



Scale: 5" / 100'
Measured Depth Log

Well Name North Platte F-J-13HNC

Location NENW SECTION 31, T5N, R63W

State COLORADO County WELD

Country USA Rig Number CADE 25

API Number 05-123-40386 AFE # 14324

Region DJ BASIN Field WATTENBERG

Spud Date 10/25/2014 Drilling Completed 10/31/2014

Surface Coordinates 453' FNL x 1174' FWL

Bottom Hole Coordinates 391' FSL x 1284' FWL

Ground Elevation 4641' K.B. Elevation 4658'

Logged Interval 6000' To 11137' Total Depth 11137'

Formation NIOBRARA C CHALK

Type of Drilling Fluid FW LSND

Operator

Company Bonanza Creek Energy Inc.

Address 410 17th STREET, SUITE 1500
DENVER, CO 80202

Geologist

Name BRANT LOGAN

Company BONANZA CREEK ENERGY INC.

Address 410 17th STREET, SUITE 1500
DENVER, CO 80202

Other

COLUMBINE LOGGING, INC. 2385 S. LIPAN STREET

DENVER, COLORADO 80202

WELL SITE GEOLOGISTS JOEY LUCE

JEFF LACY

Zone Color Coding

Oil
Note
Error

Condensate
Core
Water

Gas
Pres
Sea

Rock Types

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

Accessories

GASTROPOD	ARGILLITE GRAIN	HEAVY MINERAL	ANHYDRITE STRINGER
INOCERAMUS	B BENTONITE	K KAOLIN	BENTONITE STRINGER
ALGAE	BITUMENOUS SUBSTANCE	M MARLSTONE	COAL STRINGER
AMPHIPORA	BRECCIA FRAGMENTS	M MICACEOUS	DOLOMITE STRINGER
BELLENNITE	C CALCAREOUS	M MINERAL CRYSTALS	GYPSUM STRINGER
BIOCLASTIC	CARBONACEOUS FLAKES	N NODULES	LIMESTONE STRINGER
BRACHIOPOD	C CHERT	P PHOSPHATE PELLETS	MARLSTONE (CALC) STRG
BRYOZOA	C CHERT	P PYRITE	MARLSTONE (DOL) STRG
CEPHALOPOD	COAL - THIN BEDS	S SALT CAST	SANDSTONE STRINGER
CORAL	D DOLOMITIC	S SANDY	SHALE STRINGER
CRINOID	F FELDSPAR	S SILICEOUS	SILTSTONE STRINGER
ECHINOID	F FERRUGINOUS PELLET	S SILTY	
FISH	F FERRUGINOUS	T TUFFACEOUS	
FORAMINIFERA	A ANHYDRITIC	G GLAUCONITE	
F FOSSIL	A ARGILLACEOUS	G GYPSIFEROUS	

Stringer

Oil Show

- P PINPOINT
- VUGGY






































Engineering

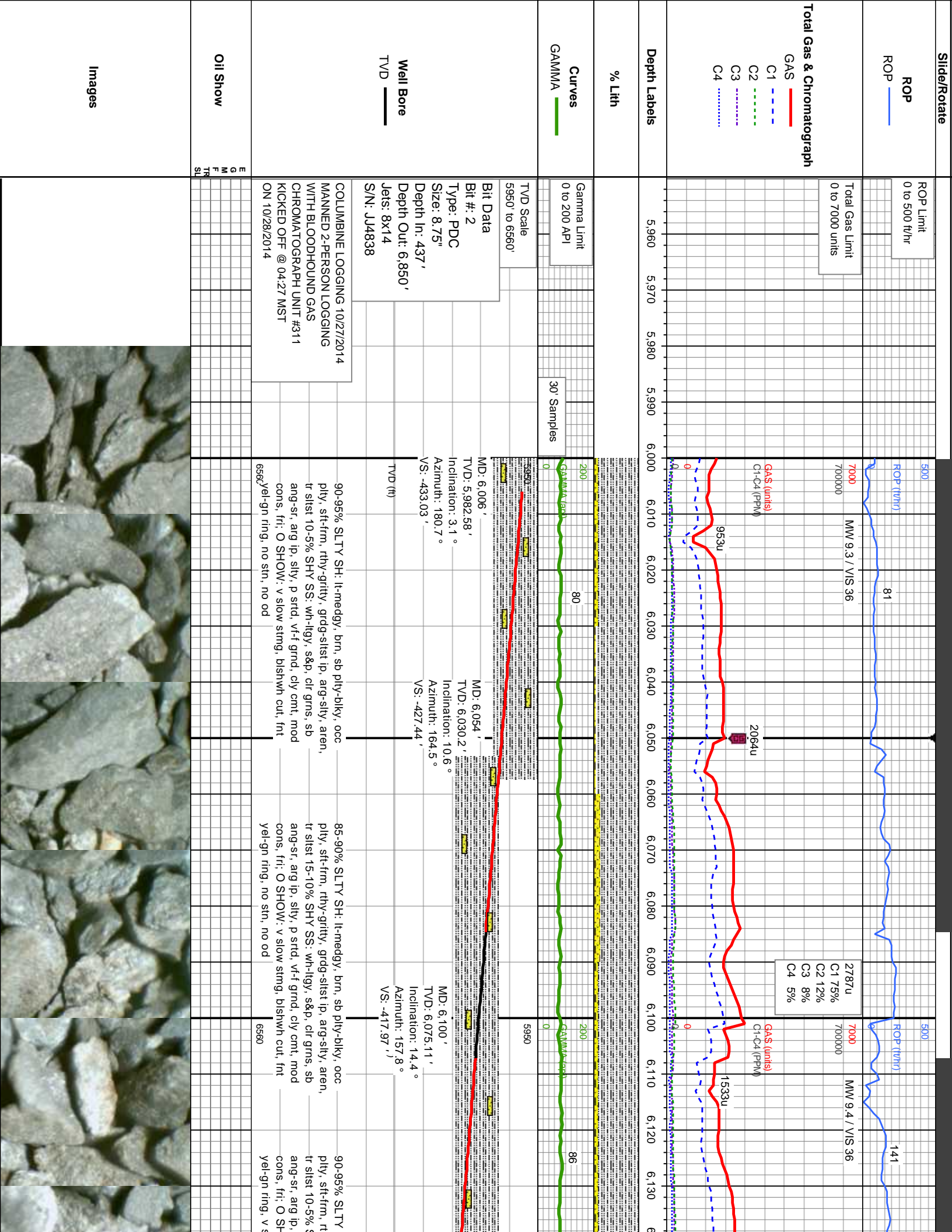
- D DEAD
- EVEN
- QUESTIONABLE
- BIT
- SPOTTED STAINING
- CONNECTION (UP)

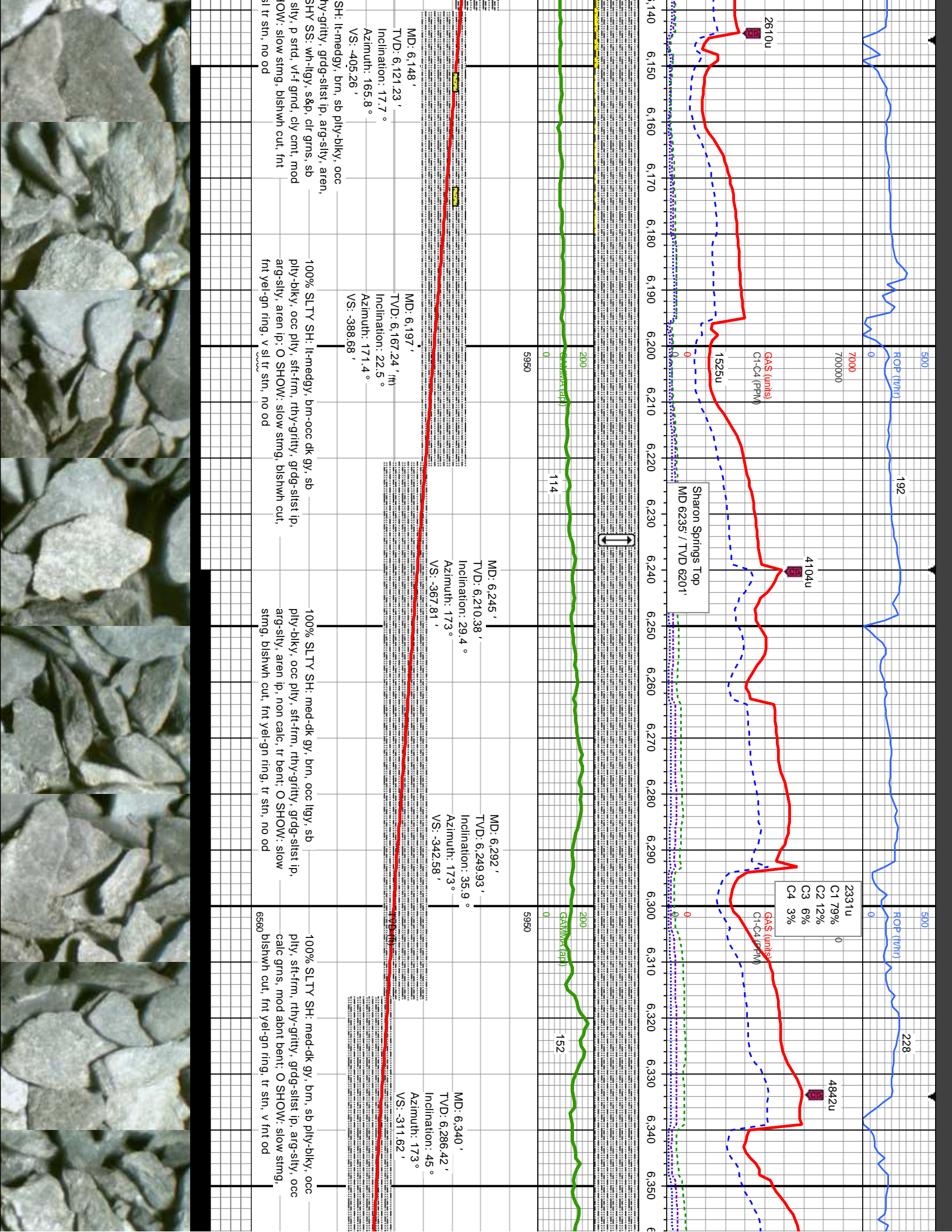
Porosity

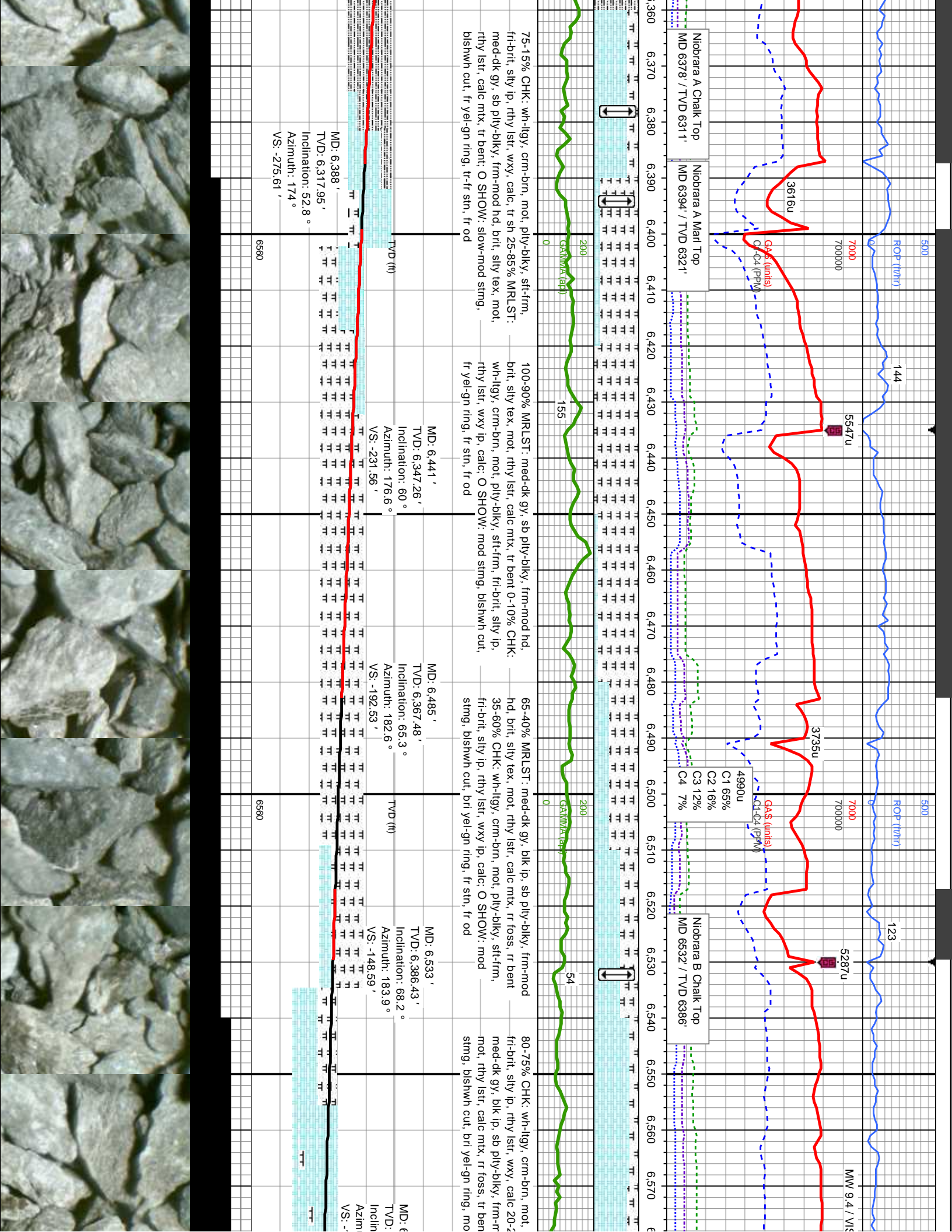
- CONNECTION GAS
- CONNECTION GAS
- TRIP GAS
- TRIP GAS (LEFT)
- FRACTURE
- INTERCRYSTALLINE
- DOWN TIME GAS
- INTEROOLITIC
- DOWN TIME GAS
- MOLDIC
- CORE - LOST
- CORE - RECOVERED

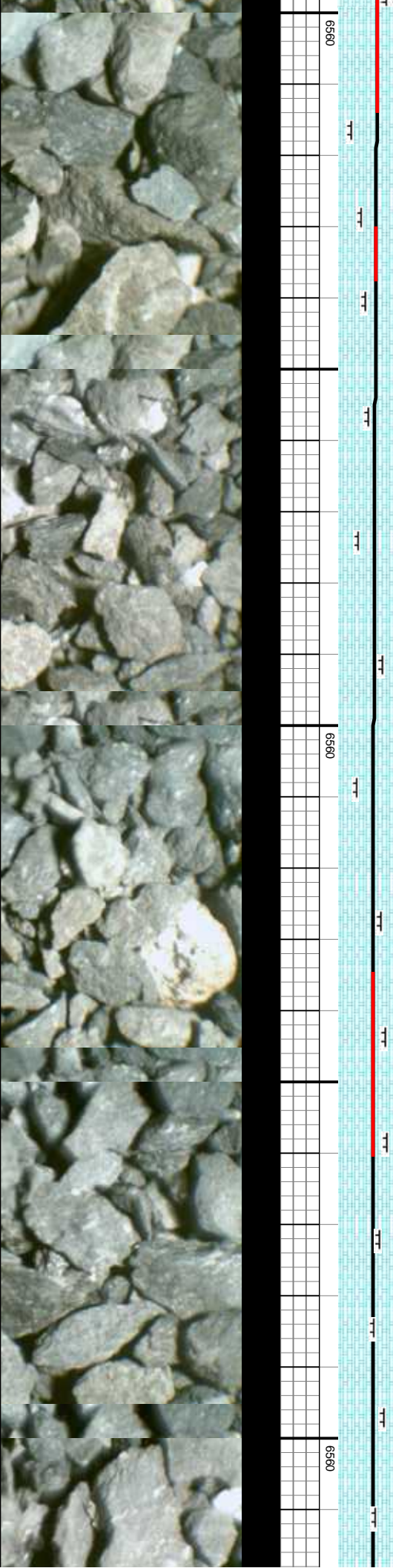
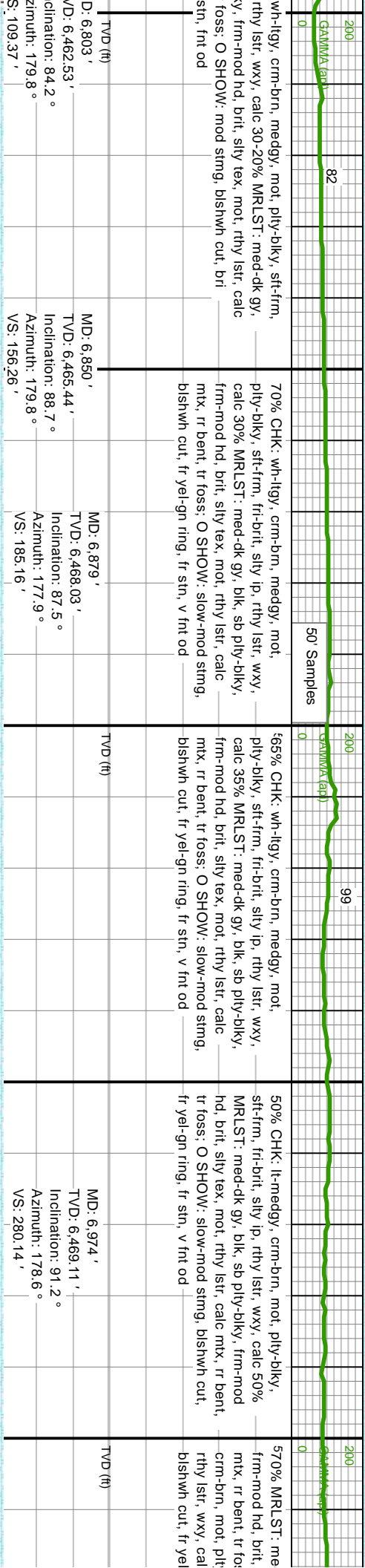
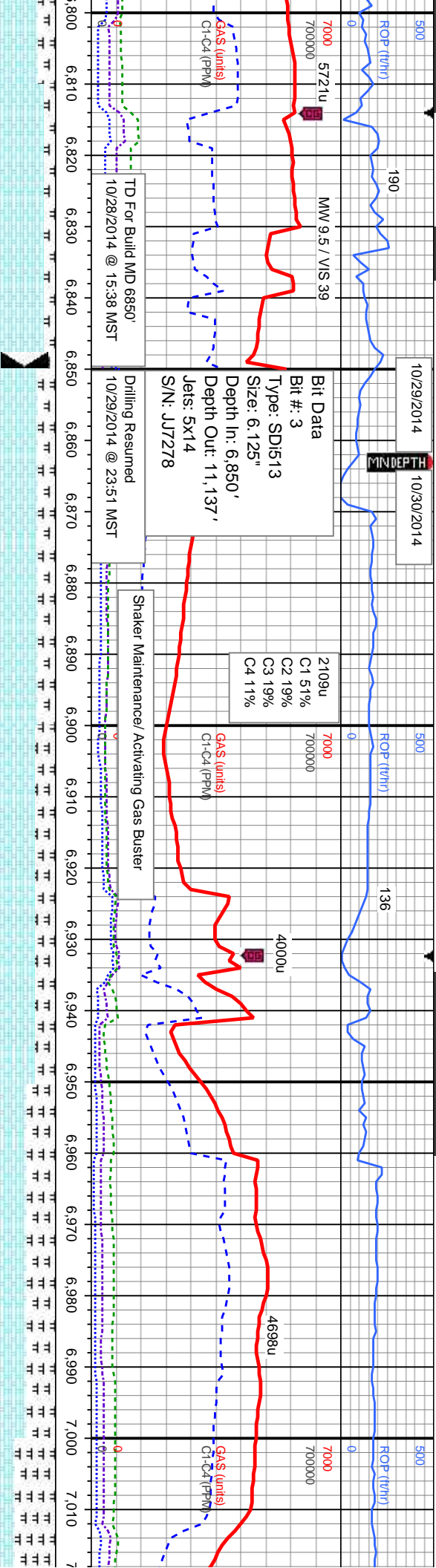
Other Symbols

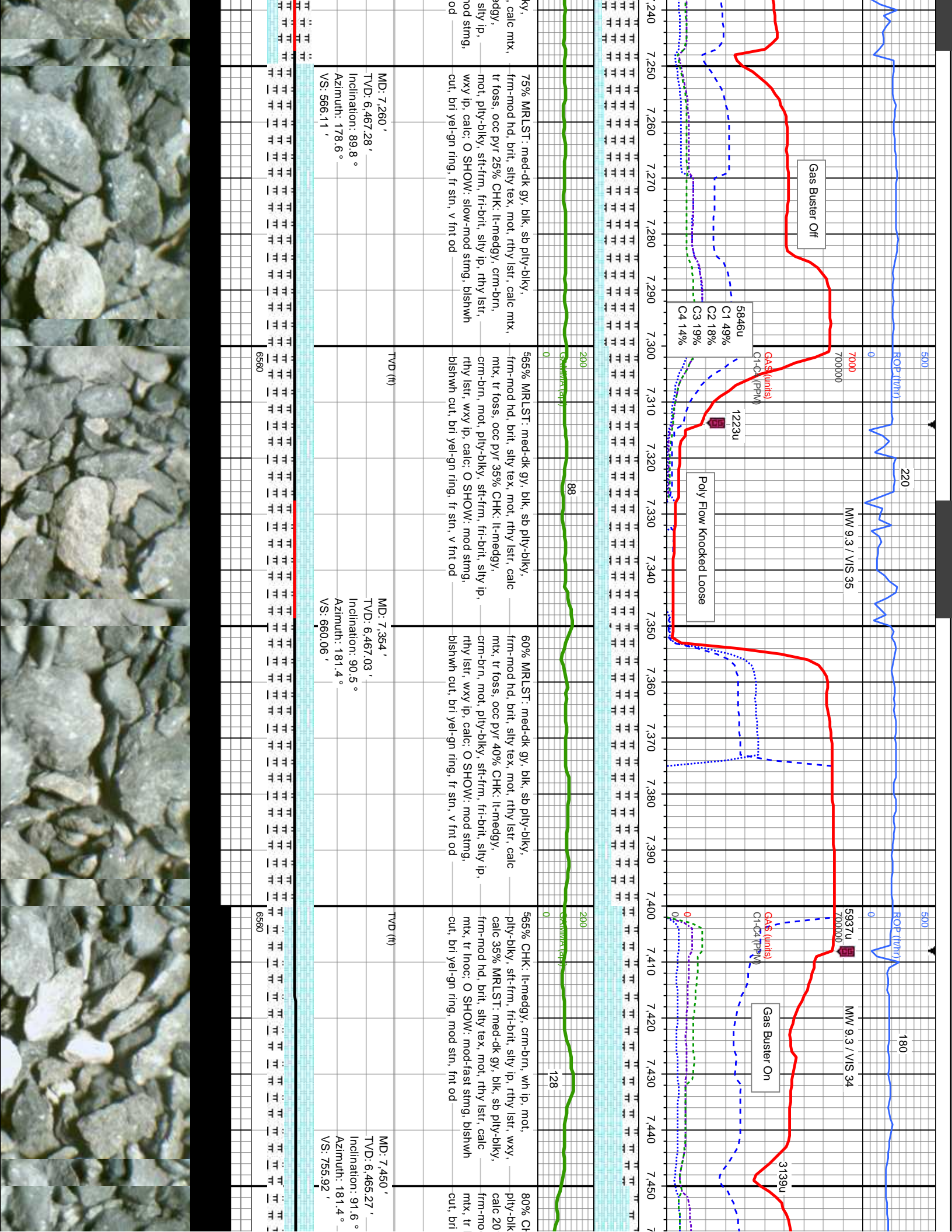
	DST INTERVAL		WIRELINE TESTED - LEFT		E EARTHY
	FAULT		WIRELINE TESTED - RT		FX FINELYXLN
	FORMATION TOP		DRILL STEM TEST		BS GRAINSTONE
	GAS SHOW		MN DEPTH		L LITHOGRAPHIC
	OIL SHOW				MX MICROXLN
	MN DEPTH UP	Rounding			
					MS MUDSTONE
	MN DEPTH (DOWN)		ANGULAR		PS PACKSTONE
	NORMAL FAULT		ROUNDED		WS WACKESTONE
	OVERTURNED STRATA		SUBANG		
	REVERSE FAULT		SUBRND	Sorting	
	CASING				M MODERATE
Textures					
	SIDEWALL CORE (LEFT)				P POOR
	SIDEWALL CORE (RIGHT)		BS BOUNDSTONE		W WELL
	SLIDE		CHALKY		
	SURVEY		CX CRYPTOXLN		

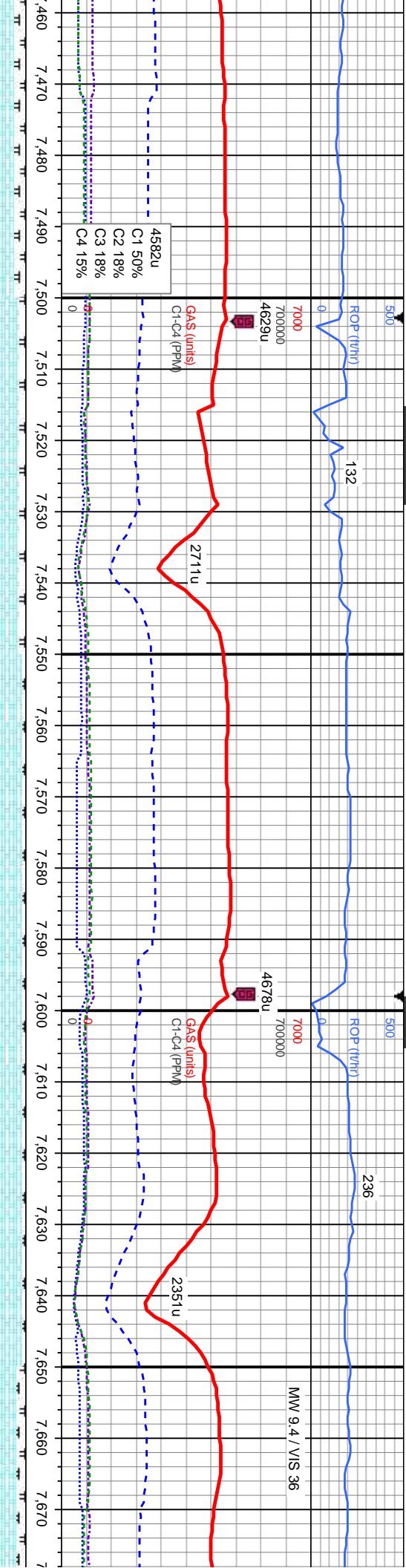




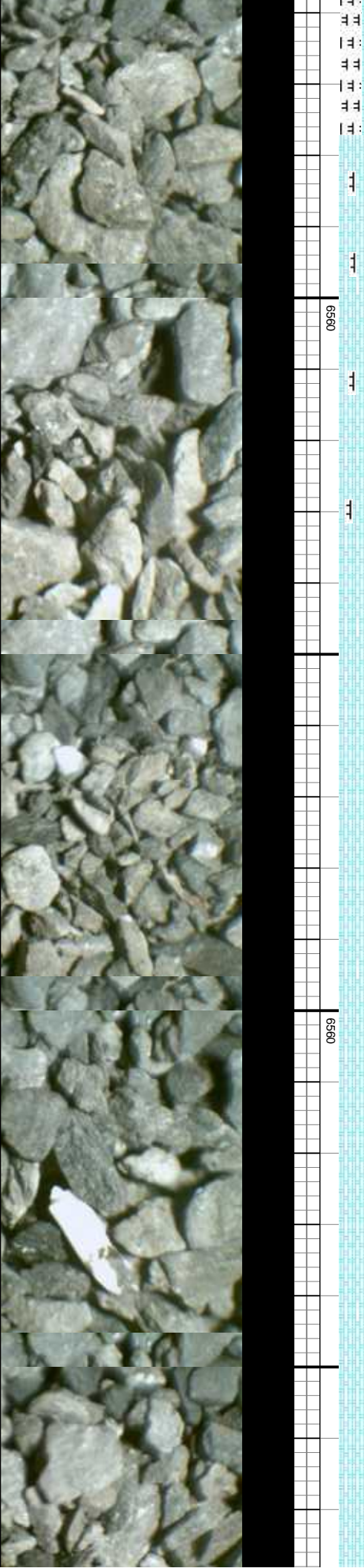


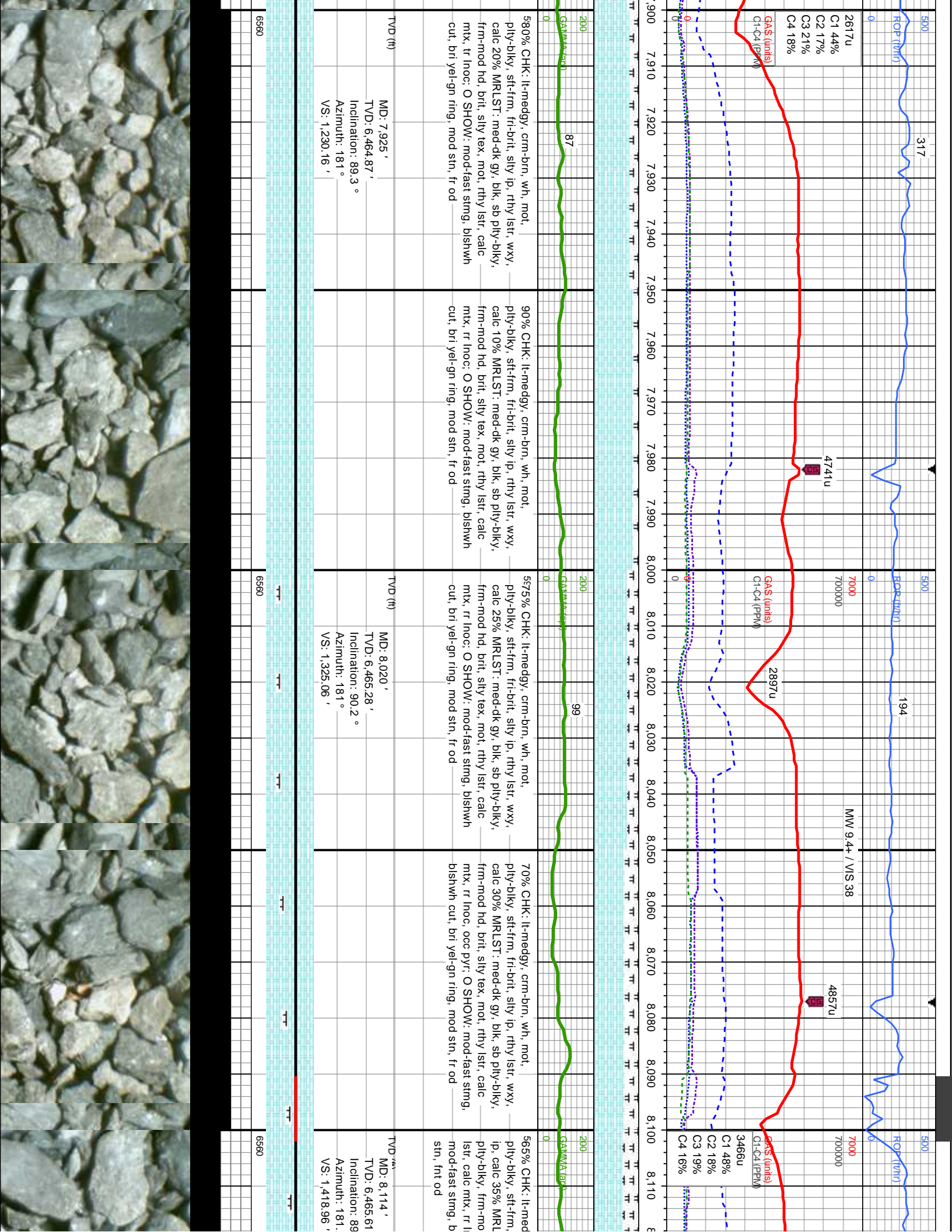


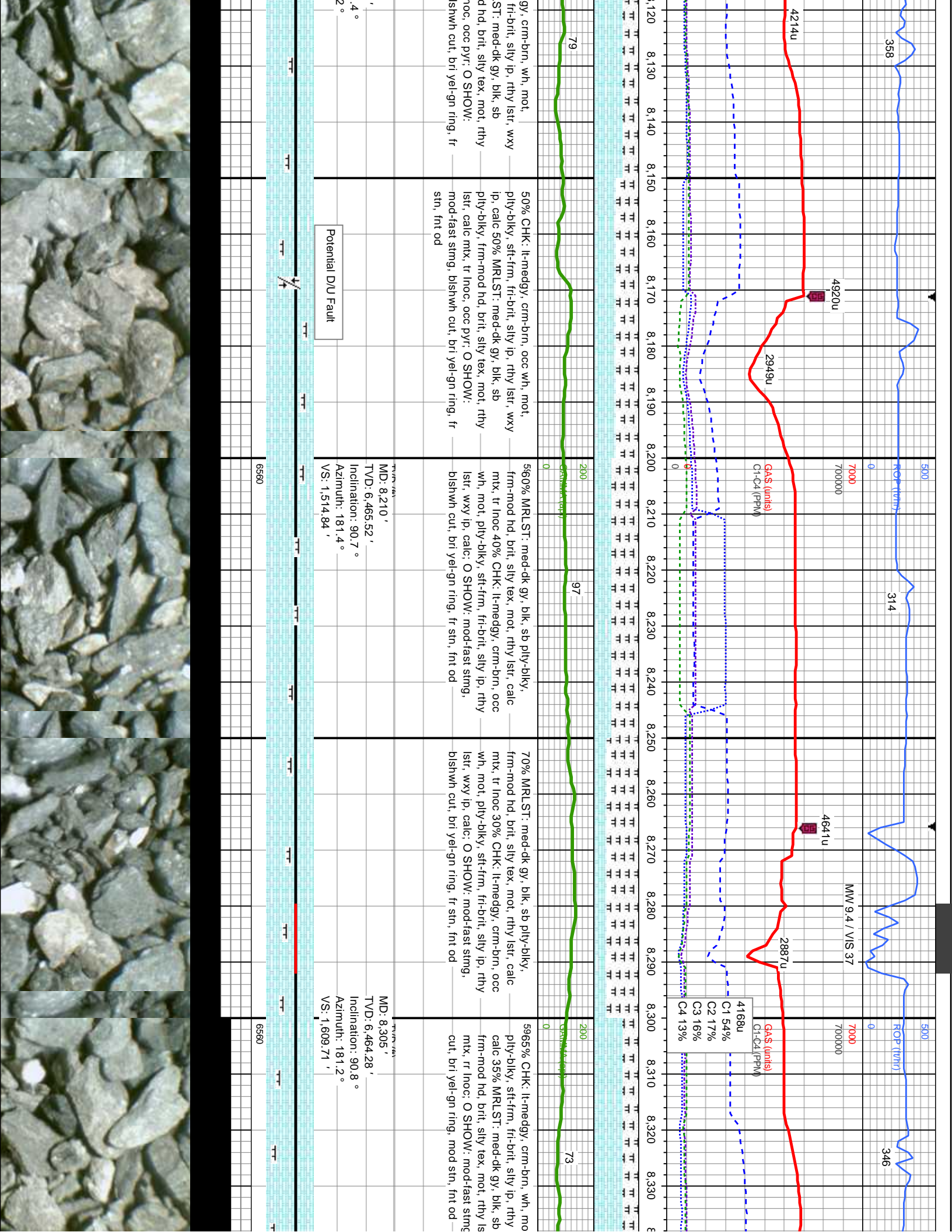


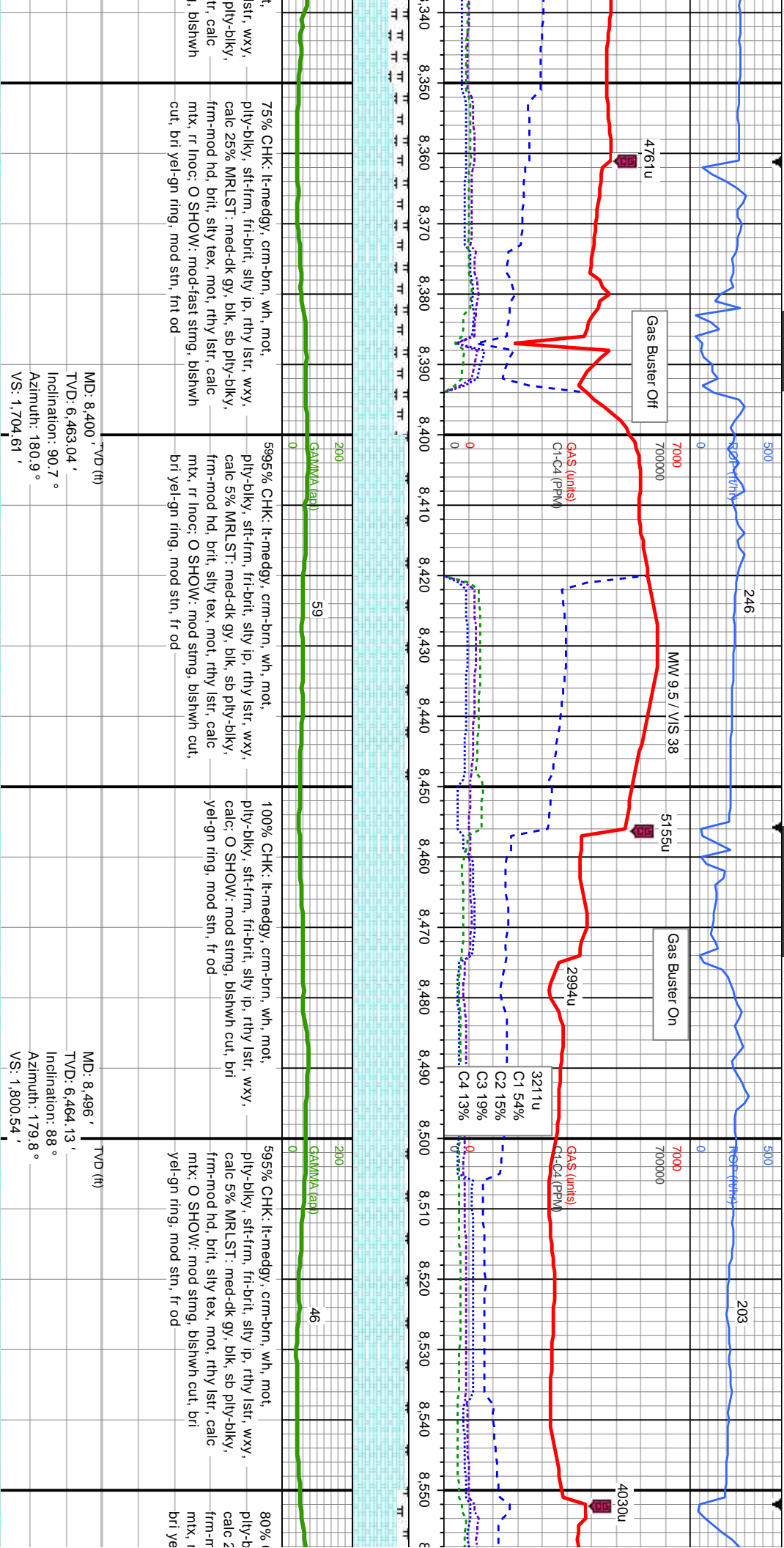


HK: lt-medgy, crm-brn, wh ip, mot, y, sft-frm, fri-brit, silty ip, rthy lstr, wxy, % MRLST: med-dk gy, blk, sb pily-biky, hd, brit, silty tex, mot, rthy lstr, calc inoc; O SHOW: mod-fast stmg, blshwh yel-gn ring, mod stn, fnt od	590% CHK: lt-medgy, crm-brn, wh ip, mot, pily-biky, sft-frm, fri-brit, silty ip, rthy lstr, wxy, calc 10% MRLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr inoc; O SHOW: mod-fast stmg, blshwh cut, bri yel-gn ring, mod stn, fnt od	95% CHK: lt-medgy, crm-brn, wh, mot, pily-biky, sft-frm, fri-brit, silty ip, rthy lstr, wxy, calc 5% MRLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr inoc; O SHOW: mod-fast stmg, blshwh cut, bri yel-gn ring, mod stn, fnt od	95% CHK: lt-medgy, crm-brn, wh, mot, pily-biky, sft-frm, fri-brit, silty ip, rthy lstr, wxy, calc 5% MRLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr inoc; O SHOW: mod stmg, blshwh cut, bri yel-gn ring, mod stn, fnt od	85% CHK: lt-medgy, crm-brn, wh, mot, pily-biky, sft-frm, fri-brit, silty ip, rthy lstr, wxy, calc 5% MRLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr inoc; O SHOW: mod stmg, blshwh cut, bri yel-gn ring, mod stn, fnt od
TVD (ft)	TVD (ft)	TVD (ft)	TVD (ft)	
MD: 7,544 ' TVD: 6,463.63 ' Inclination: 90.4 ° Azimuth: 181.4 ° VS: 849.78 '			MD: 7,640 ' TVD: 6,462.88 ' Inclination: 90.5 ° Azimuth: 182.6 ° VS: 945.59 '	



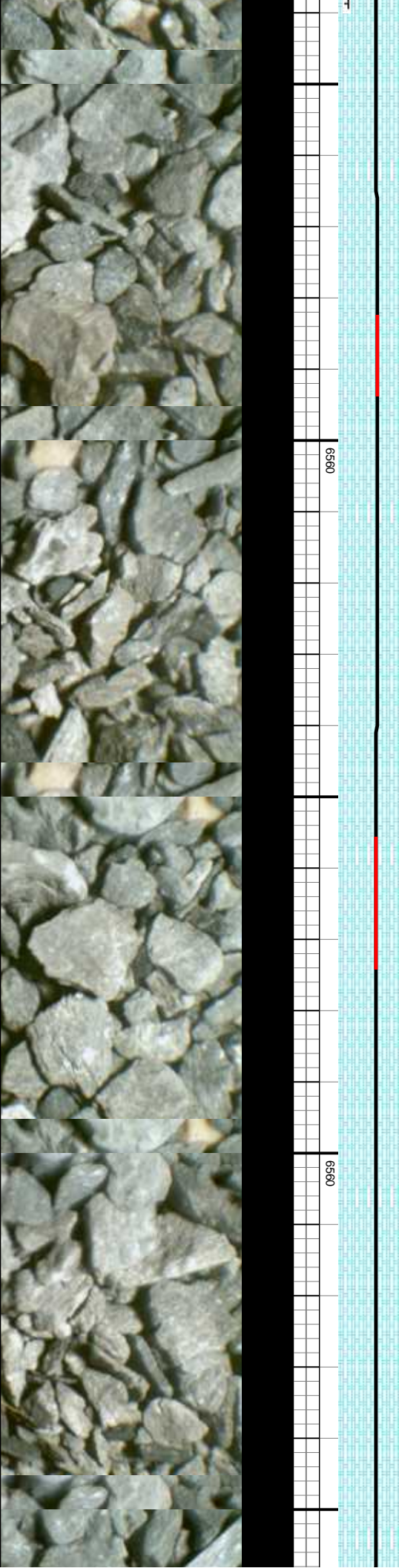


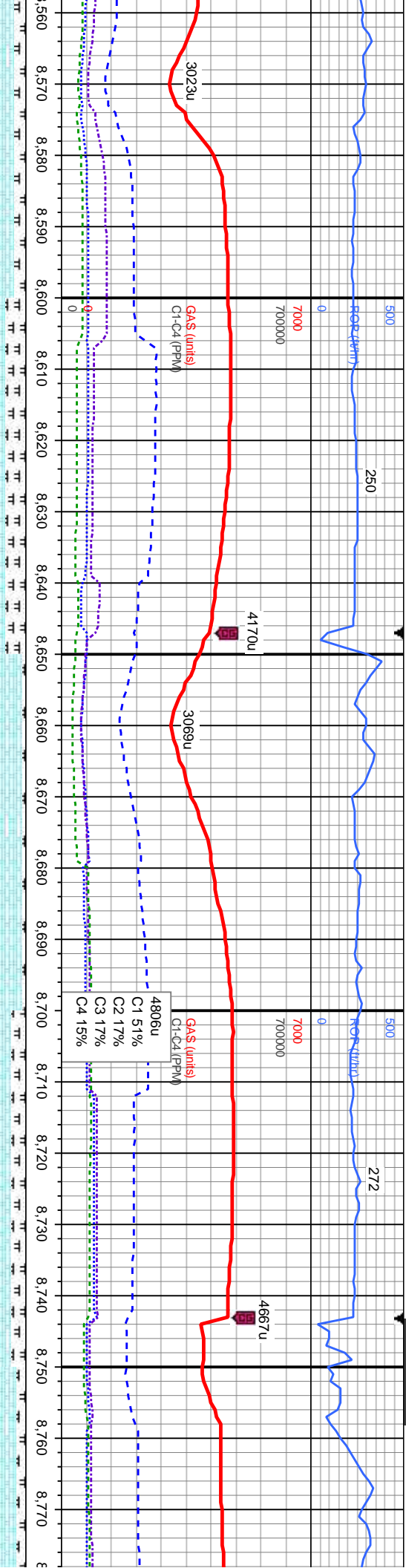




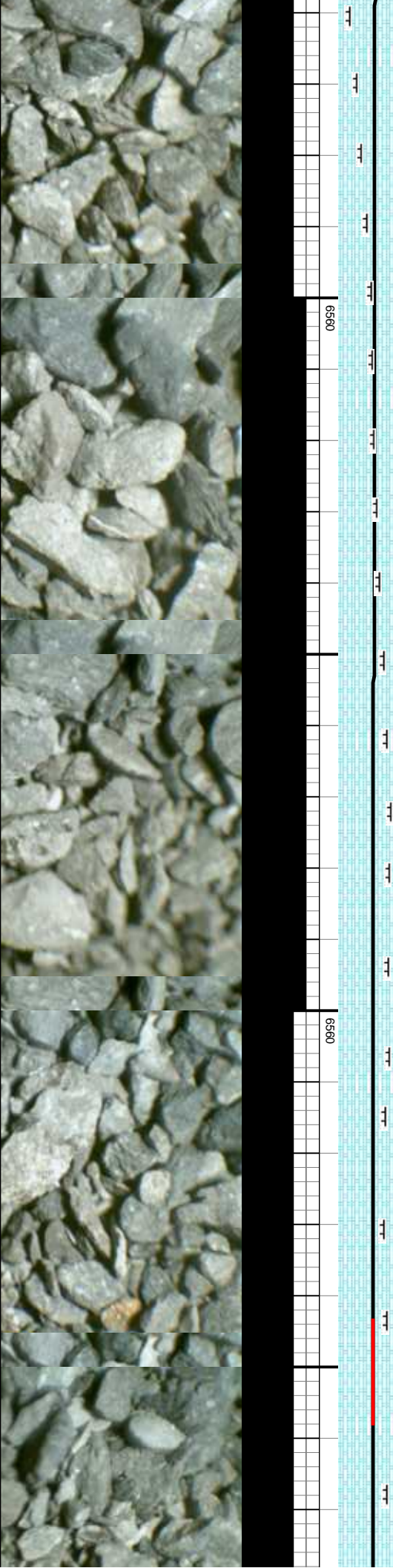
MD: 8,400 ' TVD (ft)
TVD: 6,463.04 '
Inclination: 90.7 °
Azimuth: 180.9 °
VS: 1,704.61 '

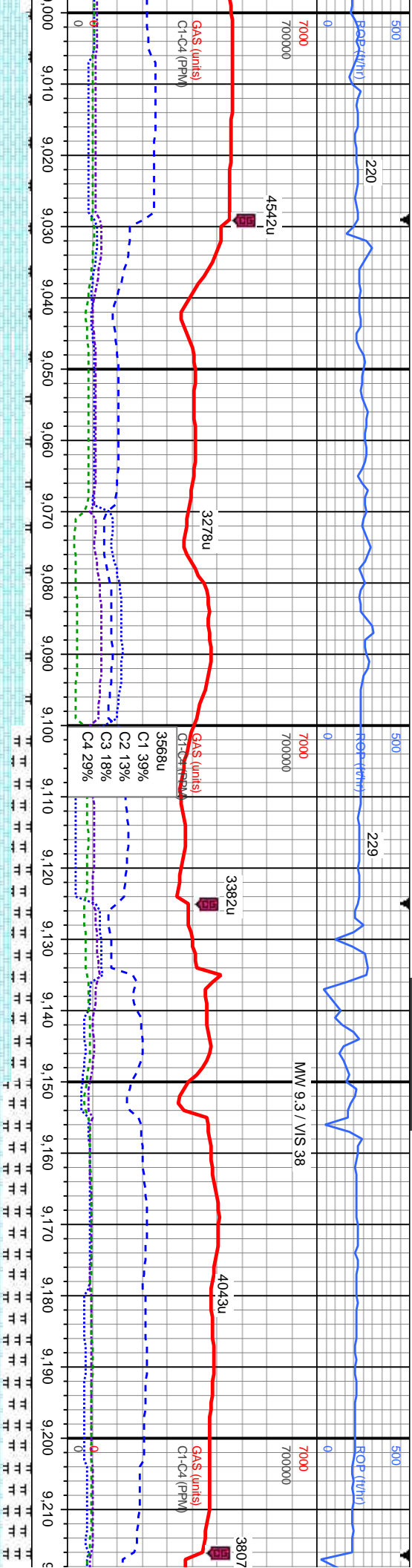
MD: 8,496 ' TVD (ft)
TVD: 6,464.13 '
Inclination: 88 °
Azimuth: 179.8 °
VS: 1,800.54 '



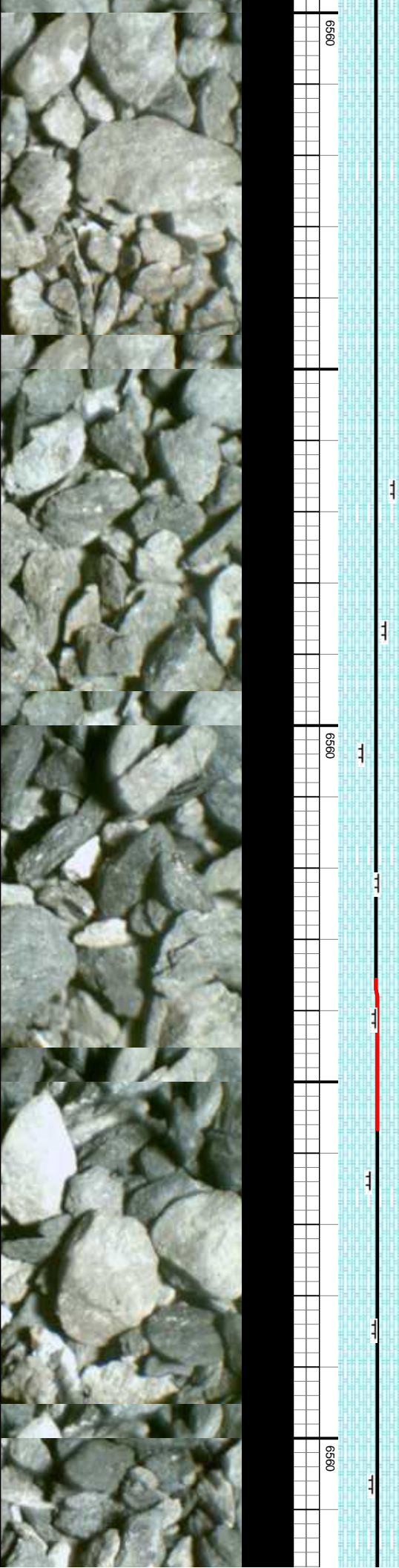


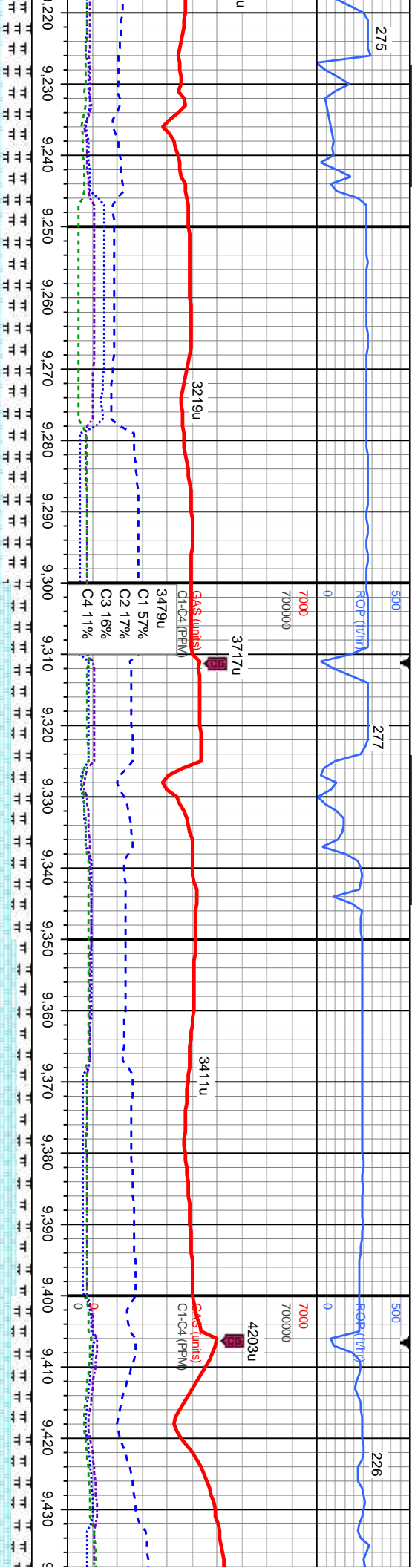
CHK: lt-medgy, crm-brn, wh, mot, blk, sft-frn, fr-brit, silty ip, rthy lstr, wxy, 100% MRLST: med-dk gy, blk, sb ply-biky, frn-mod hd, brit, silty tex, mot, rthy lstr, calc tr foss: O SHOW: mod stmg, blshwh cut, l-gn ring, mod stn, fr od	565% CHK: lt-medgy, crm-brn, wh, mot, ply-biky, sft-frn, fr-brit, silty ip, rthy lstr, wxy, calc 35% MRLST: med-dk gy, blk, sb ply-biky, frn-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr foss: O SHOW: mod-fast stmg, blshwh cut, frt orng ring, g stn, fr od	95% CHK: wh-lgy, occ medgy, crm-brn, mot, ply-biky, sft-frn, fr-brit, silty ip, rthy lstr, wxy, calc 5% MRLST: med-dk gy, blk, sb ply-biky, frn-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr foss: O SHOW: mod-fast stmg, blshwh cut, frt orng ring, g stn, fr od	5975% CHK: wh-lgy, occ medgy, crm-brn, mot, ply-biky, sft-frn, fr-brit, silty ip, rthy lstr, wxy, calc 25% MRLST: med-dk gy, blk, sb ply-biky, frn-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr foss: O SHOW: mod-fast stmg, blshwh cut, yel-wh ring, mod stn, fr od	85% CHK: wh-lgy, occ medgy, crm-brn, mot, ply-biky, sft-frn, fr-brit, silty ip, rthy lstr, wxy, calc 15% MRLST: med-dk gy, blk, sb ply-biky, frn-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr foss: O SHOW: mod-fast stmg, blshwh cut, yel-wh ring, mod stn, fr od
MD: 8,592 ' TVD: 6,466.81 ' Inclination: 88.8 ° Azimuth: 179.6 ° VS: 1,896.48 '	MD: 8,688 ' TVD: 6,469.07 ' Inclination: 88.5 ° Azimuth: 178.6 ° VS: 1,992.44 '	MD: 8,688 ' TVD: 6,469.07 ' Inclination: 88.5 ° Azimuth: 178.6 ° VS: 1,992.44 '	MD: 8,688 ' TVD: 6,469.07 ' Inclination: 88.5 ° Azimuth: 178.6 ° VS: 1,992.44 '	MD: 8,688 ' TVD: 6,469.07 ' Inclination: 88.5 ° Azimuth: 178.6 ° VS: 1,992.44 '



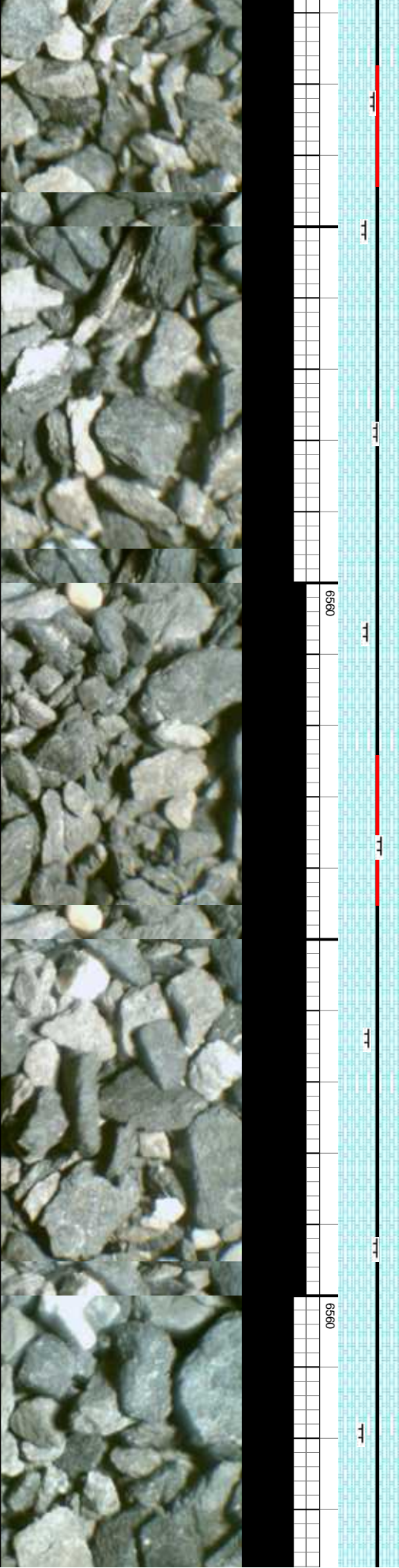


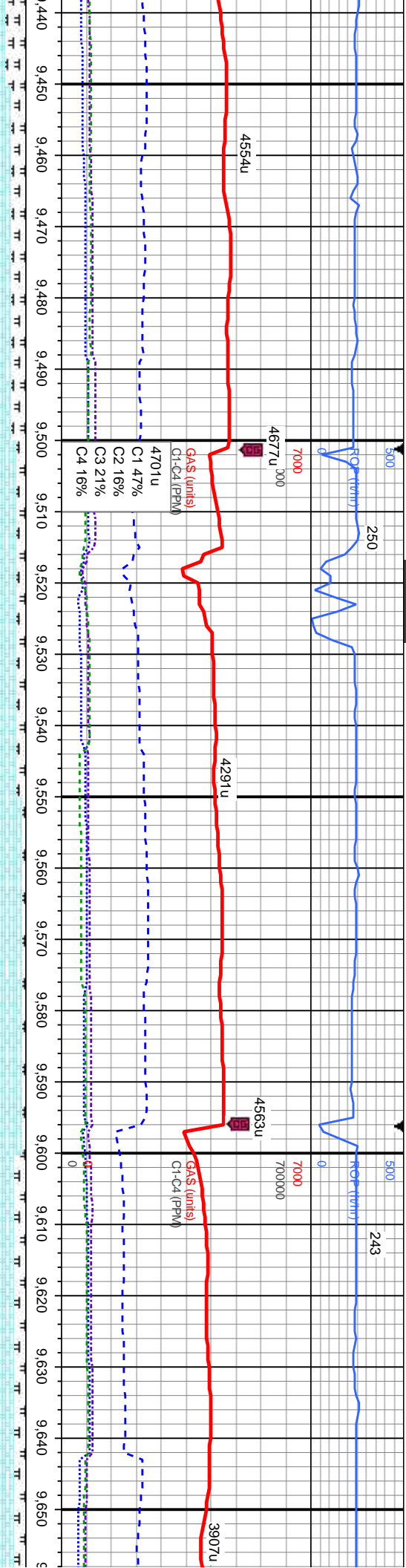
595% CHK: wh-llgy, ooc medgy, crm-brn, mot, pily-blky, sft-frn, frt-brt, silty ip, rthy lstf, wxy, calc 5% MRLST: med-dk gy, blk, sb pily-blky, frm-mod hd, brt, silty tex, mot, rthy lstf, calc mtx, rr inoc: O SHOW: mod-fast stmg, blshwh cut, yel-wh ring, mod stn, fnt od	90% CHK: wh-llgy, ooc medgy, crm-brn, mot, pily-blky, sft-frn, frt-brt, silty ip, rthy lstf, wxy, calc 10% MRLST: med-dk gy, blk, sb pily-blky, frm-mod hd, brt, silty tex, mot, rthy lstf, calc mtx, rr inoc: O SHOW: mod-fast stmg, blshwh cut, yel-wh ring, mod stn, fnt od	565% CHK: wh-llgy, ooc medgy, crm-brn, mot, pily-blky, sft-frn, frt-brt, silty ip, rthy lstf, wxy, calc 35% MRLST: med-dk gy, blk, sb pily-blky, frm-mod hd, brt, silty tex, mot, rthy lstf, calc mtx, rr inoc: O SHOW: mod-fast stmg, blshwh cut, gn-yel ring, mod stn, fnt od	50% CHK: wh-llgy, ooc medgy, crm-brn, mot, pily-blky, sft-frn, frt-brt, silty ip, rthy lstf, wxy, calc 50% MRLST: med-dk gy, blk, sb pily-blky, frm-mod hd, brt, silty tex, mot, rthy lstf, calc mtx, rr inoc: O SHOW: mod-fast stmg, blshwh cut, gn-yel ring, mod stn, fnt od	50% CHK: wh-llgy, ooc medgy, crm-brn, mot, pily-blky, sft-frn, frt-brt, silty ip, rthy lstf, wxy, calc 50% MRLST: med-dk gy, blk, sb pily-blky, frm-mod hd, brt, silty tex, mot, rthy lstf, calc mtx, rr inoc: O SHOW: mod-fast stmg, blshwh cut, yel ring, mod
200 GAMMA (api)	200 GAMMA (api)	200 GAMMA (api)	200 GAMMA (api)	200 GAMMA (api)
41	64			
TVD (ft)	TVD (ft)		TVD (ft)	TVD (ft)
MD: 9,068 ' TVD: 6,464.35 ' Inclination: 91.4 ° Azimuth: 179.8 ° VS: 2,372.3 '			MD: 9,163 ' TVD: 6,463.19 ' Inclination: 90 ° Azimuth: 180.5 ° VS: 2,467.25 '	



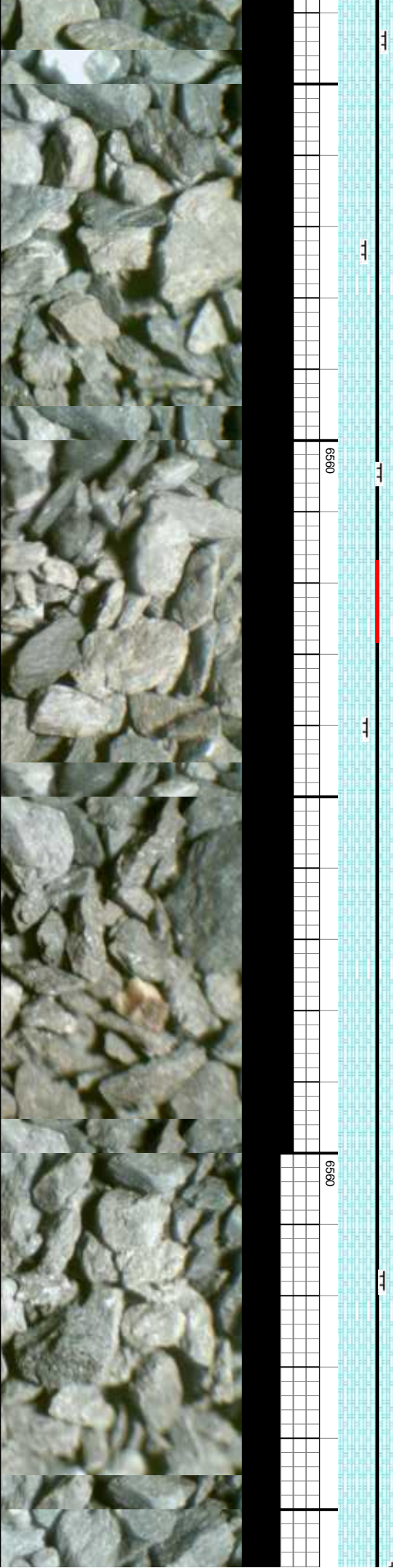


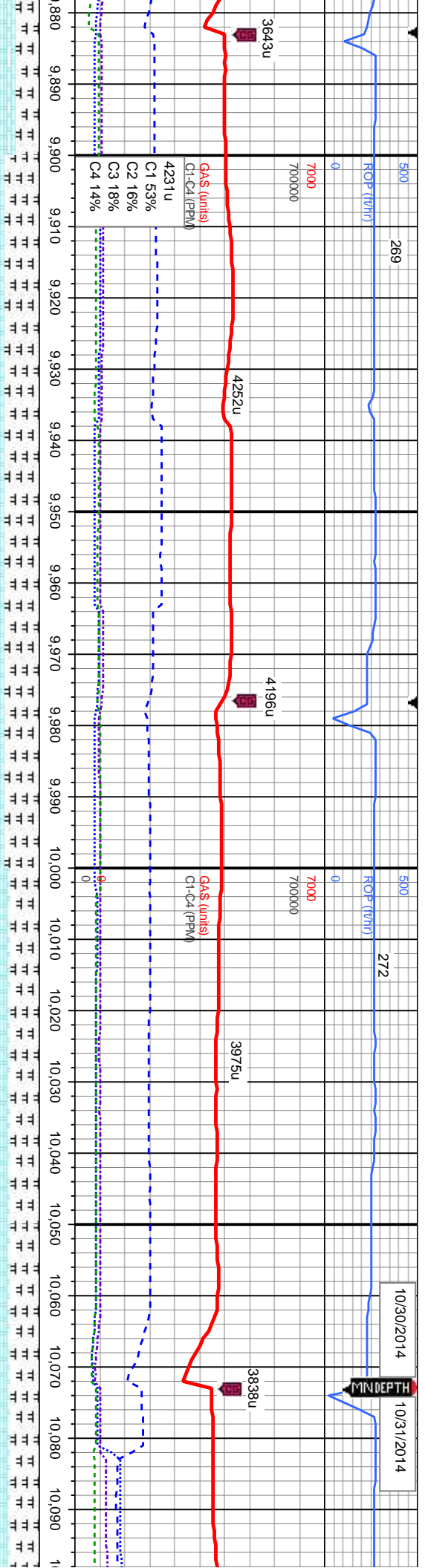
occ medgy, crm-brn, mot, fri-brit, silty ip, rthy lstr, wxy, med-dk gy, blk, sb pily-biky, silty tex, mot, rthy lstr, calc tr inoc; O SHOW: mod-slow string, blshwh stn, mod od	50% CHK: wh-lgy, occ medgy, crm-brn, mot, pily-biky, sft-frm, fri-brit, silty ip, rthy lstr, wxy, calc 50% MRLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, tr inoc; O SHOW: mod-slow string, blshwh cut, yel ring, mod stn, mod od	65% CHK: wh-lgy, occ medgy, crm-brn, mot, pily-biky, sft-frm, fri-brit, silty ip, rthy lstr, wxy, calc 35% MRLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, tr inoc; O SHOW: mod-slow string, blshwh cut, yel-oring ring, g stn, mod od	75% CHK: wh-lgy, occ medgy, crm-brn, mot, pily-biky, sft-frm, fri-brit, silty ip, rthy lstr, wxy, calc 25% MRLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, tr inoc; O SHOW: mod-slow string, blshwh cut, yel-oring ring, g stn, mod od	65% CHK: wh-lgy, occ medgy, crm-brn, mot, pily-biky, sft-frm, fri-brit, silty ip, rthy lstr, wxy, calc 35% MRLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, tr inoc; O SHOW: mod-slow string, blshwh cut, yel-wh ring, mod stn, mod od
MD: 9,258 ' TVD: 6,462.69 ' Inclination: 90.6 ° Azimuth: 183.3 ° VS: 2,562.07 '	MD: 9,354 ' TVD: 6,463.03 ' Inclination: 89 ° Azimuth: 181.6 ° VS: 2,657.82 '	MD: 9,354 ' TVD: 6,463.03 ' Inclination: 89 ° Azimuth: 181.6 ° VS: 2,657.82 '	MD: 9,354 ' TVD: 6,463.03 ' Inclination: 89 ° Azimuth: 181.6 ° VS: 2,657.82 '	MD: 9,354 ' TVD: 6,463.03 ' Inclination: 89 ° Azimuth: 181.6 ° VS: 2,657.82 '



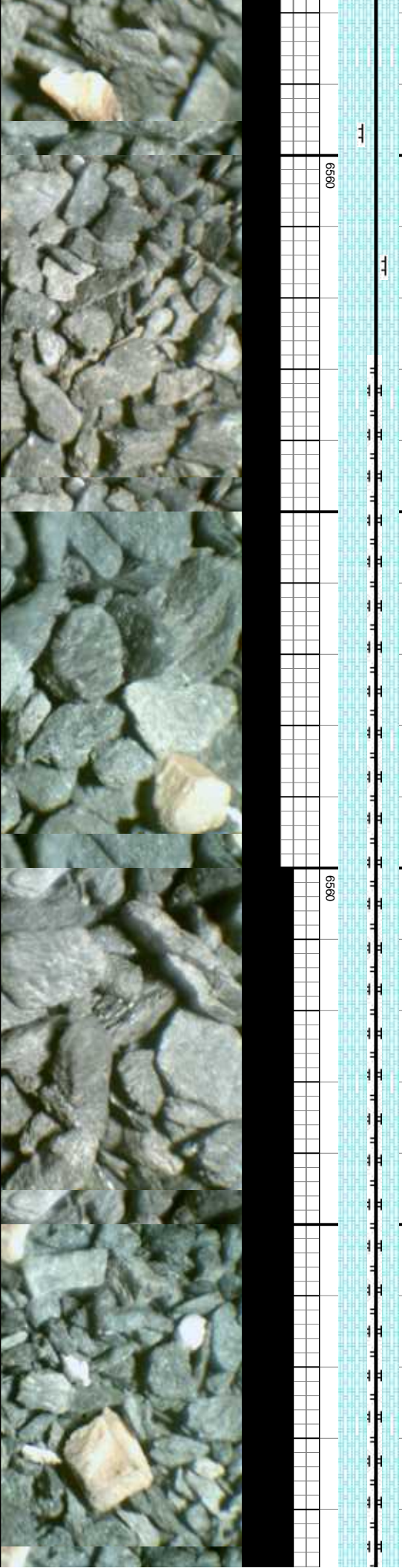


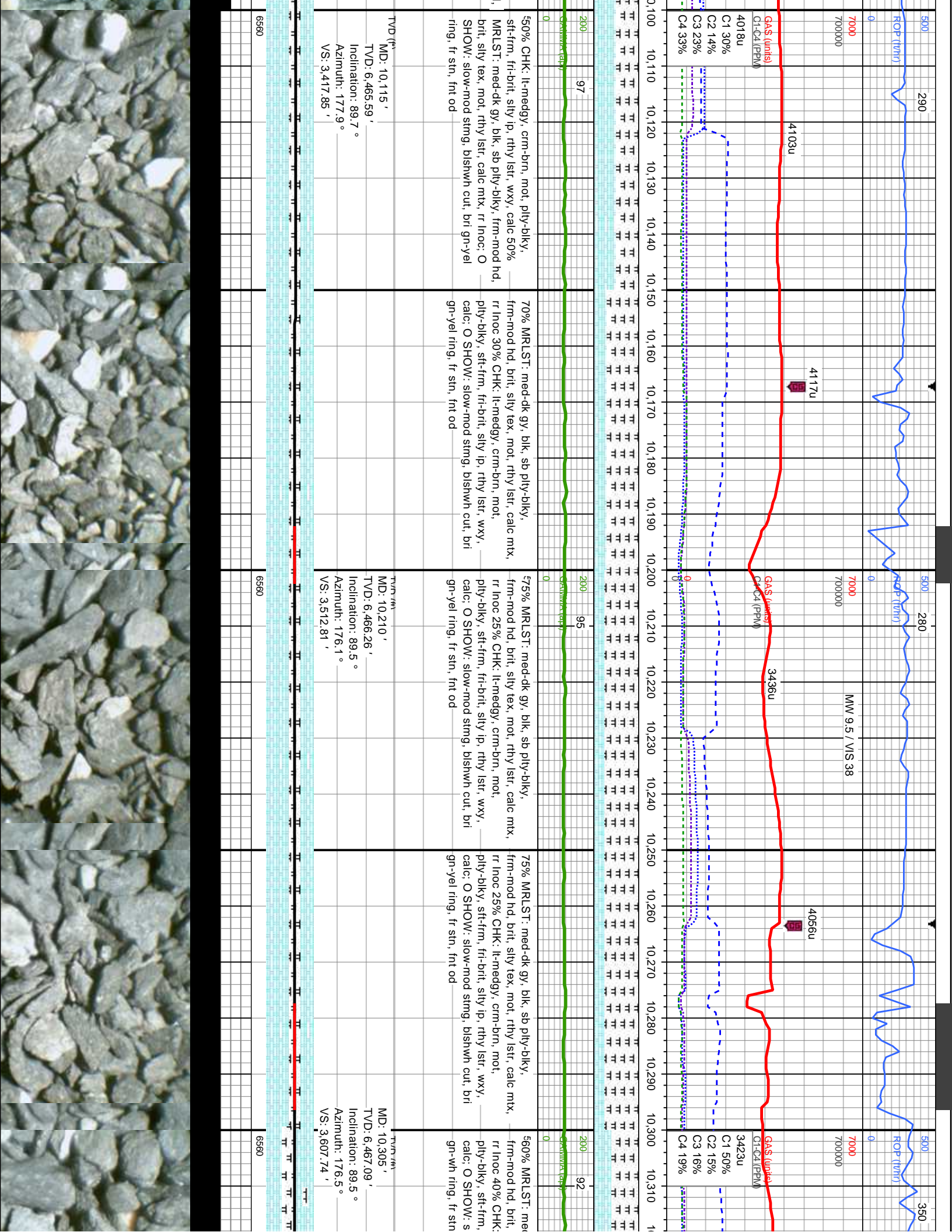
75% CHK: lt-medgy, crm-brn, mot, pily-biky, sft-frm, frt-brit, sily ip, rthy lstr, wxy, calc 25% MRSLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, sily tex, mot, rthy lstr, calc mtx, rr inoc: O SHOW: mod-slow stmg, blshwh cut, yel-wh ring, mod stn, mod od	95% CHK: lt-medgy, crm-brn, mot, pily-biky, sft-frm, frt-brit, sily ip, rthy lstr, wxy, calc 15% MRSLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, sily tex, mot, rthy lstr, calc mtx, rr inoc: O SHOW: mod-slow stmg, blshwh cut, yel-wh ring, mod stn, mod od	95% CHK: lt-medgy, crm-brn, mot, pily-biky, sft-frm, frt-brit, sily ip, rthy lstr, wxy, calc 5% MRSLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, sily tex, mot, rthy lstr, calc mtx, rr inoc: O SHOW: mod-slow stmg, blshwh cut, yel-wh ring, mod stn, mod od	80% CHK: wh-ltgy, occ medgy, crm-brn, mot, pily-biky, sft-frm, frt-brit, sily ip, rthy lstr, wxy, calc 20% MRSLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, sily tex, mot, rthy lstr, calc mtx, rr inoc: O SHOW: mod-slow stmg, blshwh cut, yel-wh ring, fr stn, frt od	80% CHK: wh-ltgy, occ medgy, crm-brn, mot, pily-biky, sft-frm, frt-brit, sily ip, rthy lstr, wxy, calc 20% MRSLST: med-dk gy, blk, sb pily-biky, frm-mod hd, brit, sily tex, mot, rthy lstr, calc mtx, rr inoc: O SHOW: mod-slow stmg, blshwh cut, yel-wh ring, fr stn, frt od
MD: 9,449 ' TVD: 6,463.28 ' Inclination: 90.7 ° Azimuth: 182.3 ° VS: 2,752.64 '	MD: 9,545 ' TVD: 6,462.86 ' Inclination: 89.8 ° Azimuth: 182.4 ° VS: 2,848.42 '	MD: 9,640 ' TVD: 6,462.69 ' Inclination: 90.4 ° Azimuth: 182.4 ° VS: 2,943.19 '	MD: 9,640 ' TVD: 6,462.69 ' Inclination: 90.4 ° Azimuth: 182.4 ° VS: 2,943.19 '	MD: 9,640 ' TVD: 6,462.69 ' Inclination: 90.4 ° Azimuth: 182.4 ° VS: 2,943.19 '

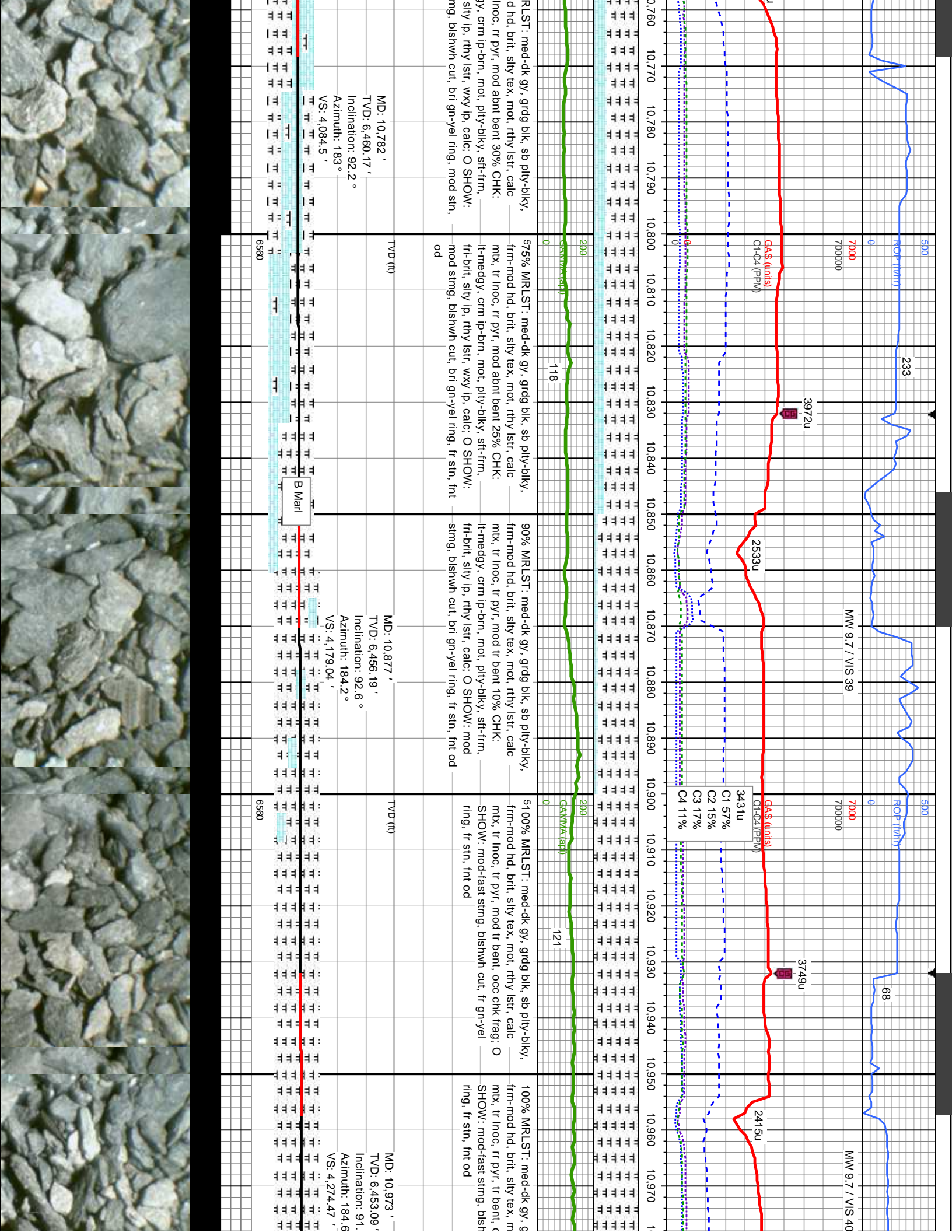


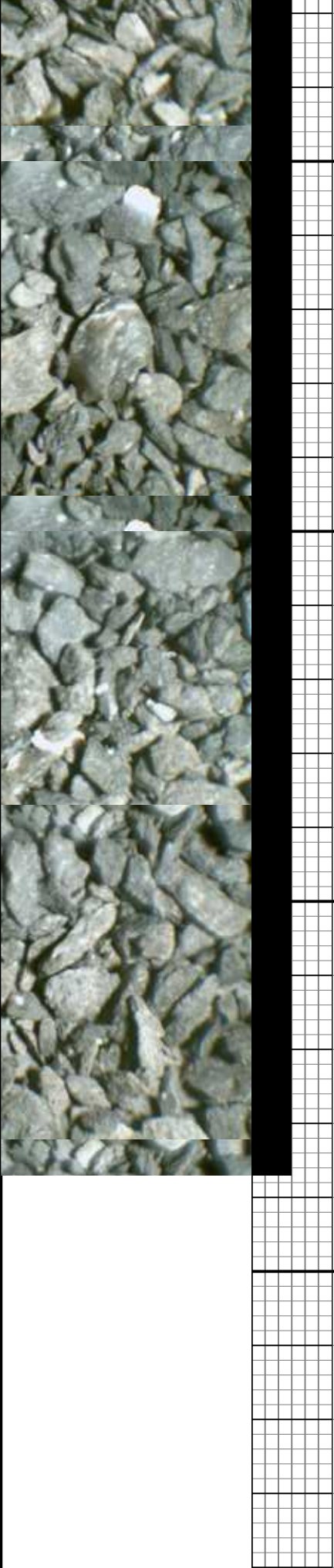
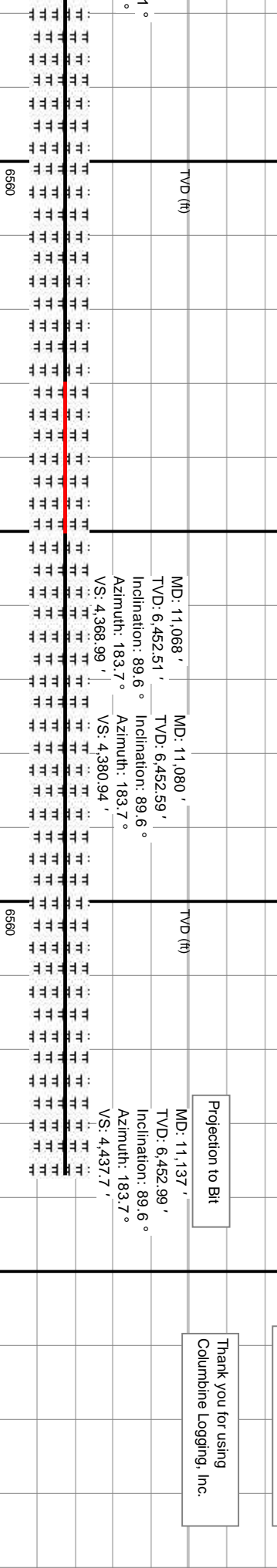
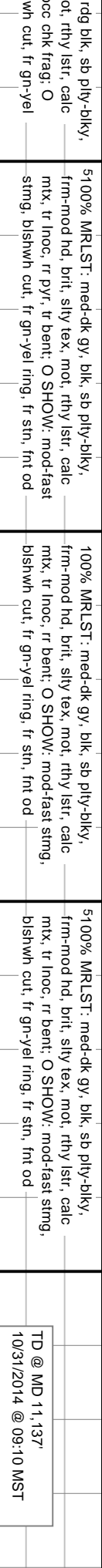
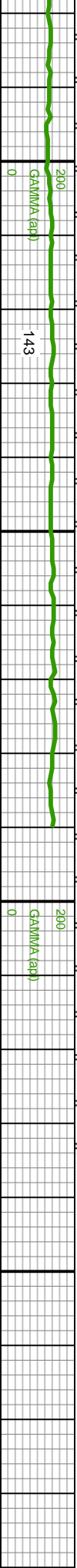
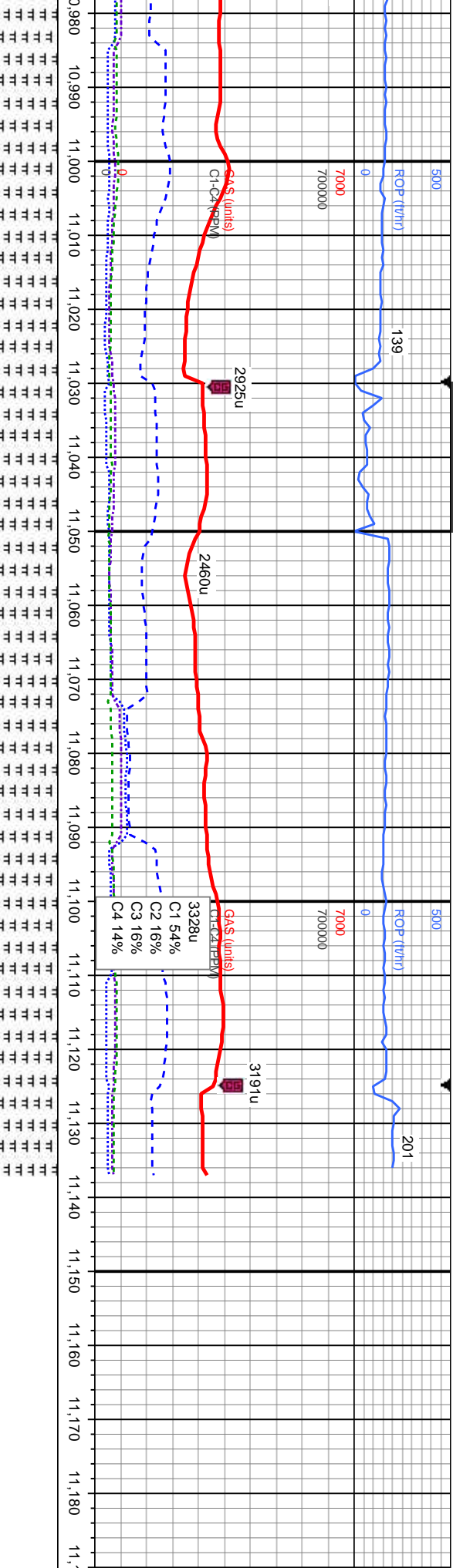


mot, pty-biky, fr, wxy, calc 40%	560% MRLST: med-dk gy, blk, sb pty-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr inoc 40% CHK: lt-medgy, crm-brn, mot, pty-biky, stf-frm, fri-brit, silty ip, rthy lstr, wxy, calc; O SHOW: mod-slow stimg, blshwh cut, yel-wh ring, fr stn, fnt od	60% MRLST: med-dk gy, blk, sb pty-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr inoc 40% CHK: lt-medgy, crm-brn, mot, pty-biky, stf-frm, fri-brit, silty ip, rthy lstr, wxy, calc; O SHOW: mod-slow stimg, blshwh cut, yel-wh ring, fr stn, fnt od	50% CHK: lt-medgy, crm-brn, mot, pty-biky, stf-frm, fri-brit, silty ip, rthy lstr, wxy, calc 50% MRLST: med-dk gy, blk, sb pty-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr inoc; O SHOW: mod-slow stimg, blshwh cut, gn-yel ring, mod stn, fnt od	50% CHK: lt-medgy, crm-brn, mot, pty-biky, stf-frm, fri-brit, silty ip, rthy lstr, wxy, calc 50% MRLST: med-dk gy, blk, sb pty-biky, frm-mod hd, brit, silty tex, mot, rthy lstr, calc mtx, rr inoc; O SHOW: mod-slow stimg, blshwh cut, gn-yel ring, mod stn, fnt od
TVD (ft)	MD: 9.926 ' TVD: 6.464.52 ' Inclination: 89.8 ° Azimuth: 180.7 ° VS: 3.228.89 '		TVD (ft)	MD: 10.020 ' TVD: 6.465.01 ' Inclination: 89.6 ° Azimuth: 179.1 ° VS: 3.322.85 '









TD @ MD 11,137'
10/31/2014 @ 09:10 MST

Thank you for using
Columbine Logging, Inc.

MD: 11,068' MD: 11,080' MD: 11,137'
TVD: 6,452.51' TVD: 6,452.59' TVD: 6,452.99'
Inclination: 89.6° Inclination: 89.6° Inclination: 89.6°
Azimuth: 183.7° Azimuth: 183.7° Azimuth: 183.7°
VS: 4,368.99' VS: 4,380.94' VS: 4,437.7'