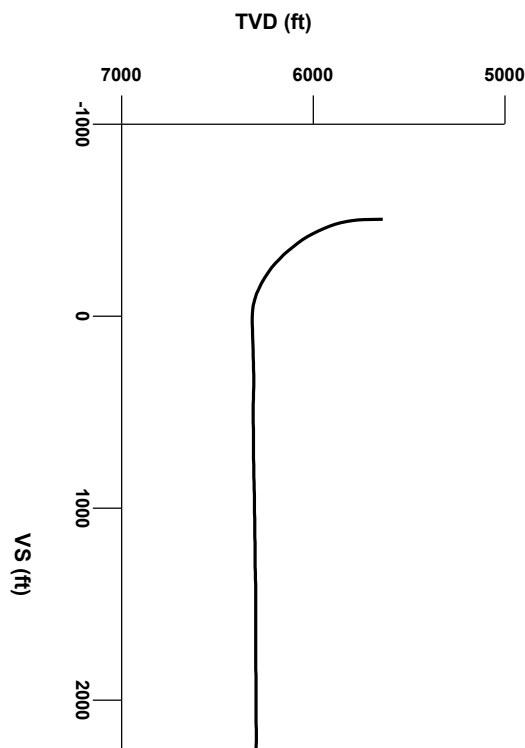




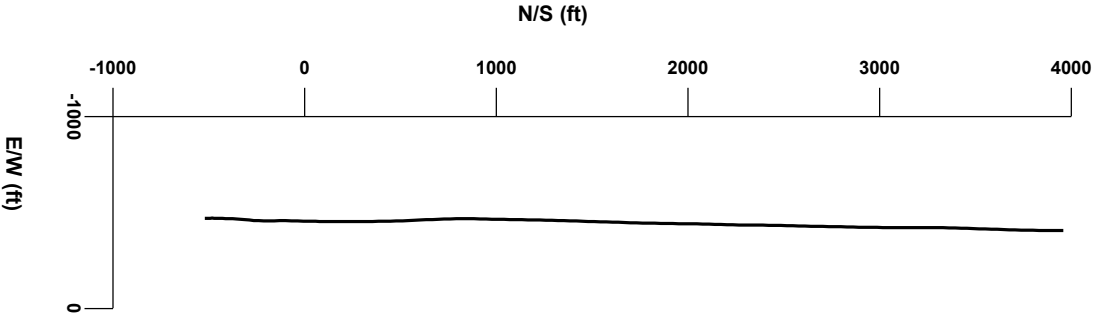
LOG created using LPLOT VH Version 3.0, October 30, 2012, Copyright (C) 1999-2009 Pason Systems Corp.

OPERATOR: BONANZA CREEK ENERGY, INC.
WELL: ANTELOPE J-21-16 XRL
LOCATION: SECTION 21, T5N, R62W
COUNTY: WELD
STATE: COLORADO
SPOT: 410' FSL x 1,937' FWL
ELEVATION: GL 4,634' KB 4,647'
FIELD: WATTENBERG
SPUD DATE: OCTOBER 19, 2012
TD DATE:
DATES LOGGED: OCTOBER 22 to , 2012
DEPTHS LOGGED: MD 5,744' to
LOGGERS: JOEY LUCE & JAKOB PAMMER
DRILLING FLUID: FW LSND
DRILLING RIG: ENSIGN 132
API: 05-123-36015
LOG TYPE: BUILD & EX TENDED LATERAL
SCALE: 1:240 (5 inches per 100 feet)
REMARKS: WELLSITE GEOLOGICAL SERVICES PROVIDED BY COLUMBINE LOGGING INC.



Survey Elevation

Survey Plan



3000

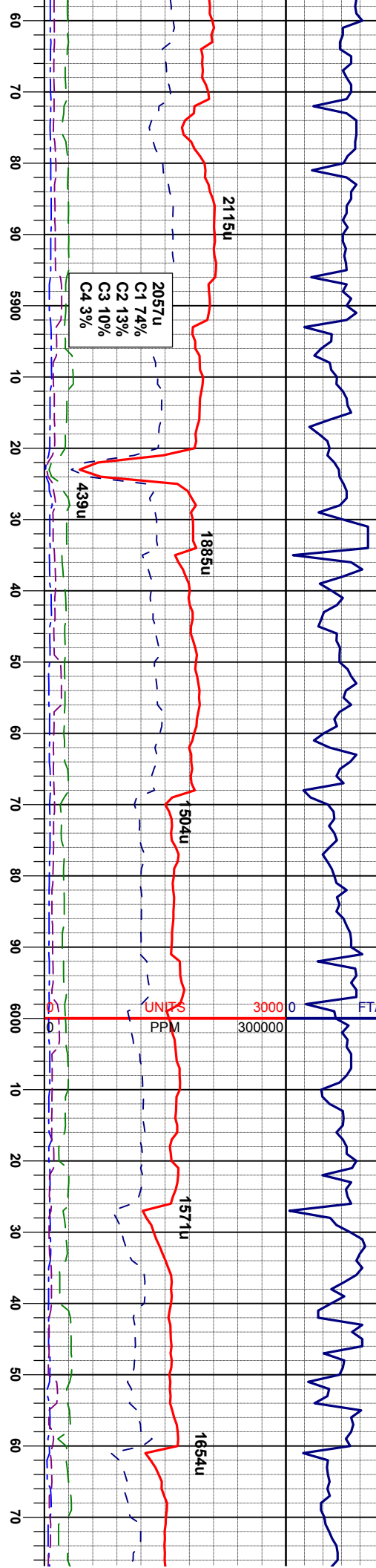
4000

MUD WT 9.7/9.7
VIS 41/49 (IN/OUT)

MUD WT 9.6+/9.6+
VIS 41/48 (IN/OUT)

MUD WT 9.6/9.5
VIS 41/45 (IN/OUT)

MUD WT 9.5/9.4
VIS 43/48 (IN/OUT)



MD: 5885'
INC: 10.7°
AZM: 0°
TVD: 5826'

MD: 5917'
INC: 14.2°
AZM: 359.3°
TVD: 5857'

MD: 5948'
INC: 17.4°
AZM: 358.8°
TVD: 5887'

MD: 5979'
INC: 20°
AZM: 0.5°
TVD: 5917'

MD: 6010'
INC: 22.9°
AZM: 2.5°
TVD: 5946'

MD: 6042'
INC: 25.6°
AZM: 2.5°
TVD: 5975'

MD: 6073'
INC: 27.9°
AZM: 1.6°
TVD: 6000'

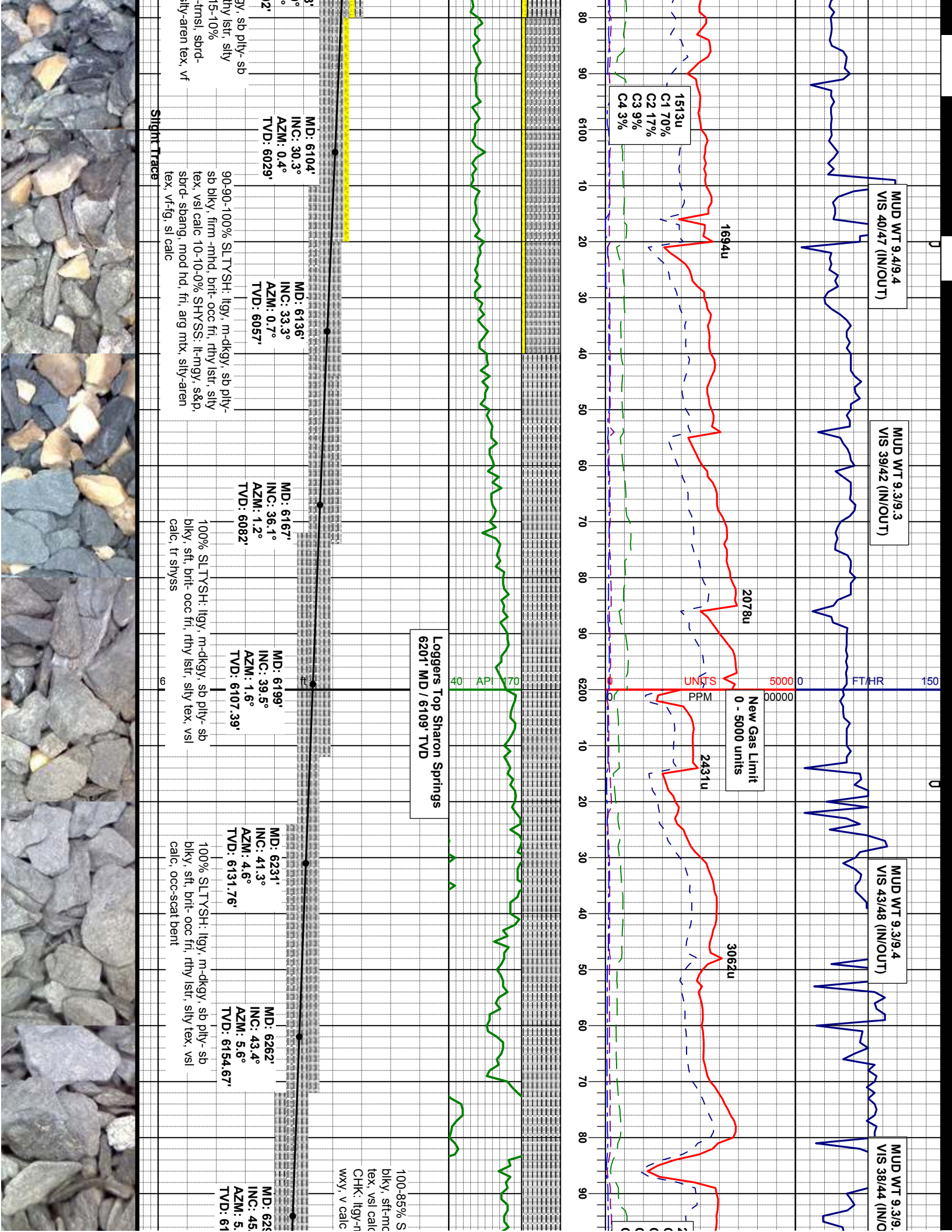
70-65-75% SLTYSH: ltgy -dkgy, sb pily-sb blk, firm, rthy lstr, silty tex, v sl calc 20-20-10% SHYSS: lt-mgy, s&p, sbnd-sbang, mod hd, fri, arg mtx, fgr, grdg ss, sl calc 10-15-25%. SS: wh -clr, occ s&p, sbnd-sblkly, mod hd, fri, arg mtx, c gr, tr glauc, sl calc

80-80-85% SLTYSH: ltgy -dkgy, sme bnd blk, sb pily-sb blk, firm -mhd, occ fri, rthy lstr, silty tex, vsi calc, occ slst, grdg-shyss 10-20-15% SHYSS: lt-mgy, s&p, sbnd-sbang, mod hd, fri, arg mtx, vf-fgr, grdg ss, sl calc 10-0-0% SS: wh -clr, occ s&p, sbnd-sbang, mod hd, fri, arg mtx, f-cl gr, sl calc

80-80-75% SLTYSH: ltgy -mgy, sb pily-sb blk, firm -mhd, brt- occ fri, rthy lstr, silty tex, vsi calc, grdg-shyss 20-20-25% SHYSS: lt-mgy, s&p, sbnd-sbang, mod hd, fri, arg mtx, vf-fg, calc, occ intbd

80-85-90% SLTYSH: ltgy -mgy, blk, firm -mhd, brt- occ fri, rthy lstr, silty tex, vsi calc, grdg-shyss 20-20-10% SHYSS: lt-mgy, s&p, sme clr sbang, mod hd, fri, arg mtx, s -fg, calc





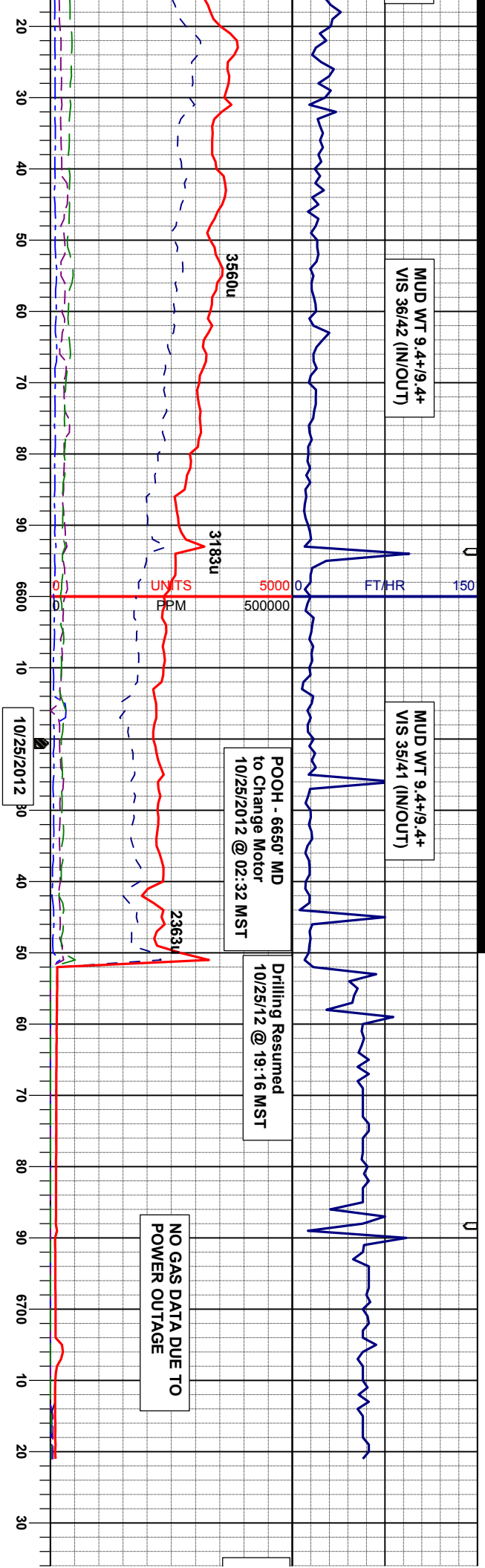
MUD WT 9.4+/9.4+
VIS 36/42 (IN/OUT)

MUD WT 9.4+/9.4+
VIS 35/41 (IN/OUT)

POOH - 6650' MD
to Change Motor
10/25/2012 @ 02:32 MST

Drilling Resumed
10/25/12 @ 19:16 MST

NO GAS DATA DUE TO
POWER OUTAGE



Loggers Top Nio B Marl
6547' MD / 6307' TVD

60-55-40% CHK: ltgy-mgy, stri, mot, sft,
sbply-sbblky, rthy lstr, occ intbd fos, v calc
40-45-60% MRL: dkgy-blk, mot, sft, sbply-
sbblky, rthy lstr, occ intbd fos, v calc, occ
bent

65-85-95% MRL: dkgy-blk, mot, sft, sbply-
sbblky, rthy lstr, tr intbd fos, v calc, occ bent
35-15-5% CHK: ltgy-mgy, stri, mot, sft,
sbply-sbblky, rthy lstr, occ intbd fos, v calc,
tr-scat inoc

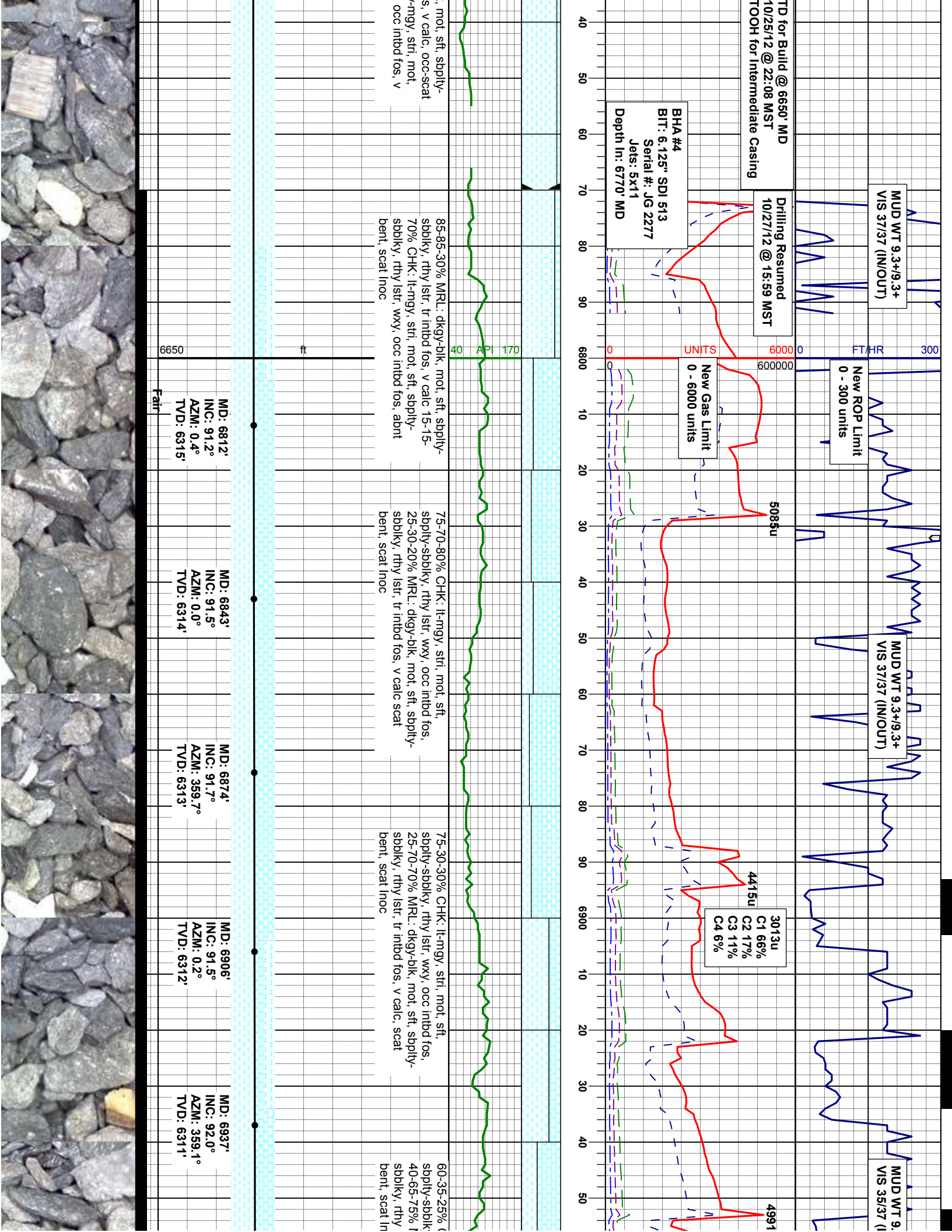
95-90-90% MRL: dkgy-blk, mot, sft, sbply-
sbblky, rthy lstr, tr intbd fos, v calc, scat
bent 5-10-10% CHK: ltgy-mgy, stri, mot, sft,
sbply-sbblky, rthy lstr, occ intbd fos, v calc,
scat-tr inoc

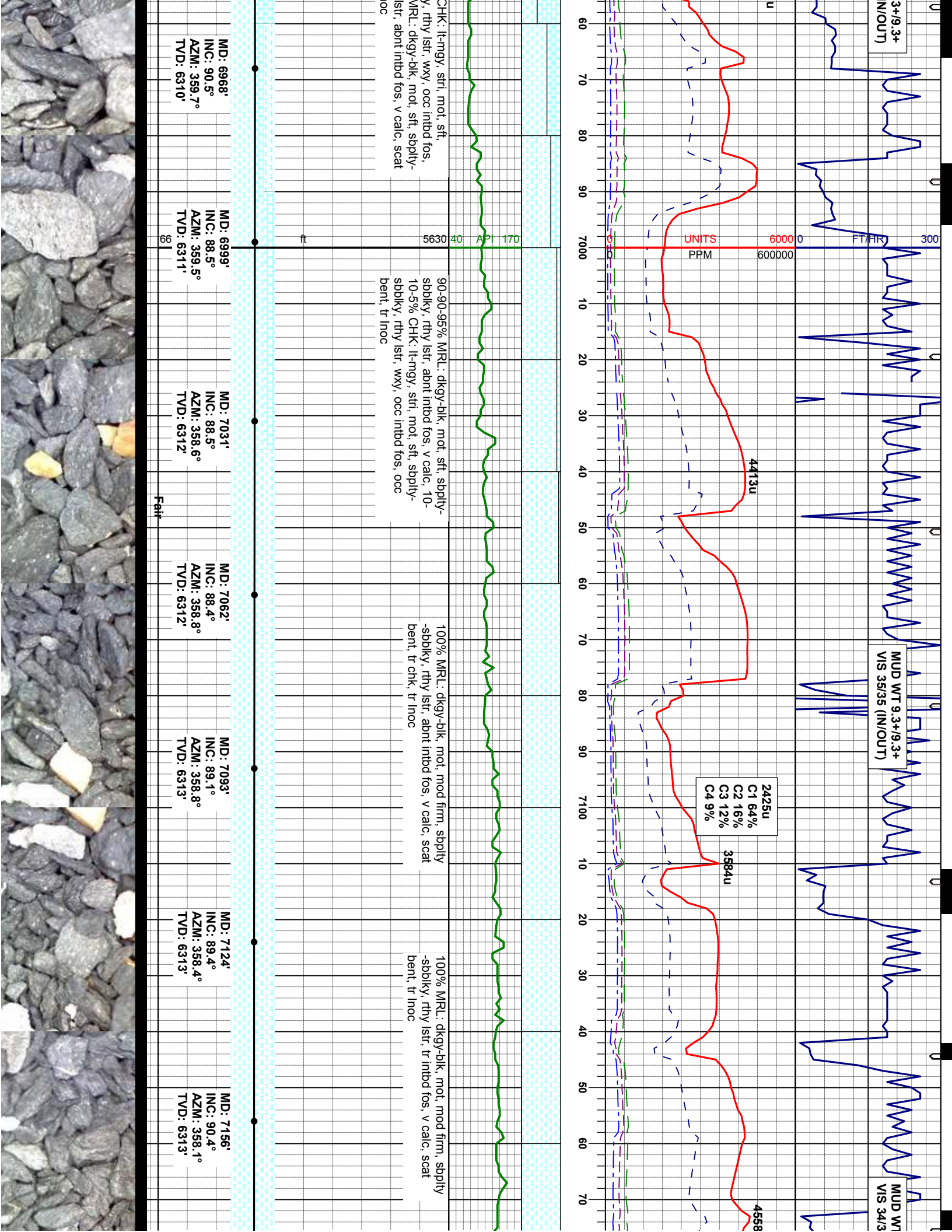
85-90-90% MRL: dkgy-blk
sbblky, rthy lstr, tr intbd fo
bent 15-10-10% CHK: ltgy
sft, sbply-sbblky, rthy lstr,
calc, occ-tr inoc

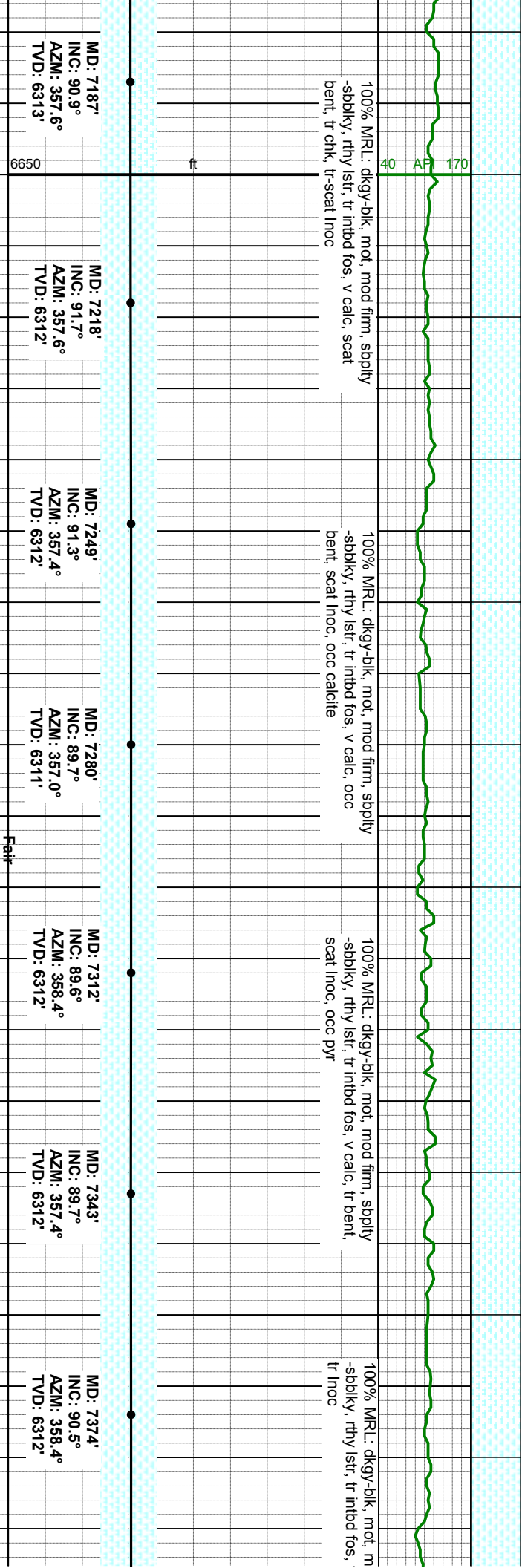
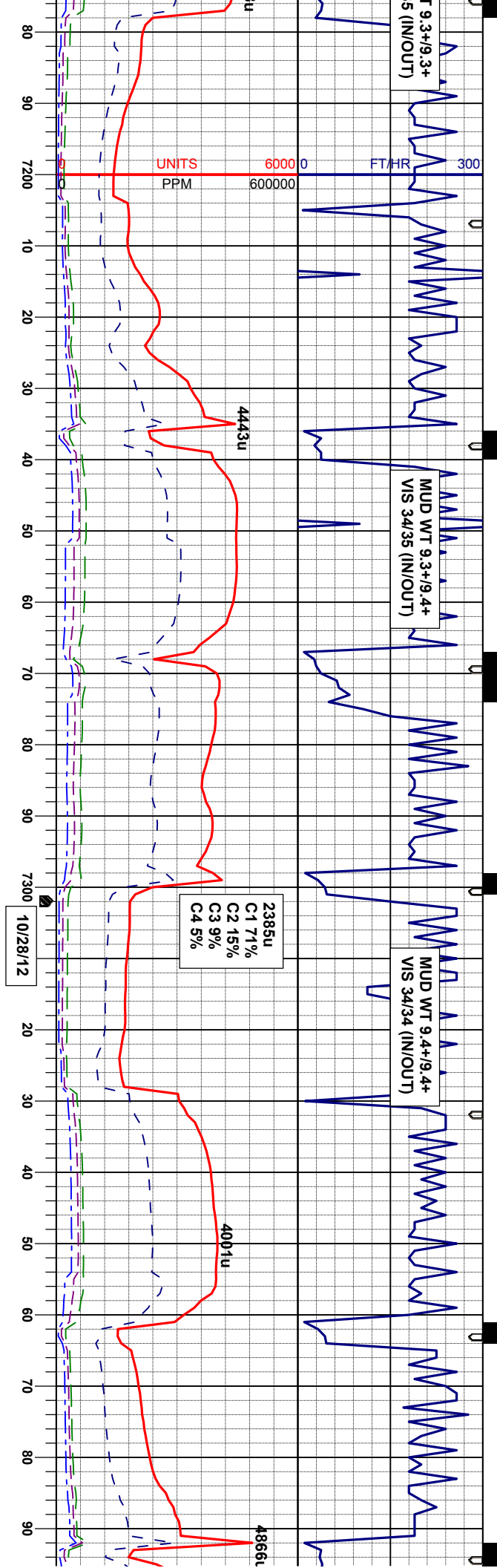
MD: 6544' INC: 74.3° AZM: 0.5° TVD: 6306'	MD: 6576' INC: 79.8° AZM: 1.1° TVD: 6313'	MD: 6608' INC: 85.1° AZM: 1.2° TVD: 6318'	MD: 6639' INC: 90.9° AZM: 1.8° TVD: 6319'	MD: 6670' INC: 91.7° AZM: 1.2° TVD: 6318'	MD: 6702' INC: 91.4° AZM: 1.1° TVD: 6317'	MD: 6722' INC: 91.4° AZM: 0.9° TVD: 6316'
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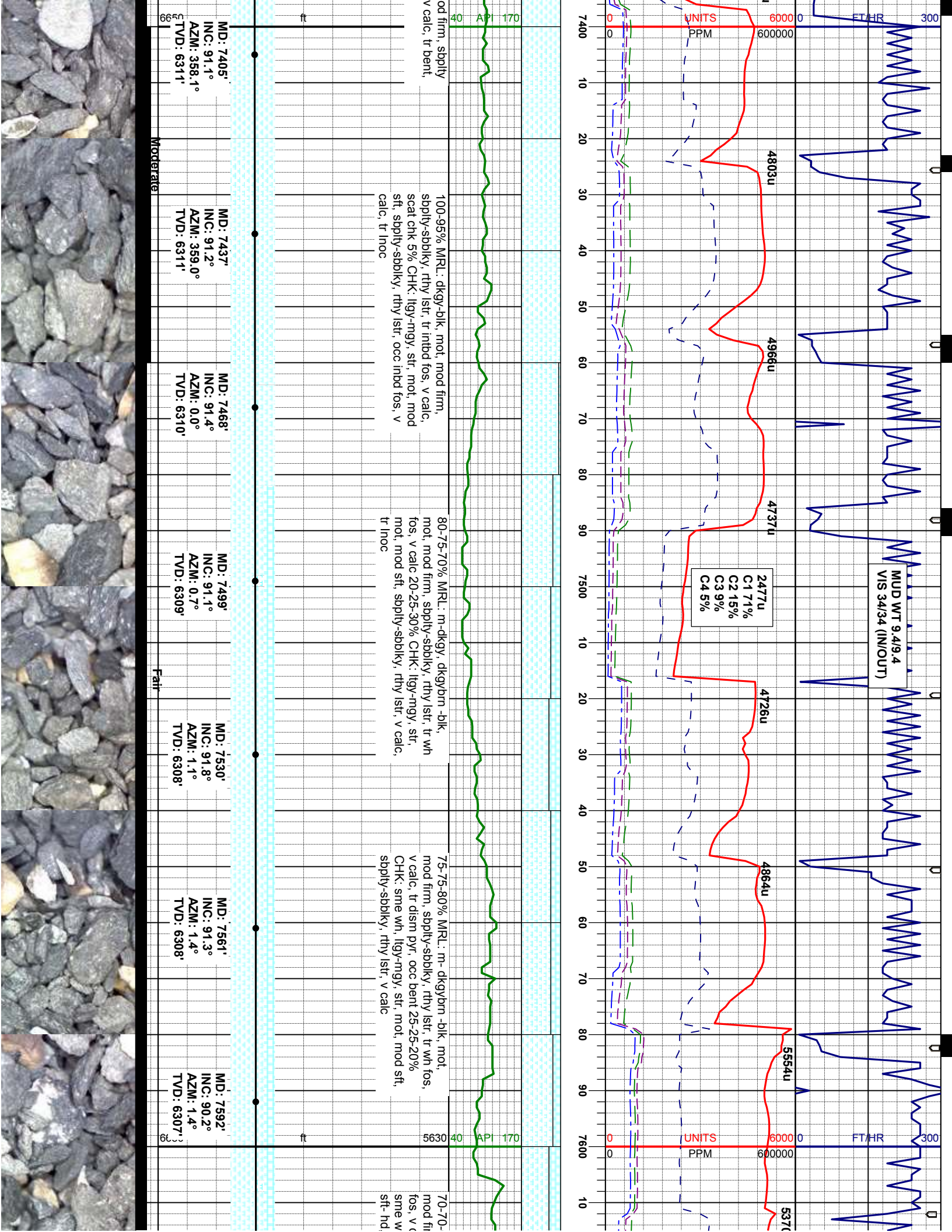
Slight Trace

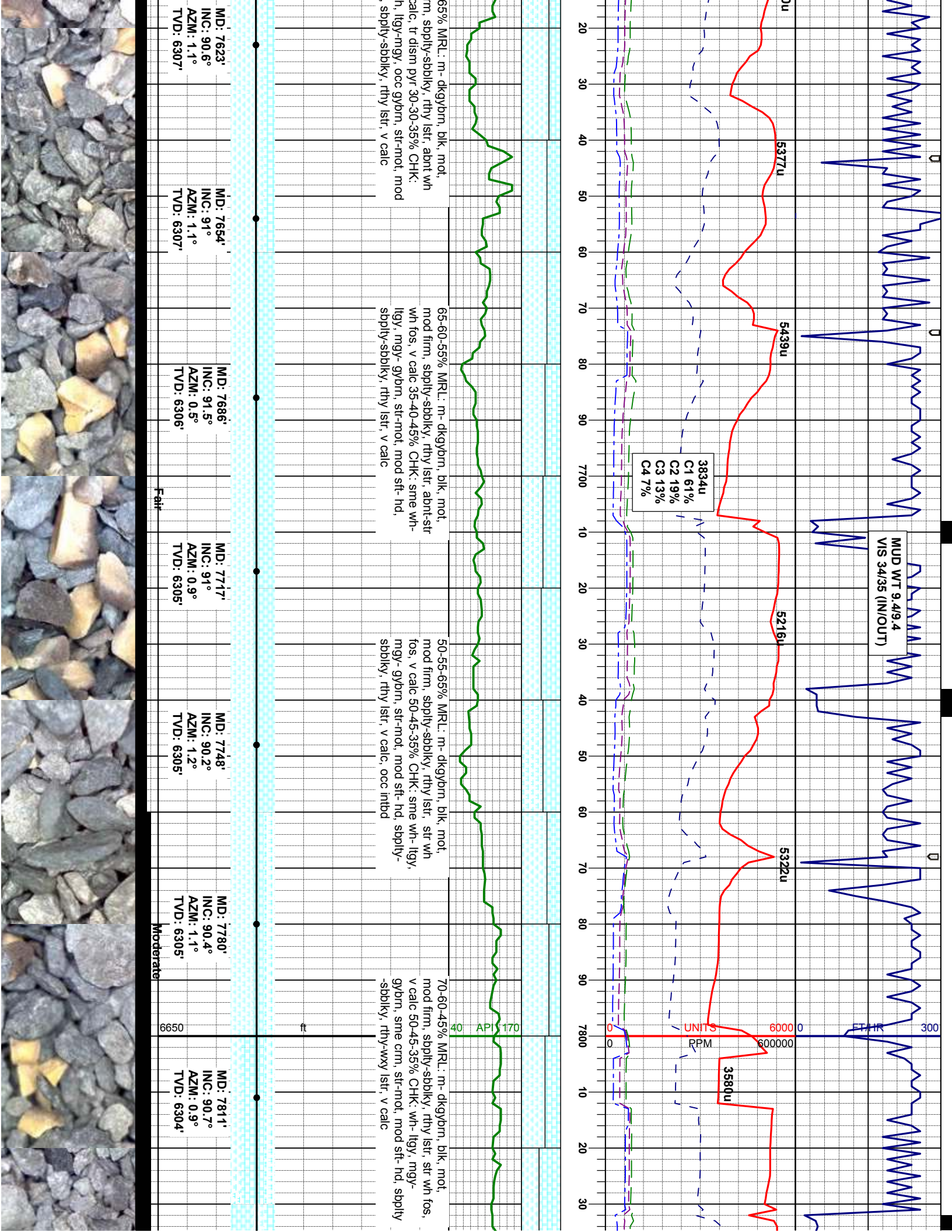


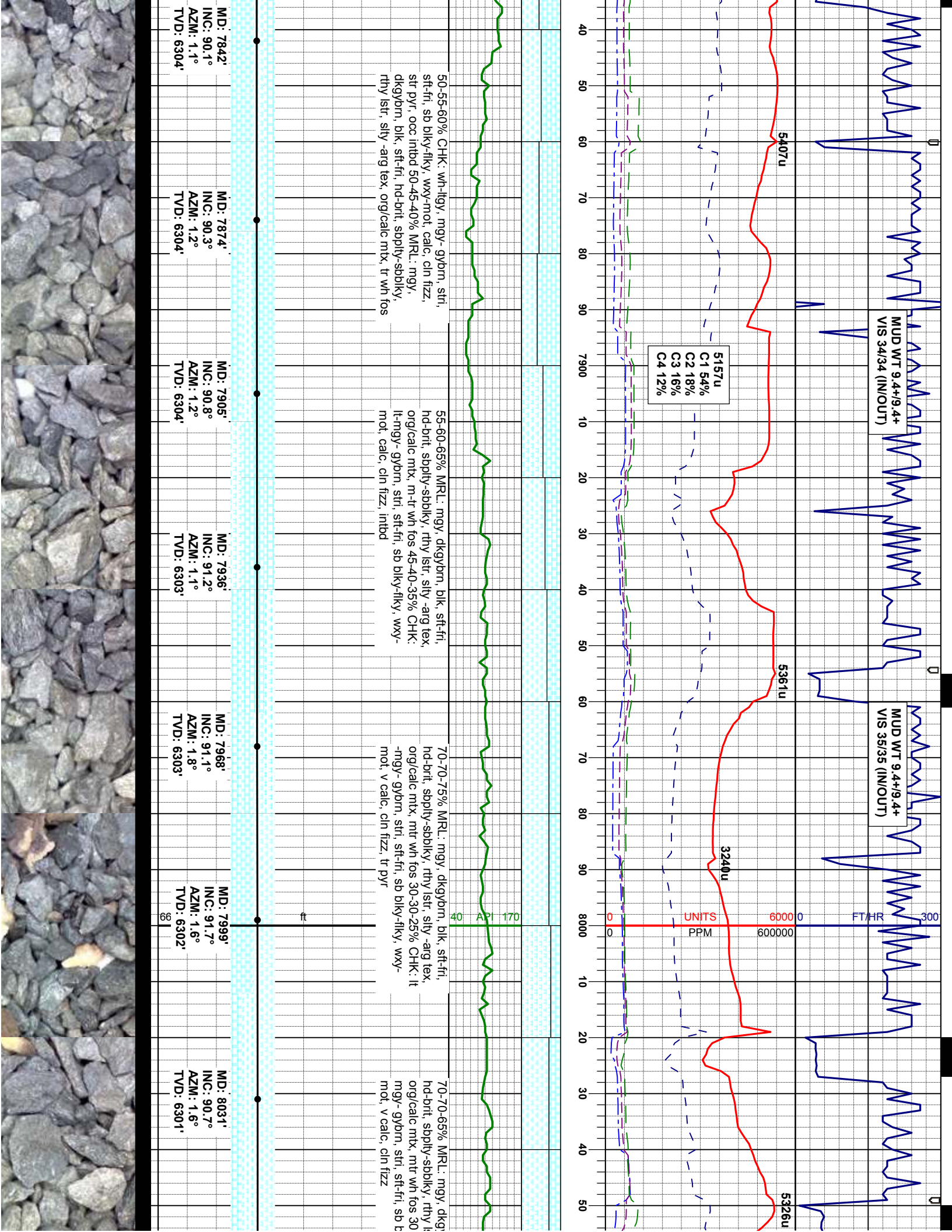




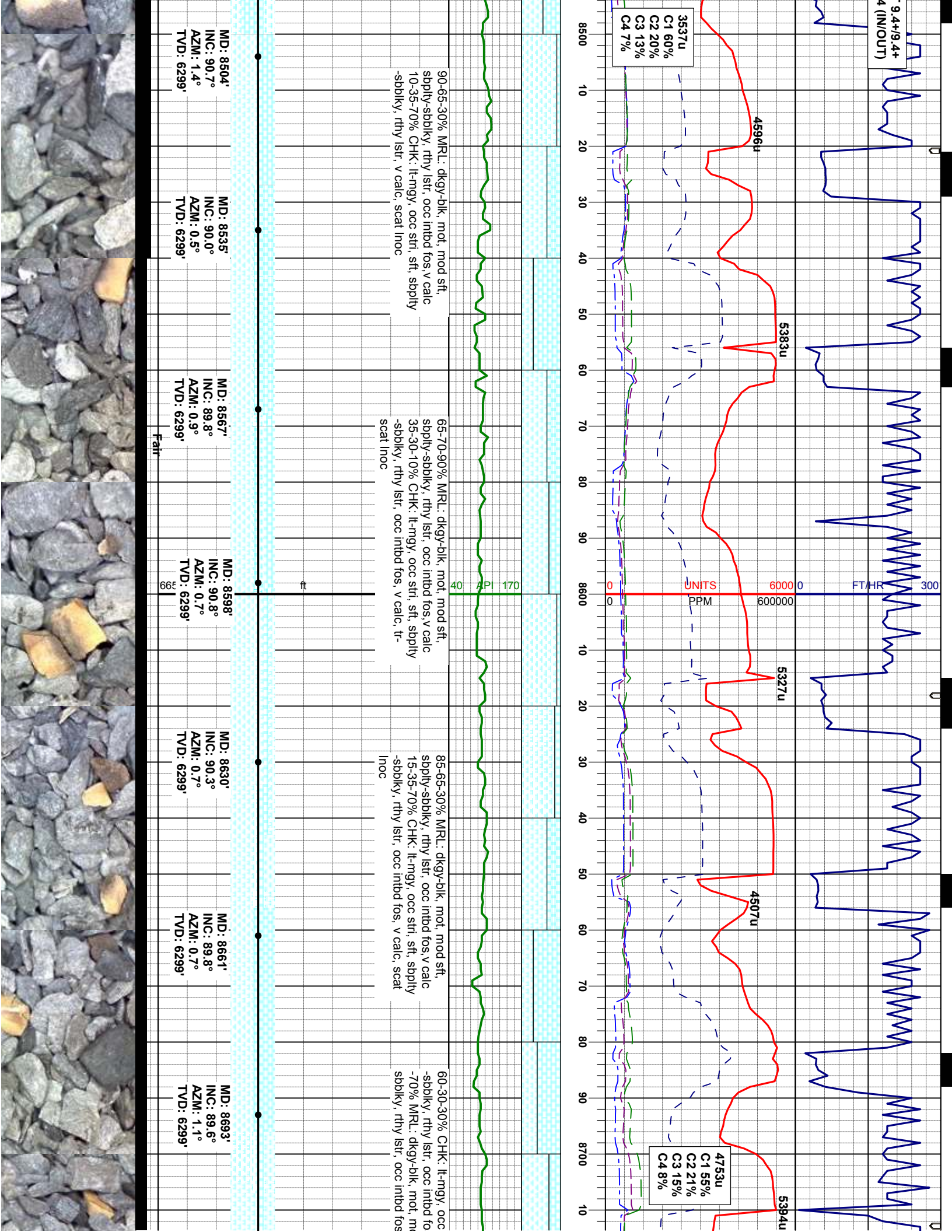


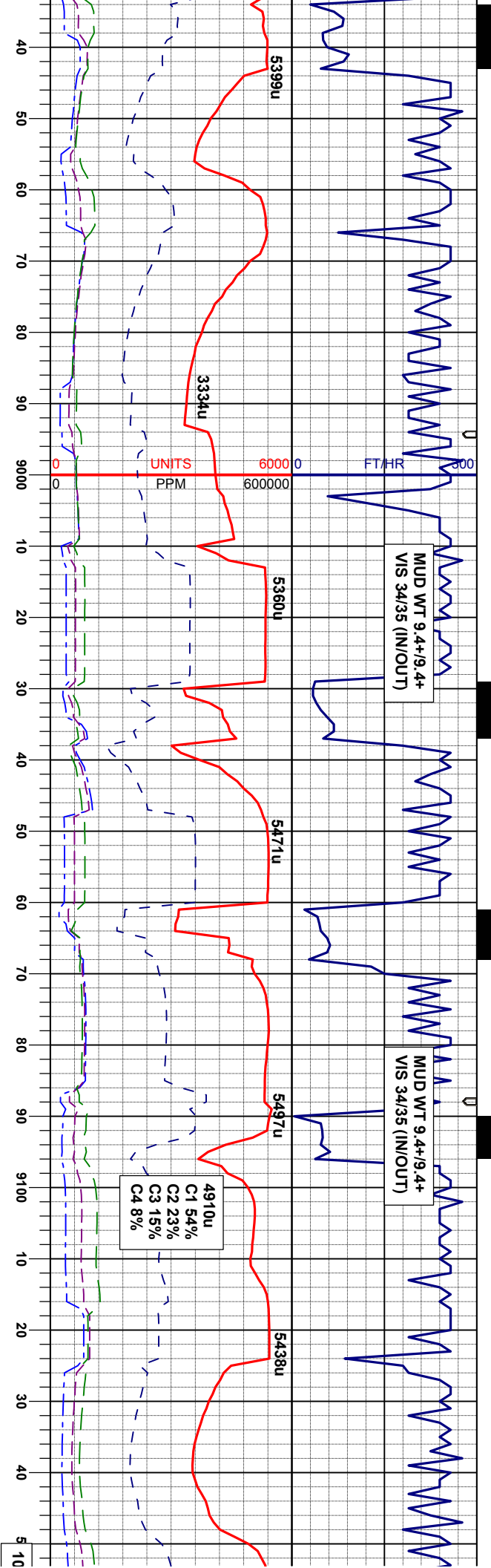






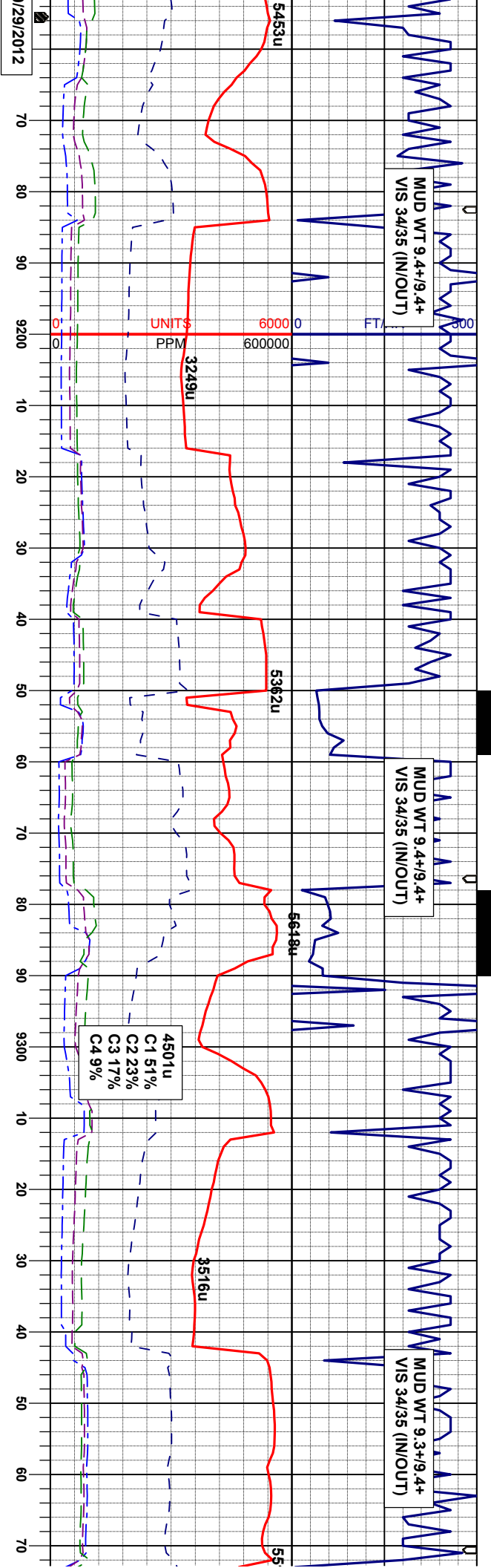






45% MRU: dkgy-blk, mot, mod sft, -sbbky, rthy istr, occ inbtd fos, v calc		55-60-65% MRU: dkgy-blk, mot, mod sft- mod firm, sbply-sbbky, rthy istr, occ inbtd fos, v calc		60-40-20% MRU: dkgy-blk, mot, mod sft- mod firm, sbply-sbbky, rthy istr, occ inbtd fos, v calc		95-90-90% CHK: lt-mgy, occ stri, mod sft, sbply-sbbky, rthy istr, occ inbtd fos, v calc	
55% CHK: lt-mgy, occ stri, sft, sbply y, rthy istr, occ inbtd fos, v calc, tr		55% CHK: lt-mgy, occ stri, sft, sbply-sbbky, rthy istr, occ inbtd fos, v calc, tr inoc		60-40-20% MRU: dkgy-blk, mot, mod sft- mod firm, sbply-sbbky, rthy istr, occ inbtd fos, v calc 40-60-80% CHK: lt-mgy, occ stri, sft, sbply-sbbky, rthy istr, occ inbtd fos, v calc, tr-scat inoc, tr bent		95-90-90% CHK: lt-mgy, occ stri, mod sft, sbply-sbbky, rthy istr, occ inbtd fos, v calc 5-10-10% MRU: dkgy-blk, mot, mod sft, sbply-sbbky, rthy istr, occ inbtd fos, v calc, tr inoc	
MD: 8943' INC: 89.4° AZM: 0.2° TVD: 6298'	MD: 8974' INC: 89.7° AZM: 359.8° TVD: 6299'	MD: 9005' INC: 90.5° AZM: 0.2° TVD: 6299'	MD: 9037' INC: 90.0° AZM: 0.5° TVD: 6299'	MD: 9068' INC: 89.3° AZM: 0.7° TVD: 6299'	MD: 9099' INC: 88.5° AZM: 1.2° TVD: 6299'	MD: 9131' INC: 88.8° AZM: 1.2° TVD: 6300'	
Moderate		Moderate		Moderate		Moderate	





90-90-90% CHK: lt-mgy, occ stri, mod sft, sbply-sbply, rthy lstr, scat intbd fos, v calc 10-10-10% MRL: dkgy-blk, mot, mod sft, sbply-sbply, rthy lstr, occ intbd fos, v calc, tr inoc

85-85-95% CHK: lt-mgy, occ stri, mod sft, sbply-sbply, rthy lstr, scat intbd fos, v calc 15-15-5% MRL: dkgy-blk, mot, mod sft, sbply-sbply, rthy lstr, occ intbd fos, v calc, tr bent, tr inoc

95-95-95% CHK: lt-mgy, occ stri, mod sft, sbply-sbply, rthy lstr, scat intbd fos, v calc 5-5-5% MRL: dkgy-blk, mot, mod sft, sbply-sbply, rthy lstr, occ intbd fos, v calc, occ bent, tr inoc

95-95-90% CHK: lt-mgy, sbply-sbply, rthy lstr, 5-5-10% MRL: dkgy-blk, sbply-sbply, rthy lstr, tr inoc

MD: 9162' INC: 89.3° AZM: 1.2° TVD: 6301'

MD: 9194' INC: 89.5° AZM: 1.6° TVD: 6301'

MD: 9225' INC: 90.0° AZM: 2.1° TVD: 6301'

MD: 9256' INC: 90.0° AZM: 1.2° TVD: 6301'

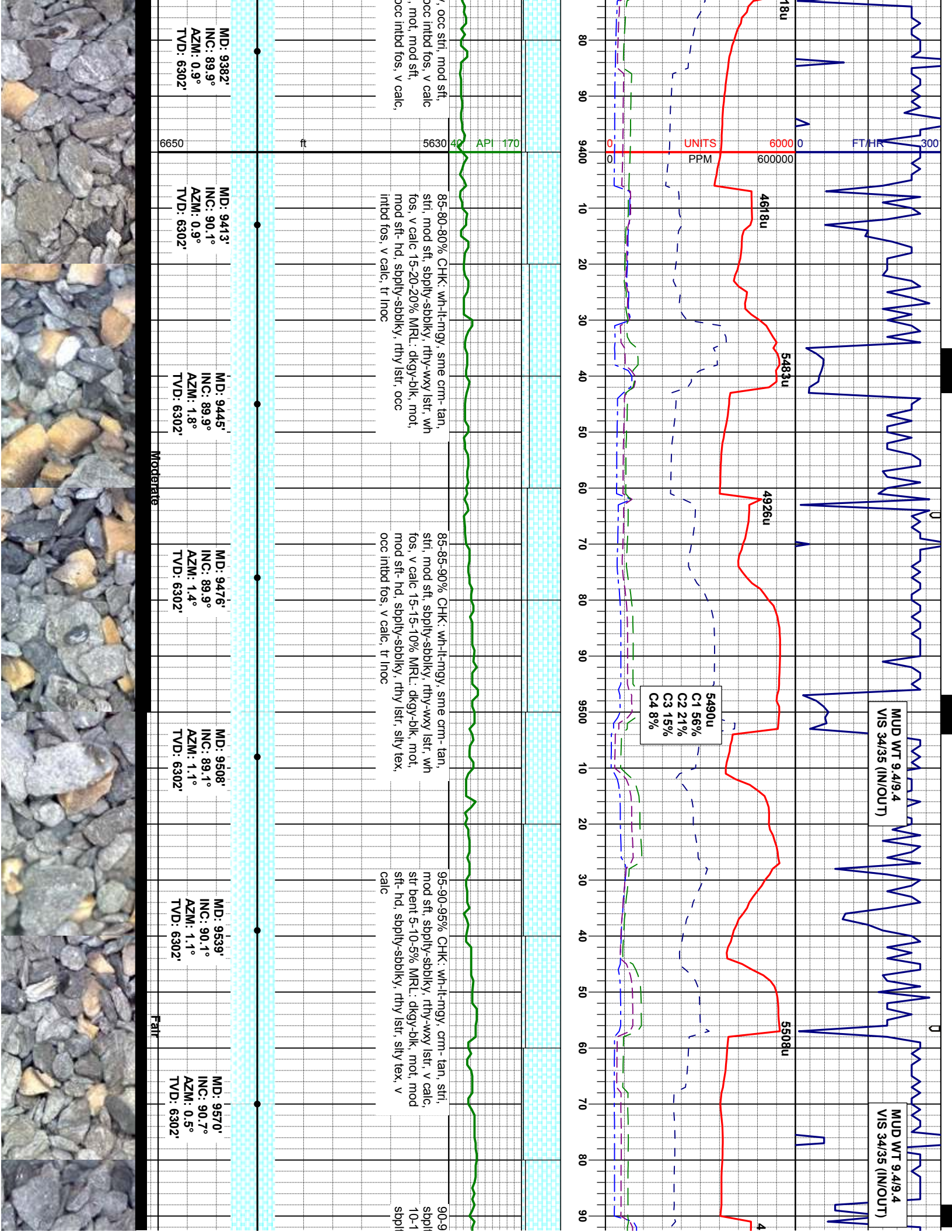
MD: 9288' INC: 89.0° AZM: 1.1° TVD: 6301'

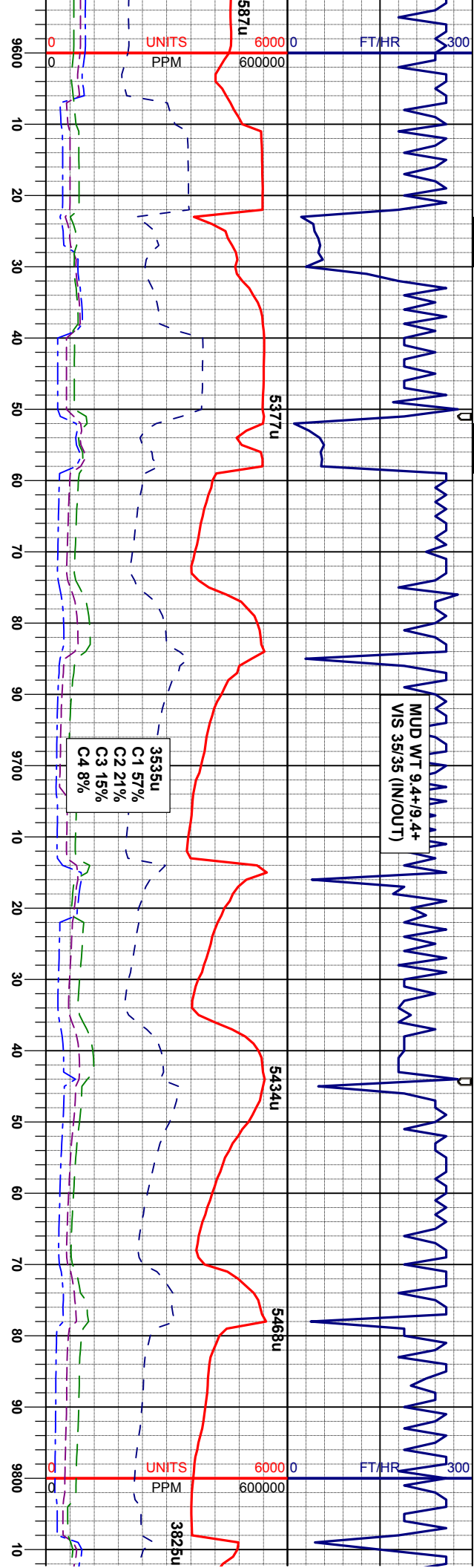
MD: 9319' INC: 89.3° AZM: 1.1° TVD: 6302'

MD: 9350' INC: 89.6° AZM: 0.7° TVD: 6302'

Moderate







0-85% CHK: wh-lt-mgy, stri, mod sft, rly-sbblky, rthy-wxy istr, v calc, vstr bent 0-15% MRL: m-dkgy, mot, mod sft-hd, rly-sbblky, rthy istr, silty tex, v calc

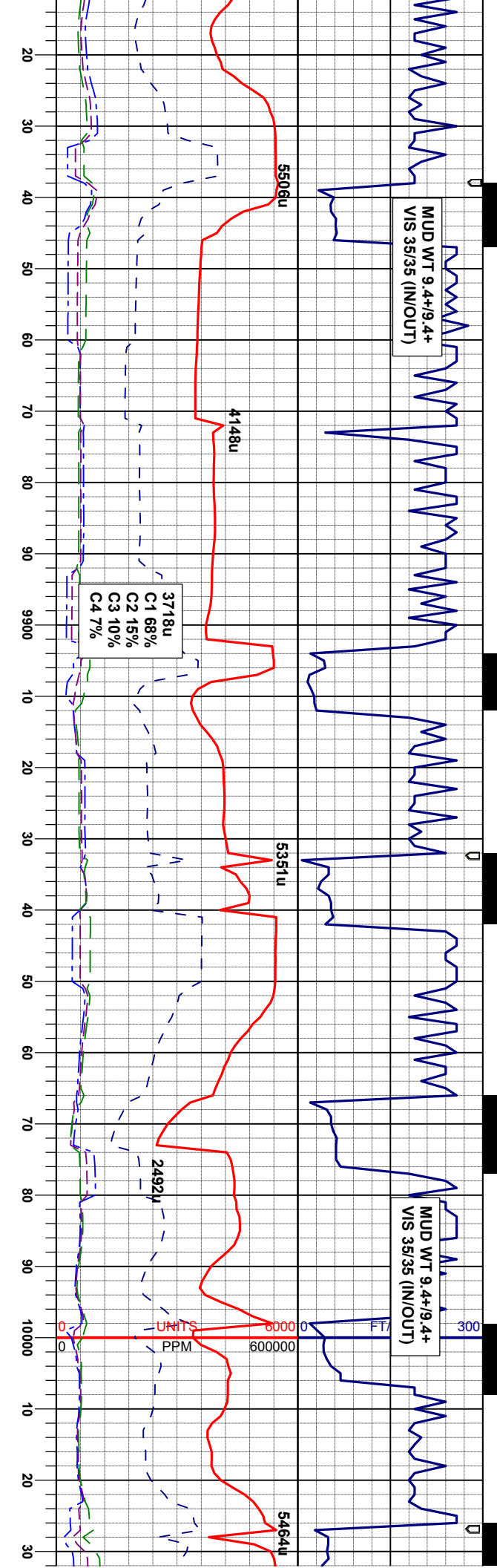
80-65-50% CHK: lt-mgy-gybrn, stri, mod sft, sbply-sbblky, rthy-wxy istr, v calc, vstr bent 20-35-50% MRL: m-dkgy-blk, mot, mod sft-hd, sbply-sbblky, rthy istr, silty tex, v calc

55-60-70% MRL: m-dkgy-blk, mot, mod sft-hd, sbply-sbblky, rthy istr, silty tex, v calc, tr inoc, scat intbd fos 45-40-30% CHK: mgy-gybrn, stri, mod sft, sbply-sbblky, rthy istr, v calc, occ intbd

70-70-60% MRL: m-dkgy-blk, mot, mod sft-hd, sbply-sbblky, rthy istr, silty tex, v calc, tr inoc 30-30-40% CHK: mgy-gybrn, occ llyg, stri, mod sft, sbply-sbblky, rthy istr, v calc, occ intbd

ft		ft		ft		ft	
MD: 9601'	INC: 90.7°	MD: 9633'	INC: 90.1°	MD: 9664'	INC: 89.5°	MD: 9695'	INC: 89.7°
AZM: 0.9°	TVD: 6302'	AZM: 0.9°	TVD: 6302'	AZM: 0.4°	TVD: 6302'	AZM: 0.5°	TVD: 6302'
Moderate							
MD: 9726'		MD: 9757'		MD: 9789'			
INC: 89.9°		INC: 89.6°		INC: 89.8°			
AZM: 0.4°		AZM: 0.4°		AZM: 359.7°			
TVD: 6302'		TVD: 6302'		TVD: 6302'			
6650							





65-70-75% MRL: m-dkgy-blk, mot, mod sft-hd, sbply-sbblky, rthy lstr, silty tex, v calc, tr inoc 35-30-25% CHK: mgv-gybrn, occ ltgy, stn, mod sft, sbply-sbblky, rthy lstr, v calc, occ inbtd

70-65-70% MRL: m-dkgy-blk, mot, mod sft-hd, sbply-sbblky, rthy lstr, silty tex, v calc, str inoc 30-35-30% CHK: mgv-gybrn, occ ltgy, stn, mod sft, sbply-sbblky, rthy lstr, v calc, inbtd

70-60-50% MRL: m-dkgy-blk, mot, mod sft-hd, sbply-sbblky, rthy lstr, silty tex, v calc, str inoc 30-40-50% CHK: wh-ll-gy, mgv-gybrn, stn, mod sft, sbply-sbblky, rthy lstr, v calc, sme inbtd, vstr bent

50-55-60% CHK: wh-ll mod sft, sbply-sbblky, calc, vstr bent 50-45-4 blk, mot, mod sft-hd, s lstr, silty tex, v calc, str

MD: 9821'
INC: 90.1°
AZM: 0°
TVD: 6302'

MD: 9852'
INC: 90.3°
AZM: 359.8°
TVD: 6302'

MD: 9884'
INC: 90.1°
AZM: 359.7°
TVD: 6302'

MD: 9915'
INC: 90.6°
AZM: 0°
TVD: 6302'

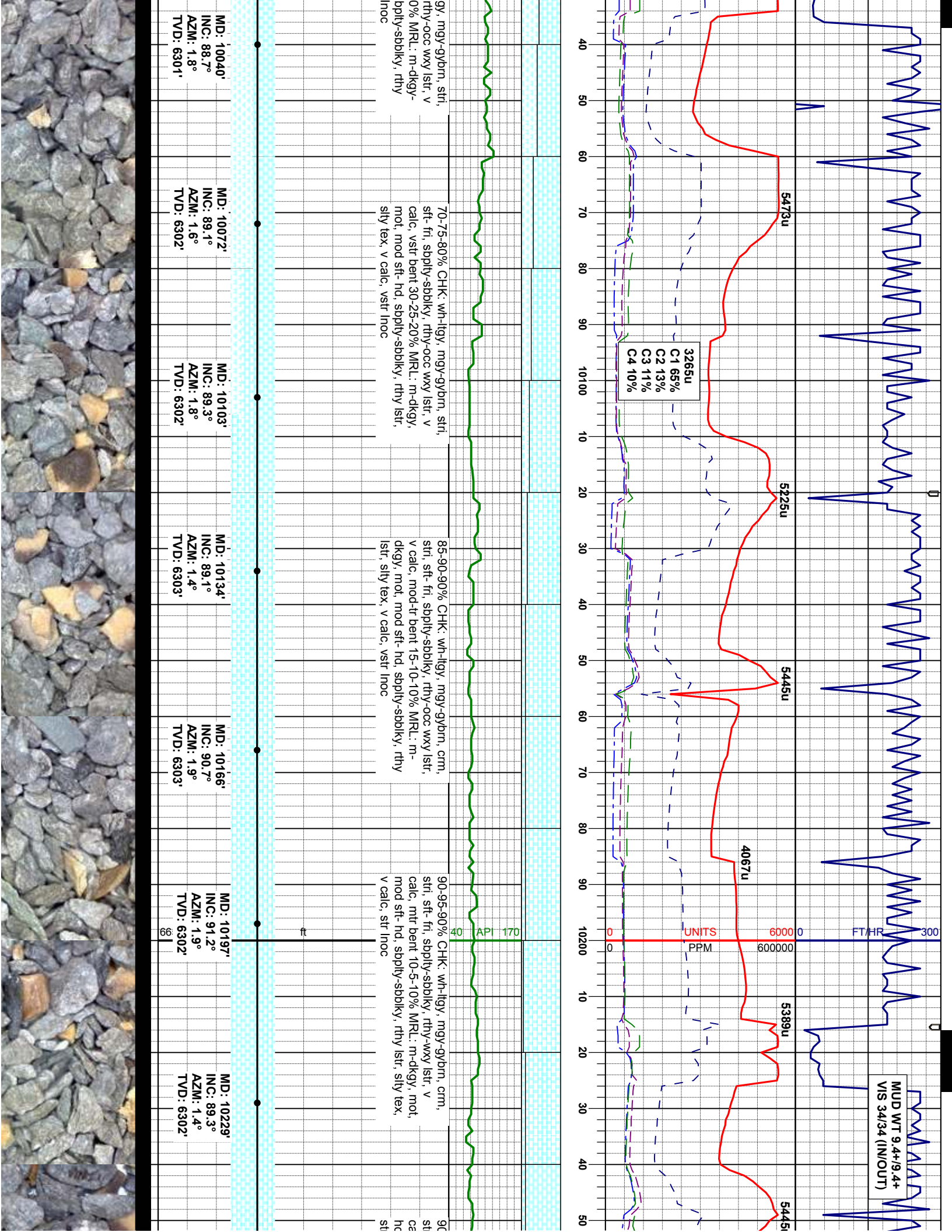
MD: 9946'
INC: 91.1°
AZM: 1.1°
TVD: 6301'

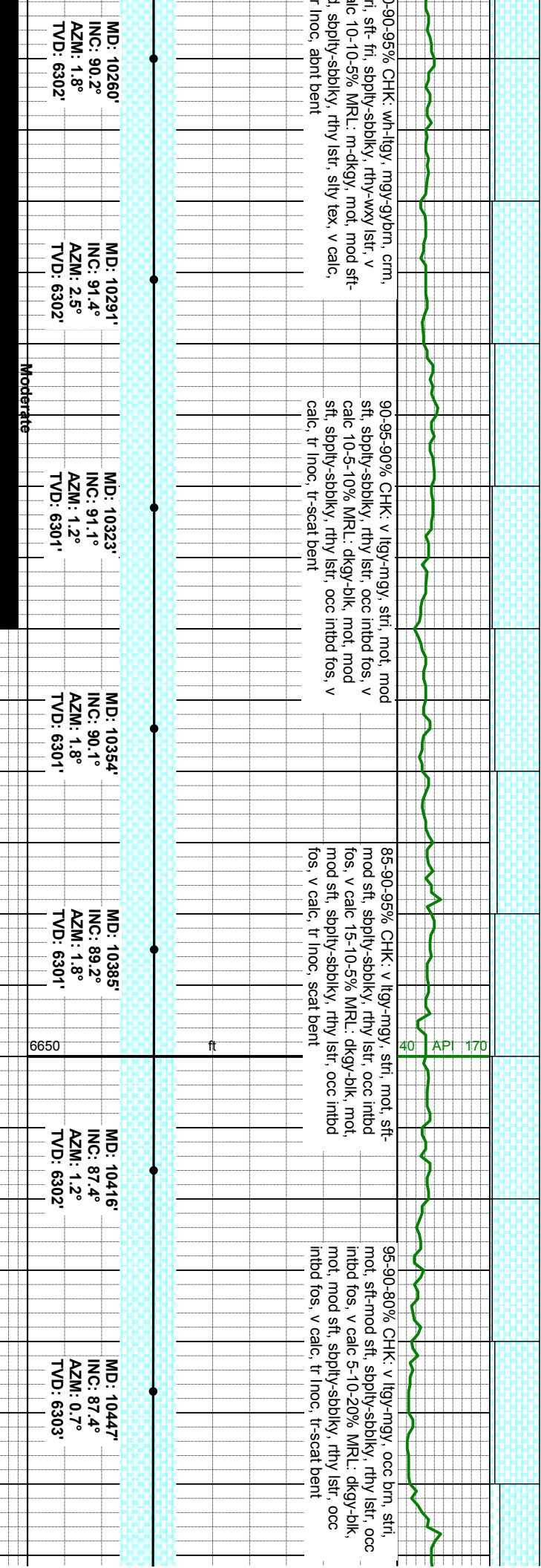
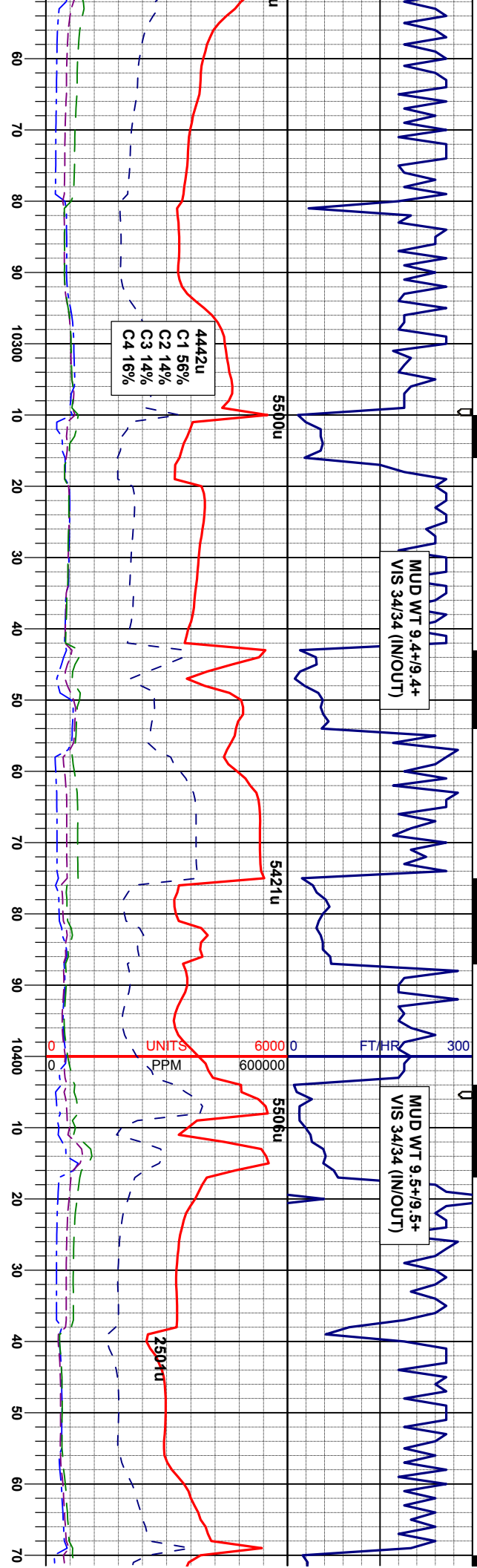
MD: 9978'
INC: 90.7°
AZM: 1.2°
TVD: 6301'

MD: 10009'
INC: 89.5°
AZM: 1.4°
TVD: 6301'

Moderate









**MUD WT 9.4+/9.4+
VIS 34/35 (IN/OUT)**

POOH - 10685' MD
for new BHA
10/30/2012 @ 02:19 MST

90% CHK: v lly-mgy, occ
-mod sft, sbply-sbblky, rth-
fos, v calc 10% MRL: dkgy
sft, sbply-sbblky, rthy lstr,
calc, tr lnoc, tr bent

MD: 10605
INC: 90.6°
AZM: 0.5°
TVD: 6305

6650

