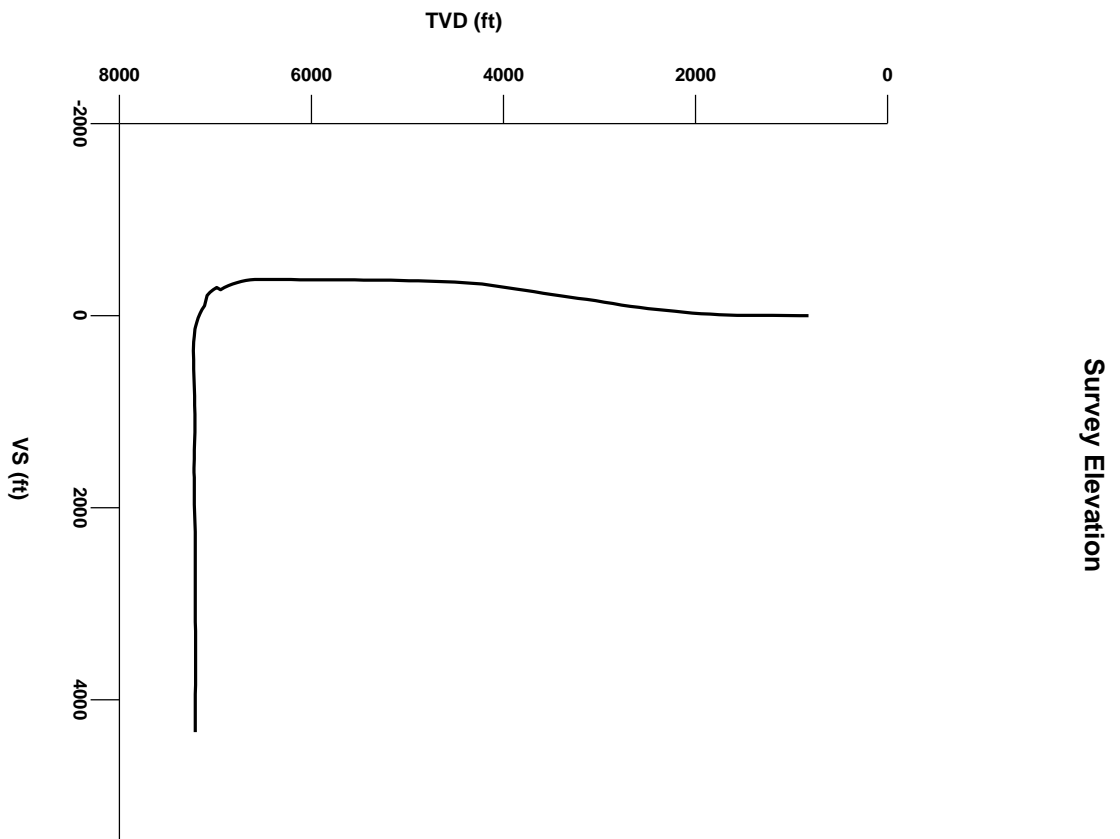


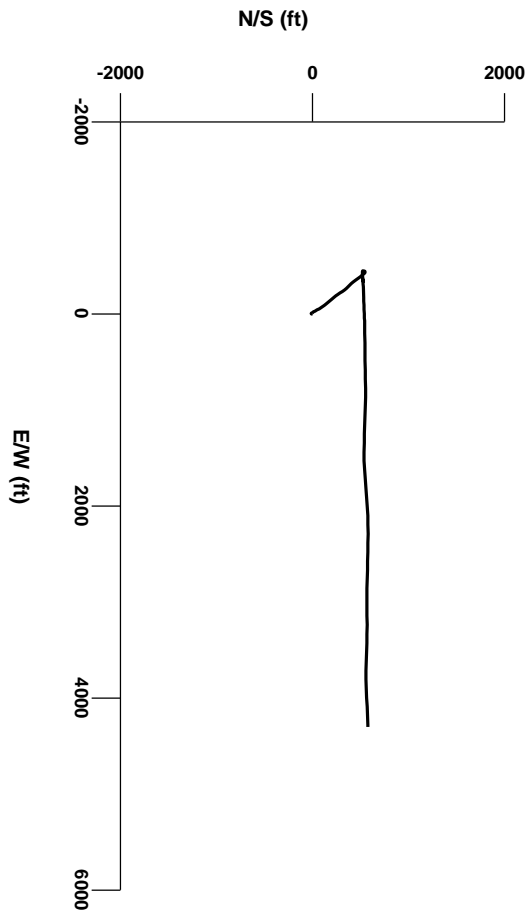
LOG created using LPLOT VH Version 3.0, May 16, 2013, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: NOBLE ENERGY
WELL: WIEST J28-65-1HN
LOCATION: SEC 28 T5N R66W
COUNTY: WELD
STATE: COLORADO
SPOT: 1918' FSL, 457' FWL
ELEVATION: GL 4863' KB 4887'
FIELD: WATTENBERG
SPUD DATE: 10/13/12
TD DATE: 10/21/12
DATES LOGGED: 10/14/12 - 10/22/12
DEPTHS LOGGED: 2000' - 11,856'
LOGGERS: TERRY ACOMB, MICHAEL ROOKS
DRILLING FLUID: WATER, POLY, MUD
DRILLING RIG: H&P #322
API: 05-123-35088-00
LOG TYPE:
SCALE: 1:240 (5 inches per 100 feet)
REMARKS:

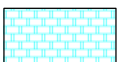


Survey Elevation

6000



LITHOLOGIES



Chalk



Marl



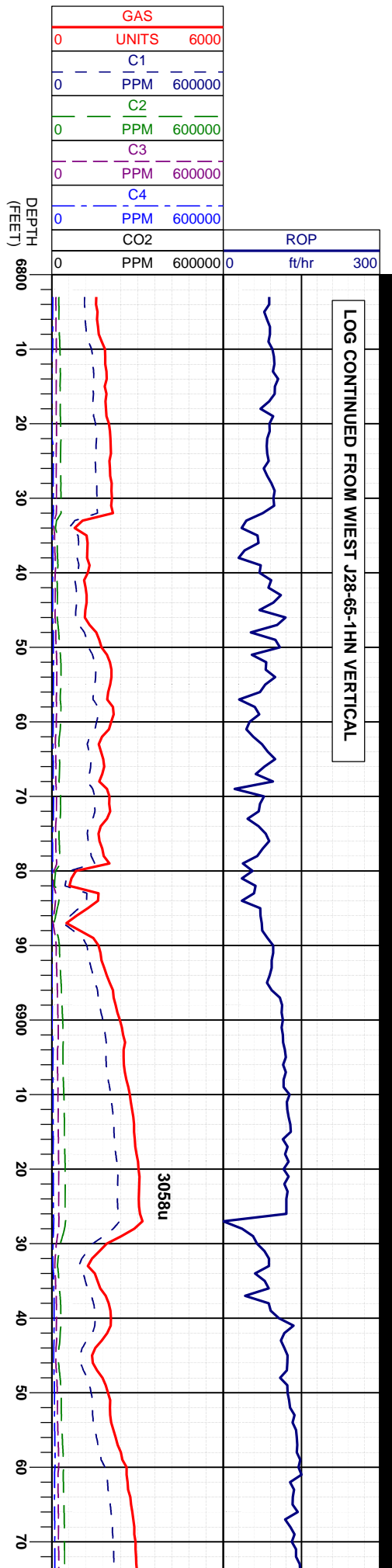
Shaly Siltstone



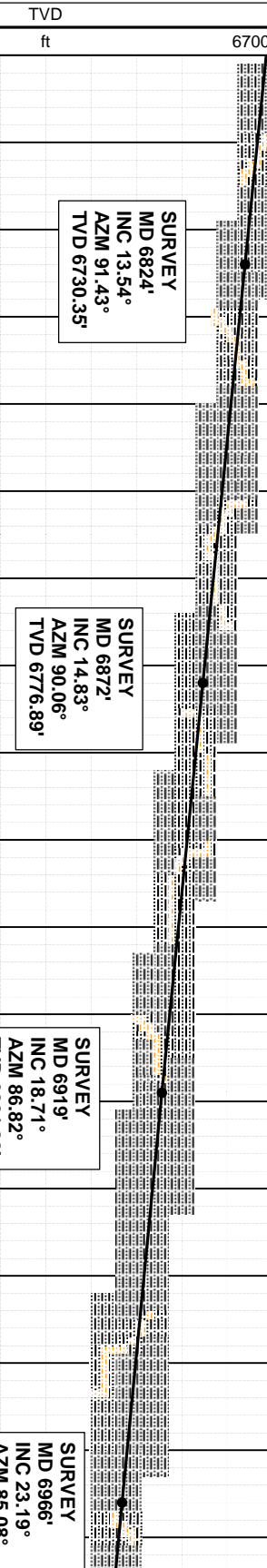
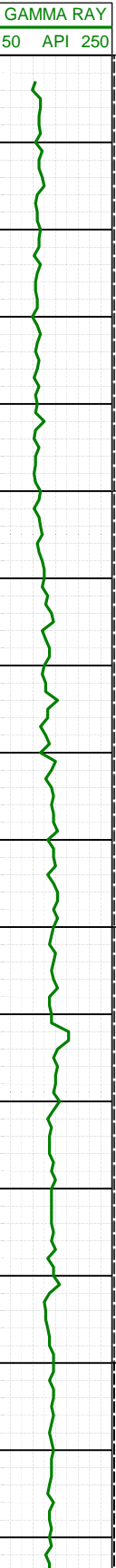
Silty Shale

ENGINEERING SYMBOLS

LOG CONTINUED FROM WIEEST J28-65-14N VERTICAL



CUTTINGS LITHOLOGY



OIL SHOWS

SAMPLE PHOTOS

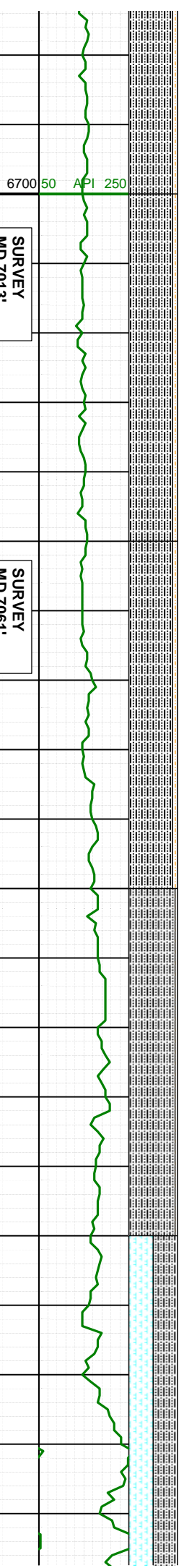
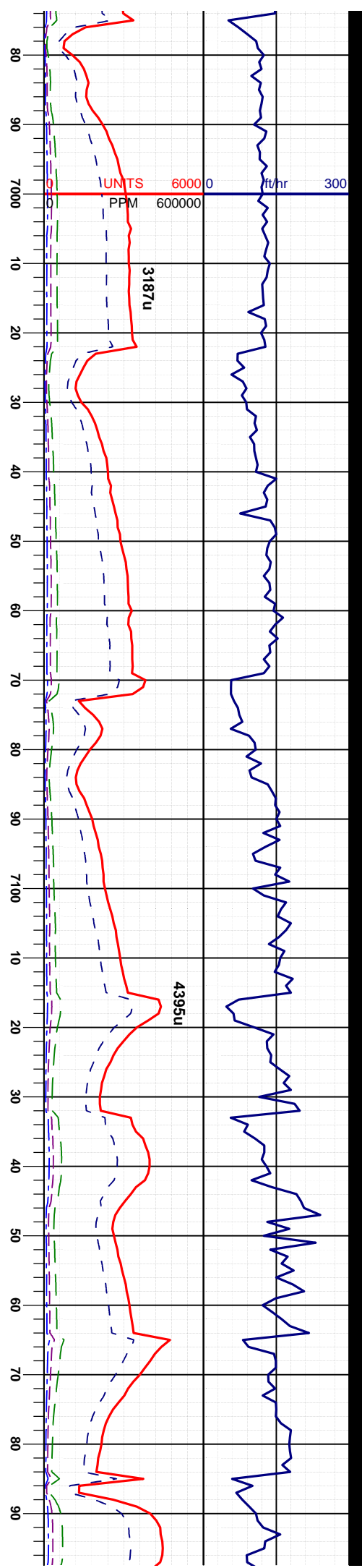


80% SLTYSH: m-dkgy, sbply-sb blkly, firm to sifit, sbnd-sbang
 20% SHYSLTST: lk-mgy, s&p, sbblkly-sbply, sbnd, vf gr, sft-firm, arg cmt, calc cmt, grdg to sltysh, tr sdy

80% SLTYSH: m-dkgy, sbply-sb blkly, firm to sifit, sbnd-sbang
 20% SHYSLTST: lk-mgy, s&p, sbblkly-sbply, sbnd, vf gr, sft-firm, arg cmt, calc cmt, grdg to sltysh, tr sdy

85% SLTYSH: m-dkgy, sbply-sb blkly, firm to sifit, sbnd-sbang
 15% SHYSLTST: lk-mgy, s&p, sbblkly-sbply, sbnd, vf gr, sft-firm, arg cmt, calc cmt, grdg to sltysh, tr sdy

90% SLTYSH: m-dkgy to sifit, sbnd-sbang
 10% SHYSLTST: lk-m sbply, sbnd, vf gr, sft-firm, arg cmt, grdg to sltysh, tr



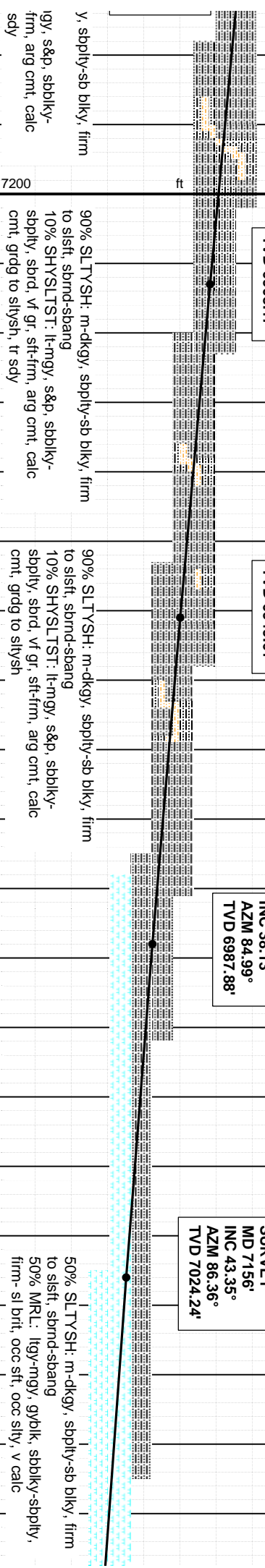
SURVEY
MD 7013'
INC 27.81°
AZM 85.69°
TVD 6908.17'

SURVEY
MD 7061'
INC 32.75°
AZM 85.82°
TVD 6949.61'

SURVEY
MD 7108'
INC 38.13°
AZM 84.99°
TVD 6987.88'

SURVEY
MD 7156'
INC 43.35°
AZM 86.36°
TVD 7024.24'

TVD SCALE CHANGE

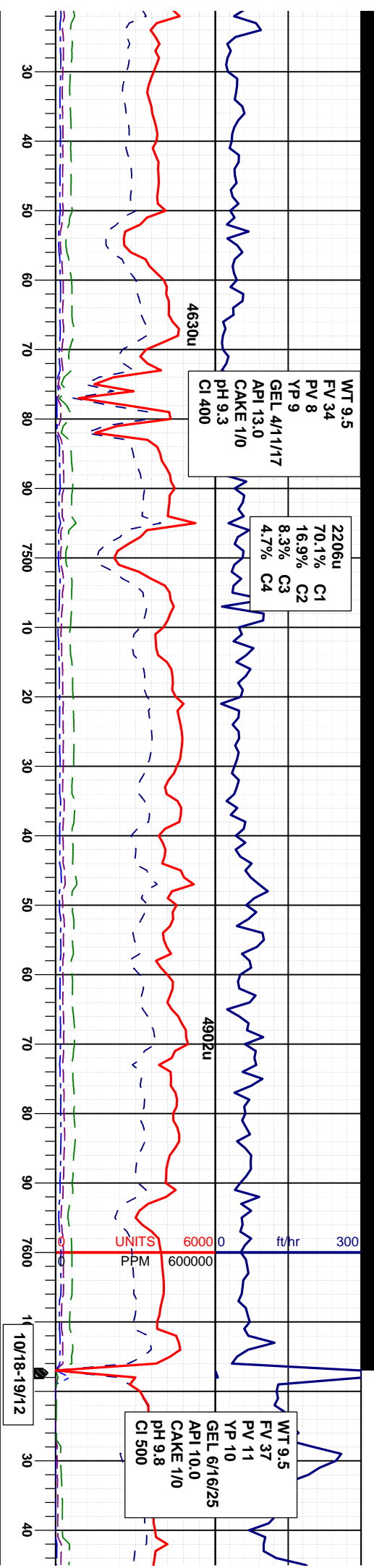


90% SLTYSH: m-dkgy, sbply-sb blk, firm
to sft, sbnd-sbang
10% SHYSLTST: l-mgy, s&p, sbblk-
sbply, sbnd, vfr, st-frm, arg cmt, calc
cmt, grdg to sltysh, tr sdy

90% SLTYSH: m-dkgy, sbply-sb blk, firm
to sft, sbnd-sbang
10% SHYSLTST: l-mgy, s&p, sbblk-
sbply, sbnd, vfr, st-frm, arg cmt, calc
cmt, grdg to sltysh

50% SLTYSH: m-dkgy, sbply-sb blk, firm
to sft, sbnd-sbang
50% MRL: lgy-mgy, gyblk, sbblk-sbply,
firm- sl brt, occ sft, occ slty, v calc





SURVEY
MD 7440'
INC 69.09°
AZM 88.1°
TVD 7181.30'

SURVEY
MD 7487'
INC 73.30°
AZM 87.65°
TVD 7196.45'

SURVEY
MD 7535'
INC 78.14°
AZM 87.47°
TVD 7208.29'

SURVEY
MD 7562'
INC 80.19°
AZM 87.96°
TVD 7213.36'

TOOH @ 7617' TO SET CASI

SURVEY
MD 7639'
INC 85.52°
AZM 88.86°
TVD 7222.94'

gy, gyblk, sbblky-sbply,
t, v calc
gy - gybrn, mot -stri,
-brit, rthy lstr, calc mtx,
tr tos

75% MRU: lgy-mgy, gyblk, sbblky-sbply,
firm- sl brit, occ sft, v calc
25% CHK: md -dk gy - gybrn, mot -stri,
sbply-sbblky, firm - brit, rthy lstr, calc mtx,
tr tos & inoc, no - tr bent

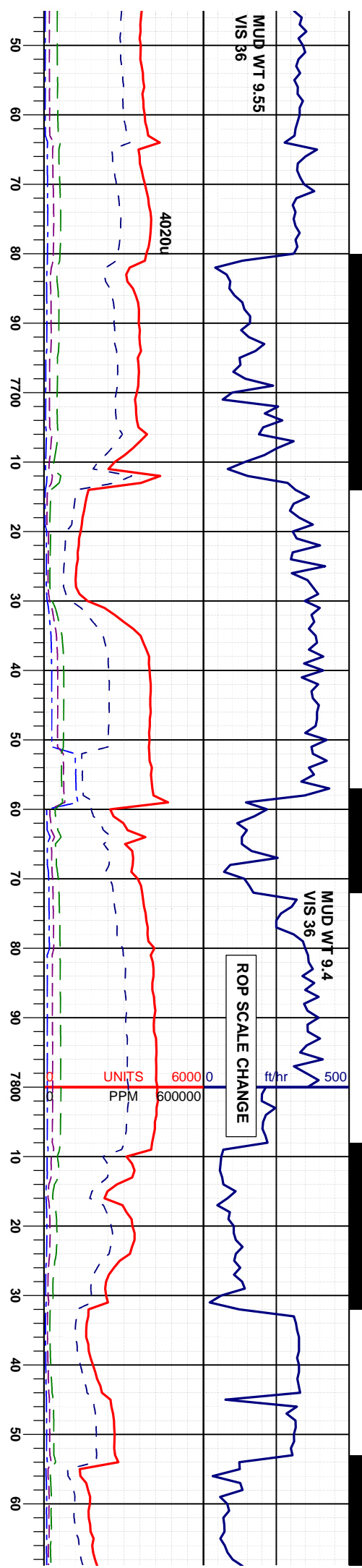
80% MRU: lgy-mgy, gyblk, sbblky-sbply,
firm- sl brit, occ sft, v calc
20% CHK: md -dk gy - gybrn, mot -stri,
sbply-sbblky, firm - brit, rthy lstr, calc mtx,
tr tos & inoc, no - tr bent

75% MRU: lgy-mgy, gyblk, sbblky-sbply,
firm- sl brit, occ sft, v calc
25% CHK: md -dk gy - gybrn, mot -stri,
sbply-sbblky, firm - brit, rthy lstr, calc mtx,
tr tos & inoc, no - tr bent

7500 ft

7000 50 API 250





SURVEY
MD 7698'
INC 87.19°
AZM 89.52°
TVD 7226.68'

SURVEY
MD 7793'
INC 88.92°
AZM 89.61°
TVD 7229.90'

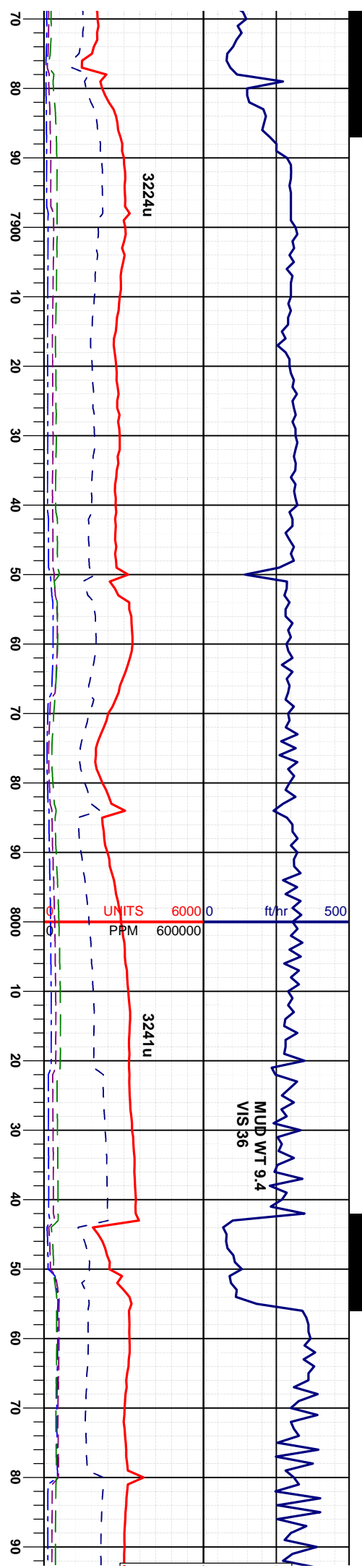
90% MRL: tgy-mgy, gyblk, sbbkly-sbply,
firm- sl brt, occ sft, v calc
10% CHK: md -dk gy - gybrn, mot -str,
sbply-sbbkly, firm - brt, rthy lstr, calc mtk,
tr fos & Inoc, no - tr bent

100% MRL: tgy-mgy, gyblk, sbbkly-
sbply, firm- sl brt, occ sft, v calc

100% MRL: tgy-mgy, gyblk, sbbkly-
sbply, firm- sl brt, occ sft, v calc

7500 ft





SURVEY
MD 7887'
INC 91.70°
AZM 89.24°
TVD 7229.40'

SURVEY
MD 7982'
INC 91.20°
AZM 89.52°
TVD 7227.00'

SURVEY
MD 8077'
INC 91.79°
AZM 89.19°
TVD 7224.52'

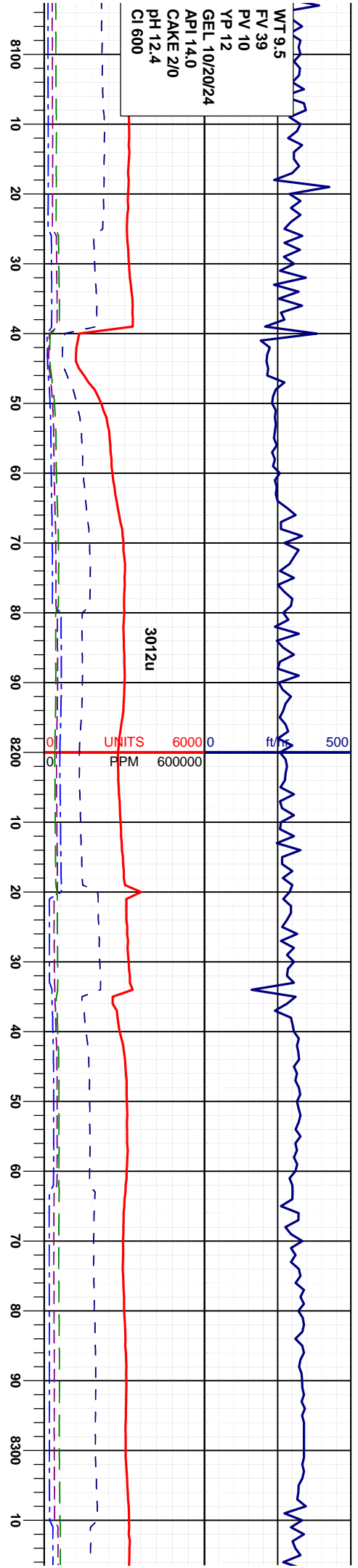
95% MRL: lgy-mgy, gyblk, sbblky-sbply,
firm-sl brit, occ sft, v calc
5% CHK: md-dk gy - gybrn, mot -srt,
sbply-sbblky, firm - brit, rthy lstr, calc mtx,
tr fos & lnooc, no - tr bent

100% MRL: lgy-mgy, gyblk, sbblky-
sbply, firm-sl brit, occ sft, v calc

7500 ft 7000 50 AP 250



WT 9.5
FV 39
PV 10
YP 12
GEL 10/20/24
API 14.0
CAKE 2/0
PH 12.4
CI 600



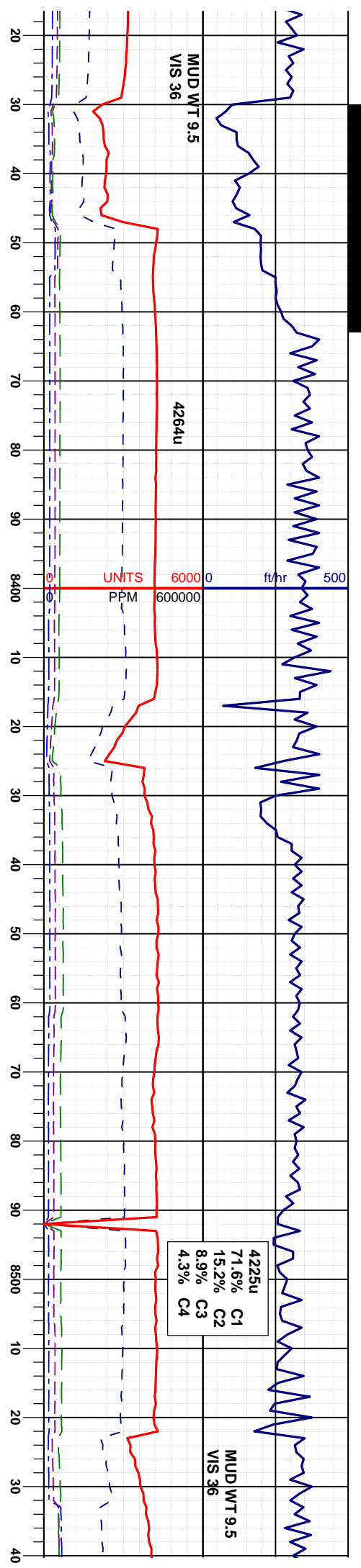
SURVEY
MD 8172'
INC 91.66°
AZM 88.89°
TVD 7221.65'

SURVEY
MD 8267'
INC 91.42°
AZM 88.73°
TVD 7219.10'

100% MRL: mgy, gyblk, sbblk, sppty,
firn- sl brt, rthy, occ sft, v calc

100% MRL: mgy, gyblk, sbblk, sppty,
firn- sl brt, rthy, occ sft, v calc





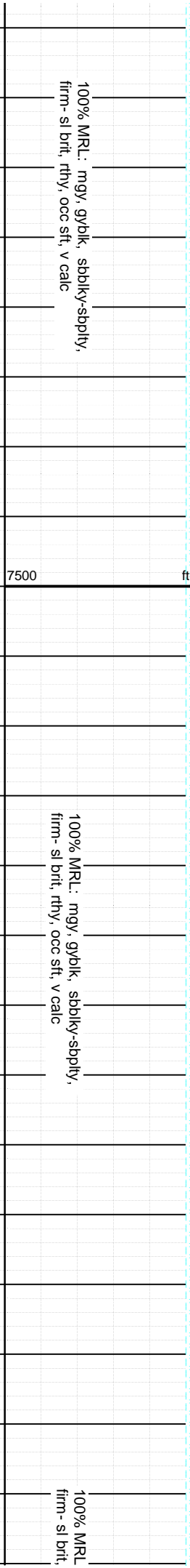
SURVEY
MD 8362'
INC 90.68°
AZM 90.17°
TVD 7217.36'

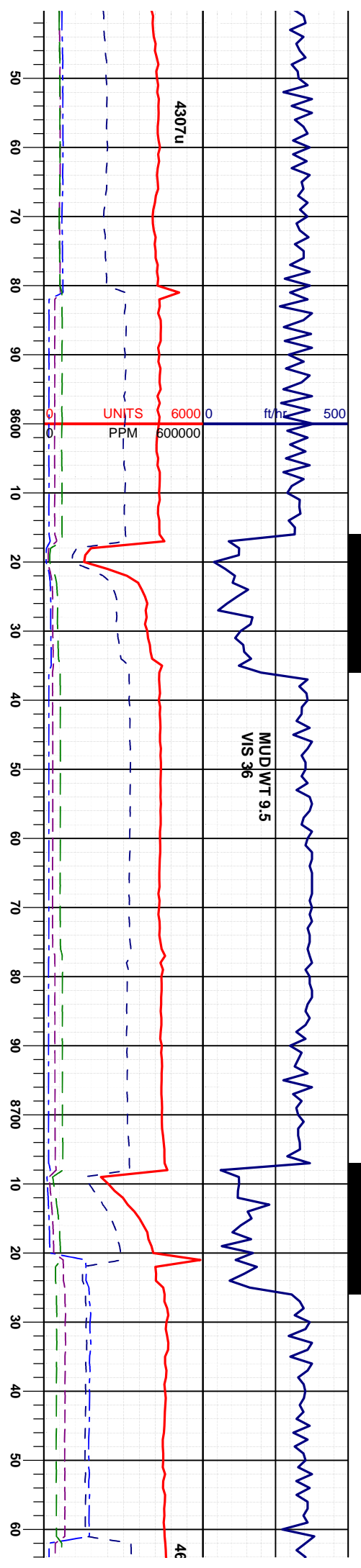
SURVEY
MD 8457'
INC 90.74°
AZM 91.74°
TVD 7216.18'

100% MRL: mgy, gyblk, sbbly-spply,
firm- sl brt, rthy, occ sft, v calc

100% MRL: mgy, gyblk, sbbly-spply,
firm- sl brt, rthy, occ sft, v calc

100% MRL
firm- sl brt,





SURVEY
MD 8552'
INC 91.02°
AZM 93.56°
TVD 7214.73'

SURVEY
MD 8647'
INC 88.46°
AZM 91.66°
TVD 7215.16'

SURVEY
MD 8742'
INC 88.74°
AZM 90.93°
TVD 7217.49'

: mgy, gyblk, sbblky-sbply,
rthy, occ sft, v calc

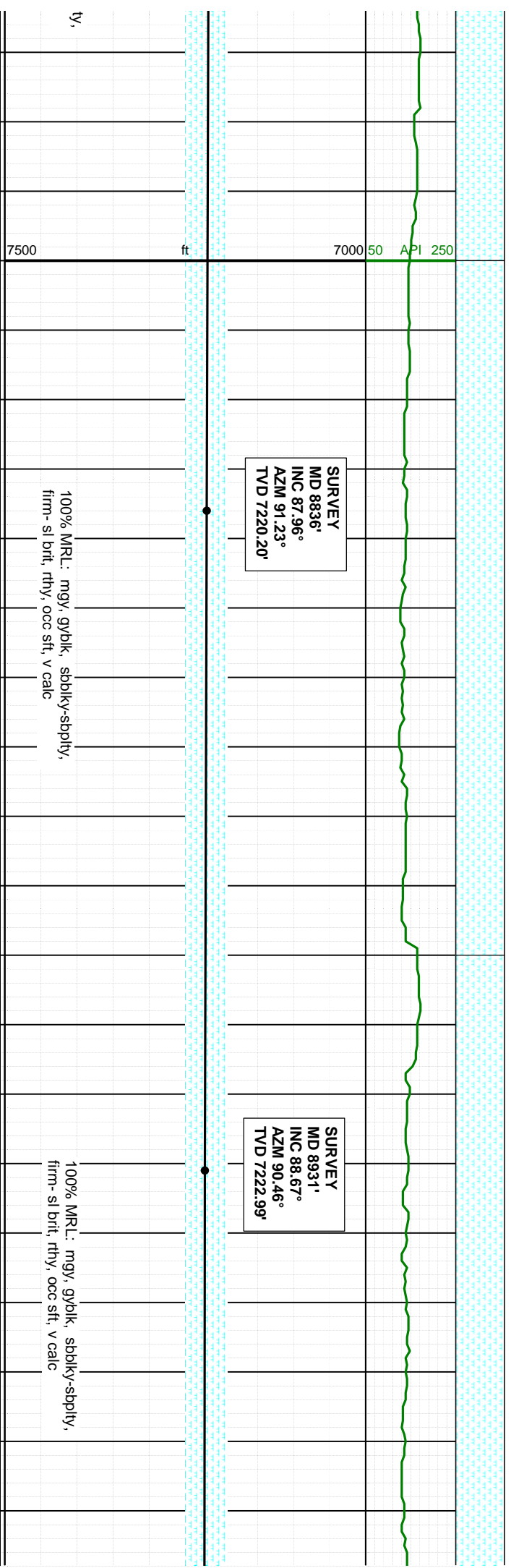
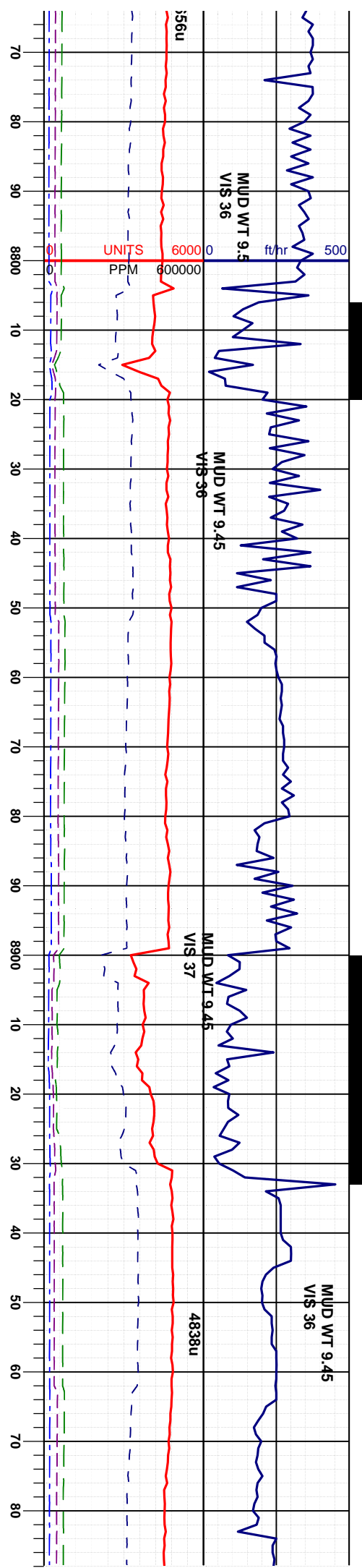
100% MRL: mgy, gyblk, sbblky-sbply,
firm- sl brit, rthy, occ sft, v calc

100% MRL: mgy, gyblk, sbblky-sbply,
firm- sl brit, rthy, occ sft, v calc

7500 ft

7000 50 API 250





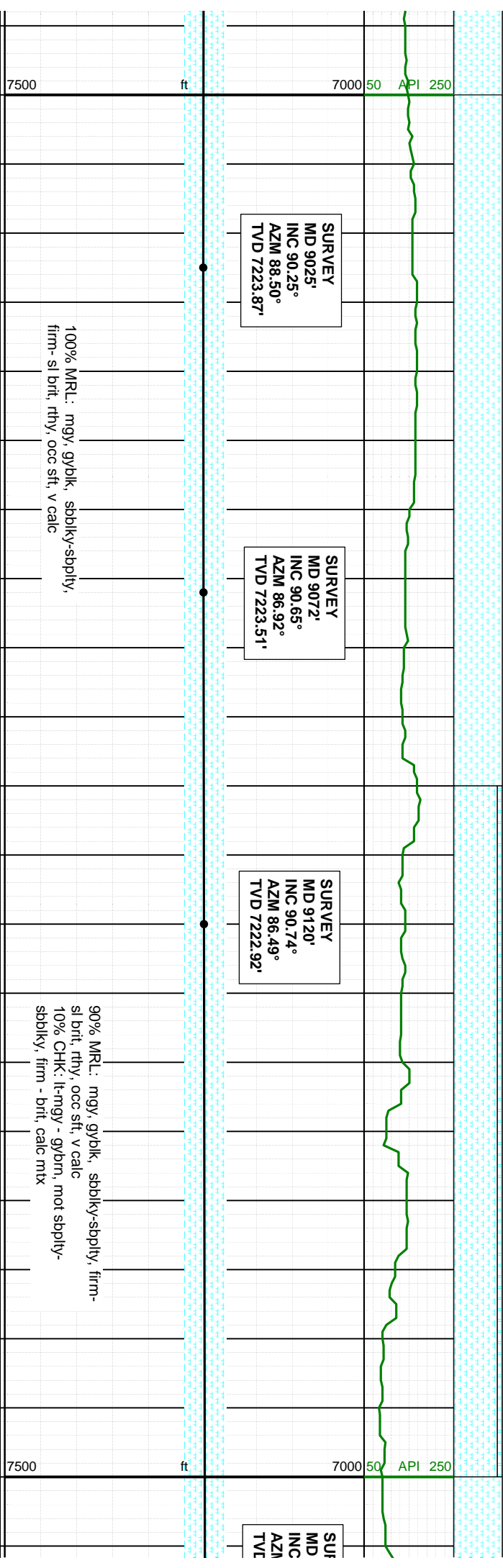
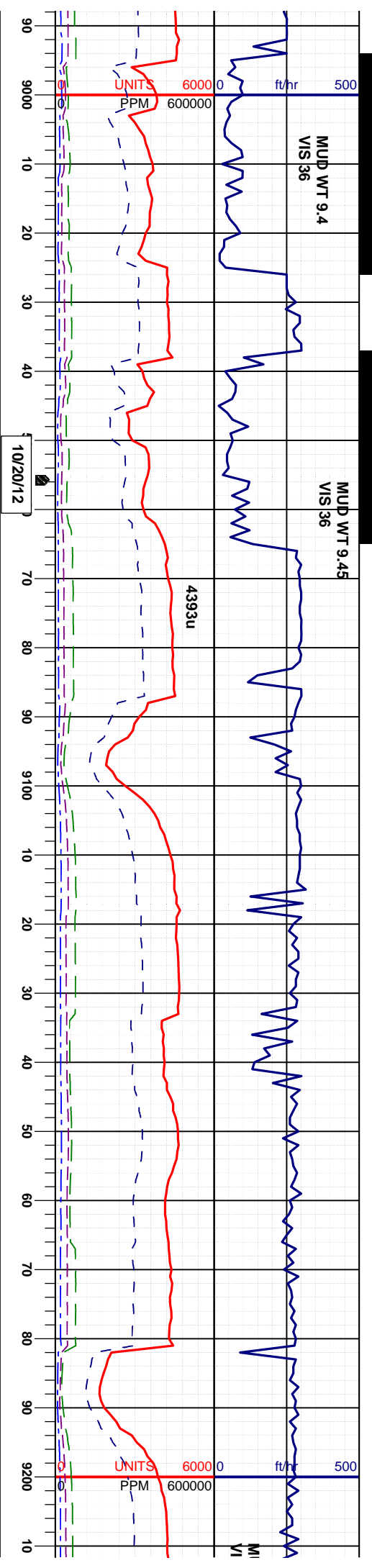
SURVEY
 MD 8836°
 INC 87.96°
 AZM 91.23°
 TVD 7220.20'

SURVEY
 MD 8931°
 INC 88.67°
 AZM 90.46°
 TVD 7222.99'

100% MRL: mgy, gybik, sbbiky-sbply,
 firm- sl brit, rthy, occ sft, v calc

100% MRL: mgy, gybik, sbbiky-sbply,
 firm- sl brit, rthy, occ sft, v calc

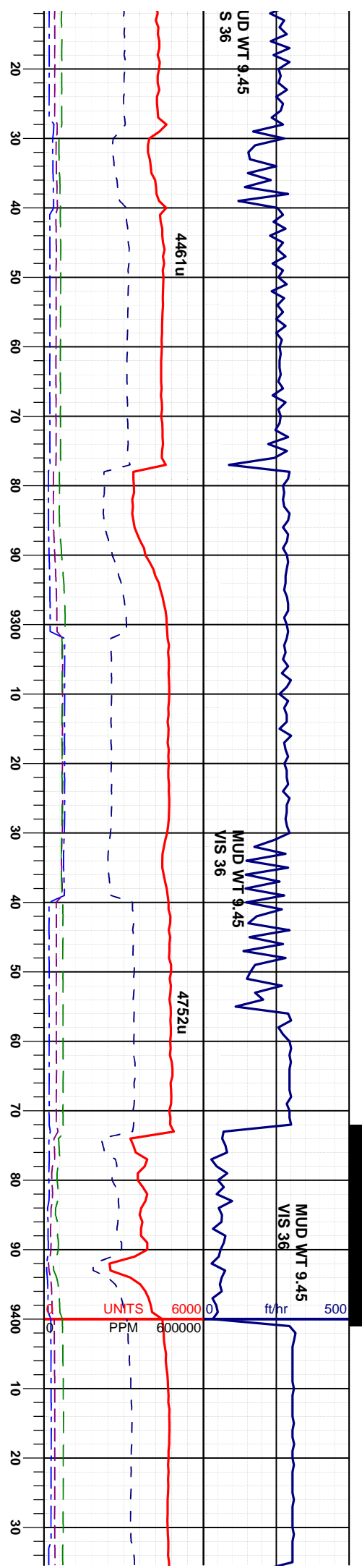




100% MRL: mgy, gyblk, sbblkv-sbply,
firm-sl brt, rthy, occ sft, v calc

90% MRL: mgy, gyblk, sbblkv-sbply, firm-
sl brt, rthy, occ sft, v calc
10% CHK: lt-mgy - gybrn, mot sbply-
sbbkly, firm - brt, calc mix





SURVEY
 9215'
 INC 90.92°
 AZM 86.56°
 TVD 7221.54'

SURVEY
 MD 9310'
 INC 90.00°
 AZM 85.52°
 TVD 7220.78'

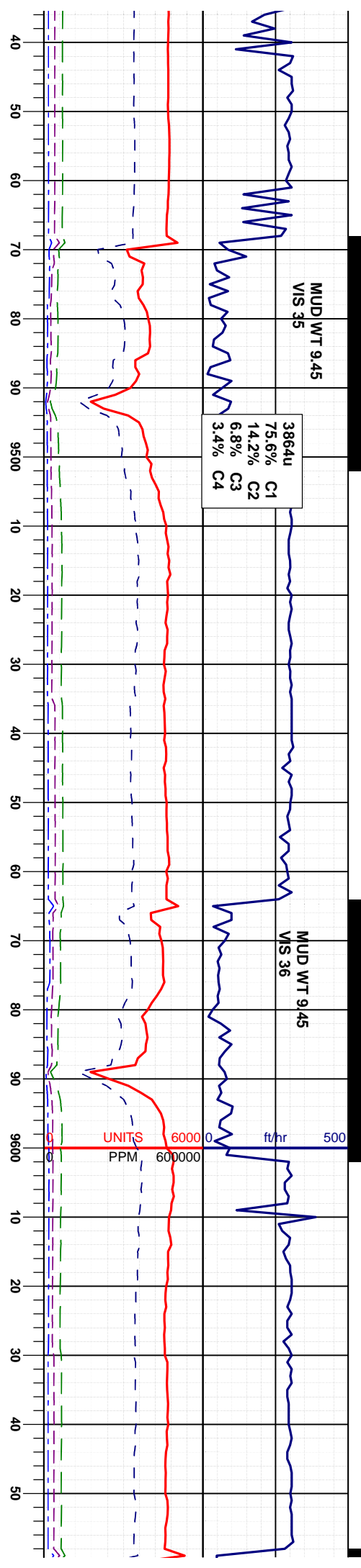
SURVEY
 MD 9405'
 INC 90.92°
 AZM 84.92°
 TVD 7220.01'

100% MRL: mgy, gyblk, sbblk, sbply,
 firm- sl brit, rthy, occ sft, v calc

100% MRL: mgy, gyblk, sbblk, sbply,
 firm- sl brit, rthy, occ sft, v calc

7500 ft 7000 50 API 250





SURVEY
MD 9500'
INC 91.33°
AZM 85.89°
TVD 7218.15'

SURVEY
MD 9595'
INC 92.10°
AZM 88.02°
TVD 7215.31'

100% MRL: mgy, gyblk, sbblk, sbply, firm-si brit, rhy, occ sft, v calc

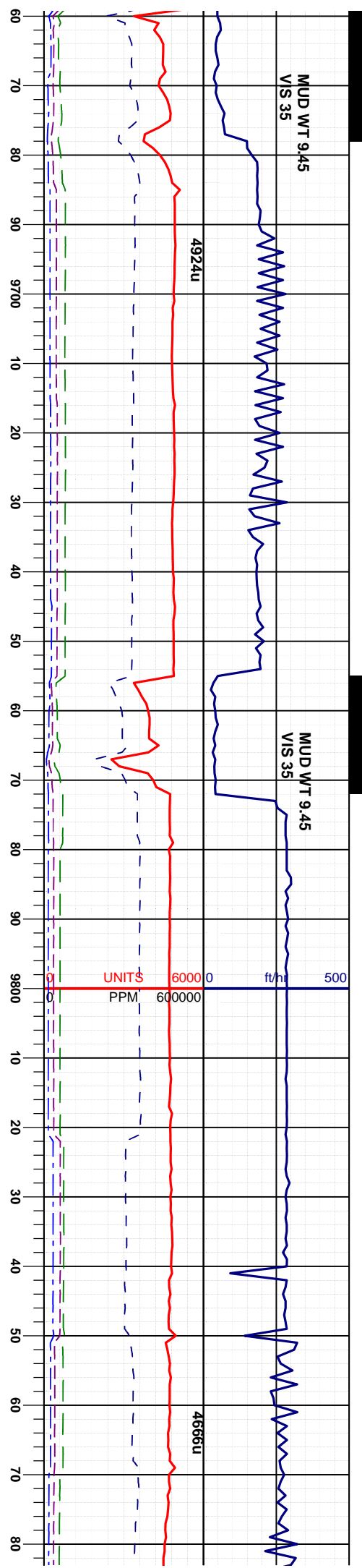
95% MRL: mgy, gyblk, sbblk-sbply, firm-si brit, rhy, occ sft, v calc
5% CHK: lt-mgy - gybrn, mot sbply-sblk, firm - brit, calc mtx

85% MRL: mgy, gyblk, sbblk
si brit, rhy, occ sft, v calc
15% CHK: lt-mgy - gybrn, mot sbblk, firm - brit, calc mtx



7500 ft

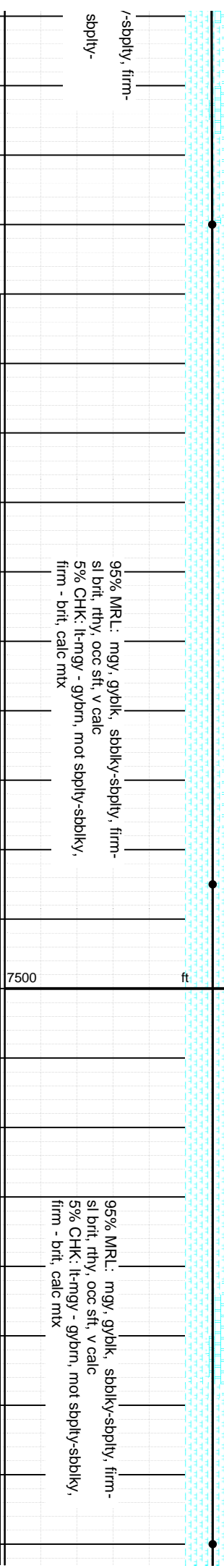
000 50 API 250



SURVEY
MD 9690'
INC 91.05°
AZM 89.09°
TVD 7212.70'

SURVEY
MD 9785'
INC 89.88°
AZM 90.25°
TVD 7211.93'

SURVEY
MD 9880'
INC 90.22°
AZM 90.7°
TVD 7211'

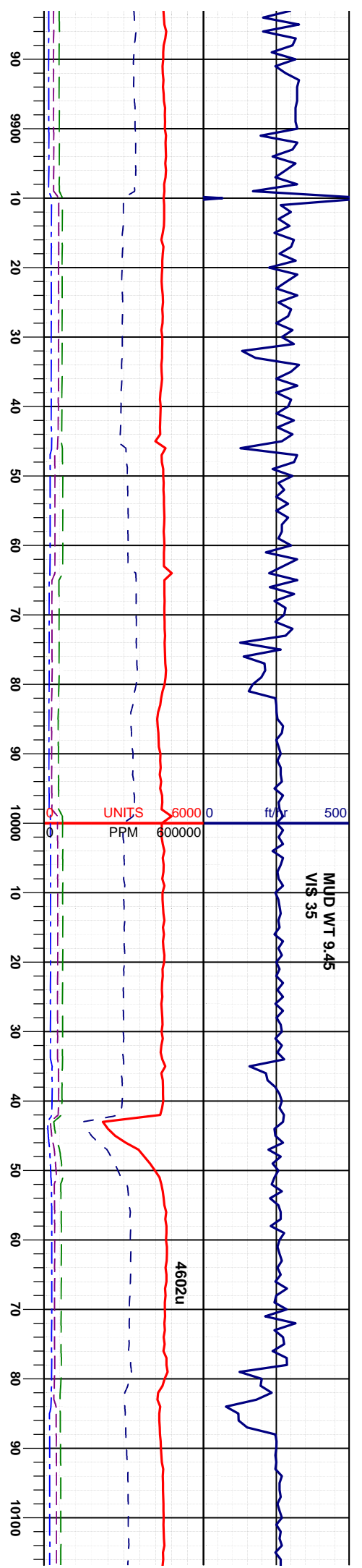


95% MRL: mgy, gyblk, sbbkly-sbply, firm-
sl brt, rhy, occ sft, v calc
5% CHK: lt-mgy - gybrn, mot sbply-sbbkly,
firm - brt, calc mtx

95% MRL: mgy, gyblk, sbbkly-sbply, firm-
sl brt, rhy, occ sft, v calc
5% CHK: lt-mgy - gybrn, mot sbply-sbbkly,
firm - brt, calc mtx

-sbply, firm-
sbply-





2°
5°
1.86'

SURVEY
MD 9975'
INC 89.85°
AZM 91.08°
TVD 7211.81'

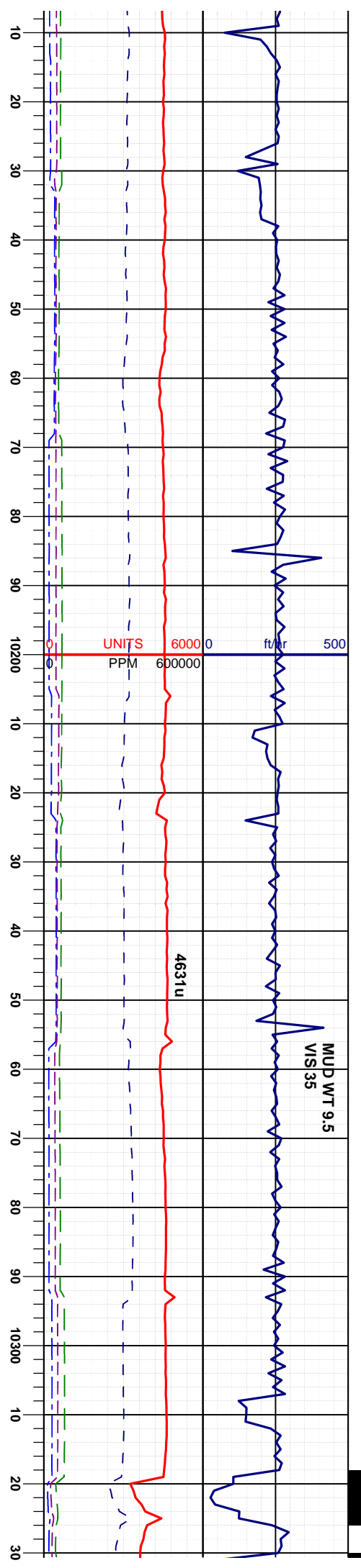
SURVEY
MD 10069'
INC 90.28°
AZM 90.99°
TVD 7211.70'

100% MRL: mgy, gyb/k, sbbkly-sbp/ly,
firm- sl brit, rthy, occ sft, v calc

100% MRL: mgy, gyb/k, sbbkly-sbp/ly,
firm- sl brit, rthy, occ sft, v calc

7500 ft 7000 50 API 250





SURVEY
MD 10164
INC 90.37°
AZM 91.36°
TVD 7211.17'

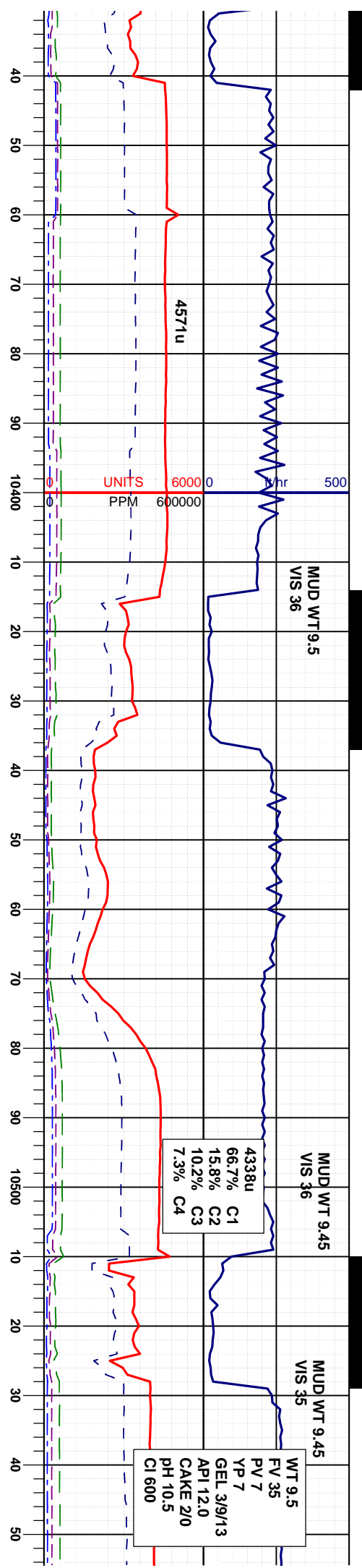
SURVEY
MD 10259
INC 90.37°
AZM 91.56°
TVD 7211.55'

90% MRL: mgy, gyblk, sbblky-sbply, firm-
sl brt, rthy, occ sft, v calc
10% CHK: lt-mgy - gybrn, mot sbply-
sbblky, firm - brt, calc mix

90% MRL: mgy, gyblk, sbblky-sbply, firm-
sl brt, rthy, occ sft, v calc
10% CHK: lt-mgy - gybrn, mot sbply-
sbblky, firm - brt, calc mix

7500 ft 7000 50 API 250





SURVEY
 MD 10354'
 INC 90.18°
 AZM 91.97°
 TVD 7210.09'

SURVEY
 MD 10449'
 INC 89.14°
 AZM 90.24°
 TVD 7210.66'

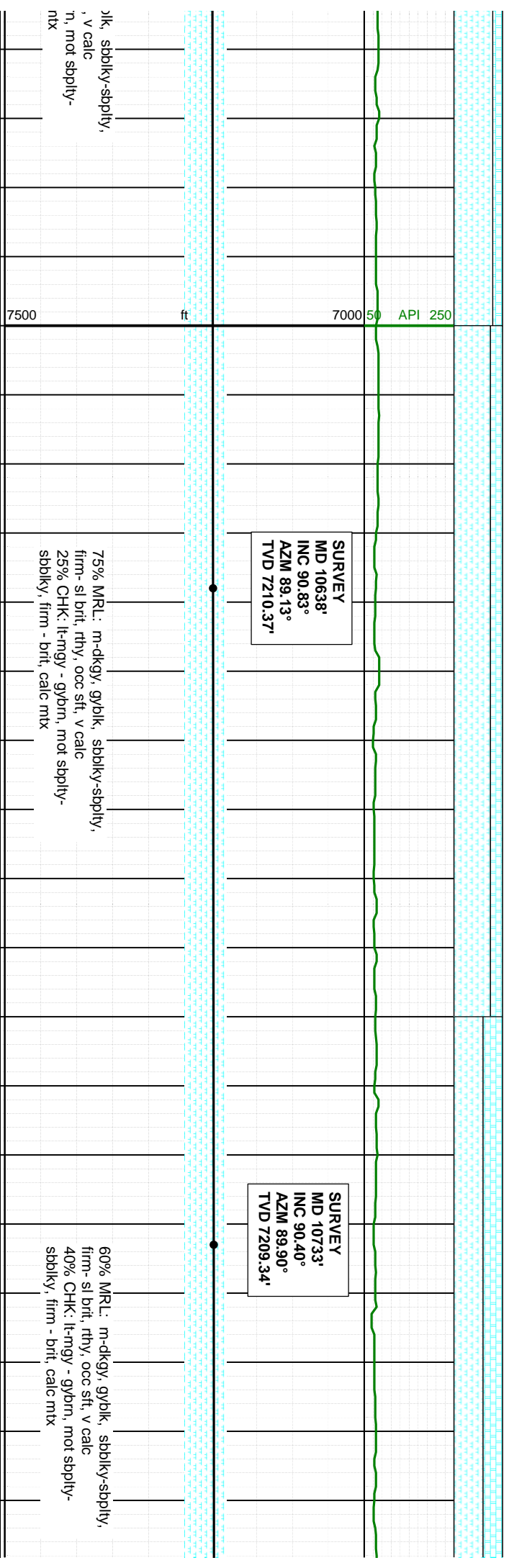
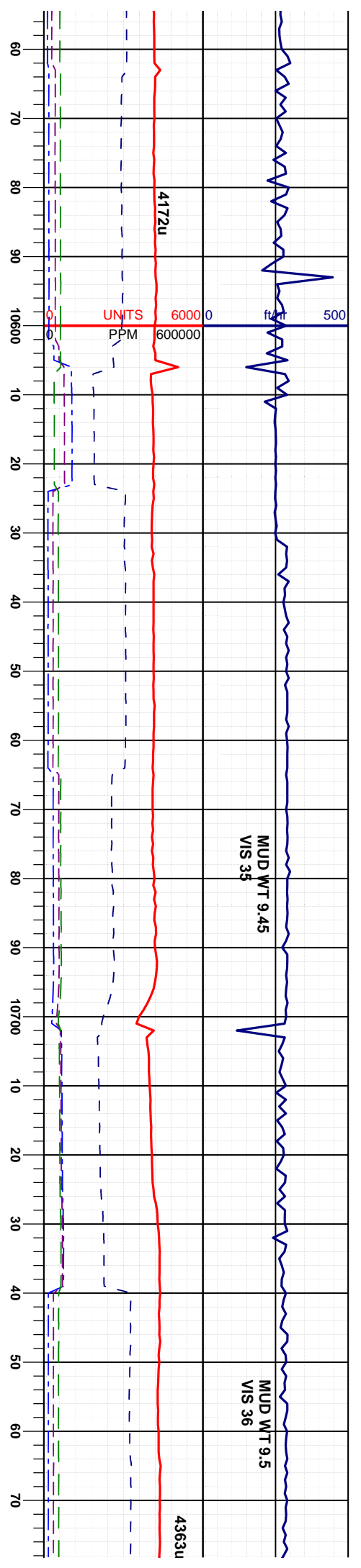
SURVEY
 MD 10543'
 INC 90.19°
 AZM 88.61°
 TVD 7211.21'

95% MRL: mgy, gyblk, sbblky-sbply, firm-sl brit, rthy, occ sft, v calc
 5% CHK: lt-mgy - gybrn, mot sbply-sbblky, firm - brit, calc mix

90% MRL: m-dkgy, gyblk, sbblky-sbply, firm-sl brit, rthy, occ sft, v calc
 10% CHK: lt-mgy - gybrn, mot sbply-sbblky, firm - brit, calc mix

80% MRL: m-dkgy, gylt firm-sl brit, rthy, occ sft
 20% CHK: lt-mgy - gybr sbblky, firm - brit, calc n

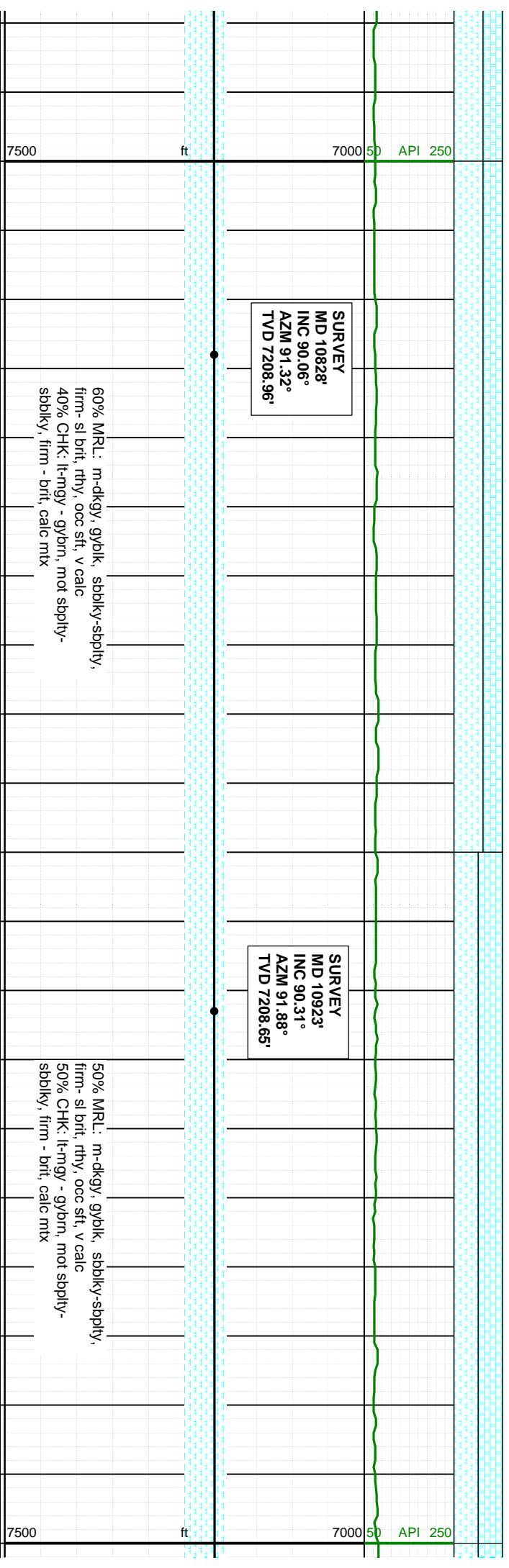
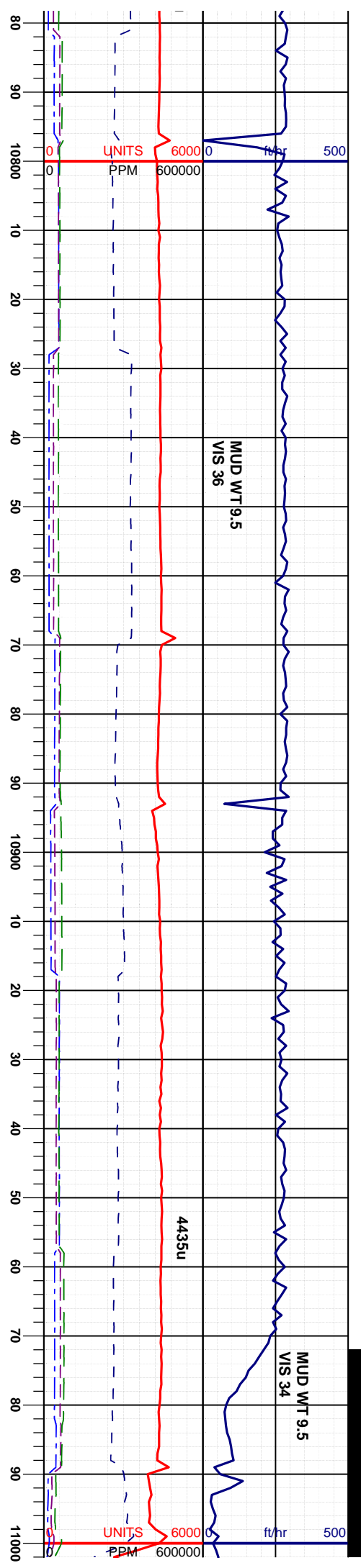




75% MRL: m-dkgy, gyblk, sbblky-sbply,
firm- sl brt, rthy, occ sft, v calc
25% CHK: lt-mgy - gybrn, mot sbply-
sbblky, firm - brt, calc mtx

60% MRL: m-dkgy, gyblk, sbblky-sbply,
firm- sl brt, rthy, occ sft, v calc
40% CHK: lt-mgy - gybrn, mot sbply-
sbblky, firm - brt, calc mtx





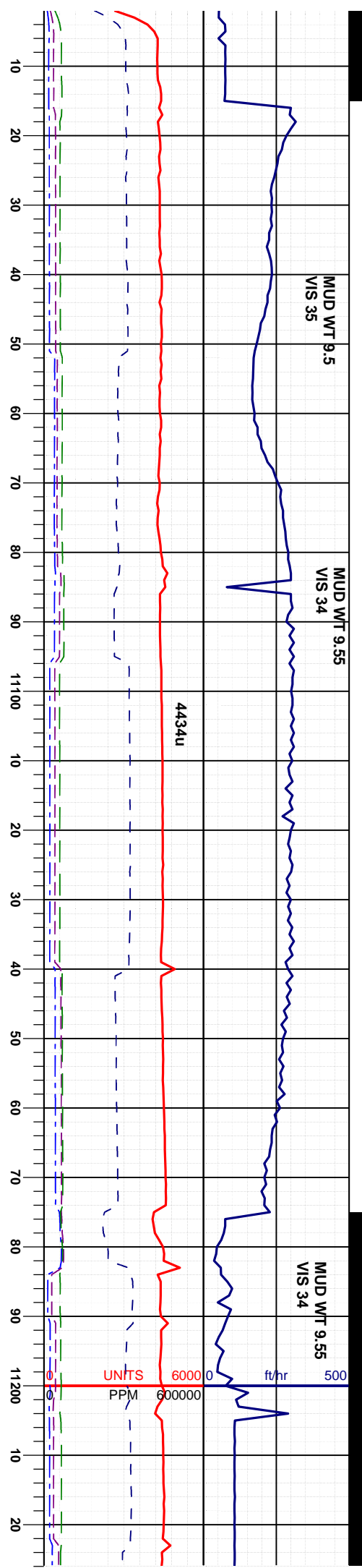
SURVEY
 MD 10828'
 INC 90.06°
 AZM 91.32°
 TVD 7208.96'

SURVEY
 MD 10923'
 INC 90.31°
 AZM 91.88°
 TVD 7208.65'

60% MRL: m-dkgy, gyblk, sbblky-sbply,
 firm- sl brit, rthy, occ sft, v calc
 40% CHK: lt-mgy - gybrn, mot sbply-
 sbblky, firm - brit, calc mtx

50% MRL: m-dkgy, gyblk, sbblky-sbply,
 firm- sl brit, rthy, occ sft, v calc
 50% CHK: lt-mgy - gybrn, mot sbply-
 sbblky, firm - brit, calc mtx





SURVEY
MD 11079'
INC 90.43°
AZM 90.96°
TVD 7208.04'

SURVEY
MD 11113'
INC 90.31°
AZM 91.96°
TVD 7207.43'

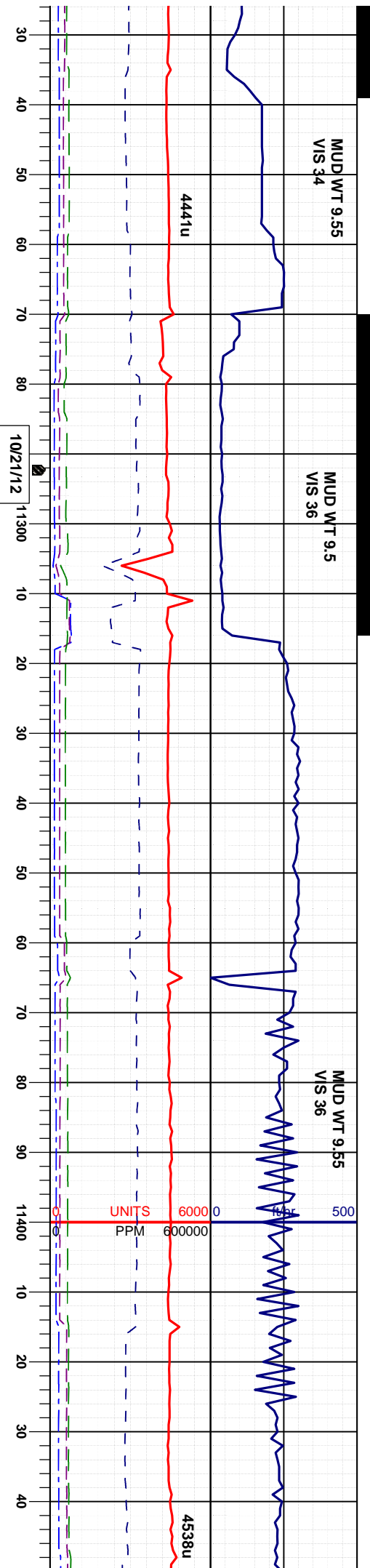
SURVEY
MD 11208'
INC 89.85°
AZM 91.21°
TVD 7207.30'

50% MRL: m-dkgy, gyblk, sbblky-sbply,
firm- sl brit, rthy, occ sft, v calc
50% CHK: lt-mgy - gybrn, mot sbply-
sbblky, firm - brit, calc mtx

50% MRL: m-dkgy, gyblk, sbblky-sbply,
firm- sl brit, rthy, occ sft, v calc
50% CHK: lt-mgy - gybrn, mot sbply-
sbblky, firm - brit, calc mtx

7500 ft 7000 50 API 250





SURVEY
MD 11303'
INC 88.89°
AZM 88.56°
TVD 7208.35'

SURVEY
MD 11398'
INC 88.86°
AZM 88.12°
TVD 7210.21'

60% MRL: m-dkgy, gybik, sbbiky-sbply,
firm- sl brit, rthy, occ sft, v calc
40% CHK: lt-mgy - gybrn, mot sbply-
sbbiky, firm - brit, calc mix

85% MRL: m-dkgy, gybik, sbbiky-sbply,
firm- sl brit, rthy, occ sft, v calc, occ calc
frags
15% CHK: lt-mgy - gybrn, mot sbply-
sbbiky, firm - brit, calc mix

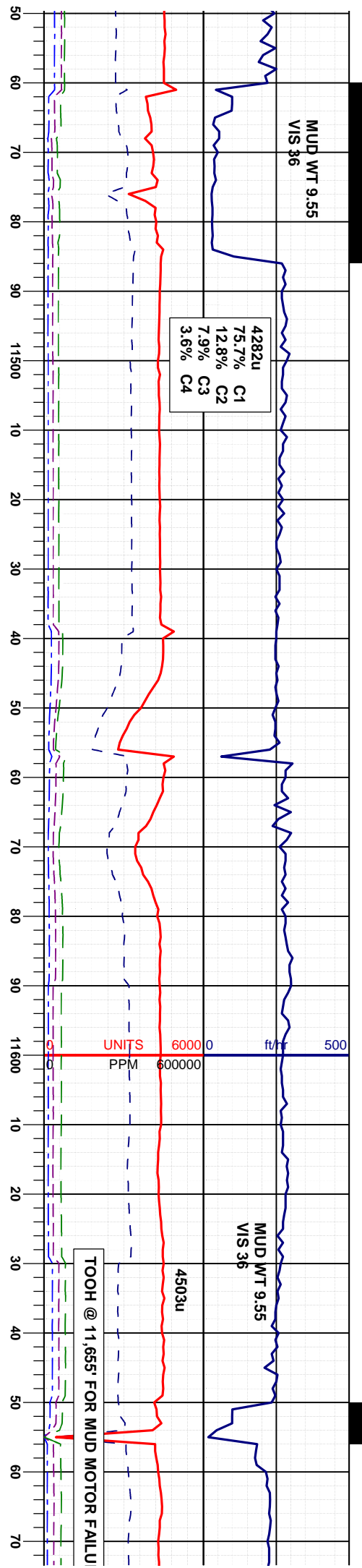
95% MRL: m-dkgy
firm- sl brit, rthy, oc
5% CHK: lt-mgy - s
firm - brit, calc mix

7500

ft

00 50 API 250





SURVEY
MD 11493'
INC 90.12°
AZM 87.75°
TVD 7211.06'

SURVEY
MD 11588'
INC 89.45°
AZM 86.90°
TVD 7211.41'

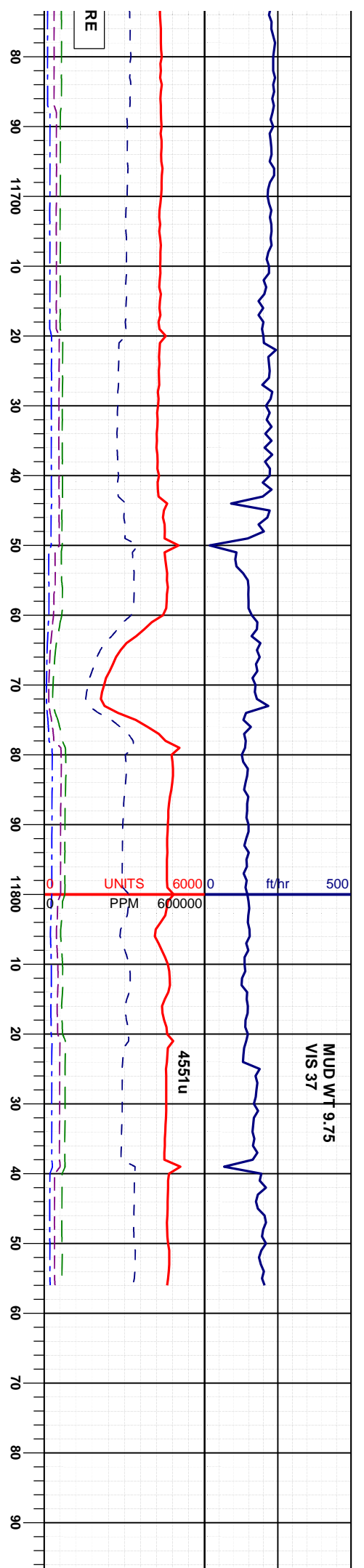
95% MRL: m-dkgy, gyblk, sbblky-sbply,
oc sft, v calc
gybrn, mot spply-sbblky,

95% MRL: m-dkgy, gyblk, sbblky-sbply,
firm-sl brit, rthy, occ sft, v calc
5% CHK: lt-mgy - gybrn, mot spply-sbblky,
firm - brit, calc mtx

95% MRL: m-dkgy, gyblk, sbblky-sbply,
firm-sl brit, rthy, occ sft, v calc
5% CHK: lt-mgy - gybrn, mot spply-sbblky,
firm - brit, calc mtx

7500 ft 7000 50 AP 250





SURVEY
MD 11,683'
INC 89.63°
AZM 87.68°
TVD 7212.18'

SURVEY
MD 11788'
INC 90.28°
AZM 88.09°
TVD 7212.26'

SURVEY
MD 11795'
INC 90.52°
AZM 87.85°
TVD 7212.14'

TD 11,856 REACHED 10:15 PM 10/21/12

95% MRL: m-dkgy, gyblk, sbblky-sbply,
firm-sl brit, rthy, occ sft, v calc
5% CHK: lt-mgy - gybrn, mot sbply-sbblky,
firm - brit, calc mix

95% MRL: m-dkgy, gyblk, sbblky-sbply,
firm-sl brit, rthy, occ sft, v calc
5% CHK: lt-mgy - gybrn, mot sbply-sbblky,
firm - brit, calc mix

7500





11900