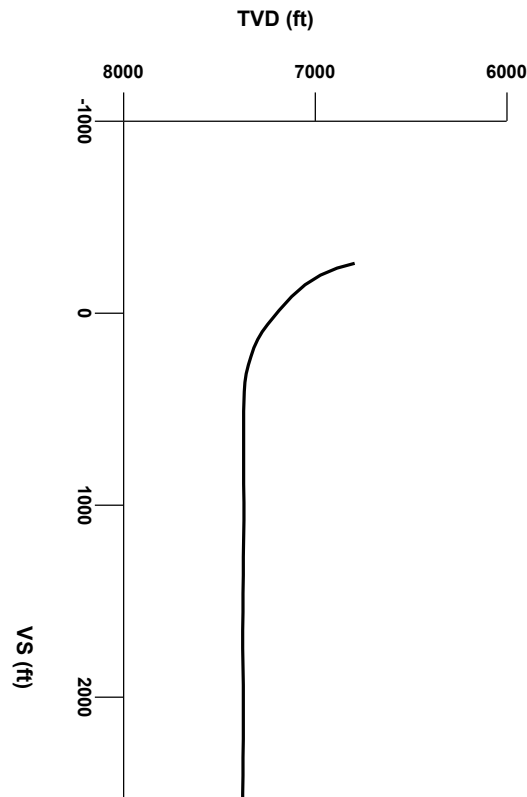




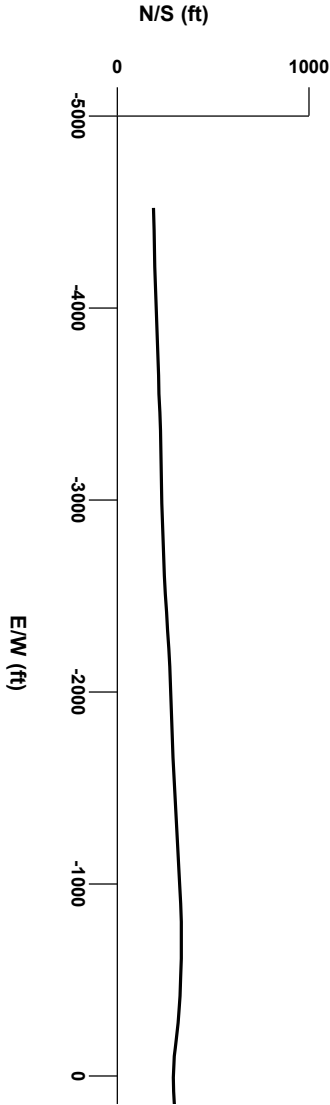
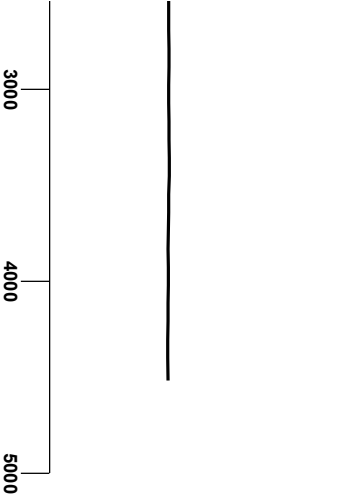
LOG created using L PLOT VH Version 3.0, July 20, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

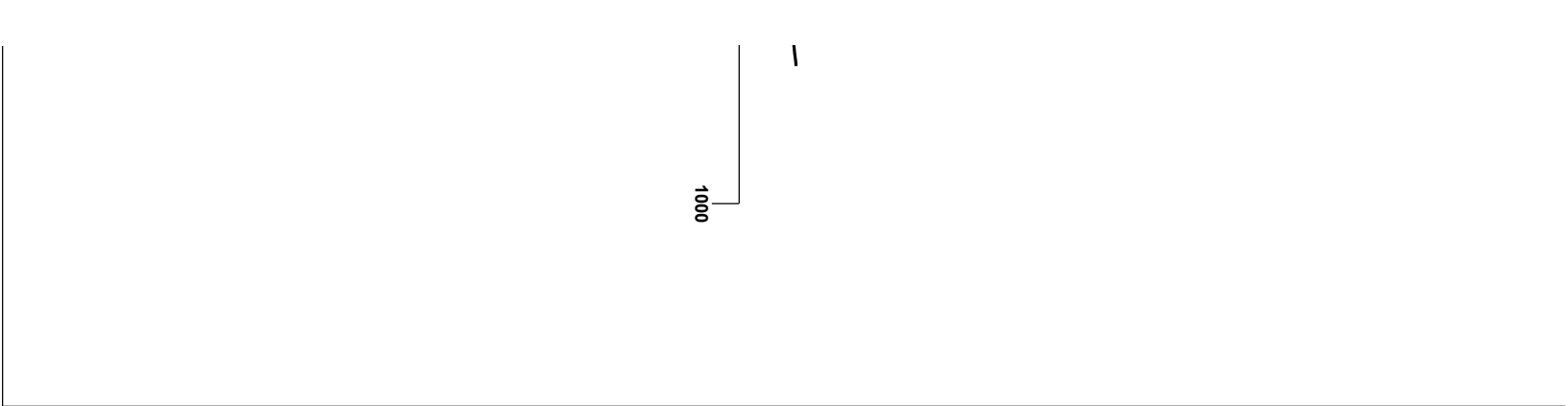
OPERATOR: ANADARKO PETROLEUM CORPORATION
WELL: BELLA FEDERAL 25C-7HZ
LOCATION: NESW SEC 8, T3N, R66W
COUNTY: WELD
STATE: COLORADO
SPOT: 2152' FSL X 2429' FWL
ELEVATION: 4863' GL - 4876' KB
FIELD: WATTENBERG
SPUD DATE: 7/15/2013
TD DATE: 7/20/2013
DATES LOGGED: 7/16/2013 - 7/20/2013
DEPTHS LOGGED: 6792' - 11957'
LOGGERS: ZACH UBER & JEREMY LOFTNESS
DRILLING FLUID: LSND
DRILLING RIG: ENSIGN 138
API: 05-123-37438
LOG TYPE: HORIZONTAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: Wellsite Geological Services Provided By Columbine Logging Inc.



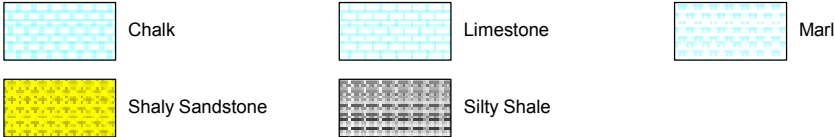
Survey Elevation

Survey Plan

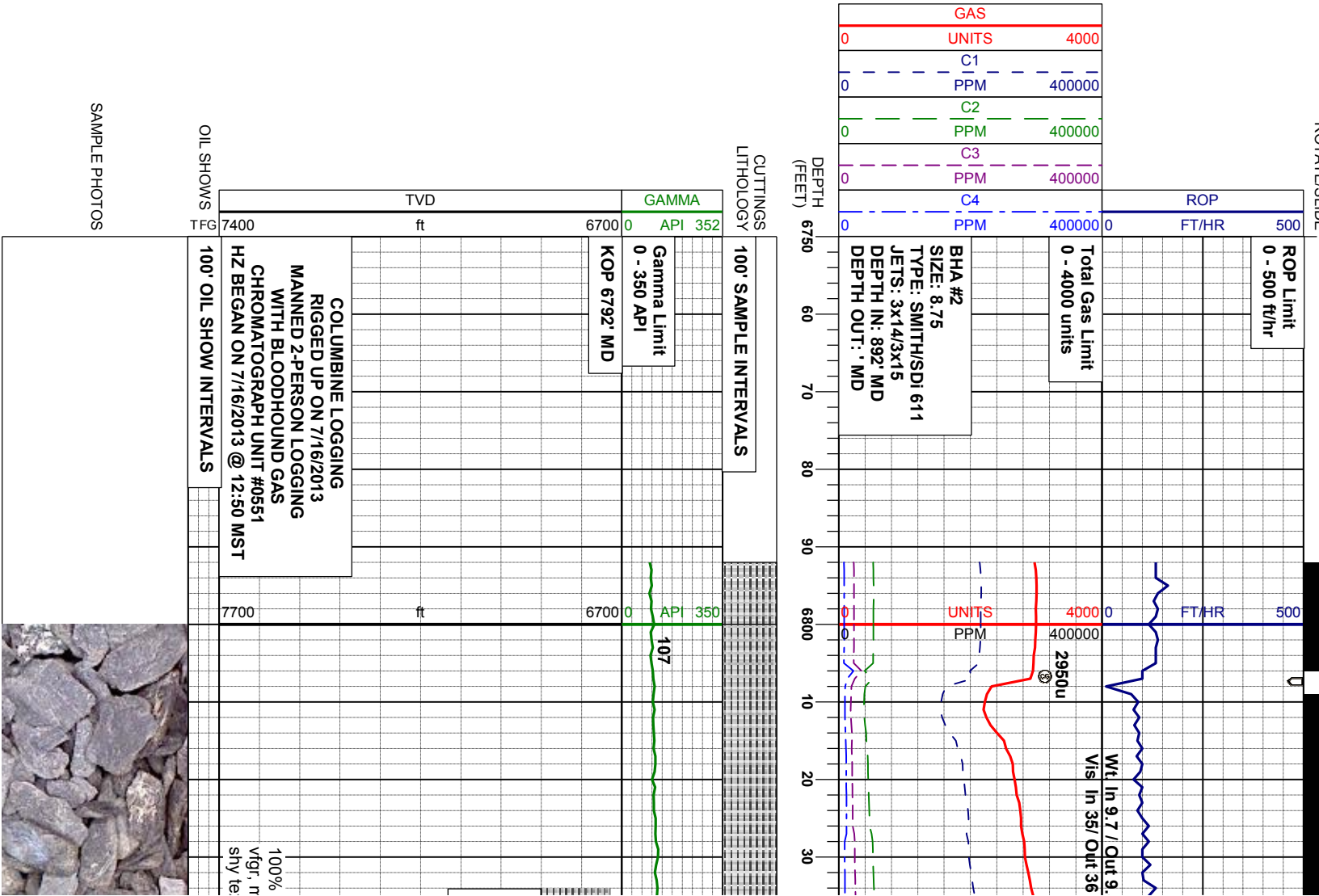
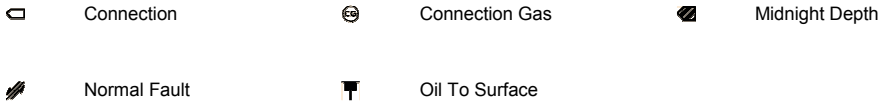


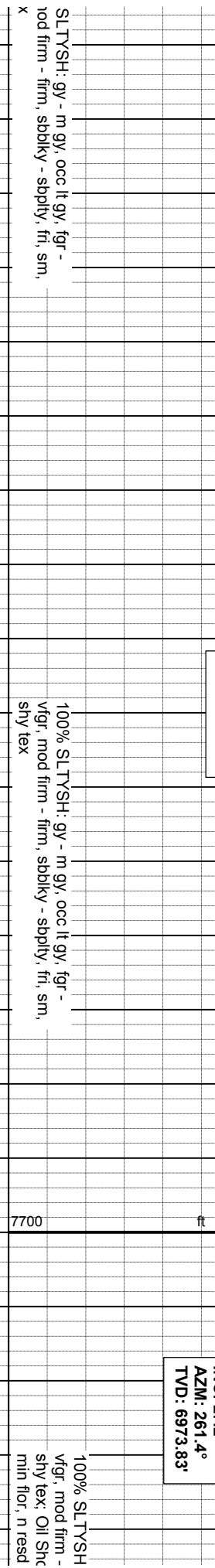
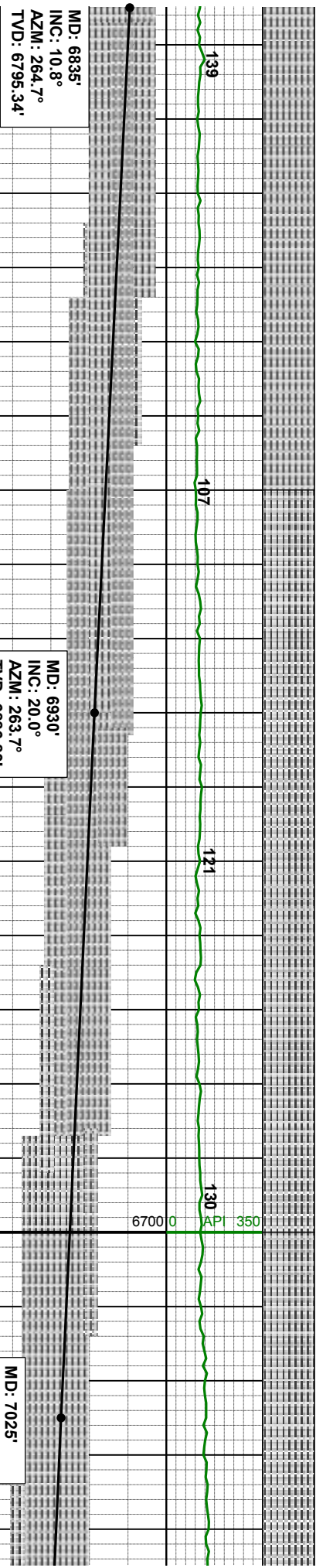
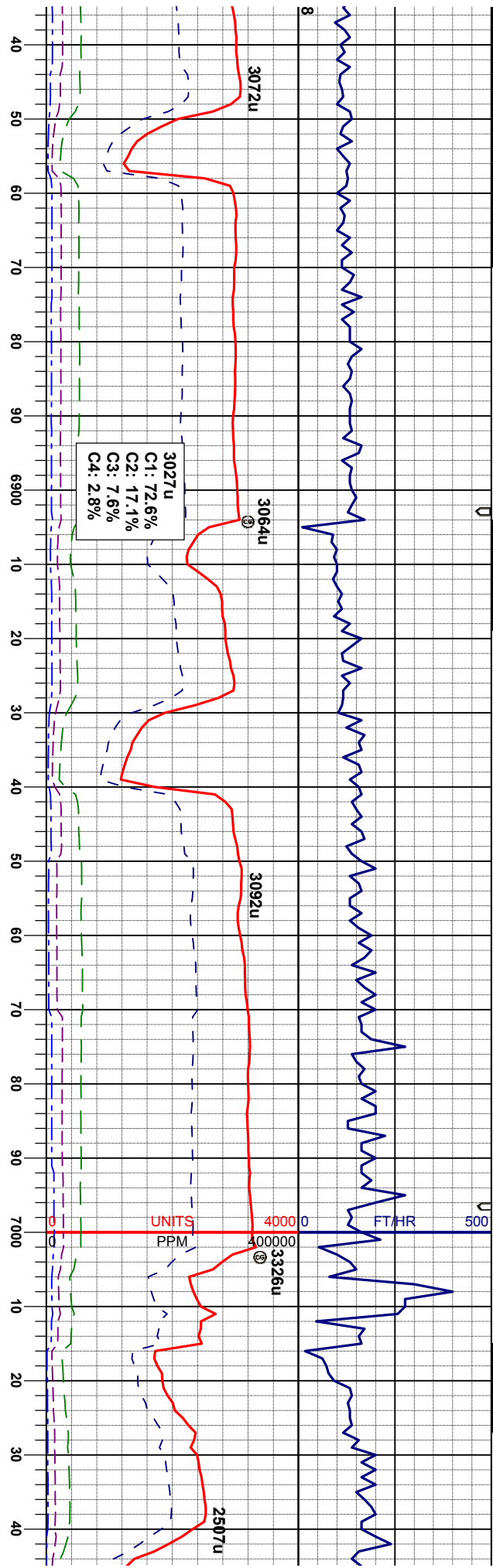


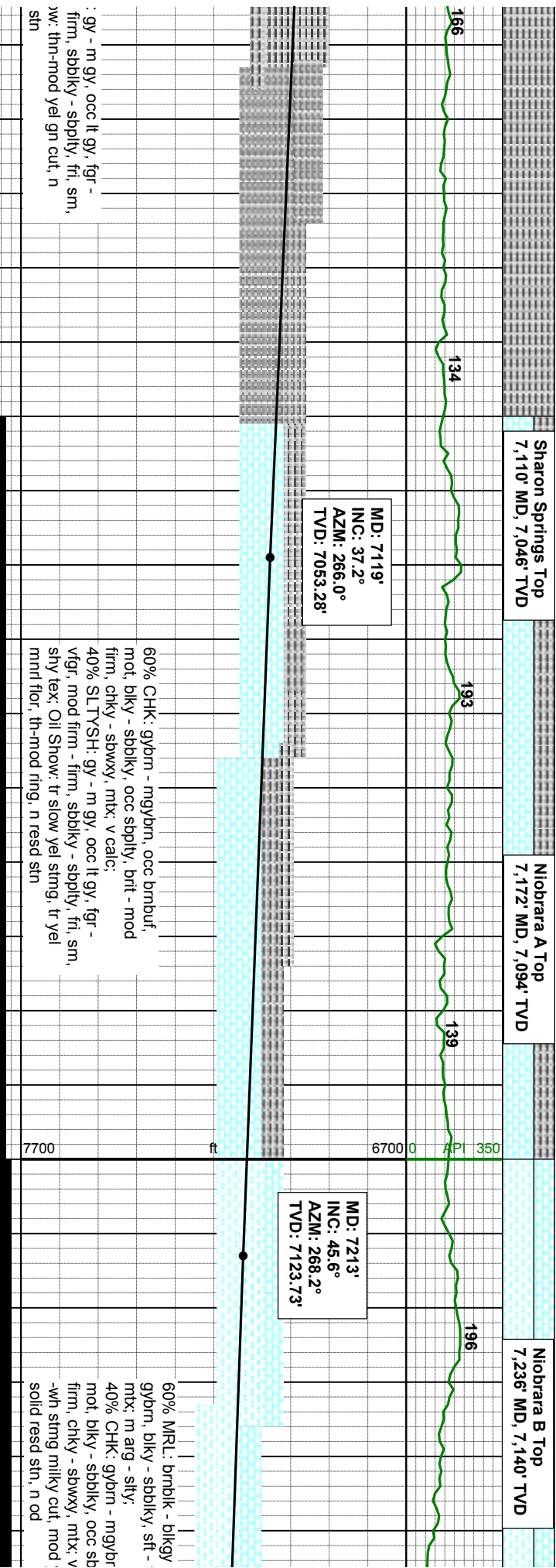
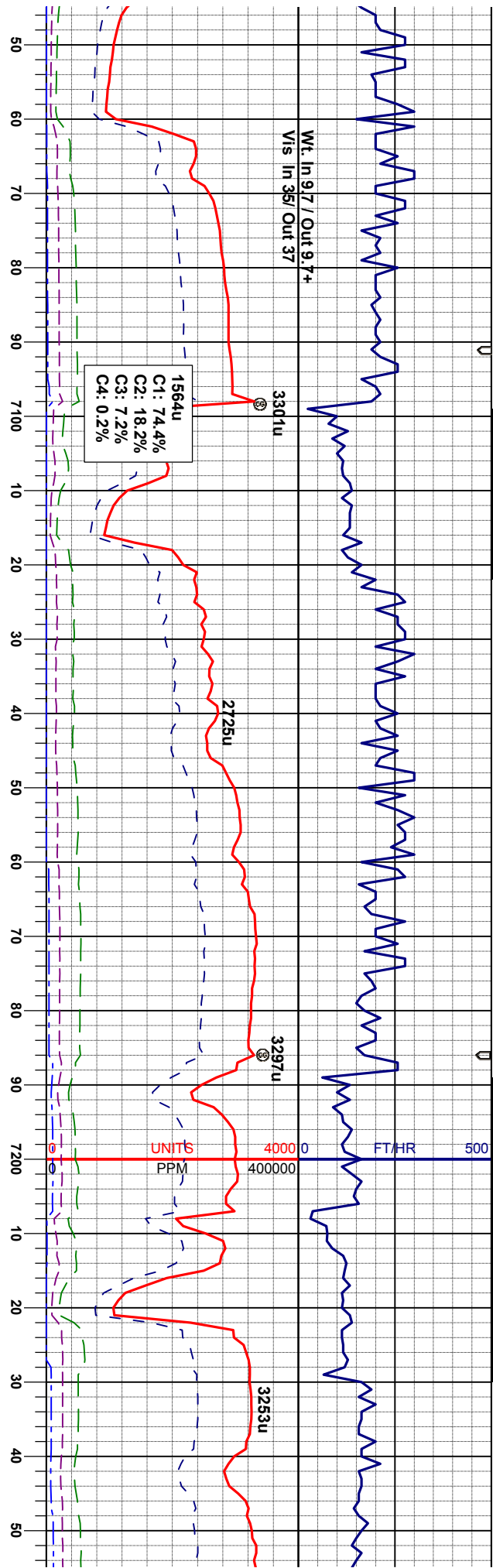
LITHOLOGIES

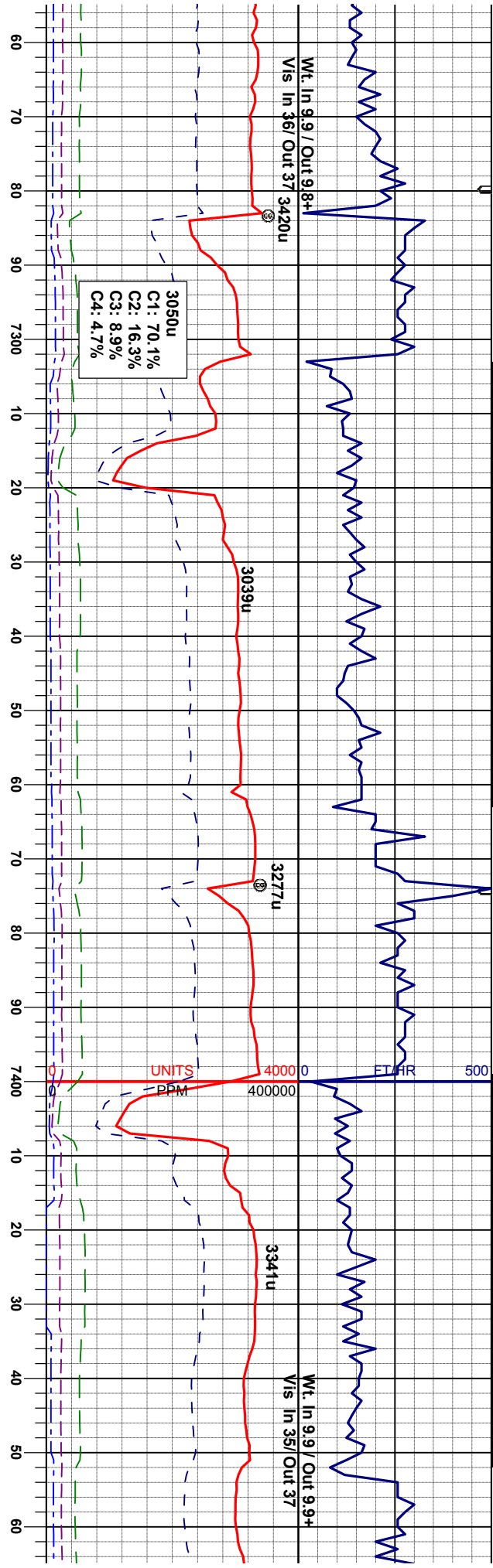


ENGINEERING SYMBOLS









Niobrara C Top
7,353' MD, 7,218' TVD

MD: 7309'
INC: 48.5°
AZM: 269.7°
TVD: 7189.14'

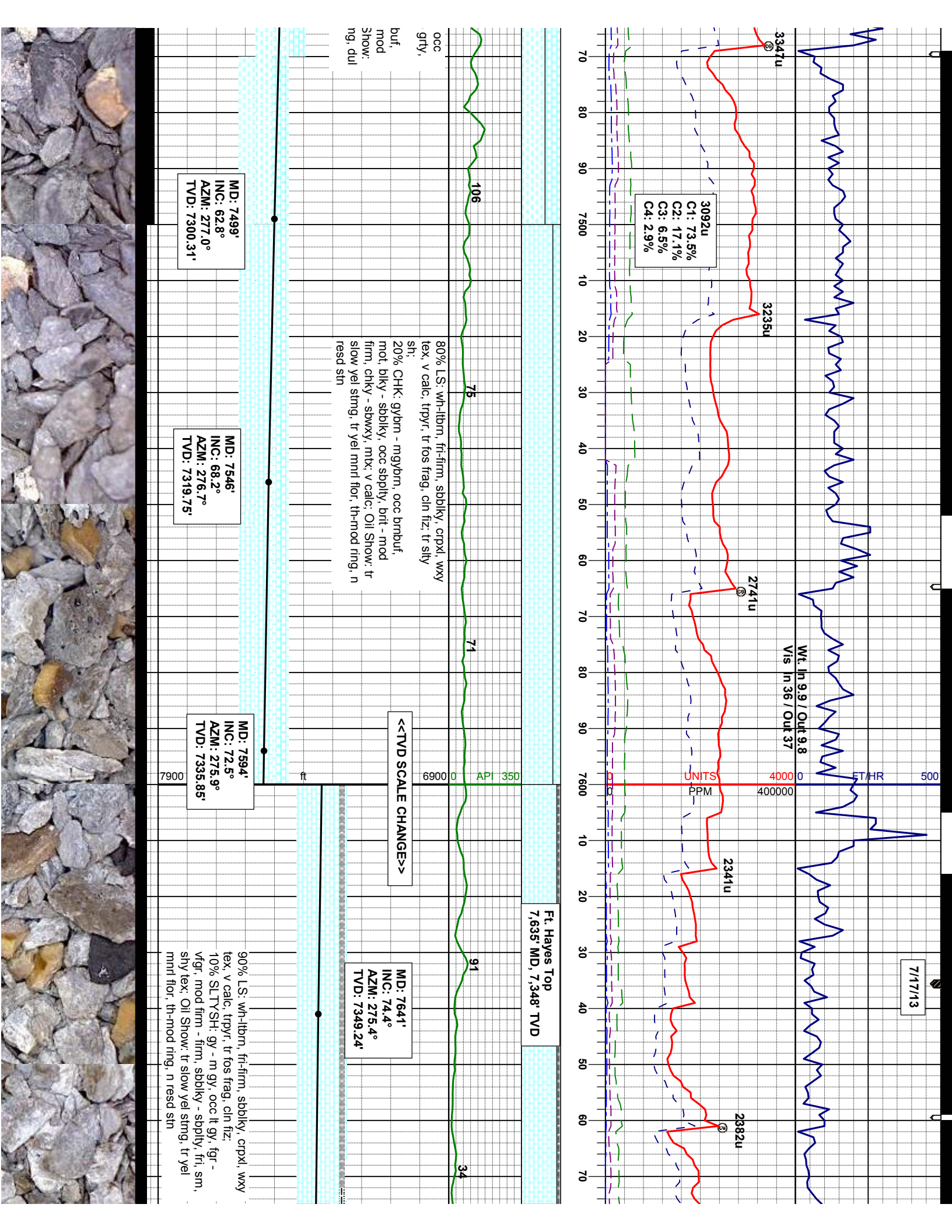
MD: 7404'
INC: 52.6°
AZM: 273.7°
TVD: 7249.5'

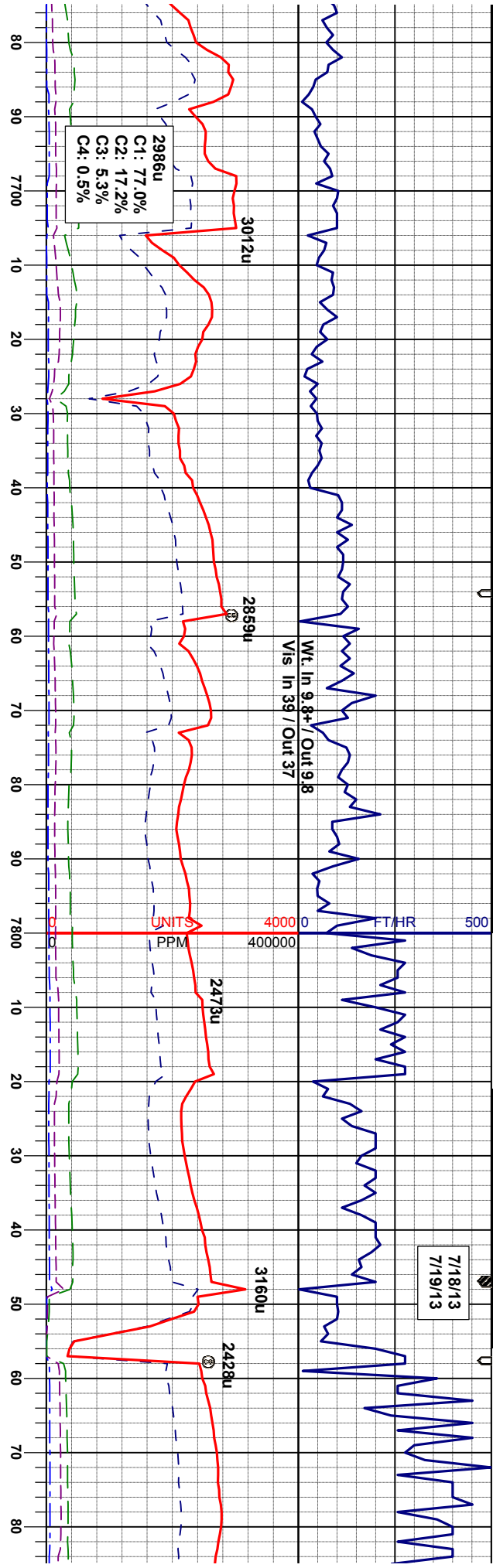
MD: 7451'
INC: 57.5°
AZM: 275.7°
TVD: 7276.42'

- dkgybrn, occ firm, rthy - grty, n, occ brmbuf, pthy, brt - mod calc. Oil Show: bl yel-wh min flr,

70% CHK: gybrn - mgybrn, occ brmbuf, mot, bkly - sbdkly, occ sbply, brt - mod firm, chky - sbwxy, mtx, v calc.
30% MRL: brmbk - blkgy - dkgybrn, occ gybrn, bkly - sbdkly, stf - firm, rthy - grty, mtx, m arg - slty. Oil Show: bl-wh string milky cut, mod yel-wh min flr, solid resd stn, n od







7/18/13
7/19/13

Niobrara B Top
7,772' MD, 7,370' TVD

MD: 7688'
INC: 79.7°
AZM: 274.9°
TVD: 7359.77'

MD: 7735'
INC: 83.2°
AZM: 273.5°
TVD: 7366.75'

MD: 7783'
INC: 85.9°
AZM: 272.4°
TVD: 7371.31'

BHA #3
SIZE: 6.125
TYPE: VM513/VM513
JETS: 5x16
DEPTH IN: 7846' MD
DEPTH OUT: 11957' MD

TOOH @ 7846' MD FOR
INTERMEDIATE CASING

MD: 76
INC: 91
AZM: 2
TVD: 7

80% LS: wh-lbmn, fri-firm, sbblky, crpxl, wxy
tex, v calc, trpyr, tr fos frag, cln fcz, tr slst
20% SHY: SS: dkgy, cl-trnsl, pred cgr, occ
fgr, sbang-sbrndd, p-modstr, fri-brt, mod-g
consol, non-slcald, tr glau; Oil Show: tr slow
yel stmg, tr yel mnrt flor, th-mod ring, n resd
stn

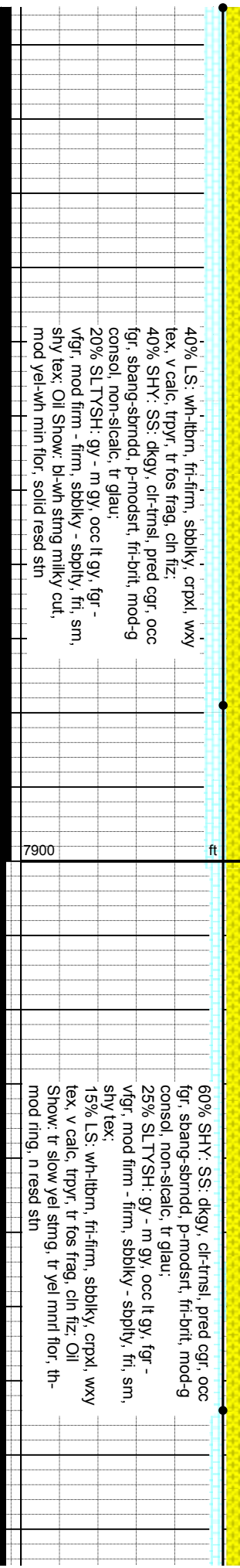
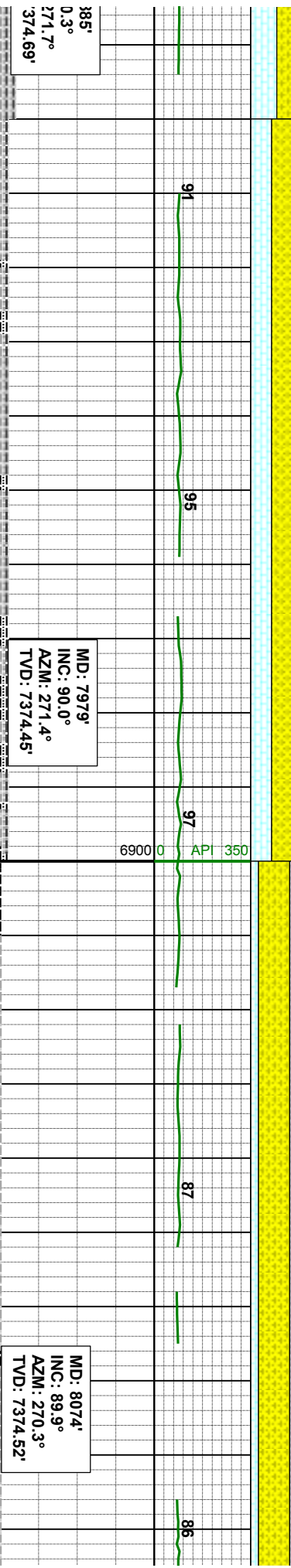
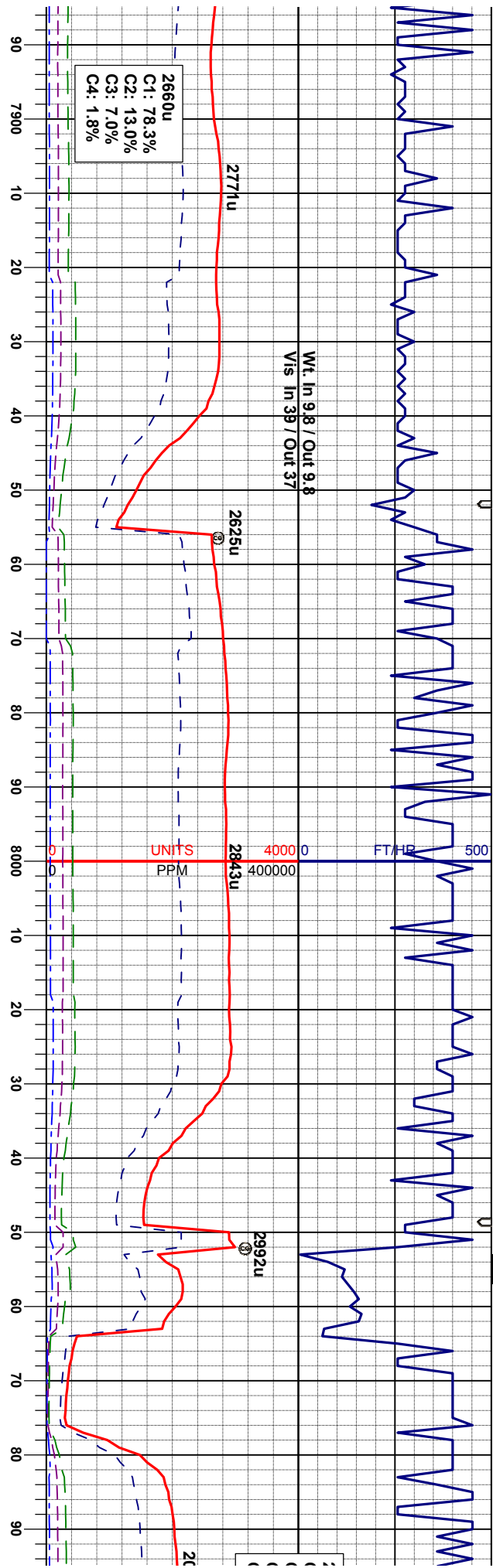
7900

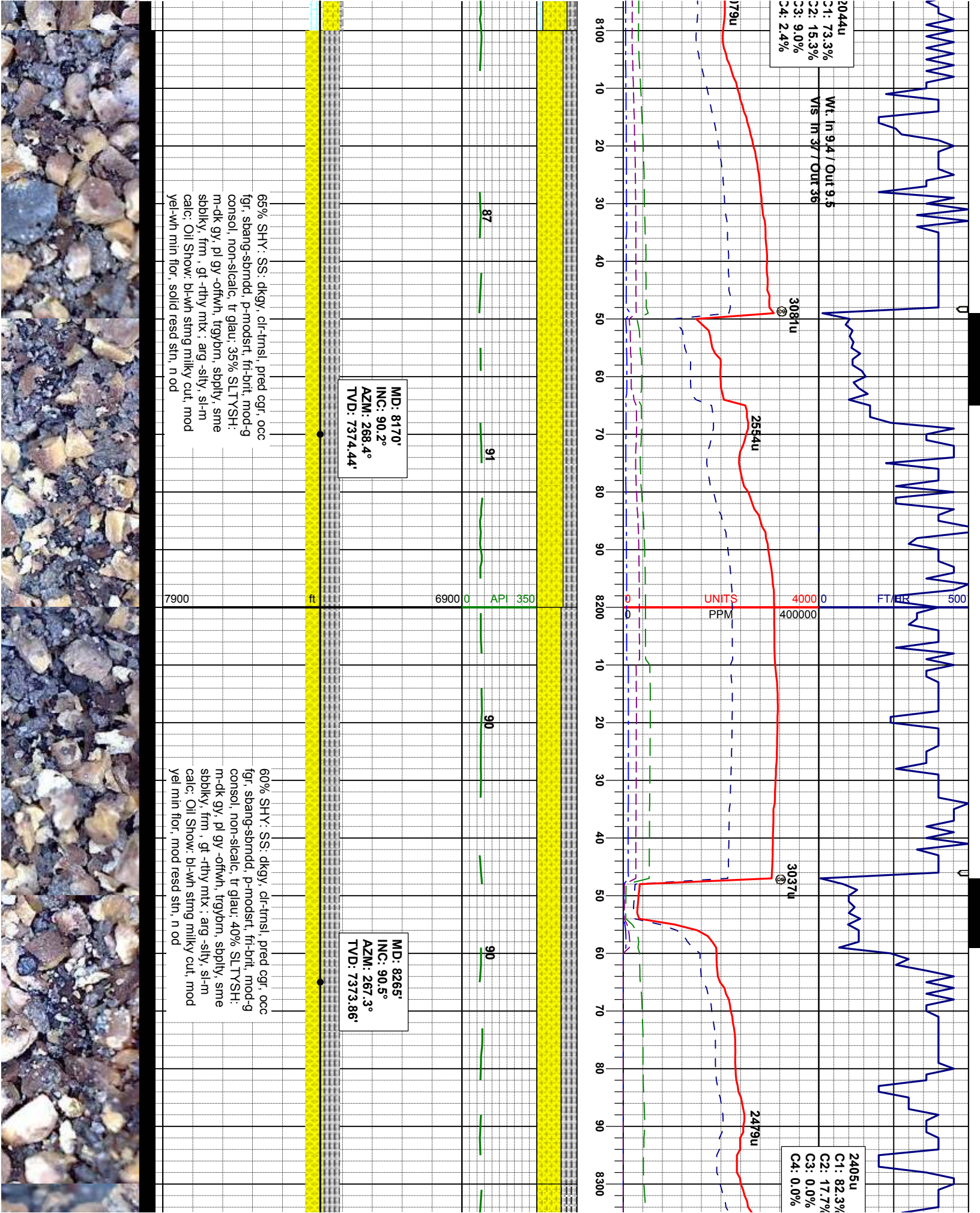
ft

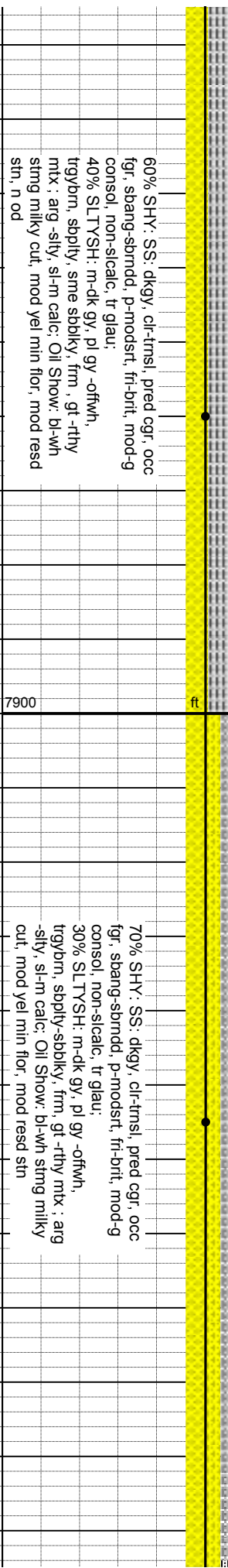
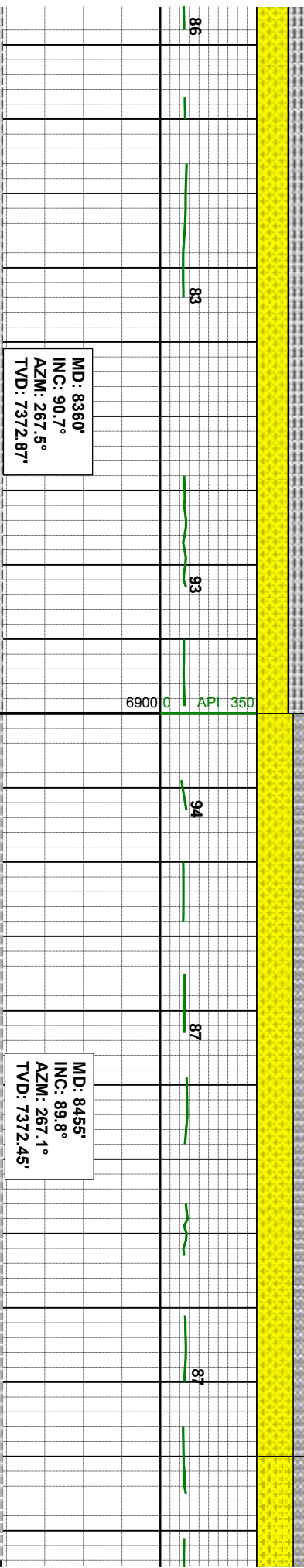
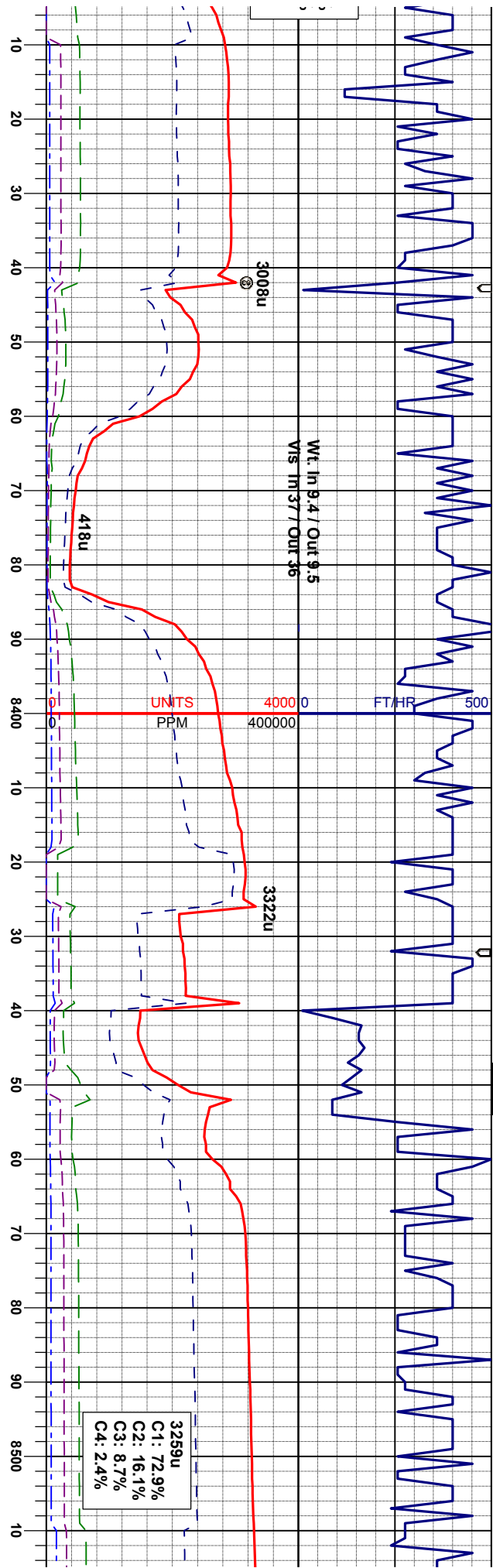
6900 0 API 350

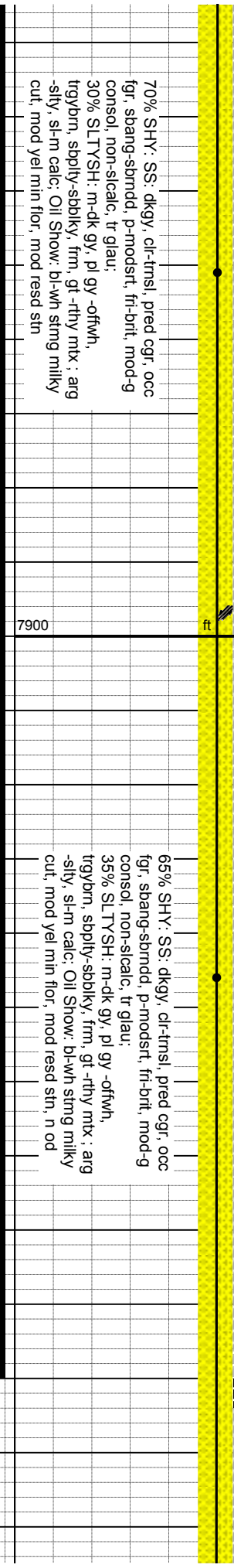
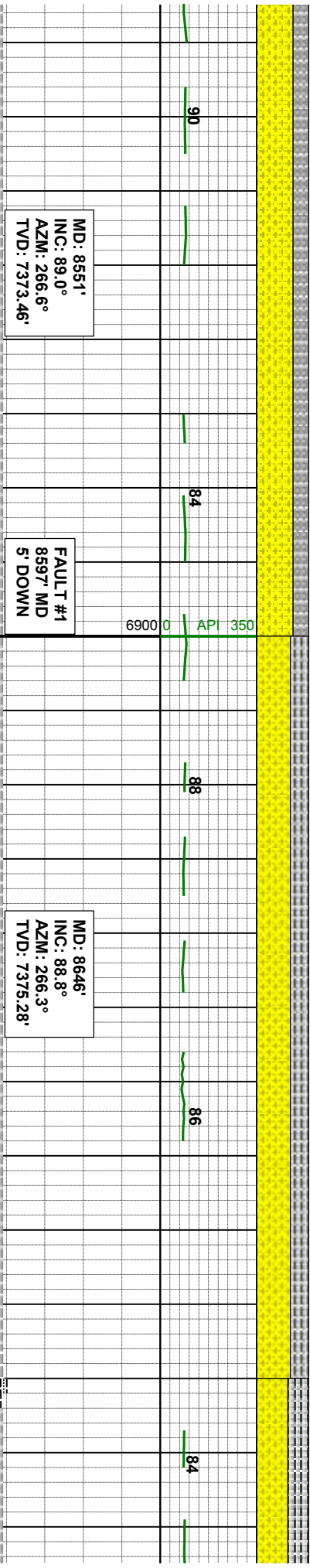
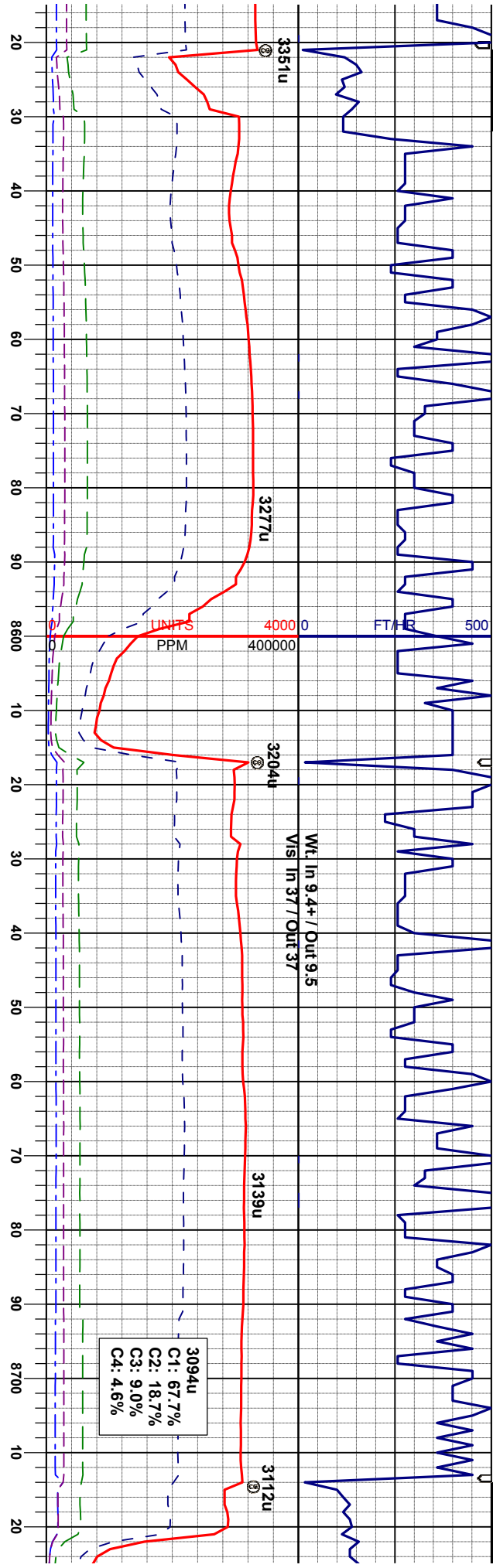
50% LS: wh-lbmn, fri-firm, sbblky, crpxl, wxy
tex, v calc, trpyr, tr fos frag, cln fcz;
30% SHY: SS: dkgy, cl-trnsl, pred cgr, occ
fgr, sbang-sbrndd, p-modstr, fri-brt, mod-g
consol, non-slcald, tr glau;
20% SLTYSH: gy - m gy, occ lt gy, fgr -
vfr, mod firm - firm, sbblky - sbply, fri, sm,
sly tex; Oil Show: bl-wh stmg milky cut,
mod yel-wh mln flor, solid resd stn

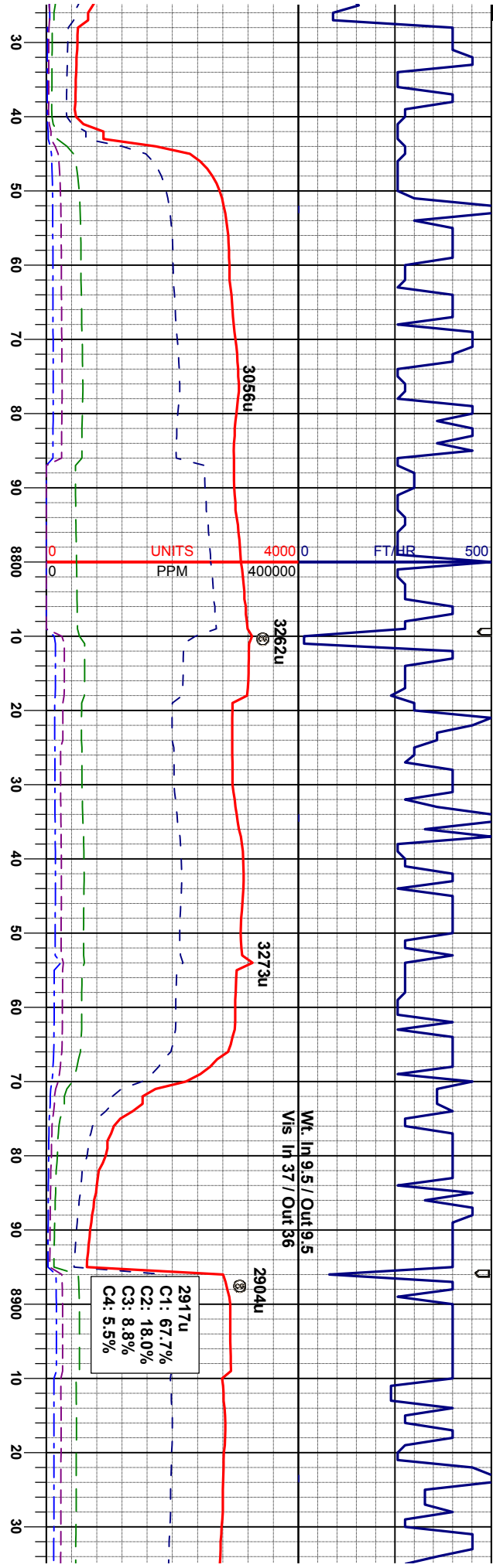












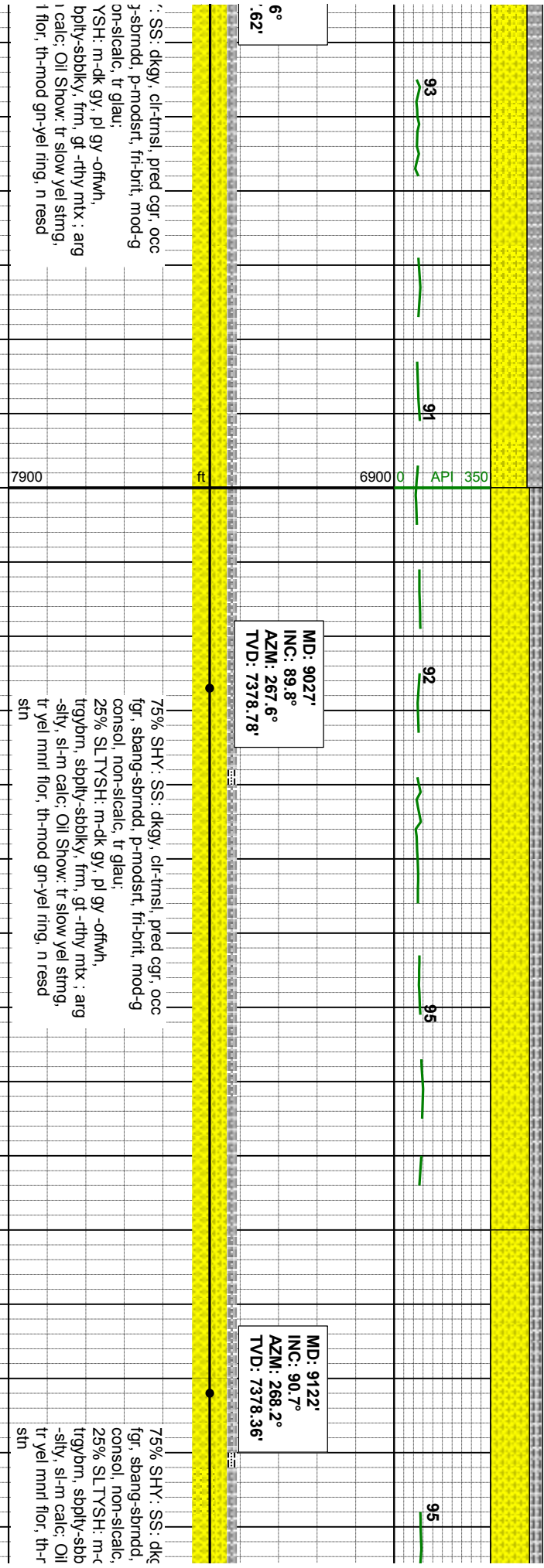
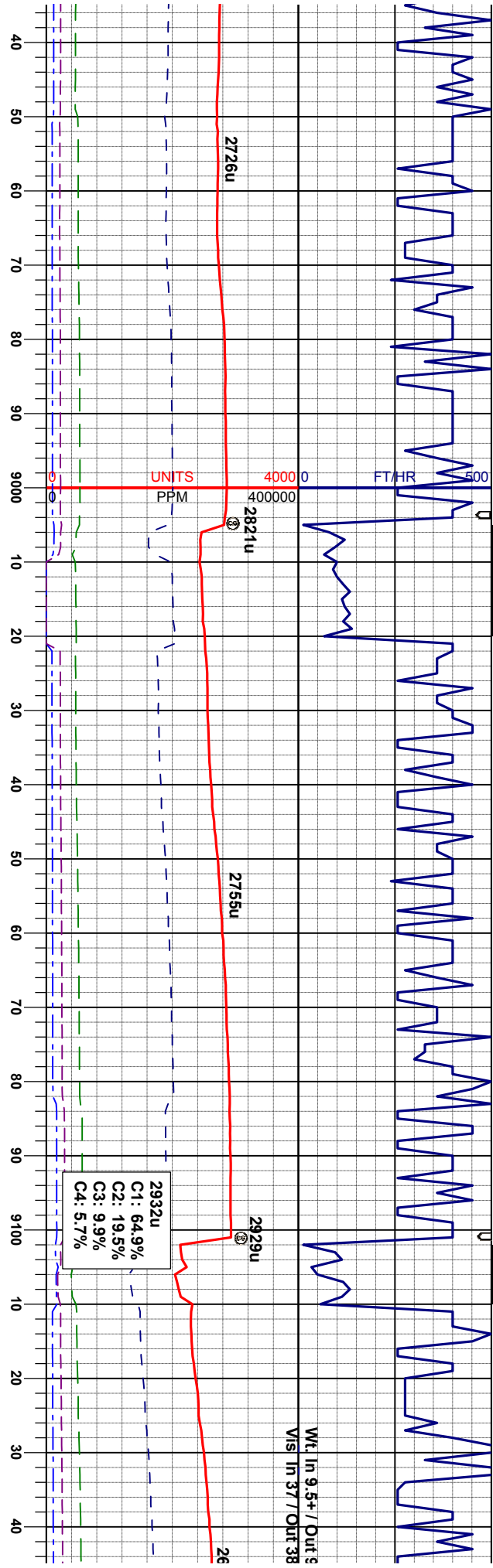
MD: 8741'
INC: 89.9°
AZM: 267.5°
TVD: 7376.36'

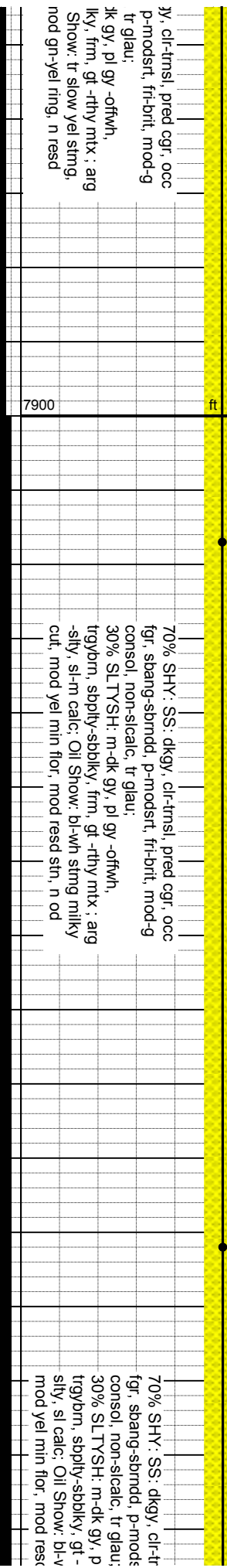
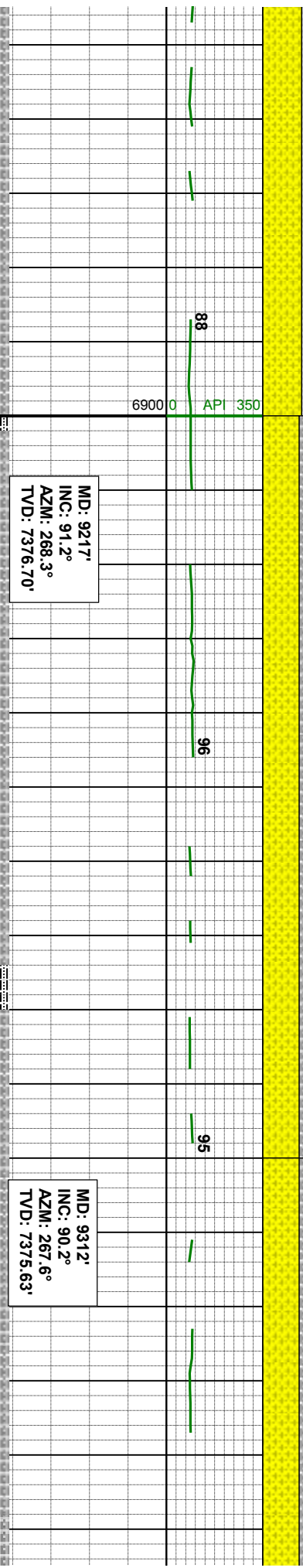
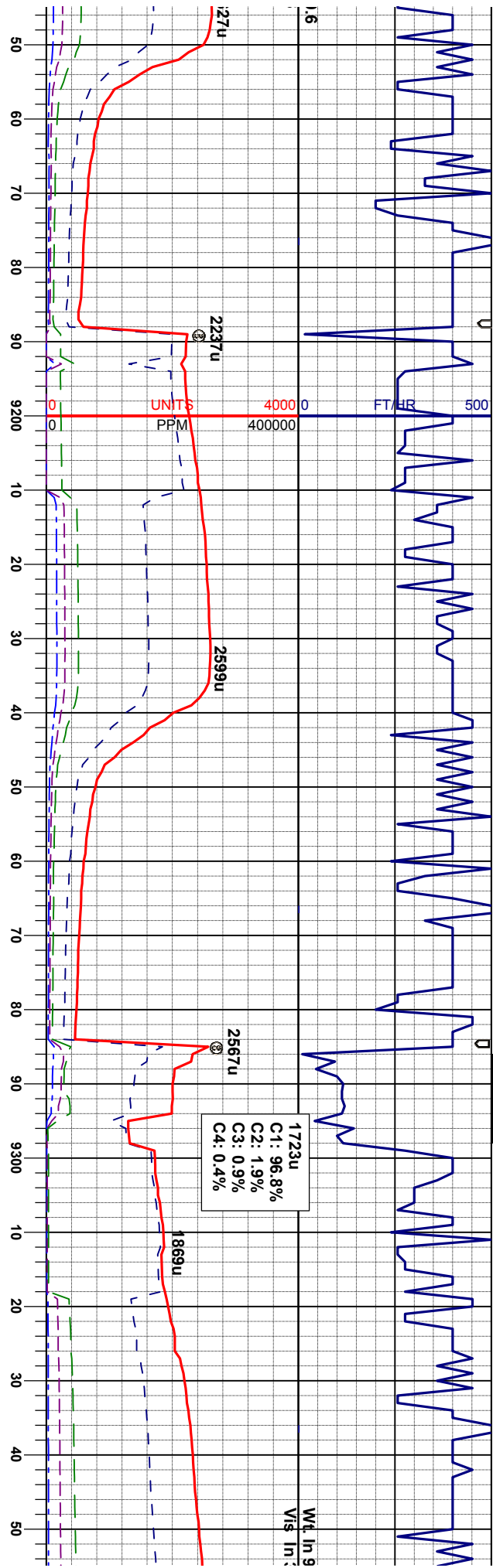
MD: 8836'
INC: 89.9°
AZM: 267.4°
TVD: 7376.53'

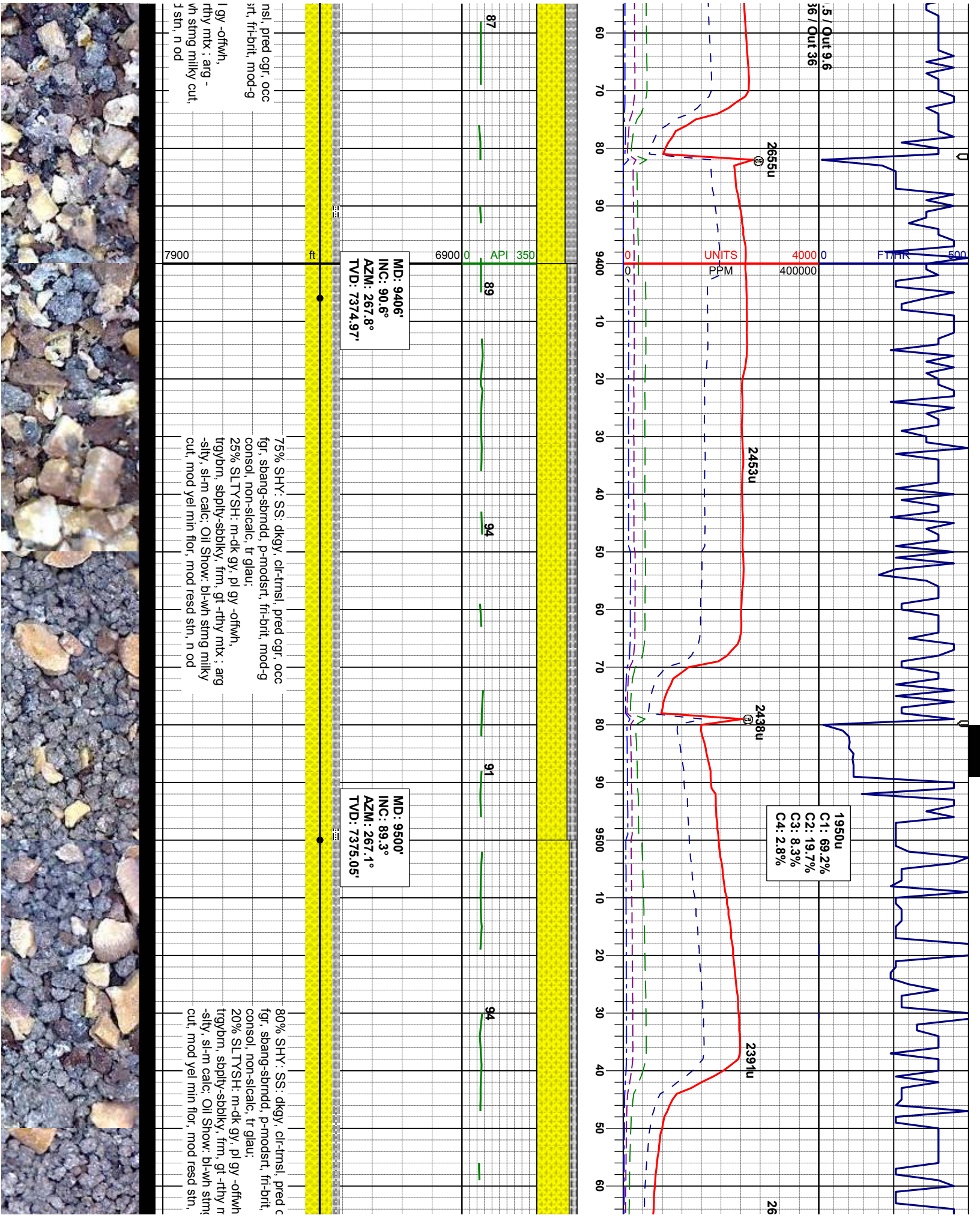
MD: 8932'
INC: 88.8°
AZM: 266.
TVD: 7377

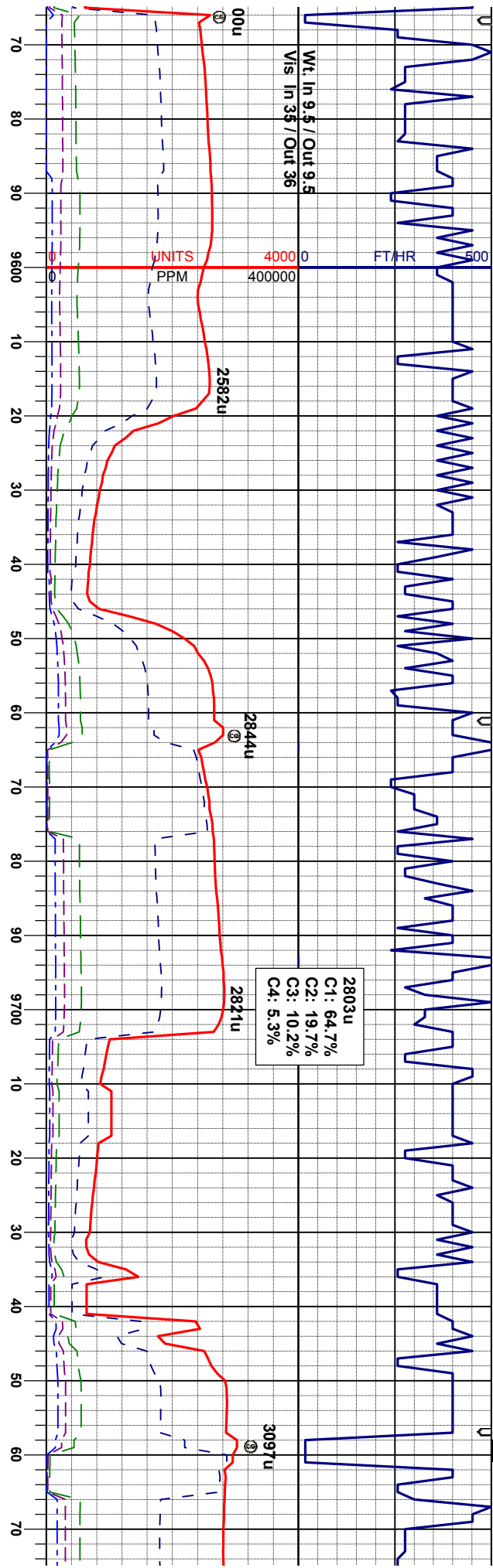
60% SHY: SS: dkgy, cl-trnsl, pred cgr, occ fgr, sbang-sbrnmd, p-modstr, fr-brt, mod-g consol, non-silcalc, tr glau: 40% SLTYSH: m-dk gy, pl gy -offwh, trgybrn, sbply-sbblky, frm, gt -rthy mtx : arg -sily, sl-m calc; Oil Show: tr slow yel stmg, tr yel mnrl flr, th-mod ring, n read stn	7900	ft	6900	0	API 350	85	90	97	94	70% SHY fgr, sbang consol, n 30% SLT trgybrn, s -sily, sl-r tr yel mnrl stn
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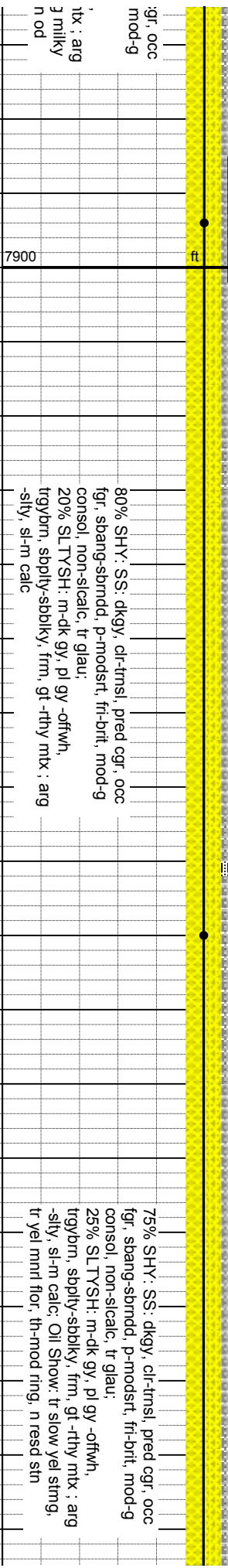


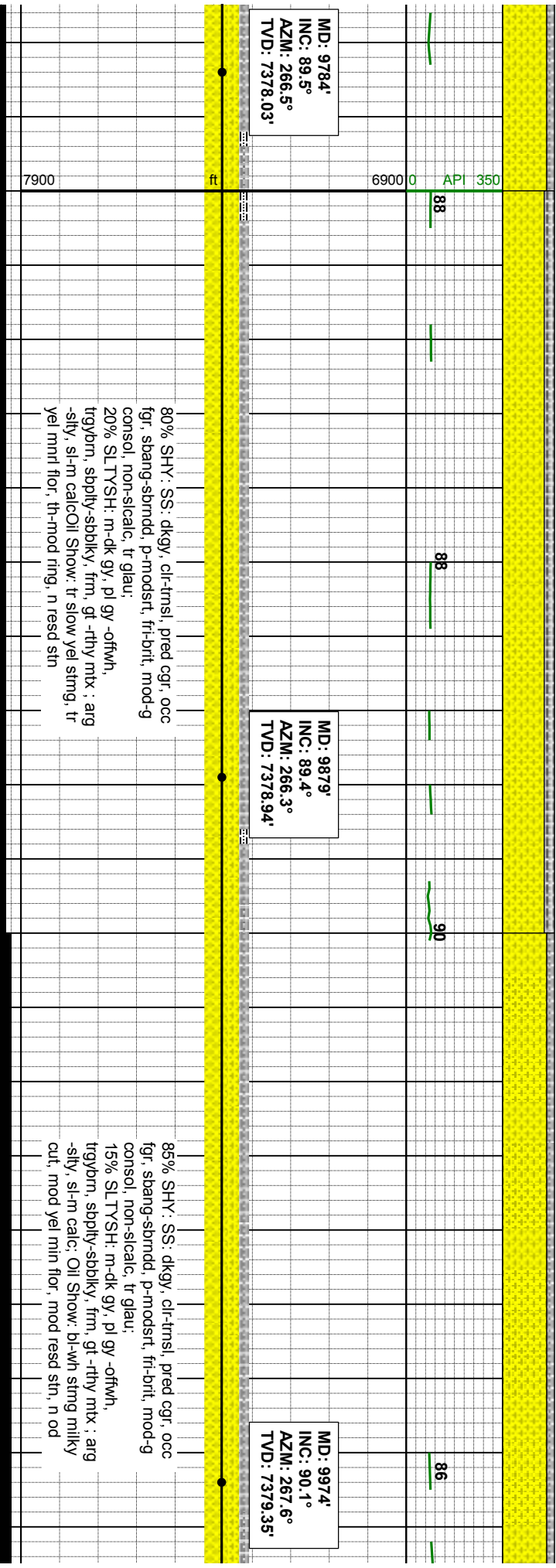
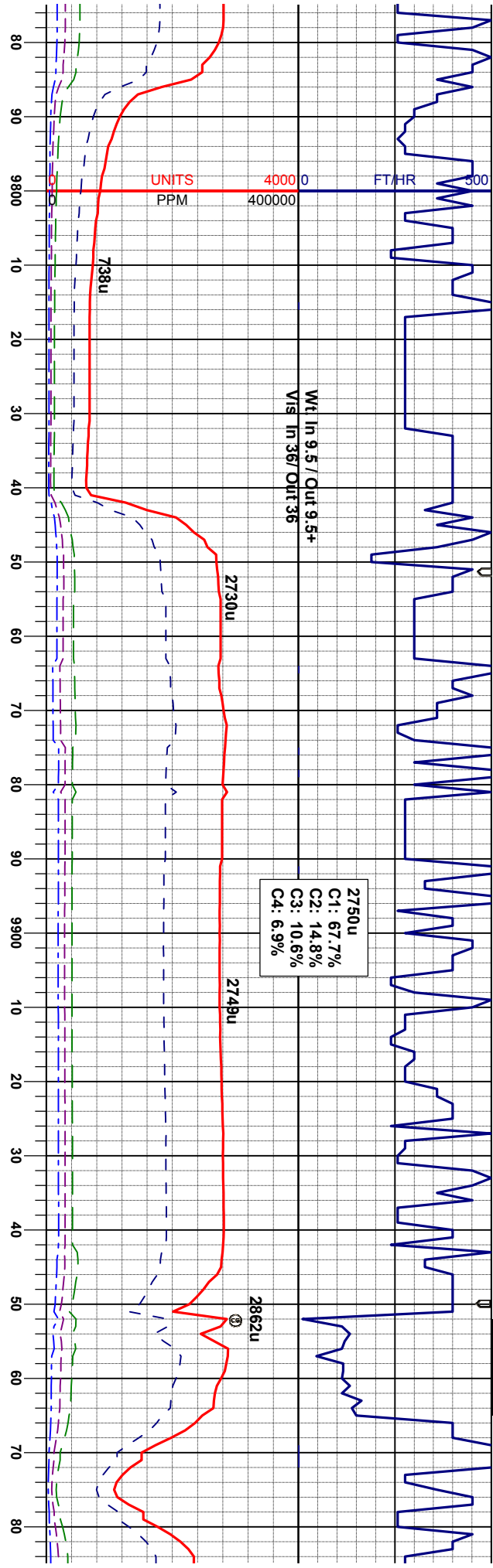


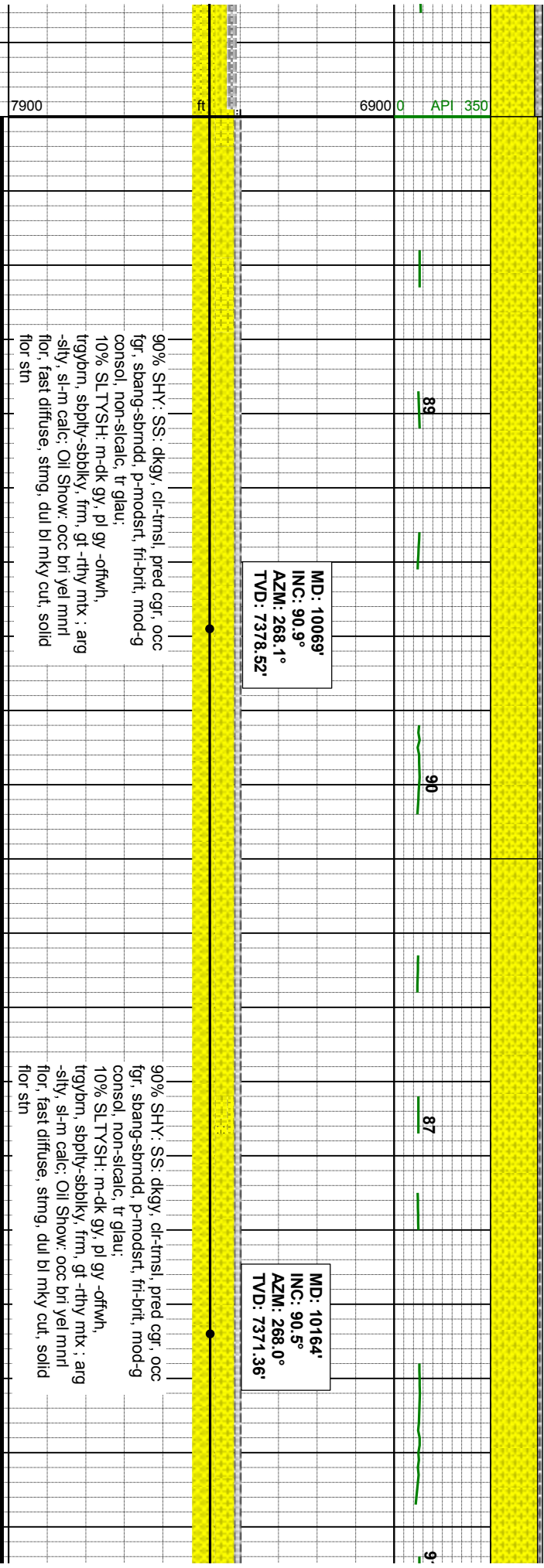
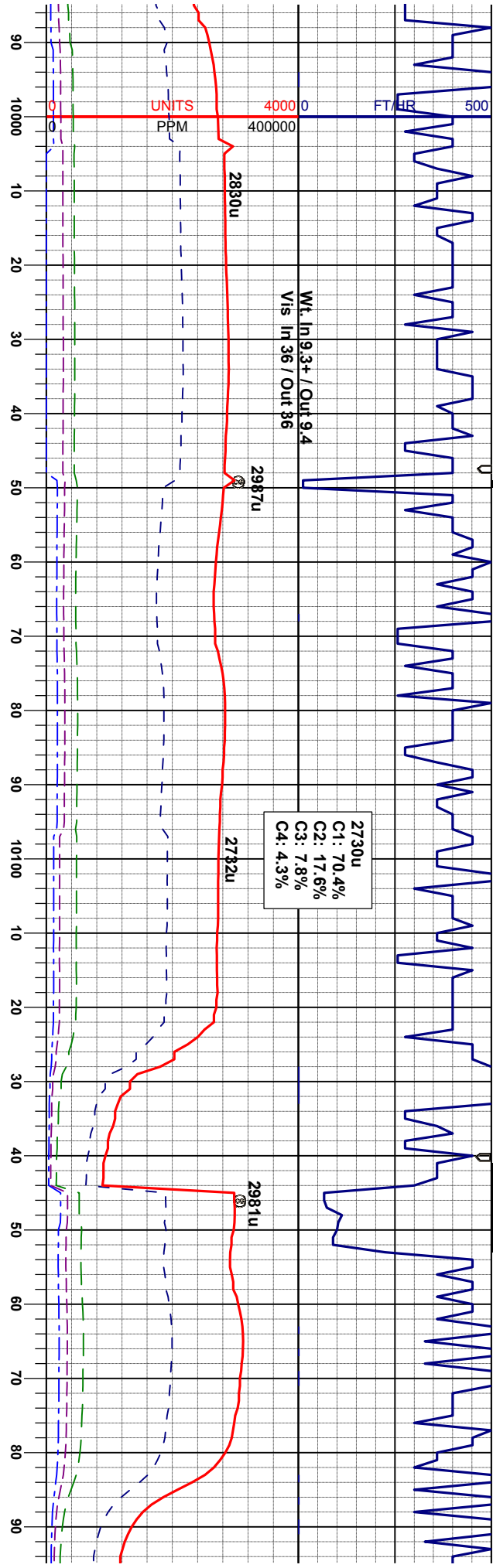


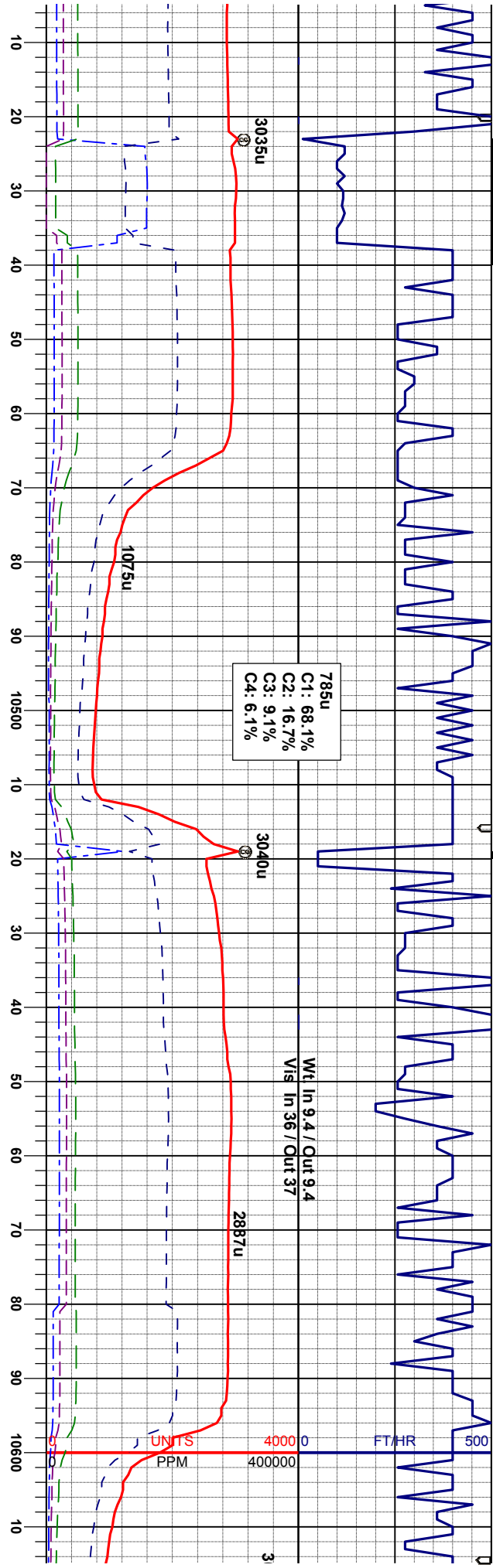
MD: 9694'
INC: 89.4°
AZM: 266.9°
TVD: 7376.12'

MD: 9690'
INC: 89.4°
AZM: 266.7°
TVD: 7377.12'









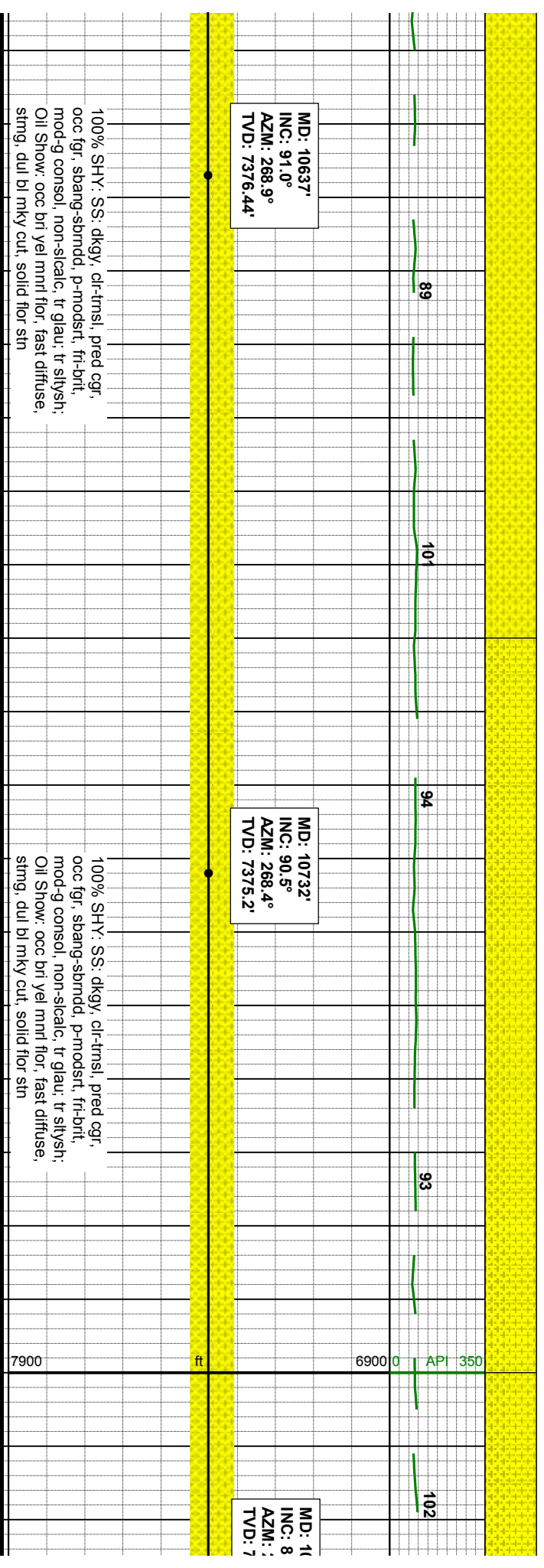
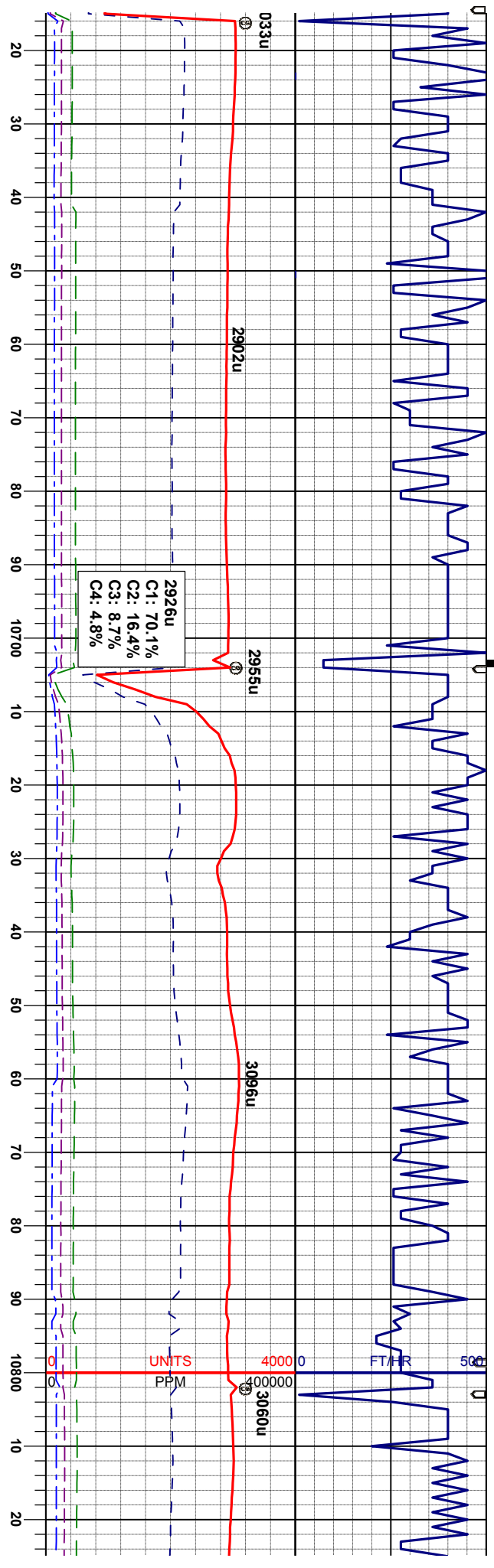
MD: 10447'
INC: 90.3°
AZM: 268.8°
TVD: 7379.01'

MD: 10543'
INC: 90.9°
AZM: 269.1°
TVD: 7378.0'

100% SHY: SS: dkgy, clr-tmsl, pred cgr,
occ fgr, sbang-sbrndd, p-modstf, fri-brt,
mod-g consol, non-silcalc, tr glau; tr siltysh;
Oil Show: occ bri yel mnrl flor, fast diffuse,
string, dul bl mky cut, solid flor str

100% SHY: SS: dkgy, clr-tmsl, pred cgr,
occ fgr, sbang-sbrndd, p-modstf, fri-brt,
mod-g consol, non-silcalc, tr glau; tr siltystr;
Oil Show: occ bri yel mnrl flor, fast diffuse,
string, dul bl mky cut, solid flor str

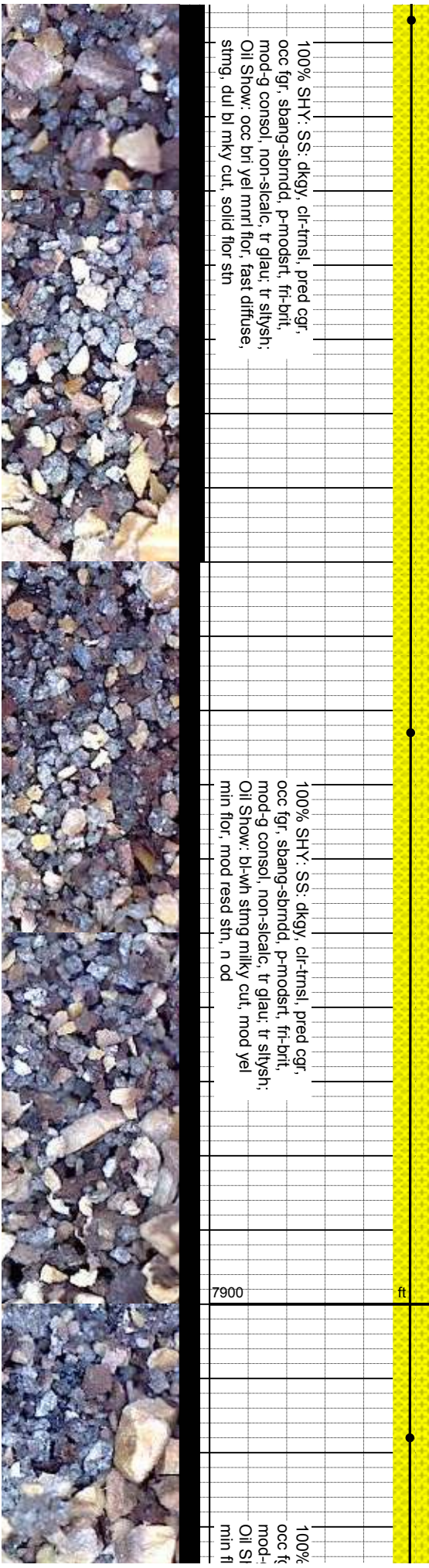
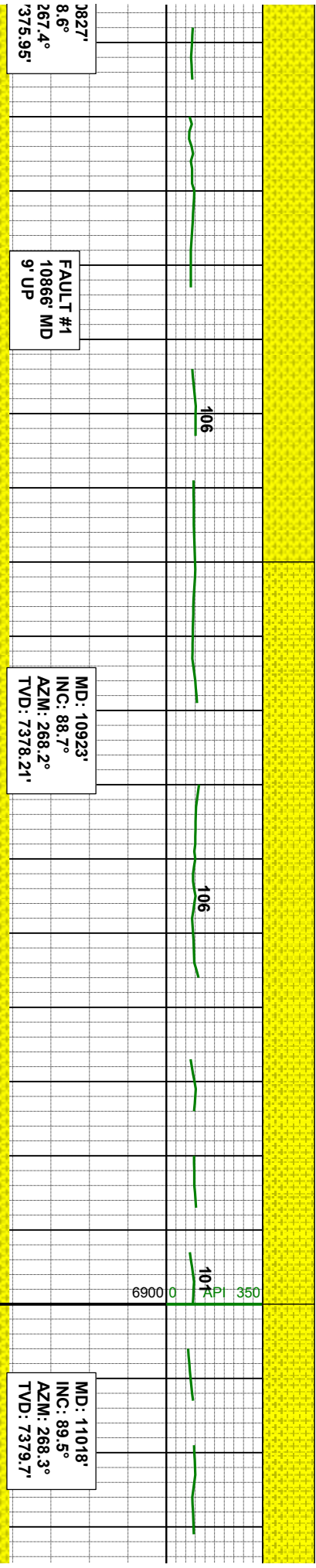
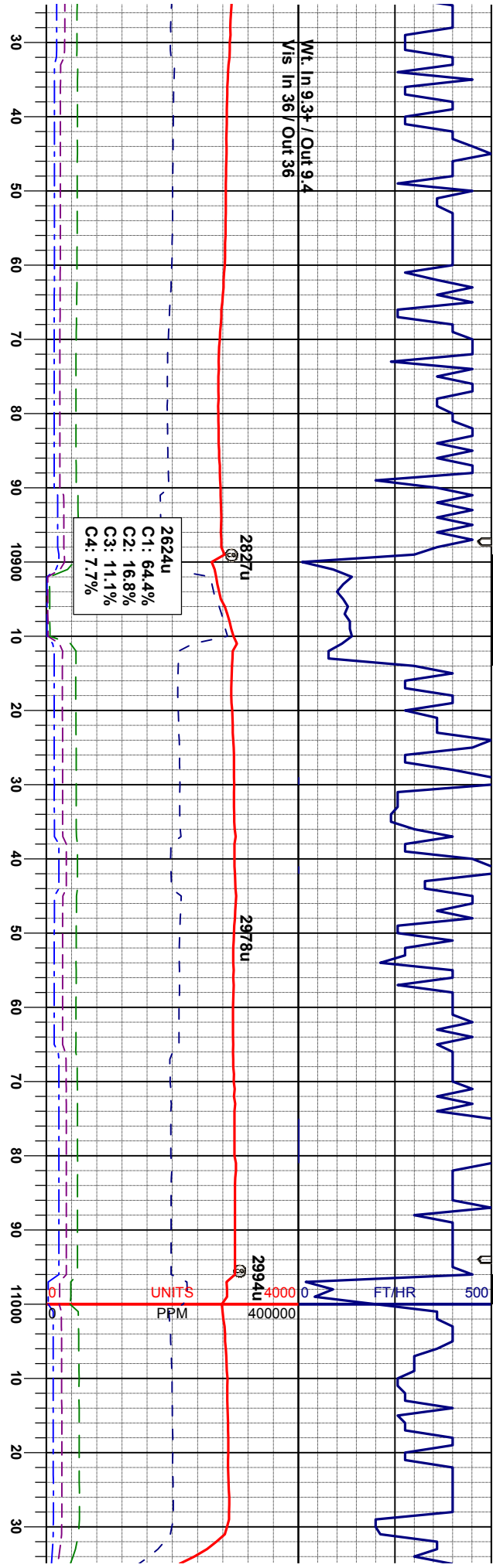


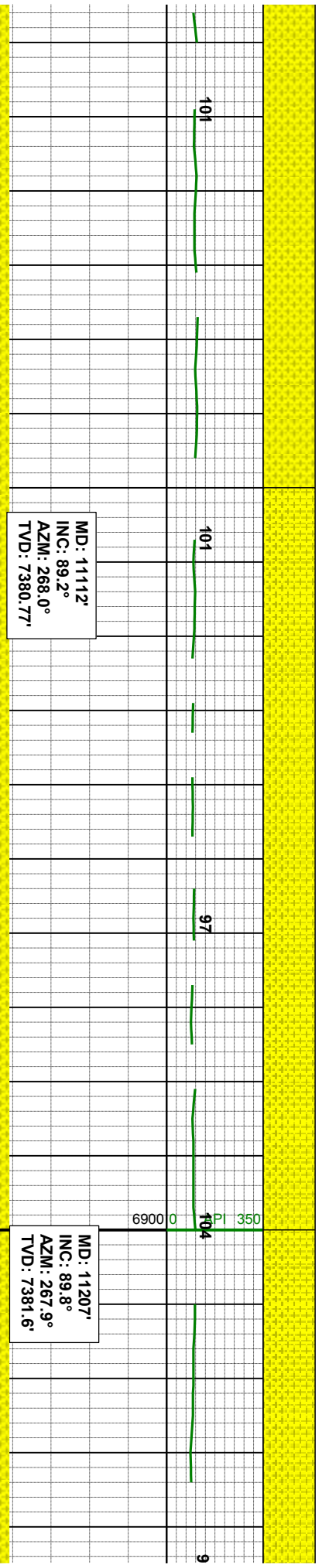
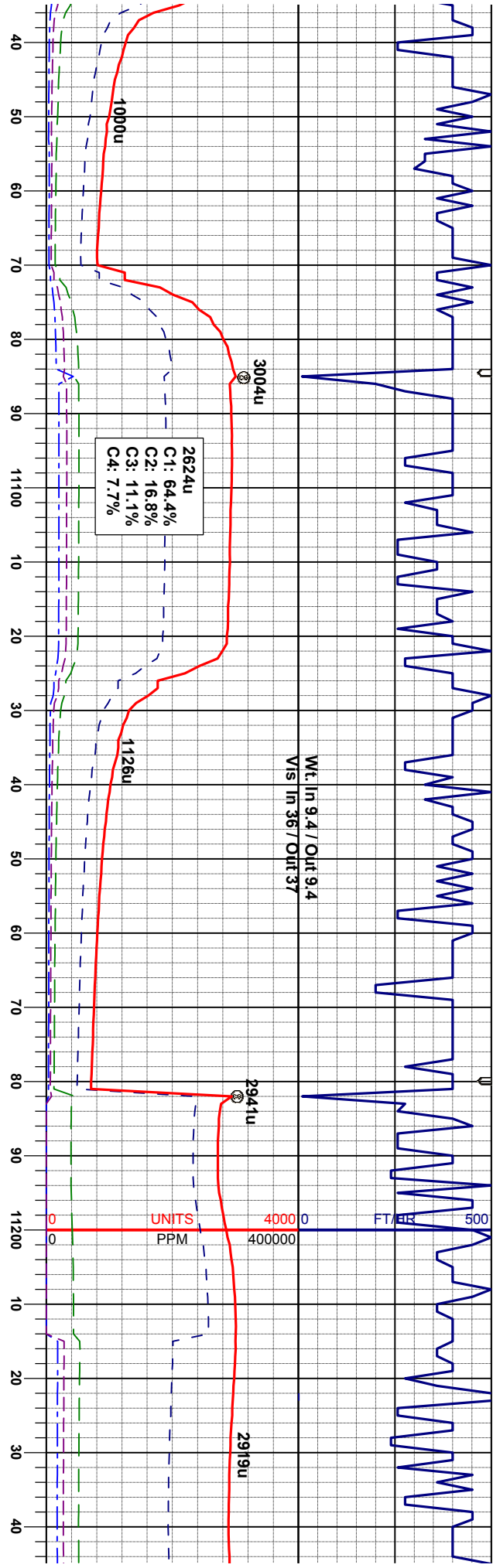


100% SHY: SS: dkgy, cl-trnsl, pred cgr,
occ fgr, sbang-sbrndd, p-modstr, fr-brtl,
mod-g consol, non-scalc, tr glau, tr sltysht,
Oil Show: occ bri yel mnrl flr, fast diffuse,
stmg, dul bl mky cut, solid flr sln

100% SHY: SS: dkgy, cl-trnsl, pred cgr,
occ fgr, sbang-sbrndd, p-modstr, fr-brtl,
mod-g consol, non-scalc, tr glau, tr sltysht,
Oil Show: occ bri yel mnrl flr, fast diffuse,
stmg, dul bl mky cut, solid flr sln



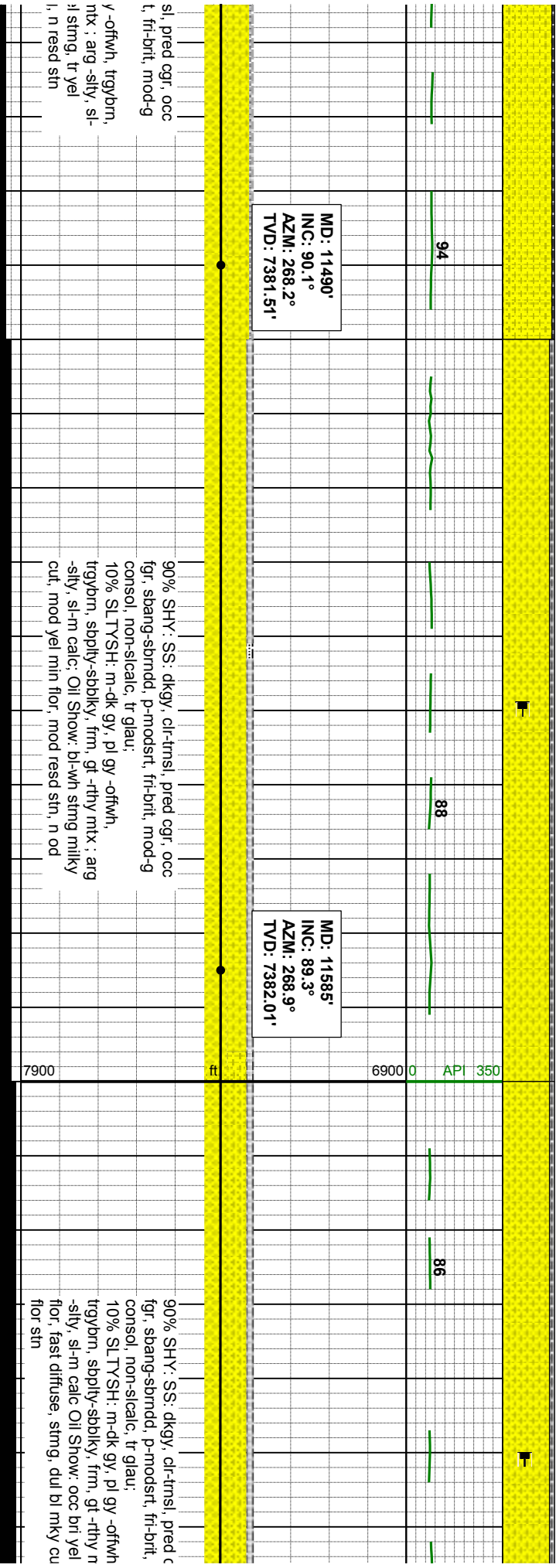
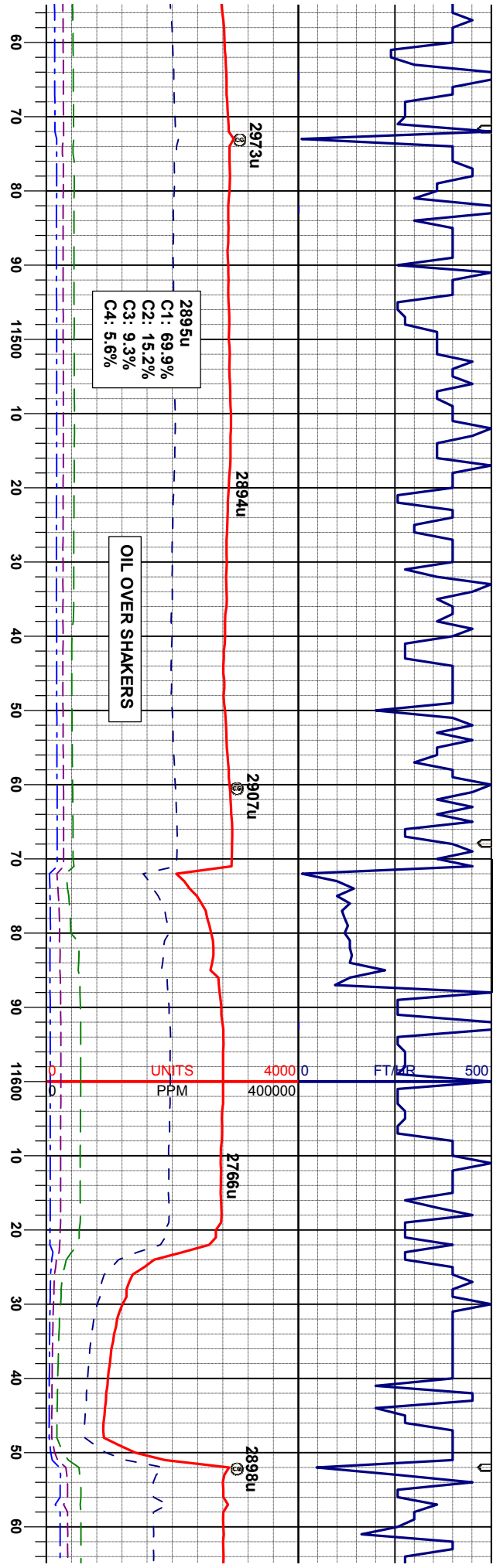


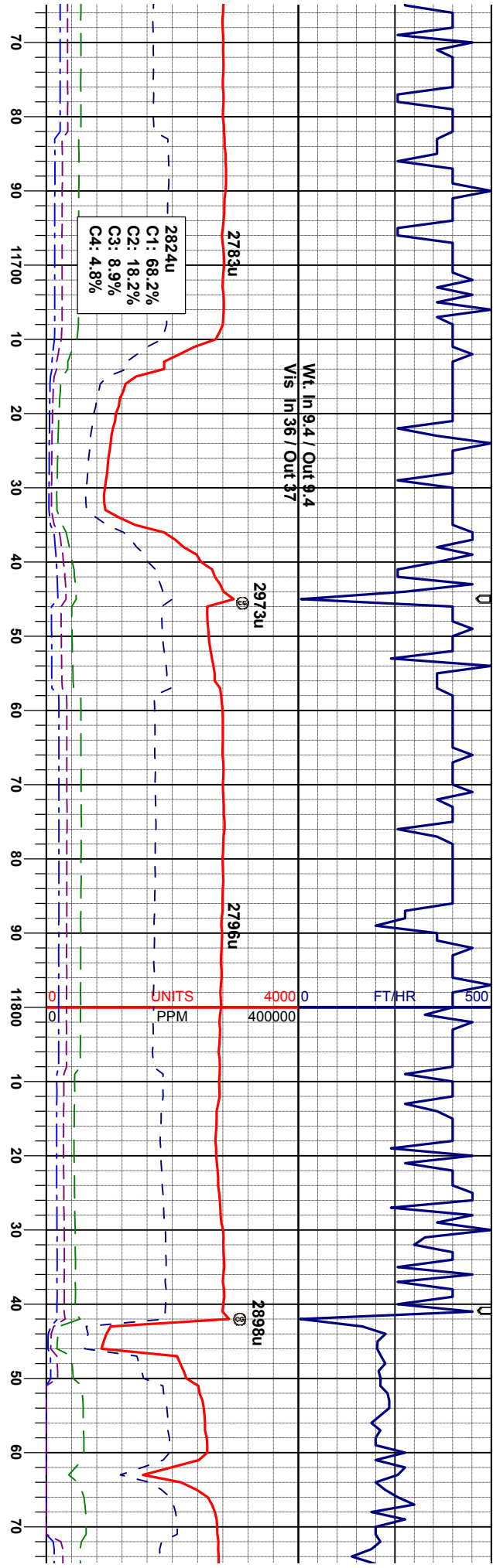


SHY: SS: dkgy, cl: trns, pred cgr, jr, sbang-sbrndd, p-modst, fr-brit, g consol, non-silcalc, tr glau, tr siltysh; low: bl-wh string milky cut, mod yel or, mod red str, n od

100% SHY: SS: dkgy, cl: trns, pred cgr, occ fgr, sbang-sbrndd, p-modst, fr-brit, mod-g consol, non-silcalc, tr glau, tr siltysh; Oil Show: bl-wh string milky cut, mod yel min flr, mod red str, n od

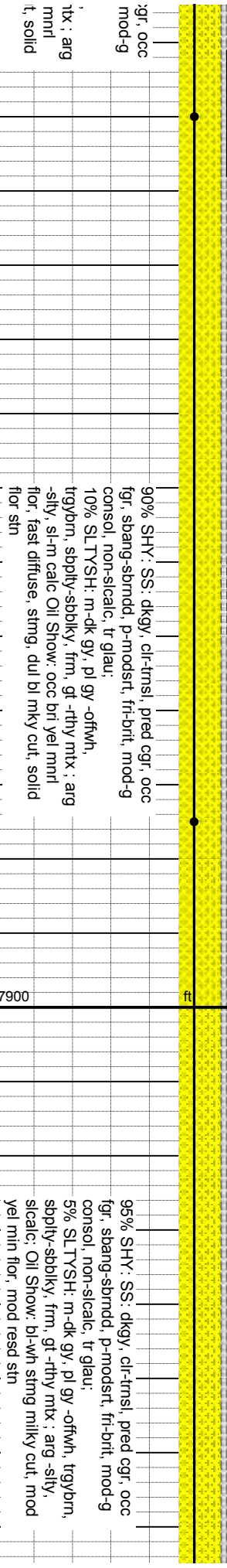






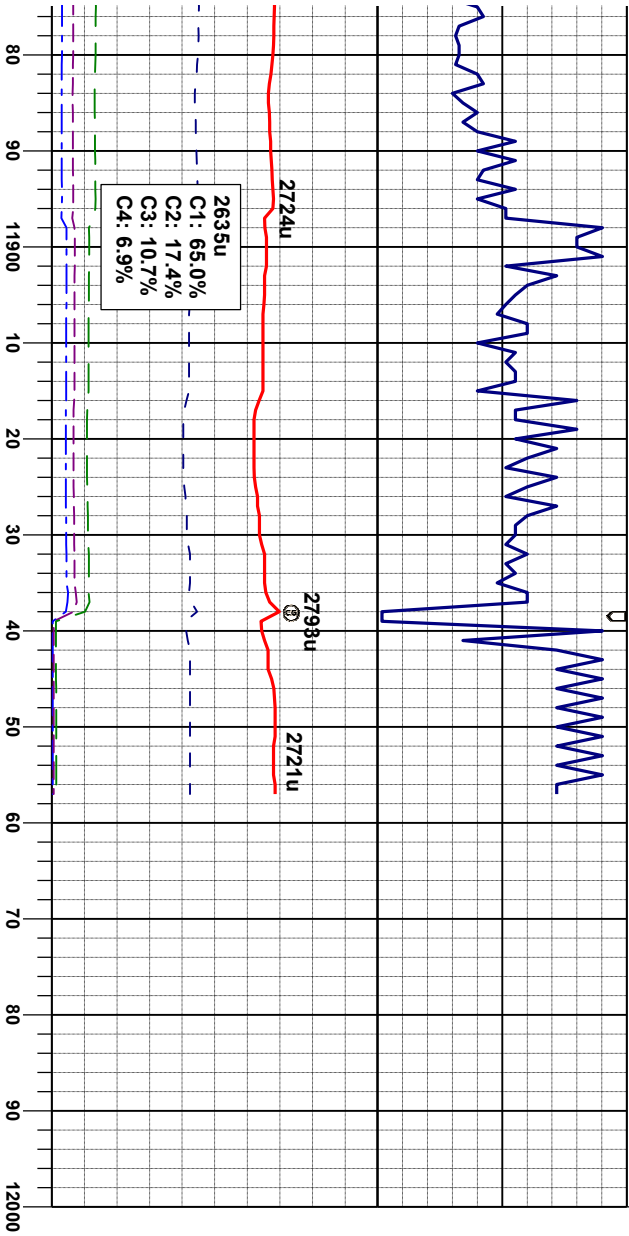
MD: 11680'
INC: 89.2°
AZM: 268.7°
TVD: 7383.25'

MD: 11775'
INC: 90.2°
AZM: 268.9°
TVD: 7383.75'



95% SHY: SS, dkgy, clr-tnsl, pred cgr, occ fgr, sbang-sbrmd, p-modstr, fri-brit, mod-g consol, non-silcalc, tr glau; 5% SLTYSH: m-dk gy, pl gy -offwh, trybrn, sbply-sbblky, frm, gt -rtly mtz; arg silty, silcalc, Oil Show: bl-wh sting milky cut, mod yel mln flr, mod resd sln





91

MD: 11893'
INC: 90.5°
AZM: 268.4°
TVD: 7383.03'

BIT PROJECTION:
MD: 11957'
INC: 90.5°
AZM: 268.4°
TVD: 7382.45'

90% SHY: SS: dkgy, cl-trnsl, pred cgr, occ
fgr, sbang-sbrndd, p-modstr, fr-brtl, mod-g
consoi, non-scalc, tr glau;
10% SL TYSH: m-dk gy, pl gy -offwh,
trybmn, sbply-sbblky, frm, gt -rthy mtk; arg
-sly; sscal: Oil Show: bl-wh string milky cut,
mod yel min flor. mod resd str

Bella Federal 25C-3HZ Wellbore TD @
11957' MD @ 01:03 hrs on 7/20/2013

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Columbine Logging, Inc.

