



Scale: 5" / 100'
Measured Depth Log

Well Name State Antelope 41-44-30HNB

Location NENE Sec 30 T5N R62W

State Colorado

County Weld

Country USA

Rig Number Ensign 128

API Number 05 123 37406 00

Field Wattenberg

Spud Date 6/25/2013

Drilling Completed 7/3/2013

Surface Coordinates 480 FNL X 838 FEL (40.37642, 104.35973)

Bottom Hole Coordinates 470 FSL x 631 FEL (40.36470, 104.35916)

Ground Elevation 4662'

K.B. Elevation 4677'

Logged Interval 5900' To 10915'

Total Depth 10915'

Formation Niobrara B Chalk

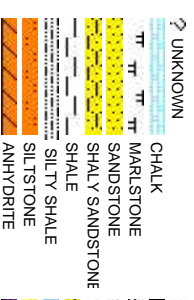
Type of Drilling Fluid H2O, LSND

Company Bonanza Creek

Name Paul McKay

Company Bonanza Creek

Address 410 17th Street
Denver, CO 80202



Operator

Energy Inc.

Geologist

Energy Inc.

, Suite 1500
202

Rock Types

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

Accessories

Fossils	F FOSSIL	ARGILLACEOUS	GLAUCONITE	TUFFACEOUS
GASTROPOD	ARGILLITE GRAIN	GYPSIFEROUS		
OOLITE	B BENTONITE	HEAVY MINERAL		
AMPHIPORA	BITUMENOUS SUBSTANCE	INOCERAMUS		
BELEMNITE	BRECCIA FRAGMENTS	KAOLIN		
BIOCLASTIC	CALCAREOUS	MARLSTONE		
BRYOZOA	CARBONACEOUS FLAKES	MINERAL CRYSTALS		
PISOLUTE	CHTDK	NODULES		
PLANT REMAINS	CHTLT	PHOSPHATE PELLETS		
CEPHALOPOD	COAL - THIN BEDS	PYRITE		
CORAL	DOLOMITIC	SALT CAST		
CRINOID	FELDSPAR	SANDY		
ECHINOID				
FISH				
FORAMINIFERA	ANHYDRITIC	FERRUGINOUS PELLET	SILICEOUS	SHALE STRINGER
			SILT TY	SILTSTONE STRINGER

Other Symbols

Oil Show	MOLDIC	FAULT	WIRELINE TESTED - LEFT	E EARTHY
DEAD	ORGANIC	FORMATION TOP	WIRELINE TESTED - RT	FX FINELYXLN
PINPOINT	P PINPOINT	GAS SHOW		GS GRAINSTONE
EVEN	VUGGY	MINDEPTH MN DEPTH		L LITHOGRAPHIC
QUESTIONABLE				
SPOTTED STAINING				
Porosity		Engineering		
E EARTHY	CONNECTION (LEFT)	BIT	ANGULAR	MX MICROXLN
FENESTRAL	CONNECTION (RIGHT)	REVERSE FAULT	ROUNDED	MS MUDSTONE
FRACTURE	CONNECTION GAS	SIDEWALL CORE (LEFT)	SUBANG	PS PACKSTONE
INTERCRYSTALLINE	CORE - LOST	SIDEWALL CORE (RIGHT)	SUBRND	WS WACKSTONE
INTEROOLITIC	CORE - RECOVERED	SLIDE		
	DST INTERVAL	SURVEY		
		TRIP GAS		
			Textures	Sorting
			B3 BOUNDSTONE	M MODERATE
			C CHALKY	P POOR
			CX CRYPTOXLN	W WELL

Slide/Rotate

Bit Data
Bit #: 3
Type: HE04JMRSV
ROF Size: 8.75
Depth In: 5.842 '
Jets: 3/20
GAMMA S/N: 1343542

Total Gas & Chromatograph
GAS
C1
C2
C3
C4
CO2

COLUMBINE LOGGING RIGGED UP
ON 06/28/2013 MANNED 2-PERSON
LOGGING WITH BLOODHOUND GAS
CHROMATOGRAPH UNIT #0680
BEGAN ON 06/28/2013

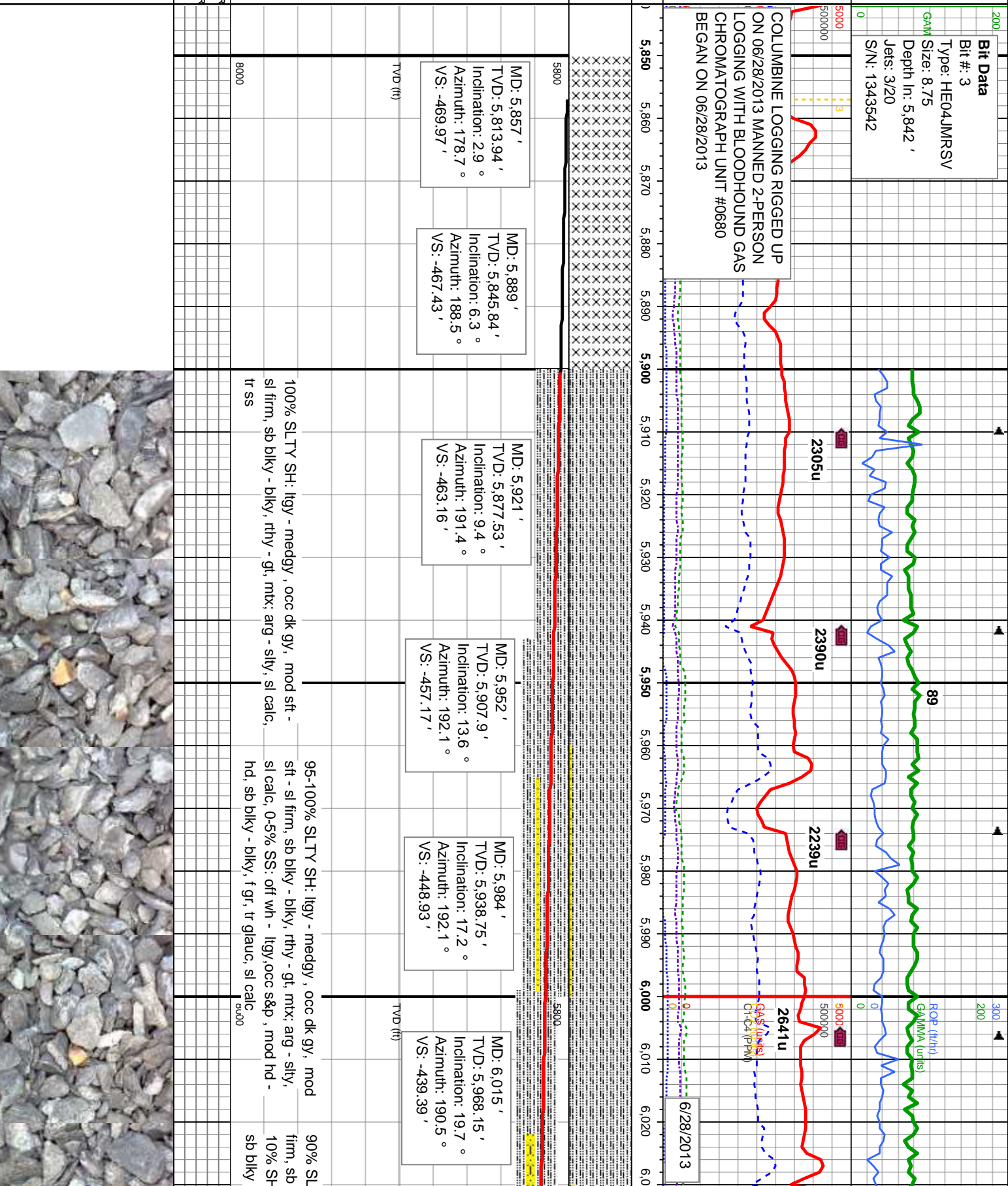
Depth Labels

% Lith

Well Bore
TVD

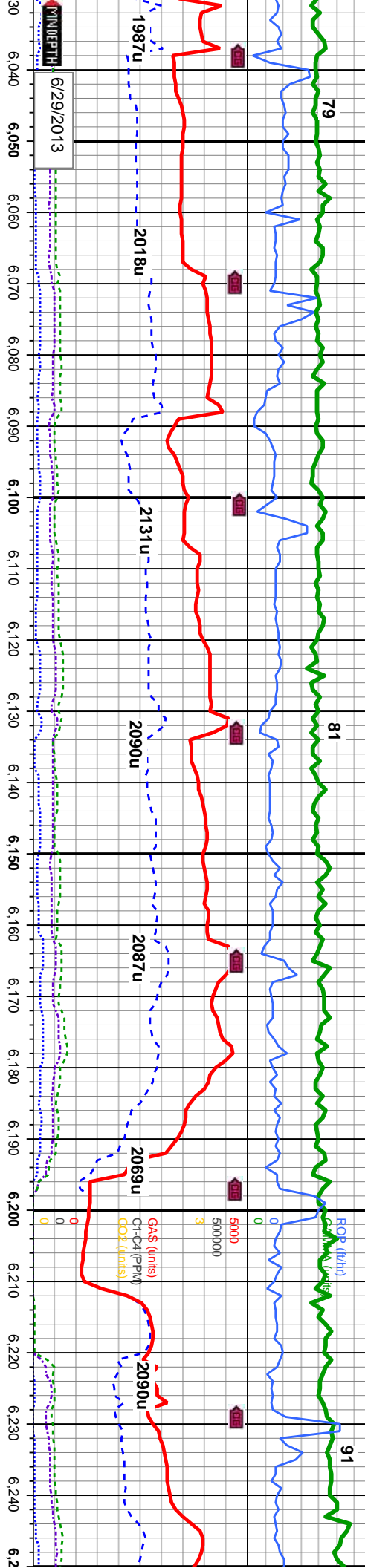
Oil Show

Images



WT 9.5 VIS 38

WT 9.7 VIS 39



6/29/2013

MD: 6,047 '
TVD: 5,998.01 '
Inclination: 22.5 °
Azimuth: 192.2 °
VS: -428.19 '

MD: 6,079 '
TVD: 6,027.37 '
Inclination: 24.3 °
Azimuth: 193.1 °
VS: -415.9 '

MD: 6,111 '
TVD: 6,056.2 '
Inclination: 27.1 °
Azimuth: 191.5 °
VS: -402.47 '

MD: 6,143 '
TVD: 6,084.29 '
Inclination: 30.2 °
Azimuth: 188 °
VS: -387.45 '

MD: 6,174 '
TVD: 6,110.62 '
Inclination: 33.5 °
Azimuth: 185.9 °
VS: -371.3 '

MD: 6,206 '
TVD: 6,136.89 '
Inclination: 36.1 °
Azimuth: 185 °
VS: -353.2 '

MD: 6,238 '
TVD: 6,162.19 '
Inclination: 39.4 °
Azimuth: 184.5 °
VS: -333.75 '

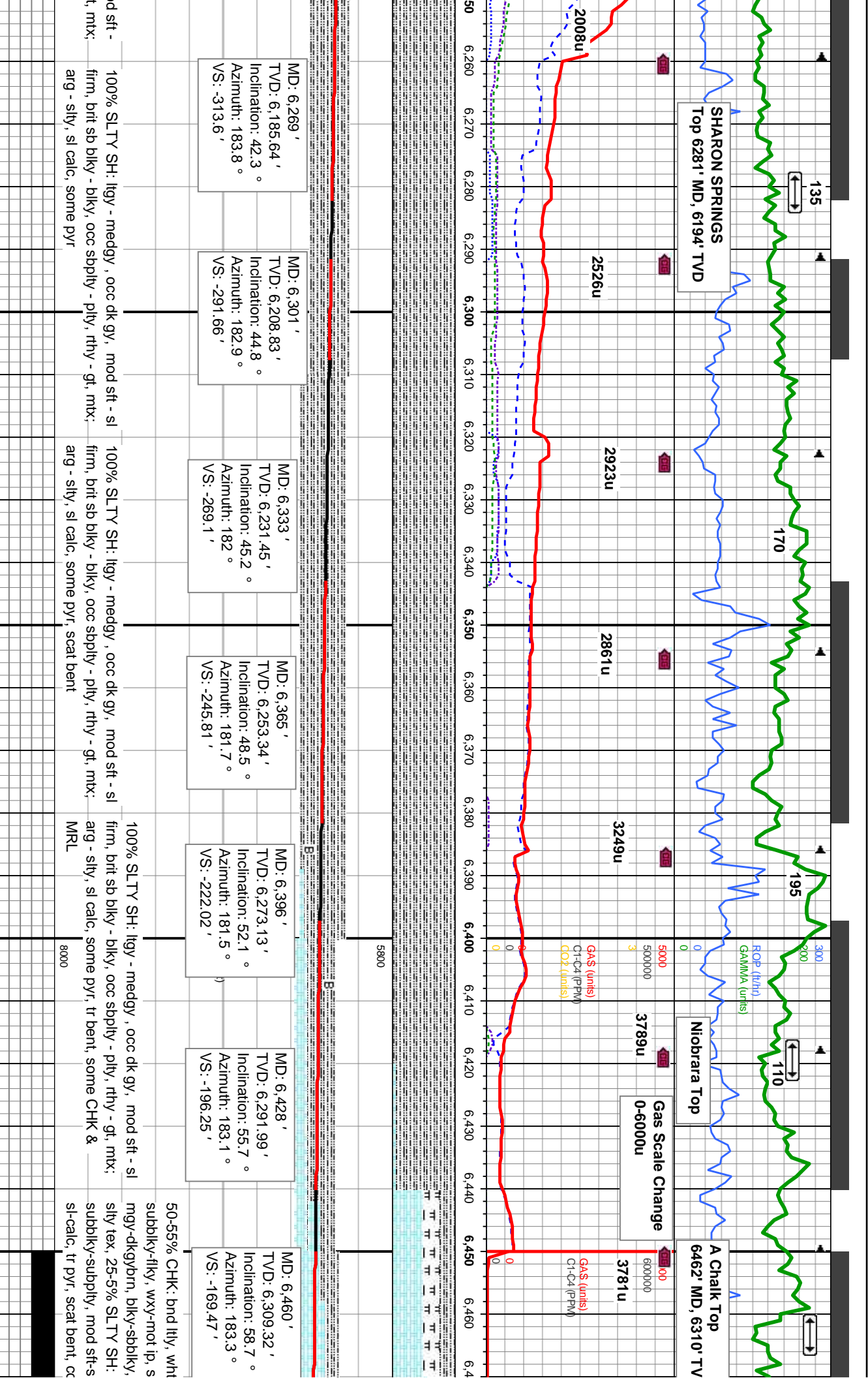
TY SH: lgy - medgy , occ dk gy, mod sft - sl
biky - biky, rthy - gt, mtx: arg - slty, sl calc,
TY SS: off wh - lgy,occ s&p , mod hd - hd,
- biky, f gr, tr glauc, sl calc

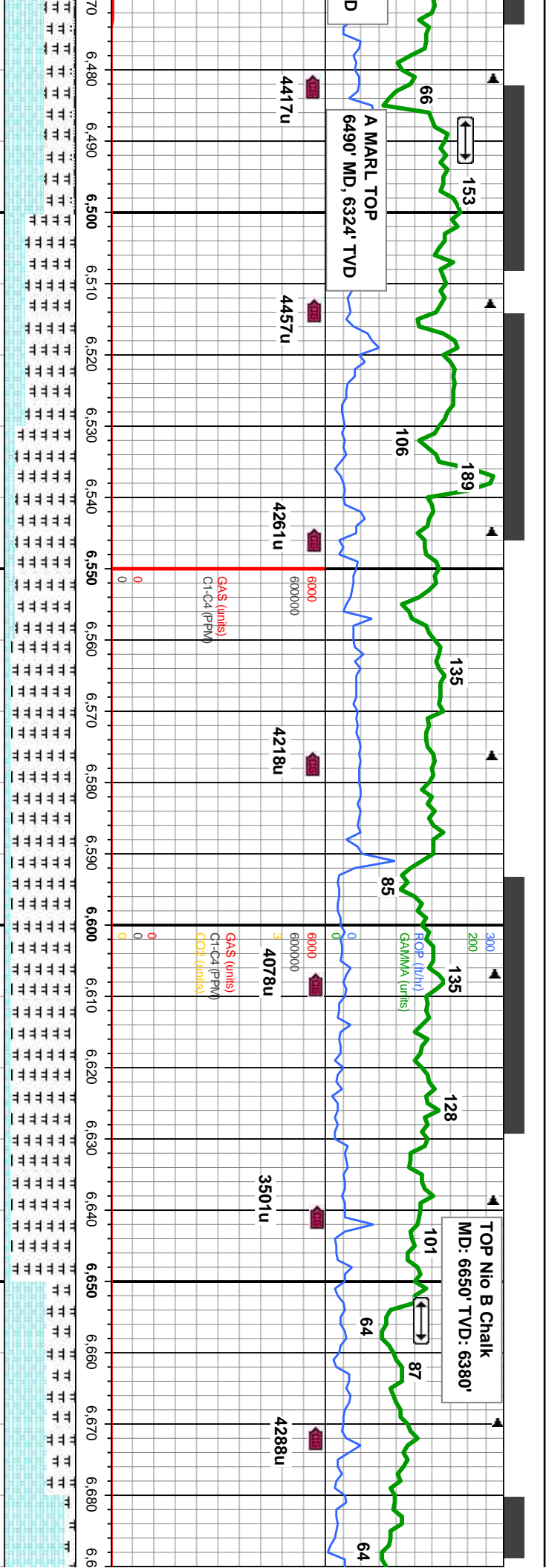
90-95% SLTY SH: lgy - medgy , occ dk gy, mod sft -
sl firm, sb biky - biky, rthy - gt, mtx: arg - slty, sl calc,
10-95% SHY SS: off wh - lgy,occ s&p , mod hd - hd,
sb biky - biky, f gr, tr glauc, sl calc

100% SLTY SH: lgy - medgy , occ dk gy, mod sft -
sl firm, sb biky - biky, rthy - gt, mtx: arg - slty, sl calc,
tr shy ss

100% SLTY SH: lgy - medgy , occ dk gy, mod sft -
sl firm, sb biky - biky, occ sbply - pty, rthy - g
arg - slty, sl calc, tr pyr, tr shy ss

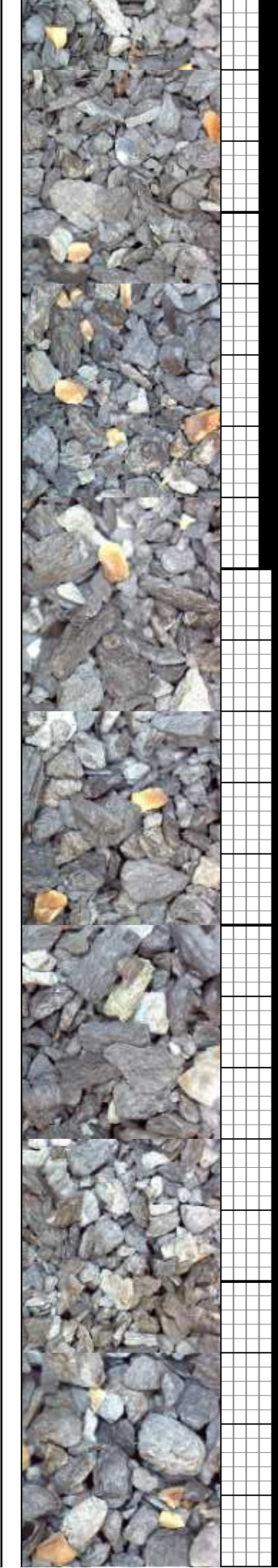


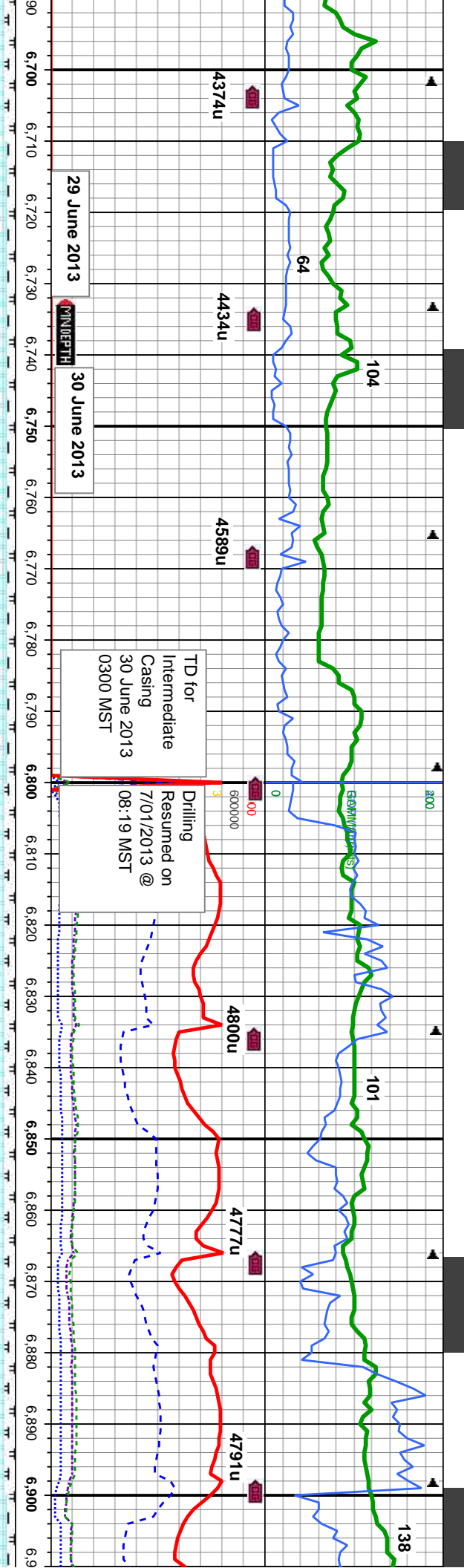




MD: 6,491 ' TVD: 6,324.56 ' Inclination: 62.4 ° Azimuth: 183.4 ° VS: -142.6 '	MD: 6,523 ' TVD: 6,338.33 ' Inclination: 66.6 ° Azimuth: 183.1 ° VS: -113.85 '	MD: 6,555 ' TVD: 6,350.5 ' Inclination: 68.7 ° Azimuth: 182.9 ° VS: -84.38 '	MD: 6,587 ' TVD: 6,361.89 ' Inclination: 69.6 ° Azimuth: 182.6 ° VS: -54.58 '	MD: 6,618 ' TVD: 6,371.62 ' Inclination: 73.8 ° Azimuth: 182.7 ° VS: -25.26 '	MD: 6,650 ' TVD: 6,379.71 ' Inclination: 76.9 ° Azimuth: 182.9 ° VS: 5.58 '	MD: 6,682 ' TVD: 6,386.06 ' Inclination: 80.2 ° Azimuth: 182.2 ° VS: 36.84 '
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70-85% MRL: lgy-med gy, occ dk gy brn, bly-sb blyk, mod sft-mod frm, rthy, arg-sily tex, mod calc, 30-15% CHK: bnd lily, wht-lily, sft-mod sft, subbly-fily, some bndd, wxy-mot ip, sl sily, scat-occ bnt, con from uphole, wh fast stmg, wh mky, fnt mod thk ring, tr stn	90% MRL: lgy-med gy, occ dk gy brn, bly-sb blyk, mod sft-mod frm, rthy, arg-sily tex, mod calc, 10% CHK: bnd lily, wht-lily, sft-mod sft, subbly-fily, some bndd, wxy-mot ip, sl sily, scat-occ bnt, con from uphole, yel mod sling, lt wht mky, fnt mod thk ring, tr yel stn	85-90% MRL: med gy - dk gy brn, bly-sb blyk, frm, rthy, arg-sily tex, mod calc, tr bent 10-60% CHK: lgy-medgy, occ wht-crm, mod sft-mod frm, brit, bly-sb blyk, occ sb pty, sb wxy-wxy, mot ip-occ bndd, v calc, slow sl stmg cut
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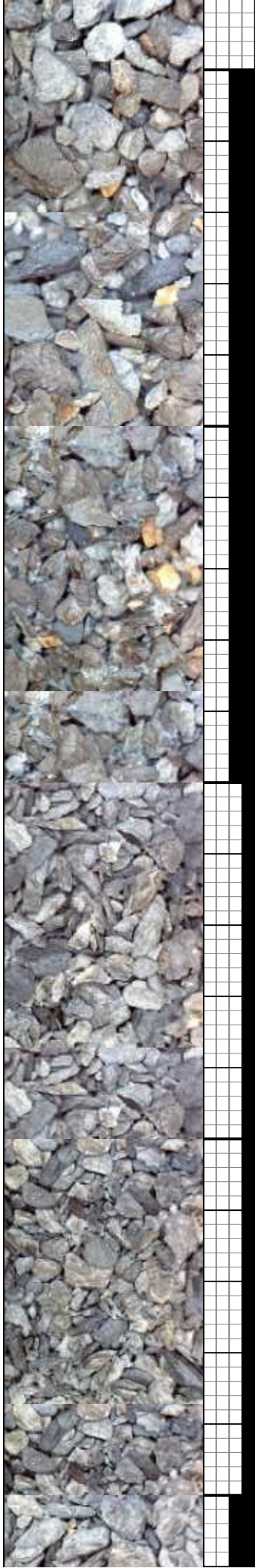


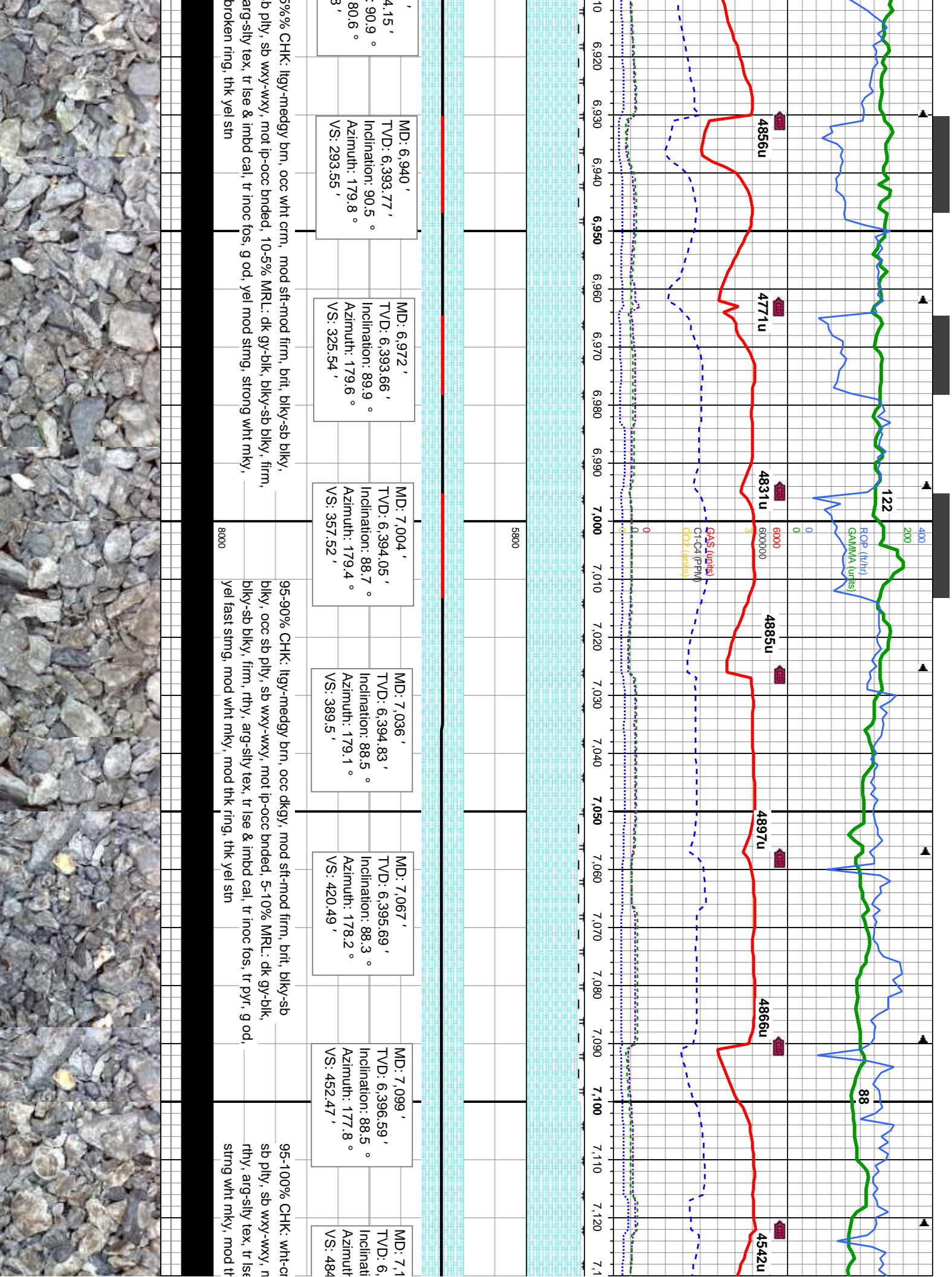
MD: 6,714 ' TVD: 6,390.71 ' Inclination: 83.1 ° Azimuth: 182.2 ° VS: 68.41 '	MD: 6,748 ' TVD: 6,394.09 ' Inclination: 85.5 ° Azimuth: 182.6 ° VS: 102.13 '	MD: 6,813 ' TVD: 6,396.18 ' Inclination: 90.8 ° Azimuth: 182.6 ° VS: 166.85 '	MD: 6,845 ' TVD: 6,395.54 ' Inclination: 91.5 ° Azimuth: 182.7 ° VS: 198.73 '	MD: 6,877 ' TVD: 6,394.76 ' Inclination: 91.3 ° Azimuth: 181.5 ° VS: 230.64 '	MD: 6,909 ' TVD: 6,39 ' Inclination: ' Azimuth: 1 ' VS: 262.5 '
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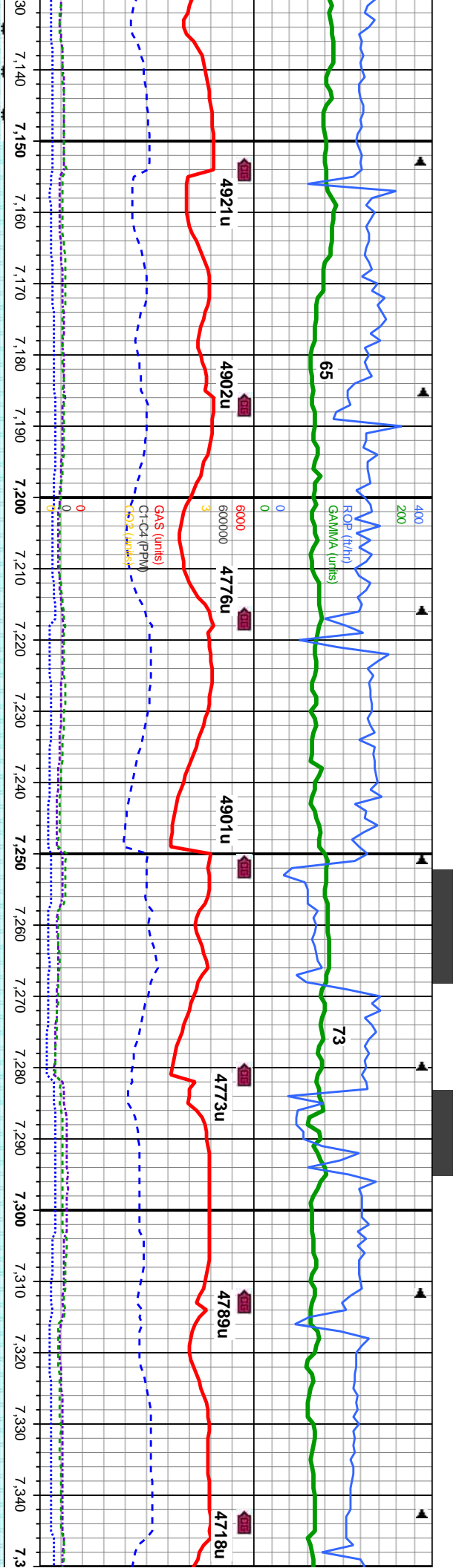
CHK: ltgy-medgy, occ wht-crm, mod firm, brit, blkly-sb blkly, occ sb plty, sb firm, brit, blkly-sb blkly, occ sb plty, sb dk gy brn, blkly-sb blkly, firm, rthy, arg-sfty ip-occ bnded, 10% MRL: med gy - dk gy brn, blkly-sb blkly, firm, rthy, arg-sfty tex, tr bent

90% CHK: ltgy-medgy, occ wht-crm, mod sft-mod firm, brit, blkly-sb blkly, occ sb plty, sb wxy-wxy, mot ip-occ bnded, 10% MRL: med gy - dk gy brn, blkly-sb blkly, firm, rthy, arg-sfty tex, tr bent

85% CHK: ltgy-medgy brn, occ dkgy, mod sft-mod firm, brit, blkly-sb blkly, occ sb plty, sb wxy-wxy, mot ip-occ bnded, 15% MRL: dk gy-blk, blkly-sb blkly, firm, rthy, arg-sfty tex, tr ise & imbd cal, g od, yel mod stmg, strong wht mky, mod broken ring, thk yel stn







5800

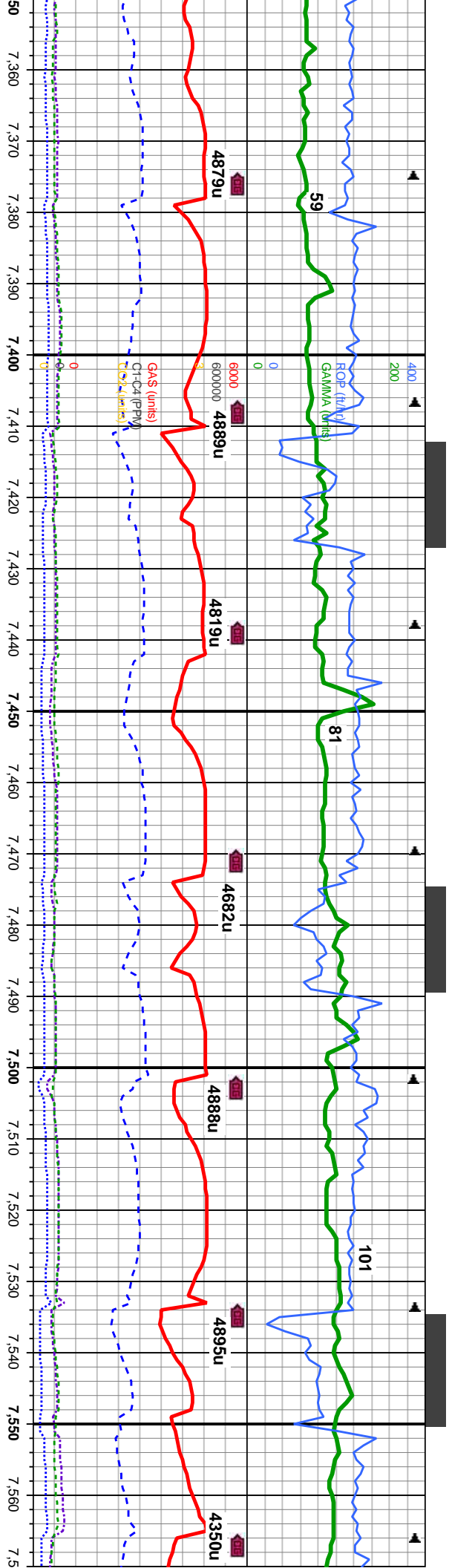
MD: 7,163 ' TVD: 6,398.1 ' Inclination: 88.9 ° Azimuth: 176.9 ° VS: 516.45 '	MD: 7,195 ' TVD: 6,398.43 ' Inclination: 89.9 ° Azimuth: 176.6 ° VS: 548.44 '	MD: 7,226 ' TVD: 6,398.24 ' Inclination: 90.8 ° Azimuth: 176.9 ° VS: 579.44 '	MD: 7,258 ' TVD: 6,398.07 ' Inclination: 89.8 ° Azimuth: 176.2 ° VS: 611.43 '	MD: 7,290 ' TVD: 6,398.38 ' Inclination: 89.1 ° Azimuth: 176.4 ° VS: 643.41 '	MD: 7,322 ' TVD: 6,398.8 ' Inclination: 89.4 ° Azimuth: 176.2 ° VS: 675.4 '
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MD: 7,163 '
TVD: 6,398.1 '
Inclination: 88.9 °
Azimuth: 176.9 °
VS: 516.45 '
MD: 7,195 '
TVD: 6,398.43 '
Inclination: 89.9 °
Azimuth: 176.6 °
VS: 548.44 '
MD: 7,226 '
TVD: 6,398.24 '
Inclination: 90.8 °
Azimuth: 176.9 °
VS: 579.44 '
MD: 7,258 '
TVD: 6,398.07 '
Inclination: 89.8 °
Azimuth: 176.2 °
VS: 611.43 '
MD: 7,290 '
TVD: 6,398.38 '
Inclination: 89.1 °
Azimuth: 176.4 °
VS: 643.41 '
MD: 7,322 '
TVD: 6,398.8 '
Inclination: 89.4 °
Azimuth: 176.2 °
VS: 675.4 '

100% CHK: wht-crm, ltgy, occ medgy, mod firm-firm, brit, blkly-sb blkly, occ sb
ply, sb wxy-wxy, mot ip-occ bnded, tr lse & imbd cal, tr inoc fos, g od, yel fast
stmg, mod wht mky, mod thk ring, thk yel stn

100% CHK: wht-crm, ltgy, occ medgy, n
ply, sb wxy-wxy, mot ip-occ bnded, tr lse
mod stmg, mod wht mky, mod thk ring, t





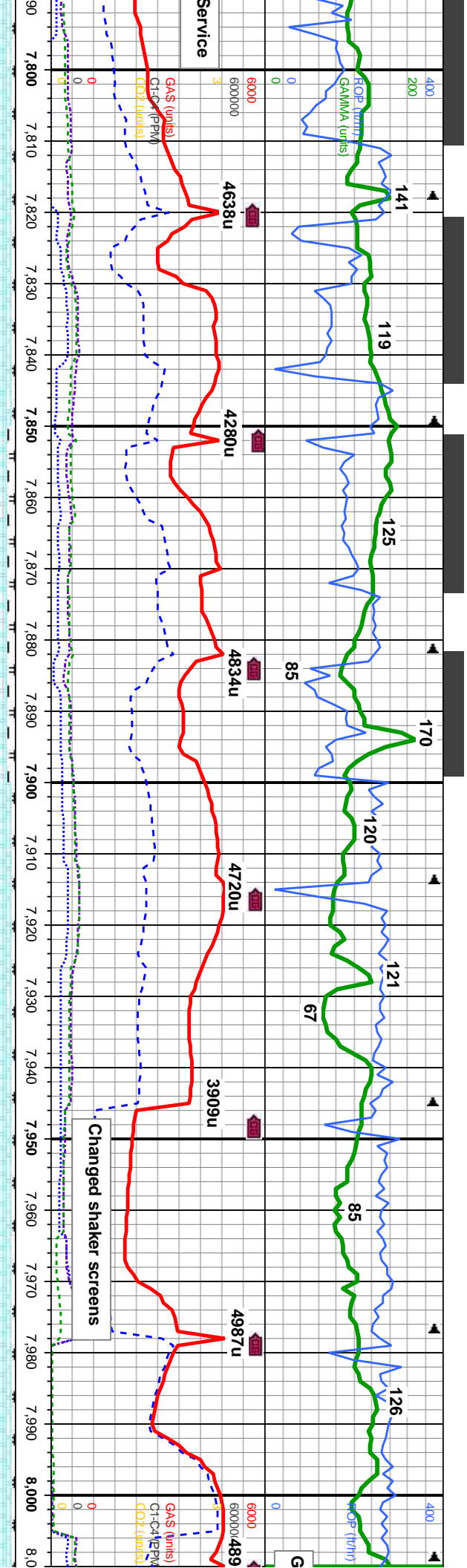
MD: 7,353' TVD: 6,398.96' Inclination: 90.7° Azimuth: 175.7° VS: 738.35'	MD: 7,417' TVD: 6,398.57' Inclination: 90.7° Azimuth: 175.5° VS: 770.33'	MD: 7,448' TVD: 6,398.17' Inclination: 90.8° Azimuth: 175.5° VS: 801.3'	MD: 7,480' TVD: 6,397.55' Inclination: 90.7° Azimuth: 176.8° VS: 833.28'	MD: 7,512' TVD: 6,397.16' Inclination: 90.7° Azimuth: 176.6° VS: 865.27'	MD: 7,544' TVD: 6,396.99' Inclination: 89.9° Azimuth: 177.1° VS: 897.26'
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mod firm-firm, brit, blk-y-sb blk-y, occ sb
e & imbd cal, tr inoc fos, g od, yel-bl
hk yel stn

100% CHK: wht-crm, ltgy, occ medgy, mod firm-firm, brit, blk-y-sb blk-y, occ sb
ply, sb wxy-wxy, mot ip-occ bnded, tr ise & imbd cal, tr inoc fos, tr mrl, g od,
yel-bl fast stmg, strong wht mky, thk ring, thk yel stn

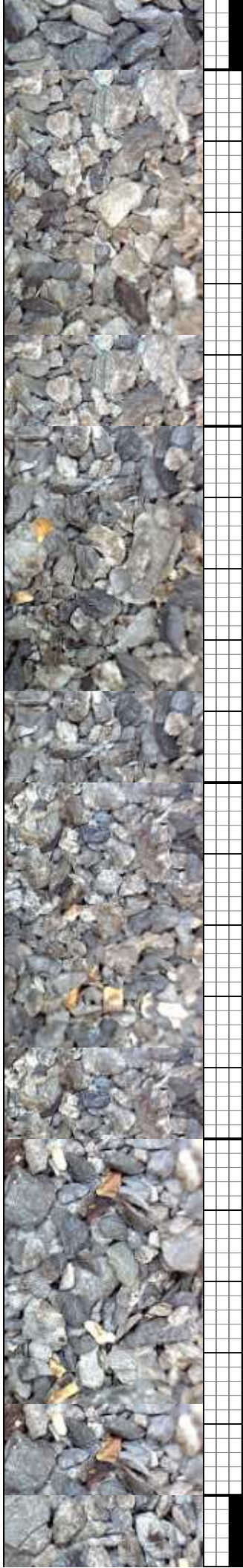
95% CHK: wht-crm, ltgy, occ medgy, mod sft-firm, brit, blk-y-sb
sb wxy-wxy, mot ip-occ bnded, 5% MRL: dk gy-blk, blk-y-sb
arg-sltv/tx, tr ise & imbd cal, tr inoc fos, tr bent, fr od, yel-b
mky, thk ring, thk yel stn

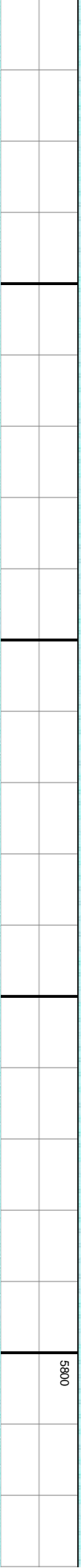
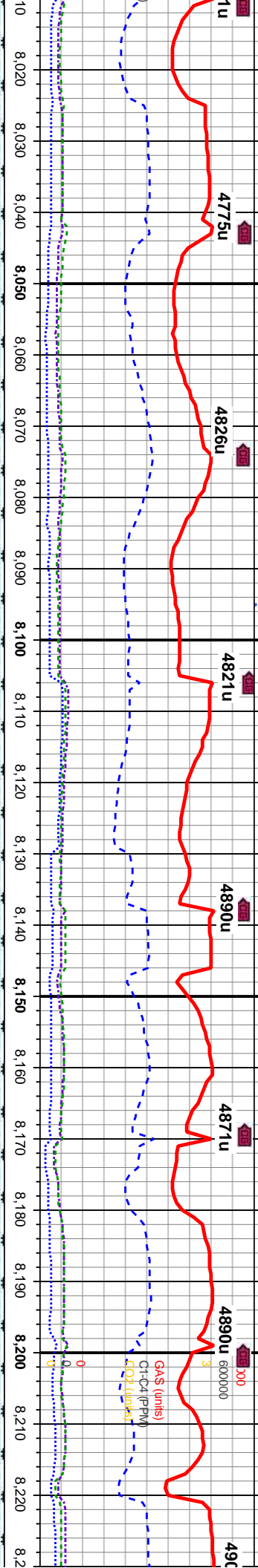
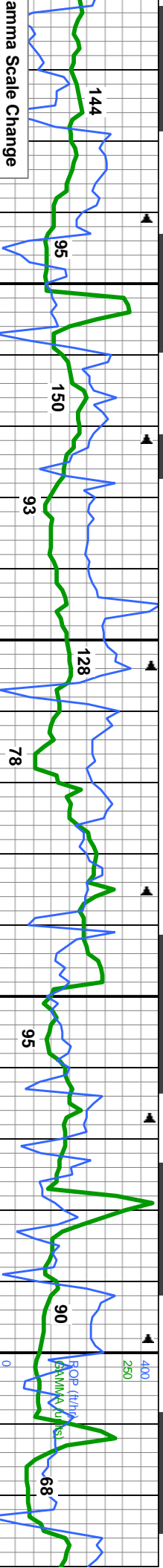




MD: 7,798 ' TVD: 6,396.72 ' Inclination: 90.7 ° Azimuth: 180.1 ° VS: 1,151.22 '	MD: 7,830 ' TVD: 6,396.33 ' Inclination: 90.7 ° Azimuth: 182.2 ° VS: 1,183.16 '	MD: 7,862 ' TVD: 6,396.27 ' Inclination: 89.5 ° Azimuth: 182.9 ° VS: 1,215.05 '	MD: 7,893 ' TVD: 6,396.95 ' Inclination: 88 ° Azimuth: 182.7 ° VS: 1,245.93 '	MD: 7,925 ' TVD: 6,398.1 ' Inclination: 87.9 ° Azimuth: 182.4 ° VS: 1,277.8 '	MD: 7,957 ' TVD: 6,399.27 ' Inclination: 87.9 ° Azimuth: 182.2 ° VS: 1,309.69 '	MD: 7,989 ' TVD: 6,400.41 ' Inclination: 88 ° Azimuth: 181.5 ° VS: 1,341.59 '
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95% CHK: wht-crm, llyg-medgy, occ drkgy, mod sft-firm, brt, blk-y-sb blk-y, occ sb ply, sb wxy-wxy, mot ip-occ bnded, 5% MRL: dk gy-blk, blk-y-sb blk-y, firm, rthy, arg-slty tex, tr lse & imbd cal, tr inoc fos, tr bent, fr od, yel slow stmg, frt wht mky, thin ring, frt yel stn





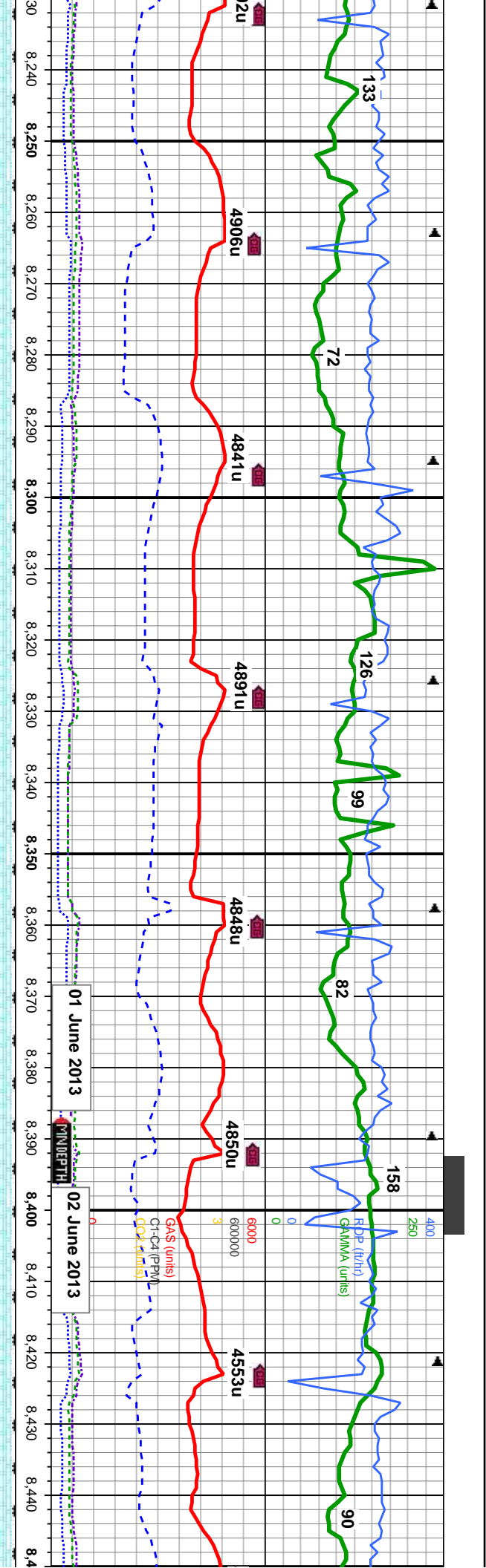
MD: 8,020 ' TVD: 6,401.17 ' Inclination: 89.2 ° Azimuth: 181.3 ° VS: 1,372.52 '	MD: 8,052 ' TVD: 6,401.2 ' Inclination: 90.7 ° Azimuth: 180.6 ° VS: 1,404.47 '	MD: 8,084 ' TVD: 6,400.72 ' Inclination: 91 ° Azimuth: 179.8 ° VS: 1,436.44 '	MD: 8,115 ' TVD: 6,400.16 ' Inclination: 91.1 ° Azimuth: 178.7 ° VS: 1,467.43 '	MD: 8,147 ' TVD: 6,399.6 ' Inclination: 90.9 ° Azimuth: 179.2 ° VS: 1,499.42 '	MD: 8,179 ' TVD: 6,399.43 ' Inclination: 89.7 ° Azimuth: 181.2 ° VS: 1,531.39 '	MD: 8,211 ' TVD: 6,399.76 ' Inclination: 89.1 ° Azimuth: 183.1 ° VS: 1,563.3 '
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95% CHK: wht-crm, ltgy-medgy, occ dfkgy, mod sft-firm, brit, blk-y-sb blk-y, occ sb plty, sb wxy-wxy, mot ip-occ bnded, 5% MRL: dk gy-blk, blk-y-sb blk-y, firm, rthy, arg-sly tex, tr ise & imbd cal, tr inoc fos, tr bent, fr od, yel mod stmg, mod wht mky, thin ring, mod yel stn

95% CHK: wht-crm, ltgy-medgy, occ dfkgy, mod sft-firm, brit, blk-y-sb blk-y, occ sb plty, sb wxy-wxy, mot ip-occ bnded, 5% MRL: dk gy-blk, blk-y-sb blk-y, firm, rthy, arg-sly tex, tr ise & imbd cal, tr inoc fos, occ bent, fr od, yel v fst stmg, mod wht mky, thin ring, mod yel stn

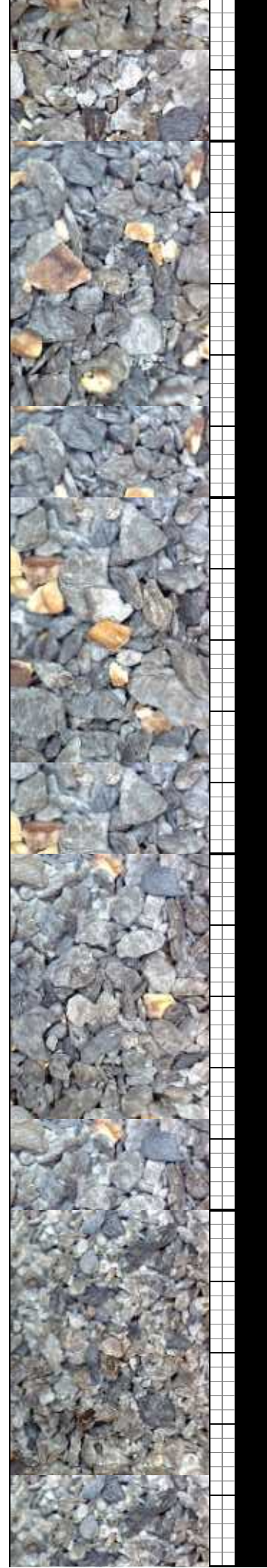
95% CHK: wht-c blk-y-sb blk-y, occ MRL: dk gy-blk, l imbd cal, tr inoc mky, mod ring, n

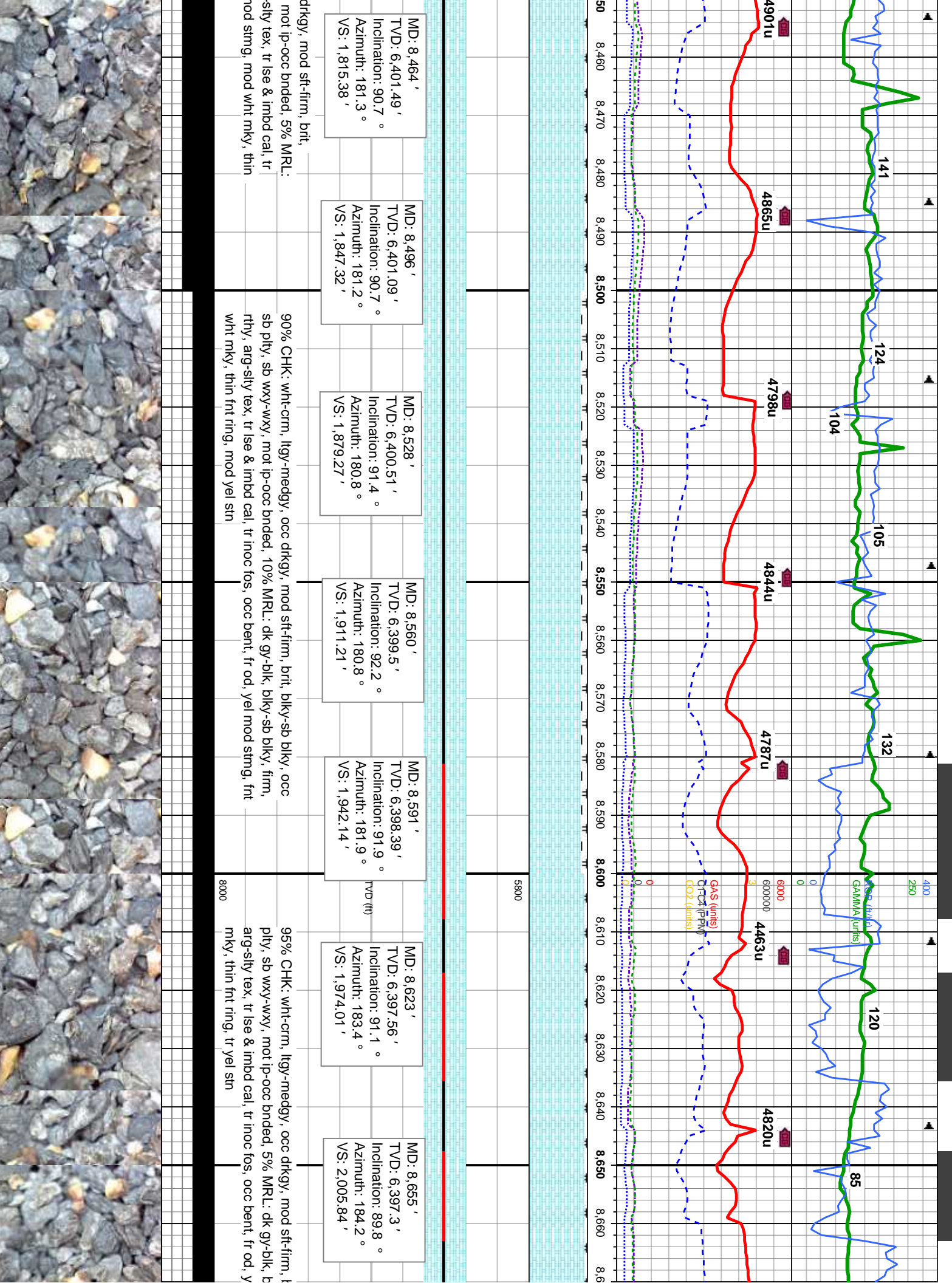


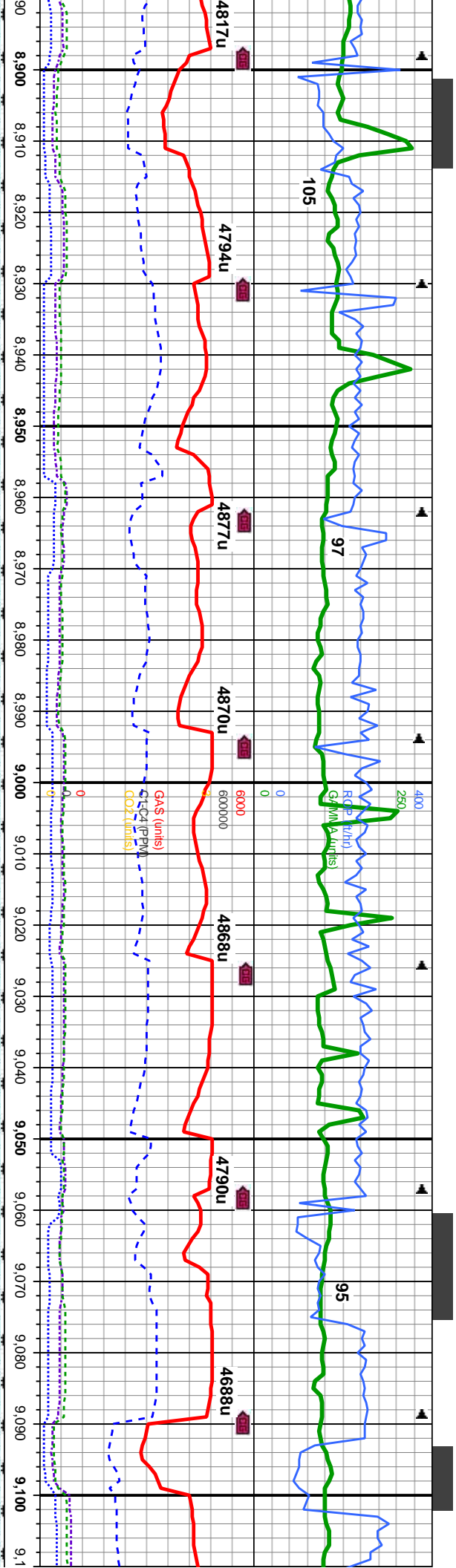


MD: 8,243 ' TVD: 6,400.38 ' Inclination: 88.7 ° Azimuth: 183.6 ° VS: 1,595.14 '	MD: 8,274 ' TVD: 6,400.92 ' Inclination: 89.3 ° Azimuth: 183.8 ° VS: 1,625.98 '	MD: 8,306 ' TVD: 6,401.28 ' Inclination: 89.4 ° Azimuth: 182.6 ° VS: 1,657.84 '	MD: 8,338 ' TVD: 6,401.59 ' Inclination: 89.5 ° Azimuth: 182.6 ° VS: 1,689.73 '	MD: 8,370 ' TVD: 6,401.81 ' Inclination: 89.7 ° Azimuth: 182.6 ° VS: 1,721.62 '	MD: 8,401 ' TVD: 6,401.84 ' Inclination: 90.2 ° Azimuth: 182 ° VS: 1,752.52 '	MD: 8,433 ' TVD: 6,401.73 ' Inclination: 90.2 ° Azimuth: 181.7 ° VS: 1,784.45 '
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95% CHK: wht-crm, ltgy-medgy, occ drkgy, mod sft-firm, brit, sb pily, sb wxy-wxy, mot ip-occ bnded, 5% MRL: dk gy-blk, blkgy-sb blkgy, firm, rthy, arg-sily tex, tr lse & imbd cal, tr inoc fos, occ bent, fr od, yel mod-fst stmg, mod wht mky, thk ring, mod yel stn







MD: 8,909 '
TVD: 6,397.25 '
Inclination: 89.6 °
Azimuth: 181.5 °
VS: 2,258.65 '

MD: 8,940 '
TVD: 6,397.38 '
Inclination: 89.9 °
Azimuth: 181.5 °
VS: 2,289.59 '

MD: 8,972 '
TVD: 6,397.47 '
Inclination: 89.8 °
Azimuth: 181 °
VS: 2,321.53 '

MD: 9,036 '
TVD: 6,397.02 '
Inclination: 91 °
Azimuth: 180.8 °
VS: 2,385.44 '

MD: 9,067 '
TVD: 6,396.78 '
Inclination: 89.9 °
Azimuth: 179.8 °
VS: 2,416.41 '

MD: 9,099 '
TVD: 6,396.67 '
Inclination: 90.5 °
Azimuth: 179.9 °
VS: 2,448.39 '

95% CHK: wht-crm, ltgy-medgy, mod sft-firm, brit, blk-y-sb blk-y, occ sb
ply, sb wxy-wxy, mot ip-occ bnded, 5% MRL: dk gy-blk, blk-y-sb blk-y,
firm, rthy, arg-sily tex, tr lse & imbd sec cal, tr inoc fos, tr bent, fr od, yel
fst stmg, mod wht mky, thin dull ring, mod yel stn

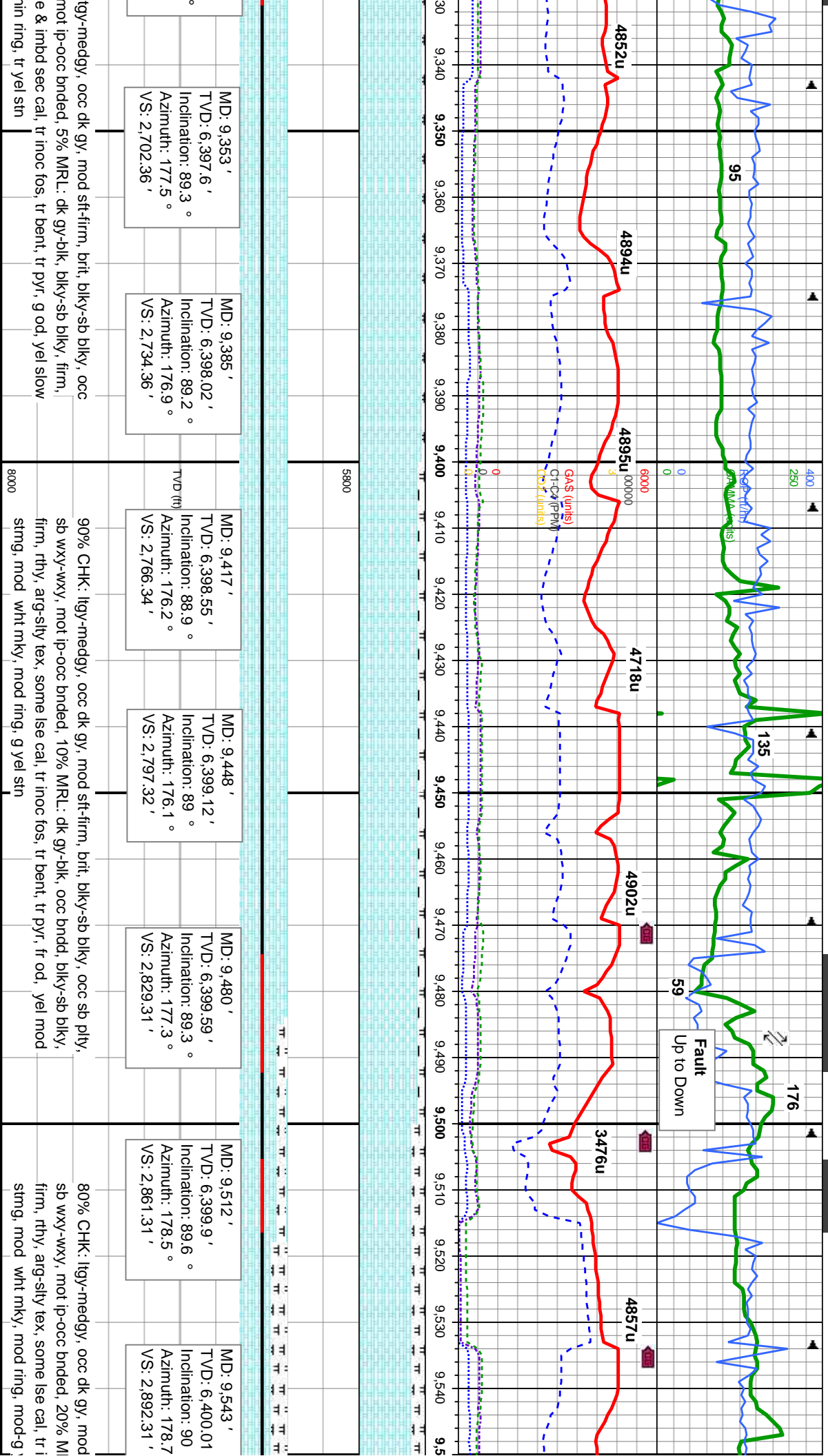
95% CHK: wht-crm, ltgy-medgy, mod sft-firm, brit, blk-y-sb blk-y, occ sb ply,
sb wxy-wxy, mot ip-occ bnded, 5% MRL: dk gy-blk, blk-y-sb blk-y, firm, rthy,
arg-sily tex, some lse & imbd sec cal, tr inoc fos, tr bent, fr od, yel mod
stmg, mod wht mky, mod ring, g yel stn

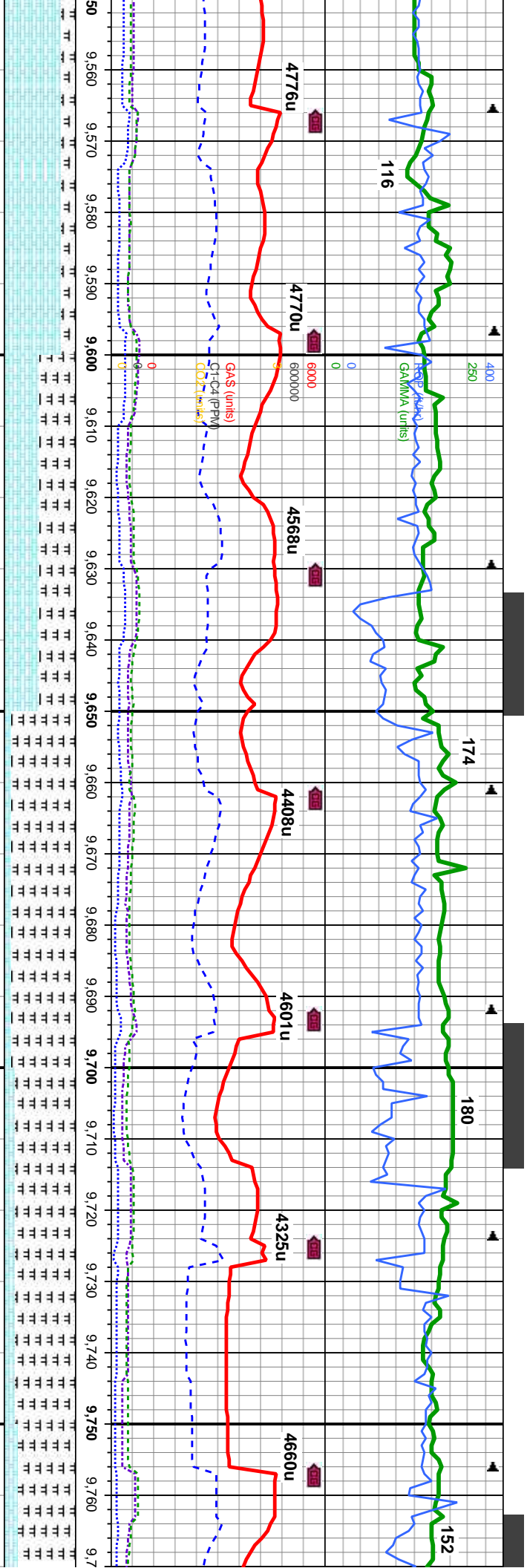
8000

5800

TVD (ft)







MD: 9,575 '
TVD: 6,400.01 '
Inclination: 90 °
Azimuth: 178 °
VS: 2,924.31 '

MD: 9,607 '
TVD: 6,400.09 '
Inclination: 89.7 °
Azimuth: 178 °
VS: 2,956.31 '

MD: 9,639 '
TVD: 6,400.17 '
Inclination: 90 °
Azimuth: 178.2 °
VS: 2,988.31 '

MD: 9,671 '
TVD: 6,400.12 '
Inclination: 90.2 °
Azimuth: 178.9 °
VS: 3,020.3 '

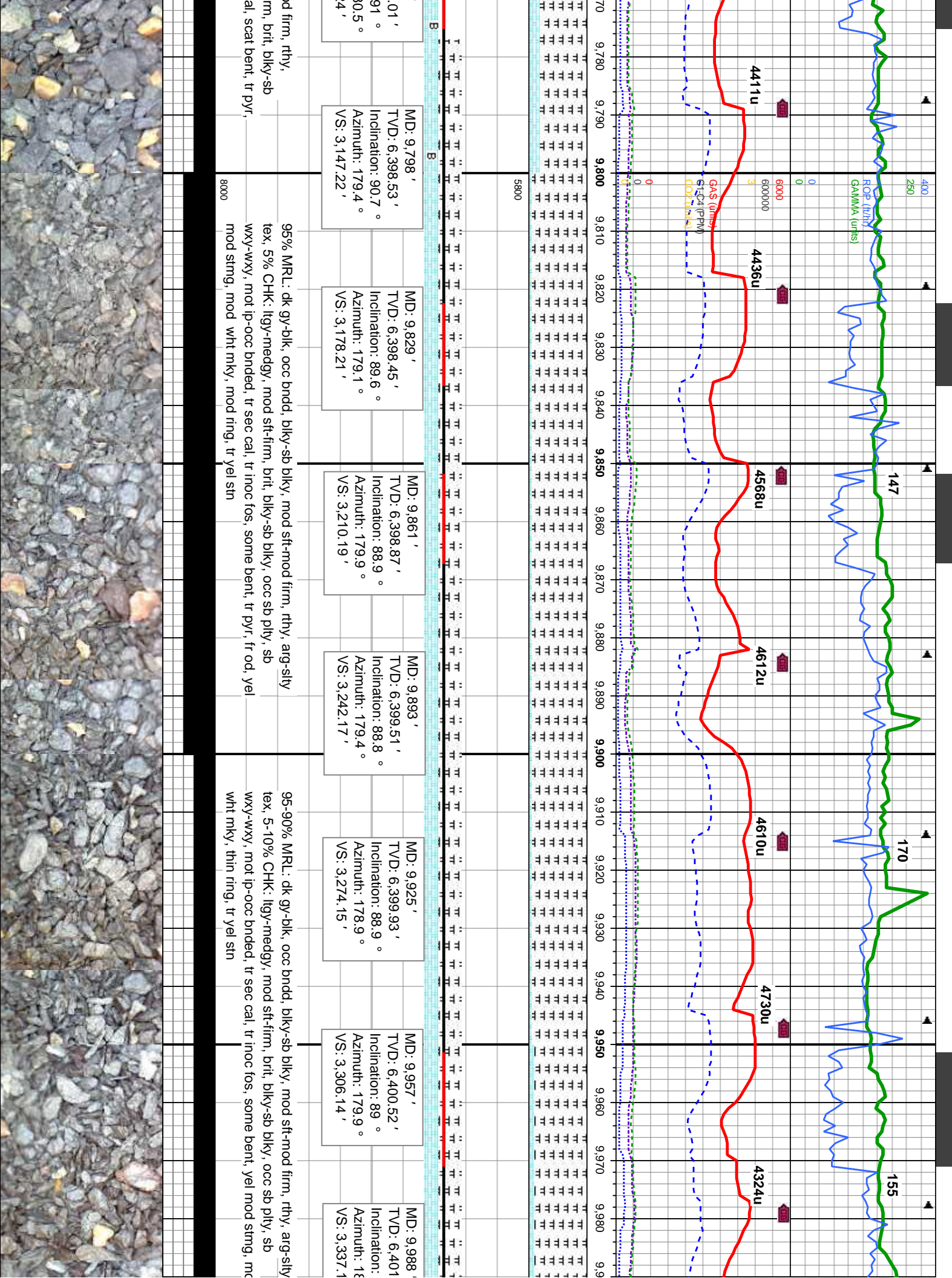
MD: 9,702 '
TVD: 6,399.87 '
Inclination: 90.7 °
Azimuth: 179.8 °
VS: 3,051.29 '

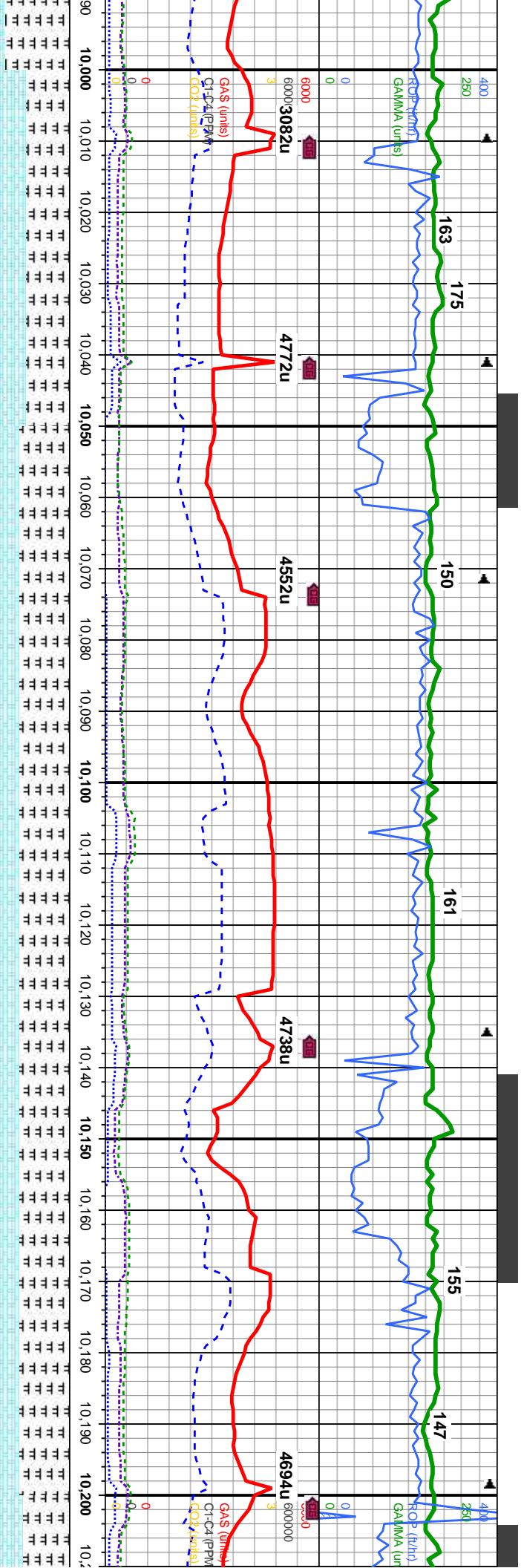
MD: 9,734 '
TVD: 6,399.48 '
Inclination: 90.7 °
Azimuth: 179.8 °
VS: 3,083.27 '

MD: 9,766 '
TVD: 6,399 '
Inclination: 90.7 °
Azimuth: 181.8 °
VS: 3,115.2 '

sft-firm, brit, blk-y-sb blk-y, occ sb pily, arg-sily tex, 50-10% CHK: lgy-medgy, mod sft-firm, brit, blk-y-sb blk-y, occ sb pily, sb wxy-wxy, mot ip-occ bnded, tr sec cal, tr bent, tr pyr, yel slow string, dull wht mky, thin ring, tr yel sin

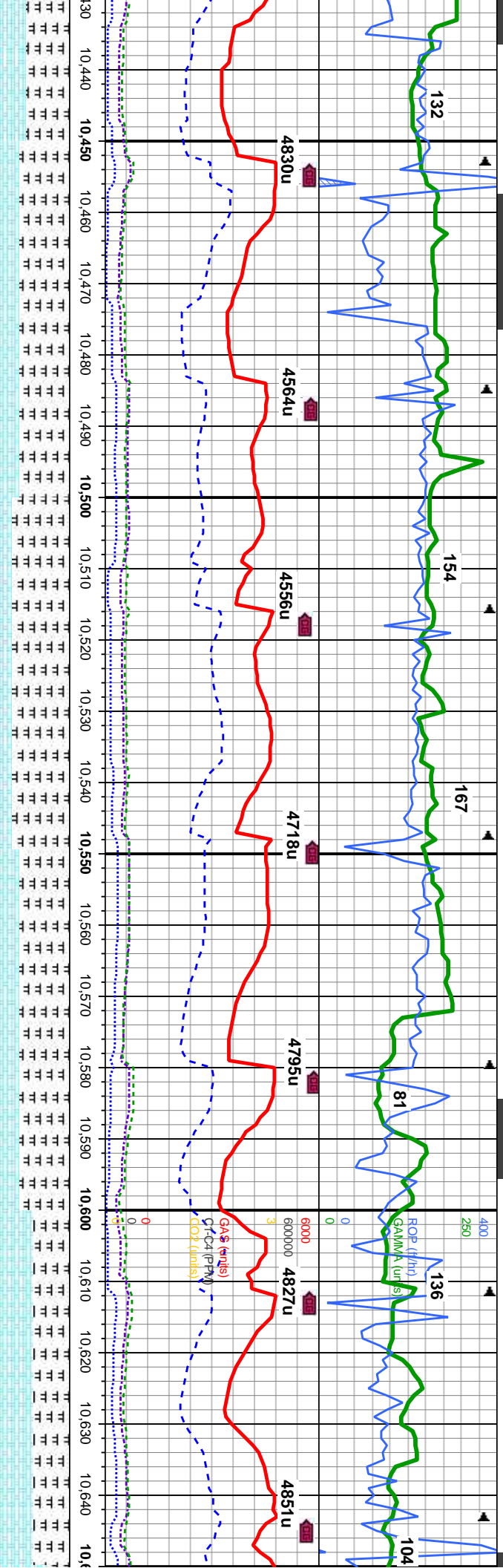






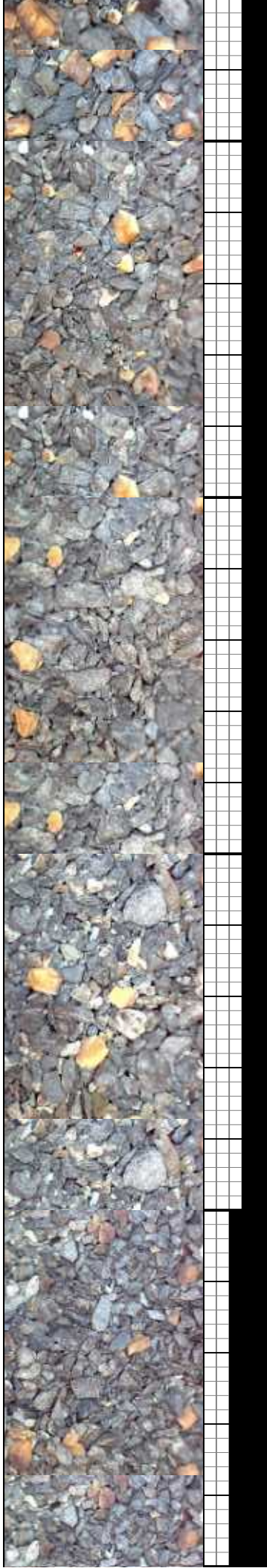
5800	MD: 10,020 ' TVD: 6,401.28 ' Inclination: 89.8 ° Azimuth: 180.3 ° VS: 3,369.08 '	MD: 10,052 ' TVD: 6,401.23 ' Inclination: 90.4 ° Azimuth: 181.3 ° VS: 3,401.04 '	MD: 10,083 ' TVD: 6,400.93 ' Inclination: 90.7 ° Azimuth: 181.3 ° VS: 3,431.98 '	MD: 10,115 ' TVD: 6,400.37 ' Inclination: 91.3 ° Azimuth: 181.3 ° VS: 3,463.92 '	MD: 10,147 ' TVD: 6,399.7 ' Inclination: 91.1 ° Azimuth: 181.7 ° VS: 3,495.85 '	MD: 10,179 ' TVD: 6,399.34 ' Inclination: 90.2 ° Azimuth: 181.9 ° VS: 3,527.77 '	MD: 10,211 ' TVD: 6,398.97 ' Inclination: 89.9 ° Azimuth: 181.9 ° VS: 3,559.71 '
60-70% MRL: dk gy-blk, occ bnnd, blk-y-sb blk-y, mod sft-mod firm, rthy, arg-sily tex, 40-30% CHK: llyg-medgy, mod sft-firm, brit, blk-y-sb blk-y, occ sb ply, sb wxy-wxy, mot ip-occ bnnded, tr sec cal, tr inoc fos, tr bent, yel mod stmg, mod wht mky, thin ring, tr yel stn	70% MRL: dk gy-blk, occ bnnd, blk-y-sb blk-y, mod sft-mod firm, rthy, arg-sily tex, 30% CHK: llyg-medgy, mod sft-firm, brit, blk-y-sb blk-y, occ sb ply, sb wxy-wxy, mot ip-occ bnnded, tr sec cal occ pyr, tr inoc fos, tr bent, yel mod stmg, mod wht mky, thin ring, tr yel stn						

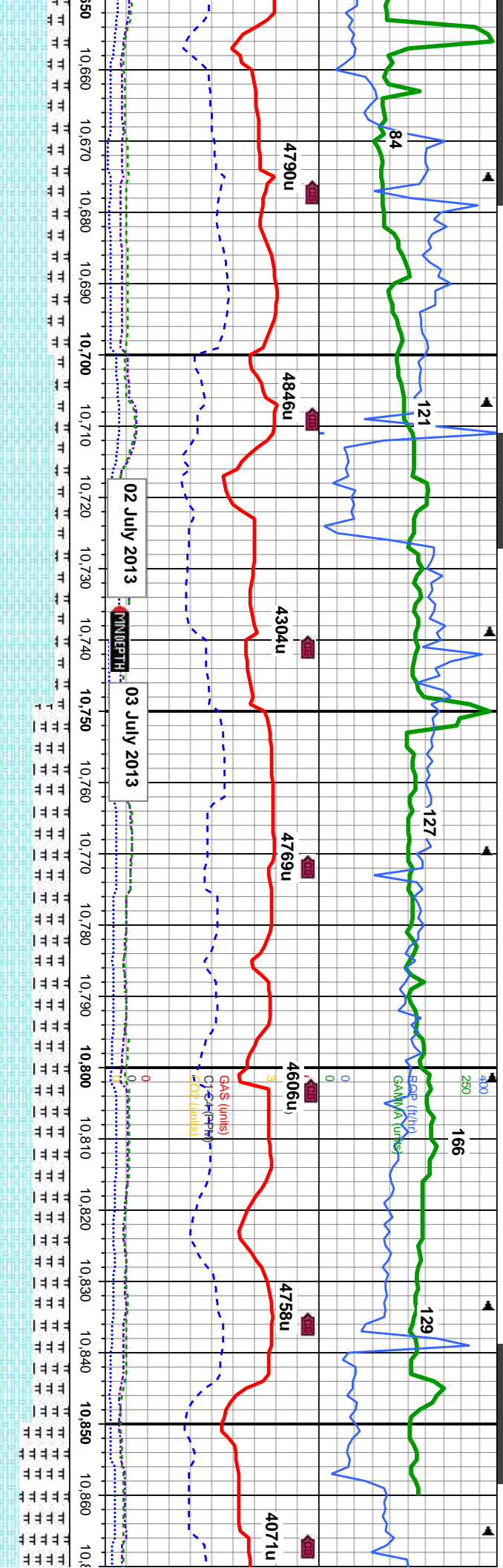




MD: 10,432' TVD: 6,402.8' Inclination: 90.3° Azimuth: 181.9° VS: 3,802.1'	MD: 10,464' TVD: 6,402.74' Inclination: 89.9° Azimuth: 181.3° VS: 3,812.15'	MD: 10,496' TVD: 6,402.8' Inclination: 89.9° Azimuth: 181.2° VS: 3,844.09'	MD: 10,528' TVD: 6,402.6' Inclination: 90.8° Azimuth: 181° VS: 3,876.04'	MD: 10,559' TVD: 6,401.98' Inclination: 91.5° Azimuth: 180.8° VS: 3,906.99'	MD: 10,591' TVD: 6,401.34' Inclination: 90.8° Azimuth: 179.8° VS: 3,938.95'	MD: 10,623' TVD: 6,401.39' Inclination: 89° Azimuth: 178.9° VS: 3,970.94'
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80-70% MRL: dk gy-blk, occ bnnd, blk-y-sb blk-y, mod sft-mod firm, rthy, arg-sily tex, 20-30% CHK: lgy-medgy, mod sft-firm, brit, blk-y-sb blk-y, occ sb pily, sb wxy-wxy, mot ip-occ bnnded, tr sec cal, tr inoc fos, tr bent, yel mod stmg, mod wht mky, thin ring, tr yel stn



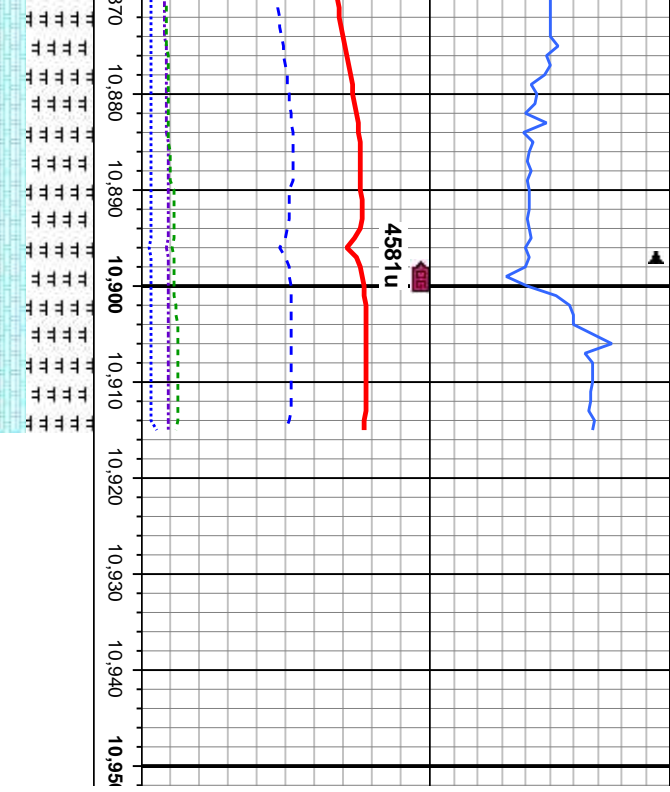


MD: 10,655 ' TVD: 6,402.2 ' Inclination: 88.1 ° Azimuth: 179.9 ° VS: 4,002.92 '	MD: 10,686 ' TVD: 6,403.04 ' Inclination: 88.8 ° Azimuth: 179.9 ° VS: 4,033.89 '	MD: 10,718 ' TVD: 6,403.49 ' Inclination: 89.6 ° Azimuth: 181 ° VS: 4,065.85 '	MD: 10,750 ' TVD: 6,403.32 ' Inclination: 91 ° Azimuth: 182.6 ° VS: 4,097.77 '	MD: 10,782 ' TVD: 6,402.54 ' Inclination: 91.8 ° Azimuth: 182.2 ° VS: 4,129.66 '	MD: 10,813 ' TVD: 6,401.59 ' Inclination: 91.7 ° Azimuth: 181.3 ° VS: 4,160.58 '	MD: 10,845 ' TVD: 6,400.78 ' Inclination: 91.2 ° Azimuth: 181 ° VS: 4,192.52 '	MD: 10,86 ' TVD: 6,400 ' Inclination: ' Azimuth: 1 ' VS: 4,210. '
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80-50% CHK: ltgy-medgy, mod sft-firm, brlt, blk-y-sb blk-y, occ sb pily, sb wxy-wxy, mot ip-occ bnded, 20-50% MRL: dk gy-blk, occ bndd, blk-y-sb blk-y, mod sft-mod firm, rthy, arg-sily tex, tr sec cal, tr inoc fos, tr bent, yel mod stmg, mod wht mky, mod ring, tr yel sin

50-70% MRL: dk gy-blk, occ bndd, blk-y-sb blk-y, mod sft-firm, rthy, arg-sily tex, 50-30% CHK: ltgy-medgy, mod sft-firm, blk-y, occ sb pily, sb wxy-wxy, mot ip-occ bnded, tr sec cal, tr bent, yel mod stmg, mod wht mky, thin ring, tr yel sin





TD occurred @ 10,915' MD
0200 MST ON 7/03/2013

THANK YOU FOR USING
COLUMBINE LOGGING INC.

3' 0.42' 91.1° 81.3° 48'

mod firm,
n, brit, biky-sb
cal, tr inoc fos,

