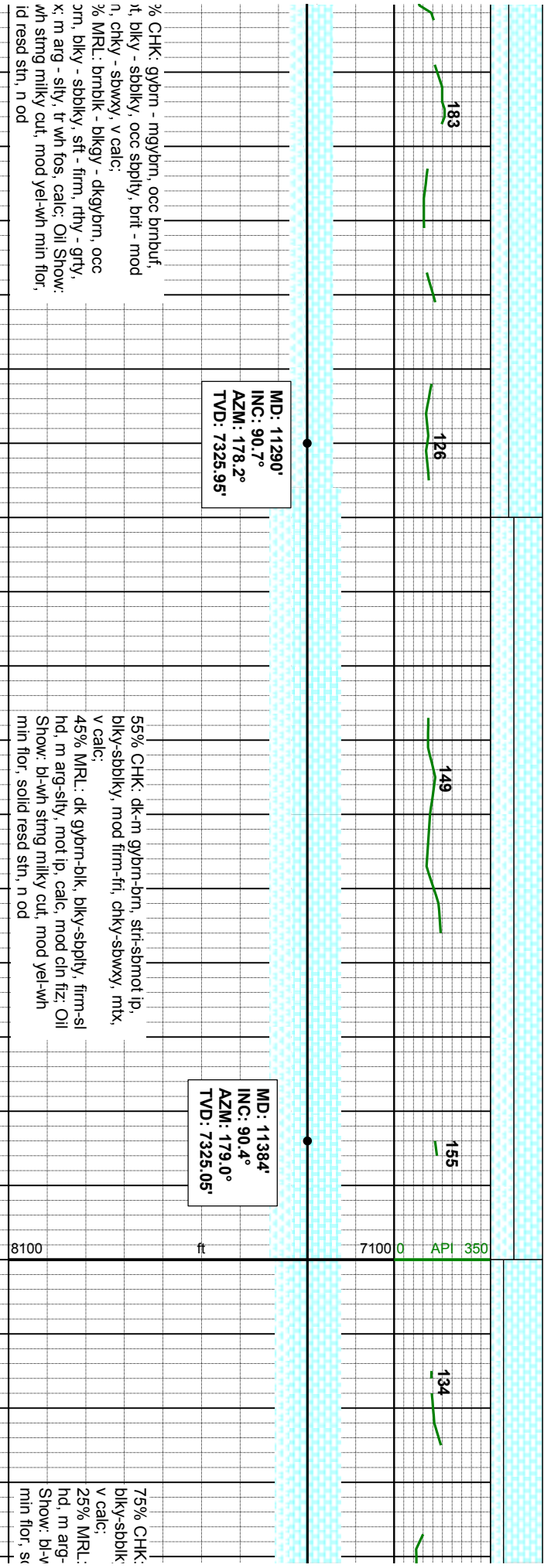
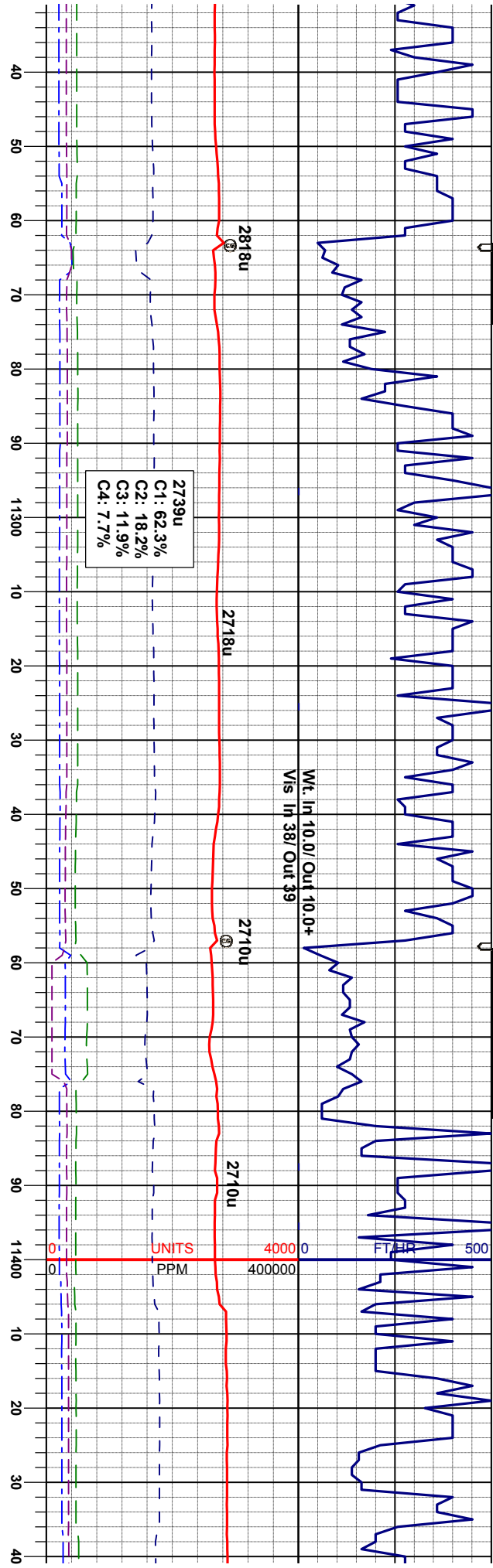
90% CHK: gybm - mgybm, occ bmbuf,
mot, bky - sbdky, occ sbply, brt - mod
firm, chky - sbwxy, abnt calc;
10% MRL: bmbk - blkgy - dkgybm, occ
gybm, bky - sbdky, sft - firm, rhy - grty,
mtx: m arg - sily, tr wh fos, calc; Oil Show:
thn-mod yel gn cut, n min flor, n resd stn

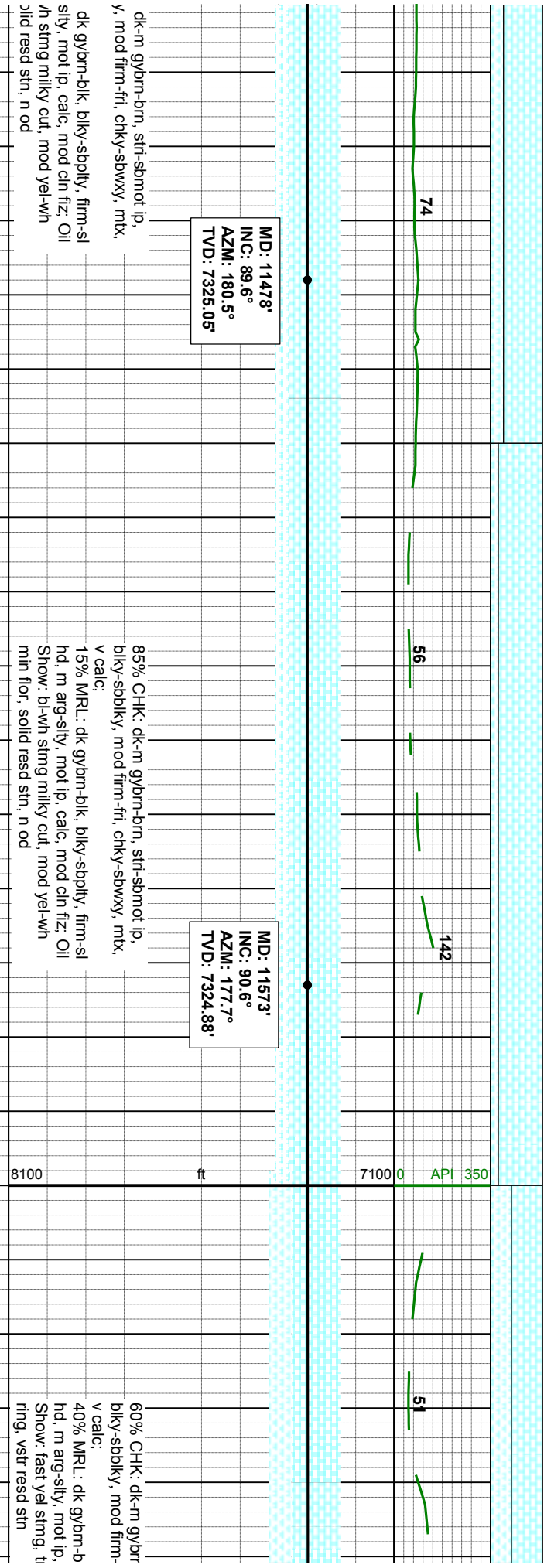
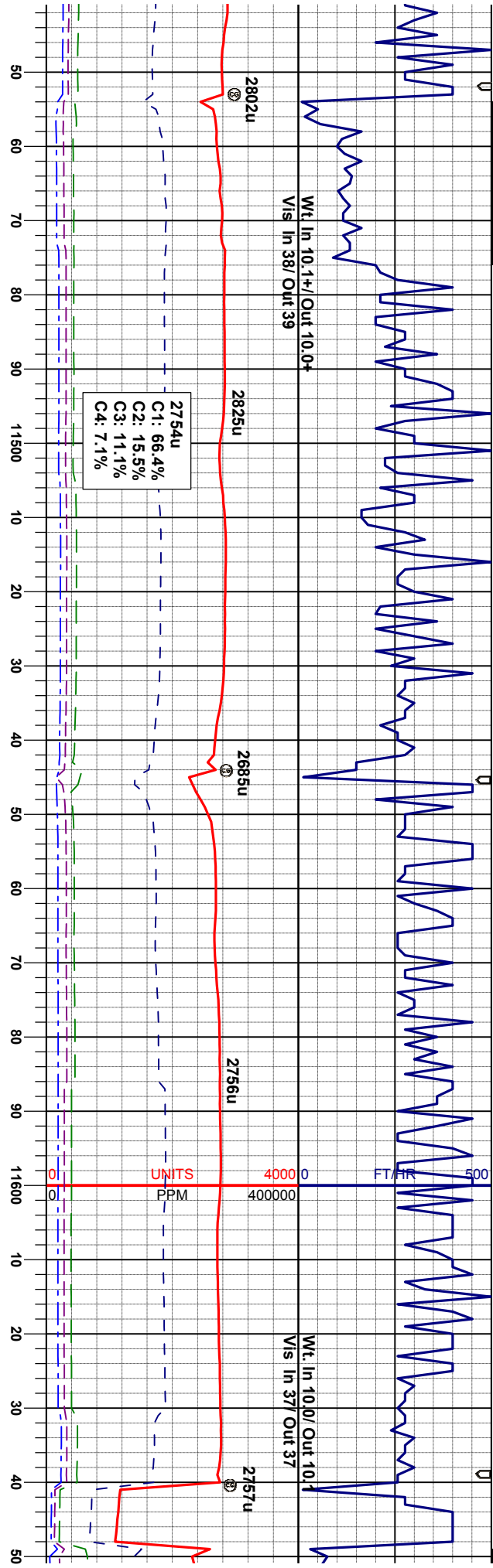
90% CHK: gybm - mgybm, occ bmbuf,
mot, bky - sbdky, occ sbply, brt - mod
firm, chky - sbwxy, abnt calc;
10% MRL: bmbk - blkgy - dkgybm, occ
gybm, bky - sbdky, sft - firm, rhy - grty,
mtx: m arg - sily, tr wh fos, calc; Oil Show:
fast yel string, tr yel mnrl flor, th-mod ring,
vsr resd stn

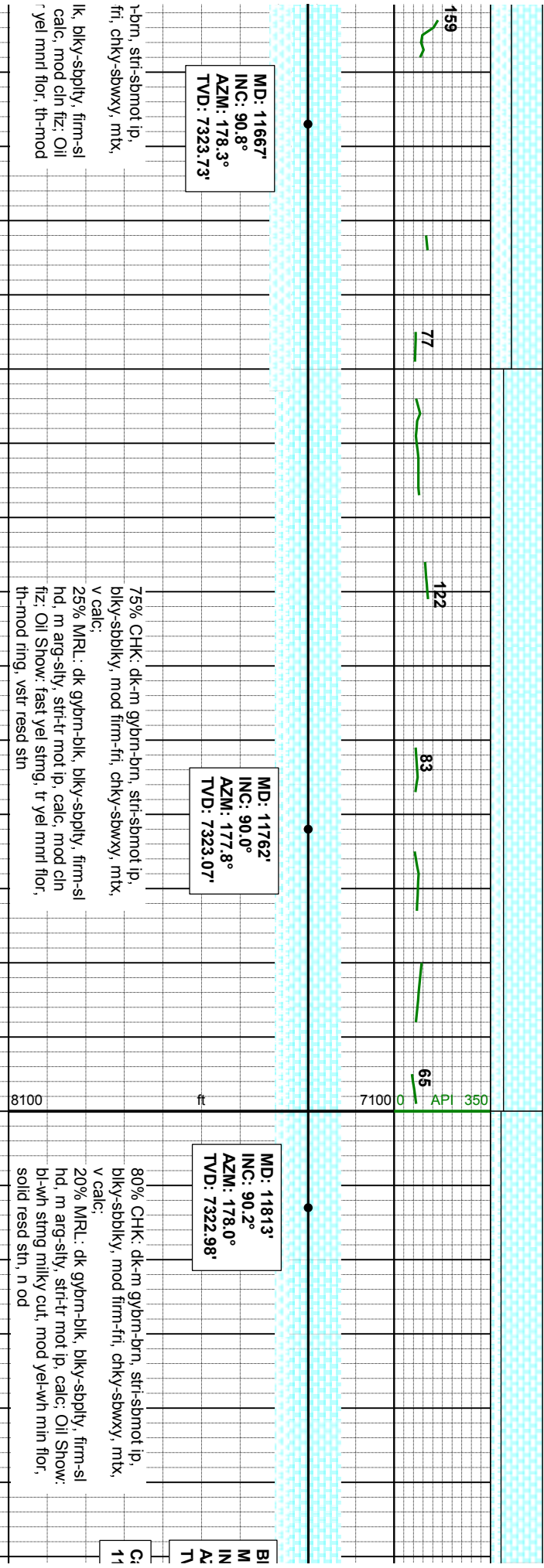
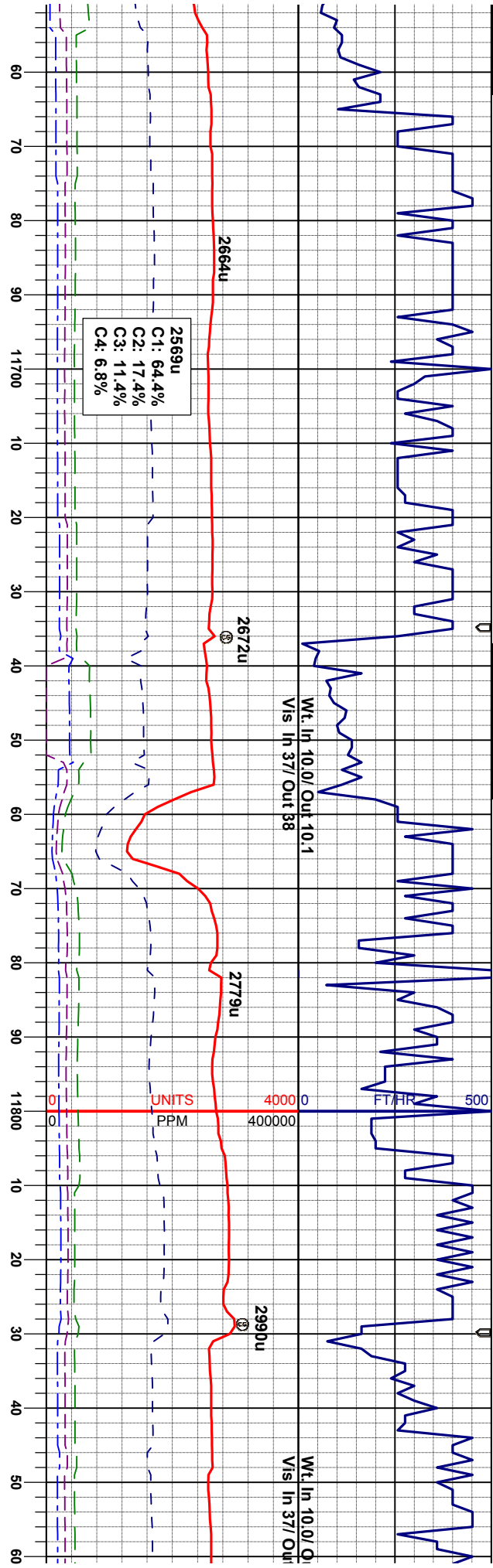
8100

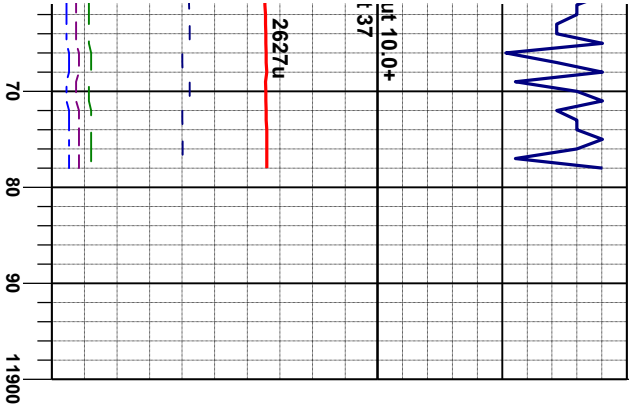


















T PROJECTION:
D: 11878'
C: 90.2°
ZM: 178.0°
/D: 7322.75'

anon 15N-3HZ Wellbore TD @
1878' MD @ 08:09 hrs on 6/23/2013

Thank You for Using
Columbine Logging, Inc.

