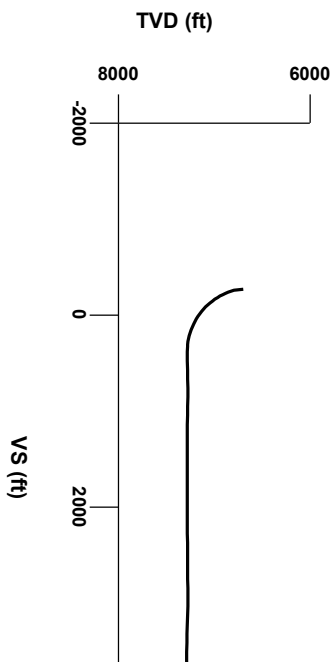




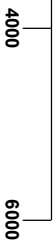
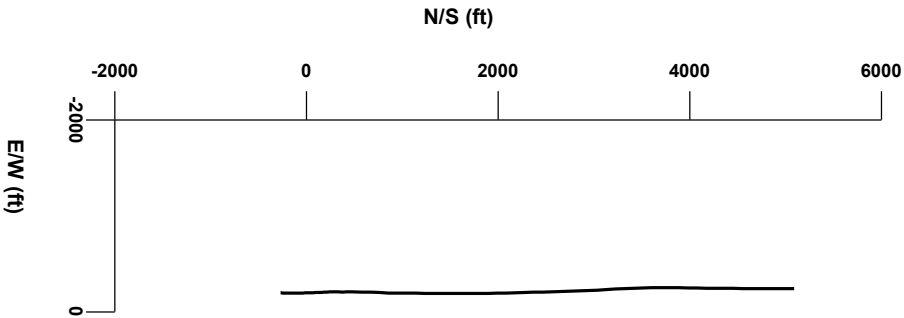
LOG created using LPLLOT VH Version 3.0, April 14, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: ANADARKO PETROLEUM CORPORATION
WELL: RUSSIAN FIDDLER 35N-18HZ
LOCATION: SEC19 T2N R65W
COUNTY: WELD
STATE: COLORADO
SPOT: 318' FSL 1243' FWL
ELEVATION: GE 5000' KB 5013'
FIELD: WATTENBERG
SPUD DATE: 04/04/2013
TD DATE: 04/14/2013
DATES LOGGED: 04/06/2013 - 04/14/2013
DEPTHS LOGGED: 6715' - 12397'
LOGGERS: MIKE KERSCHEN, JOHN WEINERTH, NATHAN M
DRILLING FLUID: WATER, MUD, POLY
DRILLING RIG: ENSIGN 145
API: 05 123 36215
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

Silty Shale

ENGINEERING SYMBOLS

▲

Casing

◀

Casing

◻

Connection

⊕

Connection Gas

■

Midnight Depth

ROTATE SLIDE

GAS		
0	UNITS	5500
0	C1	550000
0	PPM	550000
0	C2	550000
0	PPM	550000
0	C3	550000
0	PPM	550000
0	C4	550000
0	PPM	550000

ROP		
0	MIN/FT	1
Oil Shows Every 100'		

DEPTH (FEET)

Oil Shows Every 100'

2191u

GAS TEST

MWT: IN 9.7/ OUT 9.5
VS: IN 39/ OUT 50

CUTTINGS LITHOLOGY

TVD	
ft	6500
GAMMA RAY	
0 API 220	

BIT 8.87"
REID HYGALOG
TYPE: E1202A3B
SERIAL NO.: A159272
3 x 16 & 2 x 18 JETS
DEPTH IN: 6715'

100% SLTY SH: lt gy - gy, m sft - firm, sb
biky - sb pily, silty, non calc OIL SHW: fnt
yel / wh flor, n stmg, tr stn, tr o

100% SLTY SH: lt gy - gy, m sft - firm,
biky - sb pily, silty, non calc OIL SHW:
yel / wh flor, n stmg, tr stn, tr o

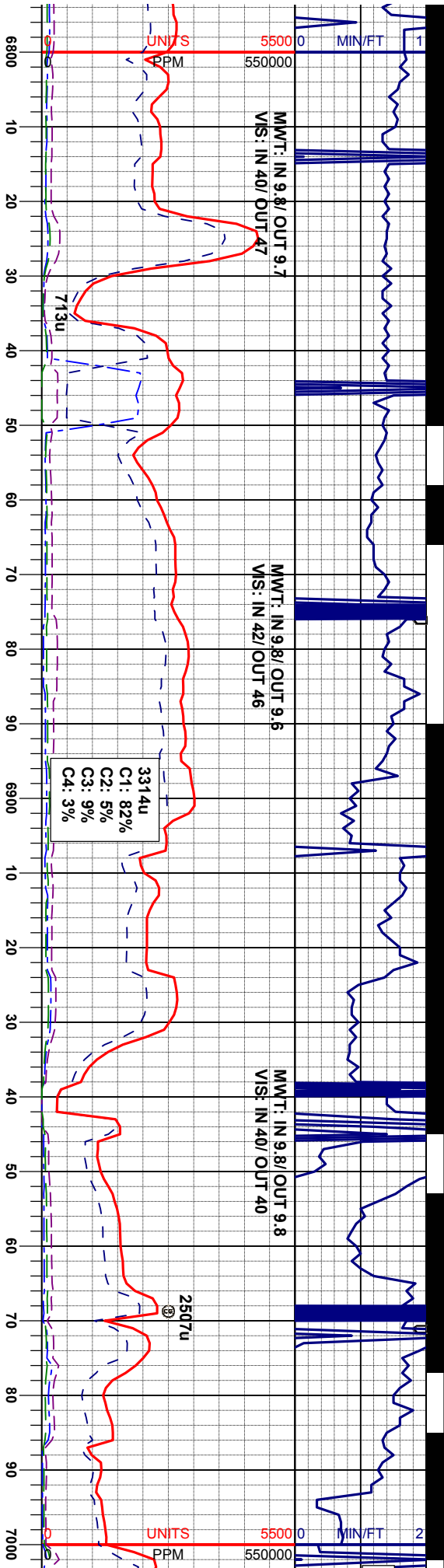
MD 6727'
INC 0.97°
AZM 42.69°
TVD 6697.92'

MD 6759'
INC 4.65°
AZM 11.57°
TVD 6729.87'

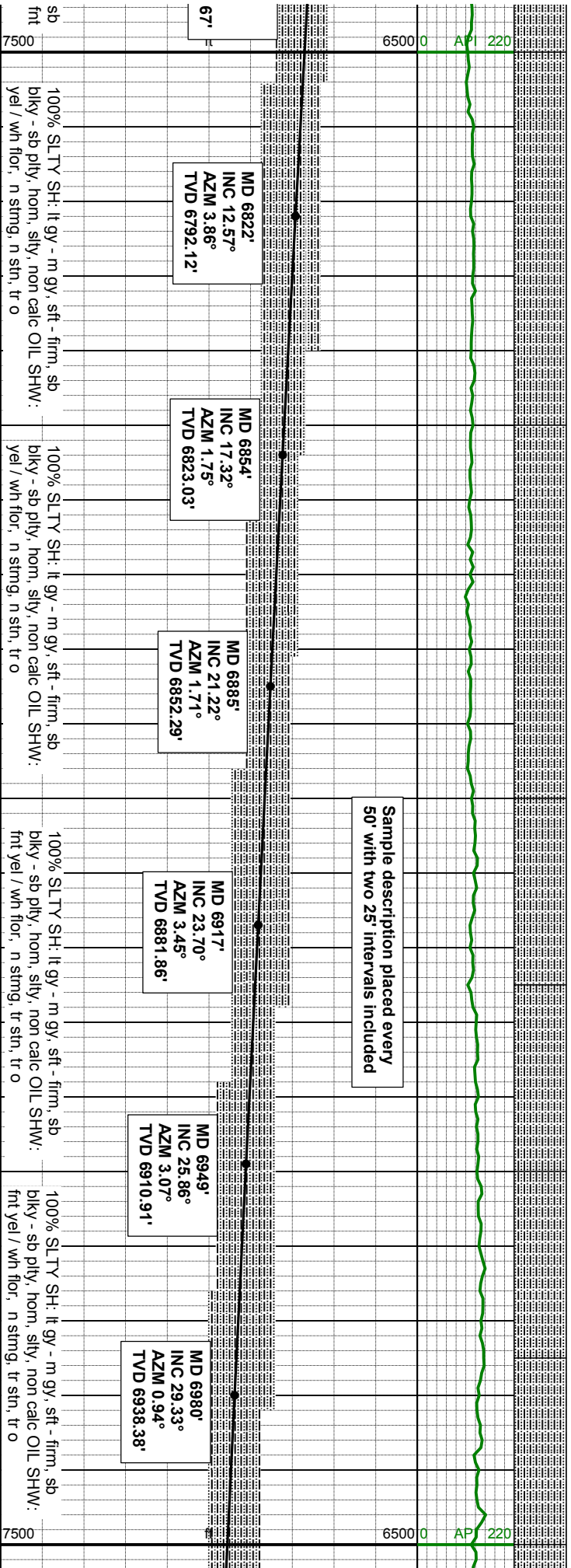
MD 6790'
INC 8.42°
AZM 7.8°
TVD 6760.

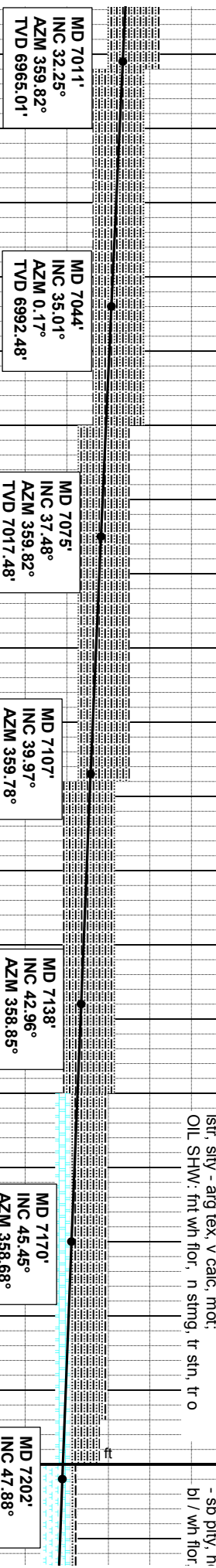
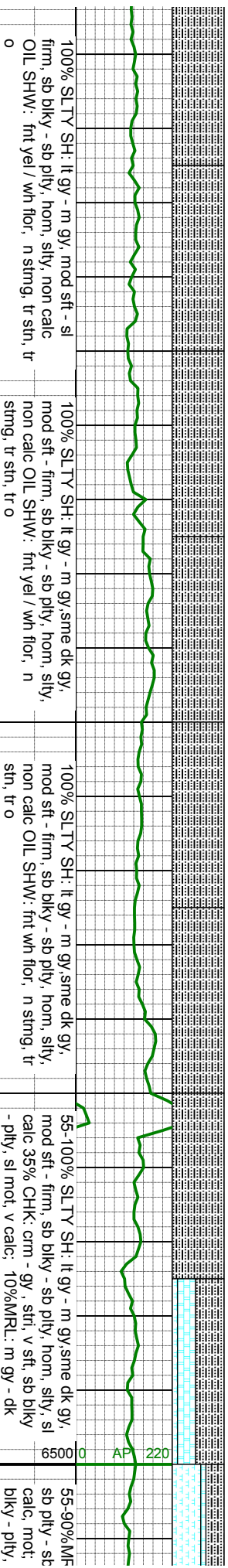
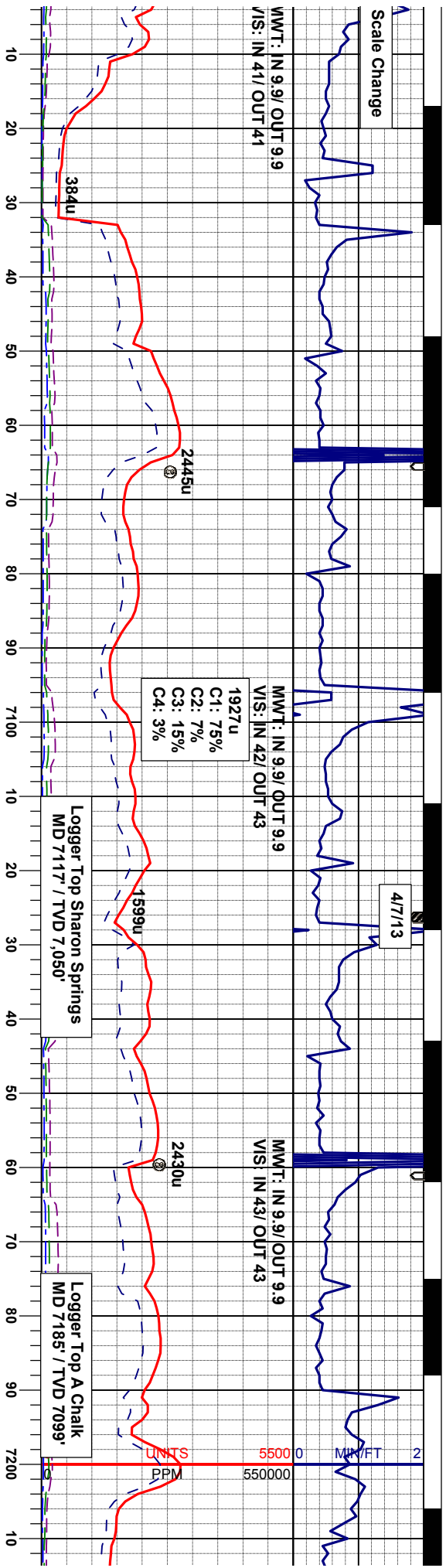
COLUMBINE LOGGING INC
RIGGED UP ON 04/06/2013
MANNED 2-PERSON LOGGING
WITH BLOODHOUND GAS
CHROMATOGRAPH UNIT #0313

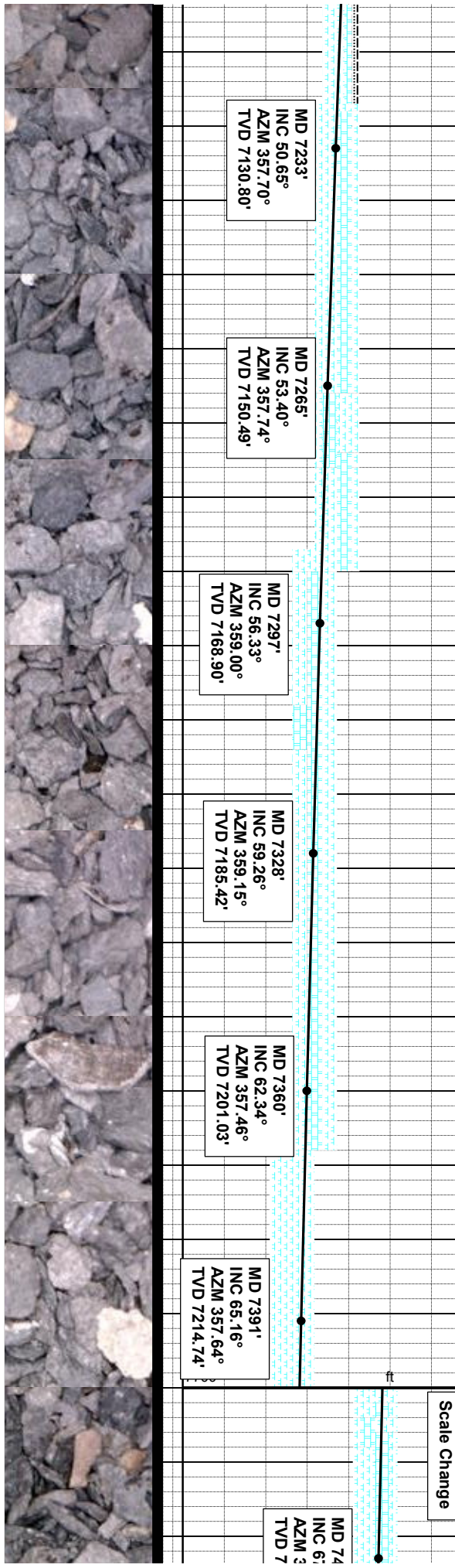
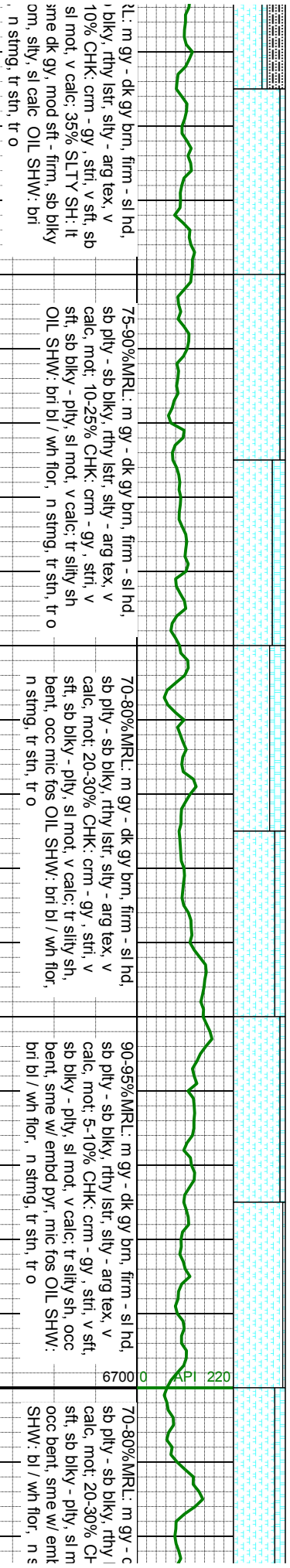
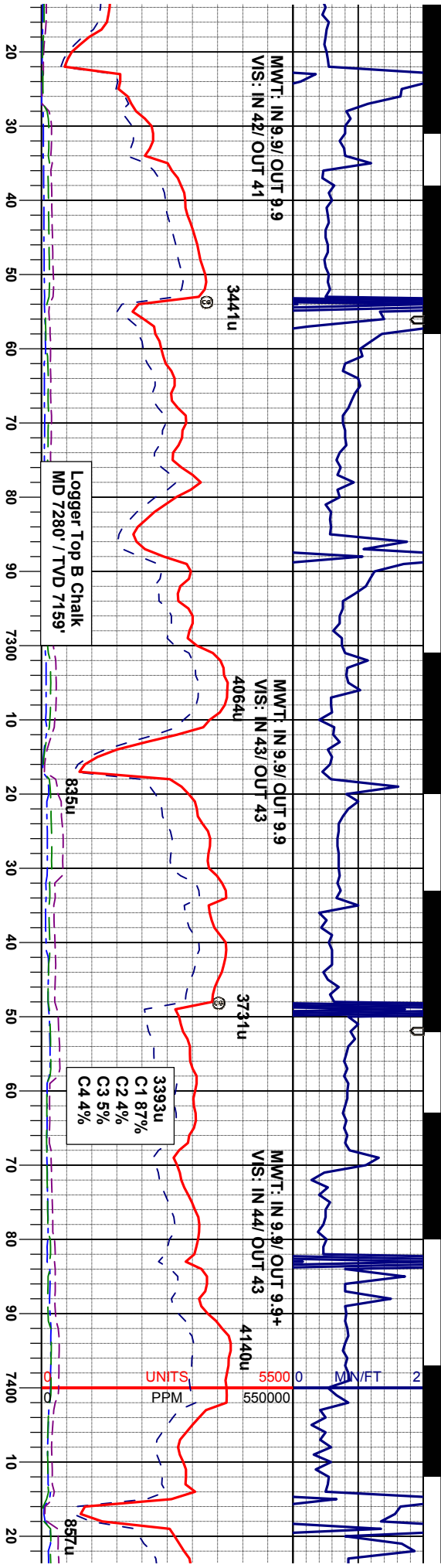
SAMPLE PHOTOS

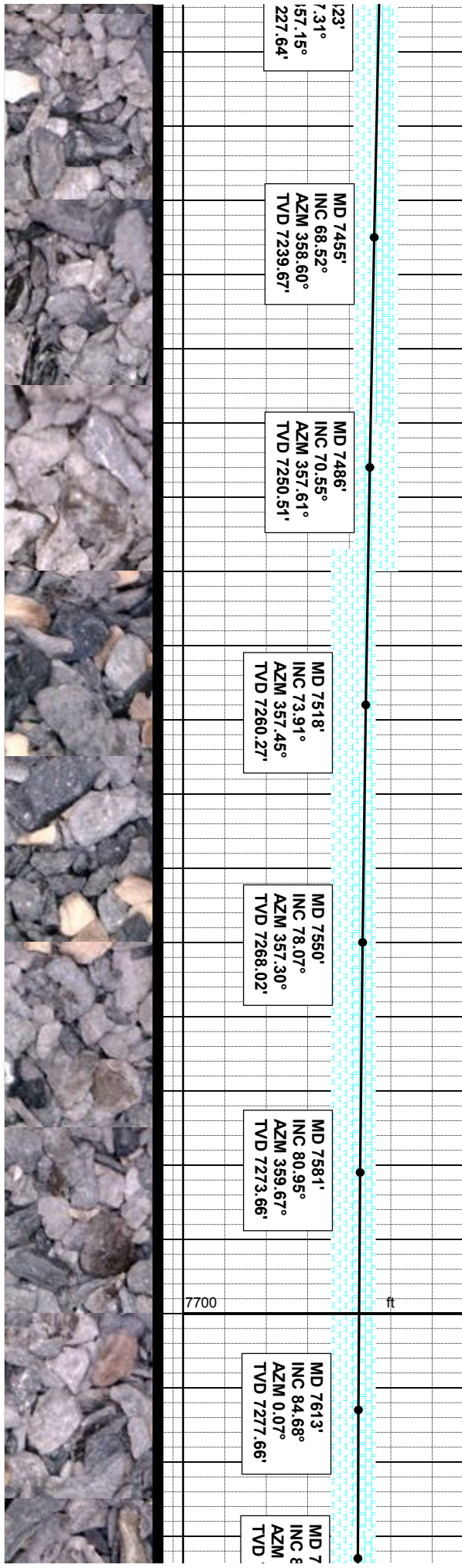
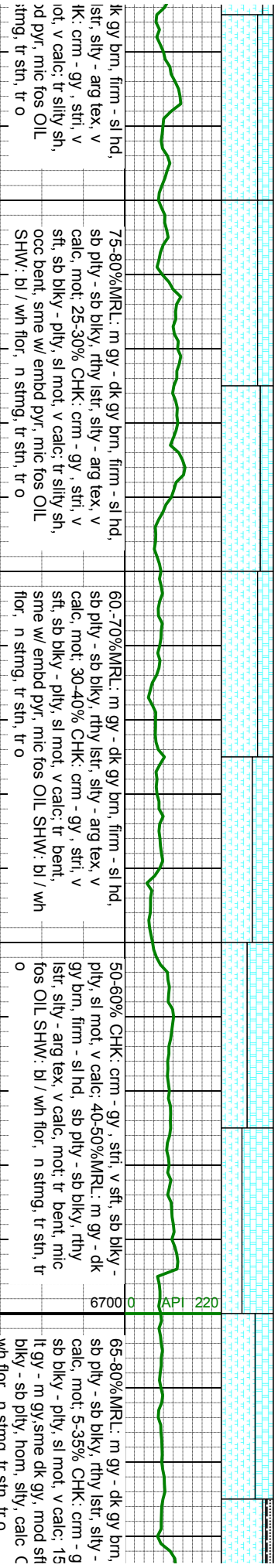
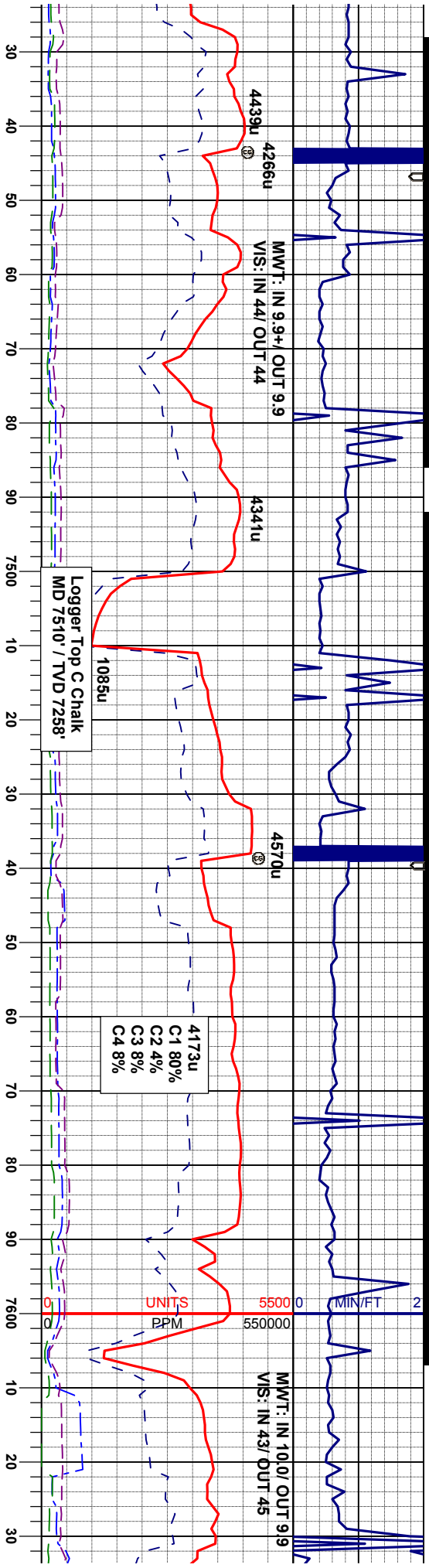


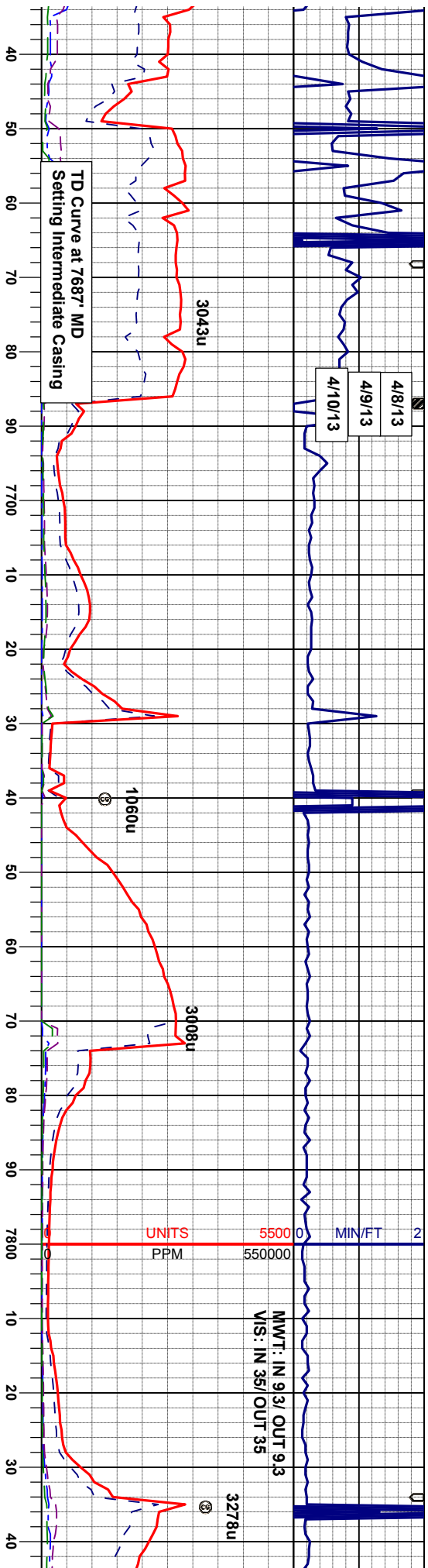
Sample description placed every 50' with two 25' intervals included











firm - sl hd, arg tex, v y, str, v sft, % SLTY SH: - firm, sb JIL SHW: bl /

100% MRL: dk gy, blk, gy brn, firm - sl hd, sb ply - sb blk, rhy lstr, sily arg tex, v clac, tr pyr, tr fos OIL SHW: bl / wh flor, n sting, tr stn, tr o

100% MRL: dk gy, blk, gy brn, firm - sl hd, sb ply - sb blk, rhy lstr, sily arg tex, v clac, tr pyr, tr fos sting, lt yel stn, tr o

100% MRL: dk sb ply - sb blk clac, tr pyr, tr fc sting, lt yel stn,

BIT 6.125"
HALIBURTON FX 191452
5 X 16S JETS
DEPTH IN: 7687'

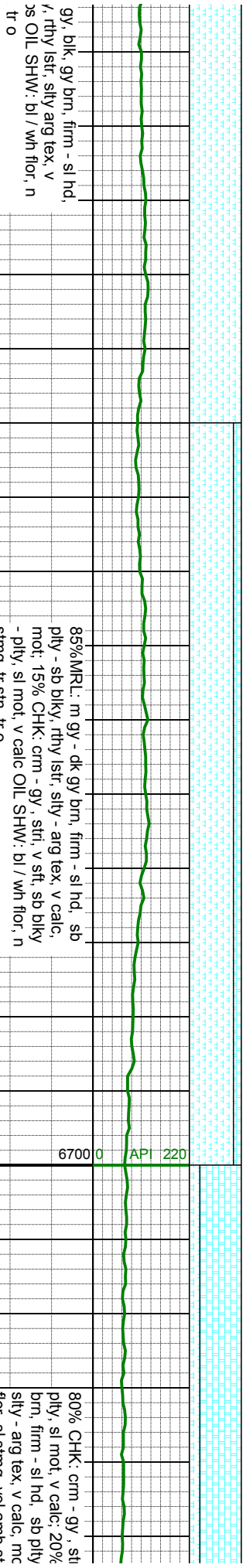
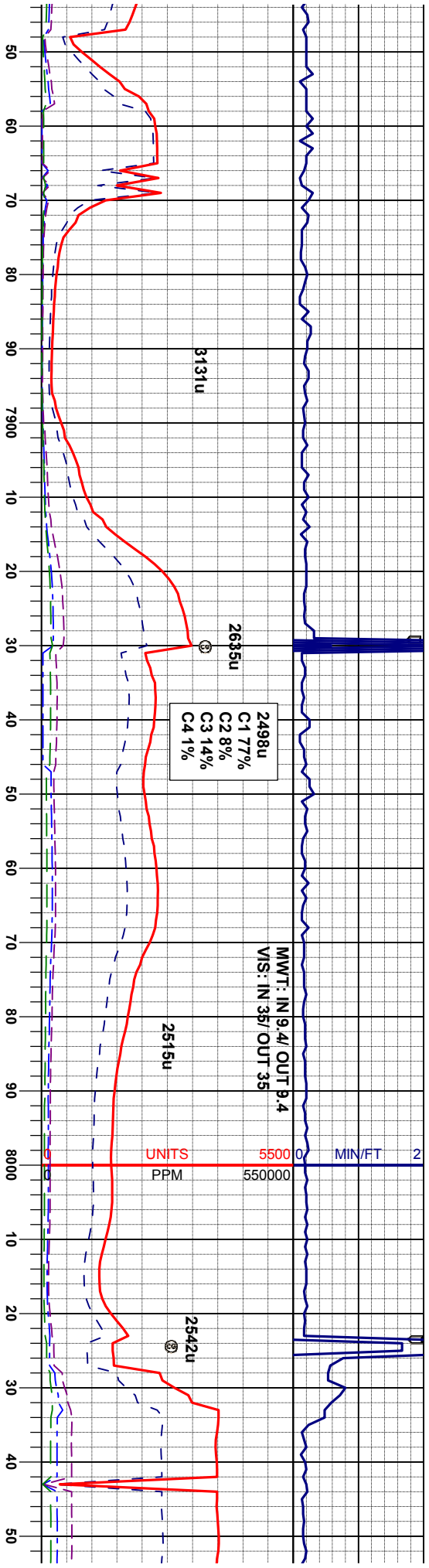
6333'
17.50°
1.23°
7279.03'

Projected
MD 7687
INC 90.19°
AZM 1.23°
TVD 7279.96'

MD 7718'
INC 90.80°
AZM 2.48°
TVD 7280.12'

MD 7782'
INC 90.64°
AZM 0.39°
TVD 7279.32'

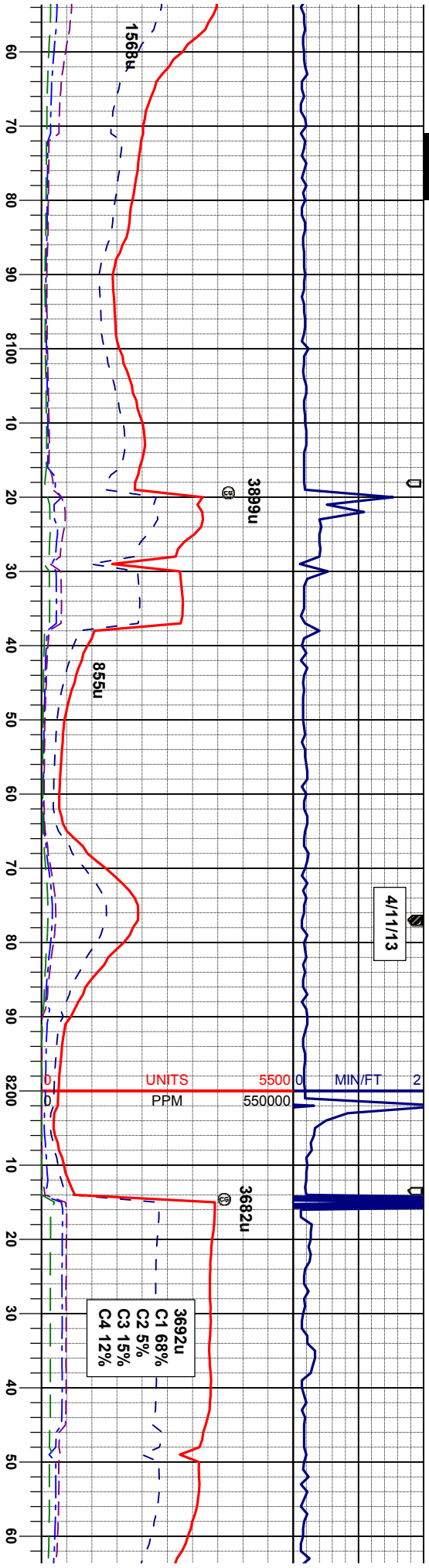




MD 7877'
INC 91.10°
AZM 1.73°
TVD 7277.87'

MD 7971'
INC 91.35°
AZM 0.61°
TVD 7275.86'





n, v sft, sb bly -
MRL: m gy - dk gy
- sb bly, rthy lstr,
t OIL SHW: bl / wh
n, tr o

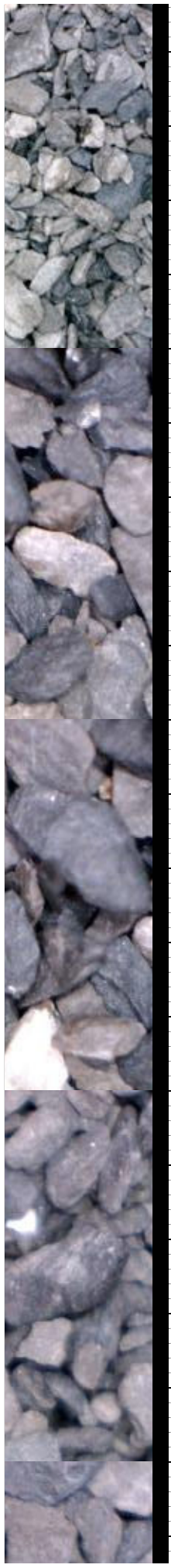
55% CHK: crm - gy, str, v sft, sb bly -
ply, sl mot, v calc, tr fos, 45%MRL: m gy -
dk gy brn, firm - sl hd, sb ply - sb bly, rthy
lstr, slty - arg tex, v calc, mot
wh flr, sl stng, lt yel amb sin, tr o

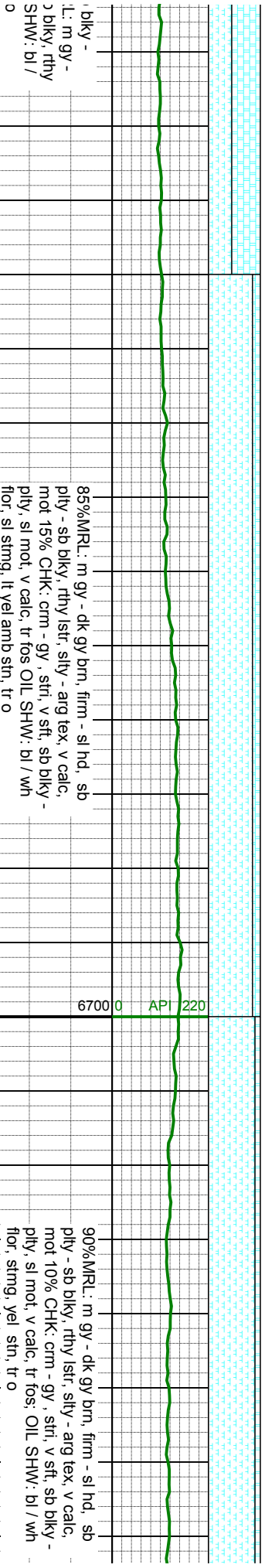
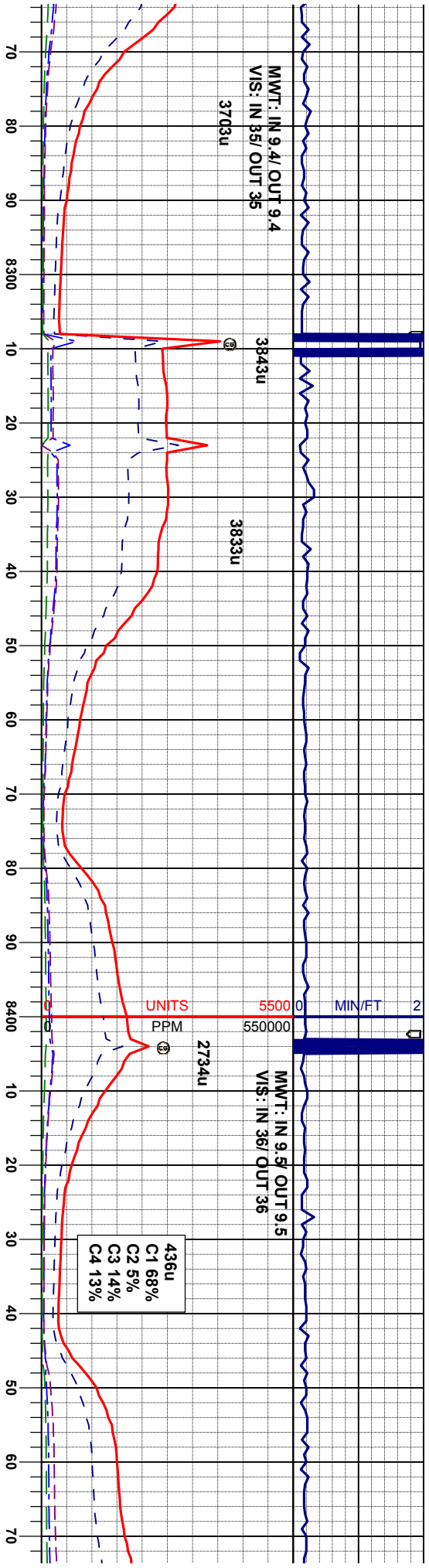
55% CHK: crm - gy, str, v sft, sb
ply, sl mot, v calc, tr fos, 45%MR
dk gy brn, firm - sl hd, sb ply - st
lstr, slty - arg tex, v calc, motOIL:
wh flr, sl stng, lt yel amb sin, tr o

MD 8066'
INC 90.64°
AZM 1.51°
TVD 7274.21'

MD 8161'
INC 89.07°
AZM 0.51°
TVD 7274.45'

MD 8256'
INC 88.82°
AZM 0.27°
TVD 7276.20'

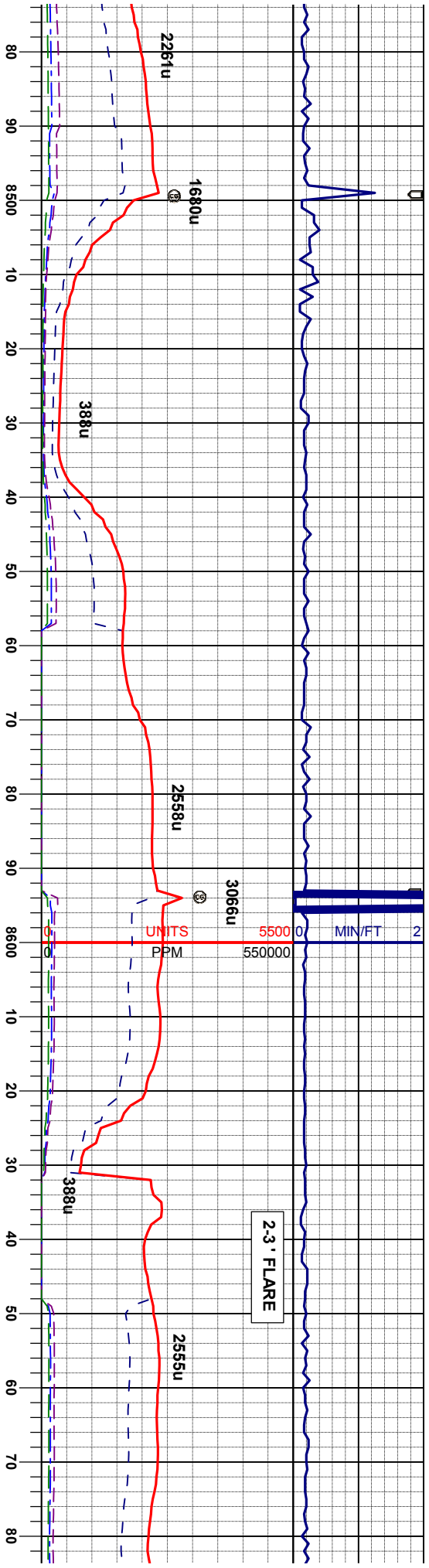




MD 8351'
INC 89.13°
AZM 0.74°
TVD 7277.90'

MD 8446'
INC 89.32°
AZM 0.30°
TVD 7279.19'





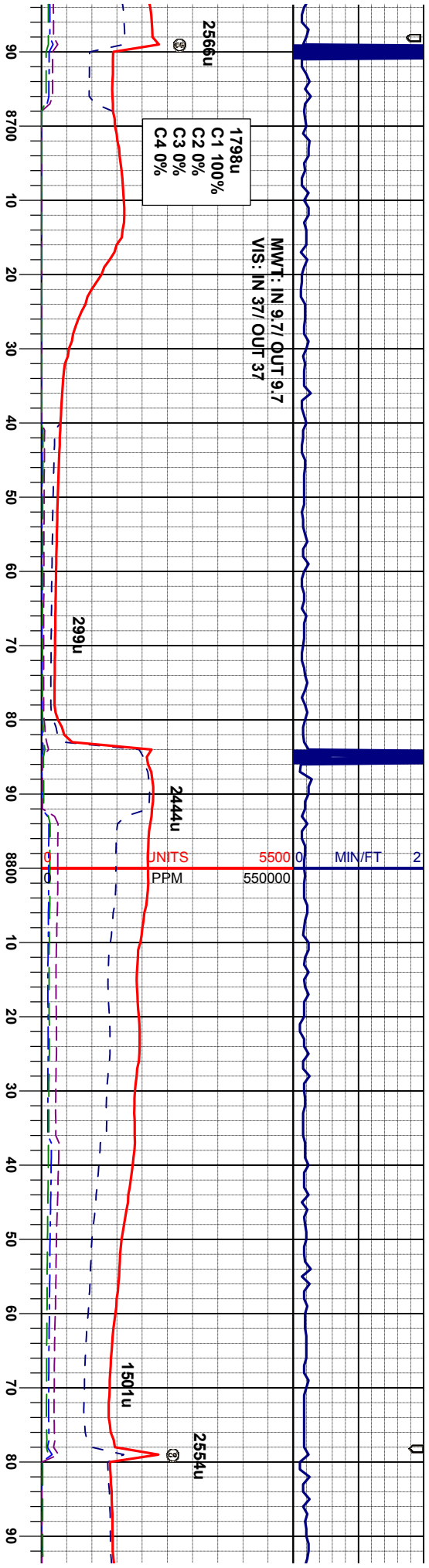
100%MRU: m gy - dk gy brn, firm - sl hd,
sb ply - sb blk, rthy lstr, silty - arg tex, v
calc, mot; tr chk OIL SHW: bl / wh flor,
stmg, yel str, tr o

MD 8540'
INC 89.50°
AZM 0.24°
TVD 7280.16'

100%MRU: m gy - dk gy brn, firm - sl hd,
sb ply - sb blk, rthy lstr, silty - arg tex, v
calc, mot; tr chk, bent, pyr OIL SHW: bl /
wh flor, stmg, yel str, tr o

MD 8635'
INC 89.81°
AZM 0.10°
TVD 7280.73'





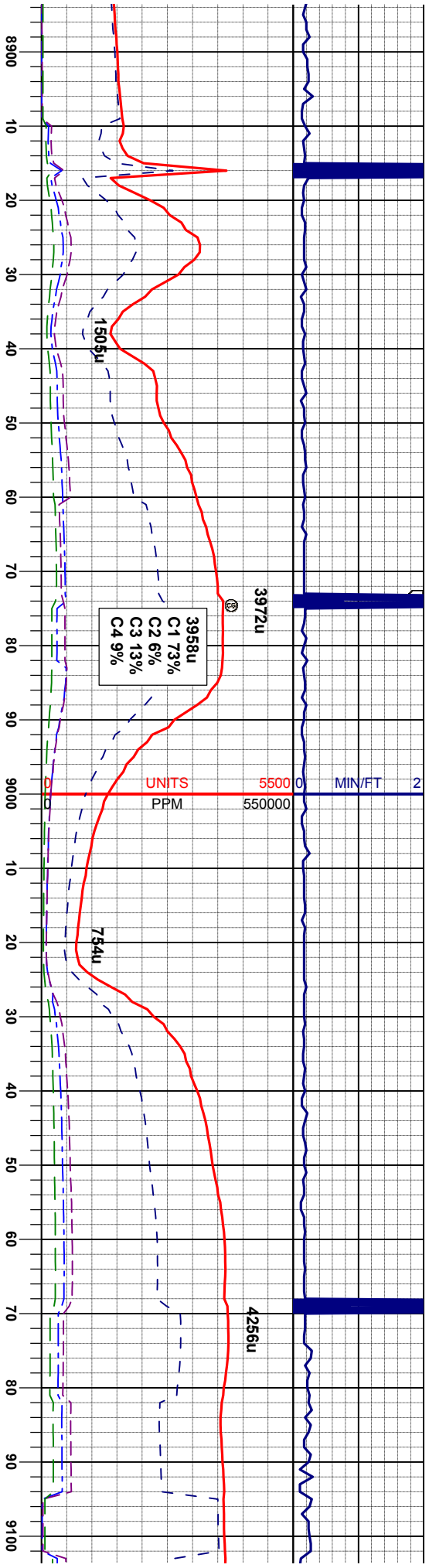
100%MR.L: m gy - dk gy brn, firm - sl hd, sb ply - sb blk, rthy lstr, silty - arg tex, v calc, mot; tr chk, bent, pyr OIL SHW; mky bl flor, n string, lt yel stn, tr o

100%MR.L: m gy - dk gy brn, firm - sl hd, sb ply - sb blk, rthy lstr, silty - arg tex, v calc, mot; tr chk, bent, pyr OIL SHW; mky bl flor, n string, lt yel stn, tr o

MD 8730'
INC 89.50°
AZM 359.80°
TVD 7281.30'

MD 8825'
INC 89.63°
AZM 359.90°
TVD 7282.03'





100%MRU: m gy - dk gy brn, firm - sl hd,
sb pily - sb blkly, rthy lstr, silty - arg tex, v
calc, mot, occ bent, tr pyr OIL SHW: mky bl
flor, n stmg, lt yel str, tr o

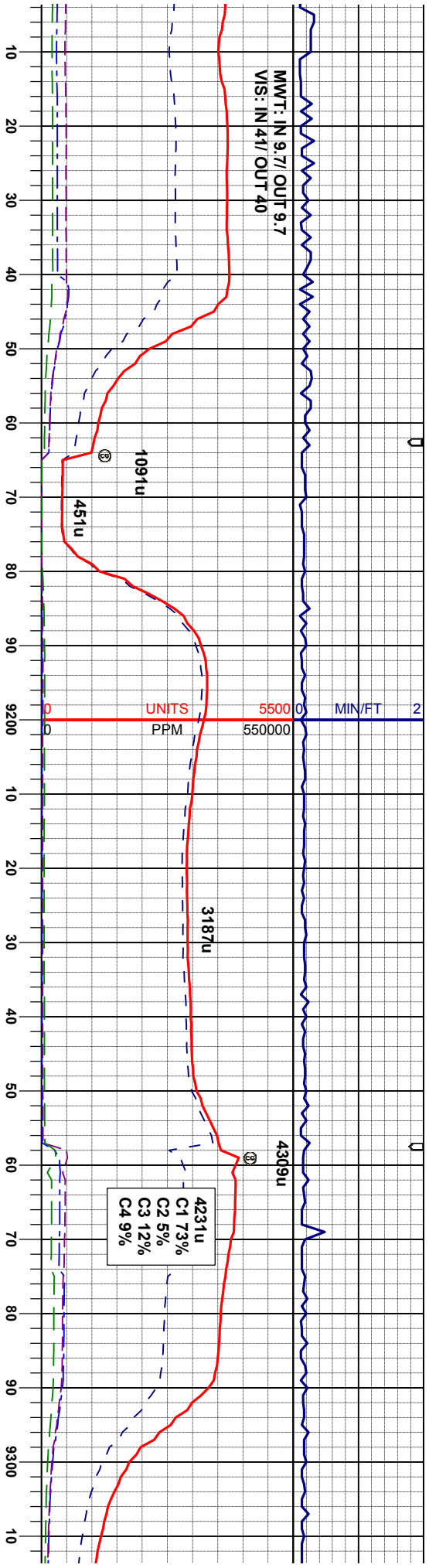
MD 8920'
INC 90.52°
AZM 0.73°
TVD 7281.90'

100%MRU: m gy - dk gy brn, firm - sl hd,
sb pily - sb blkly, rthy lstr, silty - arg tex, v
calc, mot, occ bent, tr pyr OIL SHW: mky
bl flor, sl stmg, yel str

MD 9014'
INC 89.75°
AZM 359.70°
TVD 7281.68'

ft 6700 0 API 220 7700





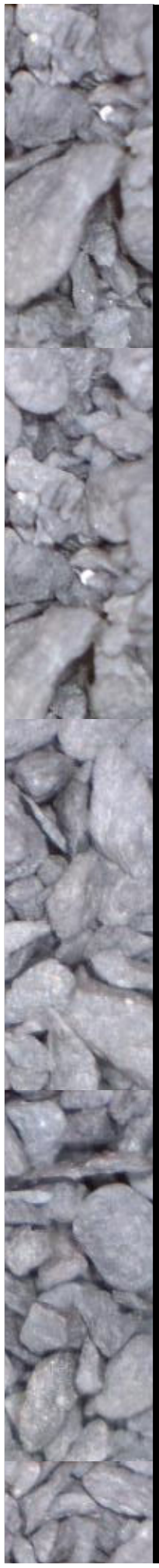
100%MRU: m gy - dk gy brn, firm - sl hd,
sb pty - sb blkty, rthy lstr, silty - arg tex, v
calc, mot; ooc bent, tr pyr OIL SHW: dul bl
flor, n stmg, amb yel stn

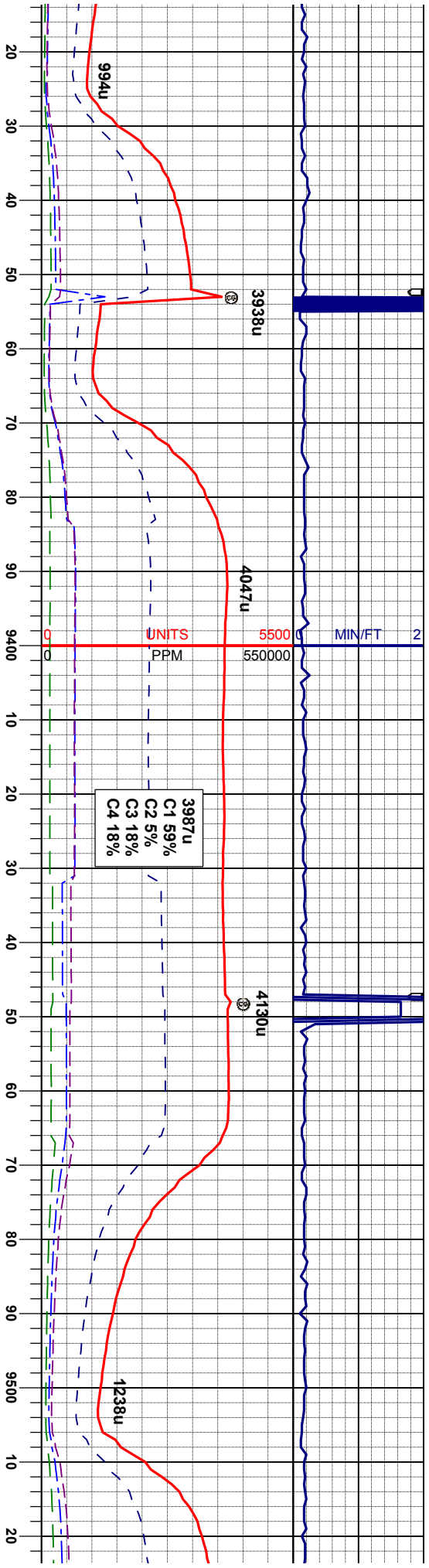
100%MRU: m gy - dk gy brn, firm - sl hd,
sb pty - sb blkty, rthy lstr, silty - arg tex, v
calc, mot; tr bent, pyr OIL SHW: dul bl flor,
n stmg, amb yel stn

MD 9109'
INC 90.18°
AZM 0.13°
TVD 7281.73'

MD 9204'
INC 90.36°
AZM 359.65°
TVD 7281.29'

MD 9299'
INC 90.21°
AZM 358.97°
TVD 7280.81'





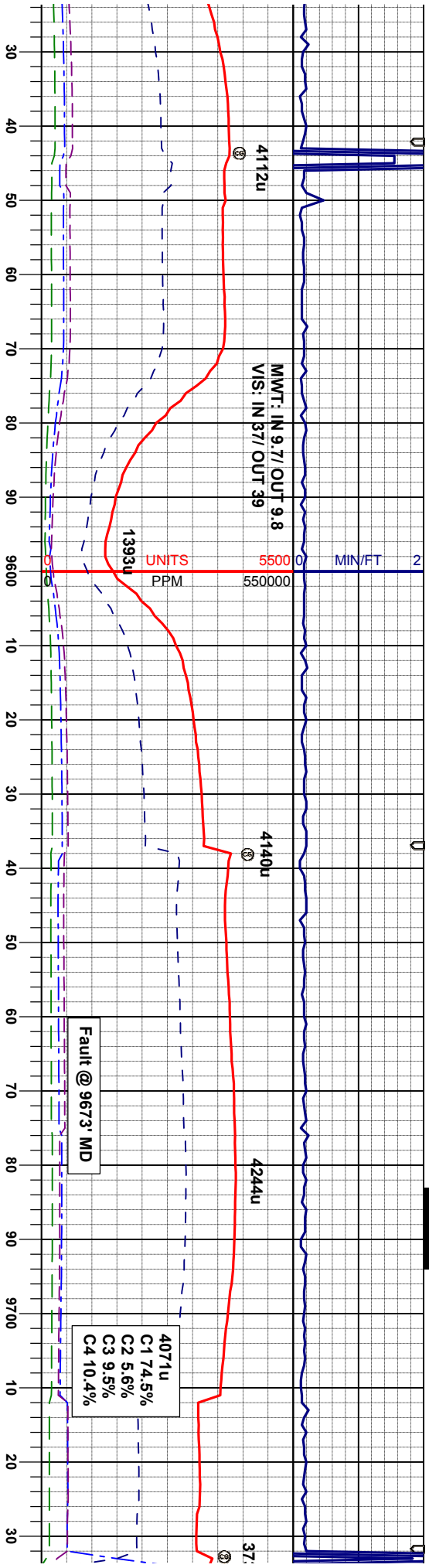
100%MR: m gy - dk gy brn, firm - sl hd,
sb pty - sb blk, rthy str, silty - arg tex, v
calc, mot; tr bent, pyr OIL SHW: du bl flor,
n sting, amb yei str

100%MR: m gy - dk gy brn, firm - sl hd,
sb pty - sb blk, rthy str, silty - arg tex, v
calc, mot; tr bent, pyr OIL SHW: du bl flor,
n sting, amb yei sin

MD 9394'
INC 90.06°
AZM 358.52°
TVD 7280.59'

MD 9489'
INC 90.39°
AZM 358.23°
TVD 7280.22'



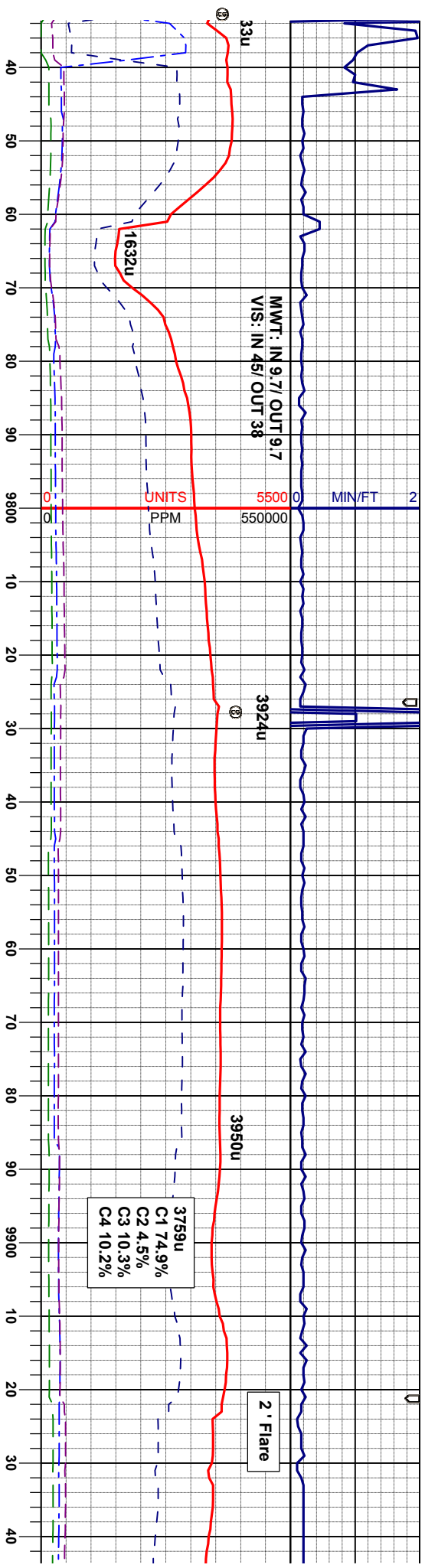


100%MR: m gy - dk gy brn, firm - sl hd, sb pty - sb blk, rthy lstr, silty - arg tex, v calc, mot; tr bent, pyr; OIL SHW: dul bl flor, n stng, amb yel str

100%MR: m gy - dk gy brn, firm - sl hd, sb pty - sb blk, rthy lstr, silty - arg tex, v calc, mot; tr chk, bent, pyr; OIL SHW: mod brt wh flor, n stng, sl yel str

100%MR: m gy - dk gy brn, firm - sl hd, sb pty - sb blk, rthy lstr, silty - arg tex, v calc, mot; tr chk, bent, pyr; OIL SHW: mod brt wh flor, n stng, sl yel str





C1 74.9%
C2 4.5%
C3 10.3%
C4 10.2%

RL: m gy - dk gy brn, firm - sl hd,
-sb blkly, rthy istr, silty - arg tex, v
ot: tr chk, bent, pyr, inoc frag; OIL
nod brit wh flor, n string, sl yel stn

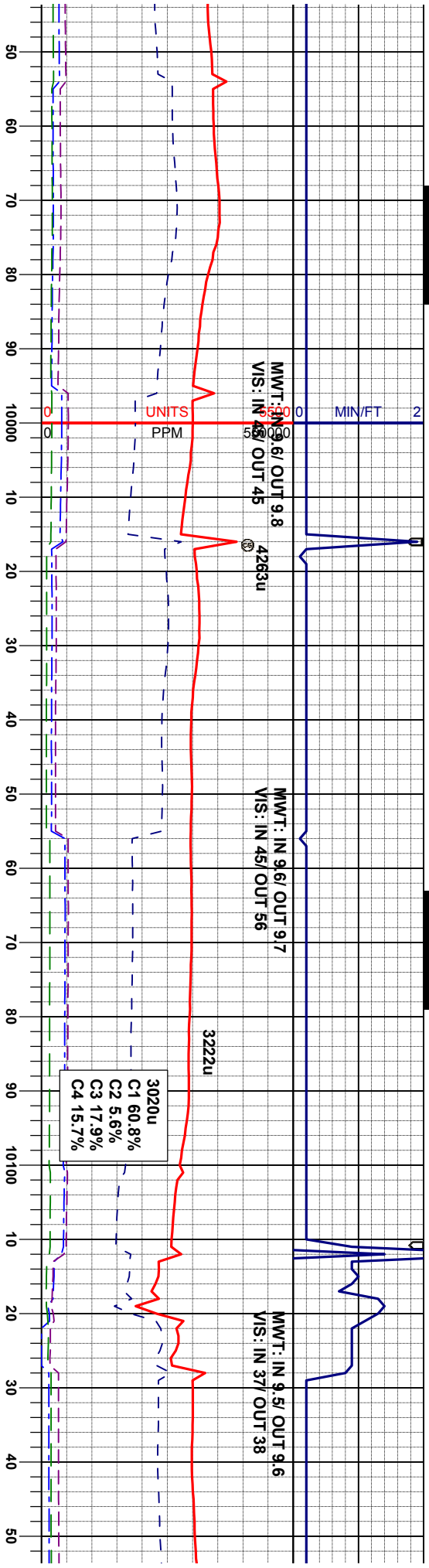
95%MR.L: m gy - dk gy brn, firm - sl hd, sb
ply - sb blkly, rthy istr, silty - arg tex, v calc,
mot 5% CHK: crm - gy, sft, sb blkly - ply, sl
mot, v calc, tr inoc fos frag; OIL SHW: mod
brt wh flor, n string, sl yel stn

100%MR.L: m
sb ply - sb blk
calc, mot; tr c
SHW: mod br

MD 9773'
INC 89.78°
AZM 358.39°
TVD 7277.83'

MD 9868'
INC 89.56°
AZM 358.15°
TVD 7278.38'





gy - dk gy brn, firm - sl hd,
y, rthy lstr, silty - arg tex, v
shk, bent, pyr, inoc frag; OIL
it wh flor, n sting, sl yel sh

100%MRU: m gy - dk gy brn, firm - sl hd,
sb pily - sb blkly, rthy lstr, silty - arg tex, v
calc, mot; tr bent, pyr, inoc frag; OIL SHW:
mod brit wh flor, n sting, sl yel sh

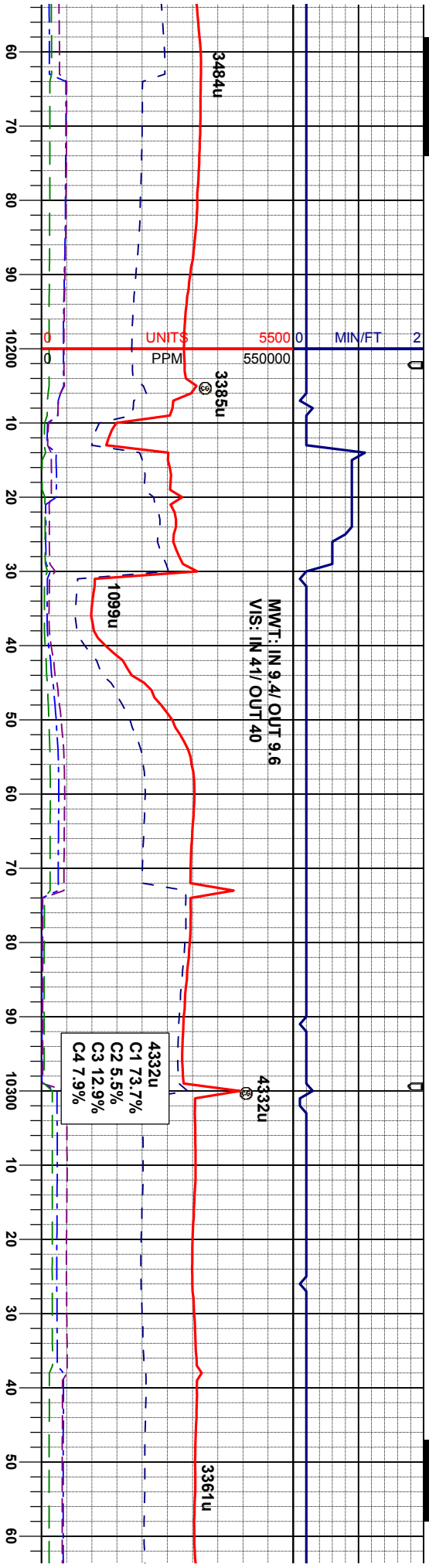
100%MRU: m gy - dk gy
sb pily - sb blkly, rthy lstr,
calc, mot; tr bent, pyr, In
br bl/wh flor, n sting, sl tr

MD 9963'
INC 90.55°
AZM 358.71°
TVD 7278.29'

MD 10057'
INC 91.32°
AZM 357.72°
TVD 7276.75'

MD 10
INC 90
AZM 3
TVD 7.





brn, firm - sl hd,
sily - arg tex, v
oc frag; OIL SHW:
stn

100%MR.L: m gy - dk gy brn, firm - sl hd,
sb pily - sb blk, rthy istr, sily - arg
calc, mot; tr bent, pyr, inoc frag
yel/wh flor, n sting, sl tr stn

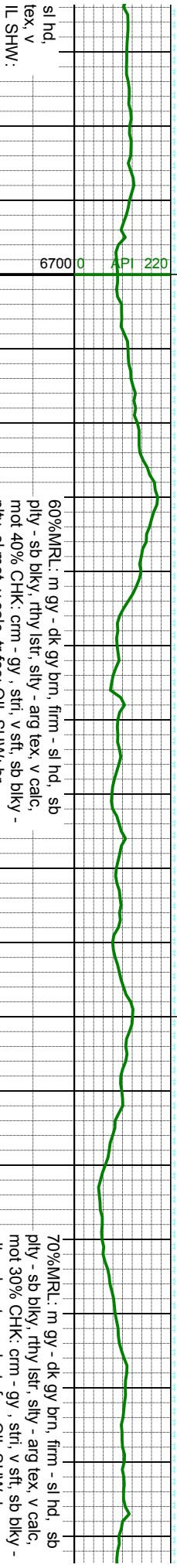
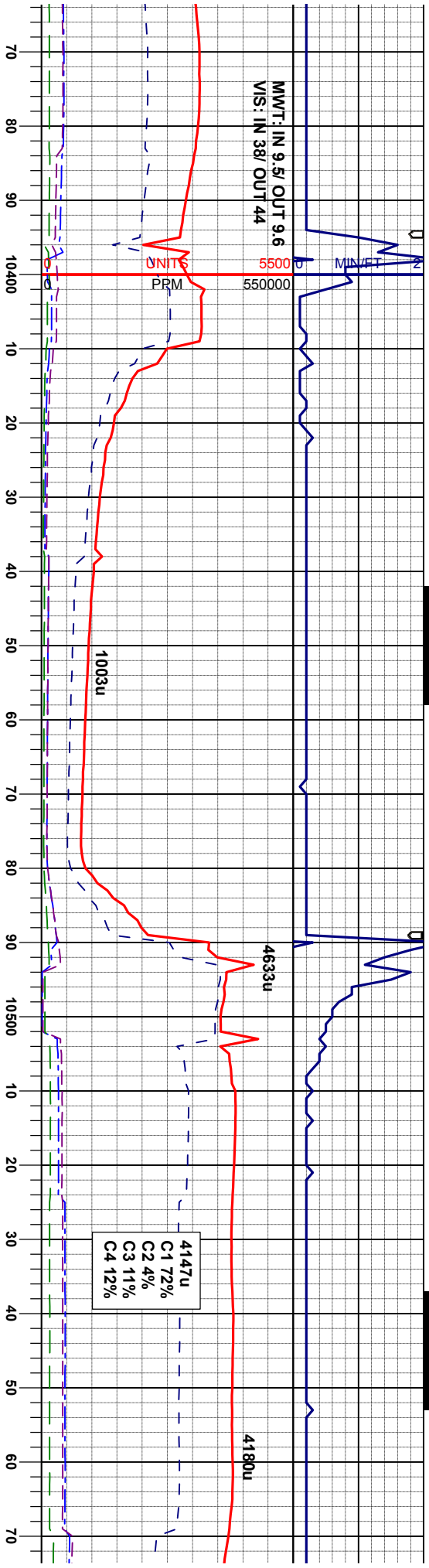
100%MR.L: m gy - dk gy brn, firm -
sb pily - sb blk, rthy istr, sily - arg
calc, mot; tr bent, pyr, inoc frag; O
yel/wh flor, n sting, sl tr stn

152'
1.80°
58.19°
275.00'

MD 10247'
INC 89.84°
AZM 358.70°
TVD 7214.47'

MD 10342'
INC 89.07°
AZM 356.49°
TVD 7275.37'

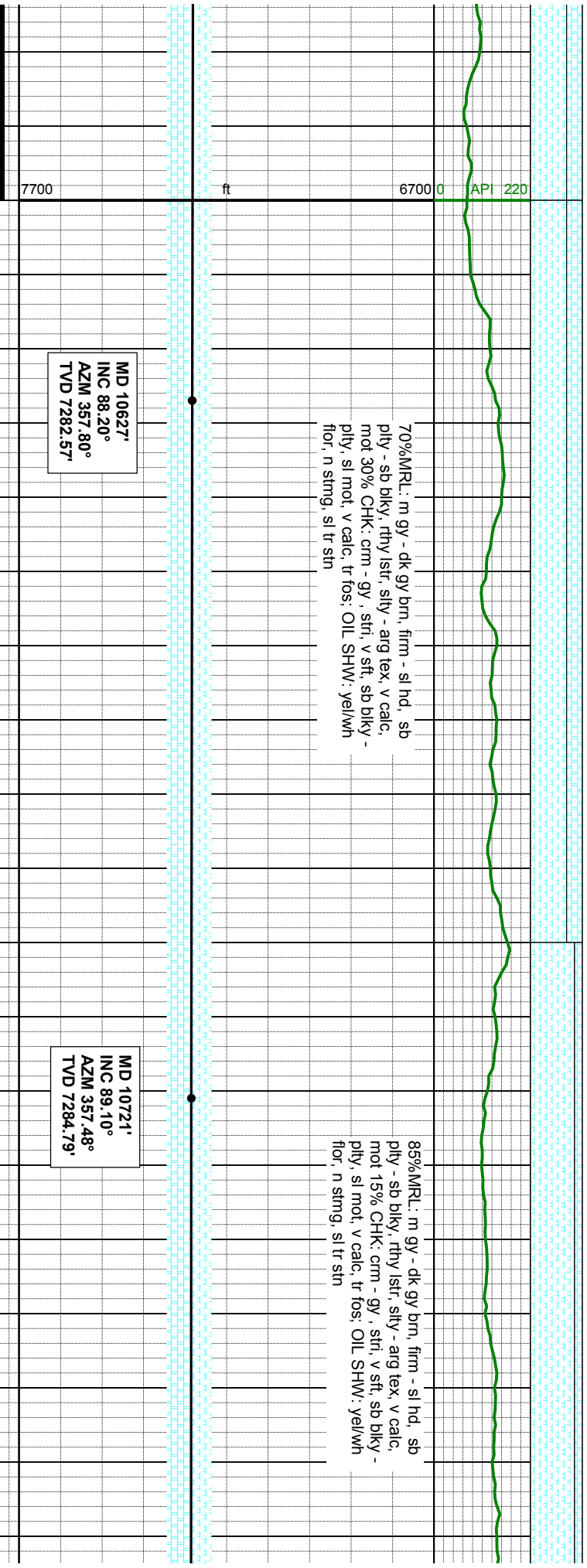
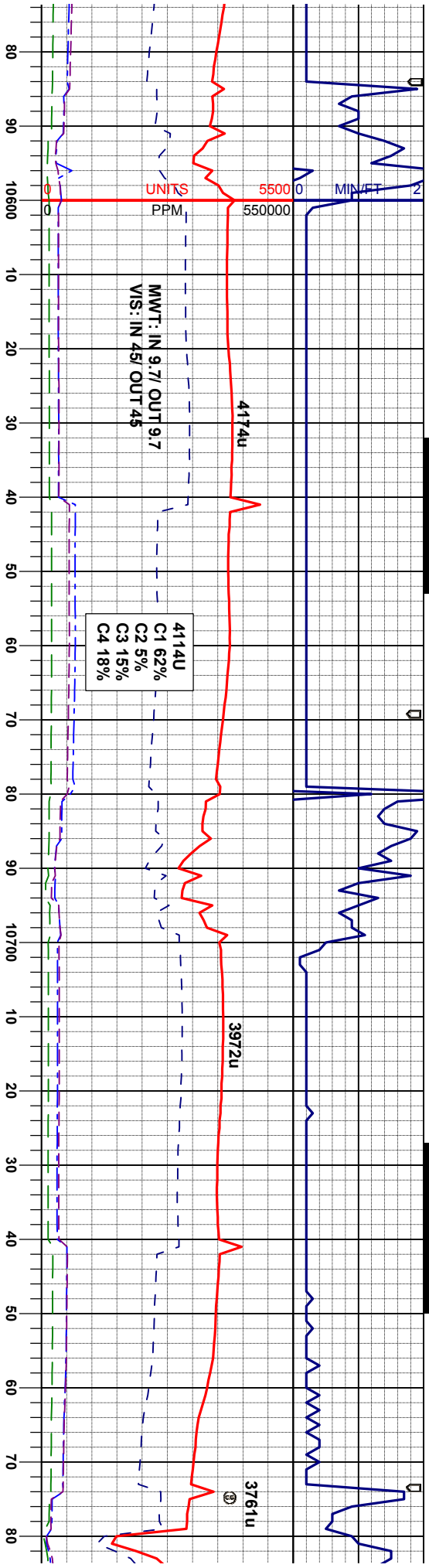




MD 10437'
INC 88.76°
AZM 355.54°
TVD 7277.17'

MD 10532'
INC 88.26°
AZM 356.70°
TVD 7279.64'

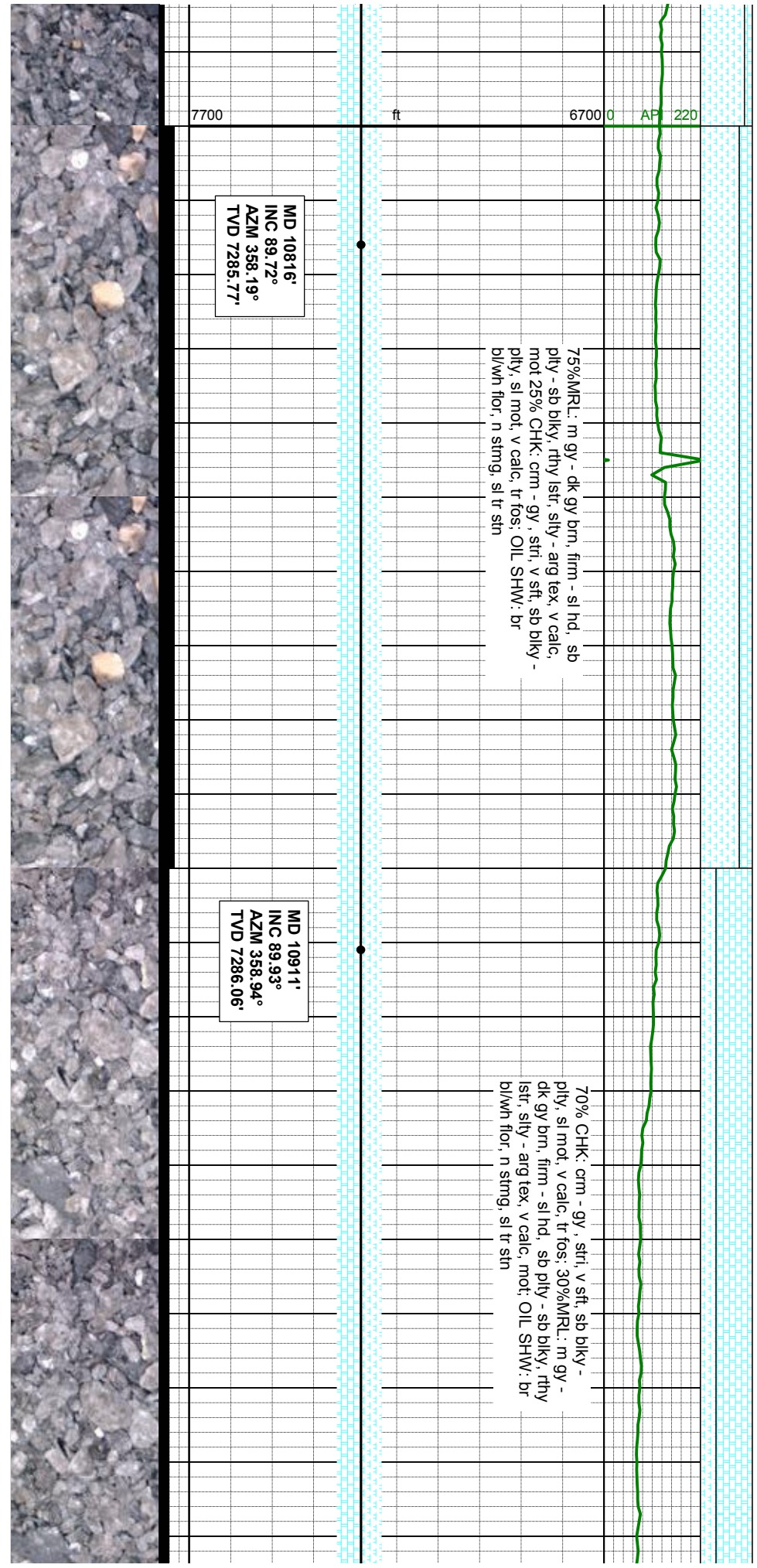
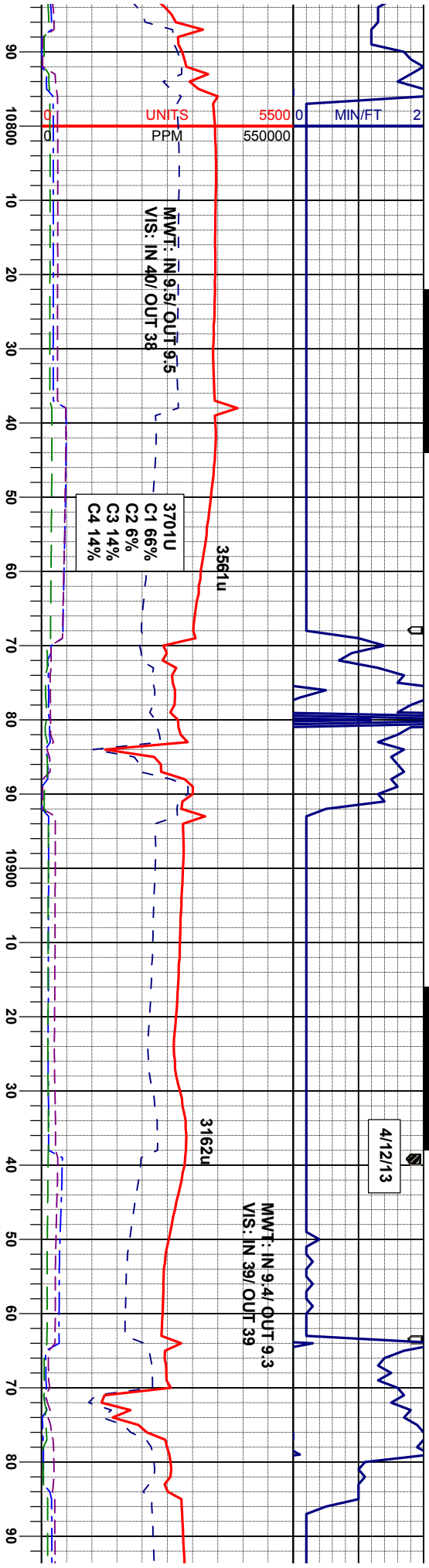


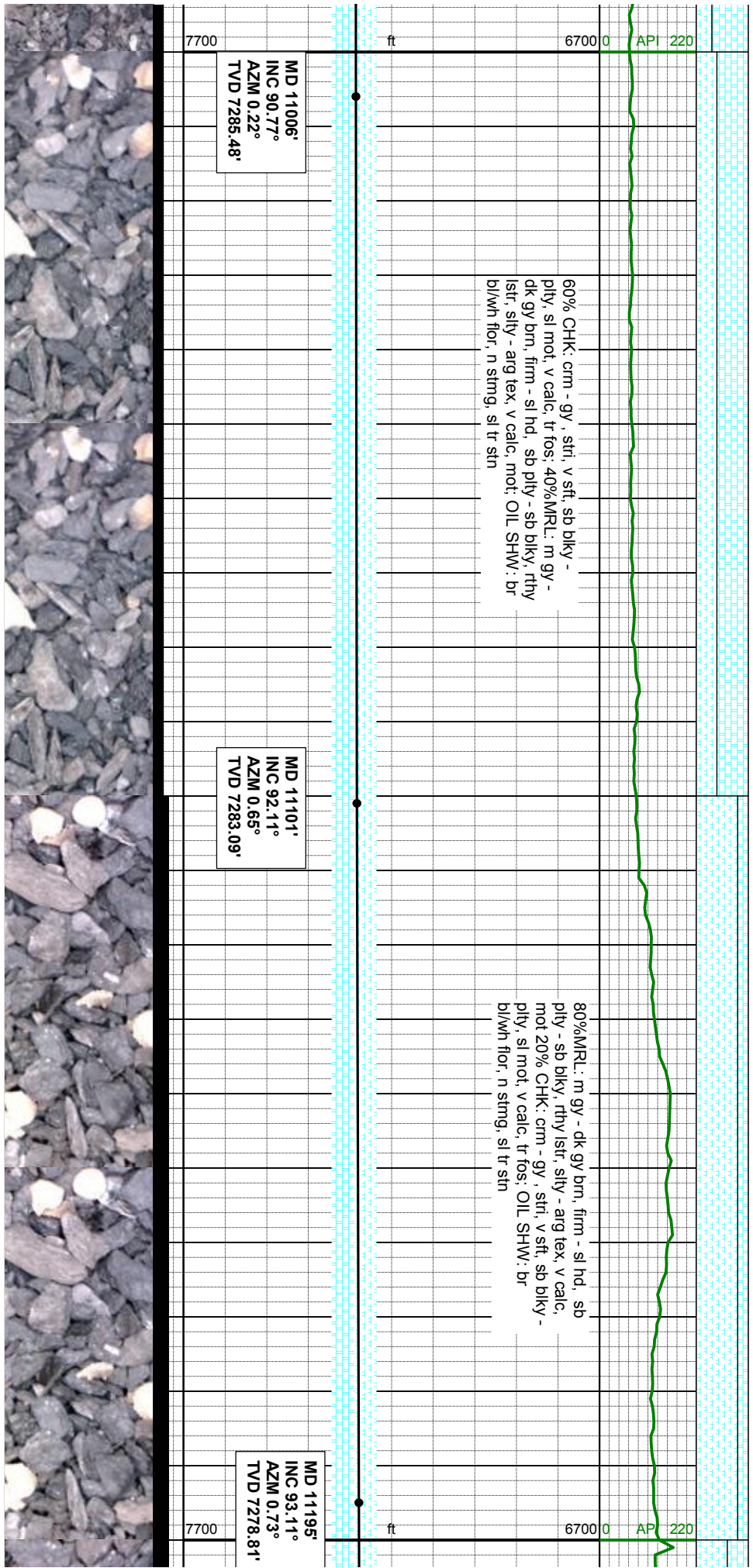
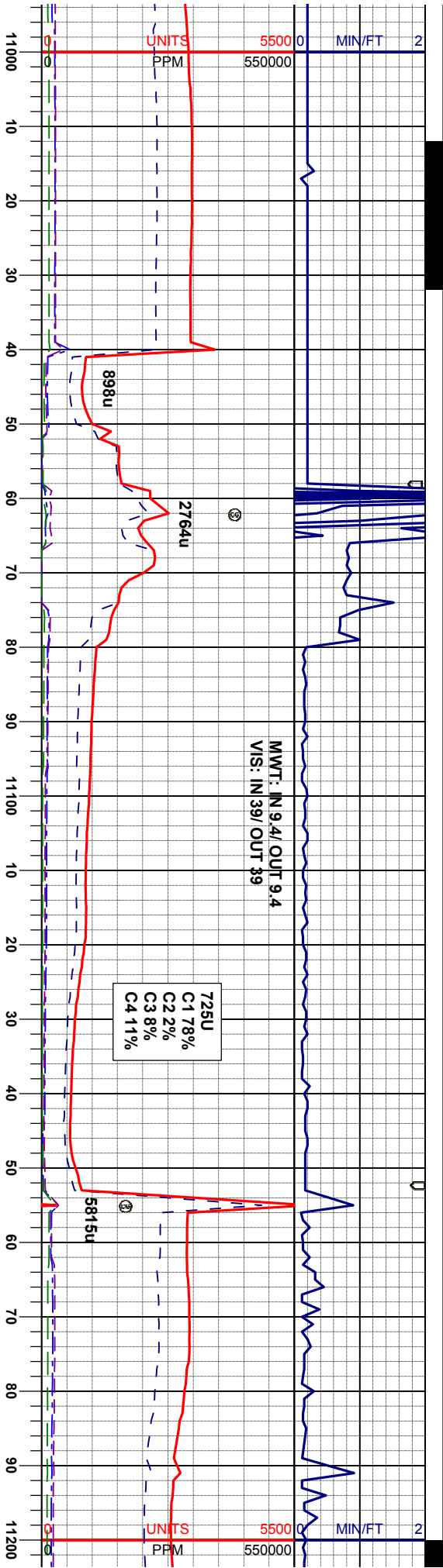


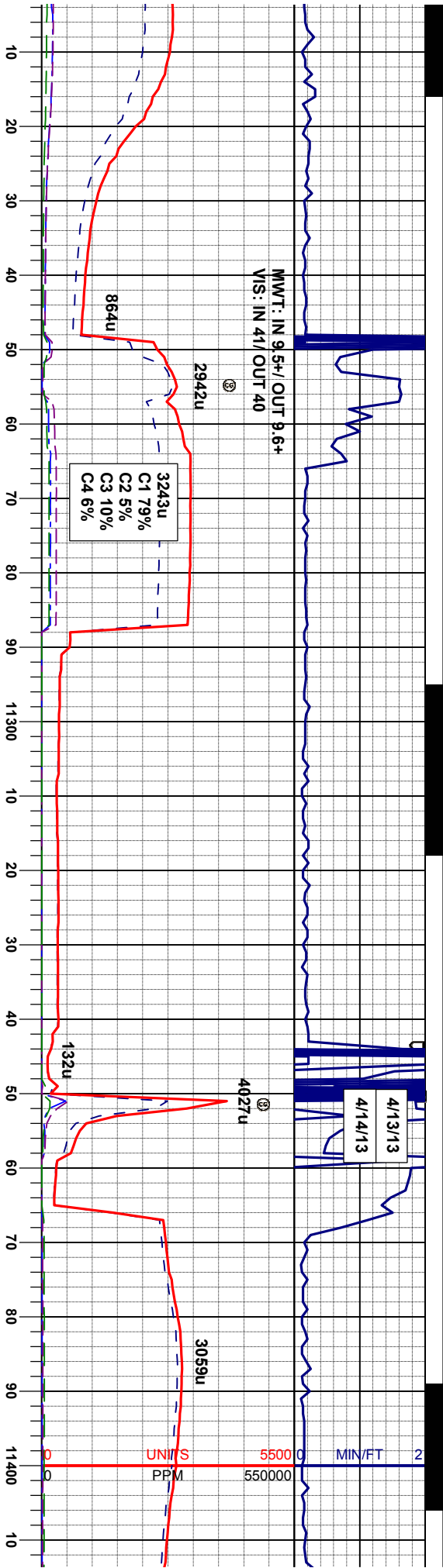
70%MRU: m gy - dk gy brn, firm - sl hd, sb
ply - sb blk, rthy lstr, silty - arg tex, v calc,
mot 30% CHK: crm - gy, str, v sft, sb blk -
ply, sl mot, v calc, tr fos; OIL SHW: yel/wh
flor, n strng, sl tr sft

85%MRU: m gy - dk gy brn, firm - sl hd, sb
ply - sb blk, rthy lstr, silty - arg tex, v calc,
mot 15% CHK: crm - gy, str, v sft, sb blk -
ply, sl mot, v calc, tr fos; OIL SHW: yel/wh
flor, n strng, sl tr sft









60% MRL: m gy - dk gy brn, firm - sl hd, sb
ply - sb bkly, rthy istr, silty - arg tex, v calc,
mot 40% CHK: crm - gy, stri, v sft, sb bkly -
ply, sl mot, v calc, tr fos, OIL SHW: br
blw/n flr, n stmg, sl tr stn

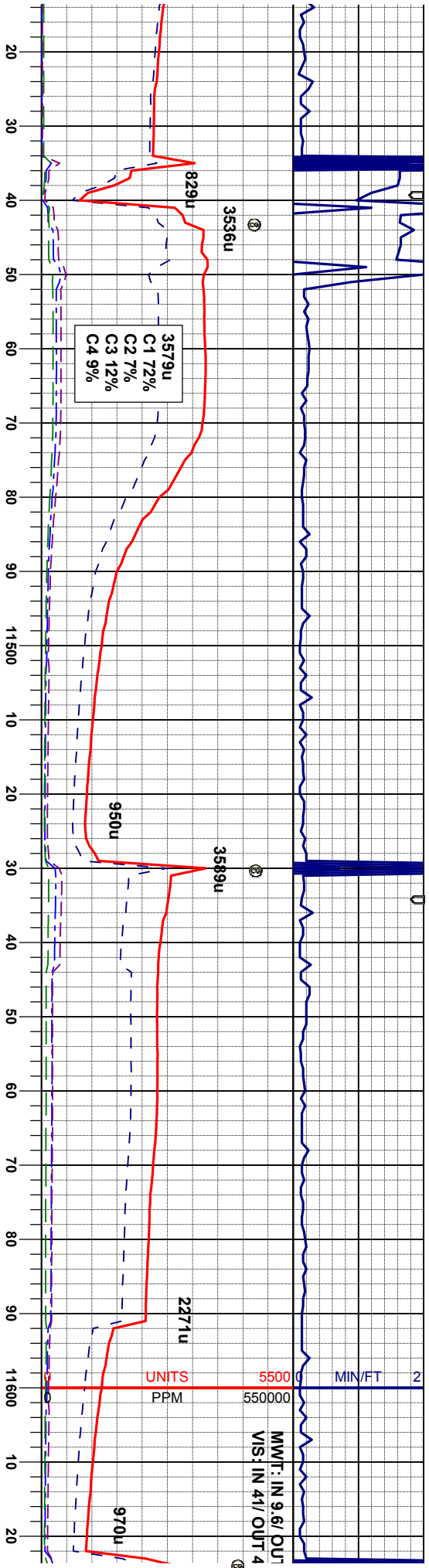
55% CHK: crm - gy, stri, v sft, sb bkly -
ply, sl mot, v calc, tr fos 45% MRL: m gy -
dk gy brn, firm - sl hd, sb ply - sb bkly, rthy
istr, silty - arg tex, v calc, mot; OIL SHW: br
blw/n flr, n stmg, sl tr stn

MD 11290°
INC 93.45°
AZM 1.51°
TVD 7273.37'

MD 11385°
INC 92.12°
AZM 0.56°
TVD 7268.76'

7700 ft 6700 0 API 220





60% CHK: crm - gy , stri, sft-firm, sb blk -
ply, sl mot, v calc, tr fos 40% MRL: m gy -
dk gy brn, firm - sl hd, sb ply - sb blk, rthy
lstr, silty - arg tex, v calc, mot; OIL SHW: br
bl/wb flor, n stmg, sl tr sin

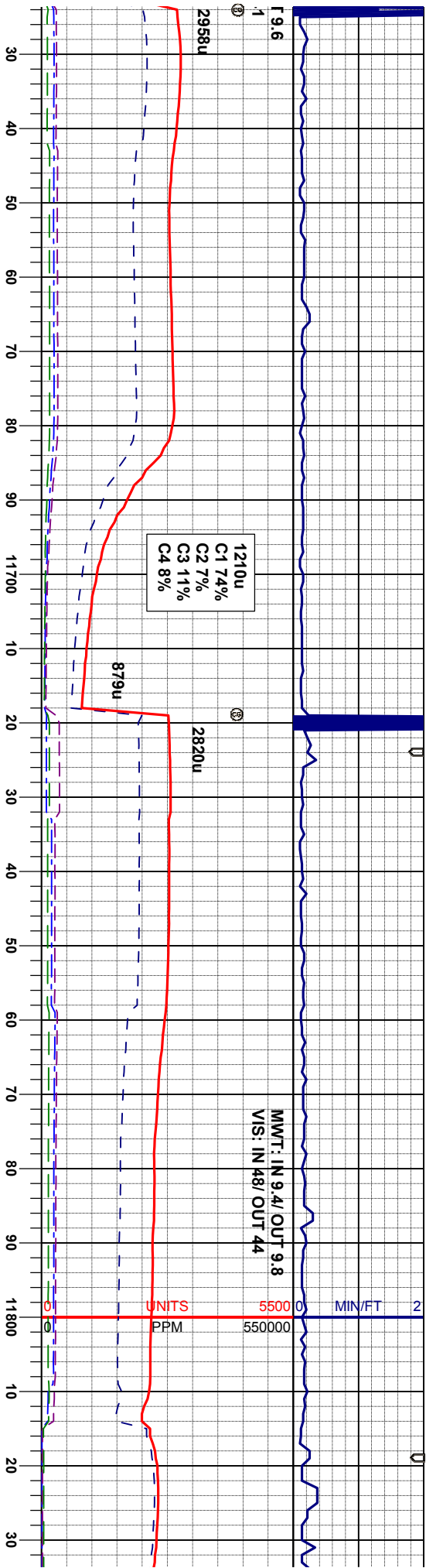
60% CHK: crm - gy , stri, sft-firm, sb blk -
ply, sl mot, v calc, tr fos 40% MRL: m gy -
dk gy brn, firm - sl hd, sb ply - sb blk, rthy
lstr, silty - arg tex, v calc, mot; OIL SHW: br
bl/wb flor, n stmg, sl tr sin

MD 11480'
INC 89.19°
AZM 0.47°
TVD 7267.67'

MD 11575'
INC 89.10°
AZM 0.05°
TVD 7269.09'

7700 ft 6700 0 API 220





60% CHK: crm - gy, stri, sft-firm, sb blkly -
ply, sl mot, v calc, tr fos 40%MRL: m gy -
dk gy brn, firm - sl hd, sb ply - sb blkly, rthy
lstr, silty - arg tex, v calc, mot; OIL SHW: br
bl/wb flr, n string, sl tr stn

80%MRL: m gy - dk gy brn, firm - sl hd, sb
ply - sb blkly, rthy lstr, silty - arg tex, v calc,
mot 20% CHK: crm - gy, stri, sft-firm, sb
blkly - ply, sl mot, v calc, tr fos; OIL SHW:
br bl/wb flr, n string, sl tr stn

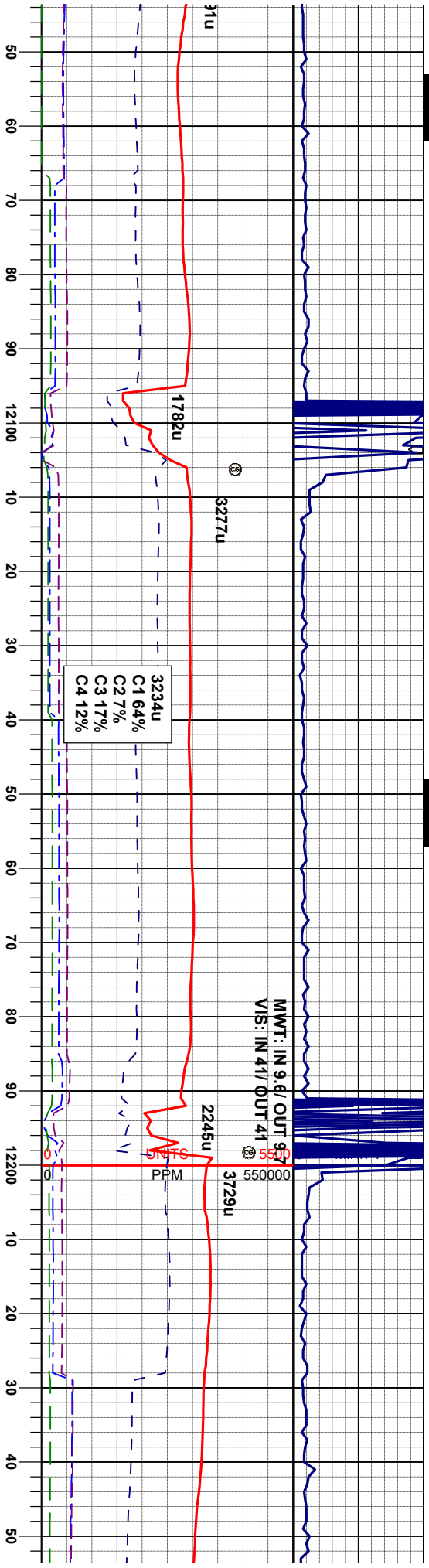
70% CHK:
ply, sl mot
dk gy brn,
lstr, silty -
bl/wb flr, l

MD 11670'
INC 89.25°
AZM 0.61°
TVD 7270.46'

MD 11764'
INC 89.56°
AZM 0.78°
TVD 7271.43'

7700 ft 6700 API 220





gy - dk gy brn, firm - sl hd, sb
rthy lst, silty - arg tex, v calc.
lk: crm - gy, stri, sft-firm, sb
mot, v calc, tr fos: OIL SHW:
n sting, sl tr stn

70%MR.L: m gy - dk gy brn, firm - sl hd, sb
ply - sb biky, rthy lst, silty - arg tex, v calc.
mot 30% CHK: crm - gy, stri, sft-firm, sb
biky - ply, sl mot, v calc, tr fos: OIL SHW:
br blw/h flr, n sting, sl tr stn

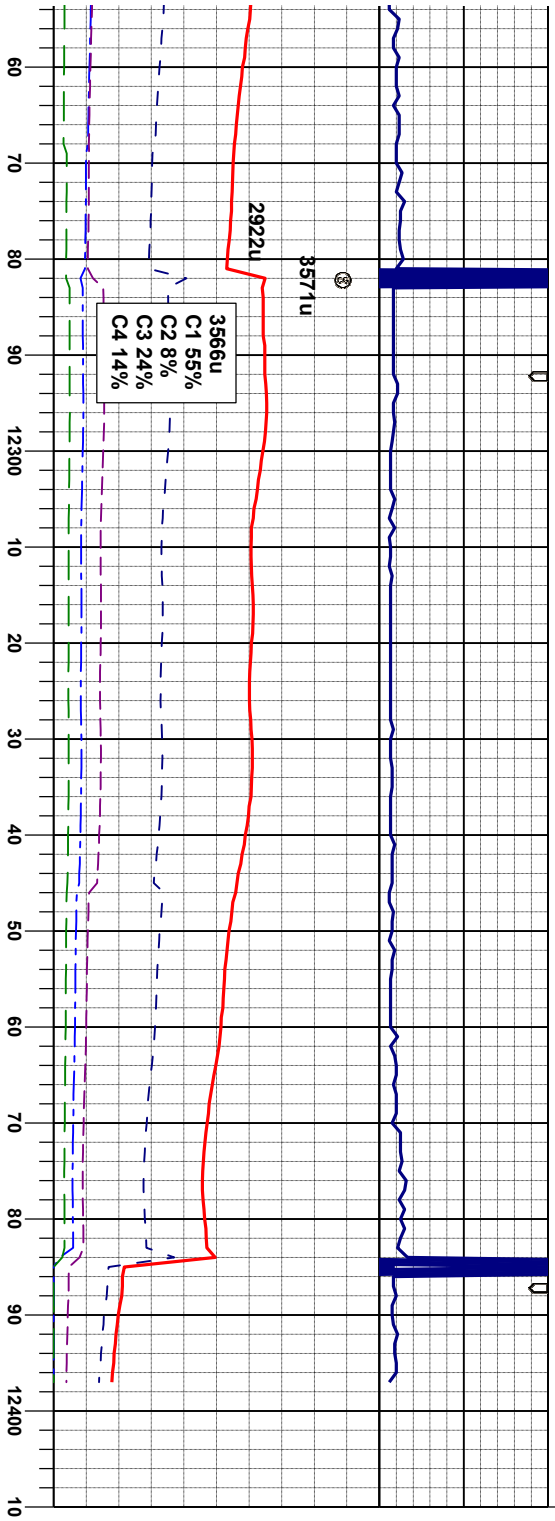
70%CHK: cr
ply, sl mot, v
dk gy brn, fir
lstr, silty - arg
blw/h flr, n s

D 12049'
IC 91.04°
ZM 0.25°
VD 7270.95'

MD 12144'
INC 91.85°
AZM 0.19°
TVD 7268.56'

MD 12239'
INC 92.40°
AZM 359.87°
TVD 7265.03'





m - gy, sti, sft-firm, sb blkly - calc, tr fos, 30%MR.L: m gy - n - sl hd, sb ply - sb blkly, rthy tex, v calc, mot; OIL SHW: br tmg, sl tr stn

80%MR.L: m gy - dk gy brn, firm - sl hd, sb ply - sb blkly, rthy istr, slty - arg tex, v calc, mot 20% CHK: crm - gy, sti, sft-firm, sb blkly - ply, sl mot, v calc, tr fos; OIL SHW: br blkwh flor, n stmg, sl tr stn

MD 12344' INC 93.56° AZM 359.51° TVD 7259.82'

TD @ MD 12,383' on 04/14/2013 @ 19:36 MST

Thank you for using Columbine Logging, Inc.

PROJECTED MD 12397' INC 93.56° AZM 359.51° TVD 7256.5'

