

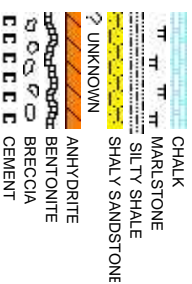


Scale: 5" / 100'
Measured Depth Log

Well Name	Storis E24-75HN HORZ		
Location	SEC 24 T6N R65W		
State	COLORADO		
Country	USA		
API Number	05-123-38152		
Region	DJ BASIN		
Spud Date	4/10/2014		
Surface Coordinates	NENE SEC 24 T6N R65W 330' FNL; 1,302' FEL LAT/LON: 40.47782/-104.60654		
Bottom Hole Coordinates	SWSE SEC 24 T6N R65W 225' FSL; 2,640' FEL		
Ground Elevation	4,685'	K.B. Elevation	4,709'
Logged Interval	6,162'	To	11,585'
Formation	NIOBRARA C CHALK		
Type of Drilling Fluid	LSND		
Total Depth	11,585'		
Drilling Completed	4/16/2014		
Rig Number	H&P 315		
AFE #	139617		
Field	WATTENBERG		

Company Noble Energy Inc
Address 1625 BROADWAY
DENVER, CO 80202

Name MARK COLE, N
Company COLUMBINE LOGGING
Address 2385 S LIPAN ST
DENVER, CO 80202



Operator

AY SUITE 2200
0202

Geologist

ATHAN MURPHY
OGGING, INC

ST
0223

Rock Types

	CHERT		SIDERITE or LIMONITE		SHALE GRAY
	CLAY CHOKE SANC		LIMESTONE		SHALY SILTSTONE
	CLAYSTONE		METAMORPHIC		SILTSTONE
	DOLOMITE		NO SAMPLE		TUFF
	CONGLOMERATE		SALT		WELDED TUFF
	GRANITE		SANDSTONE		
	GYPSUM		SALT-PEPPER SAND		
	IGNEOUS		SHALE		
			SHALE COLORED		

Accessories

Fossils	F FOSSIL	ARGILLACEOUS	GLAUCONITE	TUFACEOUS
GASTROPOD	ARGILLITE GRAIN	GYPSIFEROUS		
ALGAE	OOLITE	HEAVY MINERAL		
AMPHIPORA	OSTRACOD	INOCERAMUS		
BELEMNITE	PELECYPOD	BRECCIA FRAGMENTS	KAOLIN	ANHYDRITE STRINGER
BRACHIOPOD	PISOLITE	CARBONACEOUS FLAKES	MARLSTONE	BENTONITE STRINGER
BRYOZOA	PLANT REMAINS	CHERT	MINERAL CRYSTALS	COAL STRINGER
CEPHALOPOD	PLANT SPORES	COAL - THIN BEDS	NODULES	DOLOMITE STRINGER
CORAL	SCAPHOPOD	DOLOMITIC	PHOSPHATE PELLETS	GYPSUM STRINGER
CRINOID	STROMATOPOROID	FELDSPAR	PYRITE	LIMESTONE STRINGER
ECHINOID		FELDSPAR	SALT CAST	MARLSTONE (DOL) STRG
FISH	Minerals	FERRUGINOUS PELLET	SILTY	SANDSTONE STRINGER
FORAMINIFERA	ANHYDRITIC	FERRUGINOUS	SILTY	SHALE STRINGER
				SILTSTONE STRINGER

Other Symbols

Oil Show	O ORGANIC	CORE - RECOVERED	TRIP GAS	E EARTHY
DEAD	P PINPOINT	DST INTERVAL	WIRELINE TESTED - LEFT	FINELYXLN
EVEN	V VUGGY	FAULT	WIRELINE TESTED - RT	GS GRAINSTONE
QUESTIONABLE	Engineering	FORMATION TOP	MX MICROXLN	
SPOTTED STAINING	BIT	GAS SHOW	Rounding	
		MN DEPTH	A ANGULAR	MS MUDSTONE
Porosity	CONNECTION (DOWN)	NORMAL FAULT	R ROUNDED	PS PACKSTONE
CONNECTION (LEFT)	CONNECTION (RIGHT)	OIL SHOW	B SUBANG	WS WACKESTONE
FENESTRAL	CONNECTION GAS	OVERTURNED STRATA	B SUBRND	
FRACTURE	CONNECTION GAS UP	REVERSE FAULT		Textures
INTERCRYSTALLINE	CONNECTION GAS LEFT	SIDEWALL CORE (LEFT)	BS BOUNDSTONE	M MODERATE
INTERCRYSTALLINE	CONNECTION GAS DOWN...	SIDEWALL CORE (RIGHT)	C CHALKY	P POOR
MOLDIC	CORE - LOST	SLIDE	CX CRYPTOXLN	W WELL
		SURVEY		Sorting

Slide/Rotate

ROP

ROP

Curves

GAMMA

Total Gas & Chromatograph

GAS

C1

C2

C3

C4

Depth Labels

% Lith

Well Bore

TVD

Oil Show

Images

ROP Data from iBall

4/13/2014, Mud Wt: 9.40, FVIs: 31
PVIs: 7, YP: 5, GELS: 36/9, API Filt: 9.0
CAKE: 1/0, pH: 8.3, CI: 700, Ca: 40

MUD WT: 9.60/9.70
VIS: 30/30 IN/OUT

Gamma Data from Sperry - Halliburton

GAMMA (units)

102

Gas Data from iBall

GAS (units)

1786u

6,110 6,120 6,130 6,140 6,150 6,160 6,170 6,180 6,190 6,200 6,210 6,220 6,230 6,240 6,250 6,260 6,270 6,280 6

Columbine Logging began logging with
Bloodhound unit 0687 on 04/13/2014

50' Sample Interval @ 6,200' MD

MD: 6,171'
TVD: 6,083.69'

Inclination: 12.92°
Azimuth: 264.55°
VS: 195.08'

MD: 6,280'
TVD: 6,191.14'
Inclination: 12.92°
Azimuth: 264.55°
VS: 195.08'

Bit Data

Bit #: 2

Type: Smith

Model: SD513

Size: 8.75"

Depth In: 6,162'

Depth Out: 7,418'

Jets: 5x14

TVD (ft)

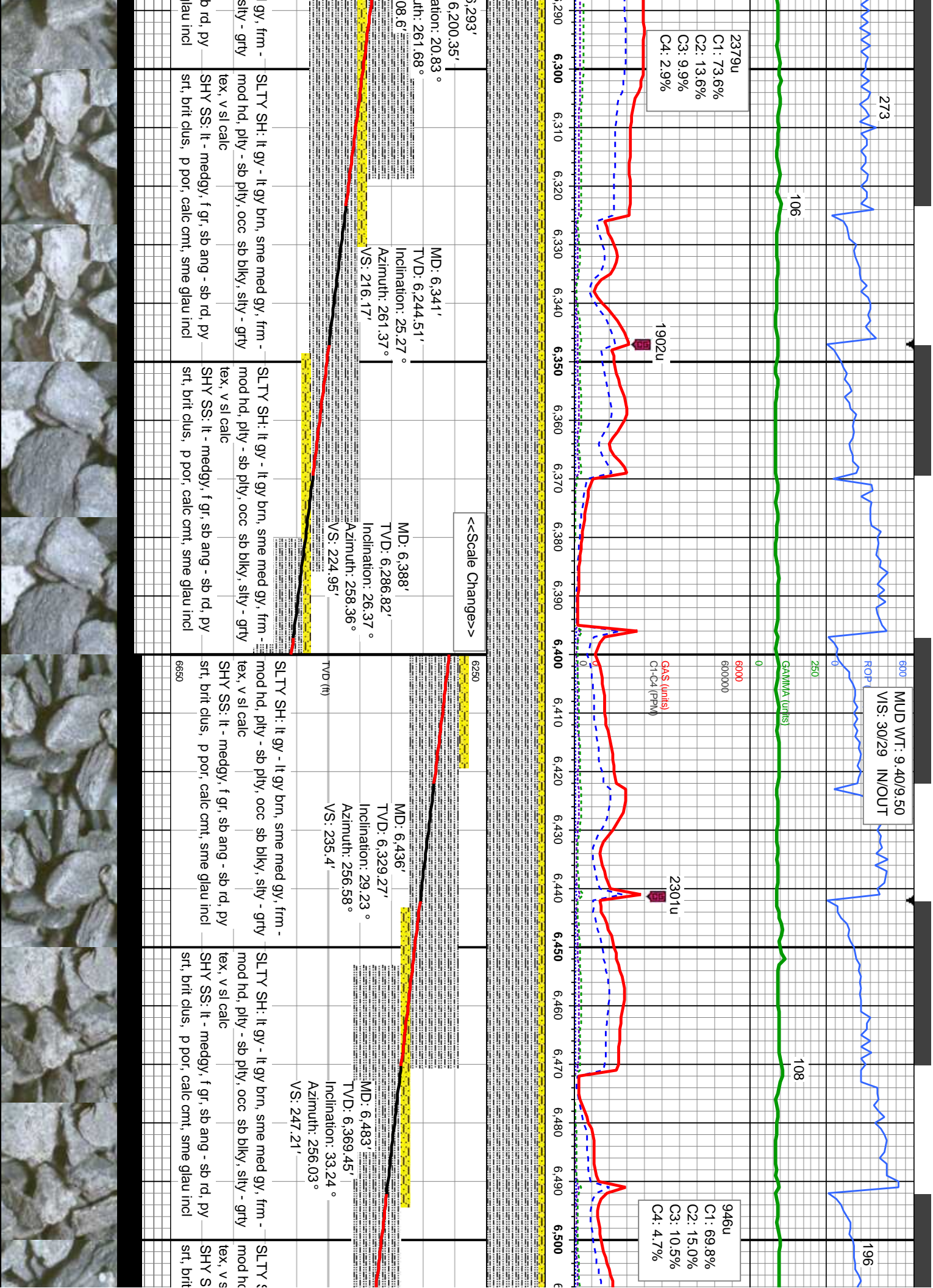
SLTY SH: lt gy - lt gy brn, sme med gy, frm -
mod hd, pty - sb pty, occ sb blk, silty - grty
tex, v sl calc
SHY SS: lt - medgy, f gr, sb ang - sb rd, py
srt, brit clus, p por, calc cmt, sme glau incl

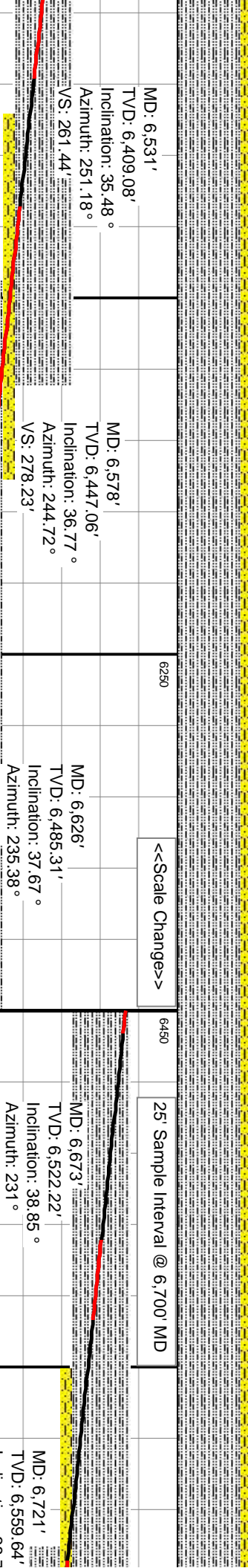
SLTY SH: lt gy - lt gy brn, sme med gy, frm -
mod hd, pty - sb pty, occ sb blk, silty - grty
tex, v sl calc
SHY SS: lt - medgy, f gr, sb ang - sb rd, py
srt, brit clus, p por, calc cmt, sme glau incl

SLTY SH: lt gy - lt gy brn, sme med gy, frm -
mod hd, pty - sb pty, occ sb blk, silty - grty
tex, v sl calc
SHY SS: lt - medgy, f gr, sb ang - sb rd, py
srt, brit clus, p por, calc cmt, sme glau incl

EGMFTS

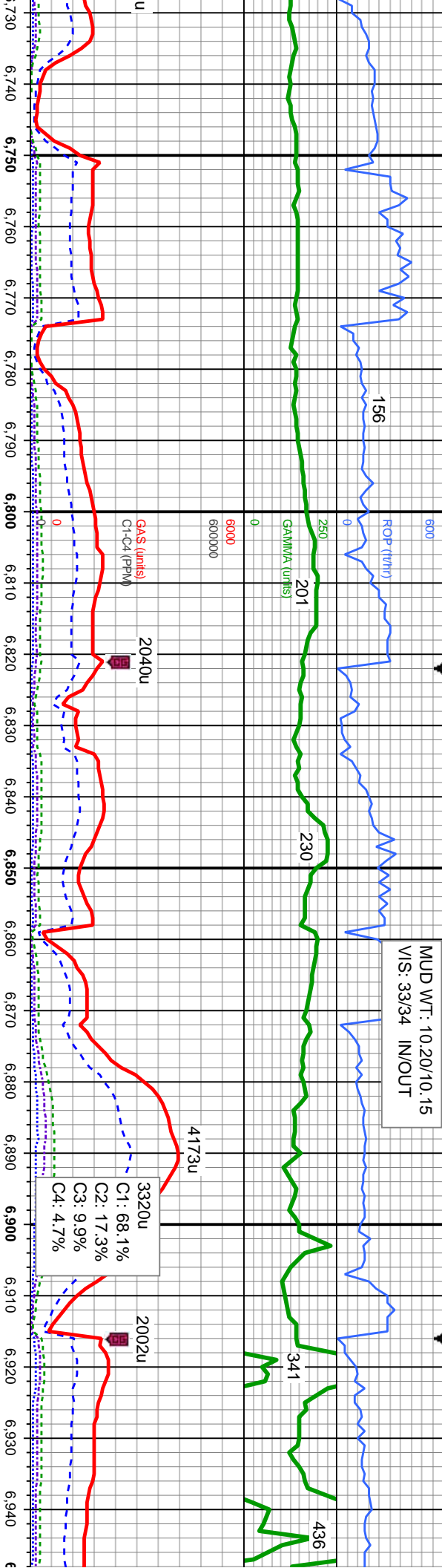






<div> <div>MD: 6,531'</div> <div>TVD: 6,409.08'</div> <div>Inclination: 35.48 °</div> <div>Azimuth: 251.18 °</div> <div>VS: 261.44'</div> </div>	<div> <div>MD: 6,578'</div> <div>TVD: 6,447.06'</div> <div>Inclination: 36.77 °</div> <div>Azimuth: 244.72 °</div> <div>VS: 278.23'</div> </div>	<div> <div>MD: 6,626'</div> <div>TVD: 6,485.31'</div> <div>Inclination: 37.67 °</div> <div>Azimuth: 235.38 °</div> <div>VS: 298.8'</div> </div>	<div> <div>MD: 6,673'</div> <div>TVD: 6,522.22'</div> <div>Inclination: 38.85 °</div> <div>Azimuth: 231 °</div> <div>VS: 321.76'</div> </div>	<div> <div>MD: 6,721'</div> <div>TVD: 6,559.64'</div> <div>Inclination: 38.7 °</div> <div>Azimuth: 229.8 °</div> <div>VS: 346.33'</div> </div>	<div> <div>MD: 6,770'</div> <div>TVD: 6,597.04'</div> <div>Inclination: 39.7 °</div> <div>Azimuth: 227.8 °</div> <div>VS: 371.8'</div> </div>	<div> <div>MD: 6,819'</div> <div>TVD: 6,634.44'</div> <div>Inclination: 40.7 °</div> <div>Azimuth: 225.8 °</div> <div>VS: 397.3'</div> </div>
<div> <div>MD: 6,868'</div> <div>TVD: 6,671.84'</div> <div>Inclination: 41.7 °</div> <div>Azimuth: 223.8 °</div> <div>VS: 422.8'</div> </div>	<div> <div>MD: 6,917'</div> <div>TVD: 6,709.24'</div> <div>Inclination: 42.7 °</div> <div>Azimuth: 221.8 °</div> <div>VS: 448.3'</div> </div>	<div> <div>MD: 6,966'</div> <div>TVD: 6,746.64'</div> <div>Inclination: 43.7 °</div> <div>Azimuth: 219.8 °</div> <div>VS: 473.8'</div> </div>	<div> <div>MD: 7,015'</div> <div>TVD: 6,784.04'</div> <div>Inclination: 44.7 °</div> <div>Azimuth: 217.8 °</div> <div>VS: 499.3'</div> </div>	<div> <div>MD: 7,064'</div> <div>TVD: 6,821.44'</div> <div>Inclination: 45.7 °</div> <div>Azimuth: 215.8 °</div> <div>VS: 524.8'</div> </div>	<div> <div>MD: 7,113'</div> <div>TVD: 6,858.84'</div> <div>Inclination: 46.7 °</div> <div>Azimuth: 213.8 °</div> <div>VS: 550.3'</div> </div>	<div> <div>MD: 7,162'</div> <div>TVD: 6,896.24'</div> <div>Inclination: 47.7 °</div> <div>Azimuth: 211.8 °</div> <div>VS: 575.8'</div> </div>

MUD WT: 10.20/10.15
VIS: 33/34 IN/OUT



Sharon Springs Marker @
6,843' MD: 6,650' TVD

Niobrara Top @
6,859' MD: 6,662' TVD

<<Scale Change>>
Nio A Chalk Top @
6,883' MD: 6,678' TVD

Nio A Marl Top @
6,898' MD: 6,688' TVD

MD: 6,816'
TVD: 6,631.53'
Inclination: 44.05 °
Azimuth: 221.85 °
VS: 400.35'

MD: 6,863'
TVD: 6,664.73'
Inclination: 46.07 °
Azimuth: 218.79 °
VS: 430.48'

MD: 6,911'
TVD: 6,696.59'
Inclination: 50.79 °
Azimuth: 212.86 °
VS: 464.09'

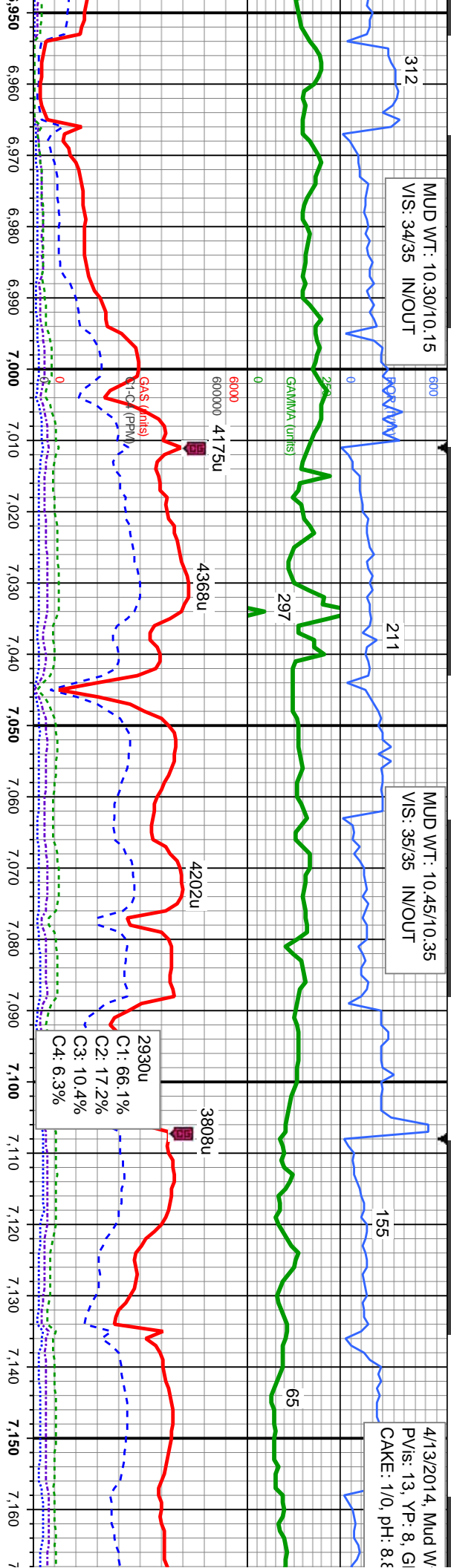
MD: 6,768'
TVD: 6,595.94'
Inclination: 40.22 °
Azimuth: 223.7 °
VS: 371.79'

sme med gy, frm - sb blk, silty - grty
SLTY SH: lt gy - lt gy brn, sme med gy, frm - mod hd, pty - sb pty, occ sb blk, silty - grty tex, v sl calc
SLTY SH: lt gy - lt gy brn, sme med gy, frm - mod hd, pty - sb pty, occ sb blk, silty - grty tex, v sl calc, abnt bent
MR.L: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grty tex
CHK: pred tan w/ wh, sme ltgy, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc, abnt bent, no fos frag

MUD WT: 10.30/10.15
VIS: 34/35 IN/OUT

MUD WT: 10.45/10.35
VIS: 35/35 IN/OUT

4/13/2014, Mud W
PVIS: 13, YP: 8, G
CAKE: 1/0, pH: 8.3



MD: 6,958'	MD: 6,724.98'	MD: 7,006'	MD: 7,054'	MD: 7,102'	MD: 7,148'	MD: 6,814.57'
Inclination: 54.88°	Inclination: 58.55°	Inclination: 61.95°	Inclination: 65.1°	Inclination: 65.1°	Inclination: 68.81°	Inclination: 68.81°
VS: 500.18'	VS: 539.47'	VS: 580.8'	VS: 623.72'	VS: 666'	VS: 666'	VS: 666'

TV D: 6,751.33'
Inclination: 58.55°
Azimuth: 205.08°
VS: 539.47'

TV D: 6,775.15'
Inclination: 61.95°
Azimuth: 199.72°
VS: 580.8'

TV D: 6,796.56'
Inclination: 65.1°
Azimuth: 194.74°
VS: 623.72'

MRL: It - med gy, occ blk, stf - mod hd, sb
ply - pily, stly - grty tex
CHK: pred tan wi wh, sme lgy, mot, lam, stf
- frm, sb ply - sb blkly, rthy tex, v calc, sme
bent, tr fos frag

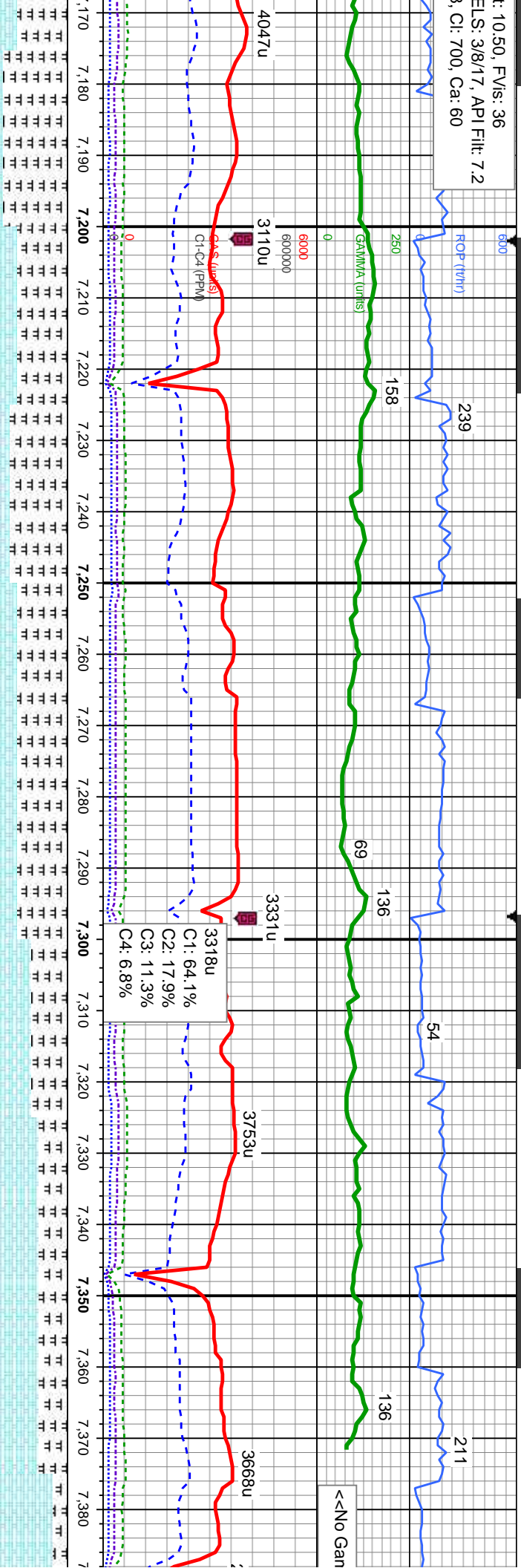
MRL: It - med gy, occ blk, stf - mod hd, sb
ply - pily, stly - grty tex
CHK: pred tan wi wh, sme lgy, mot, lam, stf
- frm, sb ply - sb blkly, rthy tex, v calc, sme
bent, tr fos frag

MRL: It - med gy, occ blk, stf - mod hd, sb
ply - pily, stly - grty tex
CHK: pred tan wi wh, sme lgy, mot, lam, stf
- frm, sb ply - sb blkly, rthy tex, v calc, sme
bent, tr fos frag

MRL: It - med gy, occ blk, stf - mod hd, sb
ply - pily, stly - grty tex
CHK: pred tan wi wh, sme lgy, mot, lam, stf
- frm, sb ply - sb blkly, rthy tex, v calc, sme
bent, tr fos frag



it: 10.50, FVIs: 36
ELS: 3/8/17, API Fil: 7.2
3, Ci: 700, Ca: 60



Marl Top @ MD: 6,822' TVD
MD: 7,196'
TVD: 6,830.35'
Inclination: 72.79°
Azimuth: 189.05°
VS: 711.13'

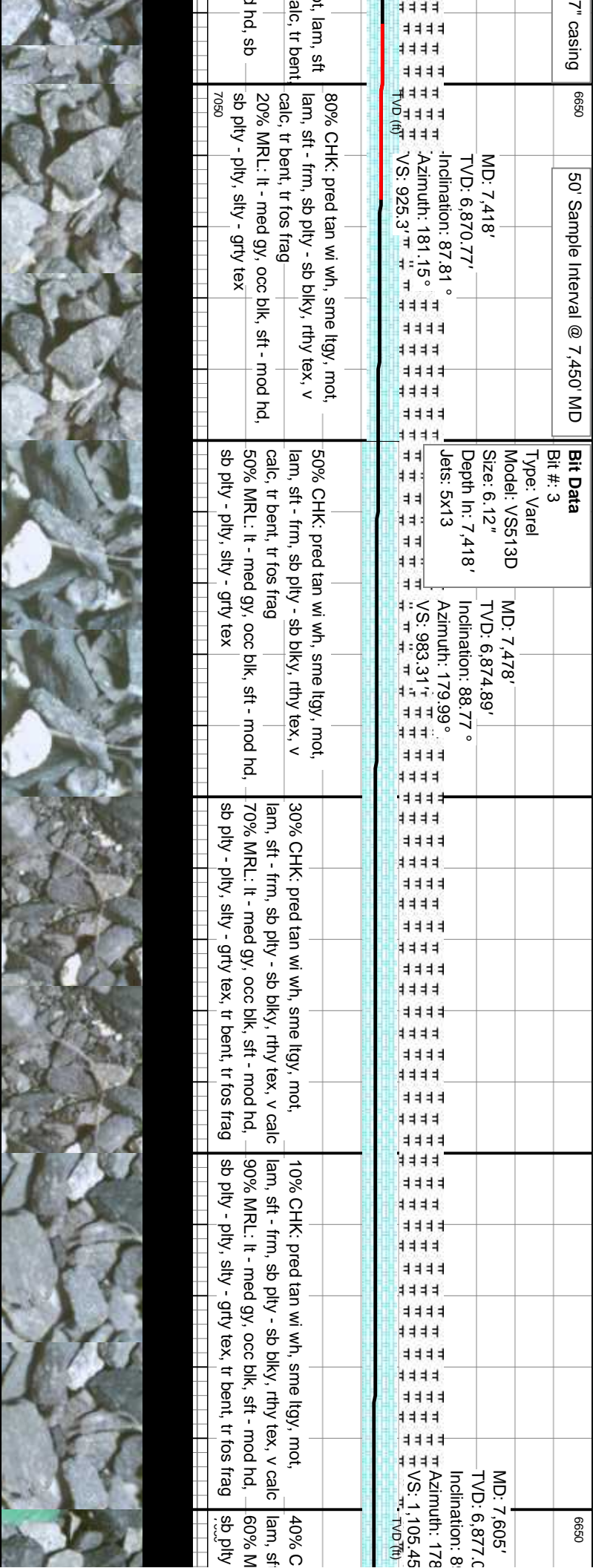
MD: 7,243'
TVD: 6,843.01'
Inclination: 75.97°
Azimuth: 186.99°
VS: 756.02'

Nio C Chalk Top @ MD: 7,269' TVD: 6,849'
MD: 7,291'
TVD: 6,853.79'
Inclination: 78.08°
Azimuth: 185.73°
VS: 802.23'

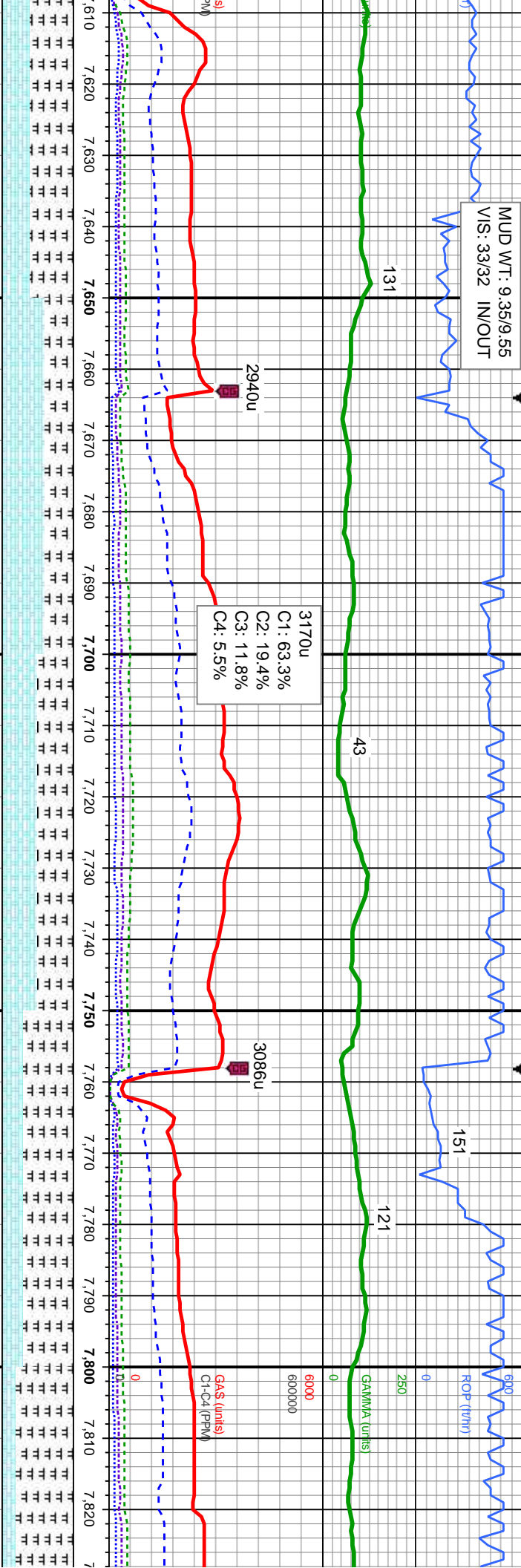
MD: 7,338'
TVD: 6,862.42'
Inclination: 80.75°
Azimuth: 184.29°
VS: 847.69'

TOOH @ 7,418' MD to run
MD: 7,364'
TVD: 6,866.21'
Inclination: 82.49°
Azimuth: 183.34°
VS: 872.9'

MR: It - med gy, occ blk, sft - mod hd, sb
ply - pty, sily - gtry tex
CHK: pred tan w/ wh, sme lgy, mot, lam, sft
- frm, sb ply - sb blk, rthy tex, v calc, bent, sme fos frag



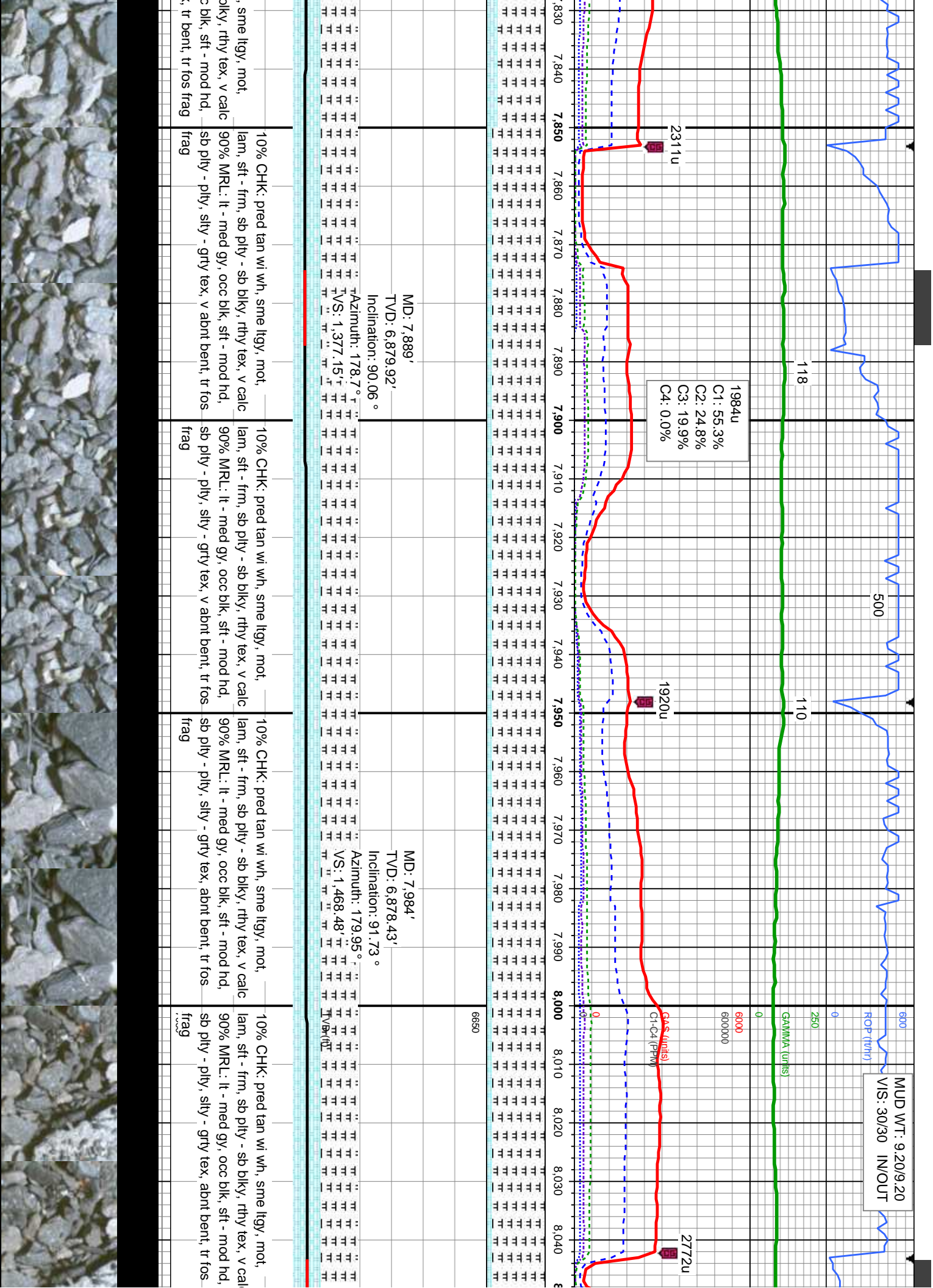
MUD WT: 9.35/9.55
VIS: 33/32 IN/OUT

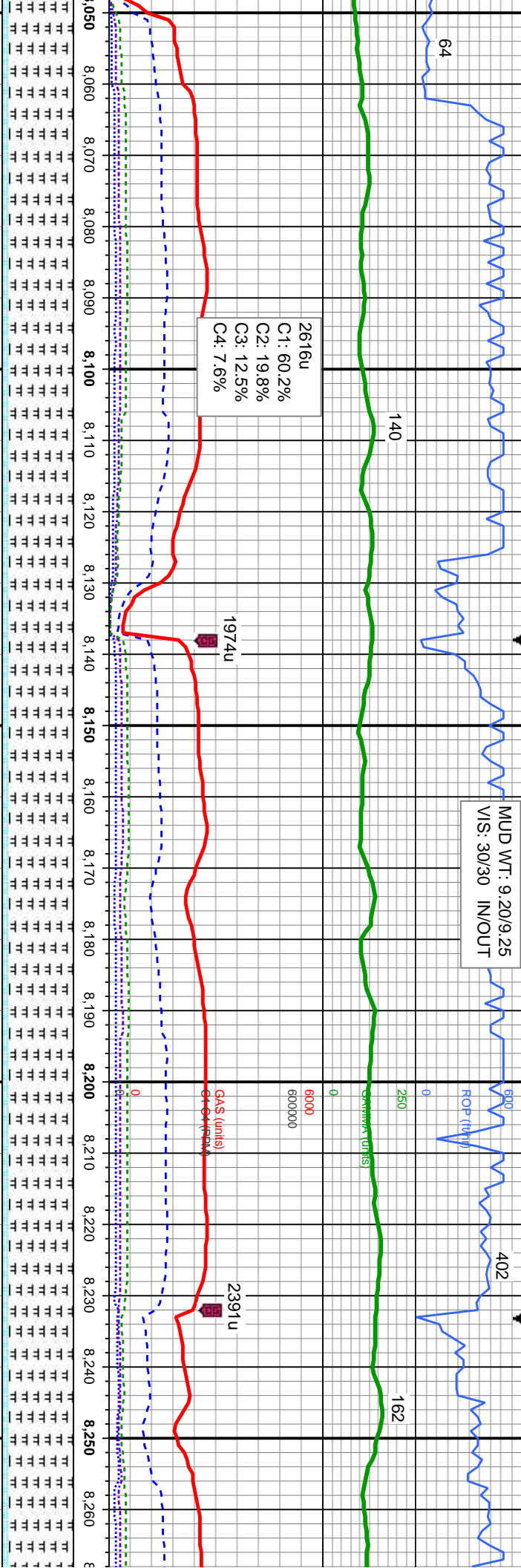


MD: 7.699'	MD: 7.794'
TVD: 6,878.15'	TVD: 6,879.35'
Inclination: 89.29°	Inclination: 89.26°
Azimuth: 177.73°	Azimuth: 178.57°
VS: 1,195.34'	VS: 1,286.12'

CHK: pred tan wi wh, sme itgy, mot,	60% CHK: pred tan wi wh, sme itgy, mot,	50% CHK: pred tan wi wh, sme itgy, mot,	30% CHK: pred tan wi wh, sme itgy, mot,	20% CHK: pred tan wi wh, sme itgy, mot,
- frm, sb pty - sb blk, rthy tex, v calc	lam, sft - frm, sb pty - sb blk, rthy tex, v calc	lam, sft - frm, sb pty - sb blk, rthy tex, v calc	lam, sft - frm, sb pty - sb blk, rthy tex, v calc	lam, sft - frm, sb pty - sb blk, rthy tex, v calc
RL: it - med gy, occ blk, sft - mod hd,	40% MRL: it - med gy, occ blk, sft - mod hd,	50% MRL: it - med gy, occ blk, sft - mod hd,	70% MRL: it - med gy, occ blk, sft - mod hd,	80% MRL: it - med gy, occ blk, sft - mod hd,
- pty, silty - grfy tex, tr bent, tr fos frag	sb pty - pty, silty - grfy tex, tr bent, tr fos frag	sb pty - pty, silty - grfy tex, tr bent, tr fos frag	sb pty - pty, silty - grfy tex, tr bent, tr fos frag	sb pty - pty, silty - grfy tex, tr bent, tr fos frag

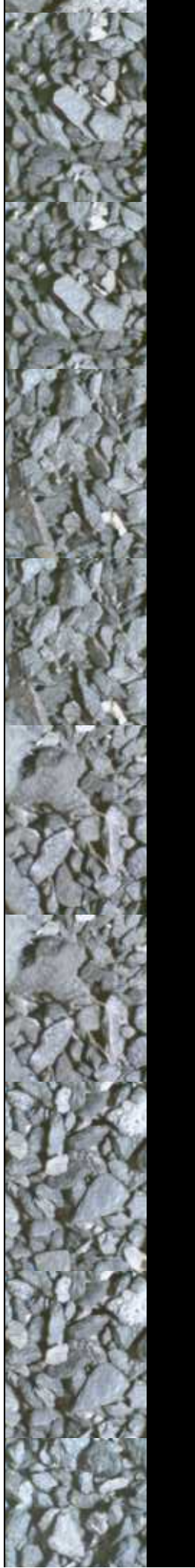


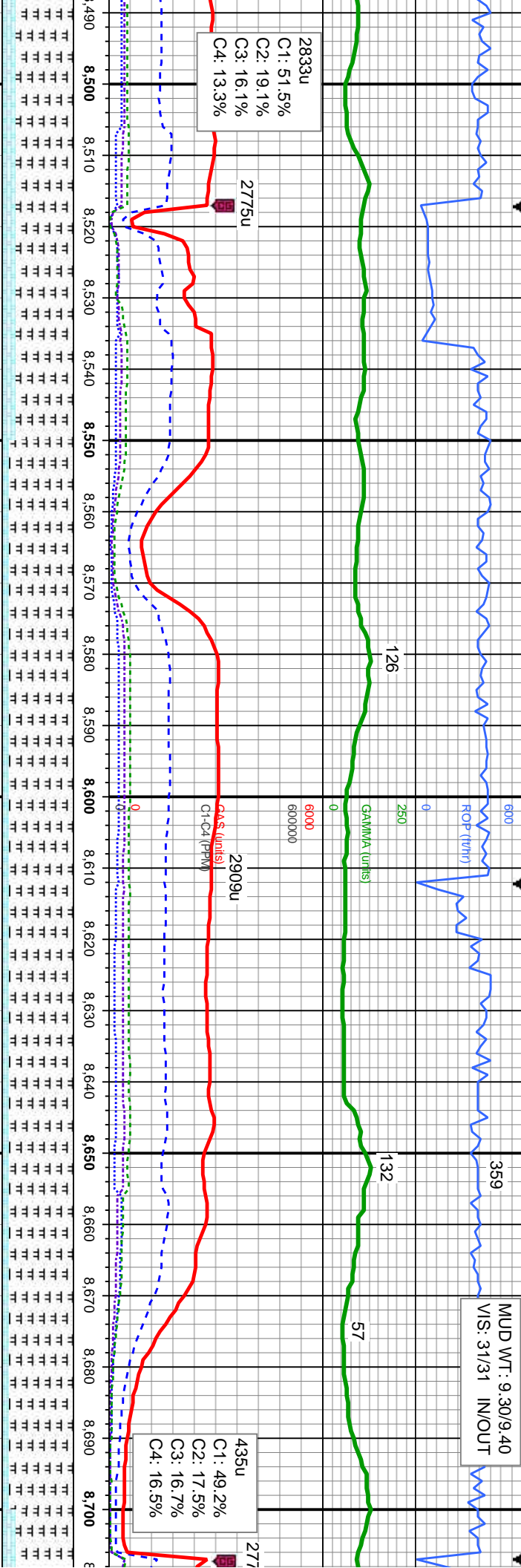




MD: 8,079' TVD: 6,876.97' Inclination: 90.03° Azimuth: 179.72°		MD: 8,174' TVD: 6,877.11' Inclination: 89.81° Azimuth: 178.97°		MD: 8,268' TVD: 6,87 Inclination: Azimuth: 1	
TB Marl	TB Marl	TB Marl	TB Marl	TB Marl	TB Marl
C Chalk		C Chalk		C Chalk	

10% CHK: pred tan wi wh, sme ltyg, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 90% MRL: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grty tex, abnt bent, tr fos frag	10% CHK: pred tan wi wh, sme ltyg, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 90% MRL: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grty tex, abnt bent, tr fos frag	10% CHK: pred tan wi wh, sme ltyg, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 90% MRL: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grty tex, abnt bent, tr fos frag	10% CHK: pred tan wi wh, sme ltyg, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 90% MRL: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grty tex, abnt bent, tr fos frag
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



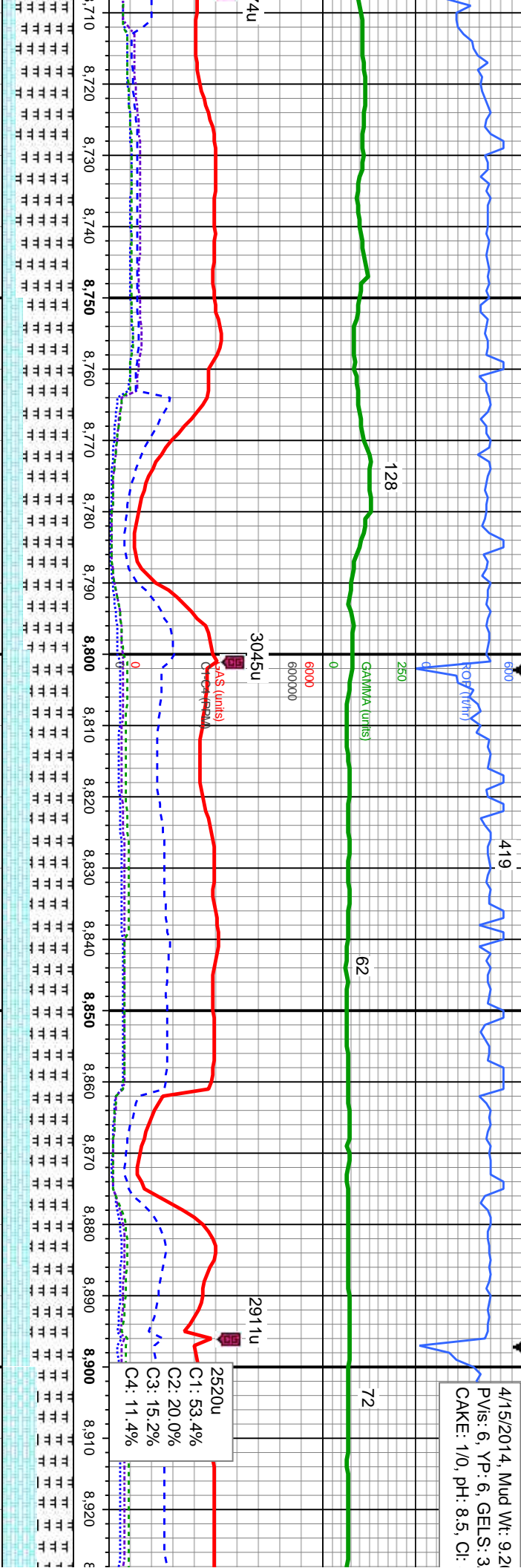


MD: 8.553'		MD: 8.648'	
TVD: 6,876.89'		TVD: 6,876.33'	
Inclination: 90.22 °		Inclination: 90.46 °	
Azimuth: 179.89 °		Azimuth: 179.61 °	
VS: 2.01526'		VS: 2.10679'	
TVD (ft)		TVD (ft)	

20% CHK: pred tan wi wh, sme ltyg, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc	10% CHK: pred tan wi wh, sme ltyg, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc	10% CHK: pred tan wi wh, sme ltyg, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc	20% C
80% MRL: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grty tex, abnt bent, tr fos	90% MRL: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grty tex, sme bent, tr fos	90% MRL: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grty tex, sme bent, tr fos	lam, sft
frag	frag	frag	80% M
			sb pty
			frag



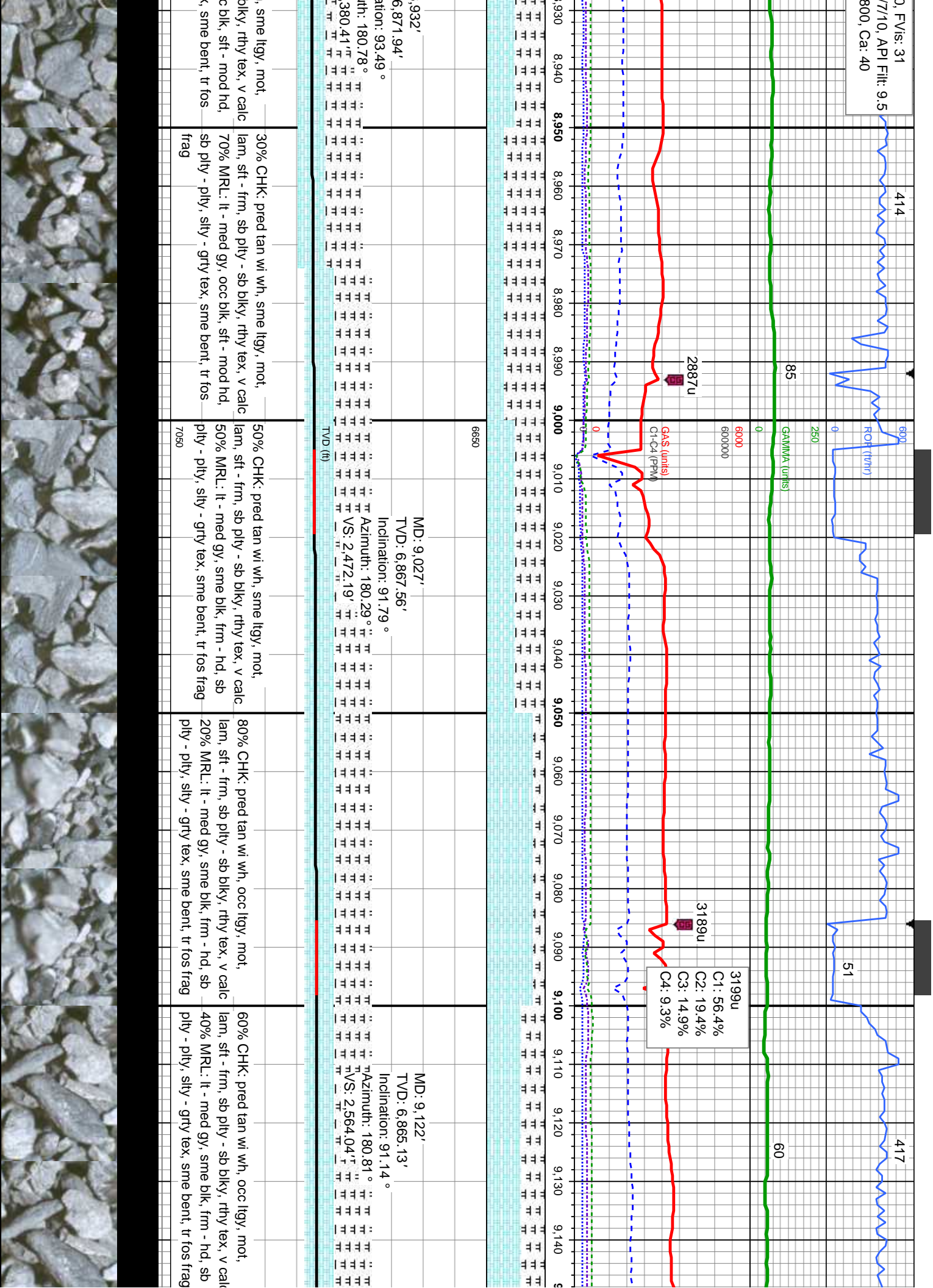
4/15/2014, Mud Wt: 9.2
PV's: 6, YP: 6, GELS: 3
CAKE: 1/0, pH: 8.5, CI:

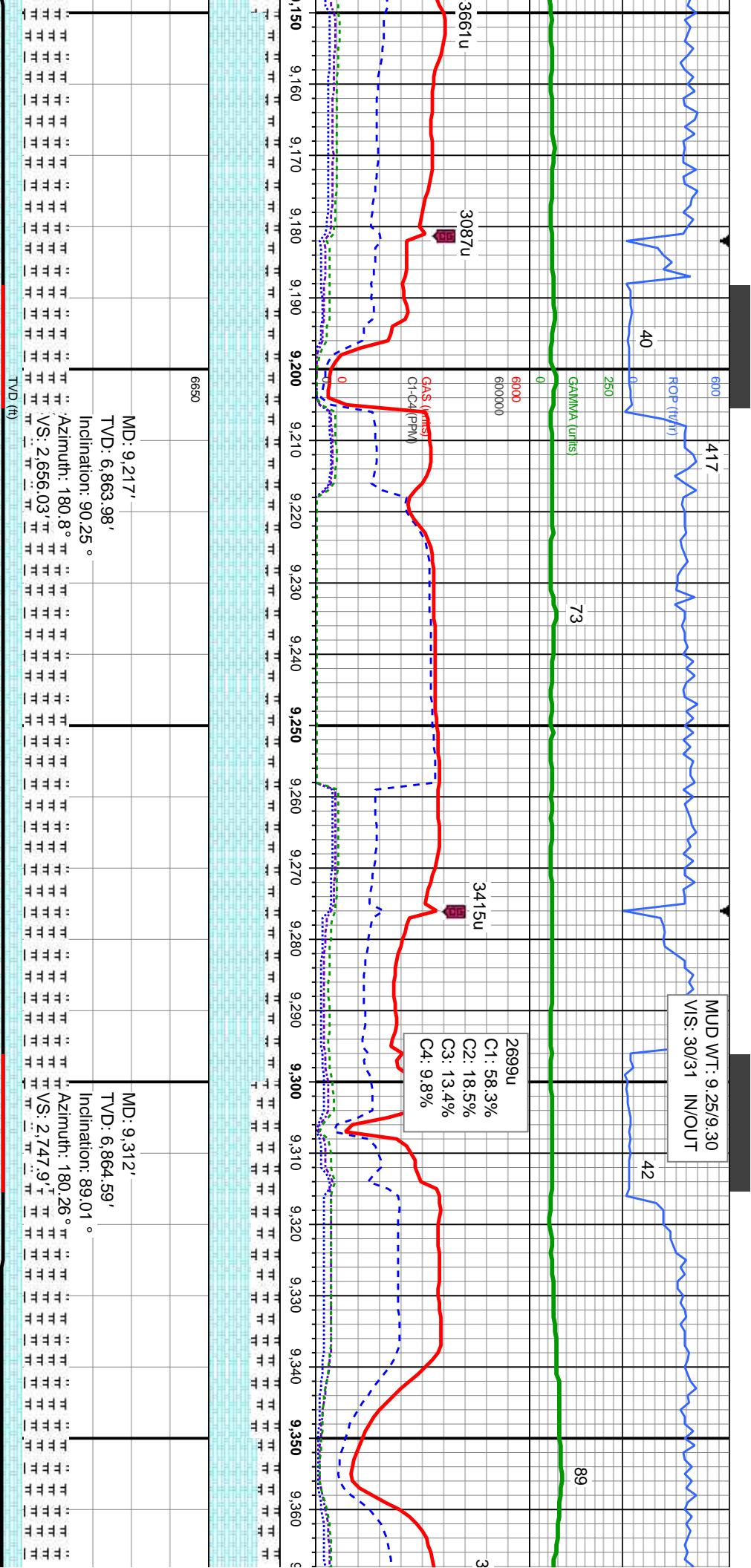


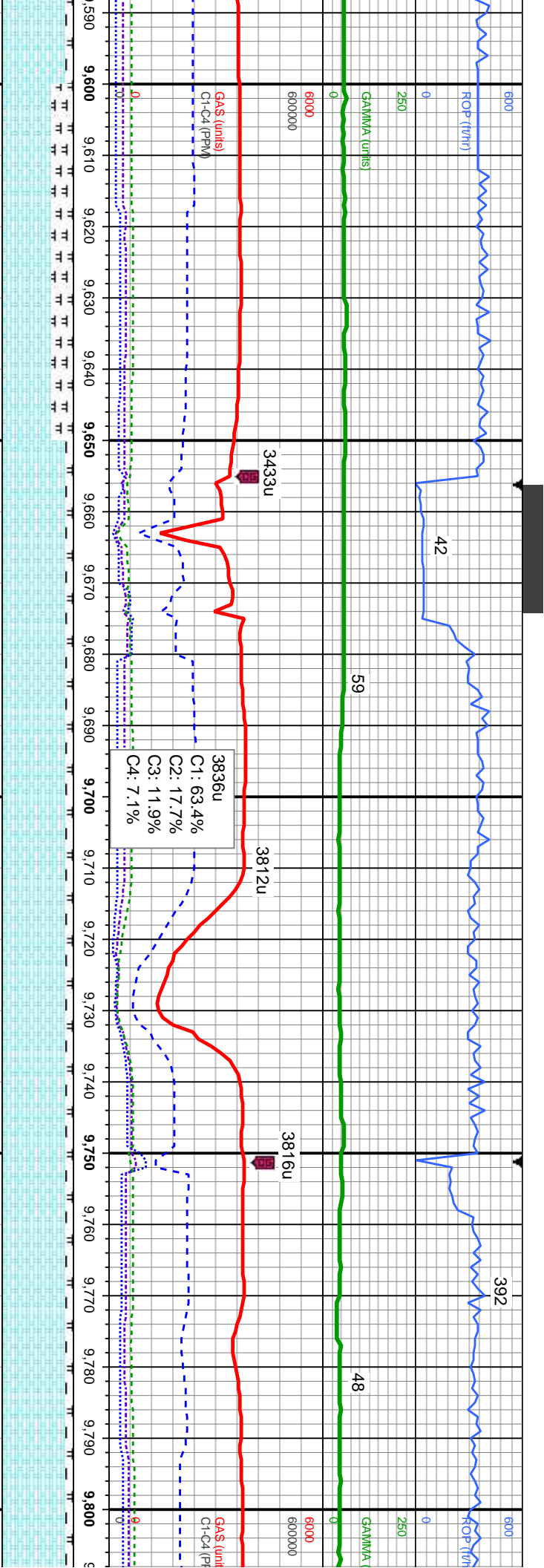
MD: 8.742' TVD: 6,875.57' Inclination: 90.46° Azimuth: 179.76° VS: 2,197.34'	6650	MD: 8.837' TVD: 6,875.01' Inclination: 90.22° Azimuth: 179.35° VS: 2,288.79'
------------------------------------------------------------------------------------------	------	------------------------------------------------------------------------------------------

HK: pred tan wi wh, sme ltyg, mot, - frm, sb pty - sb blk, rthy tex, v calc RL: lt - med gy, occ blk, sft - mod hd, - pty, silty - grly tex, sme bent, tr fos	30% CHK: pred tan wi wh, sme ltyg, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 70% MRL: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grly tex, sme bent, tr fos frag	40% CHK: pred tan wi wh, sme ltyg, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 60% MRL: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grly tex, sme bent, tr fos frag	40% CHK: pred tan wi wh, sme ltyg, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 60% MRL: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grly tex, sme bent, tr fos frag	50% CHK: pred tan wi wh, sme ltyg, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 50% MRL: lt - med gy, occ blk, sft - mod hd, sb pty - pty, silty - grly tex, sme bent, tr fos frag
------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------





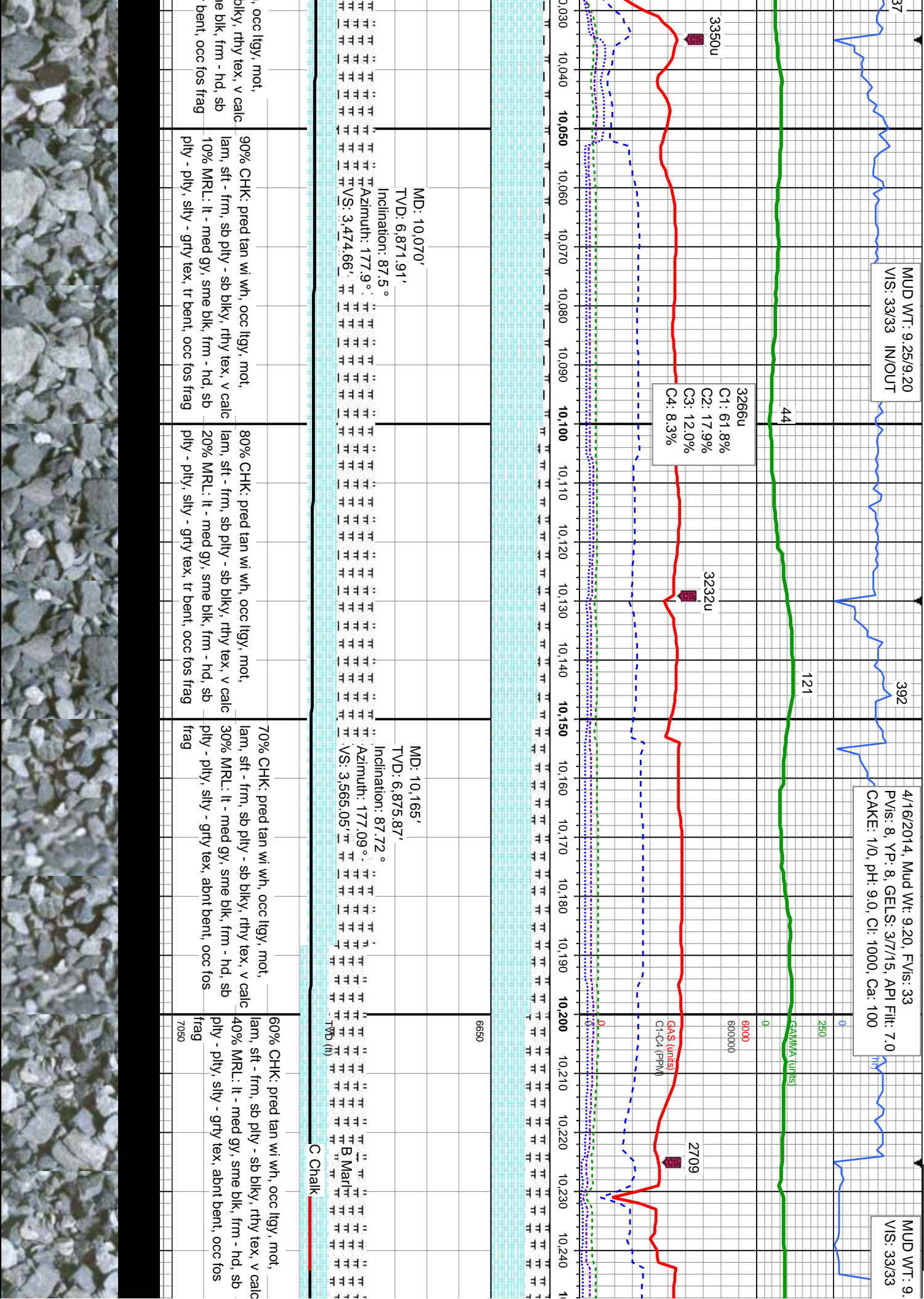


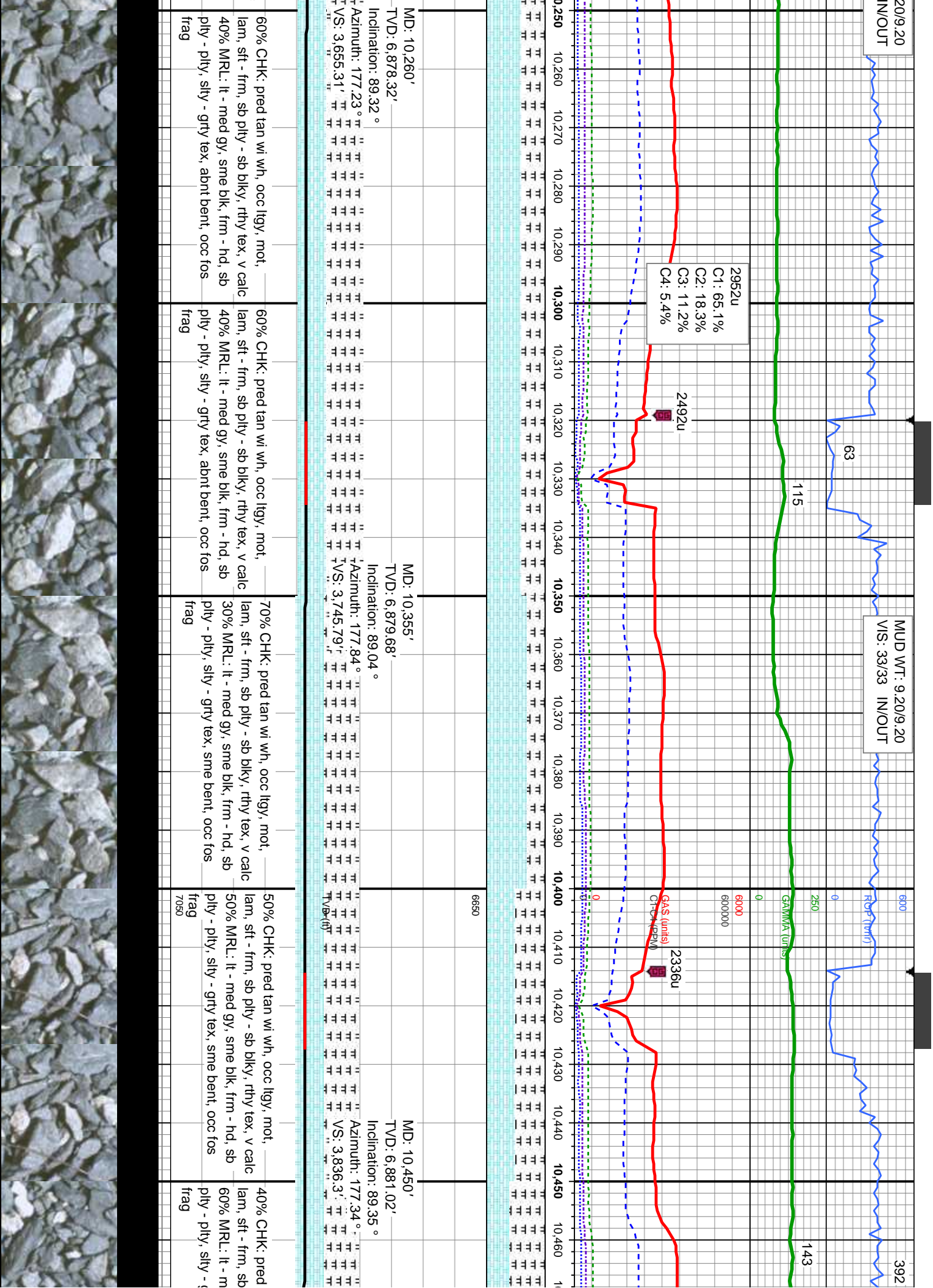


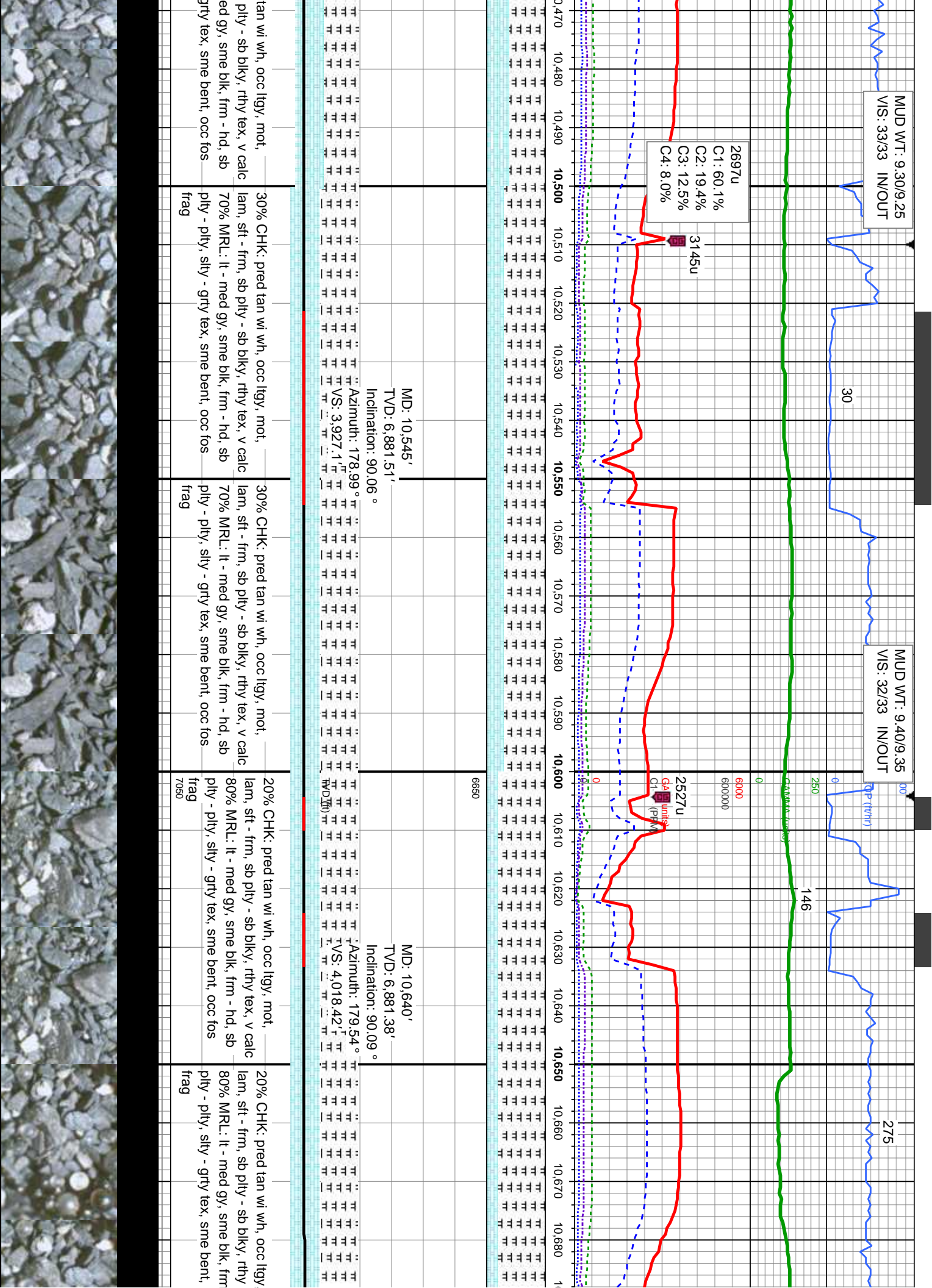
6650	MD: 9,596' TVD: 6,866.31' Inclination: 90.34° Azimuth: 178.97° VS: 3,021.09'	6650	MD: 9,691' TVD: 6,866.98' Inclination: 88.86° Azimuth: 177.92° VS: 3,112.03'	6650	MD: 9,786' TVD: 6,867.43' Inclination: 90.59° Azimuth: 178.29° VS: 3,202.79'
C Chalk					
TVD (ft)					

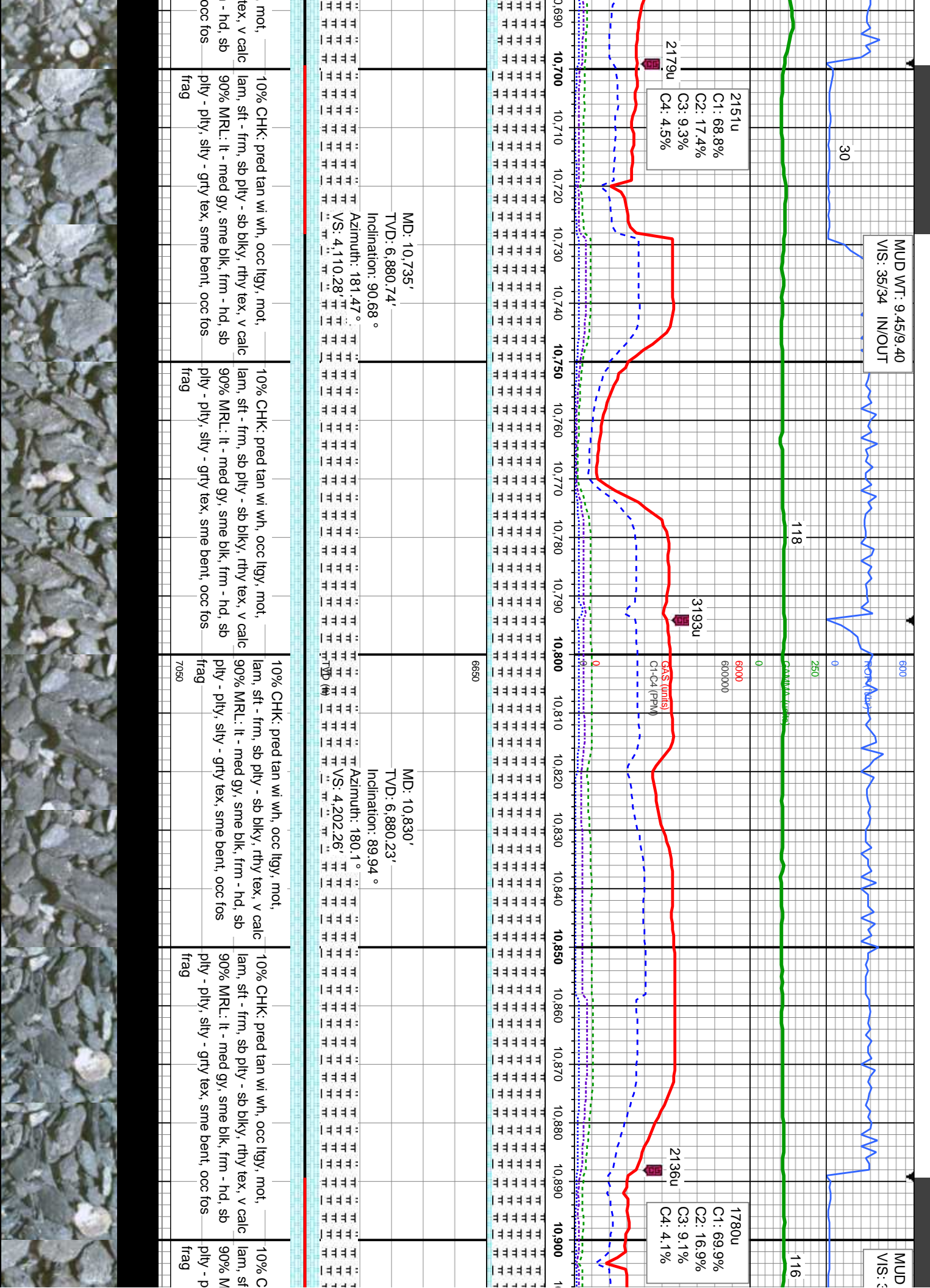
mot, v calc - hd, sb c fos frag	70% CHK: pred tan wi wh, occ lgy, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 30% MRL: lt - med gy, sme blk, frm - hd, sb pty - pty, silty - grty tex, tr bent, occ fos frag	90% CHK: pred tan wi wh, occ lgy, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 10% MRL: lt - med gy, sme blk, frm - hd, sb pty - pty, silty - grty tex, tr bent, occ fos frag	90% CHK: pred tan wi wh, occ lgy, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 10% MRL: lt - med gy, sme blk, frm - hd, sb pty - pty, silty - grty tex, tr bent, occ fos frag	90% CHK: pred tan wi wh, occ lgy, mot, lam, sft - frm, sb pty - sb blk, rthy tex, v calc 10% MRL: lt - med gy, sme blk, frm - hd, sb pty - pty, silty - grty tex, tr bent, occ fos frag	90% C
7050					7050











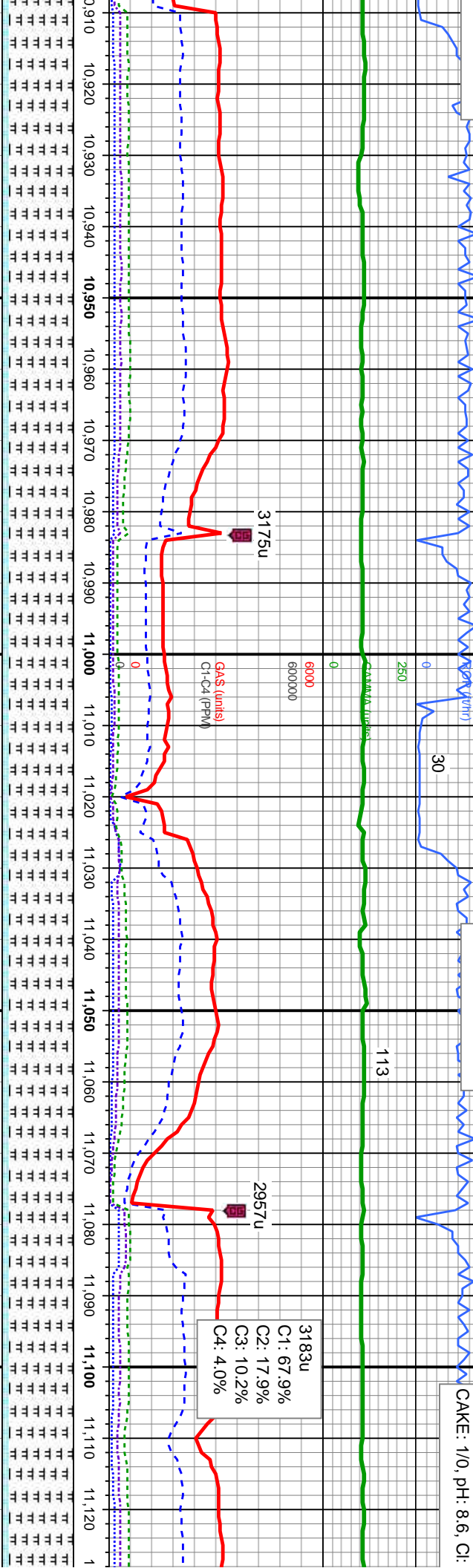
WT: 9.45/9.40
55/34 IN/OUT

365

MUD WT: 9.45/9.40
VIS: 35/35 IN/OUT

335

4/16/2014, Mud Wt: 9.3
PV's: 9, YP: 7, GELS: 3
CAKE: 1/0, pH: 8.6, CI:



MD: 10,924'
TVD: 6,880.81'
Inclination: 89.35°

Azimuth: 180.99°
VS: 4,293.18'

MD: 11,019'
TVD: 6,881.19'
Inclination: 90.19°

Azimuth: 182.48°
VS: 4,385.54'

MD: 11,114'
TVD: 6,881.44'
Inclination: 89.51°

Azimuth: 182.08°
VS: 4,478.11'

CHK: pred tan wi wh, occ lly, mot,
t - frm, sb pty - sb blk, rthy tex, v calc
RL: lt - med gy, sme blk, frm - hd, sb
lty, slty - grty tex, sme bent, occ fos

10% CHK: pred tan wi wh, occ lly, mot,
lam, sft - frm, sb pty - sb blk, rthy tex, v calc
90% MRL: lt - med gy, sme blk, frm - hd, sb
pty - pty, slty - grty tex, sme bent, occ fos
frag

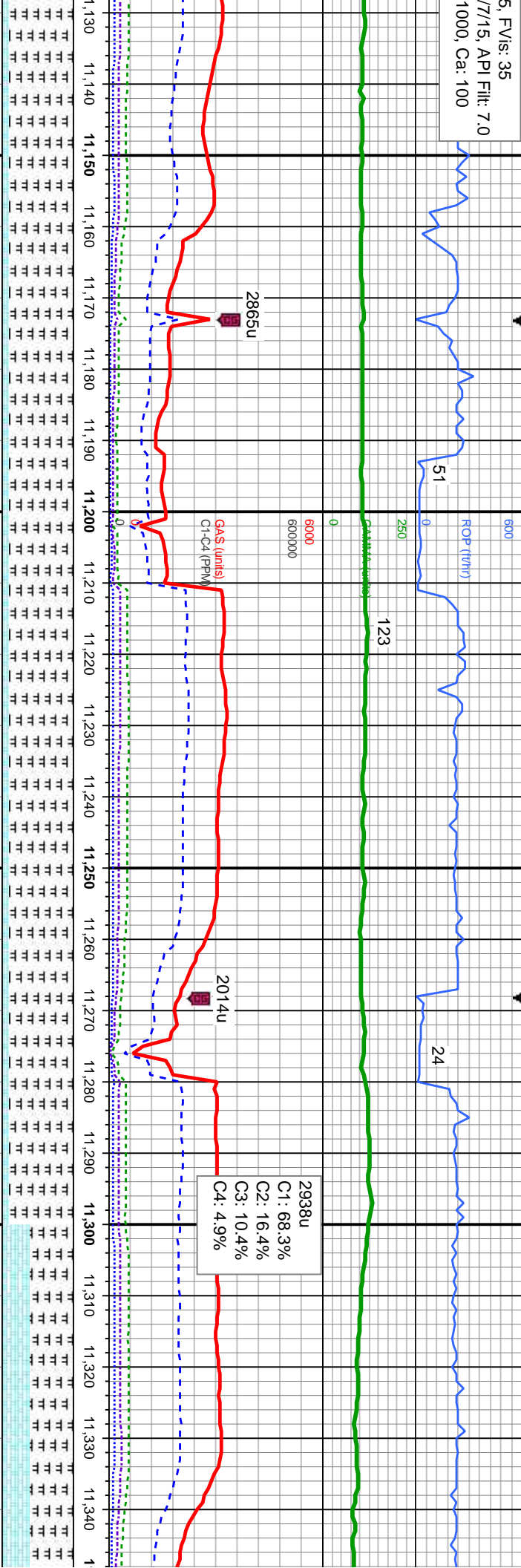
10% CHK: pred tan wi wh, occ lly, mot,
lam, sft - frm, sb pty - sb blk, rthy tex, v calc
90% MRL: lt - med gy, sme blk, frm - hd, sb
pty - pty, slty - grty tex, sme bent, occ fos
frag

10% CHK: pred tan wi wh, occ lly, mot,
lam, sft - frm, sb pty - sb blk, rthy tex, v calc
90% MRL: lt - med gy, sme blk, frm - hd, sb
pty - pty, slty - grty tex, sme bent, occ fos
frag

10% CHK: pred tan wi wh, occ lly, mot,
lam, sft - frm, sb pty - sb blk, rthy tex, v calc
90% MRL: lt - med gy, sme blk, frm - hd, sb
pty - pty, slty - grty tex, sme bent, occ fos
frag



5, FVis: 35
/7/15, API Filtr: 7.0
1000, Ca: 100



MD: 11,209'
TVD: 6,881.36'
Inclination: 90.59 °

Azimuth: 182.91°
VS: $4,570.76 \frac{\pi}{\pi}$

occilgy, mot, _____
 olky, rthy tex, v cal
 blk, frm - hd, sb
 bent, occ fos _____

10% CHK: pred tan wi wh, occ ltgy, mot, lam, sft - frm, sb pily - sb blk, rthy tex, v ca 90% MRL: lt - med gy, sme blk, frm - hd, sb pily - pily, slty - grty tex, sme bent, occ fos frag

10% CHK, pred ian wi wh, occ lly, mot, lam, sft - frm, sb ply - sb bly, rty tex, v cal 90% MR.L: it - med gy, sme blk, frm - hd, sb ply - ply, slty - gty tex, tr bent, occ fos frag

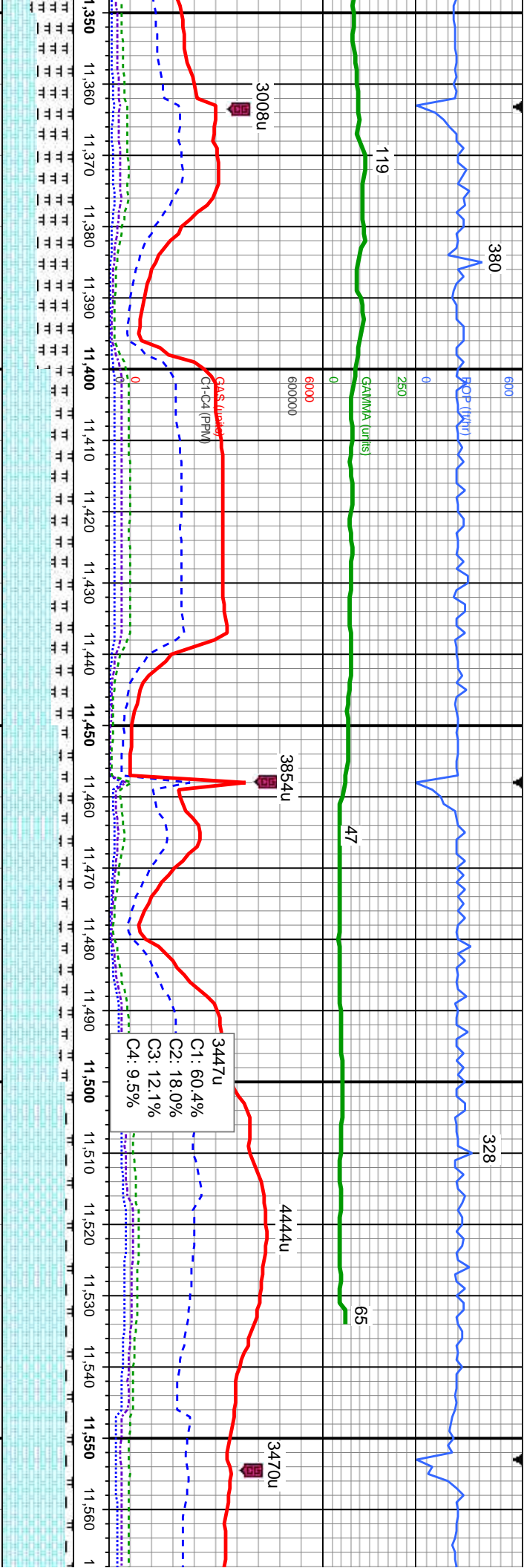
10% CHK: pred tan wi wh, occ lly, mot,
lam, sft - frm, sb ply - sb bily, rthy tex, v cal
90% MRL: lt - med gy, sme blk, frm - hd, sb
ply - ply, silty - grty tex, tr bent, occ los frag

40% CHk: pried tan wi wh, occ ltgy, mot, lam, sft - frm, sb ply - sb bkly, rthy tex, v cal 60% MRL: lt - med gy, sme blk, frm - hd, sb ply - ply, slty - gfty tex, abnt bent, abnt fos frag

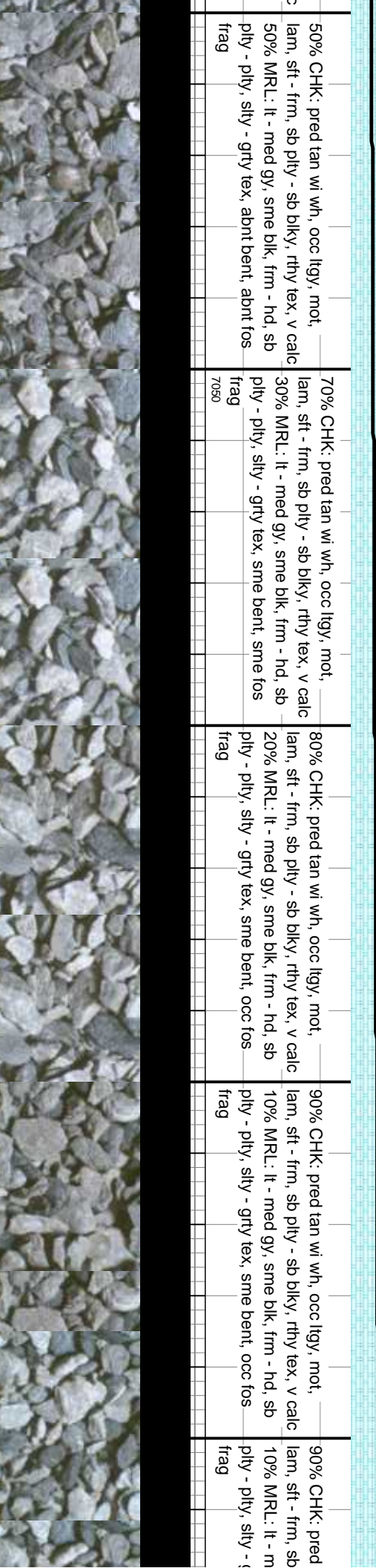
MD: 11,304'
TVD: 6,878.98'
Inclination: 92.28 °

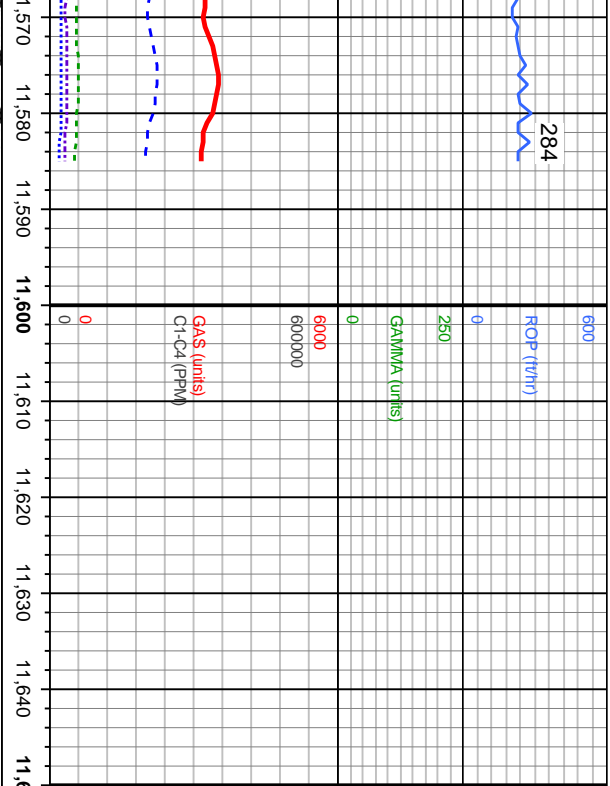
Azimuth: 182.46°
VS: 4,663.45'

2938u
C1: 68.3%
C2: 16.4%
C3: 10.4%
C4: 4.9%



6650	MD: 11,399' TVD: 6,875.56' Inclination: 91.85° Azimuth: 181.43° VS: 4,755.83' VD: 1,133.67'	50% CHK: pred tan wi wh, occ litgy, mot, lam, sft - frm, sb plty - sb blk, rthy tex, v calc 30% MRL: lt - med gy, sme blk, frm - hd, sb plty - plty, slty - grty tex, abnt bent, abnt fos frag
7050	MD: 11,526' TVD: 6,871.08' Inclination: 92.19° Azimuth: 180.45° VS: 4,878.81' VD: 1,141.41'	80% CHK: pred tan wi wh, occ litgy, mot, lam, sft - frm, sb plty - sb blk, rthy tex, v calc 20% MRL: lt - med gy, sme blk, frm - hd, sb plty - plty, slty - grty tex, sme bent, occ fos frag
	MD: 11,526' TVD: 6,871.08' Inclination: 92.19° Azimuth: 180.45° VS: 4,878.81' VD: 1,141.41'	90% CHK: pred tan wi wh, occ litgy, mot, lam, sft - frm, sb plty - sb blk, rthy tex, v calc 10% MRL: lt - med gy, sme blk, frm - hd, sb plty - plty, slty - grty tex, sme bent, occ fos frag





Projection to Bit: MD: 11,585' TVD: 6,868.83' Inclination: 92.19° Azimuth: 180.45°		TD @ 11,585' MD @ 18:17 hrs MDT on 04/16/2014	
tan wi wh, occ lly, mot, plty - sb blk, rhy tex, v calc ed gy, sme blk, frm - hd, sb gfty tex, sme bent, occ fos		Wellsite Geological Services Provided By Columbine Logging	
TVD (ft)		6650	
7050			