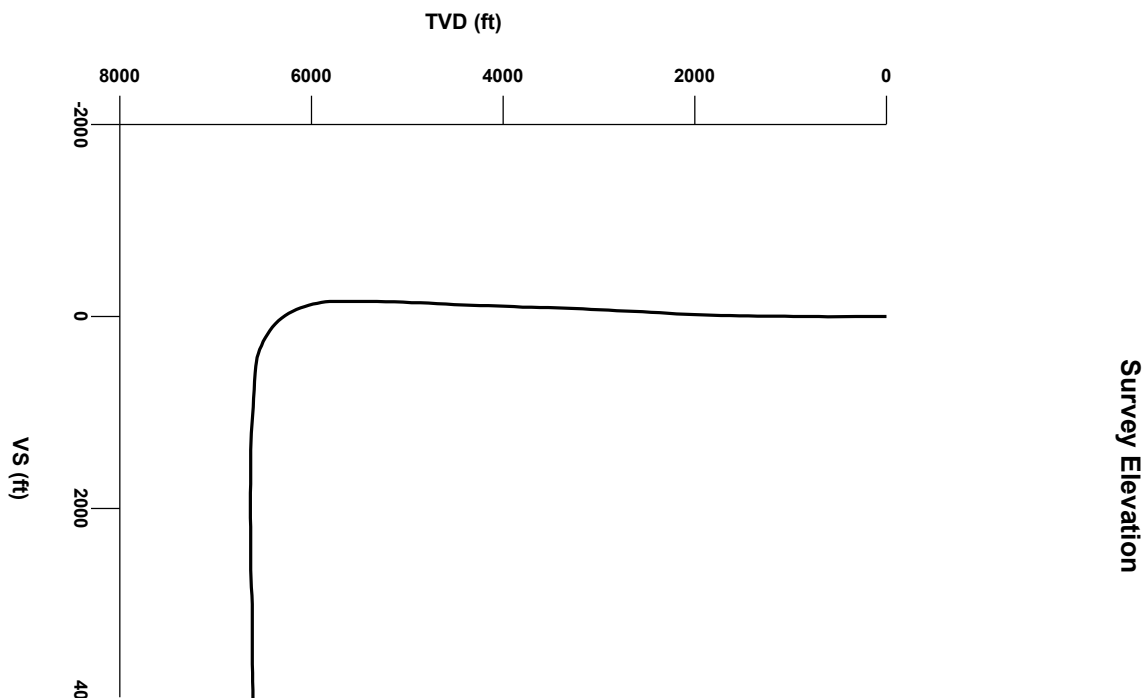
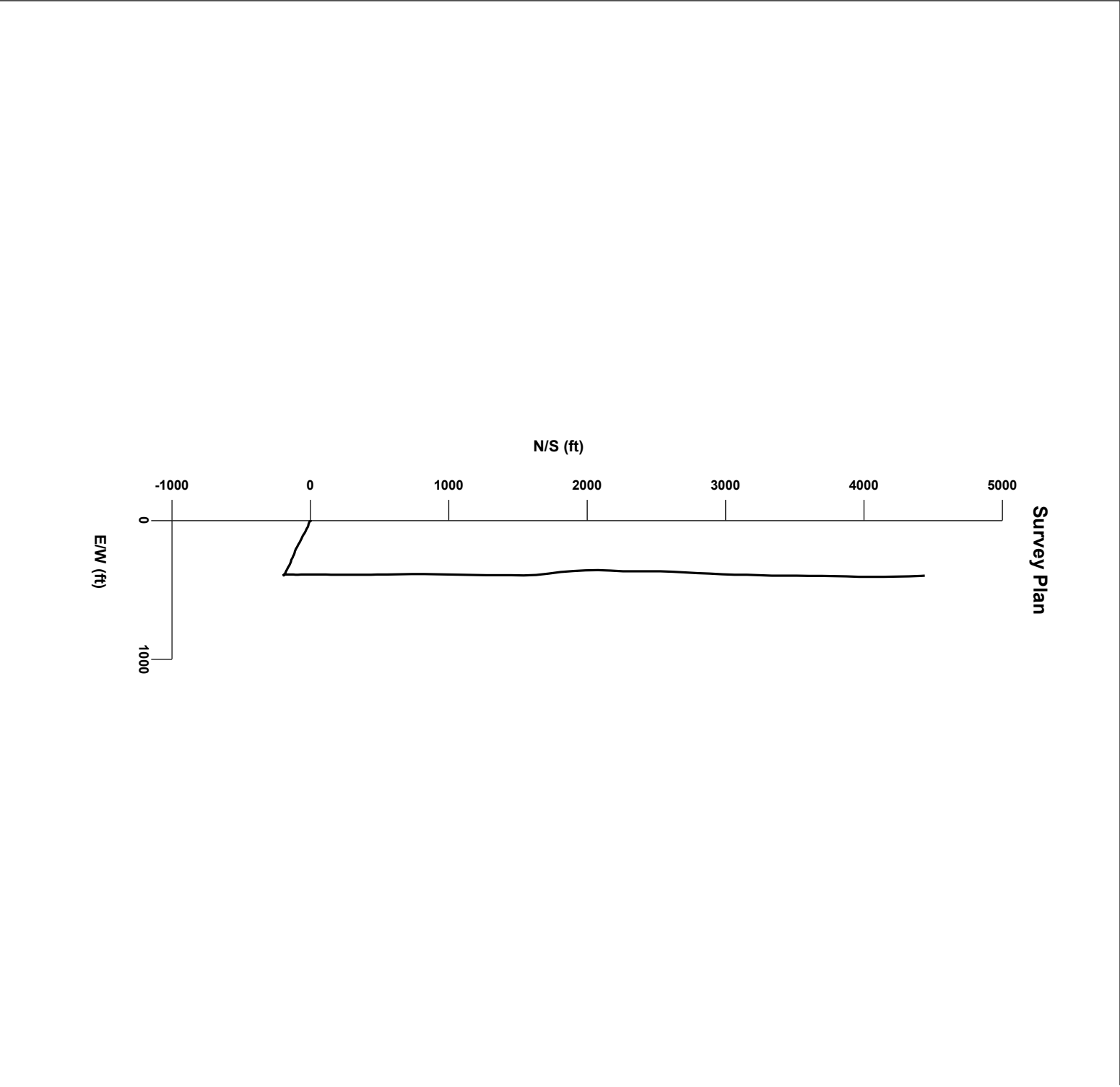
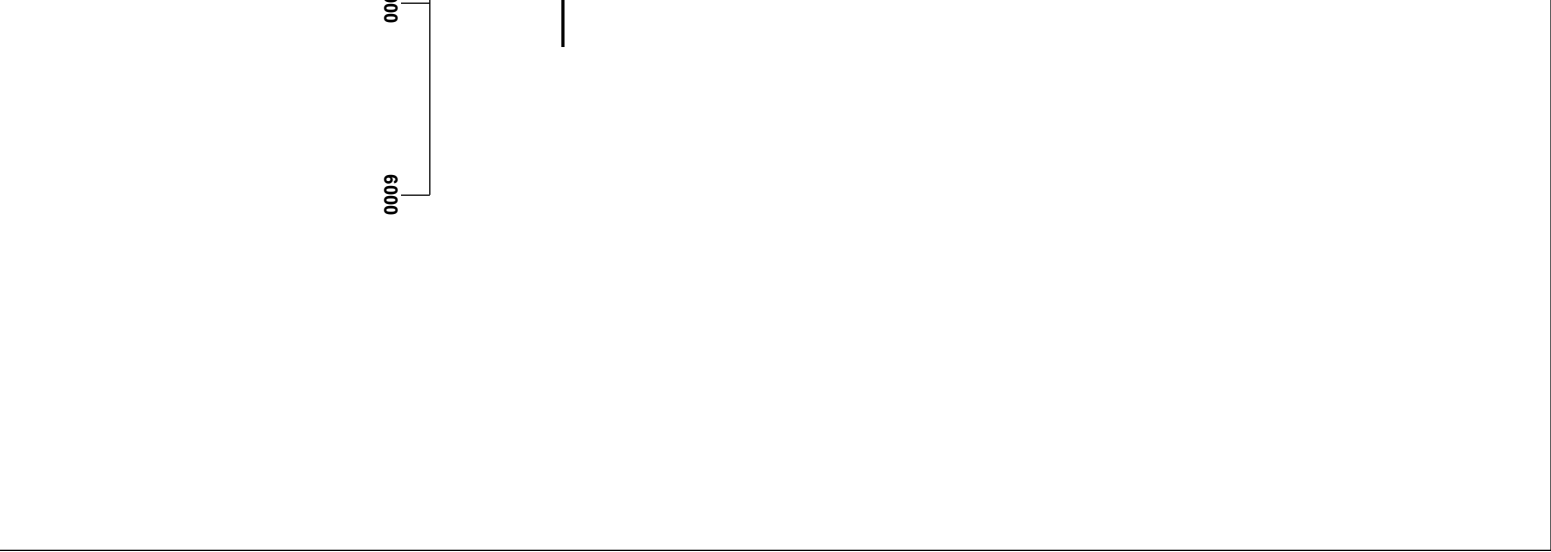


LOG created using LPLOT VH Version 3.0, October 16, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY INC.
WELL: CROW CREEK STATE AC36-78HN
LOCATION: SWSW SEC36 T7N R63W
COUNTY: WELD
STATE: COLORADO
SPOT: 270' FSL 263' FWL
ELEVATION: 4,774' GL, 4,790' KB
FIELD: WATTENBERG
SPUD DATE: 10/8/13
TD DATE: 10/15/13
DATES LOGGED: 10/9/13 - 10/15/13
DEPTHS LOGGED: 611'- 10974'
GEOLOGISTS: GARY MYERS, JESSICA SILVEY
DRILLING FLUID: LSND
DRILLING RIG: PRECISION 828
API: 05-123-37275
LOG TYPE: HORIZONTAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.

LOG CONTINUES FROM FILE: Crow Creek State AC36-78HN Vert.lplot





LITHOLOGIES

Chalk

Shale

Marl

Shaly Sandstone

Sandstone

Silty Shale

MODIFIERS

B

Bentonite

ENGINEERING SYMBOLS

Bit Change

Connection Gas

Arrow

Casing

Arrow

Trip Gas

Casing

Midnight Depth

Connection

Normal Fault

SLIDE/ROTATE

BIT #2
SMITH
SD1611, 8.75"
SER# JH3966
IN @ MD 611'

ROP

0 FT/HR 500

GAS

0 UNITS 1000

C1 PPM 100000

C2 PPM 100000

C3 PPM 100000

C4 PPM 100000

LOG CONTINUES FROM FILE:
Crow Creek State AC36-78HN Vert. plot

DRILLED OUT OF SHOE
0200 HRS, 10/9/13

DEPTH (FEET)

5750 60 70 80 90 10 20 30 40 50

CUTTINGS LITHOLOGY

TVD

ft

6800 5800

GAMMA RAY

0 API 200

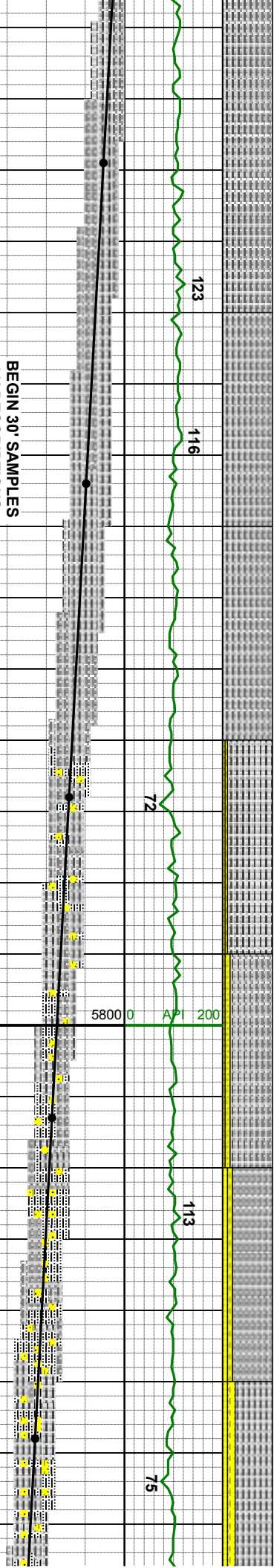
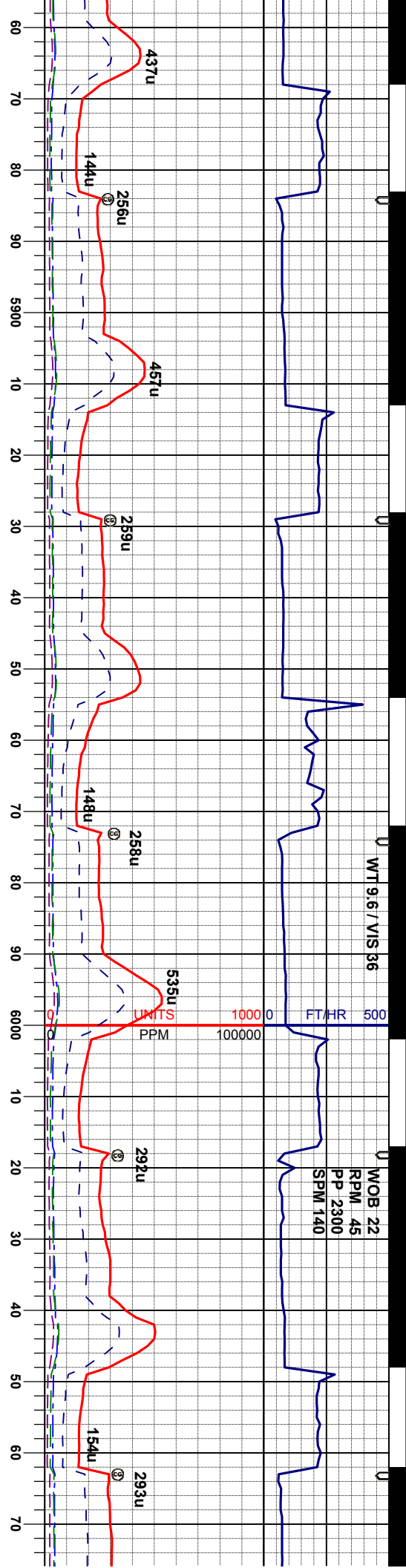
OIL SHOW

T F G

MD 5834'
INC 3.4°
AZI 348.0°
TVD 5808.6'

SLTYSH: m- dkgv, pily- sbpp
sl calc, tr fos frag, sdy ip

SAMPLE PHOTOS



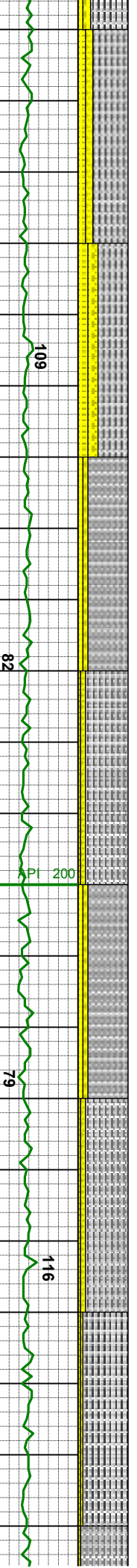
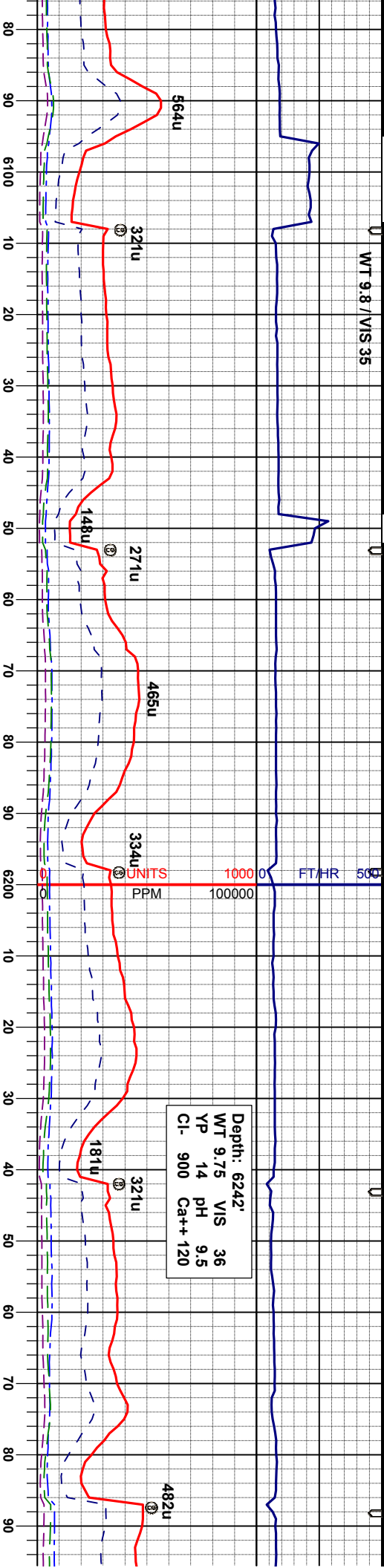
BEGIN 30' SAMPLES 60' DESCRIPTIONS			
MD	5879'	MD	5924'
INC	6.5°	INC	9.3°
AZI	352.5°	AZI	356.4°
TVD	5853.4'	TVD	5898.0'
SLTYSH: m- dkgy, occ gybrn, pily- sbply, mod firm, sl calc, sdy ip			
MD	5968'	MD	6013'
INC	11.9°	INC	13.9°
AZI	356.1°	AZI	357.1°
TVD	5941.2'	TVD	5985.1'
SLTYSH: m- dkgy, occ gybrn, pily- sbply, mod firm, sl calc, sdy ip, tr pyr, grdg- shys SS: lt- mgy, occ wh, cl- trnsi, sme op, f- mgr, blk- sbblky, sbang gr, mod str, mod cmt, sil- arg mix, vs calc, sl mica			
MD	6058'	MD	6058'
INC	15.7°	INC	15.7°
AZI	359.0°	AZI	359.0°
TVD	6028.6'	TVD	6028.6'
SLTYSH: m- dkgy, occ gybrn, pily- sbply, mod firm, sl calc, sdy ip, grdg- shys SS: lt- mgy, occ wh, cl- trnsi, sme op, f- mgr, blk- sbblky, sbang gr, mod str, mod cmt, sil- arg mix, vs calc, sl mica			



WT 9.8 /VIS 35

FT/HR 500

Depth: 6242'
WT 9.75 VIS 36
YP 14 pH 9.5
Cl- 900 Ca++ 120



MD 6103'
INC 17.6°
AZI 2.7°
TVD 6071.7'

MD 6148'
INC 20.5°
AZI 4.3°
TVD 6114.2'

MD 6193'
INC 23.3°
AZI 1.5°
TVD 6156.0'

MD 6238'
INC 26.6°
AZI 358.0°
TVD 6196.8'

SLTYSH: m- dkgy, occ, pily- sbply, mod
firm, sl calc, sdy ip, grdg- shys
SS: lt- mgy, occ wh, cl- trns, sme op, f-
mgr, biky- sbply, sbang gr, mod srt, mod
cnt, sil- arg mix, vs calc, sl mica, tr bent
(6110)

SLTYSH: m- dkgy, occ, pily- sbply, mod
firm, sl calc, sdy ip, grdg- shys
SS: lt- mgy, occ wh, cl- trns, sme op, f-
mgr, biky- sbply, sbang gr, mod srt, mod
cnt, sil- arg mix, vs calc, sl mica, scat dul
yelbm flr

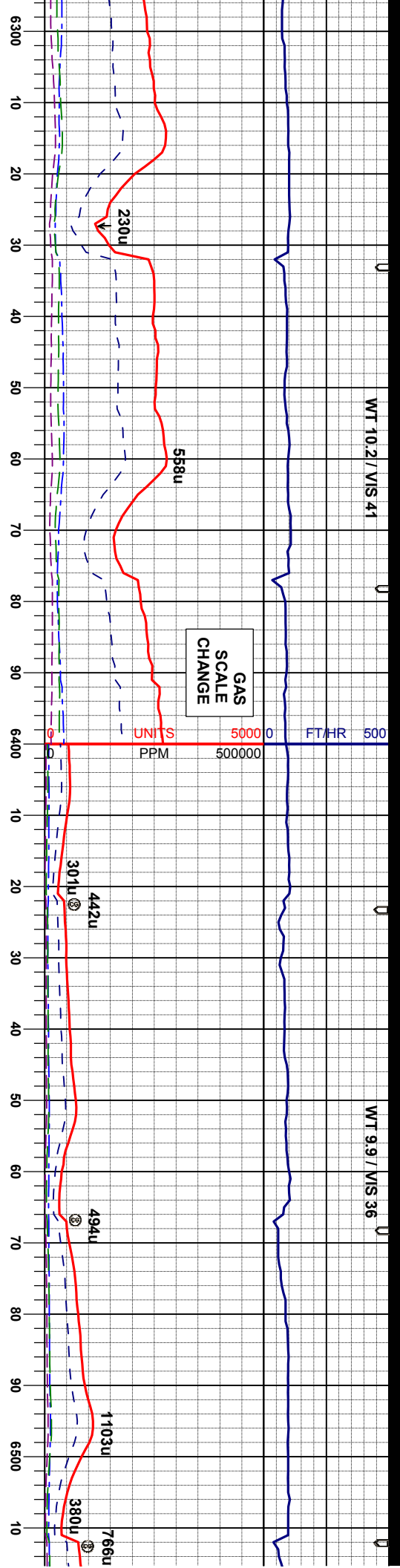
SLTYSH: m- dkgy, occ, pily- sbply, mod
firm, sl calc, sdy ip, tr bent, grdg- shys
SS: lt- mgy, occ wh, cl- trns, sme op, f-
mgr, biky- sbply, sbang gr, mod srt, mod
cnt, sil- arg mix, vs calc, sl mica, scat
(6230) - tr (6250) dul yelbm flr

SLTYSH: m- dkgy, occ, pily- sbply, mod
firm, sl calc, sdy ip, tr bent,
SS: lt- mgy, occ wh, cl- trns,
mgr, biky- sbply, sbang gr,
cnt, sil- arg mix, vs calc, sl
(6290) - (6320) dul yelbm f



WT 10.2 / VIS 41

WT 9.9 / VIS 36



MD 6373'
INC 37.6°
AZI 359.4°
TVD 6311.2'

MD 6417'
INC 41.6°
AZI 359.0°
TVD 6345.1'

MD 6462'
INC 46.0°
AZI 359.7°
TVD 6377.6'

MD 6507'
INC 51.0°
AZI 0.6°
TVD 6407.4'

MD 6328'
INC 35.5°
AZI 0.1°
TVD 6274.6'

SLTYSH: m-dkgy, occ, pty-sbply, mod firm, gt tex, sl calc, sdy ip, tr bent, grdg-shys

SS: lt-mgy, occ wh, clr-tmsl, sme op, f-mgr, blk-sbply, sbang gr, mod srl, mod cnt, sil-arg mtx, vs calc, sl mica,

SLTYSH: m-dkgy, occ lt gy, pty-sbply, mod firm, gt tex, sl calc, sdy ip, tr ss bent

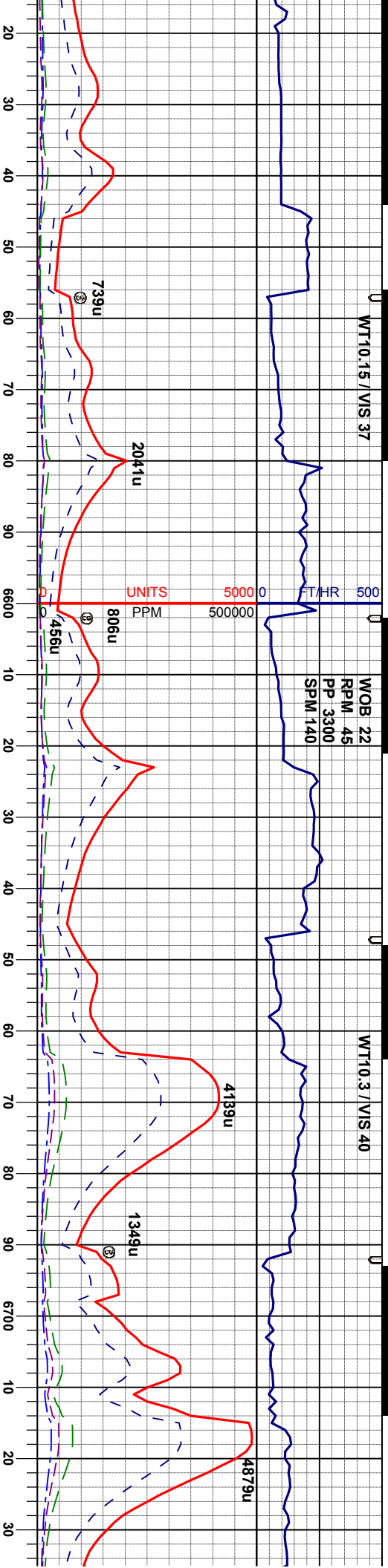
SLTYSH: m-dkgy, occ lt gy, pty-sbply, mod firm, mod srl, gt tex, sl calc, sdy ip, tr bent, tr ss

SLTYSH: m-dkgy, occ lt gy, pty-sbply, mod firm, mod srl, gt tex, sl calc, sdy ip, tr bent, tr ss

WT10.15 / VIS 37

WOB 22
RPM 45
PP 3300
SPM 140

WT10.3 / VIS 40



MD 6552'
INC 55.2°
AZI 1.2°
TVD 6434.4'

MD 6597'
INC 58.3°
AZI 1.2°
TVD 6459.1'

MD 6642'
INC 61.0°
AZI 0.5°
TVD 6481.8'

MD 6687'
INC 63.3°
AZI 0.3°
TVD 6502.8'

MD 67'
INC 65
AZI 0
TVD 6522

TVD
SCALE
CHANGE

SHARON SPRINGS
MARKER
6606' MD, 6463' TVD

MR: m-dkgy, sft-mfirm, sbdky-sbply, tr
ply, rthy-str, arg, org/calc mtx, mod calc, tr
bent, tr pyr
CHK: wh-lt-mgy, mot, sft-si firm, si arg,
sbdky-sbply, rthy istr, vcalc
SLTYSH: m-dkgy, occ lt gy, ply- sbply,
mod firm, mod str, gt tex, si calc

CHK: wh-lt-mgy, mot, sft-si firm, si arg,
sbdky-sbply, rthy istr, vcalc
MR: m-dkgy, sft-mfirm, sbdky-sbply, tr
ply, rthy-str, arg, org/calc mtx, mod calc, tr
bent, tr pyr

-dkgy, occ lt gy, ply- sbply,
mod firm, mod str, gt tex, si calc, sdy ip, tr

SLTYSH: m-dkgy, occ lt gy, ply- sbply,
mod firm, mod str, gt tex, si calc, sdy ip,
abt bent, tr ss

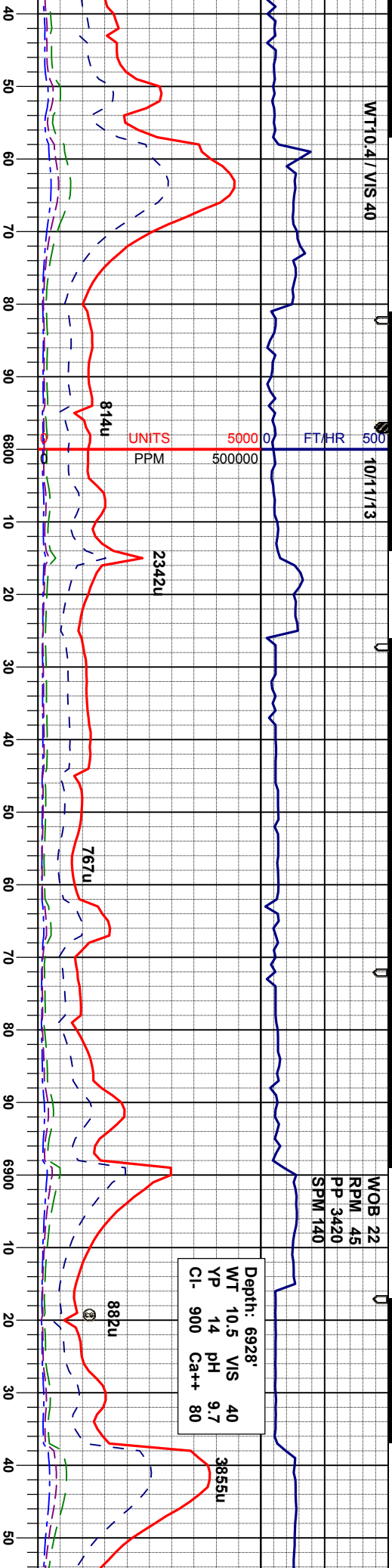


WT10.4 / VIS 40

10/1/1/3

MOB 22
RPM 45
PP 3420
SPM 140

Depth: 6928'
WT 10.5 VIS 40
YP 14 pH 9.7
Cl- 900 Ca++ 80



MD 6777'
INC 68.1°
AZI 0.1°
TVD 6539.7'

MD 6822'
INC 72.0°
AZI 0.1°
TVD 6555.1'

MD 6867'
INC 76.9°
AZI 359.0°
TVD 6567.1'

MD 6912'
INC 80.9°
AZI 358.9°
TVD 6575.8'

NIOBRARA B CHALK
LOGGER TOP
6948' MD, 6581' TVD

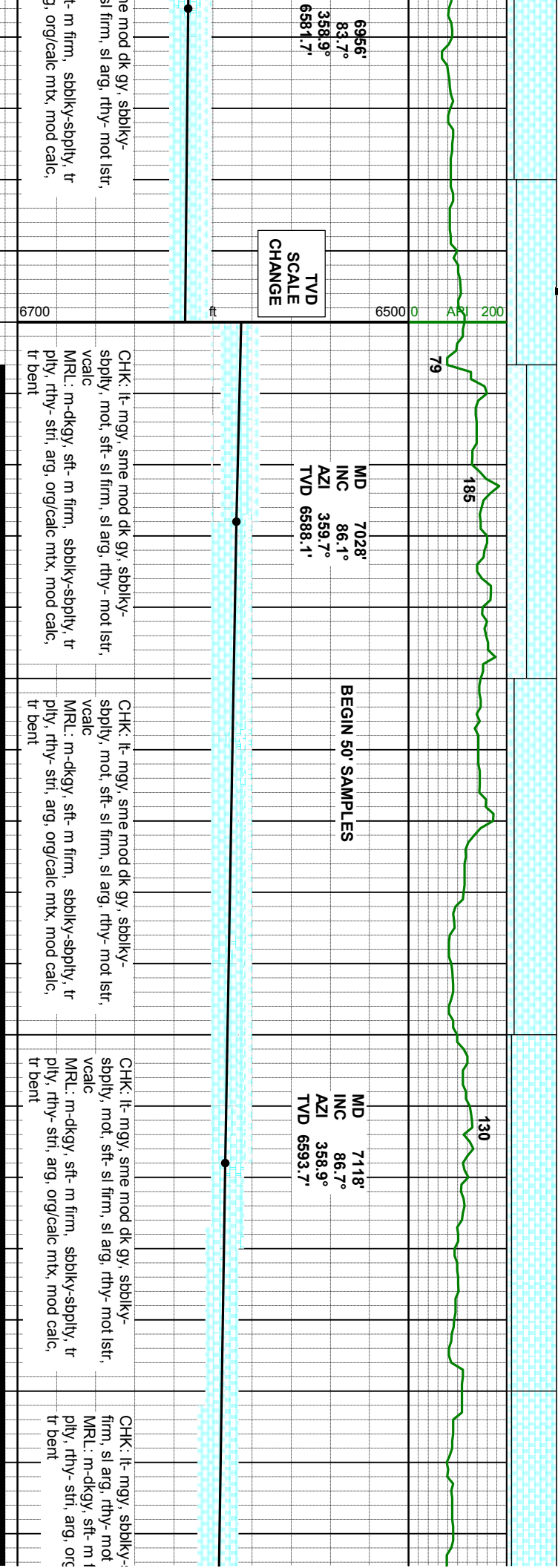
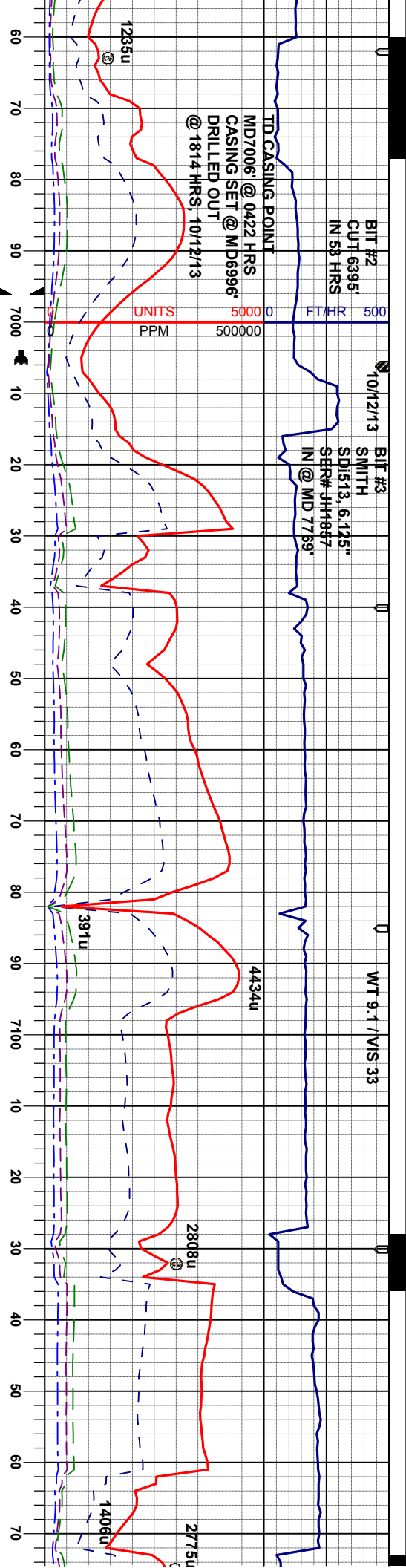
CHK: wh-lt-mgy, mot-sft-si firm, si arg,
sbbiky-sbply, rthy-istr, vcalc
MRL: m-dkgy, sft-mfirm, sbbiky-sbply, tr
ply, rthy-str, arg, org/calc mtx, mod calc, tr
bent, tr pyr

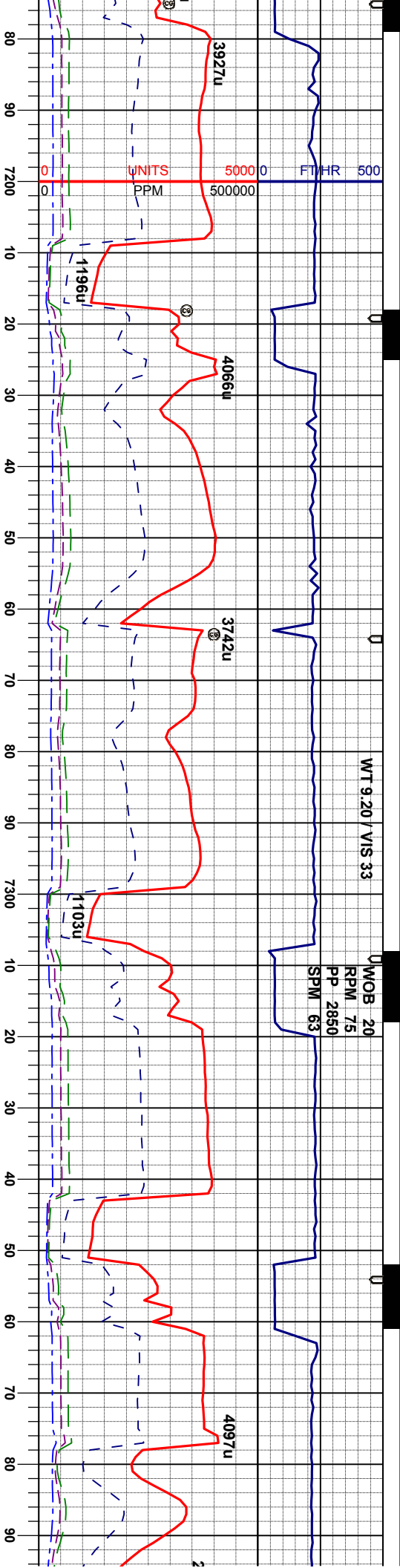
MRL: m-dkgy, sft-mfirm, sbbiky-sbply, tr
ply, rthy-str, arg, org/calc mtx, mod calc, tr
bent, tr pyr
CHK: lt-mgy, mot-sft-si firm, si arg,
sbbiky-sbply, rthy-mot-istr, vcalc

MRL: m-dkgy, sft-mfirm, sbbiky-sbply, tr
ply, rthy-str, arg, org/calc mtx, mod calc, tr
bent, tr pyr
CHK: lt-mgy, mot-sft-si firm, si arg,
sbbiky-sbply, rthy-mot-istr, vcalc

CHK: lt-mgy, sr
sbply, mot-sft-s
vcalc
MRL: m-dkgy, sft
ply, rthy-str, arg







MD 7207'
INC 86.8°
AZI 359.9°
TVD 6598.8'

MD 7297'
INC 87.1°
AZI 359.6°
TVD 6603.5'

MD 7387'
INC 87.4°
AZI 1.2°
TVD 6607.8'

PROBABLE FAULT

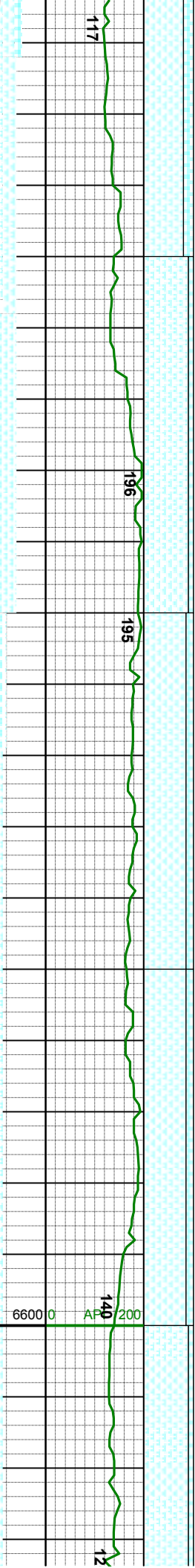
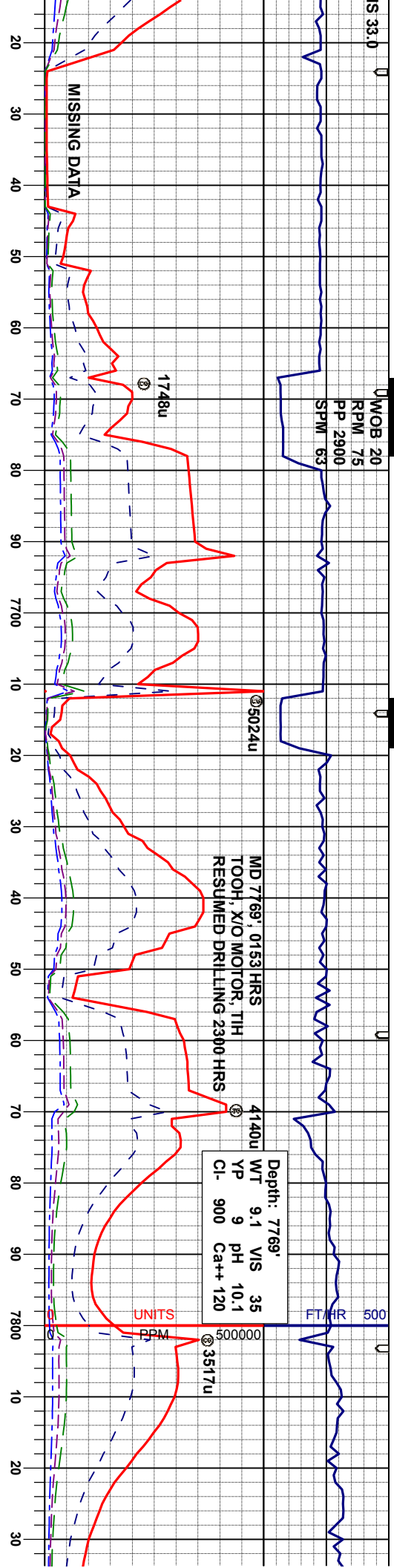
CHK: lt- mgy, sme mod dk gy, sbblky-
sblpy, mot, sft- sl firm, sl arg, rthy- mot istr,
vcalc
MRL: m-dkgy, sft- m firm, sbblky-sblpy, tr
ply, rthy- str, arg, org/calc mtx, mod calc,
tr bent

CHK: lt- mgy, sme mod dk gy, sbblky-
sblpy, mot, sft- sl firm, sl arg, rthy- mot istr,
vcalc
MRL: m-dkgy, sft- m firm, sbblky-sblpy, tr
ply, rthy- str, arg, org/calc mtx, mod calc,
tr bent

CHK: lt- mgy, sme mod dk gy, sbblky-
sblpy, mot, sft- sl firm, sl arg, rthy- mot istr,
vcalc
MRL: m-dkgy, sft- m firm, sbblky-sblpy, tr
ply, rthy- str, arg, org/calc mtx, mod calc,
tr bent

CHK: lt- mgy, sme mod dk gy, sbblky-
sblpy, mot, sft- sl firm, sl arg, rthy- mot istr,
vcalc
MRL: m-dkgy, sft- m firm, sbblky-sblpy, t
ply, rthy- str, arg, org/calc mtx, mod calc





MD 7657'
INC 85.5°
AZI 1.3°
TVD 6627.3'

MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mtx, mod calc,
tr bent
CHK: lt- mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc

MD 7746'
INC 87.8°
AZI 0.3°
TVD 6632.4'

MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mtx, mod calc,
tr bent, tr pyr
CHK: lt- mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc

MD
INC
AZI
TVD

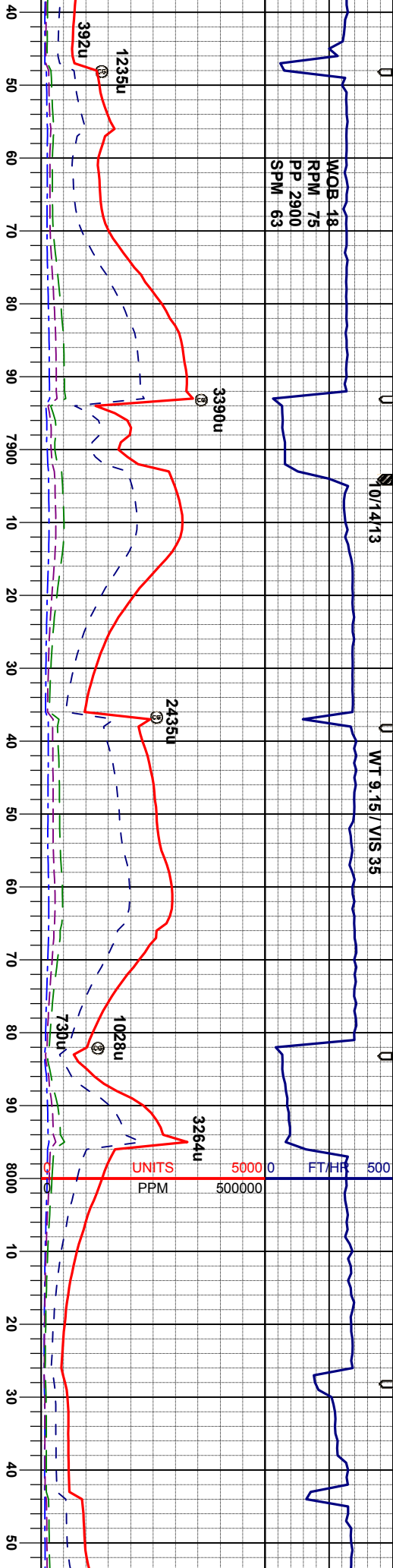
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mtx
com bent, pyr clus
CHK: lt- mgy, sbblky-sbply, m
firm, sl arg, rthy- mot lstr, vcalc



WOB 18
RPM 75
PP 2900
SPM 63

10/14/13

WT 9.15 / VIS 35



153

152

129

165

API 200

6600

6800

7886'
88.3°
359.7°
6635.5'

MD 7926'
INC 91.2°
AZI 1.5°
TVD 6635.9'

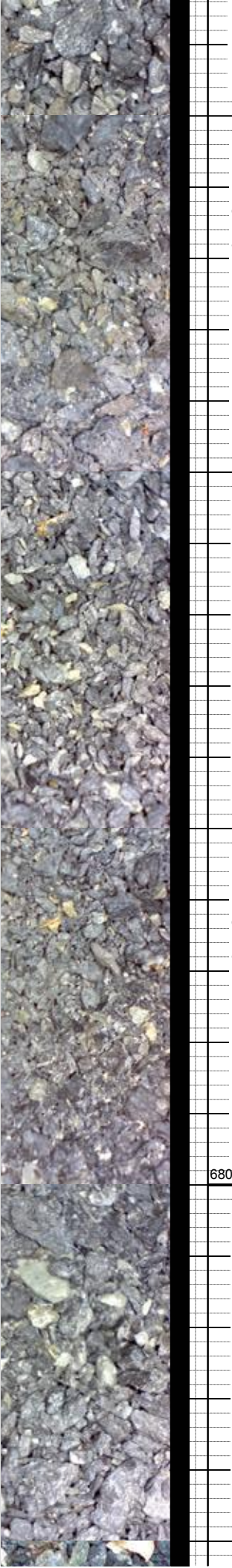
MD 8016'
INC 90.1°
AZI 359.7°
TVD 6634.9'

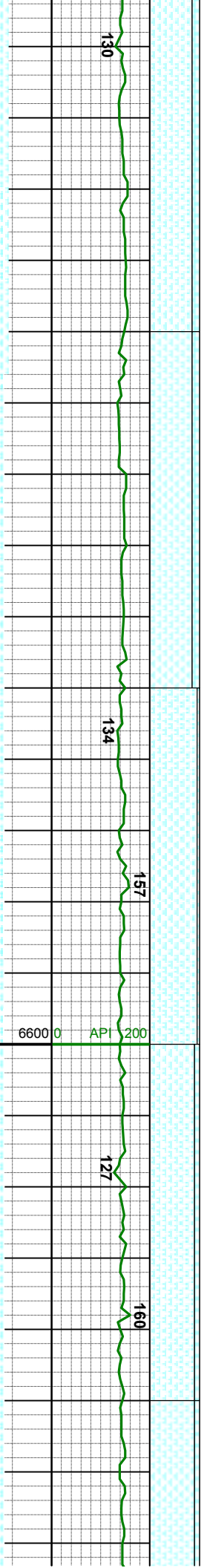
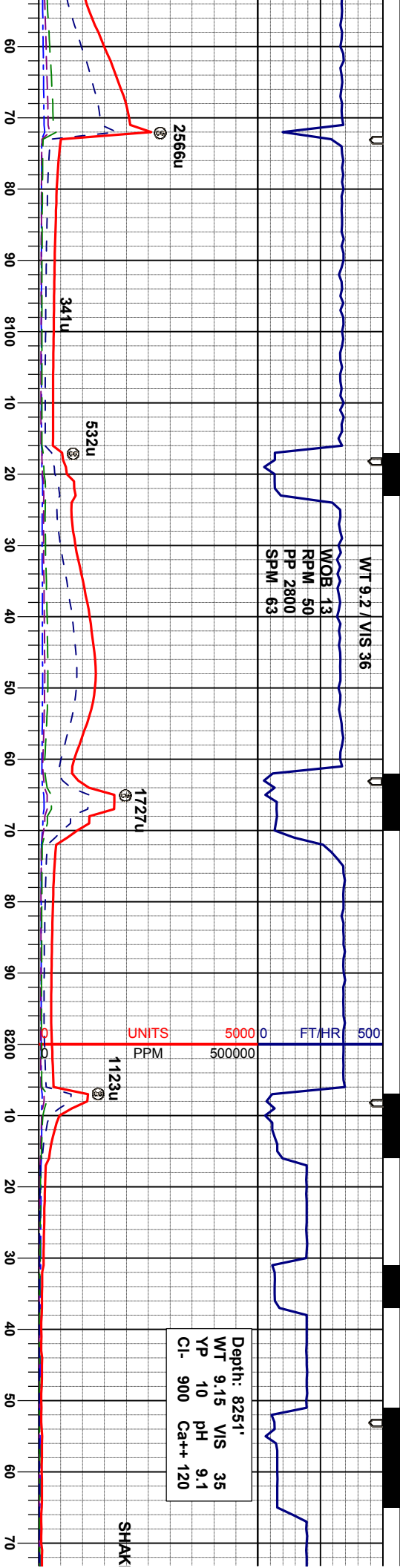
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, orgcalc mx, mod calc,
abt bent
CHK: lt- mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc

MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, orgcalc mx, mod calc,
abt bent, pyr clus
CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc

MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, orgcalc mx, mod calc,
abt bent, pyr clus
CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc

MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, orgcalc mx, mod calc,
com bent
CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc





MD 8106'
INC 89.5°
AZI 355.5°
TVD 6635.2'

MD 8196'
INC 89.4°
AZI 352.2°
TVD 6636.1'

MRL: m-dkg, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mt, mod calc,
abnt bent

MRL: m-dkg, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mt, mod calc,
abnt bent, pyr clus

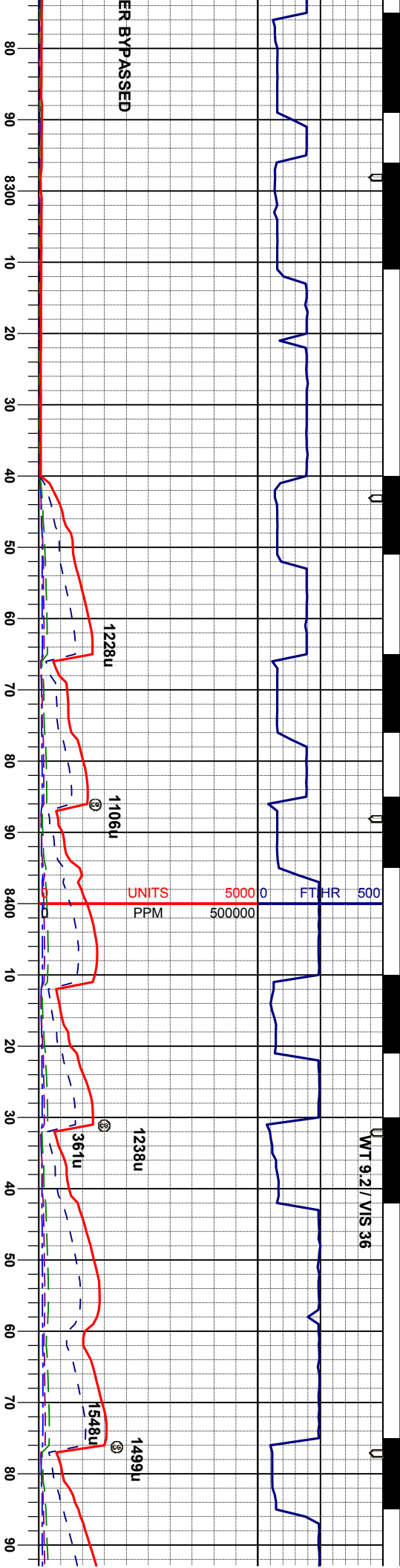
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ply, rthy- stri, arg, org/calc mt, vcalc, abnt
bent, occ chk

MRL: m-dkg, sft- m firm, sbblky-sbply,
sme ply, rthy- stri, arg, org/calc mt, vcalc,
occ fos frag, abnt bent, occ chk

MRL: m-dkg, sft- m
sme ply, rthy- stri, ar
occ fos frag, abnt bei



WT 9.2 / VIS 36



MD 8286'
INC 90.0°
AZI 353.9°
TVD 6636.6'

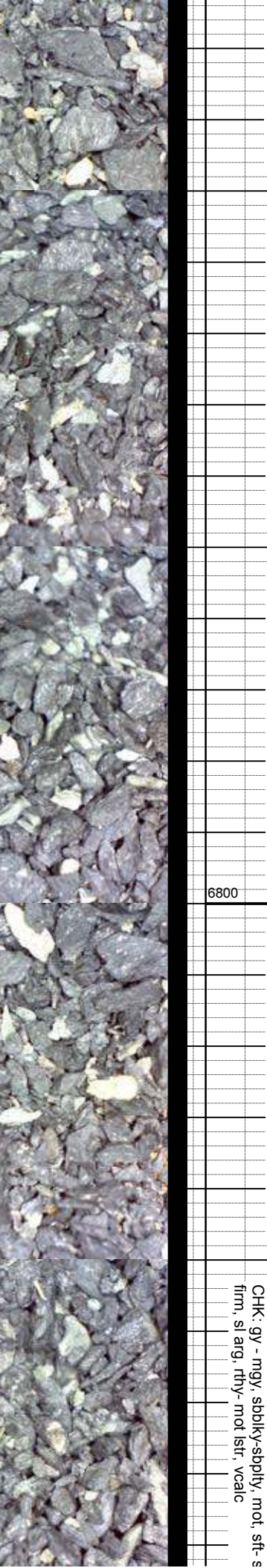
MRL: m-dkgy, sft- m firm, sbblky-sbply,
sme ply, rthy- stri, arg, org/calc mt, vcalc,
occ fos frag, abnt bent, occ chk

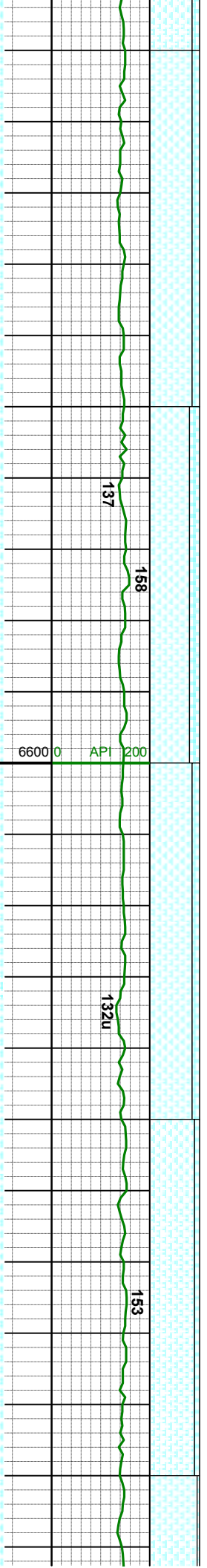
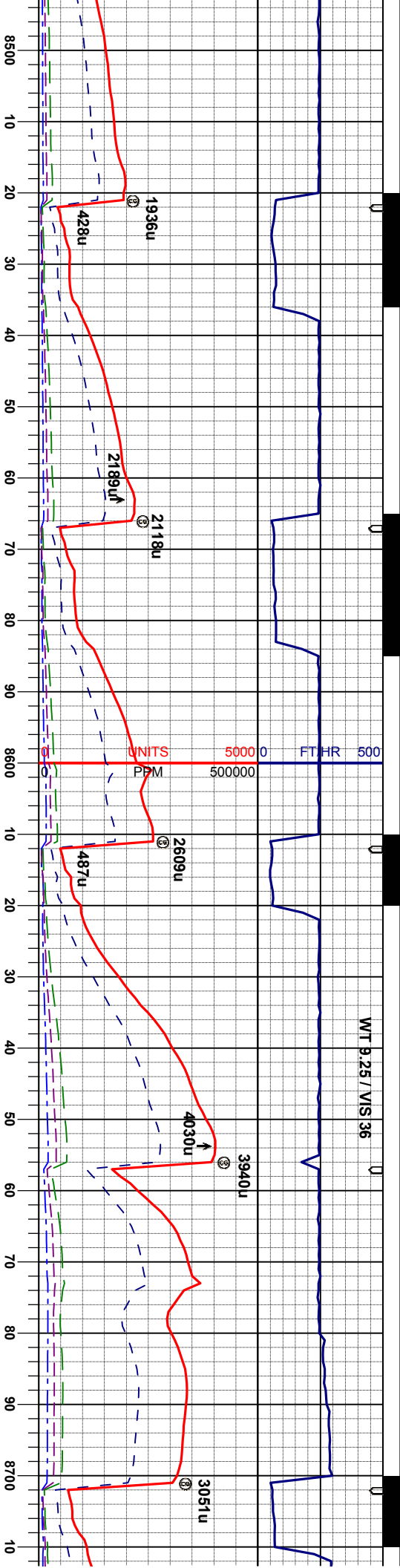
MD 8375'
INC 89.7°
AZI 355.7°
TVD 6636.8'

MRL: m-dkgy, sft- m firm, sbblky-sbply,
sme ply, rthy- stri, arg, org/calc mt, vcalc,
occ fos frag, abnt bent, occ chk

MD 8465'
INC 90.2°
AZI 358.3°
TVD 6637.0'

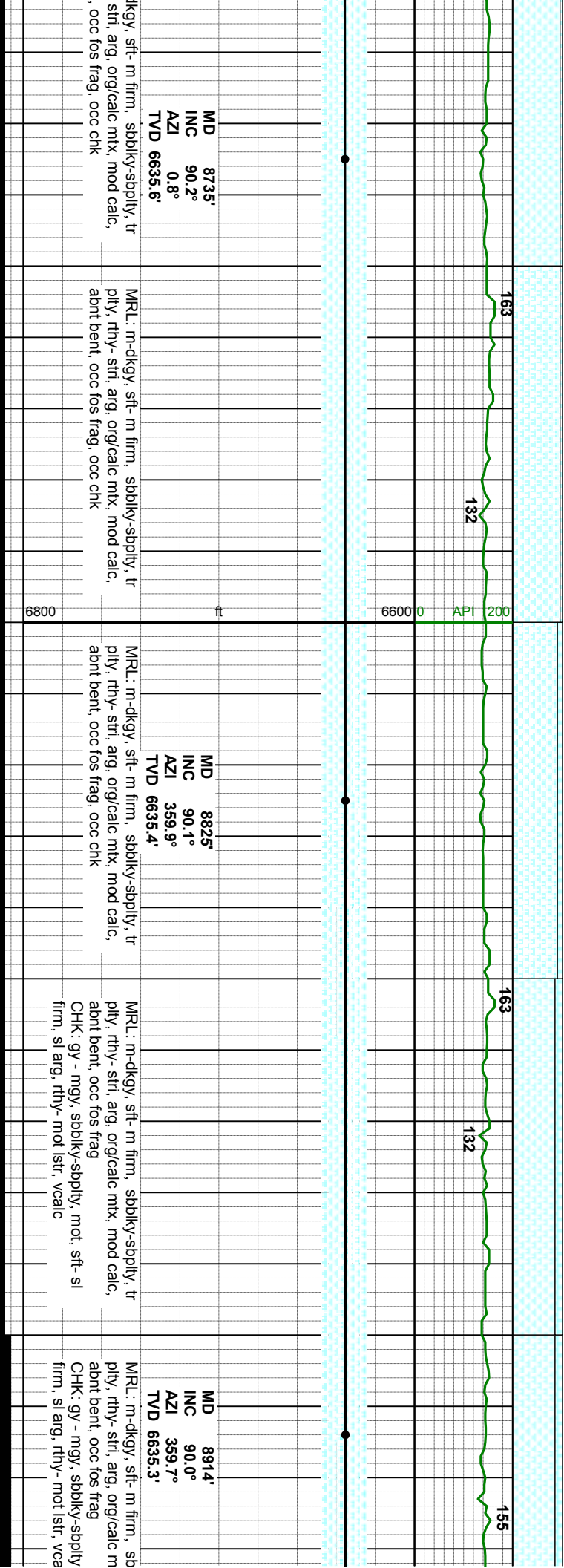
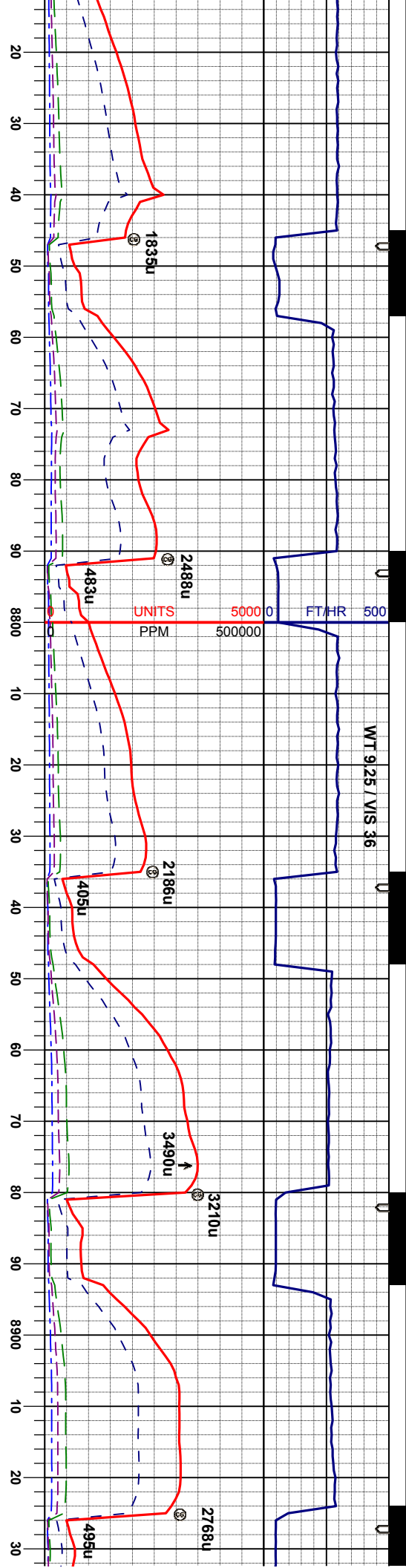
MRL: m-dkgy, sft- m firm, sbblky-sbply
ply, rthy- stri, arg, org/calc mt, mod cal
abnt bent, occ fos frag
CHK: gy - mgy, sbblky-sbply, mot, sft- s
firm, sl arg, rthy- mot lstr, vcalc

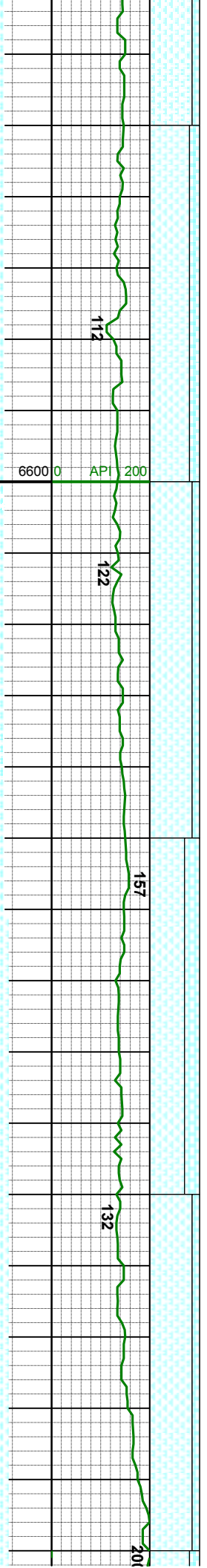
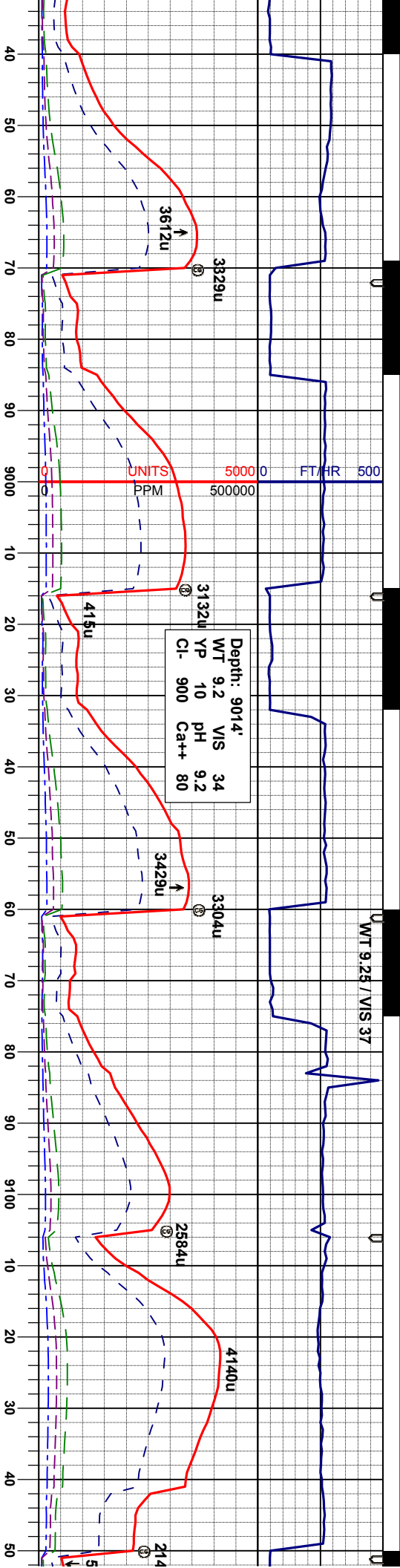




MD INC AZI TVD	8555' 90.3° 0.1° 6636.5'	MRL: m-dkgy, sft- m firm, sbblky-sbply, tr ply, rthy- stri, arg, org/calc mtx, mod calc, abnt bent, occ fos frag CHK: gy - mgy, sbblky-sbply, mot, sft- sl firm, sl arg, rthy- mot lstr, vcalc	MRL: m-dkgy, sft- m firm, sbblky-sbply, tr ply, rthy- stri, arg, org/calc mtx, mod calc, abnt bent, occ fos frag CHK: gy - mgy, sbblky-sbply, mot, sft- sl firm, sl arg, rthy- mot lstr, vcalc	MRL: m-dkgy, sft- m firm, sbblky-sbply, tr ply, rthy- stri, arg, org/calc mtx, mod calc, abnt bent, occ fos frag CHK: gy - mgy, sbblky-sbply, mot, sft- sl firm, sl arg, rthy- mot lstr, vcalc	MRL: m-dkgy, sft- m firm, sbblky-sbply, tr ply, rthy- stri, arg, org/calc mtx, mod calc, abnt bent, occ fos frag CHK: gy - mgy, sbblky-sbply, mot, sft- sl firm, sl arg, rthy- mot lstr, vcalc







MD 9004'

INC 90.2°

AZI 0.6°

TVD 6635.1'

MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mtx, mod calc,
scat bent, occ fos frag
CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc

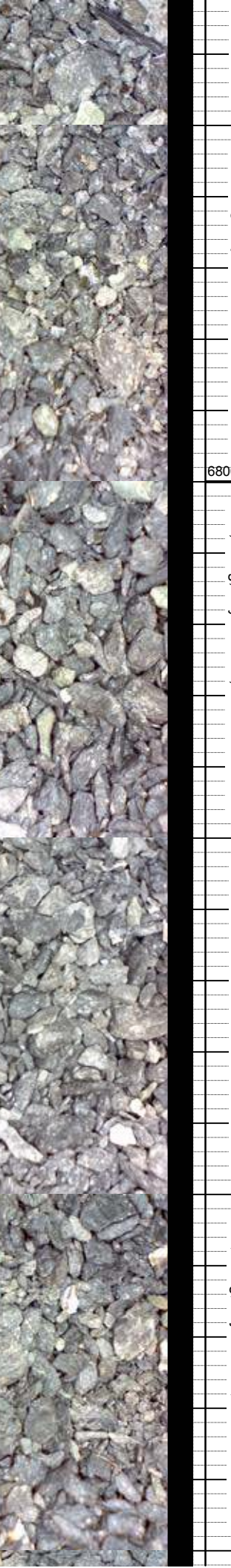
MD 9094'

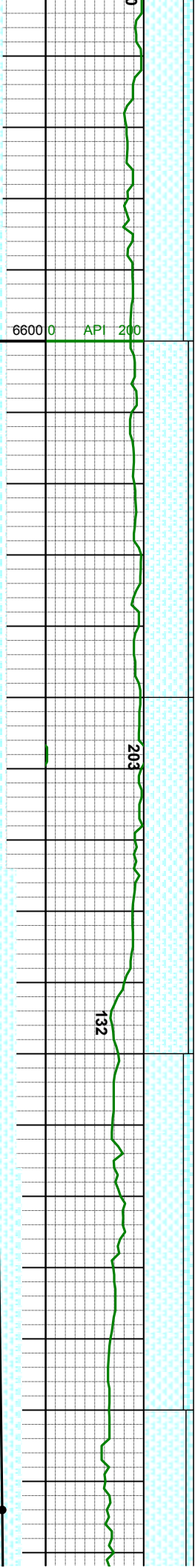
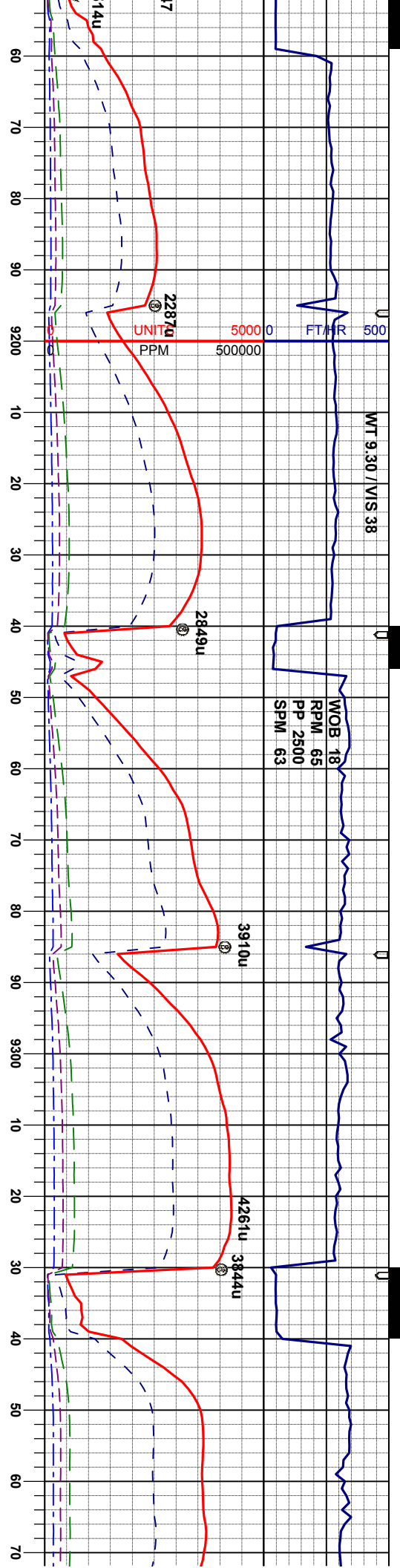
INC 91.7°

AZI 3.1°

TVD 6633.6'

MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mtx, mod calc,
scat bent, occ fos frag
CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc





MD 9184'
INC 92.5°
AZI 3.4°
TVD 6630.3'

MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mx, mod calc,
scat bent, occ fos frag
CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc

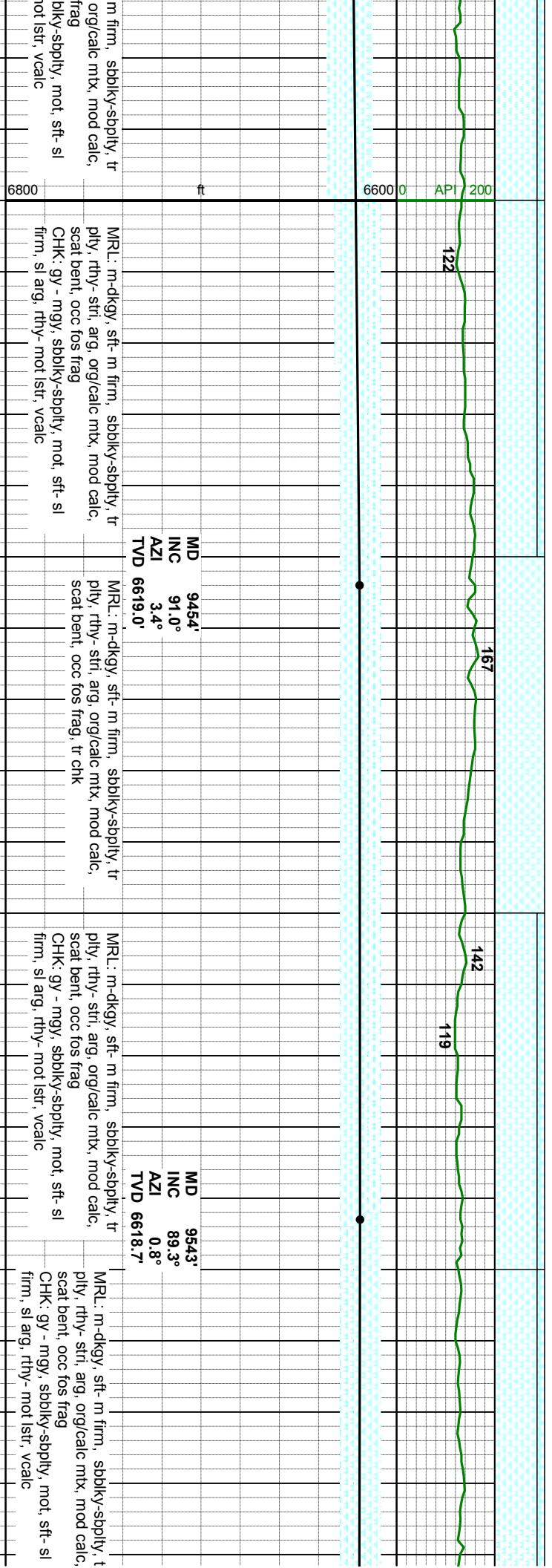
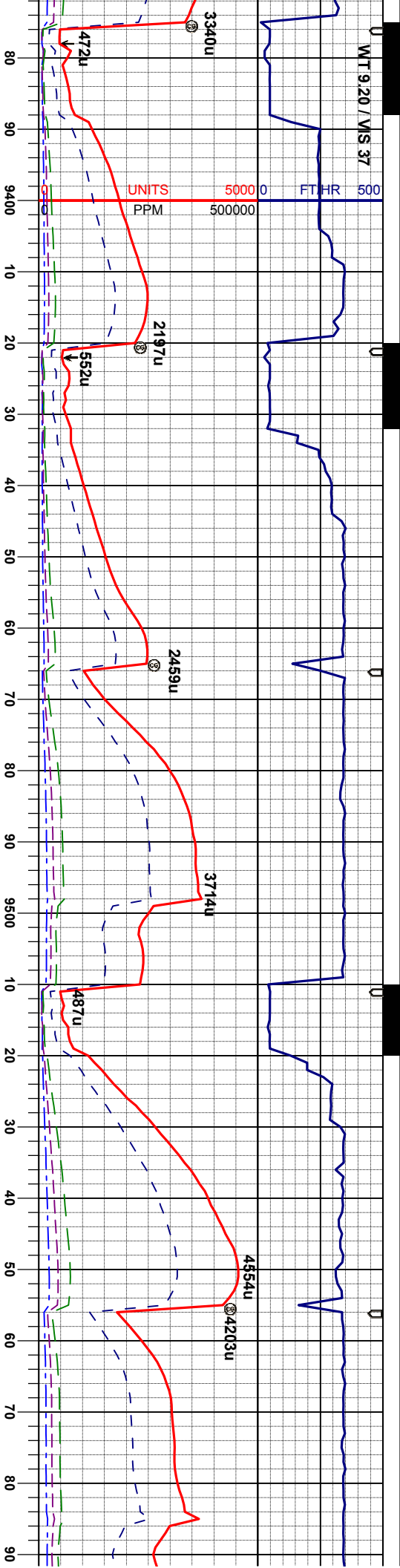
MD 9274'
INC 92.4°
AZI 3.3°
TVD 6626.5'

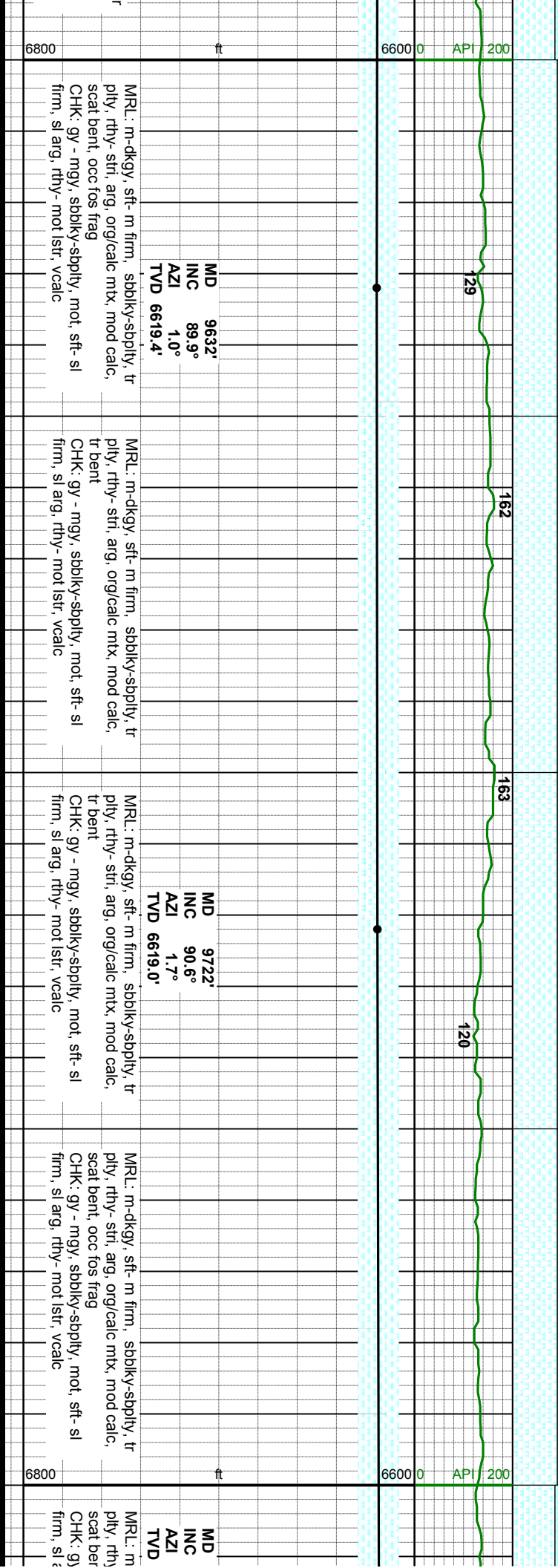
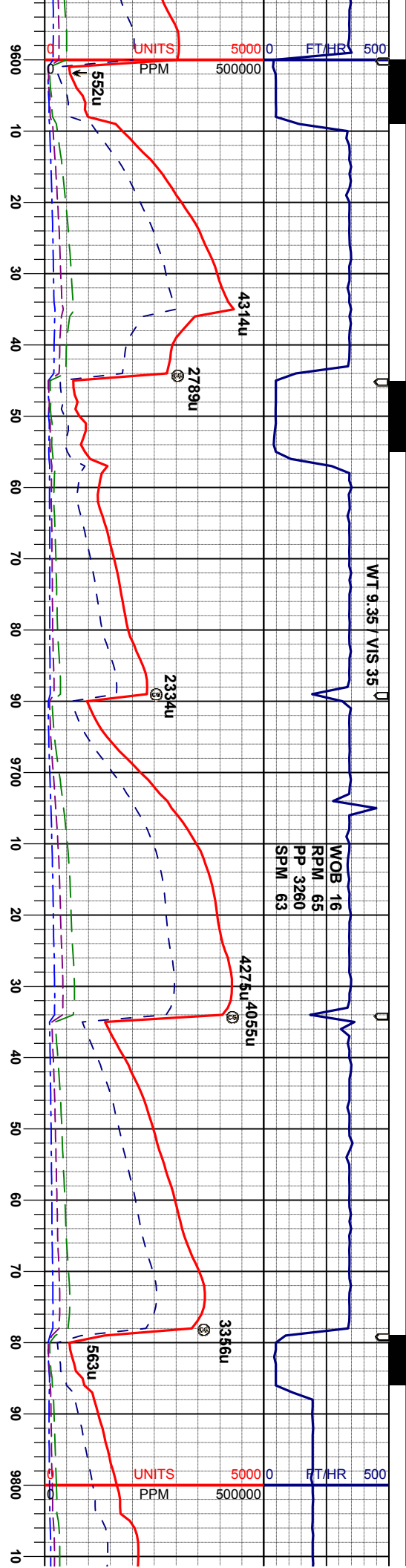
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mx, mod calc,
scat bent, occ fos frag
CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc

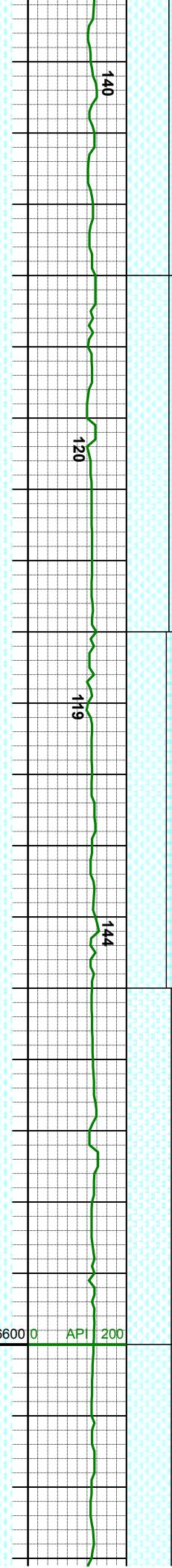
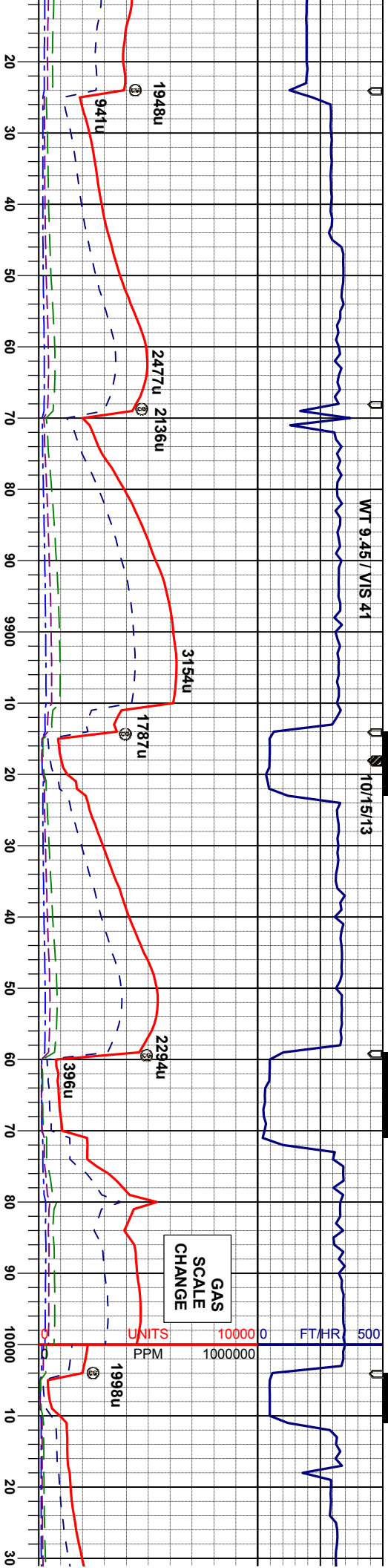
MD 9364'
INC 93.1°
AZI 1.5°
TVD 6622.2'

MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mx, mod calc,
scat bent, occ fos frag
CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc



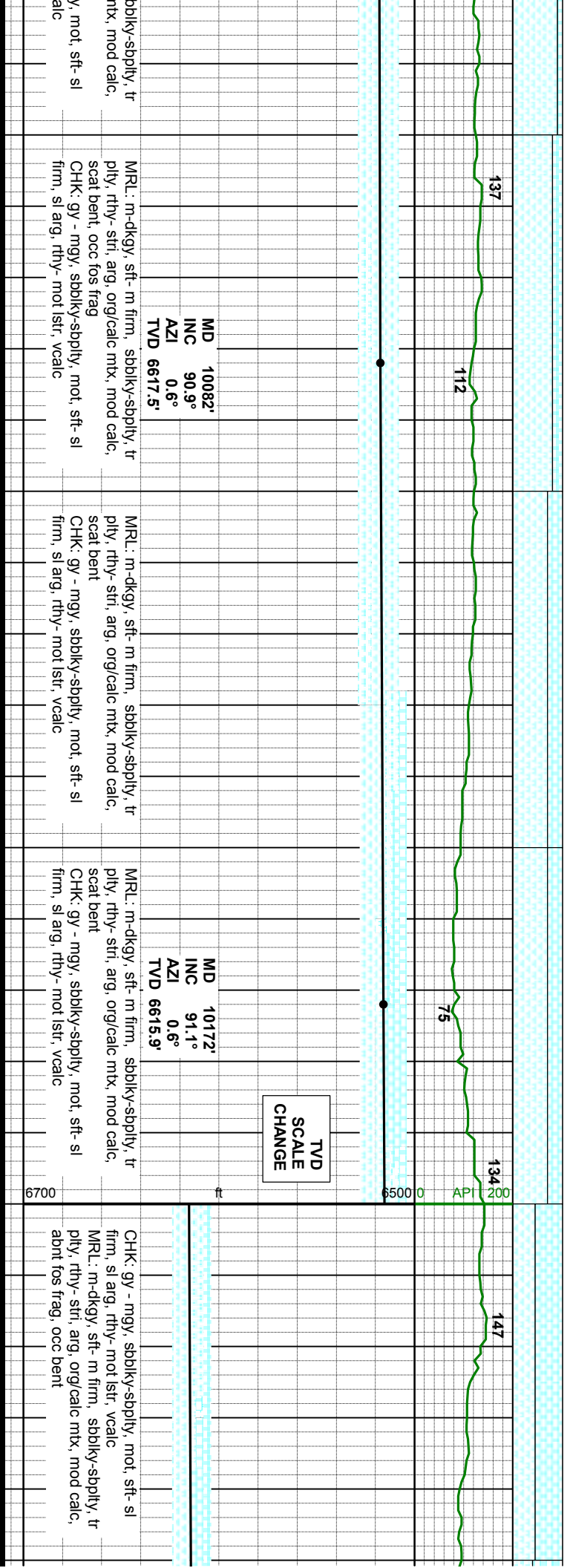
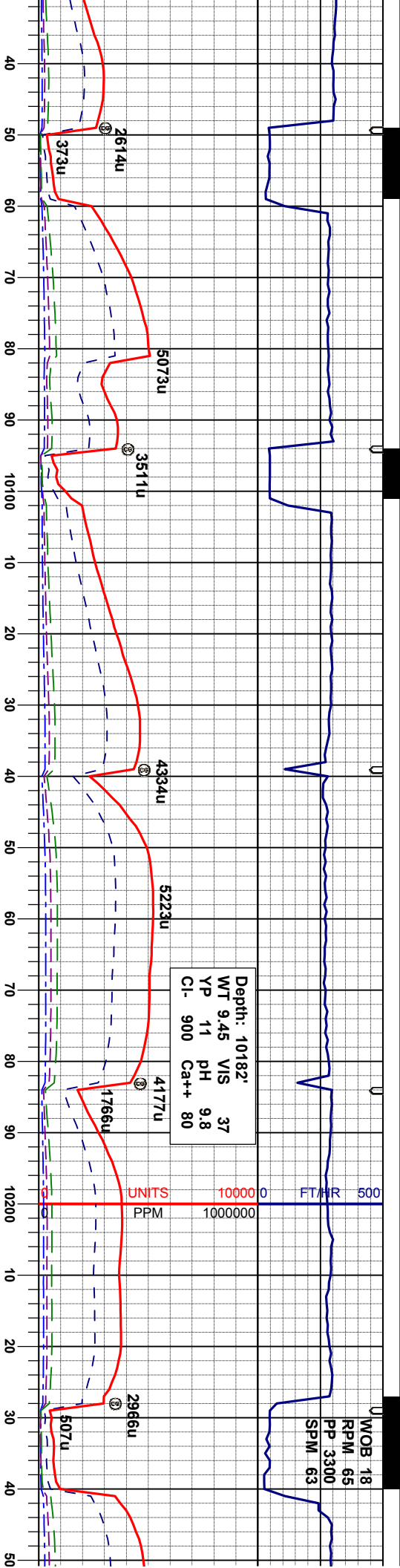


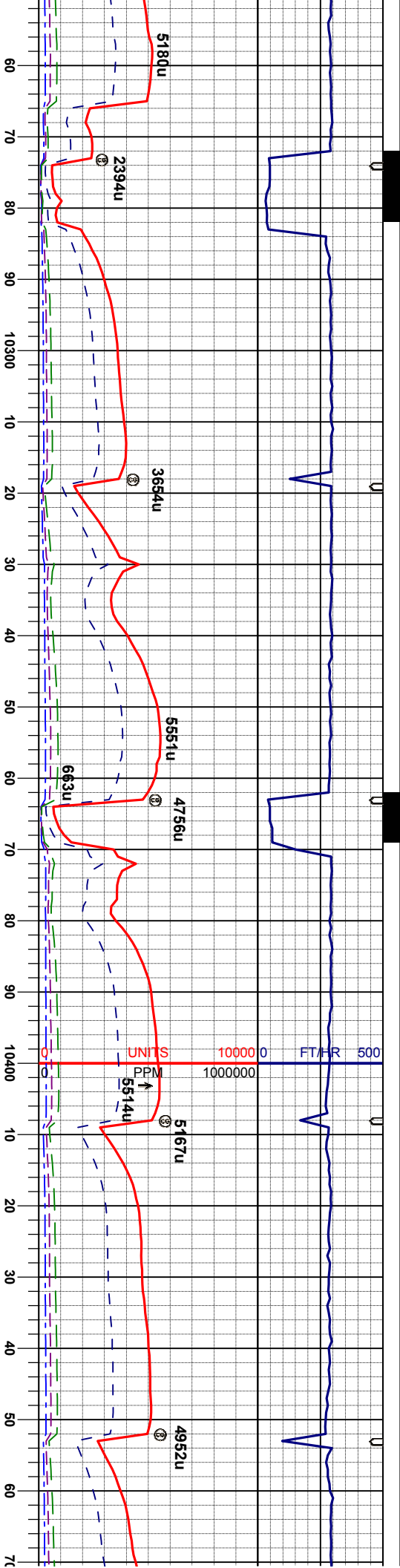




9812'	MD 9902'	INC 89.6°	MD 9992'	INC 90.2°
90.4°	AZI 359.6°	AZI 0.3°	AZI 0.3°	
2.0°	TVD 6618.1'	TVD 6618.3'		
6618.2'				
-dkgy, sft- m firm, sbbiky-sbply, tr	MRL: m-dkgy, sft- m firm, sbbiky-sbply, tr	MRL: m-dkgy, sft- m firm, sbbiky-sbply, tr	MRL: m-dkgy, sft- m firm, sbbiky-sbply, tr	MRL: m-dkgy, sft- m firm, sbbiky-sbply, tr
-stri, arg, org/calc mtx, mod calc,	ply, rthy-stri, arg, org/calc mtx, mod calc,	ply, rthy-stri, arg, org/calc mtx, mod calc,	ply, rthy-stri, arg, org/calc mtx, mod calc,	ply, rthy-stri, arg, org/calc n
tr bent	tr bent	tr bent, occ fos frag	tr bent, occ fos frag	scat bent, tr pyr
CHK: gy - mgy, sbbiky-sbply, mot, sft- sl	CHK: gy - mgy, sbbiky-sbply, mot, sft- sl	CHK: gy - mgy, sbbiky-sbply, mot, sft- sl	CHK: gy - mgy, sbbiky-sbply, mot, sft- sl	CHK: gy - mgy, sbbiky-sbply, mot, sft- sl
firm, rthy- mot lstr, vcalc	firm, sl arg, rthy- mot lstr, vcalc	firm, sl arg, rthy- mot lstr, vcalc	firm, sl arg, rthy- mot lstr, vcalc	firm, sl arg, rthy- mot lstr, vcalc







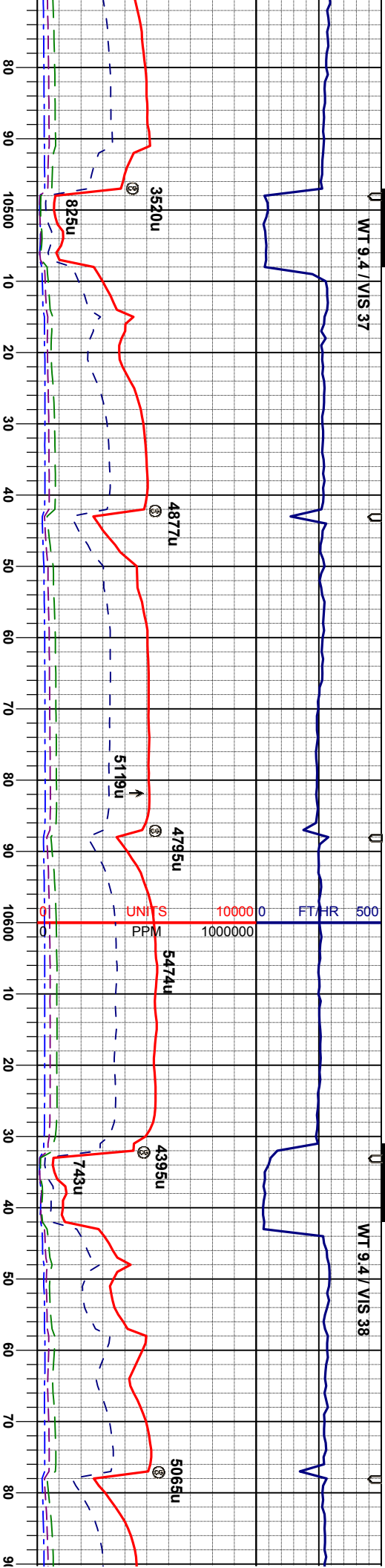
MD	INC	AZI	TVD
10262'	91.1°	1.0°	6614.2'
10351'	90.8°	2.0°	6612.7'
10441'	91.2°	0.6°	6611.1'

CHK: gy - mgy, sbblky-sbply, mot, sft- sl	CHK: gy - mgy, sbblky-sbply, mot, sft- sl	CHK: gy - mgy, sbblky-sbply, mot, sft- sl	CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc	firm, sl arg, rthy- mot lstr, vcalc, occ dul gr	firm, sl arg, rthy- mot lstr, vcalc, occ dul gr	firm, sl arg, rthy- mot lstr, vcalc, occ dul gr
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr	MRL: m-dkgy, sft- m firm, sbblky-sbply, tr	MRL: m-dkgy, sft- m firm, sbblky-sbply, tr	MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- str, arg, org/calc mnx, mod calc, occ fos frag, occ bent	ply, rthy- str, arg, org/calc mnx, mod calc, occ fos frag, occ bent	ply, rthy- str, arg, org/calc mnx, mod calc, occ fos frag, occ bent	ply, rthy- str, arg, org/calc mnx, mod calc, occ fos frag, occ bent



WT 9.4 / VIS 37

WT 9.4 / VIS 38



MD 10531'
INC 90.0°
AZI 0.1°
TVD 6610.2'

MD 10621'
INC 90.7°
AZI 359.4°
TVD 6609.6'

sbblky-sbply, mot, sft- sl
mot lstr, vcalc, occ dui gr
n firm, sbblky-sbply, tr
org/calc mtx, mod calc,
bent

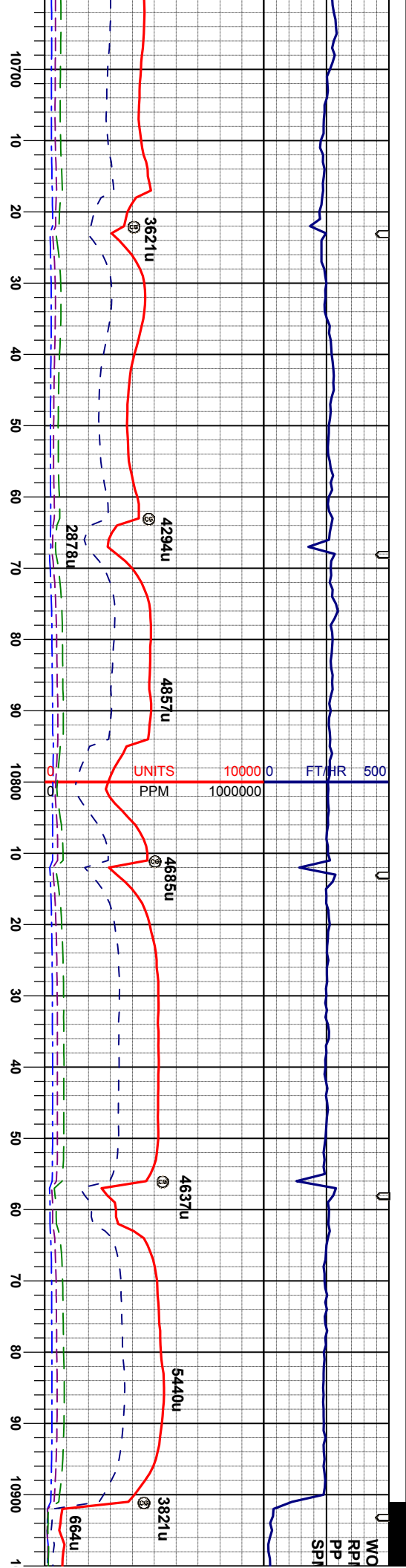
CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mtx, mod calc,
abt fof frag, occ bent

CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mtx, mod calc,
abt fof frag, occ bent

CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mtx, mod calc,
abt fof frag, occ bent

CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mtx, mod
abt fof frag, occ bent





MD 10711'
INC 89.3°
AZI 359.8°
TVD 6609.6'

MD 10801'
INC 89.7°
AZI 359.2°
TVD 6610.4'

MD 10891'
INC 90.5°
AZI 357.6°
TVD 6610.3'

CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mt, mod calc,
occ fos frag, occ bent

CHK: gy - ngy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mt, mod calc,
occ fos frag, occ bent

CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mt, mod calc,
occ fos frag, occ bent

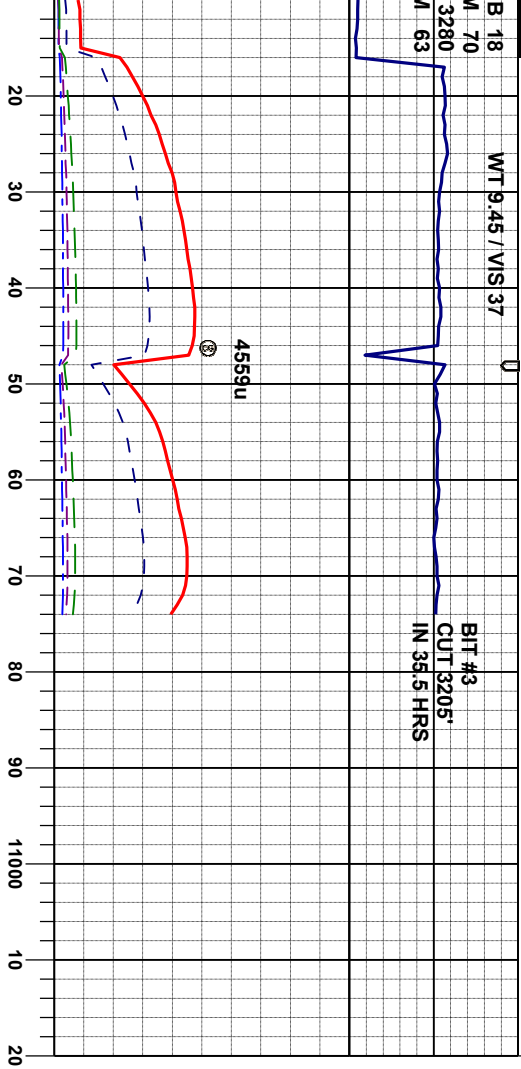
CHK: gy - mgy, sbblky-sbply, mot, sft- sl
firm, sl arg, rthy- mot lstr, vcalc
MRL: m-dkgy, sft- m firm, sbblky-sbply, tr
ply, rthy- stri, arg, org/calc mt, mod calc,
occ fos frag, occ bent



B	18
M	70
	3280
M	63

WT 9.45 / VIS 37

BIT #3	CUT 3205'
IN 35.5 HRS	



**THANK YOU FOR CHOOSING
COLUMBINE LOGGING, INC.**

MD	10917'
INC	89.6°
AZI	358.7°
TVD	6610.2'

MD	10974'
INC	89.6°
AZI	358.7°
TVD	6610.6'

PROJECTION TO BIT

TD: 10974' MD
@ 1122 HRS, 10/15/13

CHK: gy - mgy, sbblyk-sbply, mot, stf- sl
firm, sl arg, rthy- mot lst, vealc
MR: m-dkey, stf- m firm, sbblyk-sbply, t
ply, rthy- strl, arg, orgcalc mtx, mod calc,
abnt fos frag, scat bent

