



Scale: 5" / 100'  
Measured Depth Log

Well Name    MATRIX M-29HN

Location    SEC. 29-T6N-R65W

State    COLORADO

County    WELD

Country    USA

Rig Number    FRONTIER 8

API Number    0512340698

Field    GREELEY

Region    DJ BASIN

Ground Elevation    4708'

K.B. Elevation    4730.5

Logged Interval    6000'

Formation    NIOBRARA

Type of Drilling Fluid    FWLSND

Operator

Company    Bayswater Exploration and Production LLC.

Address    730 17th Street, Suite 610  
Denver, CO 80202

Geologist

Name    ROBERT DAVIS, JASON BEACH, LISA KANT

Company    COLUMBINE LOGGING, INC.

Address    602 S. LIPAN ST.  
DENVER, CO 80223

Zone Color Coding

Oil  
Note  
Error

Condensate  
Core  
Water

Gas  
Pressure  
Seal

Rock Types

UNKNOWN	COAL	MARLSTONE
ANHYDRITE	CONGLOMERATE	METAMORPHIC
BENTONITE	DOLOMITE	NO SAMPLE
BRECCIA	DOLOMITIC LIMESTONE	SALT
CHALK	GRANITE	SANDSTONE
CEMENT	GYPSUM	SALT-PEPPER SAND
CHERT	IGNEOUS	SHALE
CLAY CHOKE SAND	SIDERITE or LIMONITE	SHALE COLORED
CLAYSTONE	LIMESTONE	SHALE GRAY

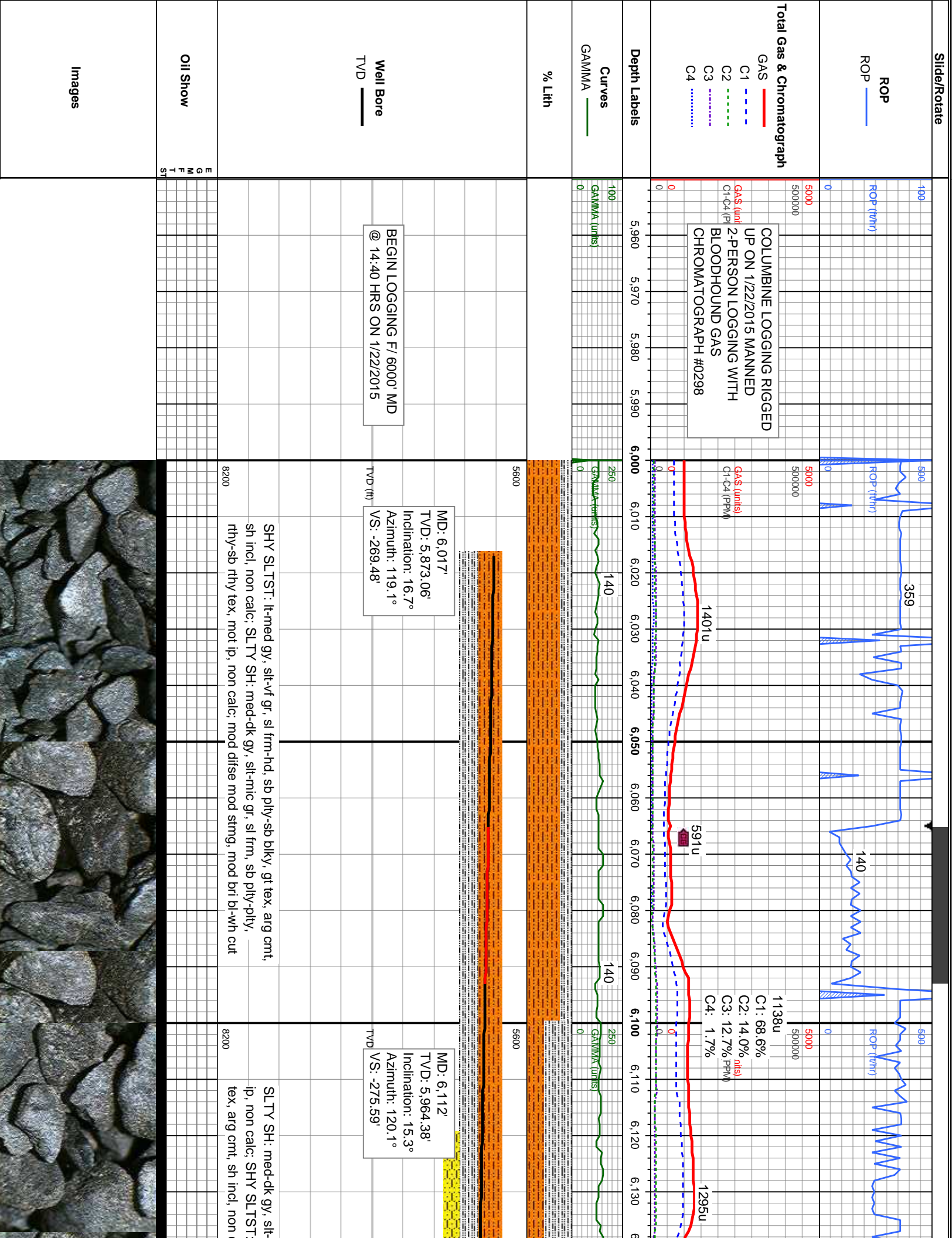
## Accessories

<b>Fossils</b>	GASTROPOD	ARGILLITE GRAIN	HEAVY MINERAL	<b>Stringer</b>
INOCERAMUS	B BENTONITE	K KAOLIN		ANHYDRITE STRINGER
ALGAE	O OOLITE	BIT BITUMENOUS SUBSTANCE	M MARCASITE	BENTONITE STRINGER
AMPHIPORA	O OSTRACOD	BRECCIA FRAGMENTS	T MARLSTONE	COAL STRINGER
BELEMNITE	P PELECYPOD	C CALCAREOUS	M MICACEOUS	DOLOMITE STRINGER
BIOCLASTIC	P PELLET	C CARBONACEOUS FLAKES	MINERAL CRYSTALS	GYPSUM STRINGER
BRACHIOPOD	P PISOLITE	CHERT	N NODULES	LIMESTONE STRINGER
BRYOZOA	P PLANT REMAINS	C COAL - THIN BEDS	PHOSPHATE PELLETS	MARLSTONE (CALC) STRG
CEPHALOPOD	P PLANT SPORES	D DOLOMITIC	P PYRITE	MARLSTONE (DOL) STRG
CORAL	S SCAPHOPOD	F FELDSPAR	S SALT CAST	SANDSTONE STRINGER
CRINOID	S STROMATOPOROID	F FERRUGINOUS PELLET	S SANDY	
E ECHINOID			S SIDERITE	SHALE STRINGER
F FISH	<b>Minerals</b>	F FERRUGINOUS	S SILICEOUS	SILTSTONE STRINGER
F FORAMINIFERA	A ANHYDRITIC	G GLAUCONITE	S SILTY	
F FOSSIL	A ARGILLACEOUS	G GYPSIFEROUS	T TUFFACEOUS	

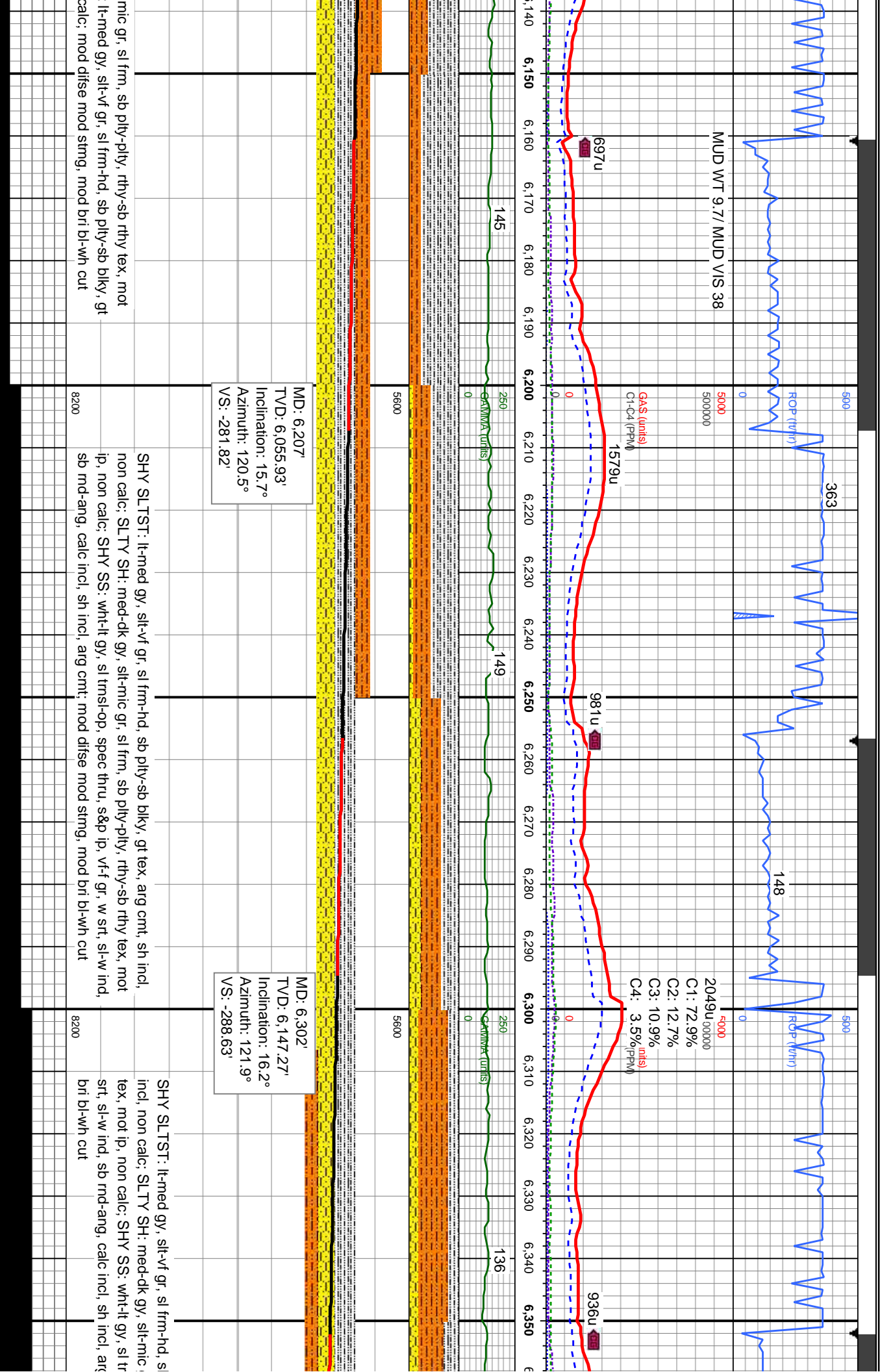
## Other Symbols

<b>Oil Show</b>	P PINPOINT	DST INTERVAL	WIRELINE TESTED - LEFT	E EARTHY
V VUGGY	FAULT	WIRELINE TESTED - RT	FX FINELYXLN	
<b>Engineering</b>	FORMATION TOP	DRILL STEM TEST	MN DEPTH	GS GRAINSTONE
D DEAD	GAS SHOW	MN DEPTH	L LITHOGRAPHIC	MX MICROXLN
E EVEN	OIL SHOW			
Q QUESTIONABLE	BIT	<b>Rounding</b>	MS MUDSTONE	
S SPOTTED STAINING	C CONNECTION (UP)			
<b>Porosity</b>	C CONNECTION (DOWN)	A ANGULAR	PS PACKSTONE	
E EARTHY	C CONNECTION GAS	R ROUNDED	WS WACKESTONE	
F FENESTRAL	C CONNECTION GAS (LEFT)	S SUBANG		<b>Sorting</b>
F FRACTURE	T TRIP GAS	R REVERSE FAULT	S SUBRND	M MODERATE
I INTERCRYSTALLINE	T TRIP GAS (LEFT)	C CASING		
I INTERCRYSTALLINE	D DOWN TIME GAS	S SIDEWALL CORE (LEFT)	P POOR	
I INTERCRYSTALLINE	D DOWN TIME GAS (LEFT)	S SIDEWALL CORE (RIGHT)	W WELL	
M MOLDIC	C CORE - LOST	S SLIDE		
O ORGANIC	C CORE - RECOVERED	S SURVEY	CX CRYPTOXLN	
		<b>Textures</b>		
		B BOUNDSTONE		
		C CHALKY		
		CX CRYPTOXLN		

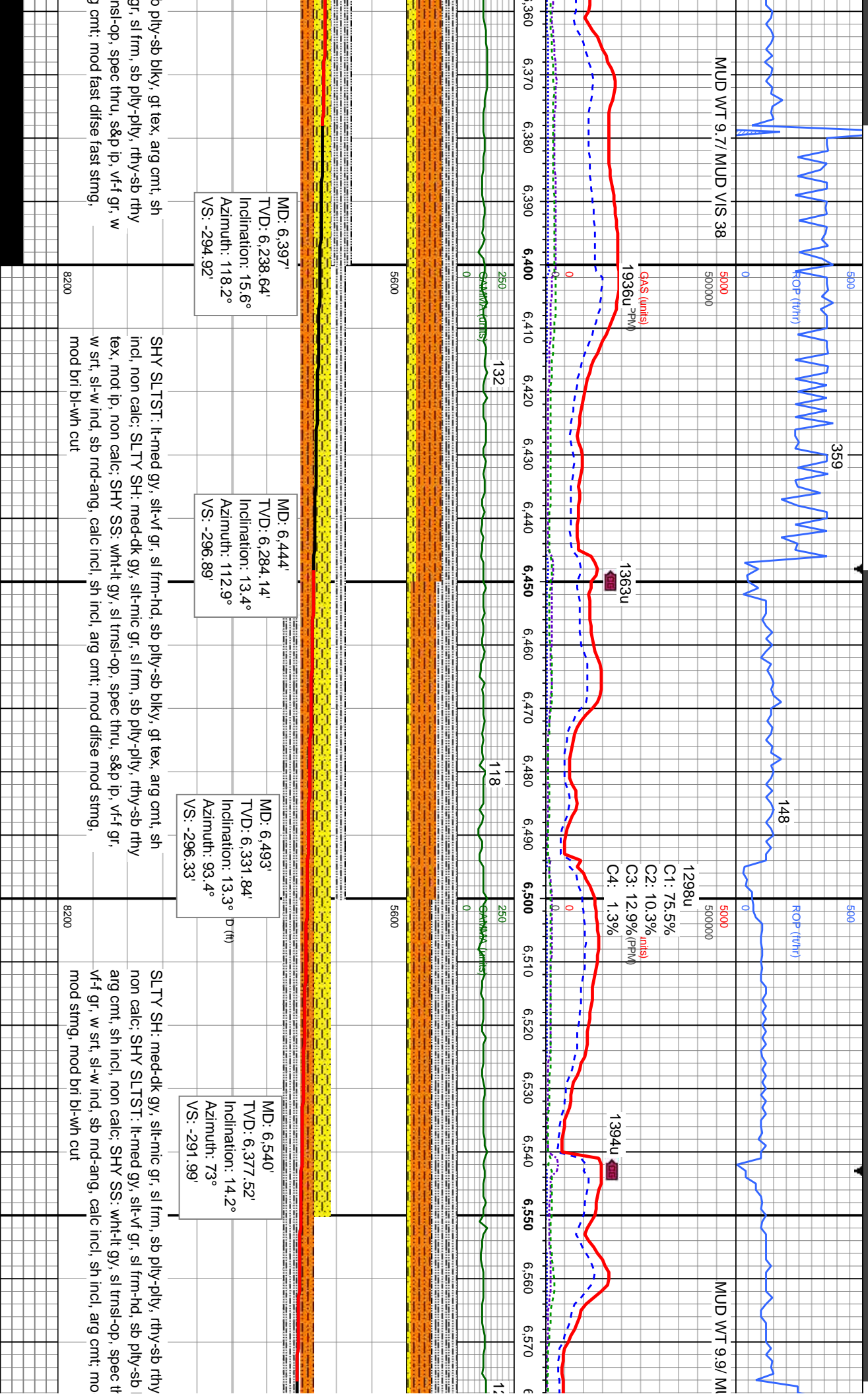




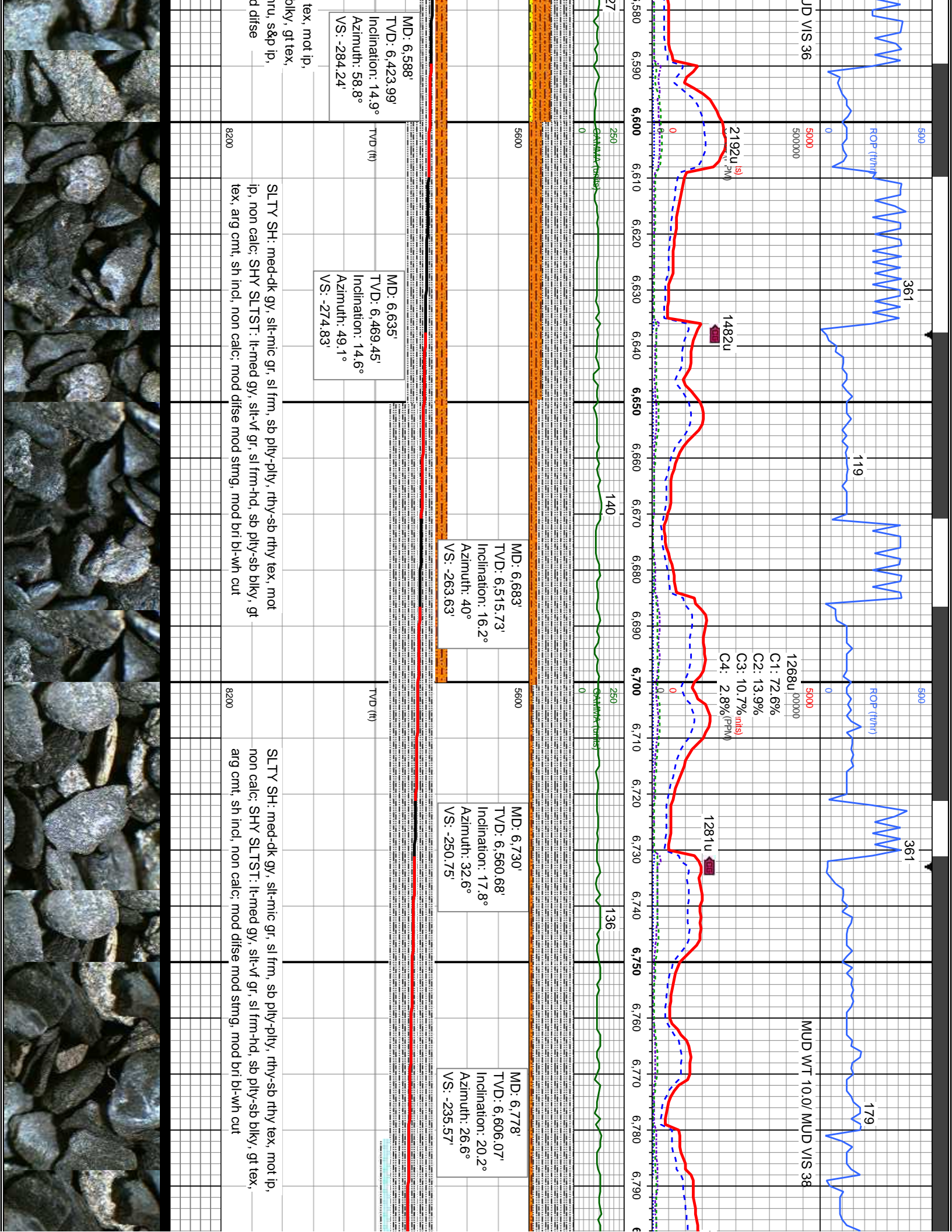






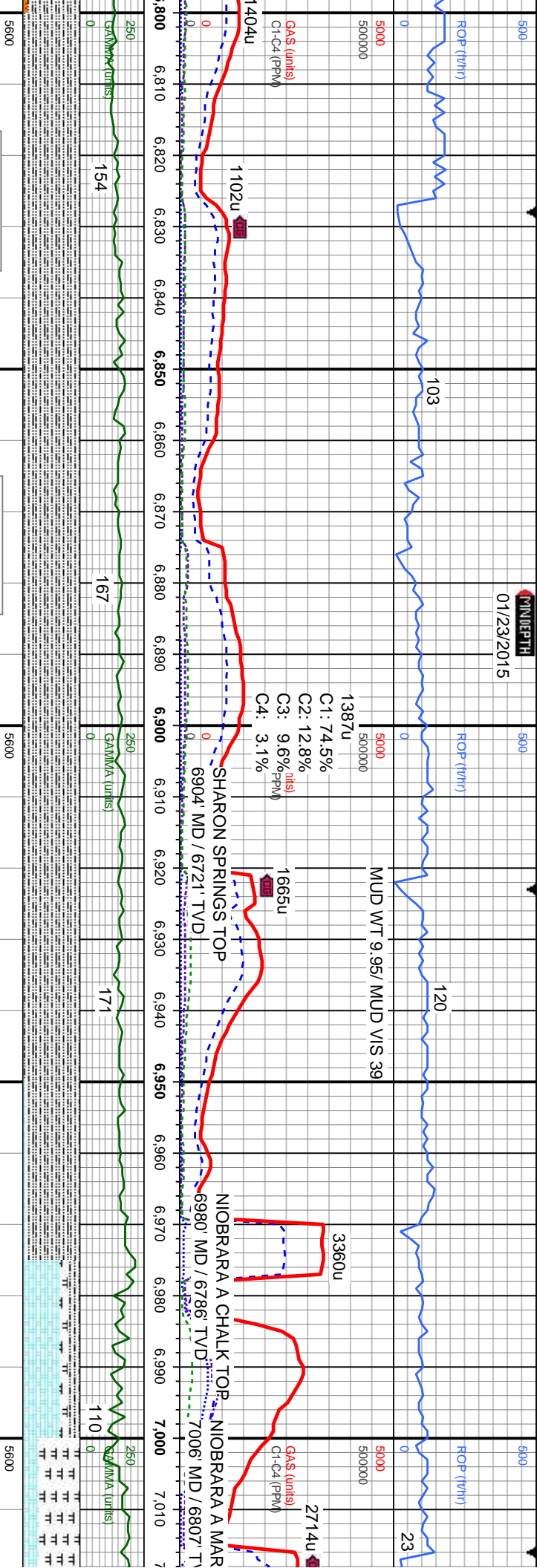






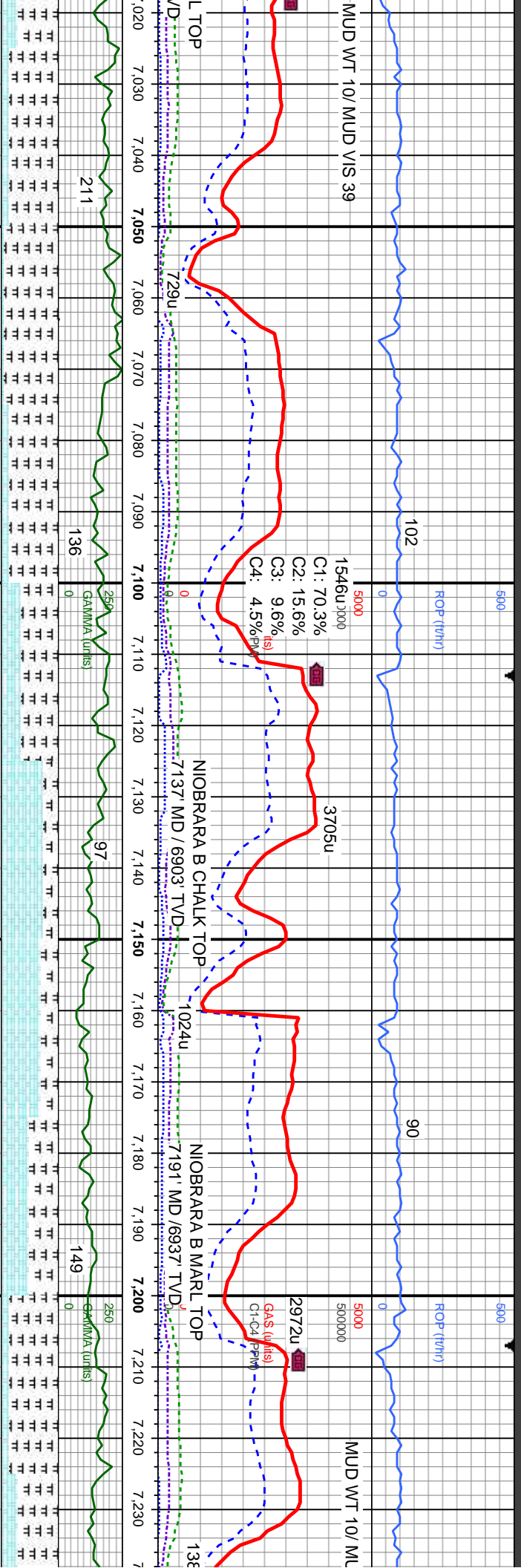


TIMEDEPTH  
01/23/2015



MD: 6.825' TVD: 6,649.77' Inclination: 23° Azimuth: 19.4° VS: -218.41'	MD: 6.873' TVD: 6,693.42' Inclination: 26.2° Azimuth: 13.1° VS: -198.46'	MD: 6.920' TVD: 6,734.89' Inclination: 29.9° Azimuth: 10.8° VS: -176.43'	MD: 6.968' TVD: 6,775.79' Inclination: 33.2° Azimuth: 9.4° VS: -151.46'	MD: 7.015' TVD: 6,814.14' Inclination: 33.2° Azimuth: 8° VS: -124.4°
SLTY SH: med gy-blk, occ brn cast, slt-mic gr, mod sft-sl frm, sb pily-pily, gt-sb rthy tex, non calc, mod difse mod stmng, mod bri bl-wh cut	SLTY SH: med gy-blk, occ brn cast, slt-mic gr, mod sft-sl frm, sb pily-pily, gt-sb rthy tex, non calc, mod difse mod stmng, mod bri bl-wh cut	SLTY SH: med gy-blk, occ brn cast, slt-mic gr, mod sft-sl frm, sb pily-pily, gt-sb rthy tex, non calc, tr-com bent, mod fast difse mod stmng-milky, bri bl-wh cut	CHK: lt-med gy, mot-str, mod sft, sb bky-sb pily, sm-rthy tex, v calc; MRLST: med-dk gy, sl frm, pily-sb pily, rthy-gt tex, calc; r bent flks; SLTY SH: med gy-blk, slt-mic gr, mod sft-sl frm, sb pily-pily, gt-sb rthy tex, non calc, r bent, mod fast difse mod stmng-milky, bri bl-wh cut	MRLST: med-d pily-sb pily, rth gy, mot-str, mc sm-rthy tex, v v stmng-milky, bri





MD: 7,064'  
TVD: 6,852.03'  
Inclination: 41.1°  
Azimuth: 9.6°  
VS: -93.67'

MD: 7,111'  
TVD: 6,886.14'  
Inclination: 45.8°  
Azimuth: 11°  
VS: -61.52'

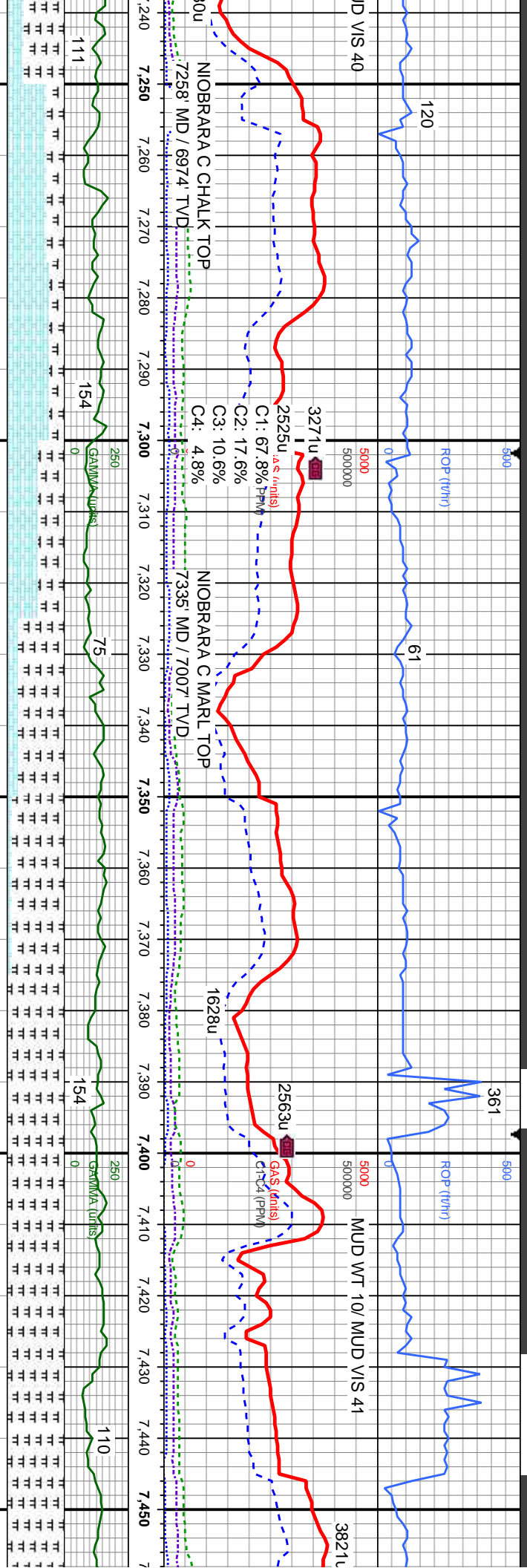
MD: 7,159'  
TVD: 6,918.16'  
Inclination: 50.5°  
Azimuth: 11.7°  
VS: -25.9'

MD: 7,206'  
TVD: 6,946.53'  
Inclination: 55.2°  
Azimuth: 12.6°  
VS: -11.46'

dk gy, sl frm, str, lam, y-gt tex, calc; CHK: lt-med	MRLST: med-dk gy, sl frm, str, lam, ply-sb ply, rthy-gt tex, calc; CHK: lt-med gy, mot-str, mod sft, sb biky-sb ply, sm-rthy tex, v calc; mod fast difse mod bl-wh cut	CHK: lt-med gy, sl mot-str, mod sft, sb biky-sb ply, sm-rthy tex, v calc; MRLST: med-dk gy, sl frm, str, lam, ply-sb ply, rthy-gt tex, calc, fos incl; fast difse v fast stmg-milky, thk bri bl-wh cut	CHK: lt-med gy, sl mot-str, mod sft, sb biky-sb ply, sm-rthy tex, v calc; MRLST: med-dk gy, sl frm, str, lam, ply-sb ply, rthy-gt tex, calc, fos incl; fast difse v fast stmg-milky, thk bri bl-wh cut
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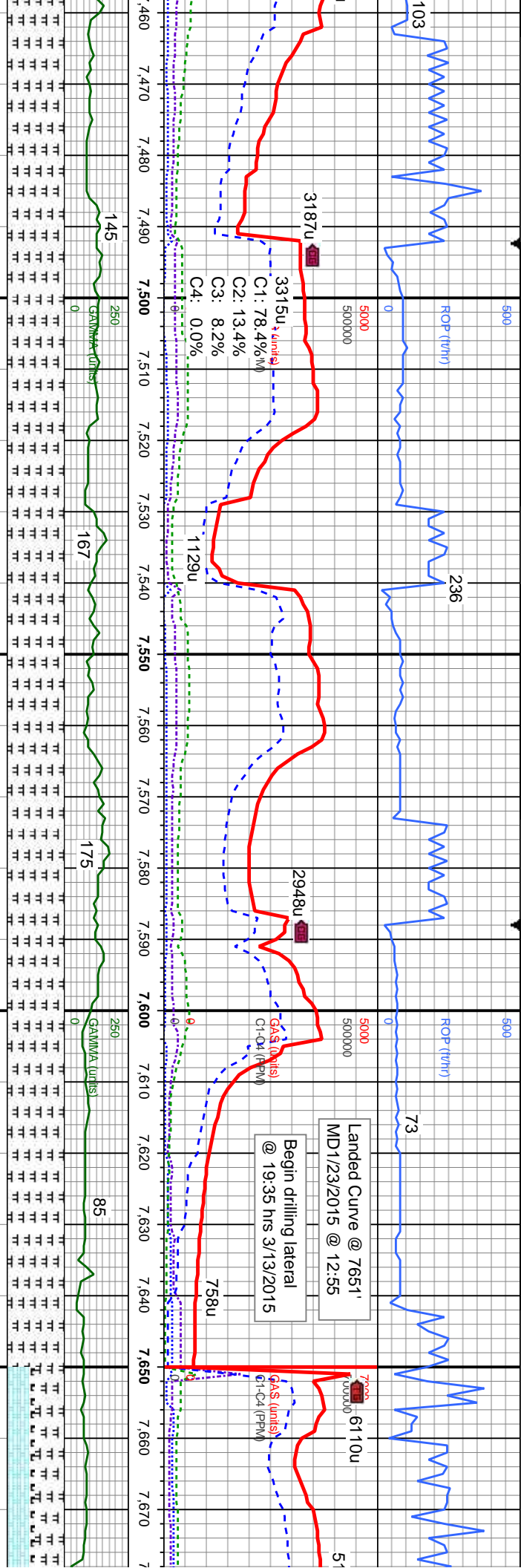






MD: 7,254' TVD: 6,972.32' Inclination: 59.8° Azimuth: 12.9° VS: 51.87'	MD: 7,301' TVD: 6,994.01' Inclination: 65.2° Azimuth: 12.4° VS: 93.46'	MD: 7,349' TVD: 7,012.14' Inclination: 70.4° Azimuth: 10.6° VS: 137.75'	MD: 7,396' TVD: 7,026.12' Inclination: 75° Azimuth: 8.9° VS: 182.33'	MD: 7,444' TVD: 7,037.32' Inclination: 78° Azimuth: 7.8° VS: 228.57'
CHK: brn-gy brn, occ lt brn, sb blk-y-bkly, sft - frm, sl mot tex, calc. MRLST: med - dk gy, frm, silty tex, microxln, sb blk-y, tr foss, tr pyr; mod fast difse mod string-milky, bri bl-wh cut	MRLST: med - dk gy, frm, silty tex, microxln, sb blk-y, tr foss, tr bent; CHK: brn-gy brn, occ lt brn, crm, sb blk-y-bkly, sft - frm, sl mot tex, calc; mod fast difse mod string-milky, bri bl-wh cut	MRLST: med - dk gy, frm, silty tex, microxln, sb blk-y, tr foss, tr bent; CHK: brn-gy brn, occ lt brn, crm, sb blk-y-bkly, sft - frm, sl mot tex, calc; mod fast difse mod string-milky, bri bl-wh cut	MRLST: med - dk gy, frm, silty tex, microxln, sb blk-y, tr foss, tr bent; CHK: brn-gy brn, occ lt brn, crm, sb blk-y-bkly, sft - frm, sl mot tex, calc; mod fast difse mod string-milky, bri bl-wh cut	MRLST: med - dk gy, frm, silty tex, microxln, sb blk-y, tr foss, tr bent; CHK: brn-gy brn, occ lt brn, crm, sb blk-y-bkly, sft - frm, sl mot tex, calc; mod fast difse mod string-milky, bri bl-wh cut





MD: 7,491'  
TVD: 7,046.29'  
Inclination: 80°  
Azimuth: 6.8°  
VS: 274.16'

MD: 7,540'  
TVD: 7,053.57'  
Inclination: 82.9°  
Azimuth: 5.9°  
VS: 321.91'

MD: 7,601'  
TVD: 7,059.37'  
Inclination: 86.2°  
Azimuth: 2.2°  
VS: 381.28'

MD: 7,649'  
TVD: 7,061.29'  
Inclination: 89.2°  
Azimuth: 1.5°  
VS: 427.77'

med - dk gy, frm, sly tex, microxl, tr foss, tr bent, mod difse mod string, bri bl-wh cut

MRLST: med - dk gy, frm, sly tex, microxl, sb blk, tr bent, mod fast difse mod string-nilky, bri bl-wh cut

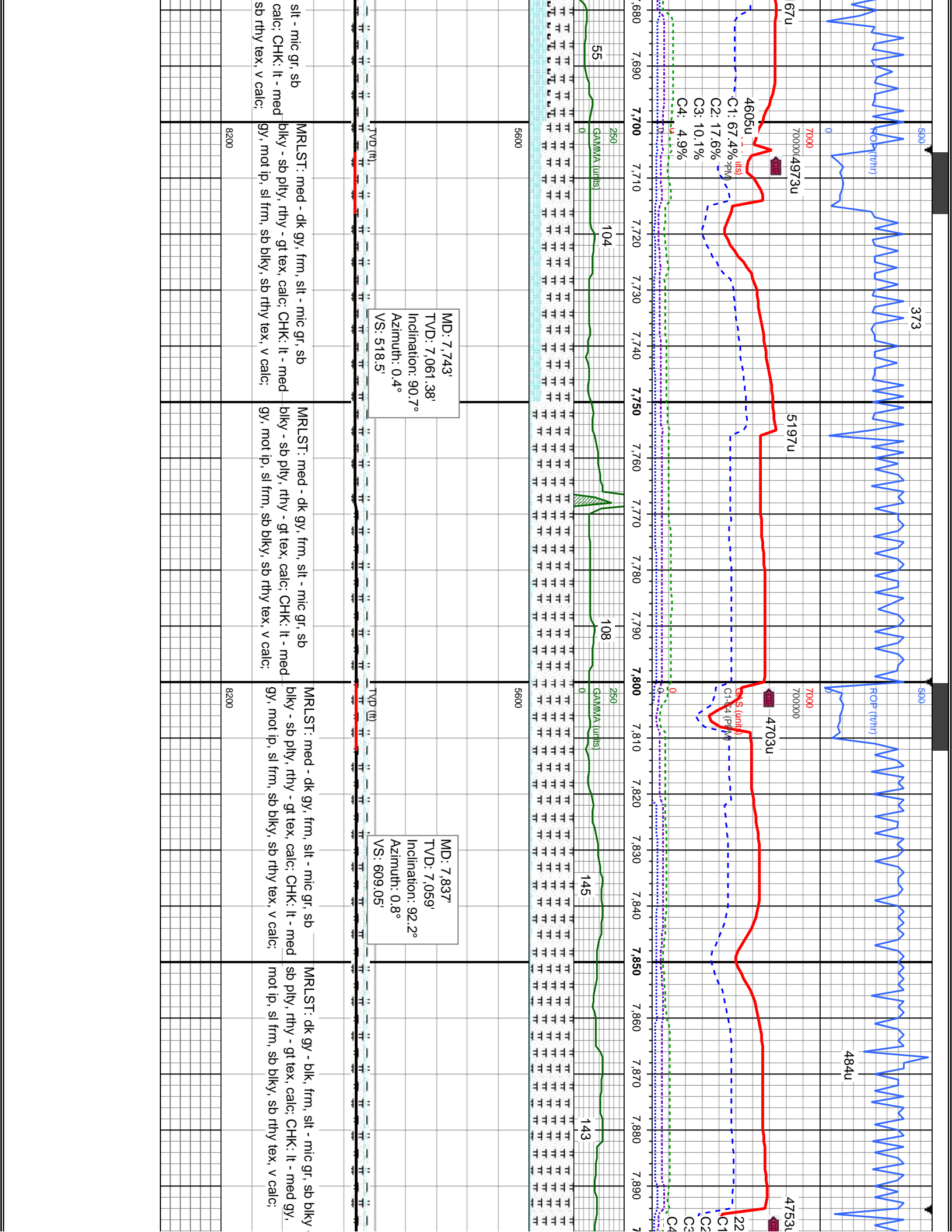
MRLST: med - dk gy, frm, sly tex, microxl, sb blk, tr bent, mod fast difse mod string-nilky, bri bl-wh cut

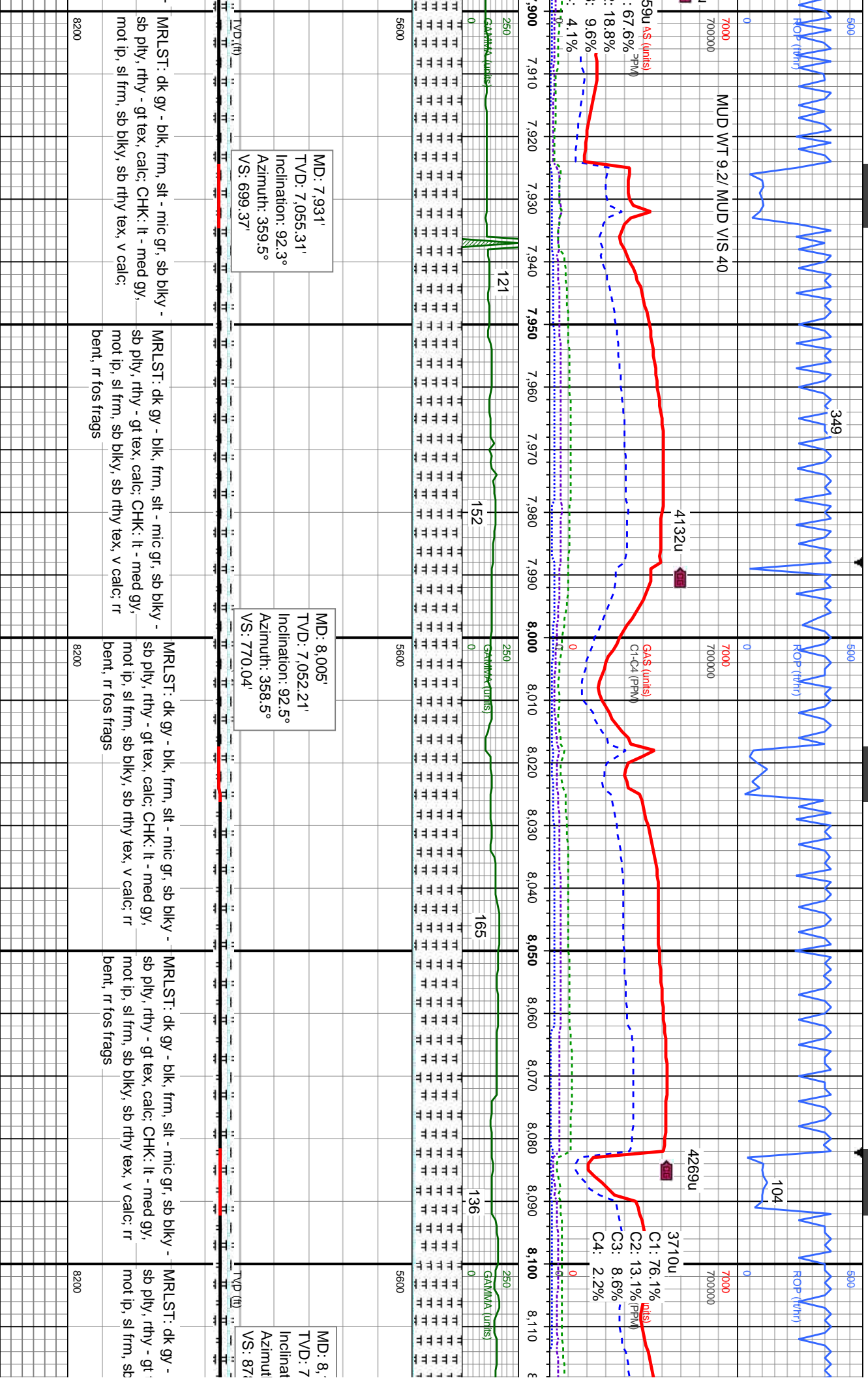
MRLST: med - dk gy, frm, sly tex, microxl, sb blk, tr bent, mod fast difse mod string-nilky, bri bl-wh cut

MRLST: med - dk gy, frm, sly tex, microxl, sb blk, tr bent, mod fast difse mod string-nilky, bri bl-wh cut

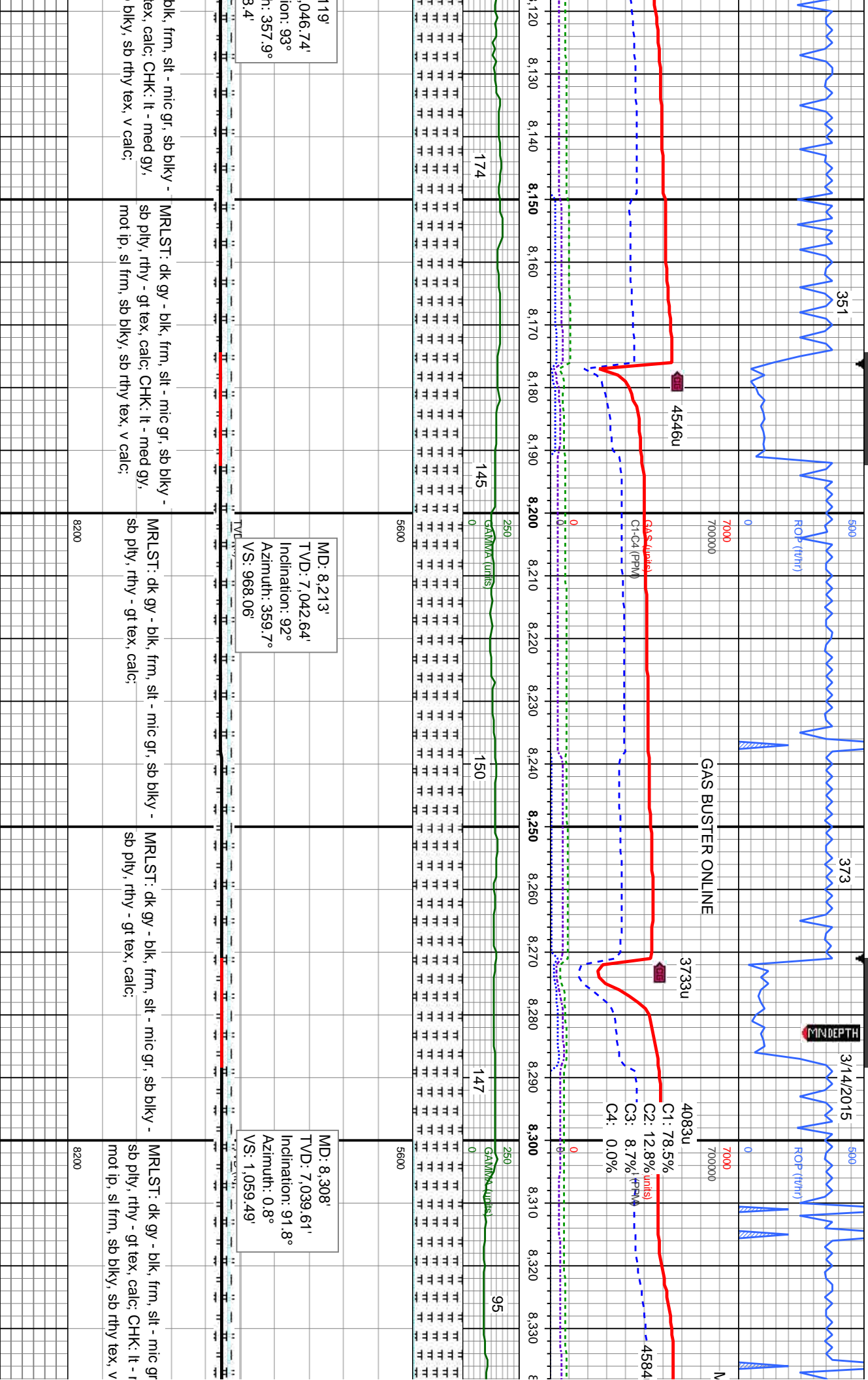
MRLST: med - dk gy, frm, sly tex, microxl, sb blk, tr bent, mod fast difse mod string-nilky, bri bl-wh cut

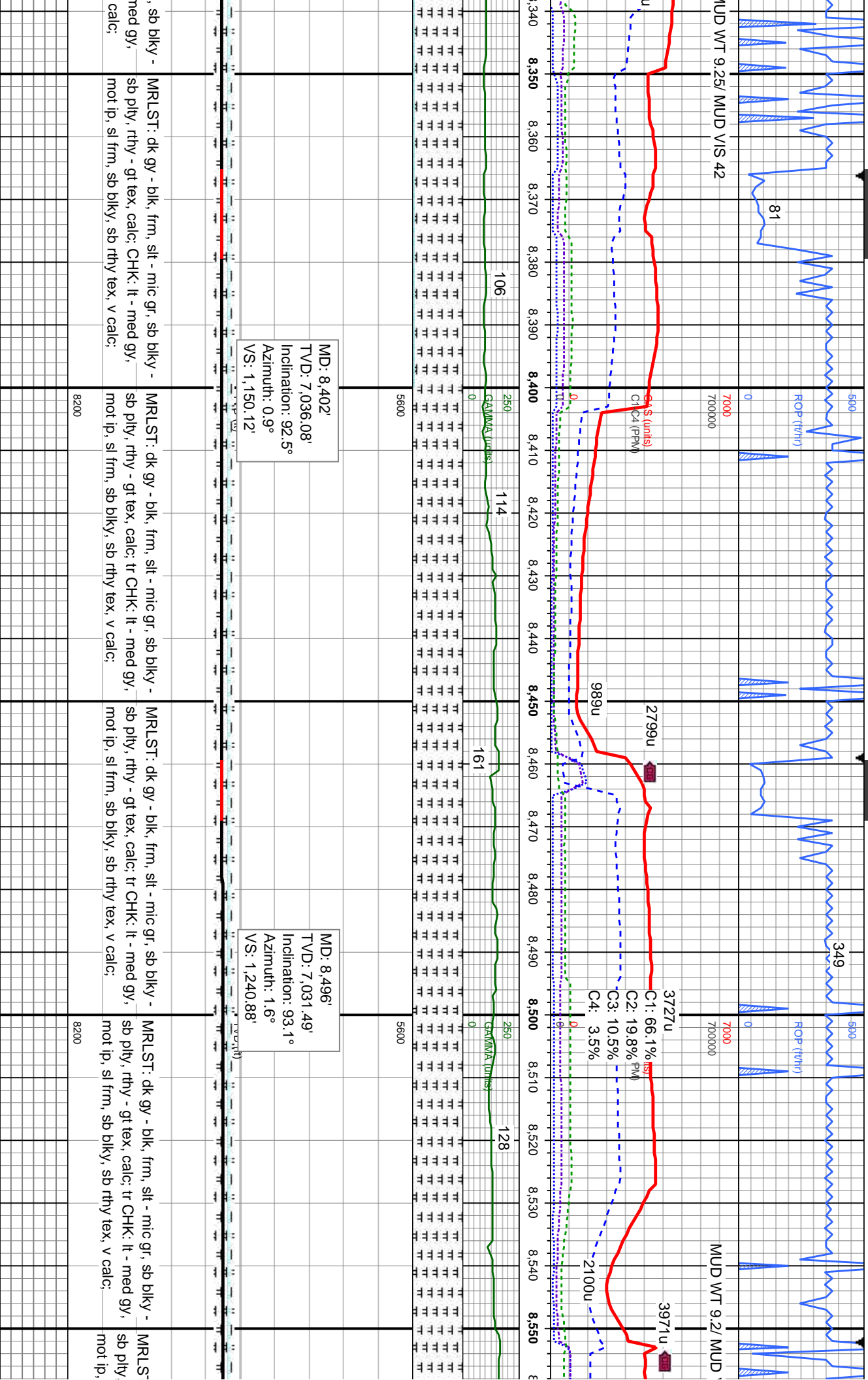




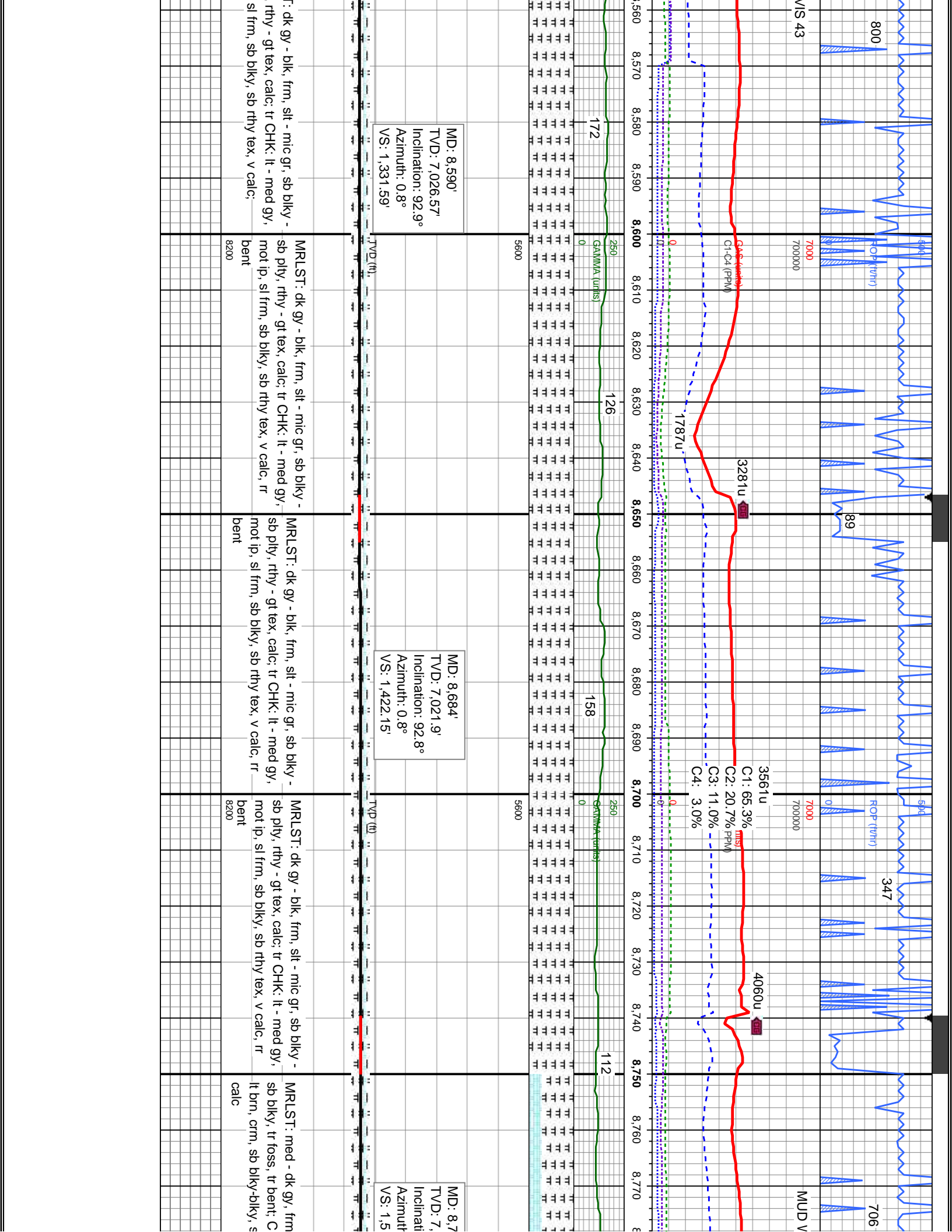






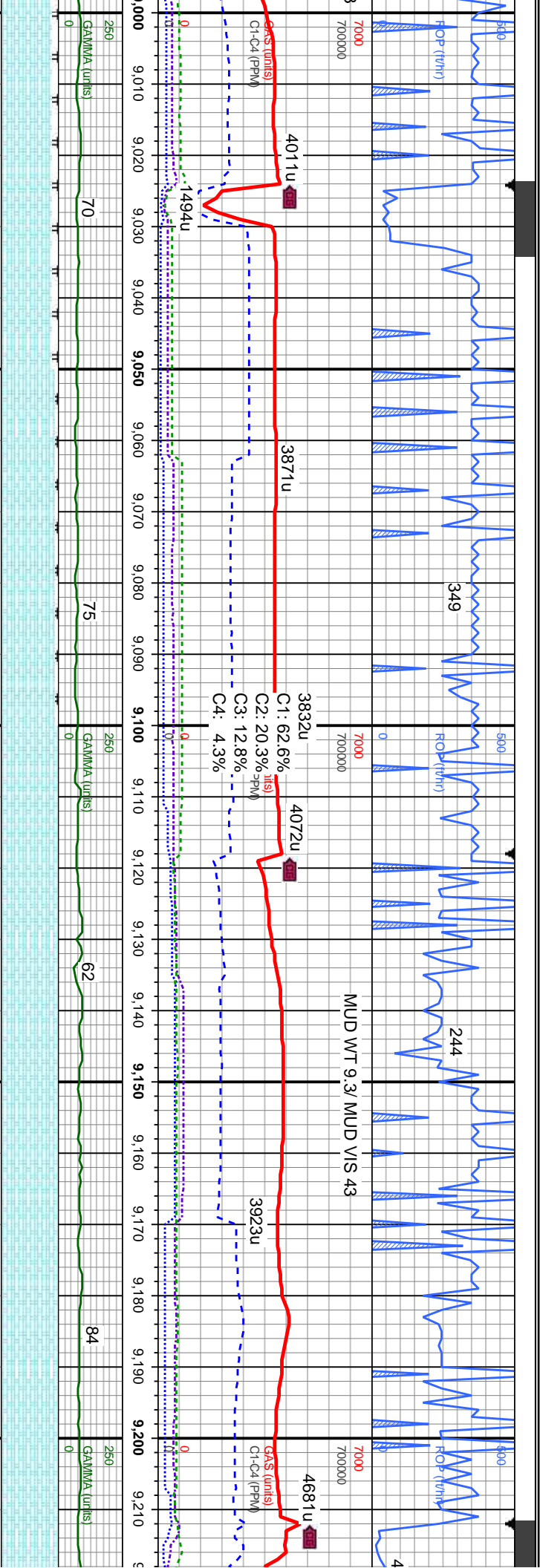








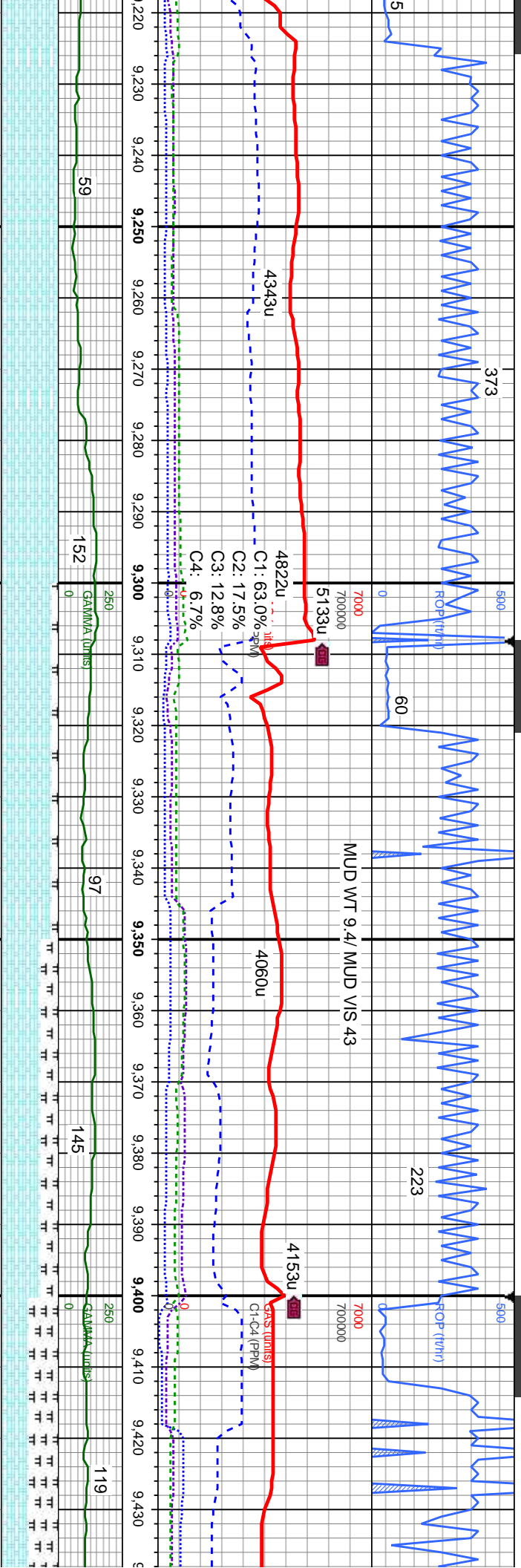




MD: 9,061'  
TV/D: 7,012.5'  
Inclination: 89.6°  
Azimuth: 359°  
VS: 1,785.8'

MD: 9,155'  
TV/D: 7,012.42'  
Inclination: 90.5°  
Azimuth: 358.5°  
VS: 1,875.53'

CHK: brn-gy brn, occ lt brn, crm, sb biky-biky, sft - frm, sl mot tex, calc, MRLST: med - dk gy, frm, silty tex, microxin, sb biky, tr foss	CHK: brn-gy brn, occ lt brn, crm, sb biky-biky, sft - frm, sl mot tex, calc, MRLST: med - dk gy, frm, silty tex, microxin, sb biky, tr foss	CHK: brn-gy brn, occ lt brn, crm, sb biky-biky, sft - frm, sl mot tex, calc, tr MRLST	CHK: brn-gy brn, occ lt brn, crm, sb biky-biky, sft - frm, sl mot tex, calc, tr MRLST	CHK: brn-gy brn biky-biky, sft - frm
8200	8200	8200	8200	8200



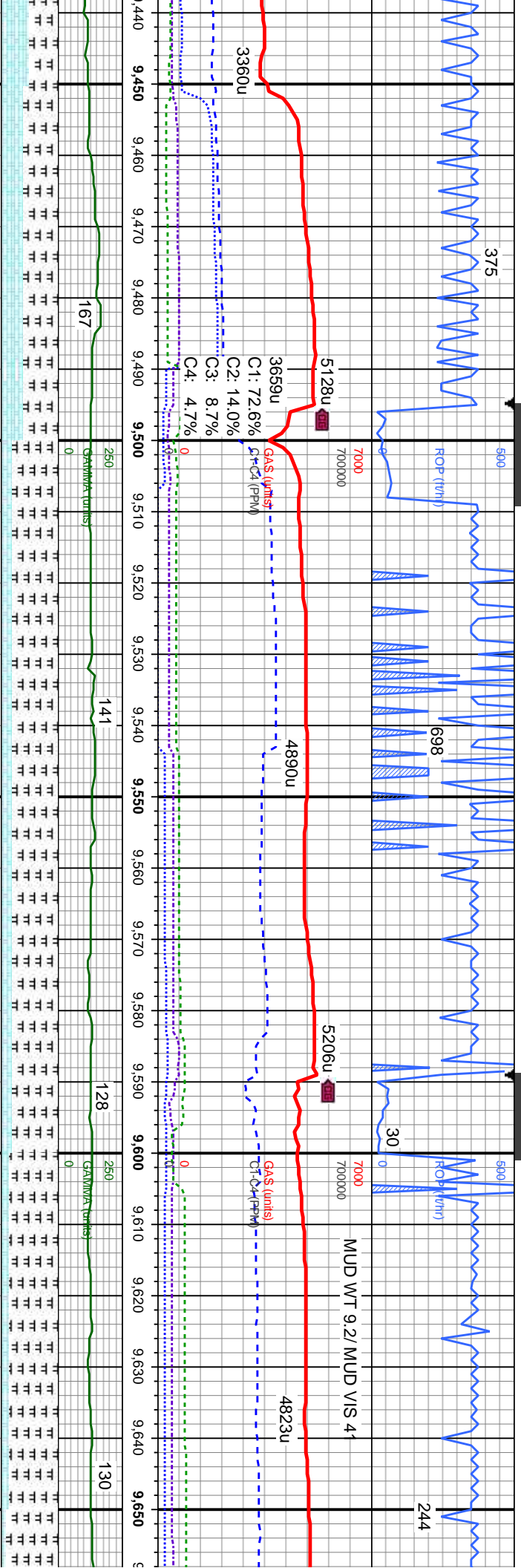
MD: 9,250'  
TVD: 7,013.75'  
Inclination: 87.9°  
Azimuth: 358.3°  
VS: 1,966.02'

MD: 9,343'  
TVD: 7,016.67'  
Inclination: 88.5°  
Azimuth: 359.5°  
VS: 2,054.82'

MD: 9,430'  
TVD: 7,016.67'  
Inclination: 88.5°  
Azimuth: 359.5°  
VS: 2,114.14'

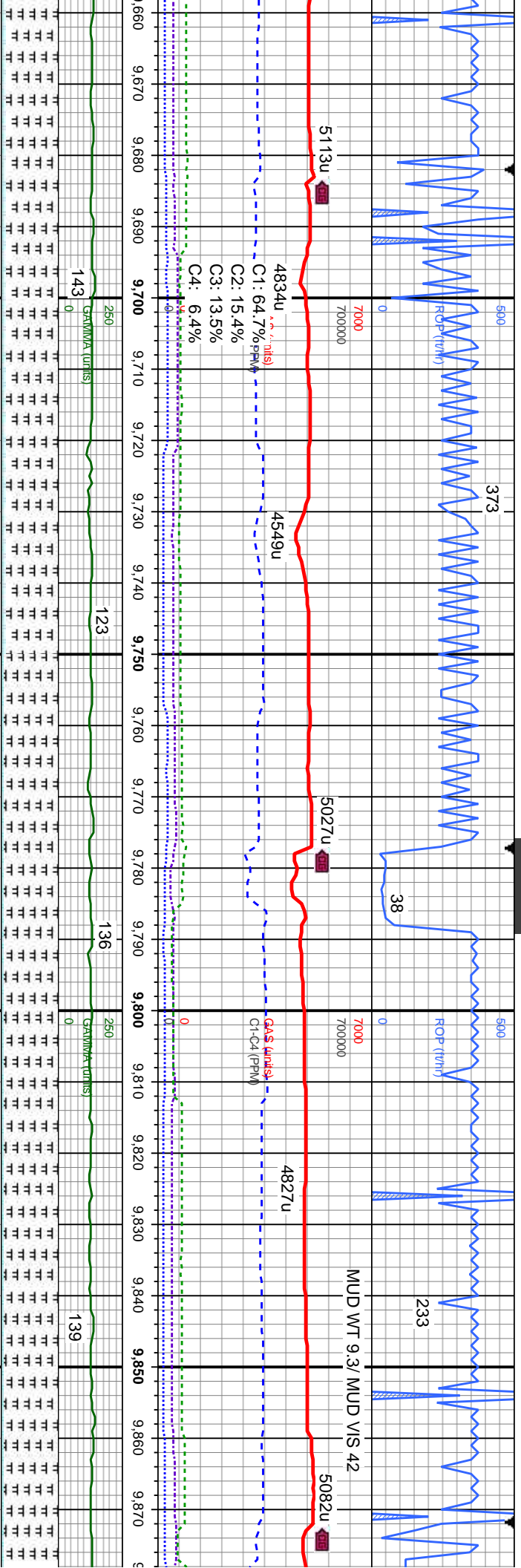
, occ lt brn, crm, sb n, sl mot tex, calc, tr MRLST	CHK: brn-gy brn, occ lt brn, crm, sb bkly-bkly, sft - frm, sl mot tex, calc, tr MRLST	CHK: brn-gy brn, occ lt brn, crm, sb bkly-bkly, sft - frm, sl mot tex, calc, MRLST: med - dk gy, frm, silty tex, microxln, sb bkly, tr foss	CHK: brn-gy brn, occ lt brn, crm, sb bkly-bkly, sft - frm, sl mot tex, calc, MRLST: med - dk gy, frm, silty tex, microxln, sb bkly, tr foss	MRLST: med-dk gy, sl frm, str, lam ply, rthy-gt tex, calc, fos cls; CHK: sl mot-str, mod sft, sb bkly-sb ply, tex, v calc, tr foss, tr bent



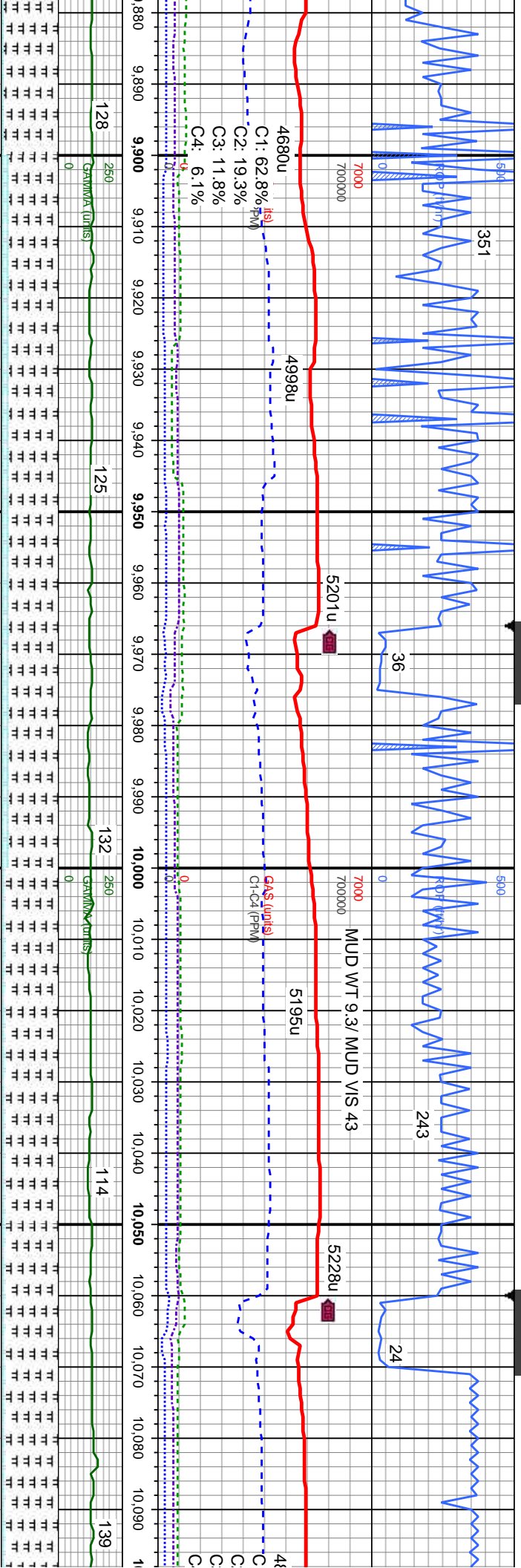


5600	MD: 9.531' TVD: 7,022.08' Inclination: 89.3° Azimuth: 1.5° VS: 2,236.08'	5600	MD: 9.625' TVD: 7,022.08' Inclination: 90.7° Azimuth: 1.5° VS: 2,327.04'
167	GRAB (ft)	128	GRAB (ft)
141	GRAB (ft)	130	GRAB (ft)
0	GRAB (ft)	0	GRAB (ft)

ply-sb med gy, sm-rthy	MRLST: med-dk gy, sl frm, str, lam, ply-sb ply, rthy-gt tex, calc, fos cls; CHK: lt-med gy, sl mot-str, mod sft, sb bkly-sb ply, sm-rthy tex, v calc, tr foss, tr bent	8200	MRLST: med-dk gy, sl frm, str, lam, ply-sb ply, rthy-gt tex, calc, fos cls; CHK: lt-med gy, sl mot-str, mod sft, sb bkly-sb ply, sm-rthy tex, v calc, tr foss	8200	MRLS ply, rt sl mot- tex, v c
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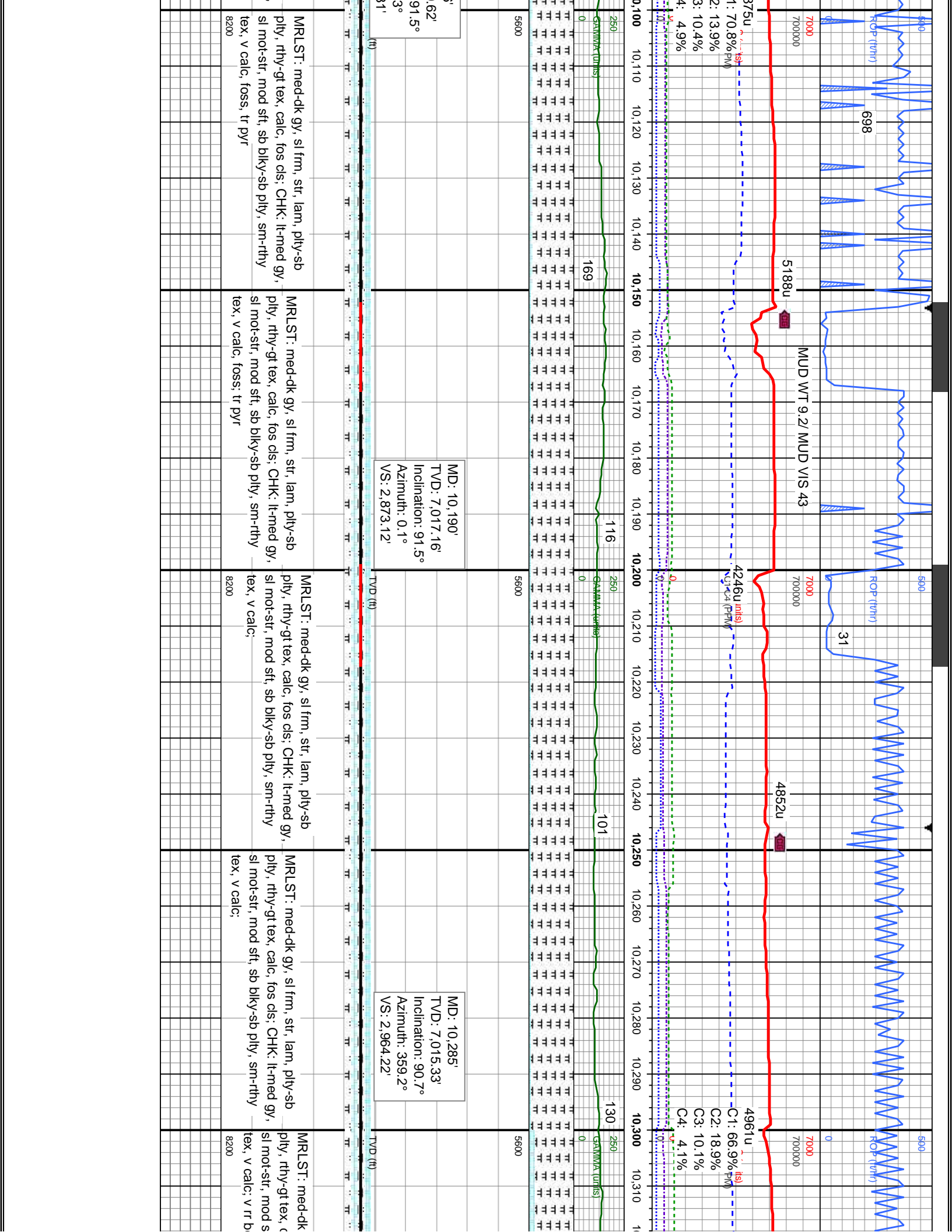


MD: 9,908'  
TVD: 7,021.18'  
Inclination: 89.8°  
Azimuth: 0.6°  
VS: 2,600.42'

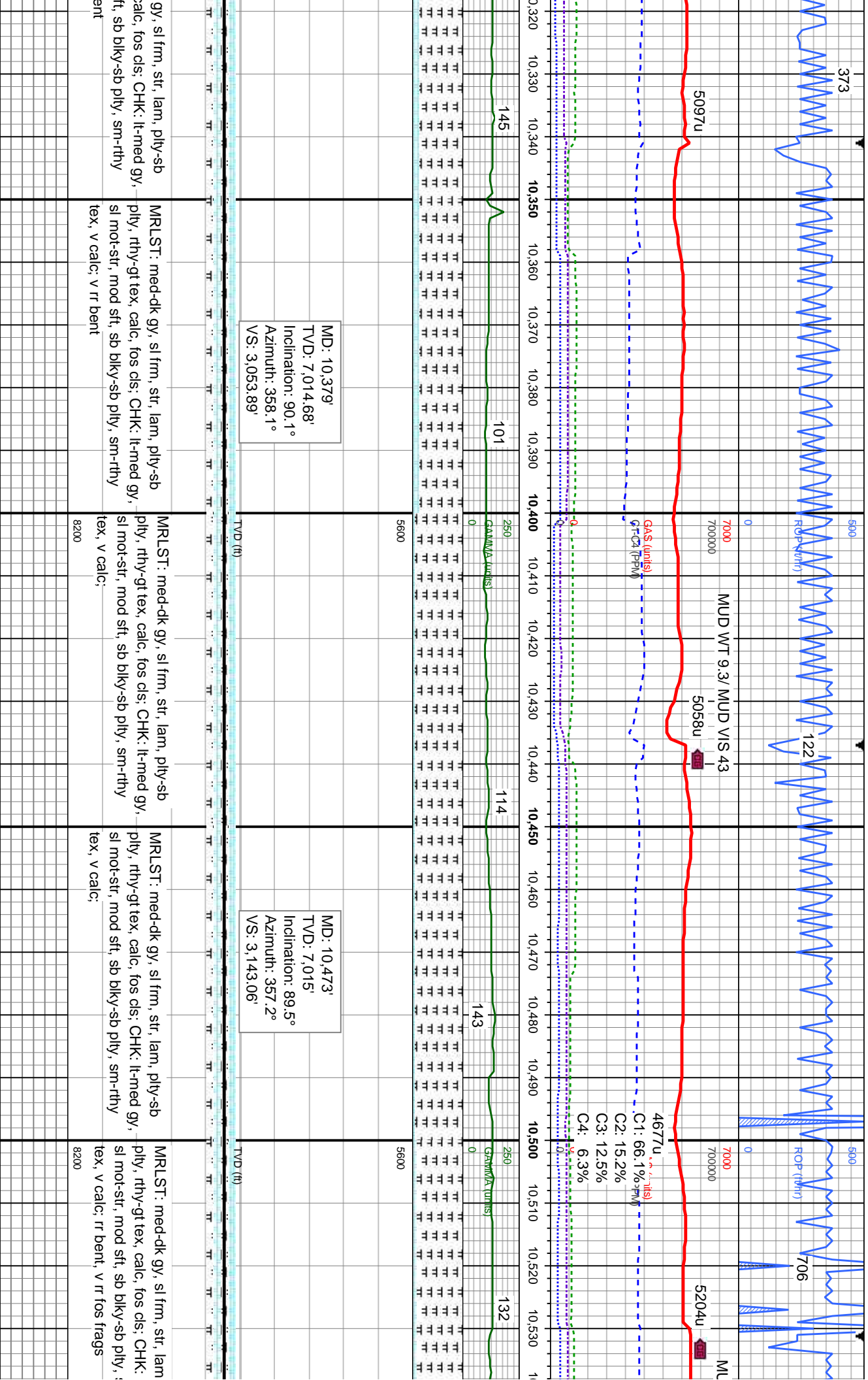
MD: 10,002'  
TVD: 7,021.09'  
Inclination: 90.3°  
Azimuth: 1.5°  
VS: 2,691.2'

MD: 10,096'  
TVD: 7,019'  
Inclination:  
Azimuth: 2.  
VS: 2,782.3'

str, lam, pily-sb s: CHK: lt-med gy, -sb pily, sm-rthy	MRLST: med-dk gy, sl frm, str, lam, pily-sb pily, rthy-gt tex, calc, fos cls; CHK: lt-med gy, sl mot-str, mod sft, sb biky-sb pily, sm-rthy tex, v calc, foss, tr pyr	8200
str, lam, pily-sb s: CHK: lt-med gy, -sb pily, sm-rthy	MRLST: med-dk gy, sl frm, str, lam, pily-sb pily, rthy-gt tex, calc, fos cls; CHK: lt-med gy, sl mot-str, mod sft, sb biky-sb pily, sm-rthy tex, v calc, foss, tr pyr	8200
str, lam, pily-sb s: CHK: lt-med gy, -sb pily, sm-rthy	MRLST: med-dk gy, sl frm, str, lam, pily-sb pily, rthy-gt tex, calc, fos cls; CHK: lt-med gy, sl mot-str, mod sft, sb biky-sb pily, sm-rthy tex, v calc, foss, tr pyr	8200







gy, sl frm, str, lam, pily-sb  
calc, fos ds; CHK: lt-med gy,  
ft, sb blk-y-sb pily, sm-rthy  
ent

MRLST: med-dk gy, sl frm, str, lam, pily-sb  
pily, rthy-gt tex, calc, fos ds; CHK: lt-med gy,  
sl mot-str, mod sft, sb blk-y-sb pily, sm-rthy  
tex, v calc, v rr bent

MRLST: med-dk gy, sl frm, str, lam, pily-sb  
pily, rthy-gt tex, calc, fos ds; CHK: lt-med gy,  
sl mot-str, mod sft, sb blk-y-sb pily, sm-rthy  
tex, v calc;

MRLST: med-dk gy, sl frm, str, lam, pily-sb  
pily, rthy-gt tex, calc, fos ds; CHK: lt-med gy,  
sl mot-str, mod sft, sb blk-y-sb pily, sm-rthy  
tex, v calc;

MRLST: med-dk gy, sl frm, str, lam  
pily, rthy-gt tex, calc, fos ds; CHK:  
sl mot-str, mod sft, sb blk-y-sb pily, :  
tex, v calc; rr bent, v rr fos frags

