

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name ANADARKO GRIFFITHS 35N-20HZ

Location NWNW Sec 17, T1N, R67W

State COLORADO

Country USA

API Number 05-123-36635

County WELD

Rig Number H&P 307

AFE # 2075219

Field WILDCAT

Spud Date 7/3/2013

Drilling Completed 7/20/2013

Surface Coordinates 465' FNL & 740' FWL

Ground Elevation 5071'

K.B. Elevation 5096'

Logged Interval 6951' To 17370'

Total Depth 17370'

Formation NIOBRARA 'B'

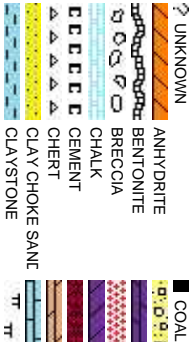
Type of Drilling Fluid LSND TO 7' CASING POINT, OBM FOR LATERAL

Company Anadarko

Name Jim Frank, Jake Rol

Company Columbine Logging,

Address 2385 S. Lipan St.
Denver, CO



Operator

Geologist

bertson, Isaac Smith
Inc.

Rock Types

	METAMORPHIC		SHALY SILTSTONE
	NO SAMPLE		SILTY SHALE
	SALT		SILTSTONE
	SANDSTONE		TUFF
	SALT-PEPPER SANT		WELDED TUFF
	SHALE		
	SHALE COLORED		
	SHALE GRAY		
	SHALY SANDSTONE		
	MARLSTONE		
	CONGLOMERATE		
	DOLOMITE		
	GRANITE		
	GYPSUM		
	IGNEOUS		
	SIDERITE or LIMONITE		
	LIMESTONE		
	MARLSTONE		

Accessories

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

Other Symbols

Oil Show	MOLDIC	FAULT	WIRELINE TESTED - LEFT	E EARTHY
	ORGANIC	FORMATION TOP	WIRELINE TESTED - RT	FX FINELYXLN
	DEAD	P PINPOINT	GAS SHOW	ES GRAINSTONE
	EVEN	V VUGGY	MINDEPTH MN DEPTH	L LITHOGRAPHIC
	QUESTIONABLE			
	SPOTTED STAINING			
Engineering				
	NORMAL FAULT			MX MICROXLN
	OIL SHOW			MS MUDSTONE
	OVERTURNED STRATA			PS PACKSTONE
	REVERSE FAULT			WS WACKSTONE
	SIDEWALL CORE (LEFT)			
	SUBANG			
	SUBRND			
Textures				
	BOUNDSTONE			
	CHALKY			
	CRYPTOXLN			
Sorting				
	MODERATE			
	POOR			
	WELL			

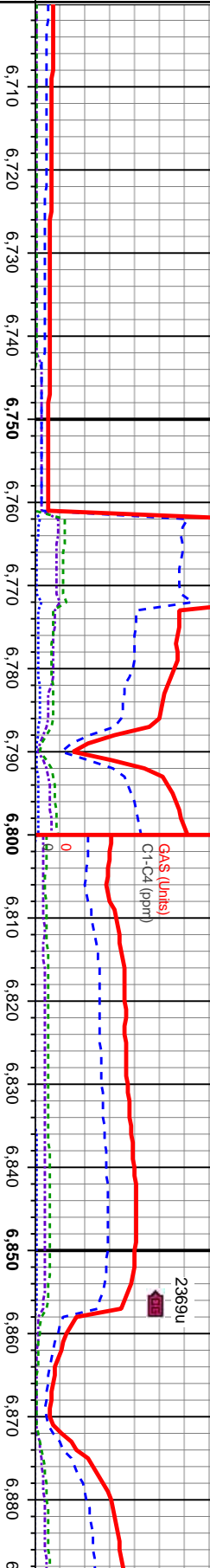
Slide/Rotate

ROP
ROF
GAMMA



Total Gas & Chromatograph

GAS
C1
C2
C3
C4



Depth Labels



% Lith

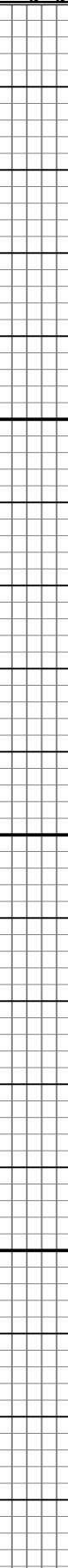


Well Bore
TVD

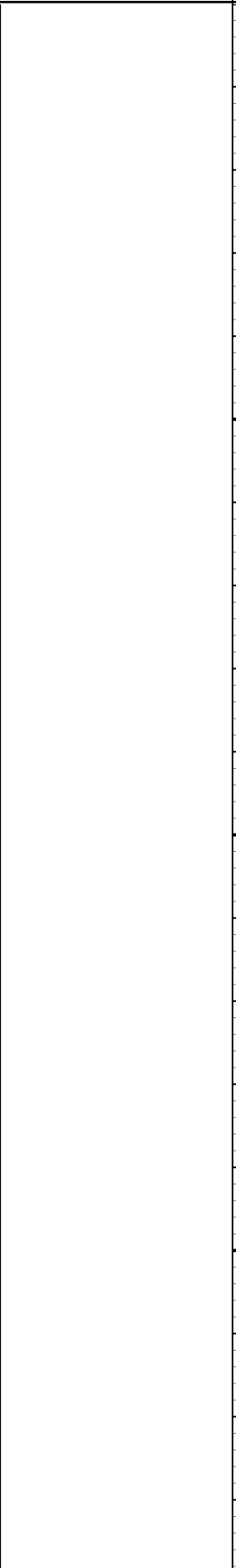


Oil Show

TR
P
FR
G
E

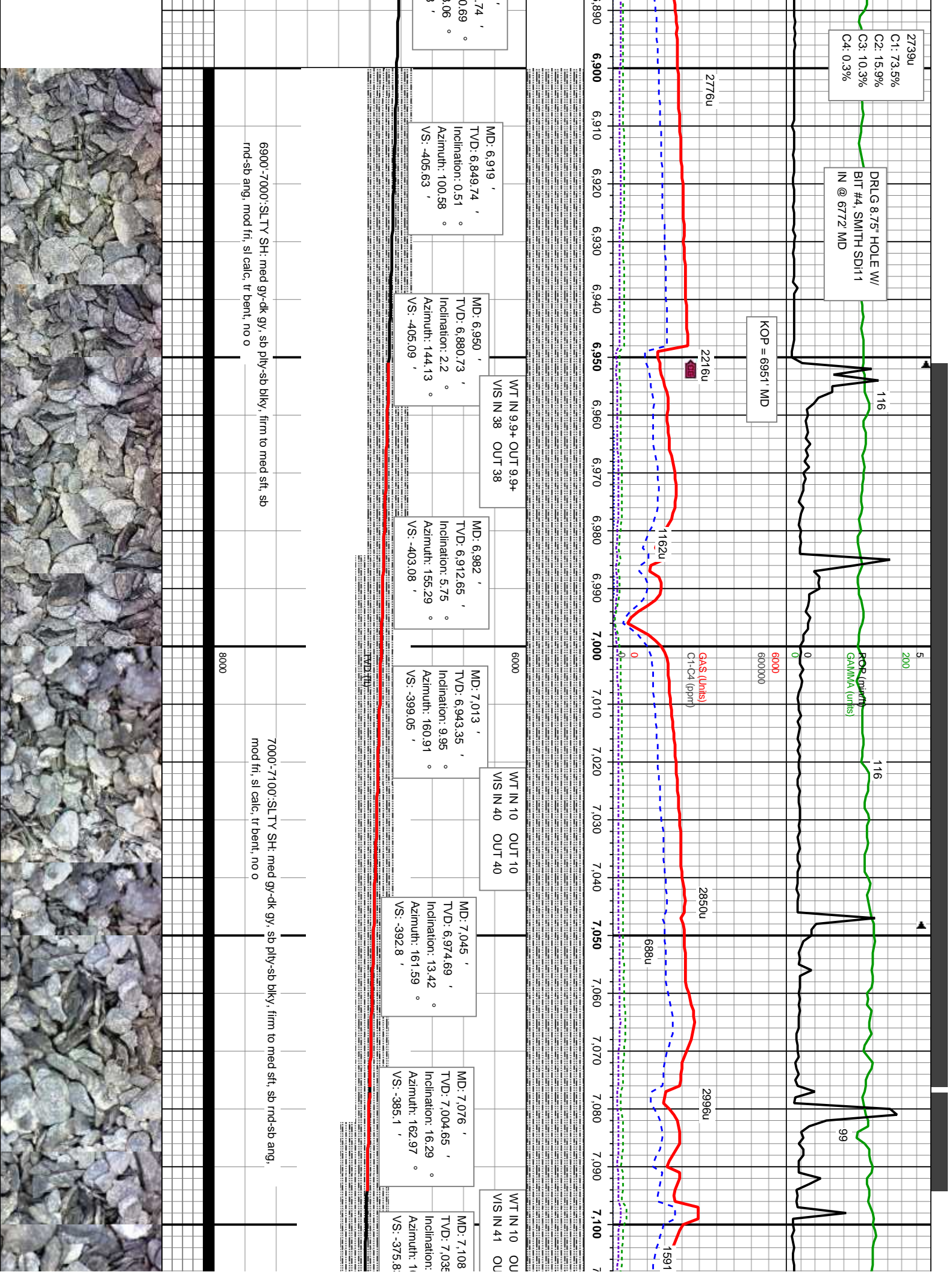


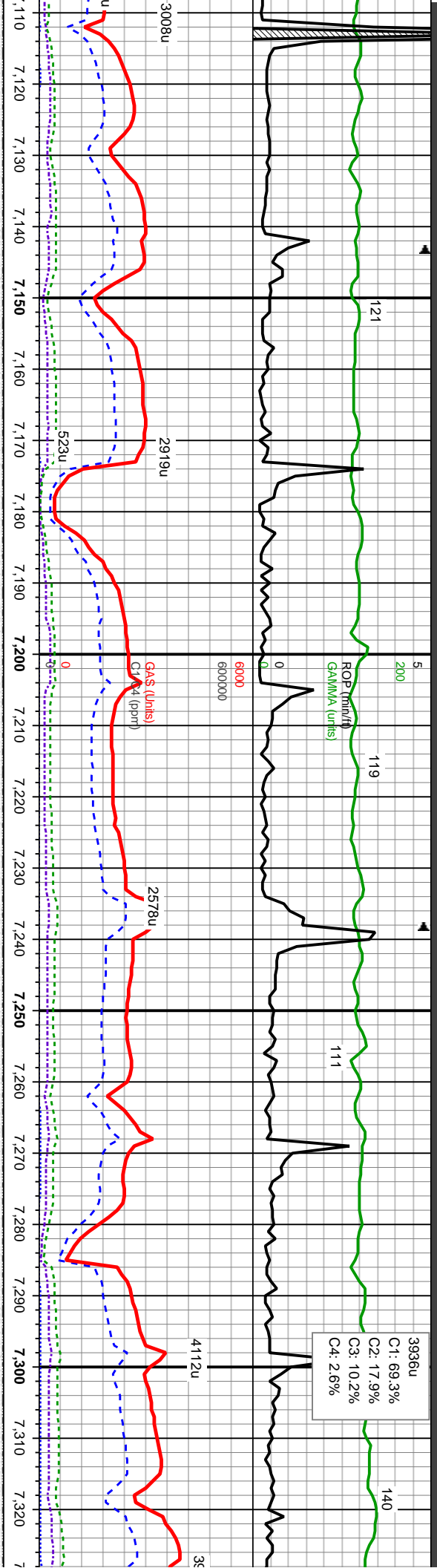
Images



WT IN 9.9+ OUT 9.9+
VIS IN 38 OUT 37

MD: 6.887
TVD: 6.817
Inclination: 93
Azimuth: 93
VS: -405.66

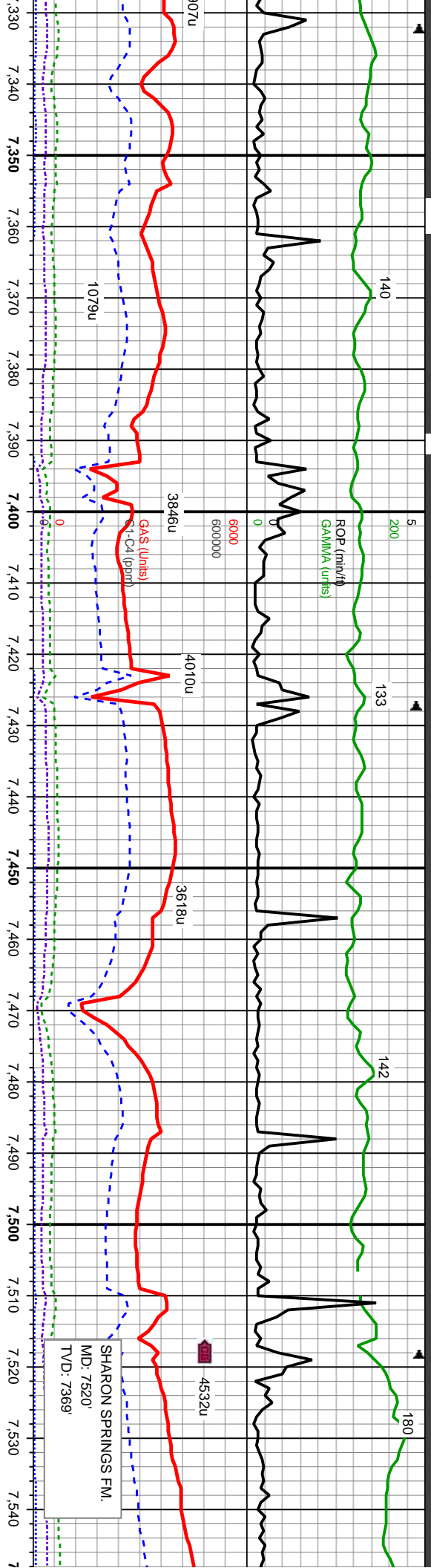




T 10 T 41	WT IN 10 VIS IN 42	OUT 10 OUT 43	MD: 7,139 ' TVD: 7,064.5 ' Inclination: 19.88 ° Azimuth: 169.44 ° VS: -365.86 '	WT IN 10 VIS IN 42	OUT 9.9+ OUT 41	MD: 7,203 ' TVD: 7,123.67 ' Inclination: 24.73 ° Azimuth: 171.94 ° VS: -341.67 '	MD: 7,234 ' TVD: 7,151.56 ' Inclination: 27.03 ° Azimuth: 174.86 ° VS: -328.16 '	MD: 7,266 ' TVD: 7,179.7 ' Inclination: 29.87 ° Azimuth: 177.55 ° VS: -312.92 '	MD: 7,297 ' TVD: 7,206.2 ' Inclination: 32.58 ° Azimuth: 180.99 ° VS: -296.88 '	MD: 7,328 ' TVD: 7,231 ' Inclination: Azimuth: 1 ' VS: -279.7 '
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7100'-7200':SLTY SH: med gy-dk gy, sb pty-sb blk, firm to med sft, sb rnd-sb ang, mod fri, sl calc, tr bent, no o	7200'-7300':SLTY SH: med gy-dk gy, sb pty-sb blk, firm to med sft, sb rnd-sb ang, mod fri, sl calc, tr bent, no o	7300'-7400':SLTY SH: med gy-dk gy, sb pty-sb blk, firm to med sft, sb rnd-sb ang, mod fri, sl calc, tr bent, no o
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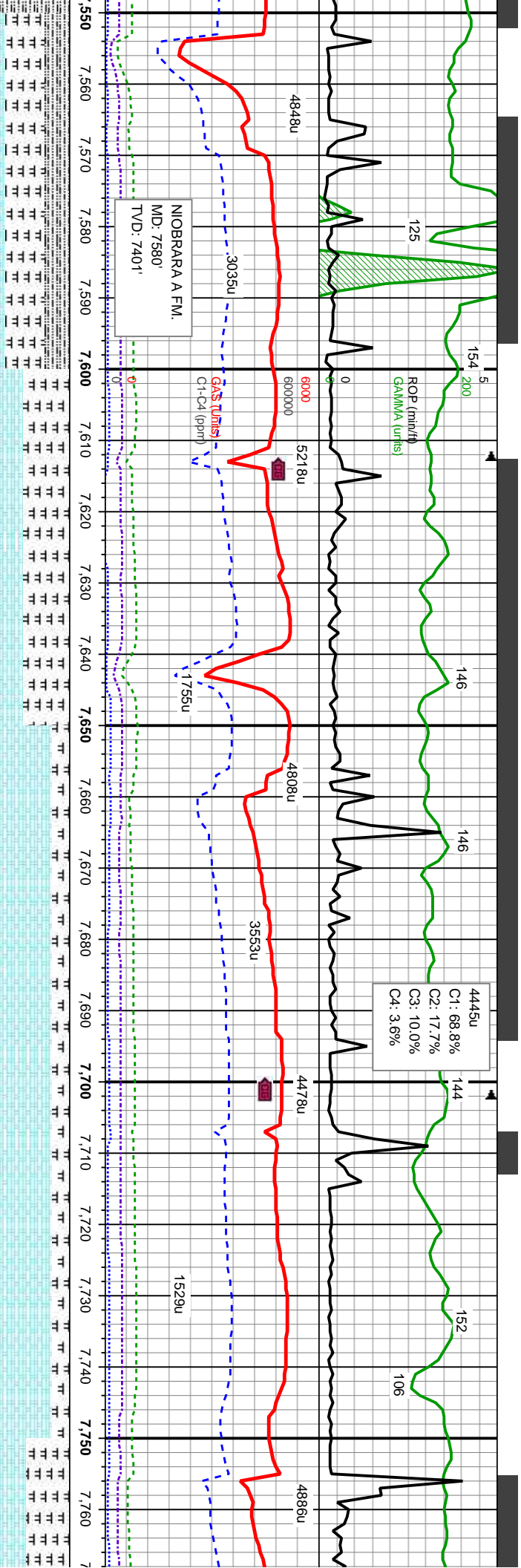


WT IN 10 OUT 9.9+
VIS IN 43 OUT 44

7400'-7500': SLTY SH: med gy-dk gy, sb pily-sb blk, firm to med sft, sb md-sb ang, mod fri, sl calc, tr bent, no o

7500'-7550': SLTY SH: med gy-dk gy, sb pily-sb blk, firm to med sft, sb md-sb ang, mod fri, sl calc, tr bent, no o





7550'-7600' MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-y-sb ply, sft - sl frm, fri, chky-sb wxy, v calc, MRLST - med-dk gy-gy brn, sb ply-bkly, sft-frm, mod arg-sily, sl calc, SLTY SH: med gy-dk gy, sb ply-sb blk-y, firm to med sft, sb rnd-sb ang, mod fri, sl calc, tr lt bl flr w/ v sl halo cut

7600'-7650' MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-y-sb ply, sft - sl frm, fri, chky-sb wxy, v calc, MRLST - med-dk gy-gy brn, sb ply-bkly, sft-frm, mod arg-sily, sl calc, tr lt bl flr w/ v sl halo cut

7650'-7700' MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-y-sb ply, sft-si frm, fri, chky-sb wxy, v calc, MRLST - med-dk gy-gy brn, sb blk-y, sft-frm, mod arg-sily, sl calc, tr lt bl flr w/ v sl halo cut

7700'-7750' MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-y-sb ply, sft-si frm, fri, chky-sb wxy, v calc, MRLST - med-dk gy-gy brn, sb ply-bkly, sft-frm, mod arg-sily, sl calc, tr lt bl flr w/ v sl halo cut

7750'-7800' MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-y-sb ply, sft-si frm, fri, chky-sb wxy, v calc, MRLST - med-dk gy-gy brn, sb ply-bkly, sft-frm, mod arg-sily, sl calc, tr lt bl flr w/ v sl halo cut

MD: 7,595' TVD: 7,408.5' Inclination: 61.09° Azimuth: 179.76° VS: -84.15'

MD: 7,643' TVD: 7,429.7' Inclination: 66.48° Azimuth: 179.28° VS: -41.16'

MD: 7,690' TVD: 7,446.57' Inclination: 71.42° Azimuth: 180.17° VS: 2.62'

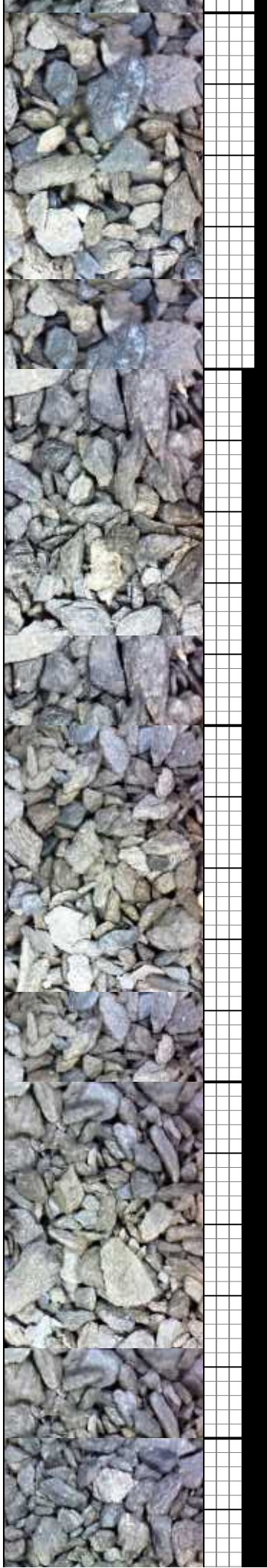
MD: 7,737' TVD: 7,461.11' Inclination: 72.54° Azimuth: 179.71° VS: 47.24'

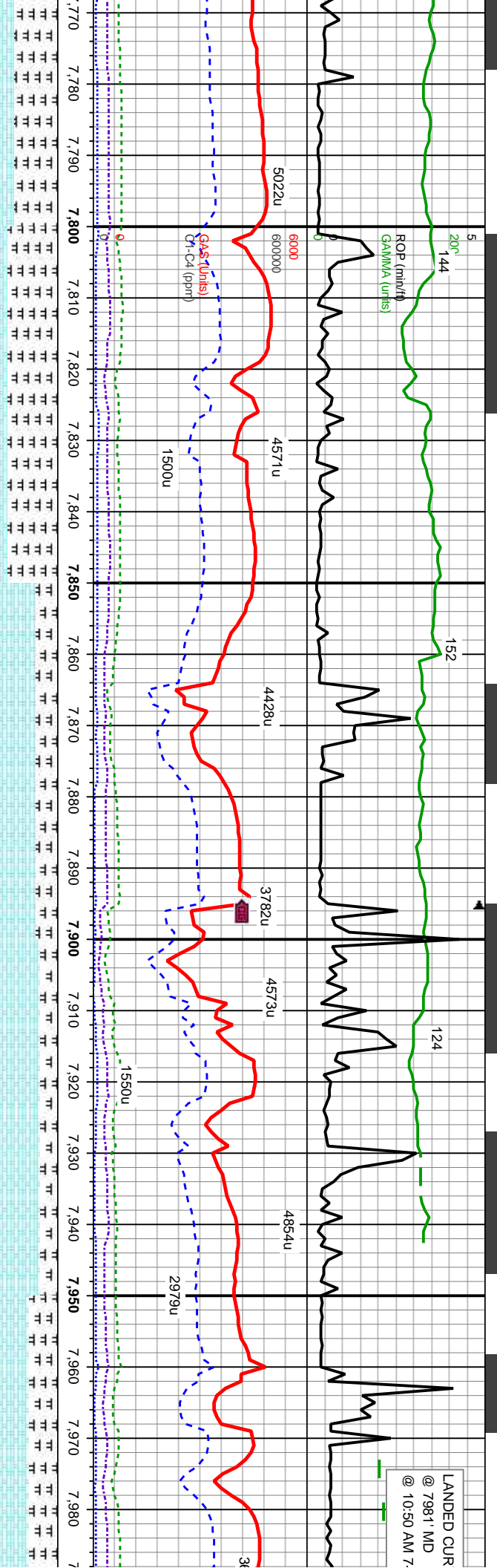
MD: 7,773' TVD: 7,476.11' Inclination: 73.54° Azimuth: 179.71° VS: 47.24'

WT IN 10+ OUT 9.9+ VIS IN 46 OUT 45

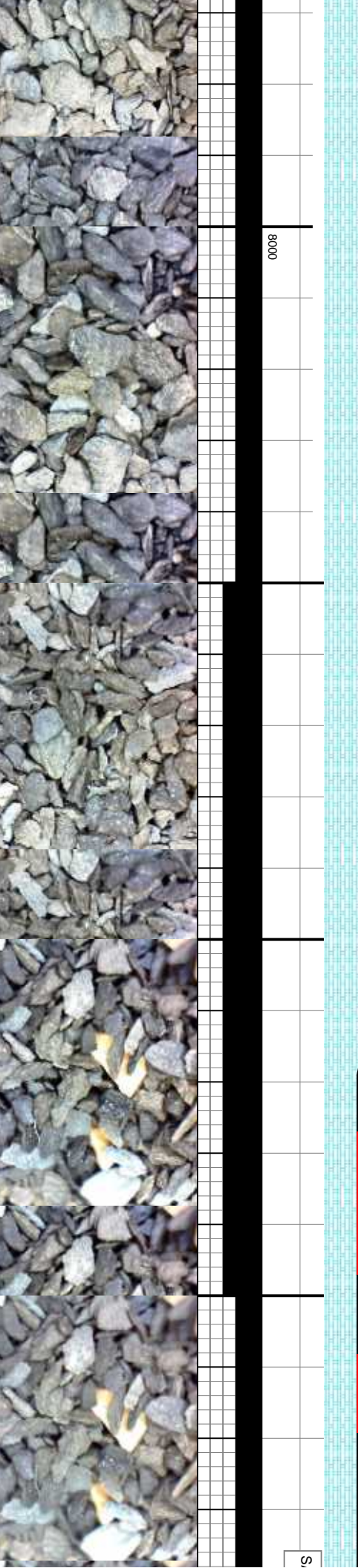
MD: 7,737' TVD: 7,461.11' Inclination: 72.54° Azimuth: 179.71° VS: 47.24'

MD: 7,773' TVD: 7,476.11' Inclination: 73.54° Azimuth: 179.71° VS: 47.24'





WT IN 10.1 OUT 10	7800-7850MD: CHK-lt-med gy, lt-med gy brn, mot, sti, sb blk-y-sb ply, sft-sl frm, fti, chky-sb wxy, v arg-sly, sl calc, tr lt bl flr w/ v sl halo	WT IN 10.1 OUT 10.0 VIS IN 43 OUT 42	7850-7900MD: CHK-lt-med gy, lt-med gy brn, mot, sti, sb blk-y-sb ply, sft-sl frm, fti, chky-sb wxy, v calc, MRLST - med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sly, sl calc, tr lt bl flr w/ v sl halo cut	7900-7950MD: CHK-lt-med gy, lt-med gy brn, mot, sti, sb blk-y-sb ply, sft-sl frm, fti, chky-sb wxy, v calc, MRLST - med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sly, sl calc, tr lt bl flr w/ v sl halo cut	7900-7950MD: CHK-lt-med gy, lt-med gy brn, mot, sti, sb blk-y-sb ply, sft-sl frm, fti, chky-sb wxy, v calc, MRLST - med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sly, sl calc, tr lt bl flr w/ v sl halo cut
MD: 7.800 ' TVD: 7.477.16 ' Inclination: 77.6 ° Azimuth: 179.45 ° VS: 108.07 '	MD: 7.831 ' TVD: 7.483.23 ' Inclination: 79.81 ° Azimuth: 179.29 ° VS: 101.38 '	MD: 7.863 ' TVD: 7.488.68 ' Inclination: 80.59 ° Azimuth: 180.08 ° VS: 132.91 '	MD: 7.894 ' TVD: 7.493.35 ' Inclination: 82.07 ° Azimuth: 180.16 ° VS: 163.55 '	MD: 7.926 ' TVD: 7.497.16 ' Inclination: 84.26 ° Azimuth: 180.45 ° VS: 195.32 '	MD: 7.968 ' TVD: 7.501.16 ' Inclination: 86.45 ° Azimuth: 180.73 ° VS: 227.00 '

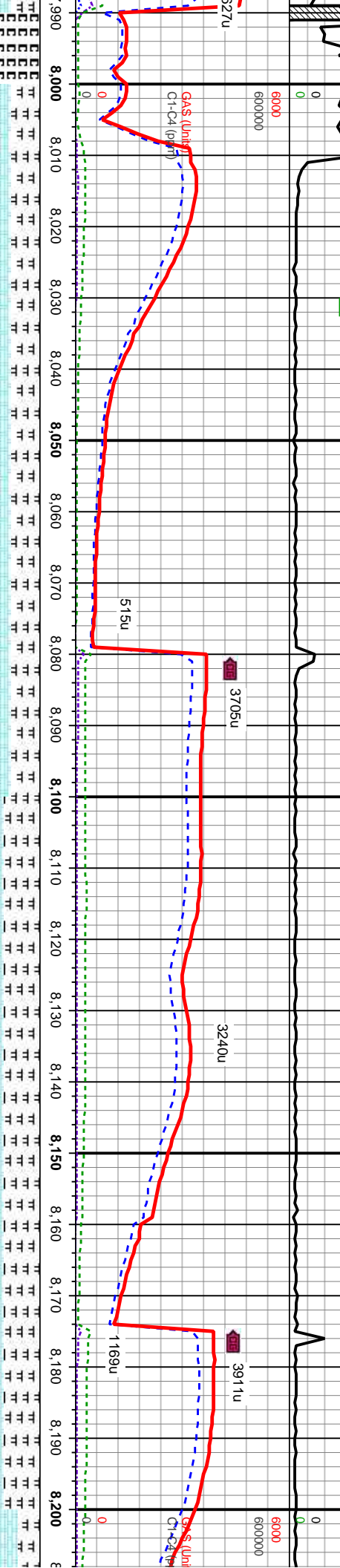


DRLG 6.125" HOLE
W/ BIT #5, SMITH
JG3453 IN @ 7981' MD

ROP (min/f)
GAMMA (units)

3542u
C1: 89.1%
C2: 8.6%
C3: 2.2%
C4: 0.1%

ROP (min/f)
GAMMA (units)



8000-8100 MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb blk-y-sb ply, sft-si frm, fri, chy-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb ply-biky, sft-frm, mod arg-sily, sl calc, tr cal, tr inoc

8100-8200 MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb blk-y-sb ply, sft-si frm, fri, chy-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb ply-biky, sft-frm, mod arg-sily, sl calc, tr cal, tr inoc

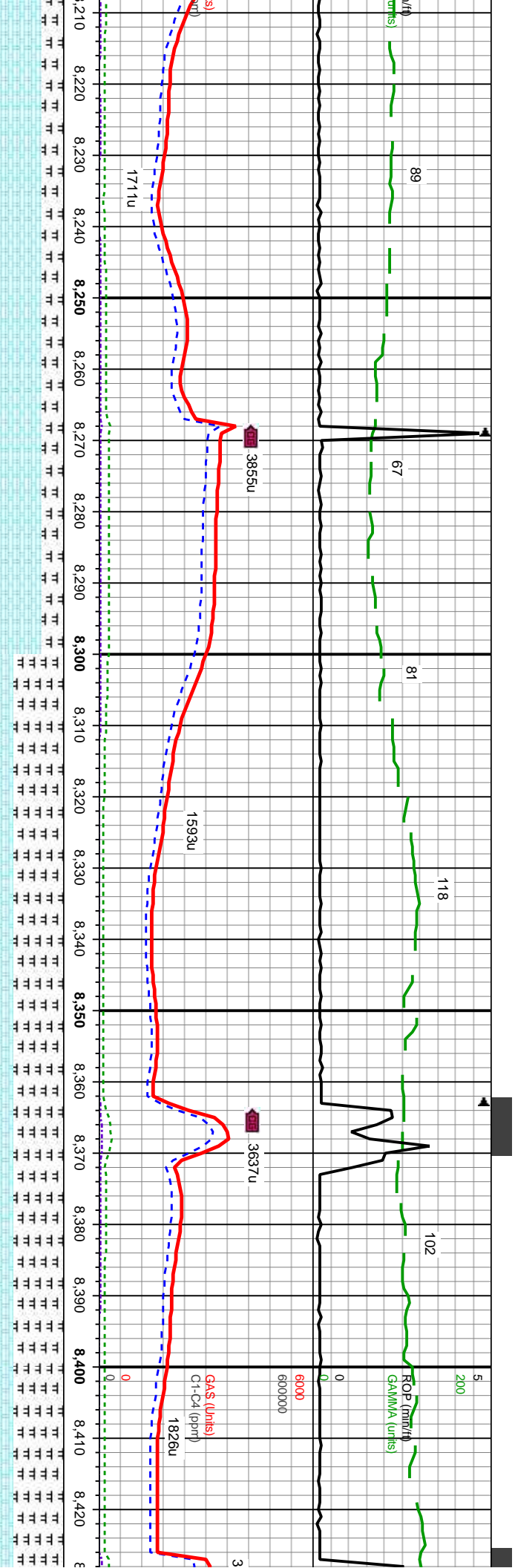
MD: 7.990 '
D: 7.501 '
Inclination: 88.75 °
Azimuth: 180 °
VS: 295 '

MD: 8.121 '
TVD: 7.508.6 '
Inclination: 89.01 °
Azimuth: 180.6 °
VS: 389.93 '

WT IN 10.1 OUT 10+
VIS IN 77 OUT 78

AMPLE PICTURES AFTER 7981' MD ARE OF DIMINISHED QUALITY DUE TO OIL BASED MUD





8210 8220 8230 8240 8250 8260 8270 8280 8290 8300 8310 8320 8330 8340 8350 8360 8370 8380 8390 8400 8410 8420

8300'-8300MD: CHK-dk-med gy, dk-med gy brn, mol, stri, sb blk-y-sb ply, sft-si frm, fri, blk-y-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr cal, tr inoc

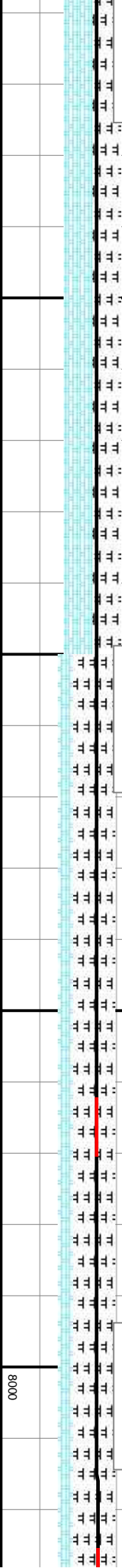
8300'-8400MD: CHK-dk-med gy, dk-med gy brn, mol, stri, sb blk-y-sb ply, sft-si frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr cal

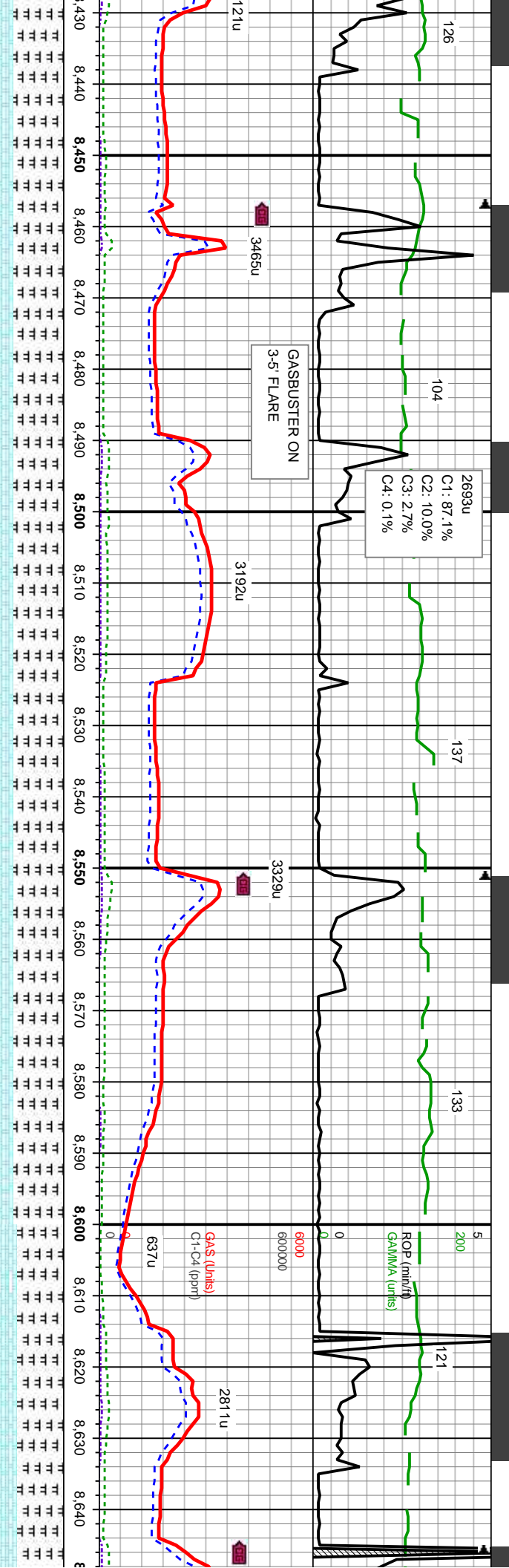
8300'-8400MD: CHK-dk-med gy, dk-med gy brn, mol, stri, sb blk-y-sb ply, sft-si frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr cal

MD: 8,215 '
TVD: 7,509.16 '
Inclination: 90.31 °
Azimuth: 180.82 °
VS: 483.92 '

MD: 8,309 '
TVD: 7,507.58 '
Inclination: 91.61 °
Azimuth: 180.59 °
VS: 577.9 '

MD: 8,404 '
TVD: 7,504.1 '
Inclination: 92.59 °
Azimuth: 180.58 °
VS: 672.83 '





N 10.2 OUT 10.2
N 76 OUT 72

WT IN 10.2 OUT 10.2
VIS IN 72 OUT 71

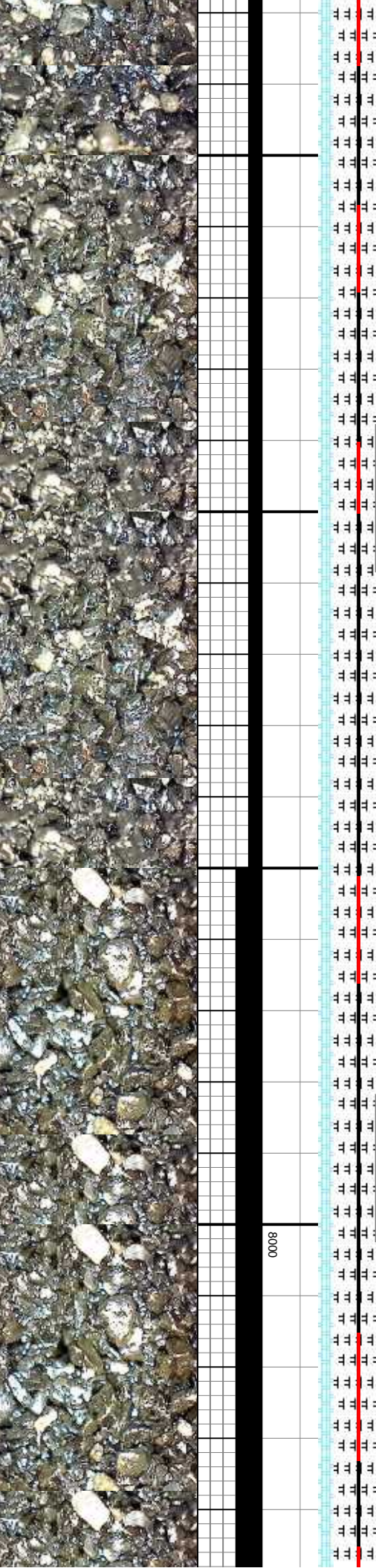
K-dk-med gy, dk-med gy brn, mot, str, sb
n, fri, chky-sb wxy, v calc, MRLST- med-dk
ky, sft-firm, mod arg-sily, sl calc, tr cal.

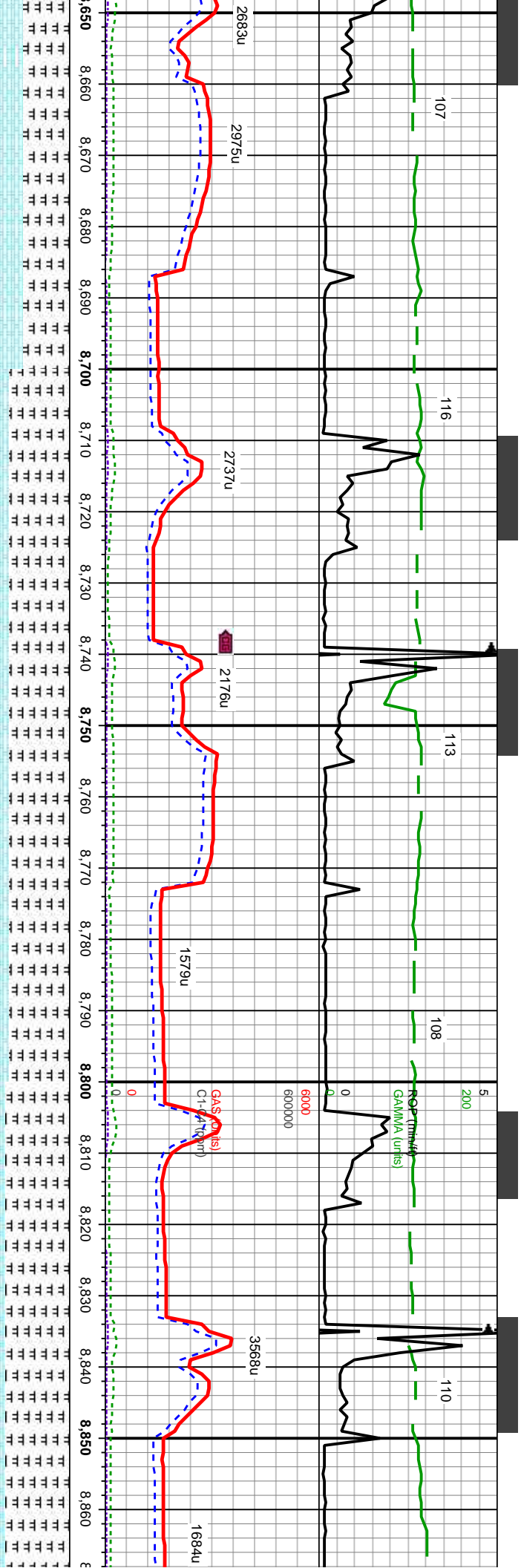
8500-8600MD: CHK-dk-med gy, dk-med gy brn, mot, str, sb bly-sb ply,
sft-sl frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb ply-bly,
sft-firm, mod arg-sily, sl calc, tr cal, tr inoc

8600-8700MD: CHK-dk-med gy, dk-med
bly-sb ply, sft-sl frm, fri, chky-sb wxy, v c
gy-gy brn, sb ply-bly, sft-firm, mod arg-sl
Inoc

MD: 8,498 '
TVD: 7,500.76 '
Inclination: 91.48 °
Azimuth: 179.42 °
VS: 766.77 '

MD: 8,592 '
TVD: 7,498.13 '
Inclination: 91.73 °
Azimuth: 179.41 °
VS: 860.73 '





WT IN 10.2 OUT 10.2
VIS IN 59 OUT 60

WT IN 10.2 OUT 10.2
VIS IN 59 OUT 60

gy brn, mot, sft, sb
alc, MRLST - med-dk
y, sl calc, tr cal, tr

8700'-8800'MD: CHK-dk-med gy, dk-med gy brn, mot, sft, sb
biky-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST - med-dk
gy-gy brn, sb ply-biky, sft-frm, mod arg-sly, sl calc, tr cal.

8800'-8900'MD: CHK-dk-med gy, dk-med gy brn, mot, sft, sb
ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST - med-dk gy-br
ply-biky, sft-frm, mod arg-sly, sl calc, tr cal.

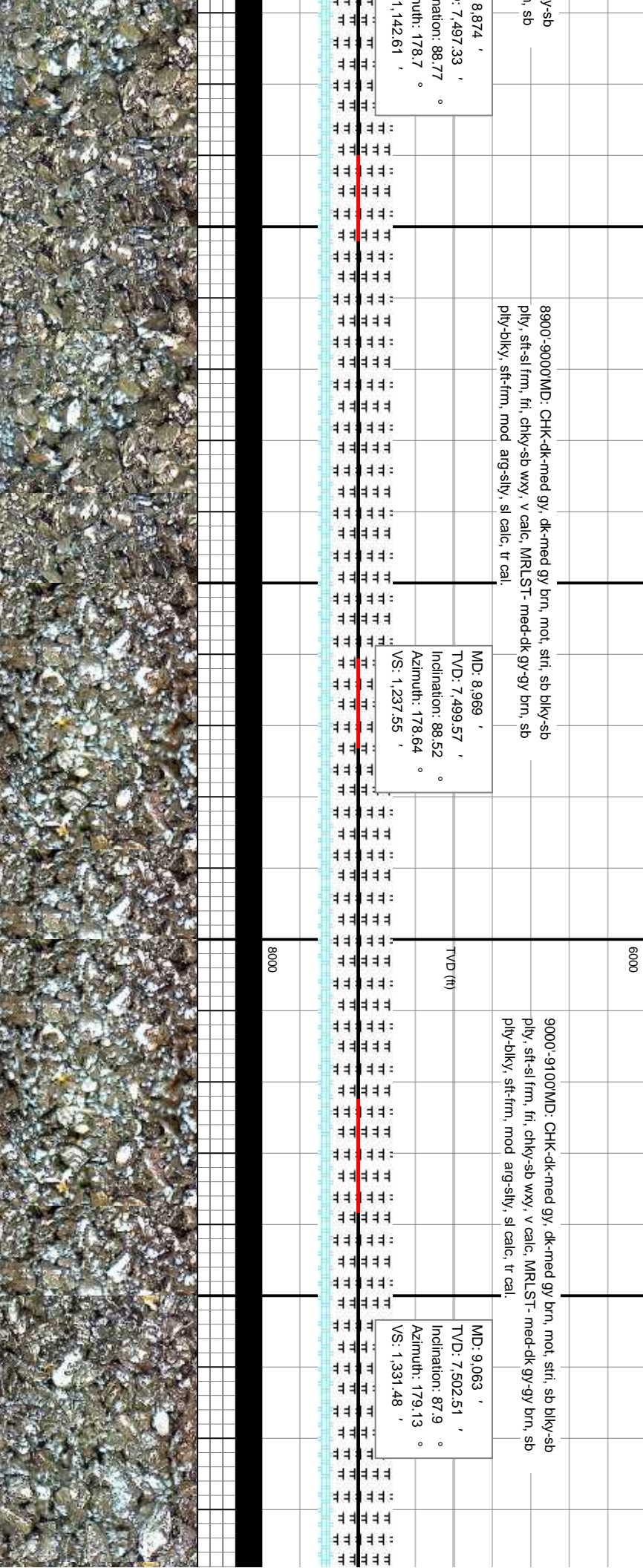
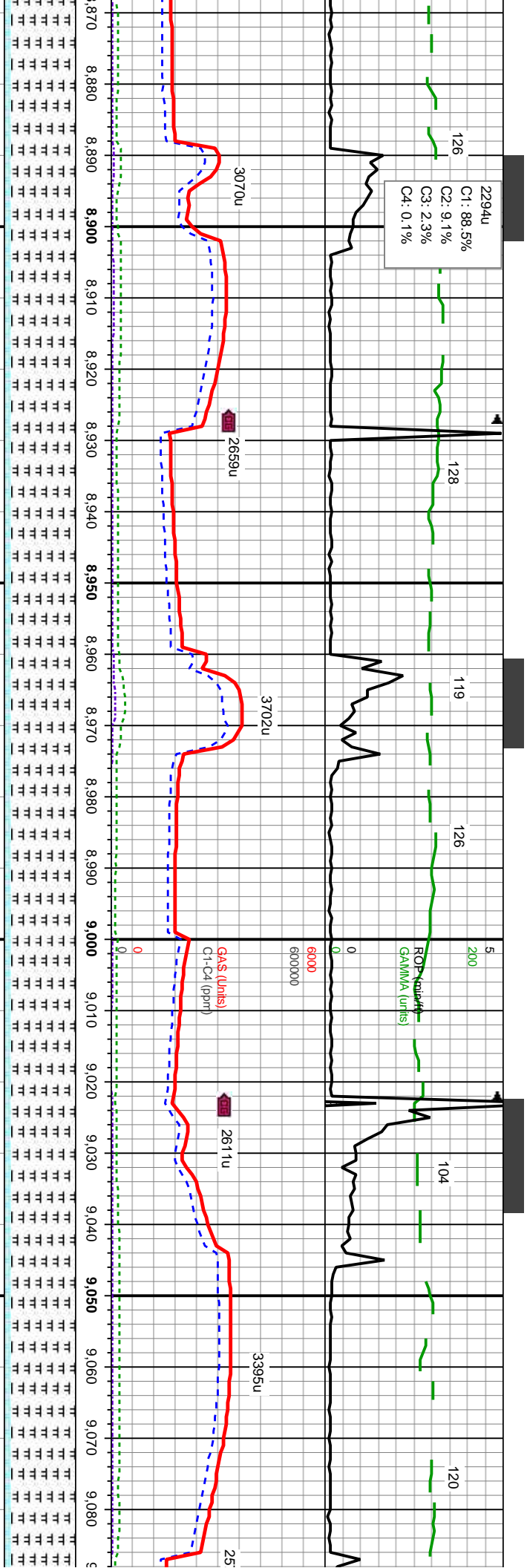
MD: 8,686 '
TVD: 7,496.36 '
Inclination: 90.43 °
Azimuth: 178.23 °
VS: 954.68 '

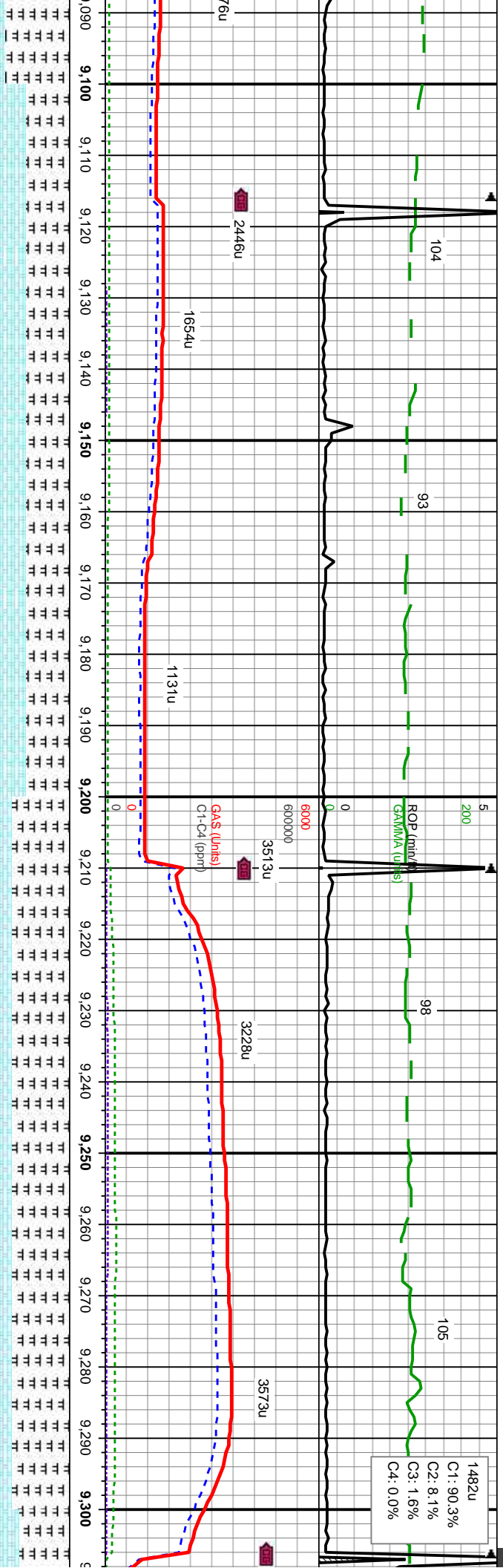
MD: 8,780 '
TVD: 7,496.16 '
Inclination: 89.81 °
Azimuth: 179.08 °
VS: 1,048.64 '

TVD (ft)

8000







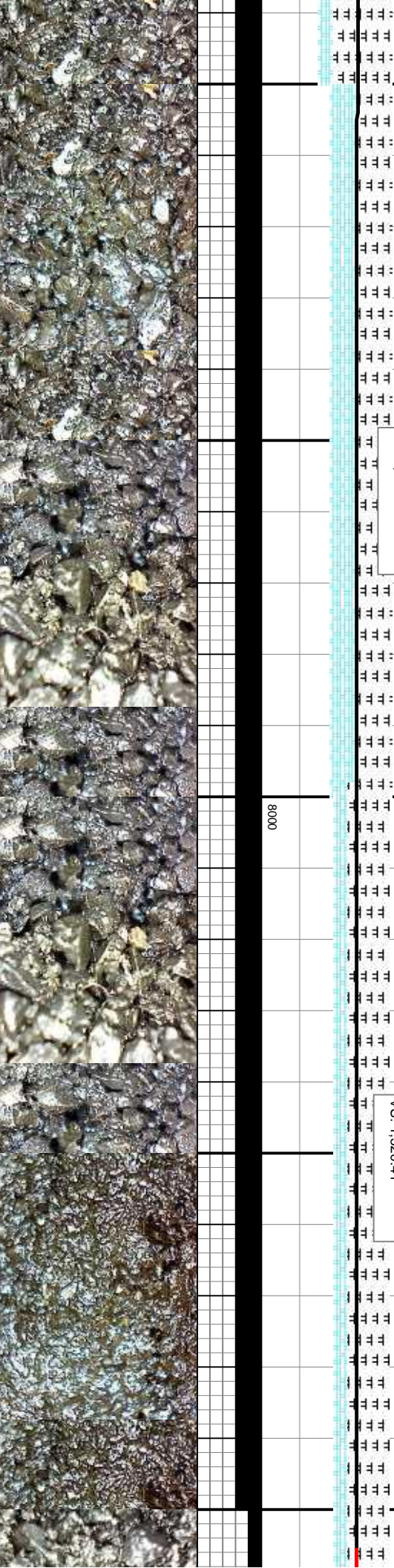
9100-9200MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb blk-y-sb
ply, sft-si frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb
ply-blky, sft-frm, mod arg-sily, sl calc, tr cal.

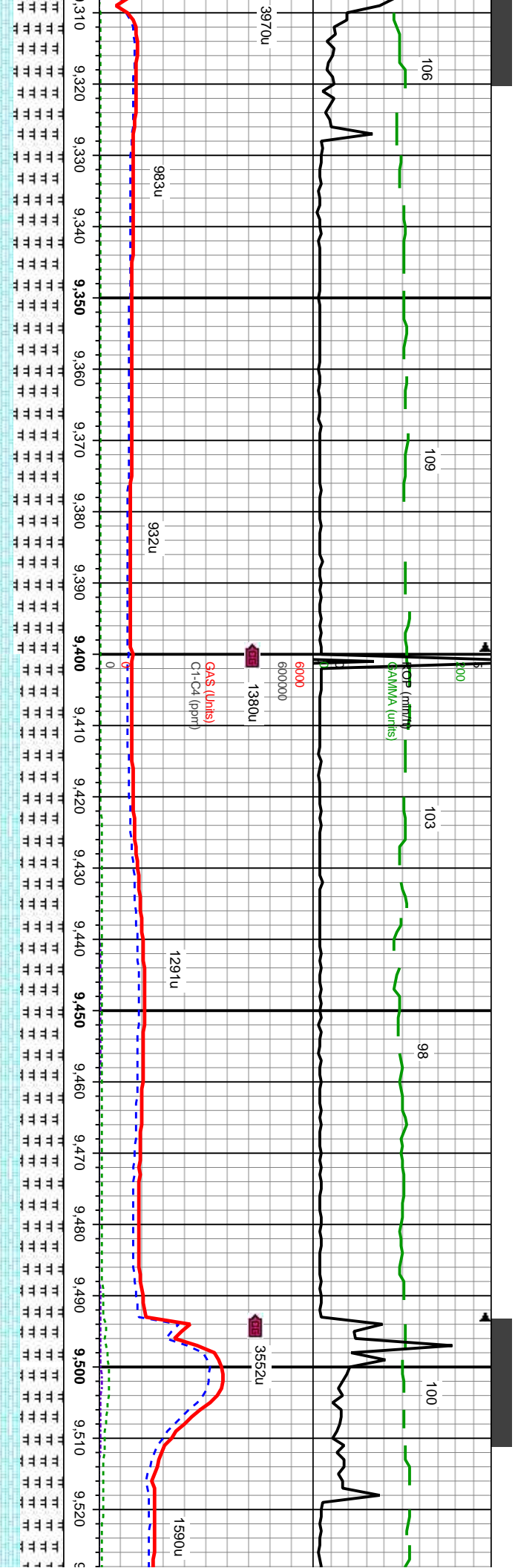
MD: 9,157 '
TVD: 7,505.24 '
Inclination: 88.77 °
Azimuth: 179.49 °
VS: 1,425.43 '

TVD (ft)

9200-9300MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb blk-y-sb
ply, sft-si frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb
ply-blky, sft-frm, mod arg-sily, sl calc, tr cal.

MD: 9,252 '
TVD: 7,506.57 '
Inclination: 89.63 °
Azimuth: 179.28 °
VS: 1,520.41 '





WT IN 10.2 OUT 10.2
VIS IN 74 OUT 76

9300'-9400'MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb blk-y-sb pty,
sft-sl frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb pty-blky,
sft-frm, mod arg-sly, sl calc, tr cal.

MD: 9,346 '
TVD: 7,507.58 '
Inclination: 89.14 °
Azimuth: 179.4 °
VS: 1,614.4 '

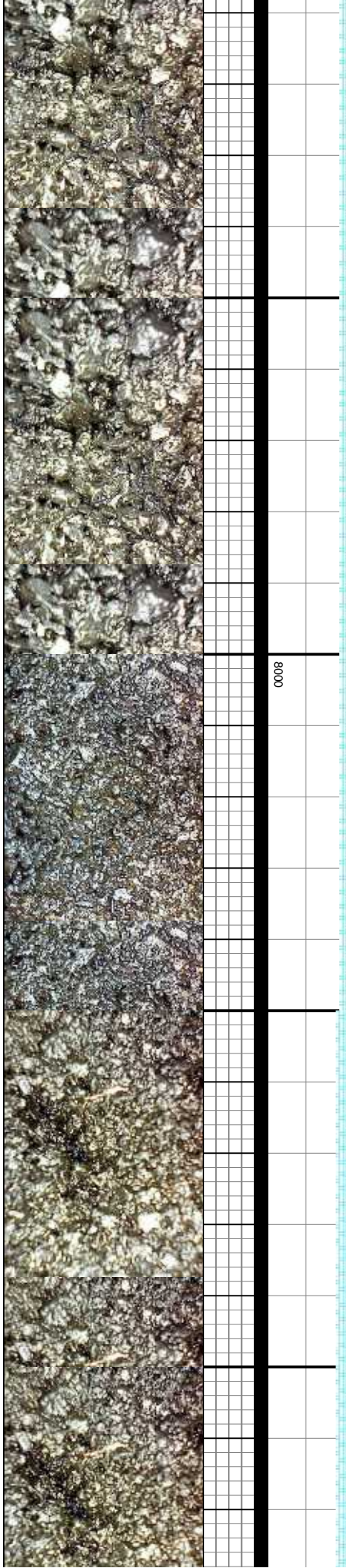
TVD (ft)

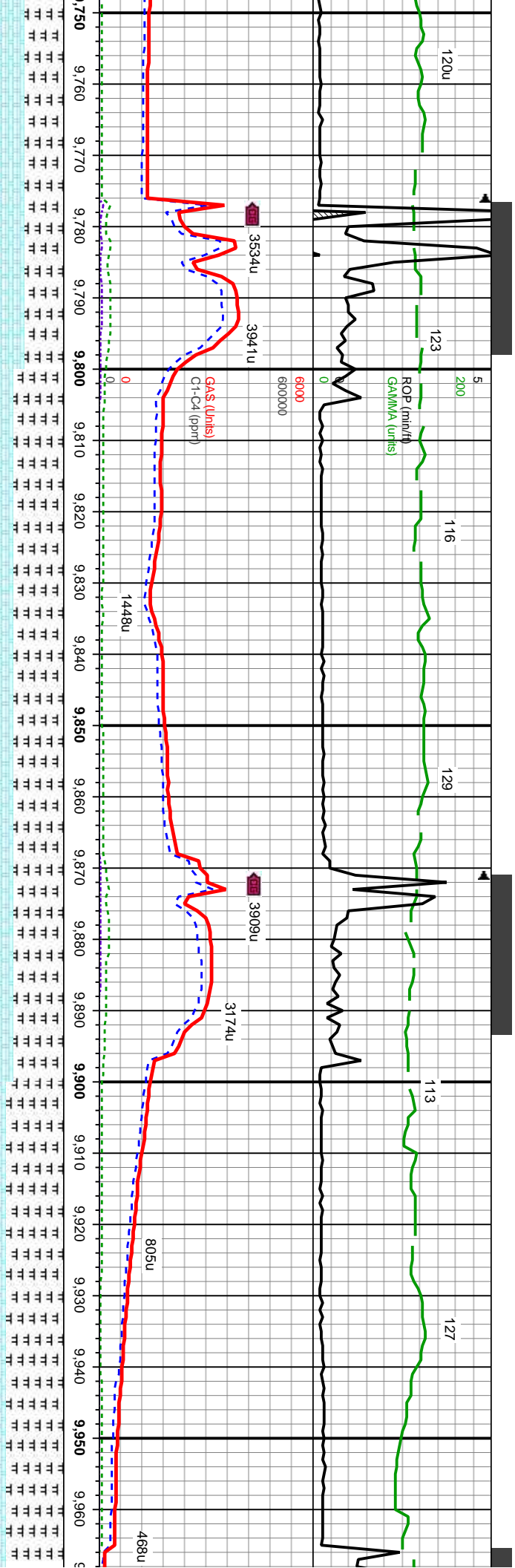
9400'-9500'MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb blk-y-sb pty,
sft-sl frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb pty-blky,
sft-frm, mod arg-sly, sl calc, tr cal.

MD: 9,440 '
TVD: 7,508.08 '
Inclination: 90.25 °
Azimuth: 179.73 °
VS: 1,708.39 '

9500'-9600'MD: CH
sft-sl frm, fri, chky-s
sft-frm, mod arg-sly

MD: 9,440 '
TVD: 7,508.08 '
Incl: 90.25 °
Azim: 179.73 °
VS: 1,708.39 '





WT IN 10.4 OUT 10.3+
VIS IN 77 OUT 78

WT IN 10.4 OUT 10.3+
VIS IN 75 OUT 76

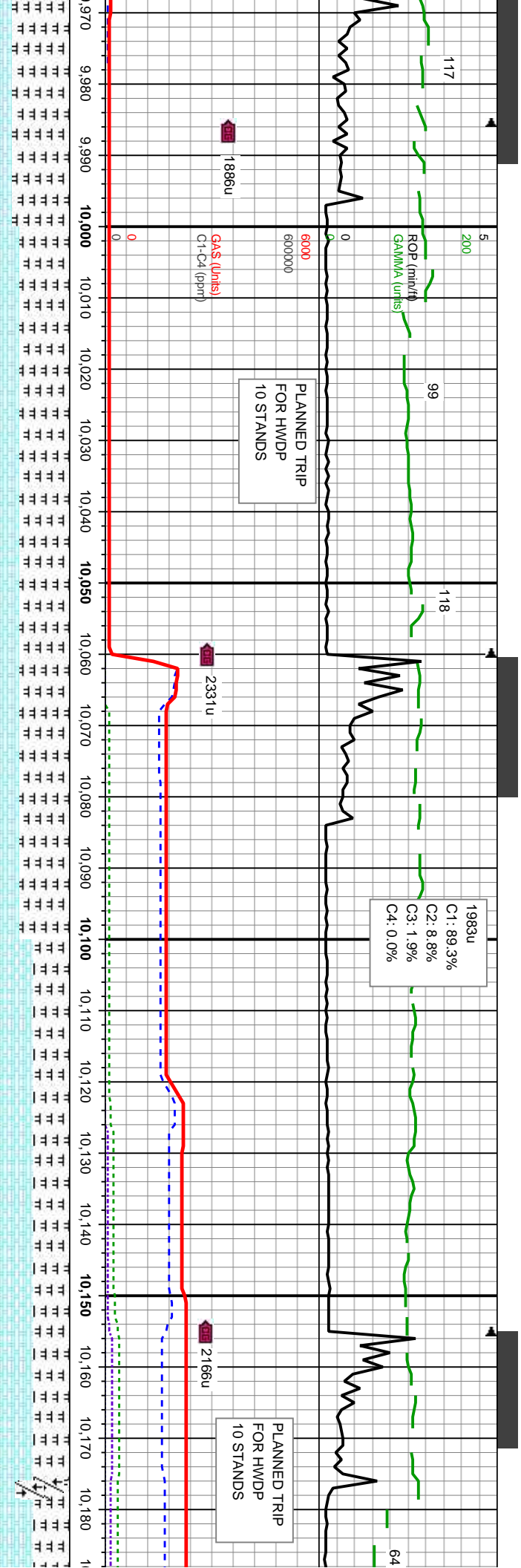
MD: 9,818 '
TVD: 7,508.07 '
Inclination: 89.88 °
Azimuth: 180.14 °
VS: 2,086.38 '
TVD (ft)

MD: 9,912 '
TVD: 7,508.47 '
Inclination: 89.63 °
Azimuth: 179.31 °
VS: 2,180.38 '
TVD (ft)

9800-9900MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb blk-
ply, sft-sf frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb
ply-blky, sft-frm, mod arg-sily, sl calc, tr cal.

9900-1000MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb blk
frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb ply-bl
mod arg-sily, sl calc, tr cal.

8000



6000

WT IN 10.2 OUT 10.2

VIS IN 64 OUT 70

10000'-10100MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb biky-sb
ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb
ply-biky, sft-frm, mod arg-sily, sl calc, tr cal.

MD: 10,007 '
TVD: 7,509.75 '
Inclination: 88.83 °
Azimuth: 179.42 °
VS: 2,275.36 '

WT IN 10.2 OUT 10.2

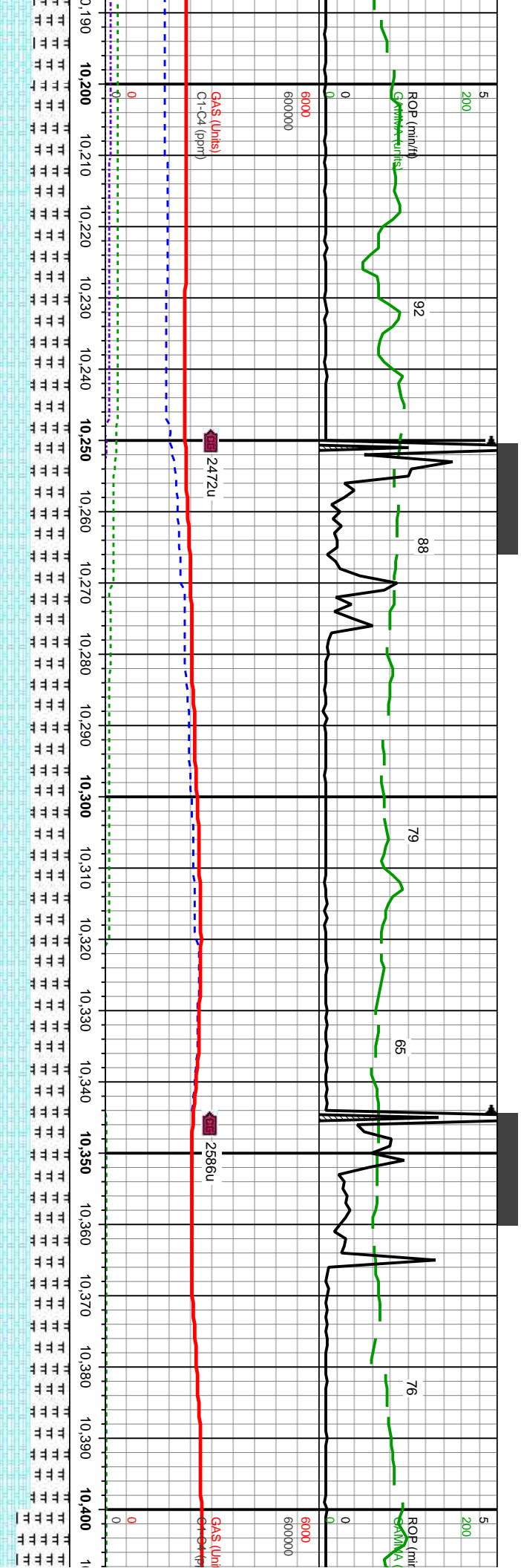
VIS IN 68 OUT 65

10100'-10200MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb biky-sb
ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb
ply-biky, sft-frm, mod arg-sily, sl calc, tr cal.

MD: 10,102 '
TVD: 7,512.09 '
Inclination: 88.34 °
Azimuth: 179.13 °
VS: 2,370.32 '

8000





6000
WT IN 10.2 OUT 10.2
VIS IN 67 OUT 66

10200'-10300MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb
biky-sb ply, sft-sf frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy
brn, sb ply-biky, sft-frm, mod arg-sly, sl calc, tr cal.

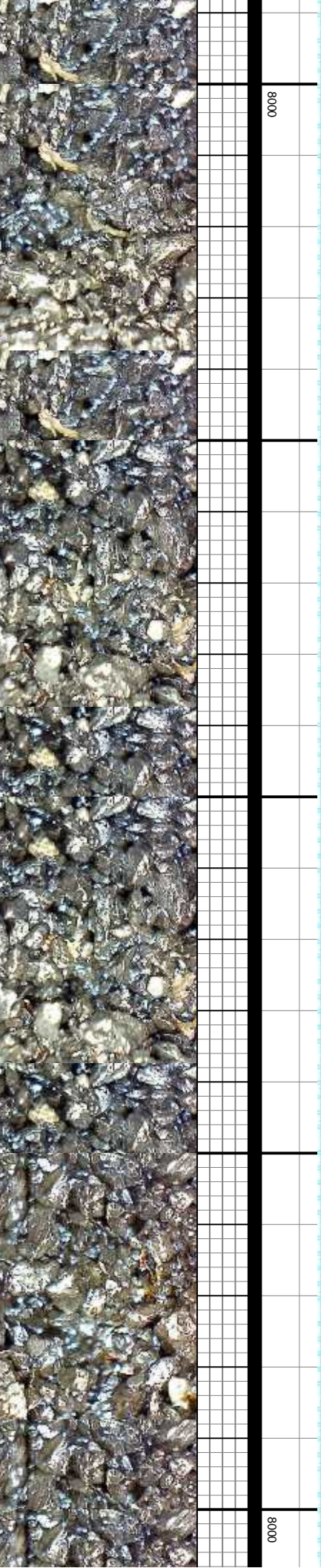
MD: 10,197 '
TVD: 7,514.65 '
Inclination: 88.58 °
Azimuth: 179.74 °
VS: 2,465.28 '

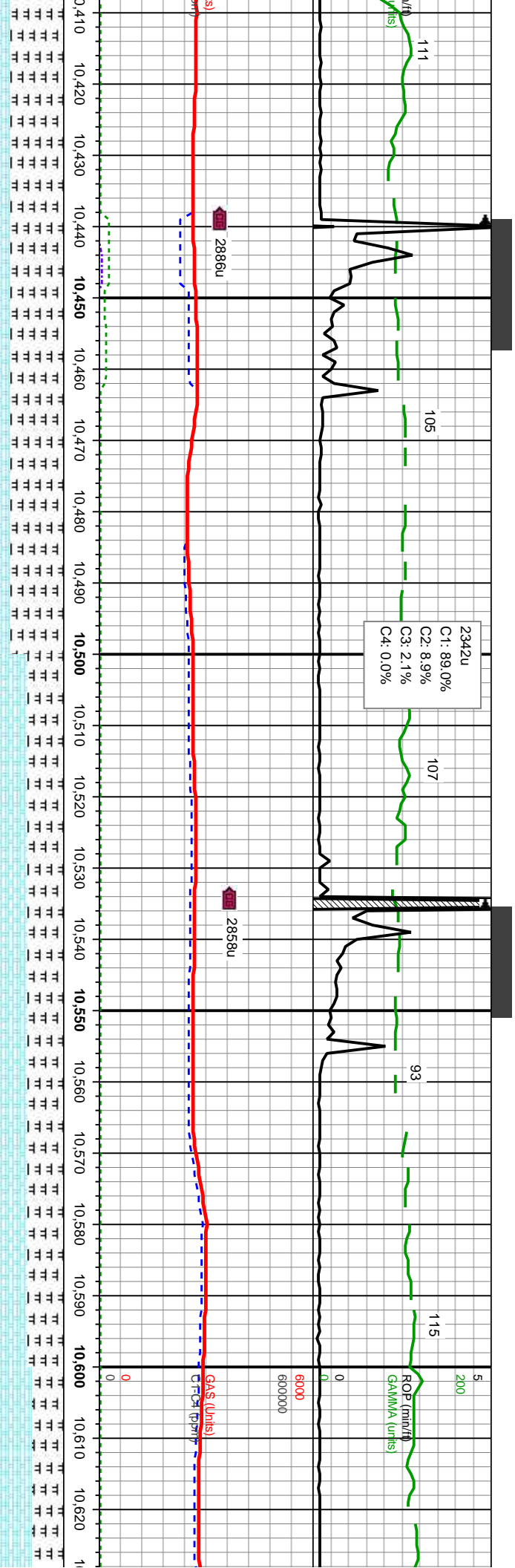
6000
WT IN 10.2 OUT 10.2
VIS IN 66 OUT 65

10300'-10400MD: CHK-dk-med gy, dk-med gy brn, mot, stri, sb biky-sb ply,
sft-sf frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb ply-biky,
sft-frm, mod arg-sly, sl calc, tr cal.

MD: 10,291 '
TVD: 7,516.52 '
Inclination: 89.14 °
Azimuth: 179.68 °
VS: 2,559.25 '

MD: 10,386 '
TVD: 7,517.84 '
Inclination: 89.26 °
Azimuth: 179.9 °
VS: 2,654.24 '





2342u
C1: 89.0%
C2: 8.9%
C3: 2.1%
C4: 0.0%

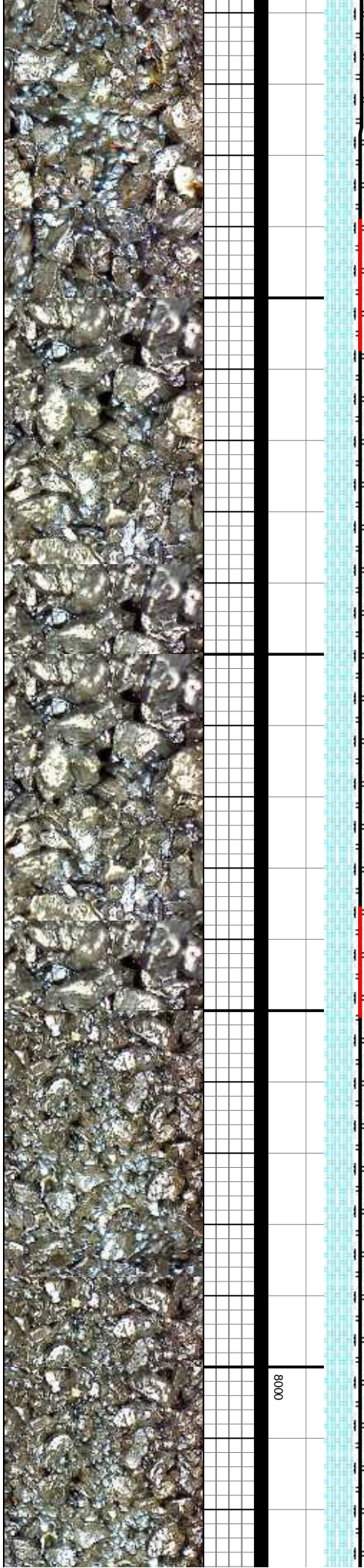
MD: 10,482 '
TVD: 7,519.44 '
Inclination: 88.83 °
Azimuth: 180.64 °
VS: 2,750.23 '

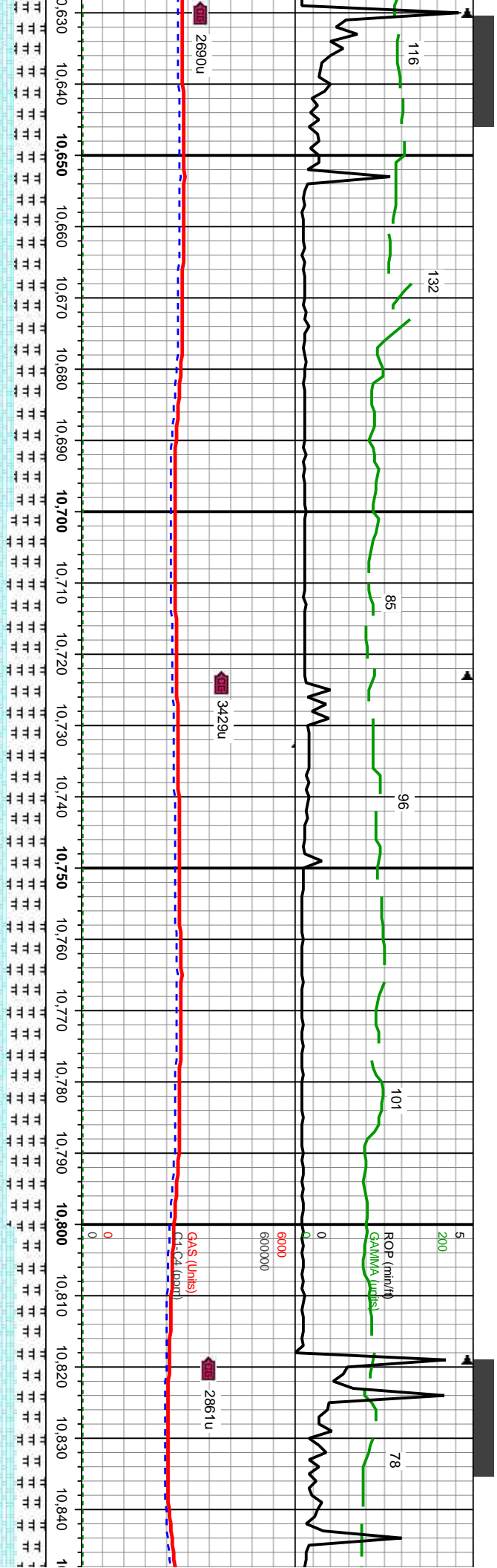
MD: 10,577 '
TVD: 7,521.23 '
Inclination: 89.01 °
Azimuth: 181.03 °
VS: 2,845.2 '

10400'-10500MD: CHK-dk-med gy, dk-med gy brn, mot, str, sb blk-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr cal.

10500'-10600MD: CHK-dk-med gy, dk-med gy brn, mot, str, sb blk-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr cal.

10600'-10700MD: sb blk-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr cal.





VT IN 10.2 OUT 10.2
IS IN 65 OUT 66

CHK-dk-med gy, dk-med gy brn, mot, str,
sl frm, fri, chky-sb wxy, v calc, MRLST-
sb ply-blky, sft-frm, mod arg-sily, sl calc, tr

MD: 10,671 '
TVD: 7,523.26 '
Inclination: 88.52 °
Azimuth: 181.26 °
VS: 2,939.17 '

10700'-10800 MD: CHK-dk-med gy, dk-med gy brn, mot, str, sb blky-sb ply,
sft-sl frm, fri, chky-sb wxy, v calc, MRLST- med-dk gy-gy brn, sb ply-blky, sft-frm,
mod arg-sily, sl calc, tr cal.

MD: 10,766 '
TVD: 7,525.15 '
Inclination: 89.2 °
Azimuth: 181.23 °
VS: 3,034.13 '

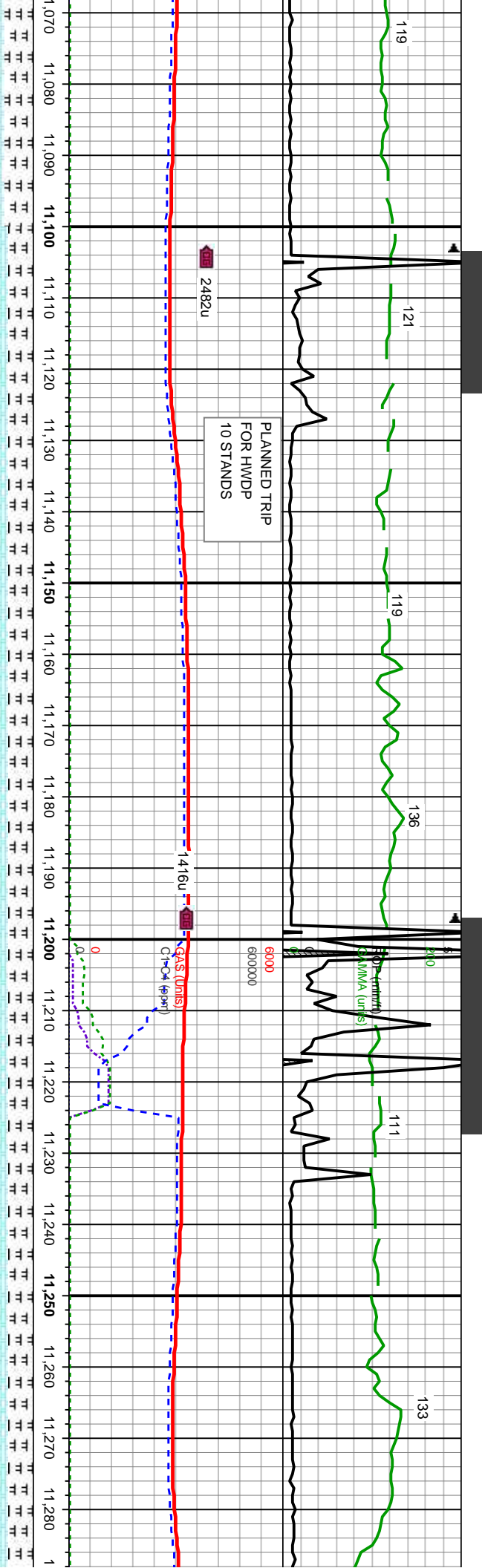
WT IN 10.2 OUT 10.2
VIS IN 65 OUT 66

10800'-10900 MD: CHK-dk-med gy, dk-
blky-sb ply, sft-sl frm, fri, chky-sb wxy, v
brn, sb ply-blky, sft-frm, mod arg-sily, s

TVD (ft)

8000



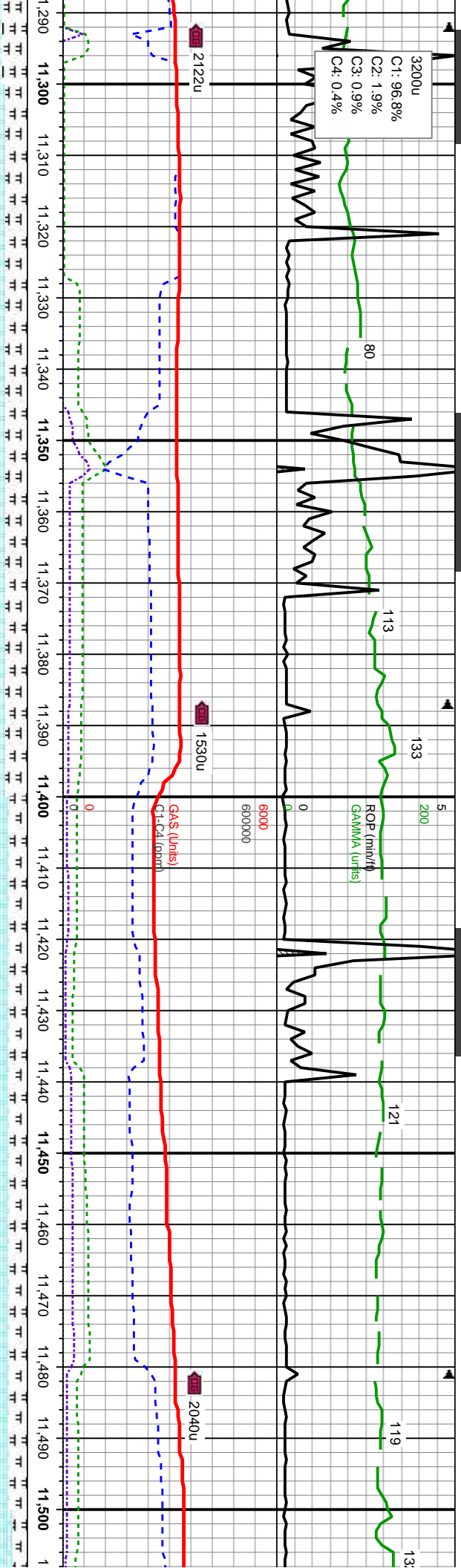


11100-11200MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb biky-sb ply, sft-sl frm, fri, chky-sb wxy v calc,MRLST-med-dk-gy-gy brn, sb ply-biky, sft-frm, mod arg-sily, sl calc,tr bent,tr lt bl flr w/ v sl halo cut		MD: 11,144 ' TVD: 7,529.58 ' Inclination: 90.25 ° Azimuth: 181.62 °
gy-sb	TT	TT
sb	TT	TT
halo cut	TT	TT
11200-11300MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb biky-sb ply, sft-sl frm, fri, chky-sb wxy v calc,MRLST-med-dk-gy-gy brn, sb ply-biky, sft-frm, mod arg-sily, sl calc,tr bent,tr lt bl flr w/ v sl halo cut		MD: 11,239 ' TVD: 7,529.17 ' Inclination: 90.25 ° Azimuth: 180.91 °
gy-sb	TT	TT
sb	TT	TT
halo cut	TT	TT

8000	WT IN 10.2 OUT 10.2 VIS IN 65 OUT 67	WT IN 10.2+ OUT VIS IN 61 OU
------	--------------------------------------	------------------------------



3200u
C1: 96.8%
C2: 1.9%
C3: 0.9%
C4: 0.4%



UT 10.2+
T 64

WT IN 10.2+ OUT 10.3
VIS IN 60 OUT 58

WT IN 10.2 OUT 10.2
VIS IN 66 OUT 60

11300'-11400MD: CHK-lt-med gy, lt-med gy brn, mot, strf, sb blk-y-sb
ply, sft-sl frm, fri, chky-sb wxy v calc,MRLST-med-dk gy-gy brn, sb
ply-blky, sft-frm, mod arg-sily, sl calc,lt bent,lt lt bl flr w/ v sl halo cut

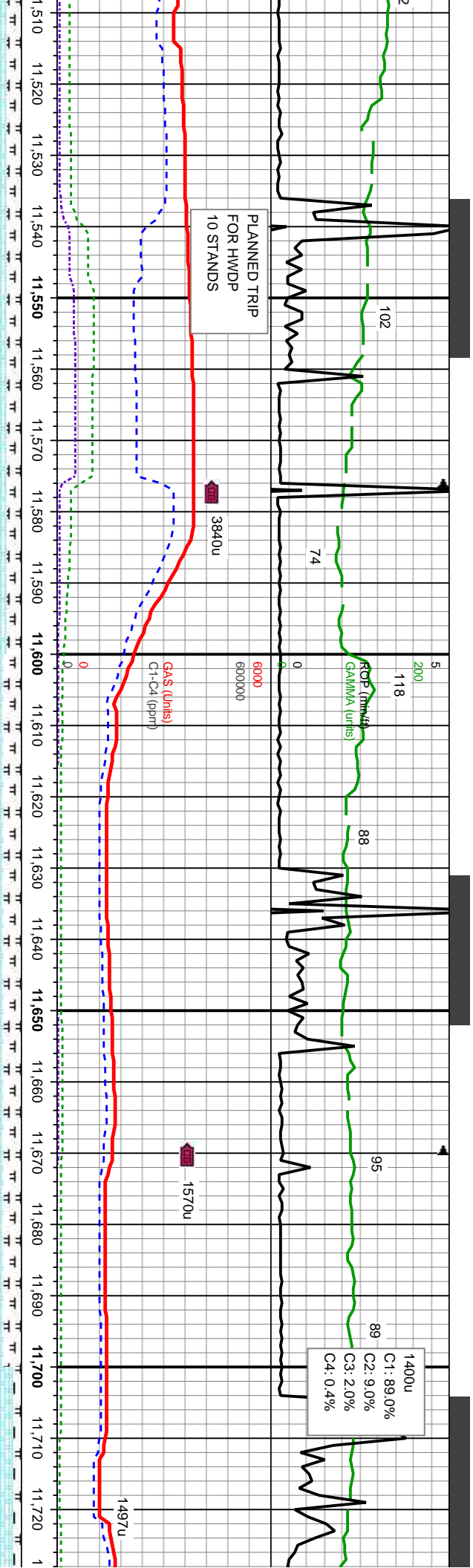
11400'-11500MD: CHK-lt-med gy, lt-med gy brn, mot, strf, sb blk-y-sb
ply, sft-sl frm, fri, chky-sb wxy v calc,MRLST-med-dk gy-gy brn, sb
ply-blky, sft-frm, mod arg-sily, sl calc,lt bent,lt lt bl flr w/ v sl halo cut

MD: 11,334 '
TVD: 7,529.32 '
Inclination: 89.57 °
Azimuth: 180.07 °
VS: 3,601.98 '

MD: 11,428 '
TVD: 7,530.93 '
Inclination: 88.46 °
Azimuth: 179.44 °
VS: 3,695.96 '

8000





WT IN 10.2 OUT 10.2
VIS IN 57 OUT 56

11500-11600MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb bly-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb ply-bly, sft-frm, mod arg-sly, sl calc, tr bent, tr lt bl flr w/ v sl halo cut

MD: 11,523 '
TVD: 7,532.57 '
Inclination: 89.57 °
Azimuth: 179.69 °
VS: 3,790.94 '

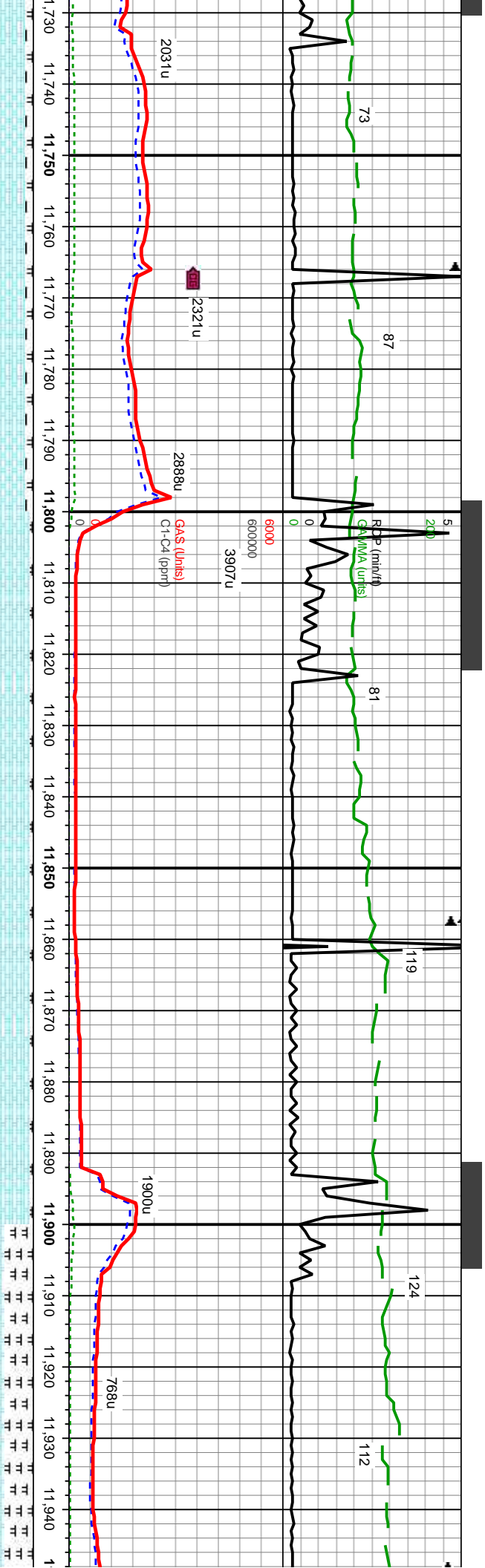
WT IN 10.2 OUT 1
VIS IN 58 OUT 5

11700-11800MD: ply, sft-sl frm, fri, c ply-bly, sft-frm, r

MD: 11,712 '
TVD: 7,534.1 '
Inclination: 89.07 °
Azimuth: 179.63 °
VS: 3,979.91 '

8000





0.2
7
WT IN 10.4 OU
VIS IN 74 OU

CHK-lt-med gy, lt-med gy brn, mot, str, sb biky-sb
biky-sb wxy v calc,MRLST-med-dk gy-gy brn, sb
mod arg-sily, sl calc,lr bent,lr lt bl flor w/ v sl halo cut

11800-11900MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb biky-sb
ply, sft-sl frm, fri, chky-sb wxy,v calc,MRLST-med-dk gy-gy brn, sb
ply-biky, sft-frm, mod arg-sily, sl calc,lr bent,lr lt bl flor w/ v sl halo cut

11900-12000MD: CHK-lt-med gy, lt-med gy
ply, sft-sl frm, fri, chky-sb wxy,v calc,MRLS
ply-biky, sft-frm, mod arg-sily, sl calc,lr ben

MD: 11,806 '
TVD: 7,535.47 '
Inclination: 89.26 °
Azimuth: 179.19 °
VS: 4.073.9 '

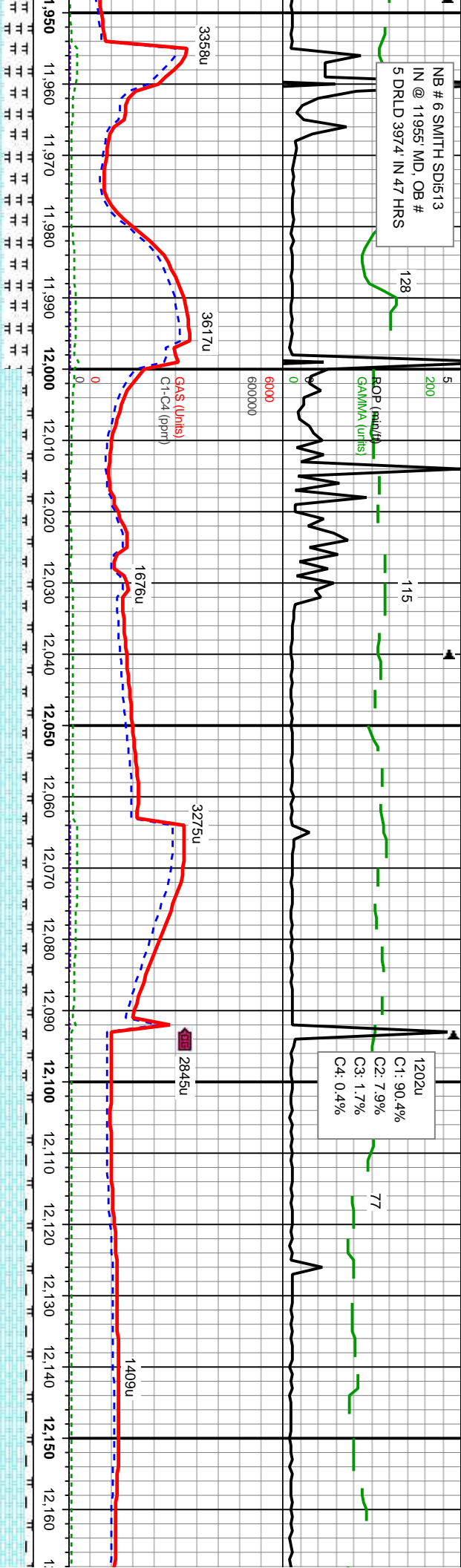
MD: 11,901 '
TVD: 7,535.94 '
Inclination: 90.18 °
Azimuth: 178.69 °
VS: 4.168.87 '

MD: 11,946 '
TVD: 7,535.6 '
Inclination: 90 '
Azimuth: 178 '
VS: 4.213.86 '

8000



NB # 6 SMITH SD/513
IN @ 11955 MD, OB #
5 DRLD 3974 IN 47 HRS



12000-12100MD: CHK-It-med gy, It-med gy brn, mot, stri, sb blk-y-sb
ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb
ply-blky, sft-frm, mod arg-sily, sl calc, tr bent, tr it bl floor w/ v sl halo cut

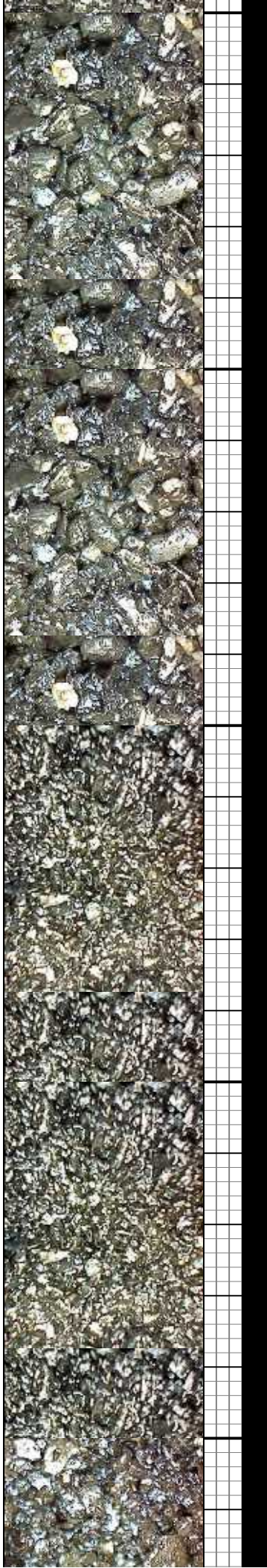
12100-12200MD: CHK-It-med gy, It-med gy brn, mot, stri, sb blk
sft-sl frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb pl
sft-frm, mod arg-sily, sl calc, tr bent, tr it bl floor w/ v sl halo cut

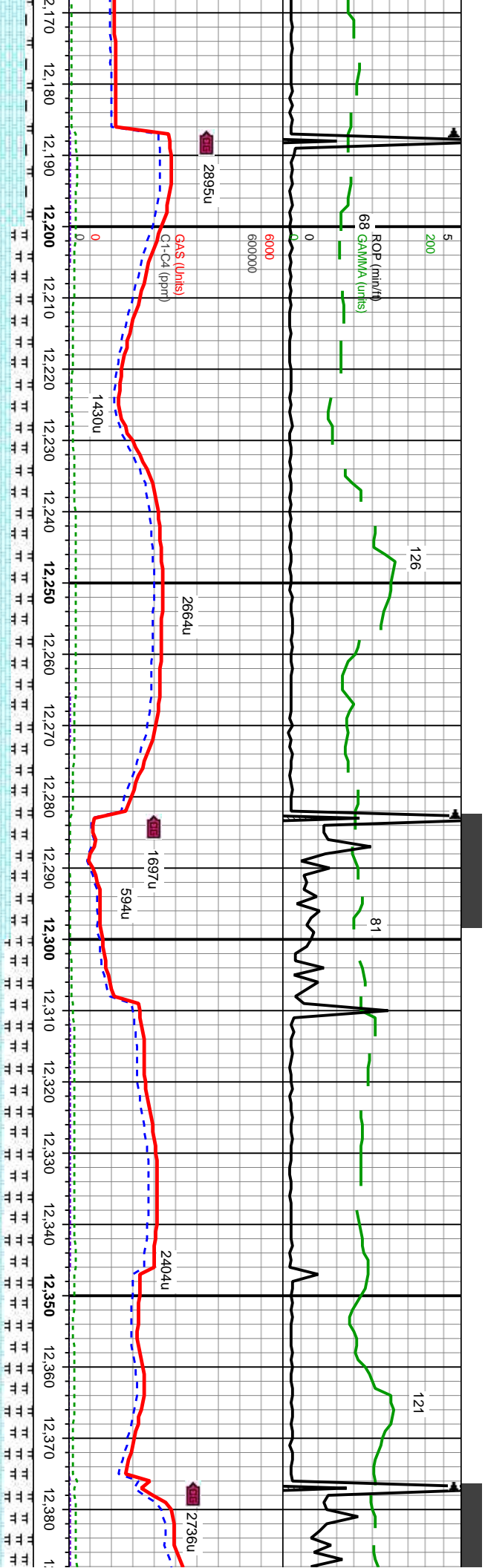
MD: 12,040' TVD: 7,535.93' Inclination: 89.14° Azimuth: 180.99° VS: 4,307.84'

MD: 12,134' TVD: 7,538.15' Inclination: 88.15° Azimuth: 180.72° VS: 4,401.81'

T 10.4
T 75

WT IN 10.3+ OUT 10.4
VIS IN 72 OUT 65





6000 WT IN 10.3 OUT 10.3
VIS IN 65 OUT 63

WT IN 10.2 OUT 10.3
VIS IN 63 OUT 63

12200'-12300' MD: CHK-lt-med gy, lt-med gy brn, mot, stri, sb blk-y-sb ply, sft-sl frm, fri, chky-sb wxy v calc, MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flwr w/ v sl halo cut

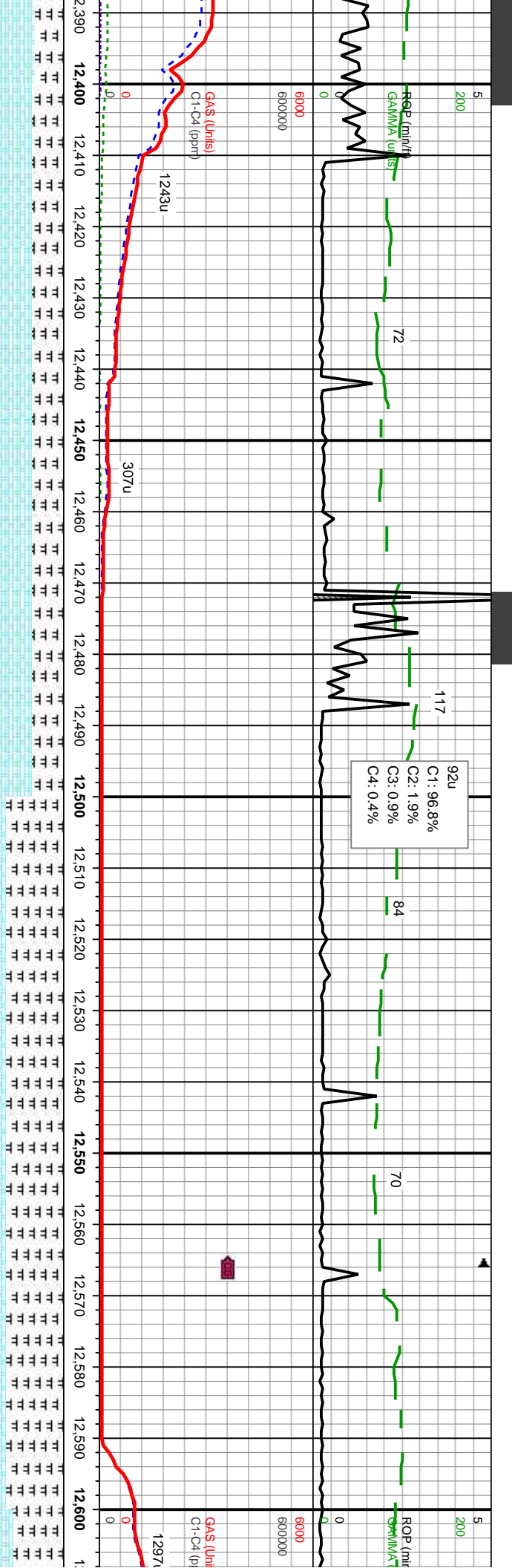
12300'-12400' MD: CHK-lt-med gy, lt-med gy brn, mot, stri, sb blk-y-sb ply, sft-sl frm, fri, chky-sb wxy v calc, MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flwr w/ v sl halo cut

MD: 12,229 '
TVD: 7,541.99 '
Inclination: 87.22 °
Azimuth: 180.58 °
VS: 4,496.73 '

MD: 12,323 '
TVD: 7,546.6 '
Inclination: 87.16 °
Azimuth: 182.07 °
VS: 4,590.59 '

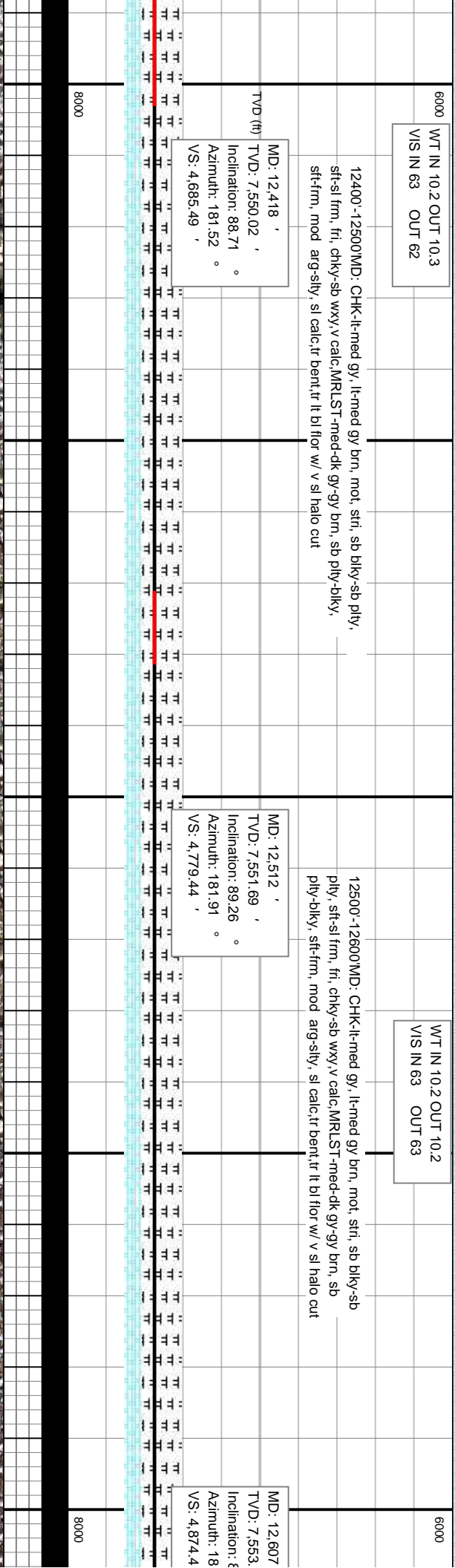
8000

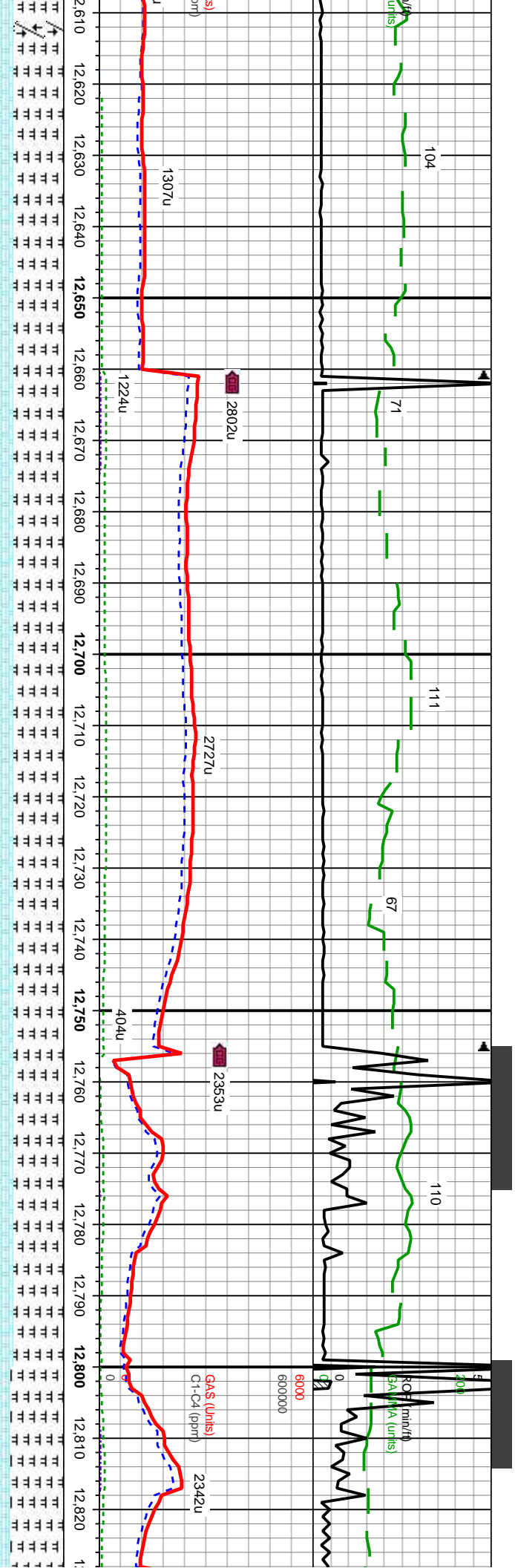




12400-12500MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flor w/ v sl halo cut

12500-12600MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flor w/ v sl halo cut





12600'-12700MD: CHK-lt-med gy, lt-med gy brn, mot, stri, sb blk-y-sb ply, sft-si frm, fri, chky-sb wxy v calc,MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc,tr bent,tr lt bl flor w/ v sl halo cut

WT IN 10.2 OUT 10.2
VIS IN 58 OUT 59

MD: 12,702 '
TVD: 7,555.41 '
Inclination: 87.97 °
Azimuth: 181.4 °
VS: 4,969.35 '

12700'-12800MD: CHK-lt-med gy, lt-med gy brn, mot, stri, sb blk-y-sb ply, sft-si frm, fri, chky-sb wxy v calc,MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc,tr bent,tr lt bl flor w/ v sl halo cut

MD: 12,775 '
TVD: 7,557.96 '
Inclination: 88.02 °
Azimuth: 181.85 °
VS: 5,042.28 '

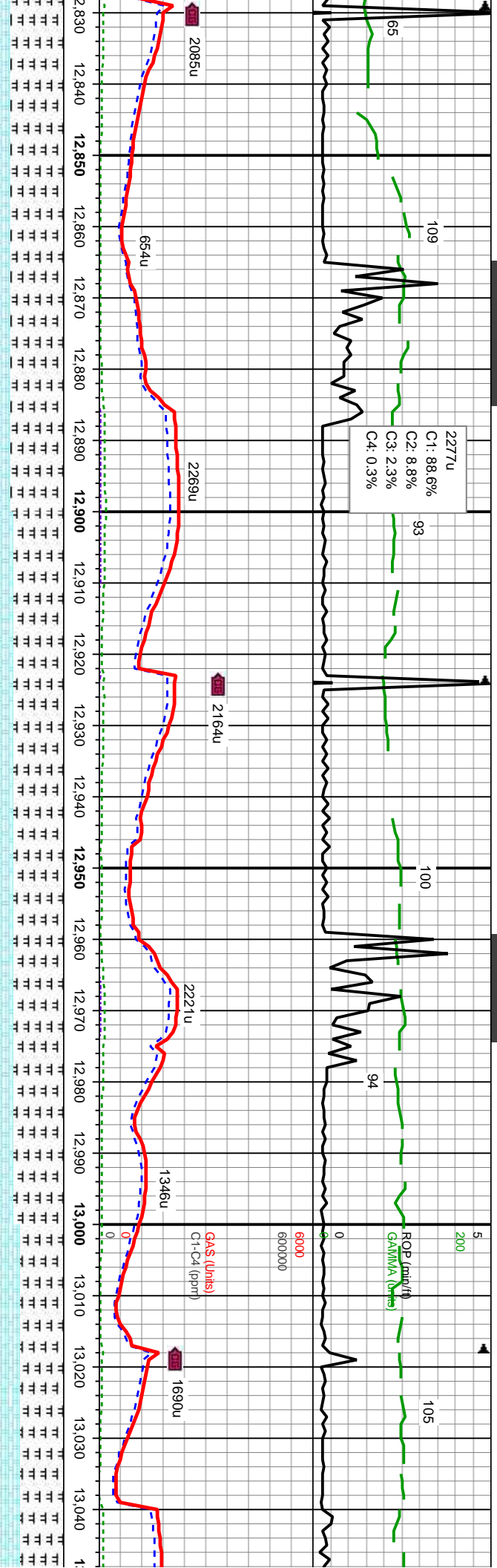
12800'-12900MD: ply, sft-si frm, fri, c ply-blky, sft-frm, m

WT IN 10.2+ OUT 10.2+
VIS IN 58 OUT 58

TVD (ft)

8000





WT IN 10.2+ OUT 10.2+
VIS IN 57 OUT 58

WT IN 10.2+ OUT 10.2+
VIS IN 56 OUT 55

CHK-It-med gy, It-med gy brn, mot, str, sb blk-y-sb
hky-sb wxy v calc,MRLST-med-dk gy-gy brn, sb
od arg-sily, sl calc,tr bent,tr It bl flwr w/ v sl halo cut

12900-13000MD: CHK-It-med gy, It-med gy brn, mot, str, sb blk-y-sb pily,
sft-sl frm, fri, chky-sb wxy v calc,MRLST-med-dk gy-gy brn, sb pily-blky,
sft-frm, mod arg-sily, sl calc,tr bent,tr It bl flwr w/ v sl halo cut

13000-13100MD: CHK-It-med gy, It-med
pily, sft-sl frm, fri, chky-sb wxy v calc,MRL
pily-blky, sft-frm, mod arg-sily, sl calc,tr t

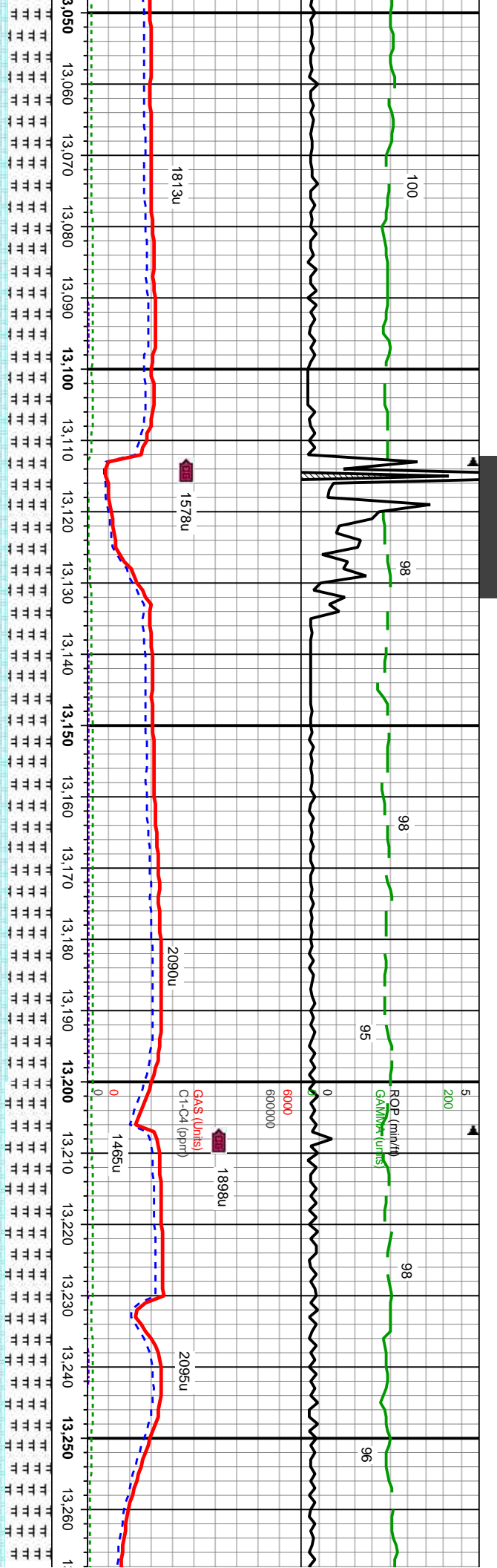
MD: 12,870 '
TVD: 7,560.07 '
Inclination: 89.44 °
Azimuth: 181.24 °
VS: 5,137.23 '

MD: 12,964 '
TVD: 7,560.43 '
Inclination: 90.12 °
Azimuth: 180.18 °
VS: 5,231.22 '

TVD (ft)

8000





gy brn, mot, str, sb blk-y-sb
ST-med-dk gy-gy brn, sb
ent, tr lt bl flr w/ v sl halo cut

13100'-13200' MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-y-sb ply,
sft-sl frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb ply-blky,
sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flr w/ v sl halo cut

13200'-13300' MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-y-sb blk
ply, sft-sl frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn,
ply-blky, sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flr w/ v sl halo cut

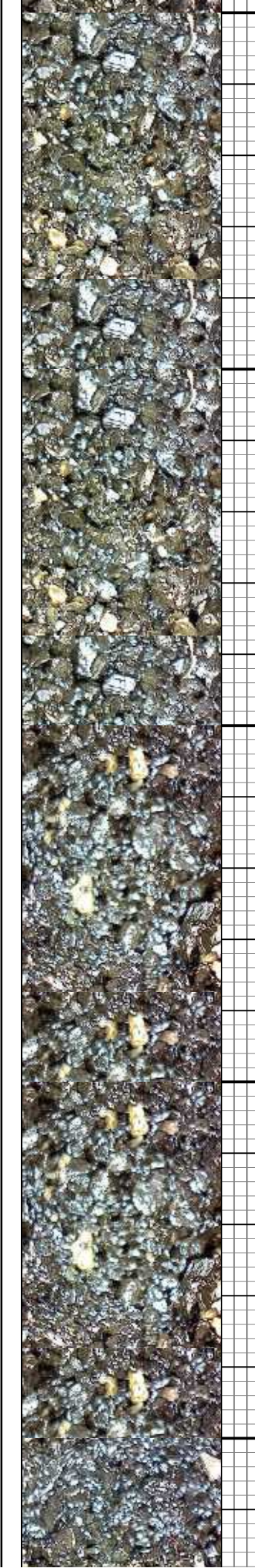
MD: 13,059 '
TVD: 7,560.84 '
Inclination: 89.38 °
Azimuth: 179.29 °
VS: 5,326.22 '

MD: 13,153 '
TVD: 7,561.45 '
Inclination: 89.88 °
Azimuth: 177.03 °
VS: 5,420.15 '

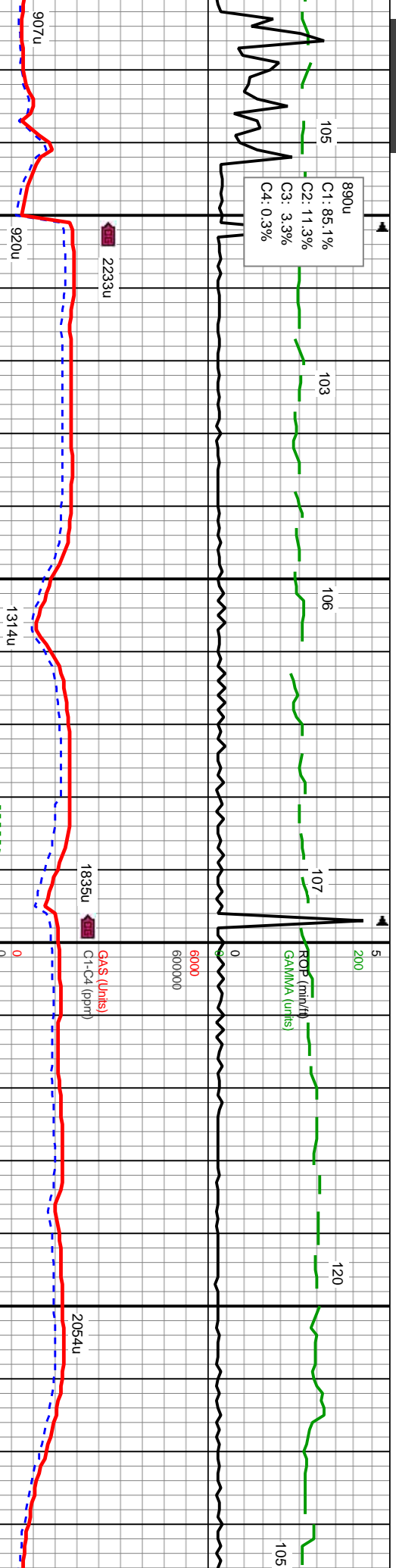
MD: 13,248 '
TVD: 7,562.01 '
Inclination: 89.44 °
Azimuth: 178.25 °
VS: 5,515.05 '

WT IN 10.3 OUT 10.3
VIS IN 55 OUT 55

6000
8000



890u
C1: 85.1%
C2: 11.3%
C3: 3.3%
C4: 0.3%



WT IN 10.2 OUT 10.2
VIS IN 55 OUT 56

13300-13400MD: CHK-lt-med gy, lt-med gy brn, mot, stri, sb blk-y-sb ply, sft-si frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flr w/ v sl halo cut

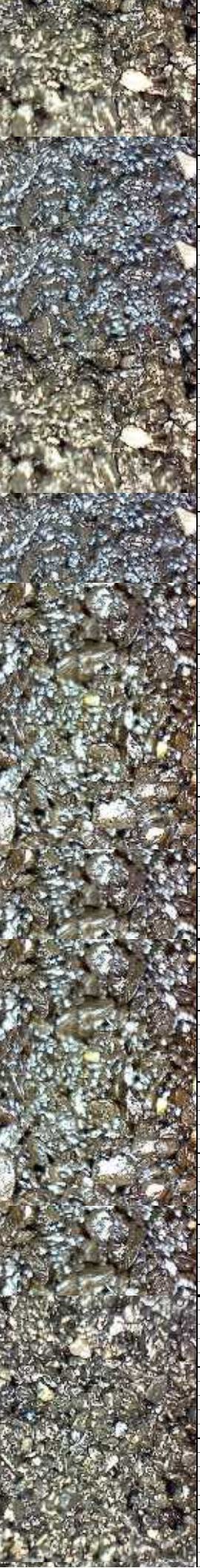
MD: 13,343 '
TVD: 7,562.53 '
Inclination: 89.94 °
Azimuth: 178.46 °
VS: 5,610.01 '

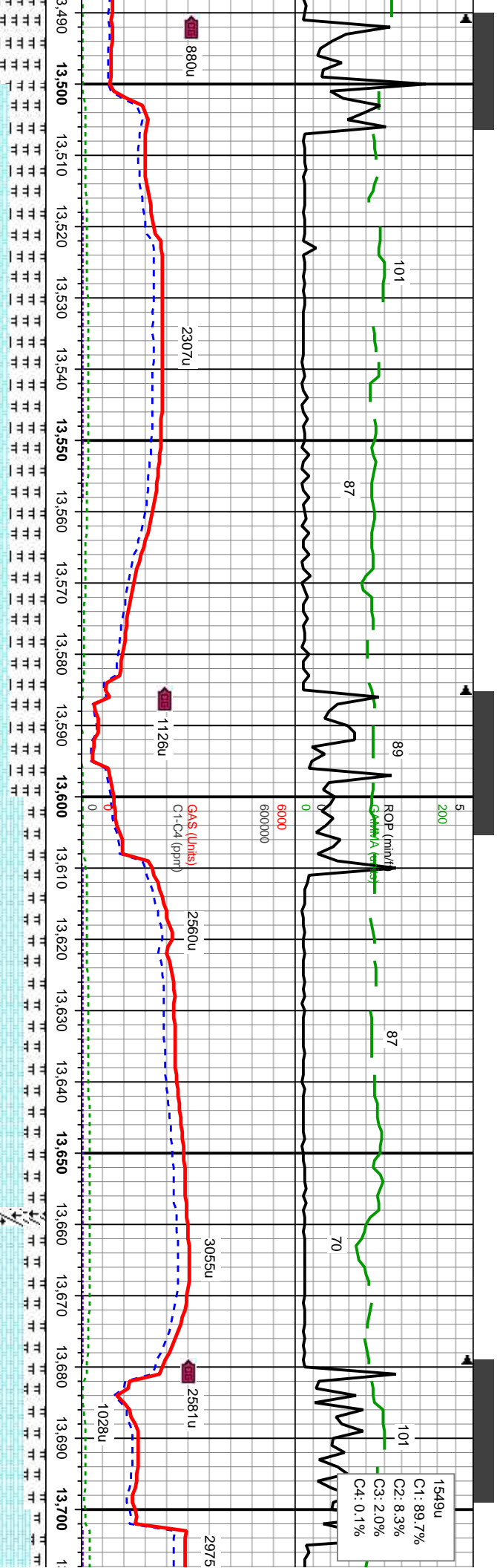
TVD (ft)

WT IN 10.2+ OUT 10.2+
VIS IN 55 OUT 53

13400'-13500MD: CHK-lt-med gy, lt-med gy brn, mot, stri, sb blk-y-sb ply, sft-si frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flr w/ v sl halo cut

MD: 13,437 '
TVD: 7,563.3 '
Inclination: 89.12 °
Azimuth: 176.92 °
VS: 5,703.91 '





WT IN 10.3 OUT 10.3
VIS IN 55 OUT 54

13500'-13600MD: CHK-lt-med gy, lt-med gy brn, mot, stri, sb blk-y-sb pily,
sft-si frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb pily-blky,
sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flor w/ v sl halo cut

MD: 13,532 '
TVD: 7,564.13 '
Inclination: 89.88 °
Azimuth: 176.95 °
VS: 5,798.75 '

TVD (ft)

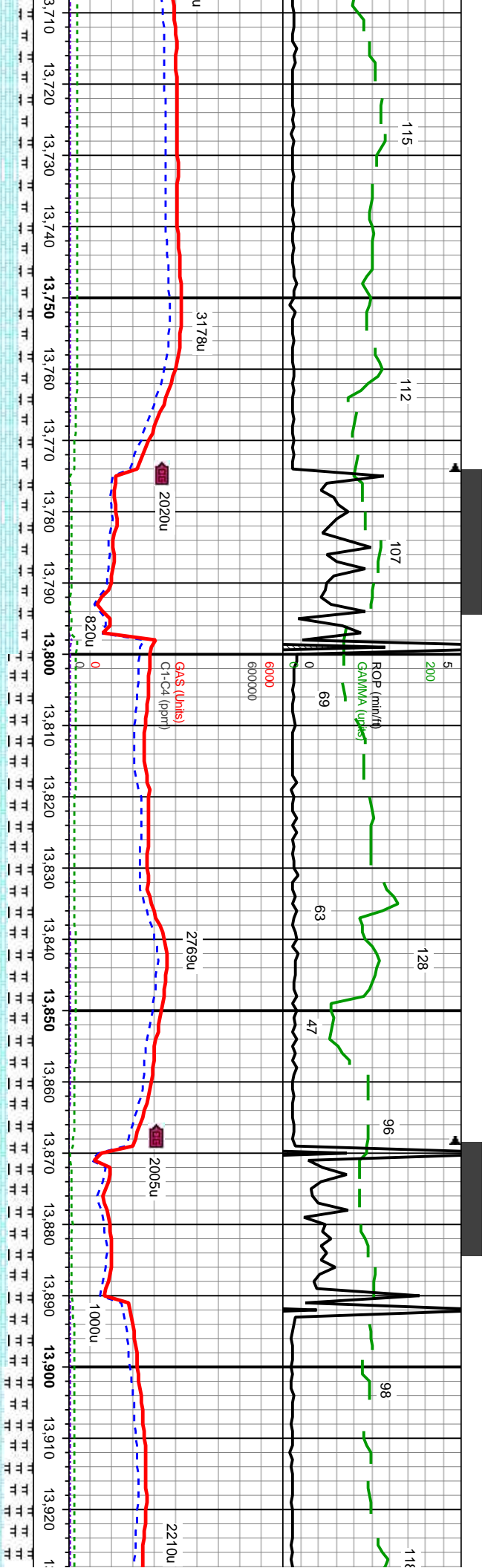
WT IN 10.3 OUT 10.3
VIS IN 56 OUT 54

13600'-13700MD: CHK-lt-med gy, lt-med gy brn, mot, stri, sb blk-y-sb
pily, sft-si frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb
pily-blky, sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flor w/ v sl halo cut

MD: 13,626 '
TVD: 7,564.63 '
Inclination: 89.51 °
Azimuth: 178.09 °
VS: 5,892.65 '

8000





WT IN 10.3+ OUT 10.3+
VIS IN 60 OUT 59

13700'-13800'MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-ly-sb pty,
st-si frm, fri, chky-sb wxy v calc,MRLST-med-dk gy-gy brn, sb pty-blky,
st-frm, mod arg-sily, si calc,lt bent,lt lt bl flr w/ v si halo cut

MD: 13,721 '
TVD: 7,566 '
Inclination: 88.83 °
Azimuth: 179.56 °
VS: 5,987.61 '

WT IN 10.3 OUT 10.3+
VIS IN 58 OUT 55

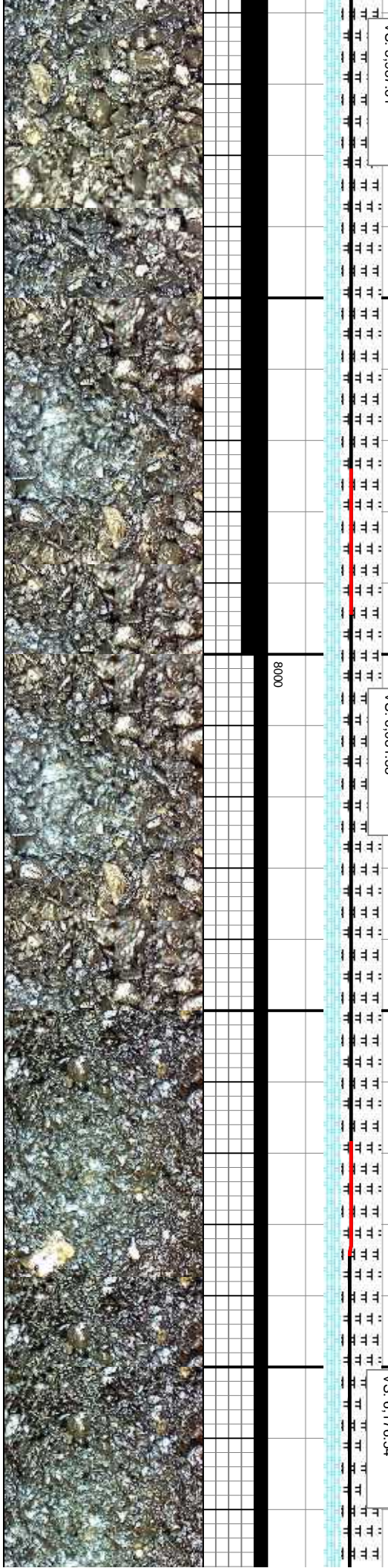
13800'-13900'MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-ly-sb
pty, st-si frm, fri, chky-sb wxy v calc,MRLST-med-dk gy-gy brn, sb
pty-blky, st-frm, mod arg-sily, si calc,lt bent,lt lt bl flr w/ v si halo cut

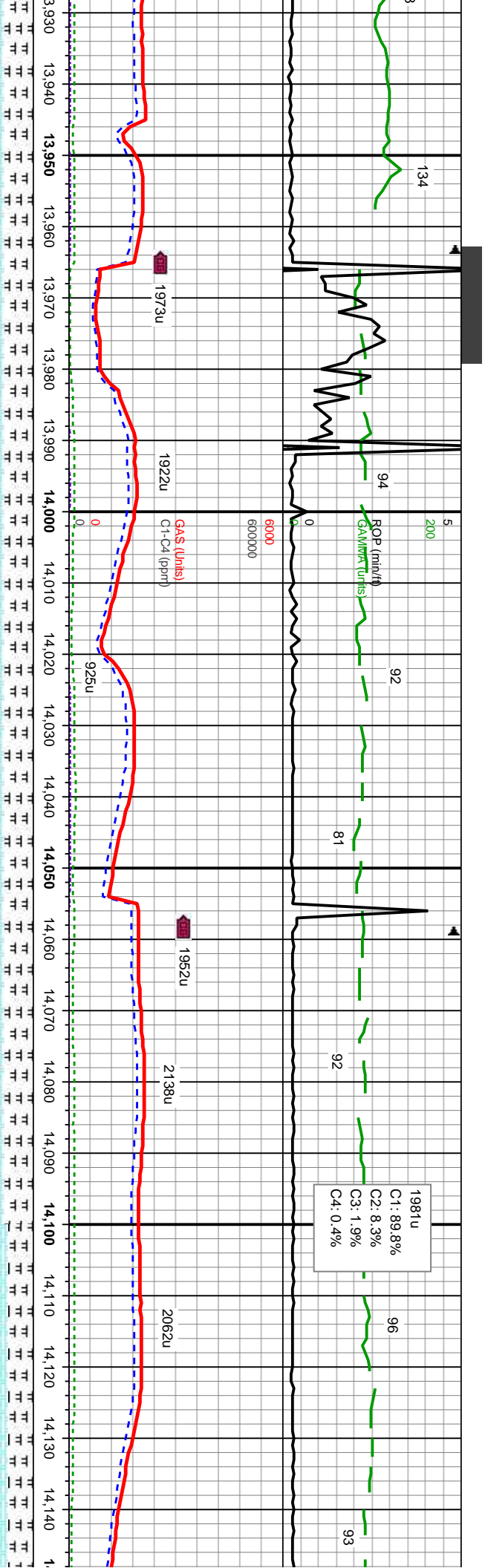
MD: 13,815 '
TVD: 7,568.48 '
Inclination: 88.15 °
Azimuth: 180.7 °
VS: 6,081.58 '

WT IN 10.3 OUT 10.3+
VIS IN 58 OUT 55

13900'-14000'MD: CHK-lt-med gy, lt-med gy brn, mot, str, sb blk-ly-sb pty,
st-si frm, fri, chky-sb wxy v calc,MRLST-med-dk gy-gy brn, sb pty-blky,
st-frm, mod arg-sily, si calc,lt bent,lt lt bl flr w/ v si halo cut

MD: 13,910 '
TVD: 7,571.09 '
Inclination: 88.7 °
Azimuth: 180.25 °
VS: 6,176.54 '





WT IN 10.2 OUT 10.3
VIS IN 54 OUT 53

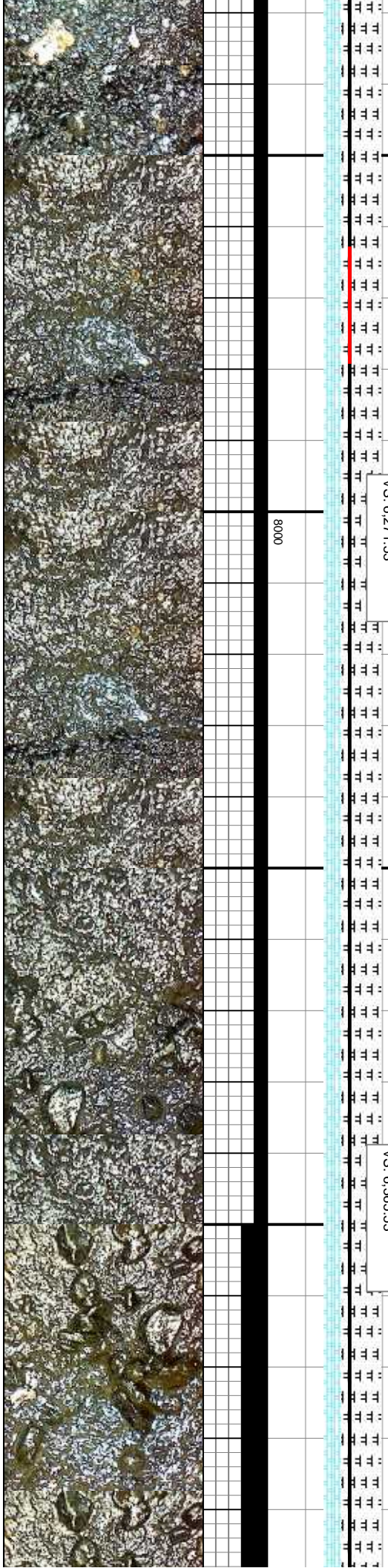
CHK-It-med gy, It-med gy brn, mot, str, sb blk-y-sb
chky-sb wxy v calc, MRLST-med-dk gy-gy brn, sb
mod arg-sily, sl calc, It bent, It bl flr w/ v sl halo cut

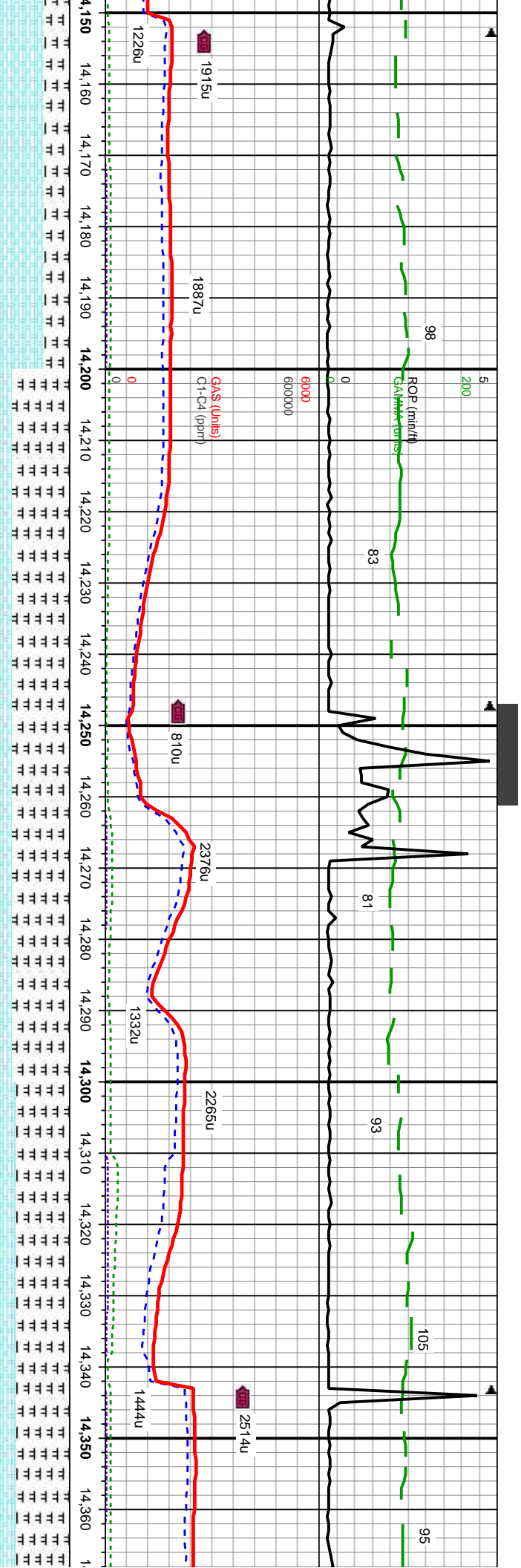
14000'-14100MD: CHK-It-med gy, It-med gy brn, mot, str, sb blk-y-sb ply,
sft-sl frm, fri, chky-sb wxy v calc, MRLST-med-dk gy-gy brn, sb ply-blky,
sft-frm, mod arg-sily, sl calc, It bent, It bl flr w/ v sl halo cut

MD: 14,005 '
TVD: 7,571.86 '
Inclination: 90.37 °
Azimuth: 180.28 °
VS: 6,271.53 '

MD: 14,099 '
TVD: 7,571.36 '
Inclination: 90.25 °
Azimuth: 179.78 °
VS: 6,365.53 '

14100'-14200MD: CHK-It-med gy, It-med
ply, sft-sl frm, fri, chky-sb wxy v calc, MRL
ply-blky, sft-frm, mod arg-sily, sl calc, It b





gy brn, mot, str, sb blk-y-sb
ST-med-dk-gy-gy brn, sb
ent, tr bl flr w/ v sl halo cut

14200-14300MD: CHK-tr-med gy, lt-med gy brn, mot, str, sb blk-y-sb
ply, sft-sl frm, fri, chky-sb wxy v calc, MRLST-med-dk-gy-gy brn, sb
ply-blky, sft-frm, mod arg-sily, sl calc, tr bent, tr bl flr w/ v sl halo cut

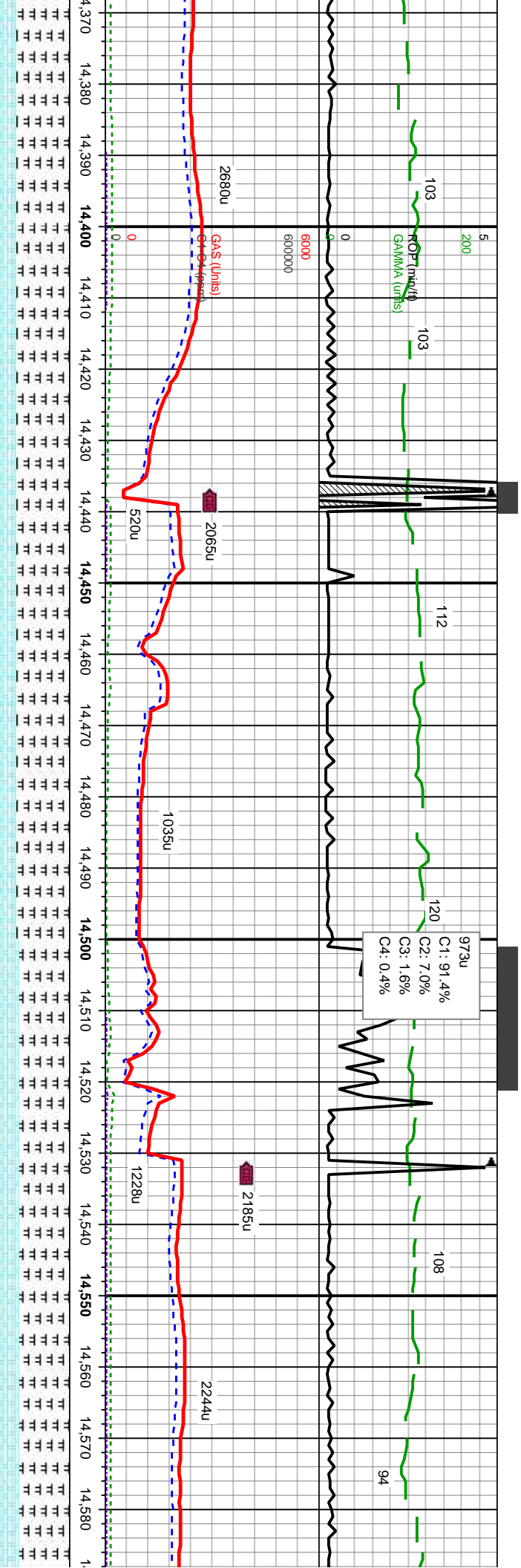
14300-14400MD: CHK-tr-med gy, lt-med gy brn, mot, str, sb blk
sft-sl frm, fri, chky-sb wxy v calc, MRLST-med-dk-gy-gy brn, sb pl
sft-frm, mod arg-sily, sl calc, tr bent, tr bl flr w/ v sl halo cut

MD: 14,194 '
TVD: 7,571.22 '
Inclination: 89.91 °
Azimuth: 179.22 °
VS: 6,460.52 '

MD: 14,289 '
TVD: 7,570.86 '
Inclination: 90.53 °
Azimuth: 180.45 °
VS: 6,555.52 '

8000





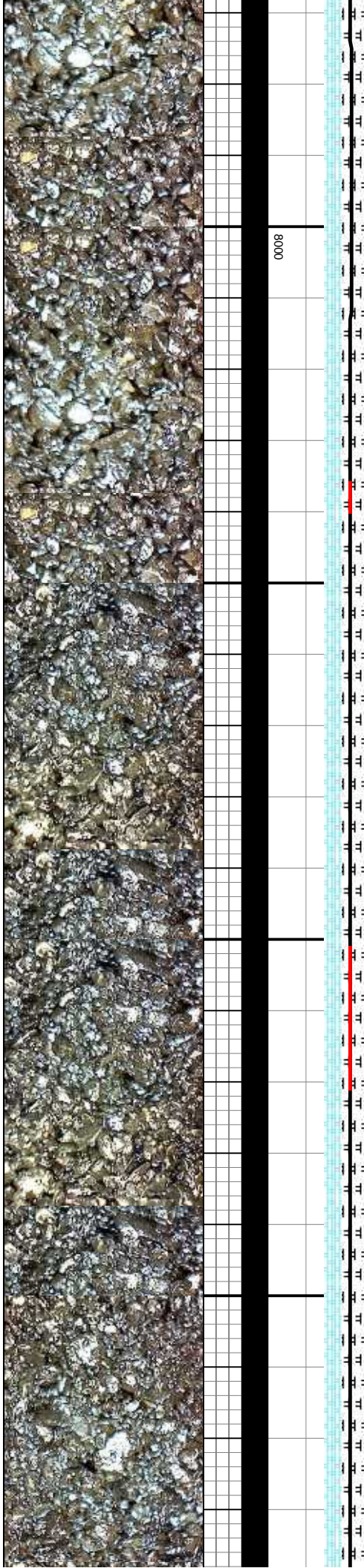
14400'-14500' MD: CHK-It-med gy, It-med gy brn, mot, str, sb blk-y-sb pty, sst-si frm, fri, chky-sb wxy v calc, MRLST-med-dk gy-gy brn, sb pty-bkly, sst-frm, mod arg-sily, sl calc, tr bent, tr It bl flr w/ v sl halo cut

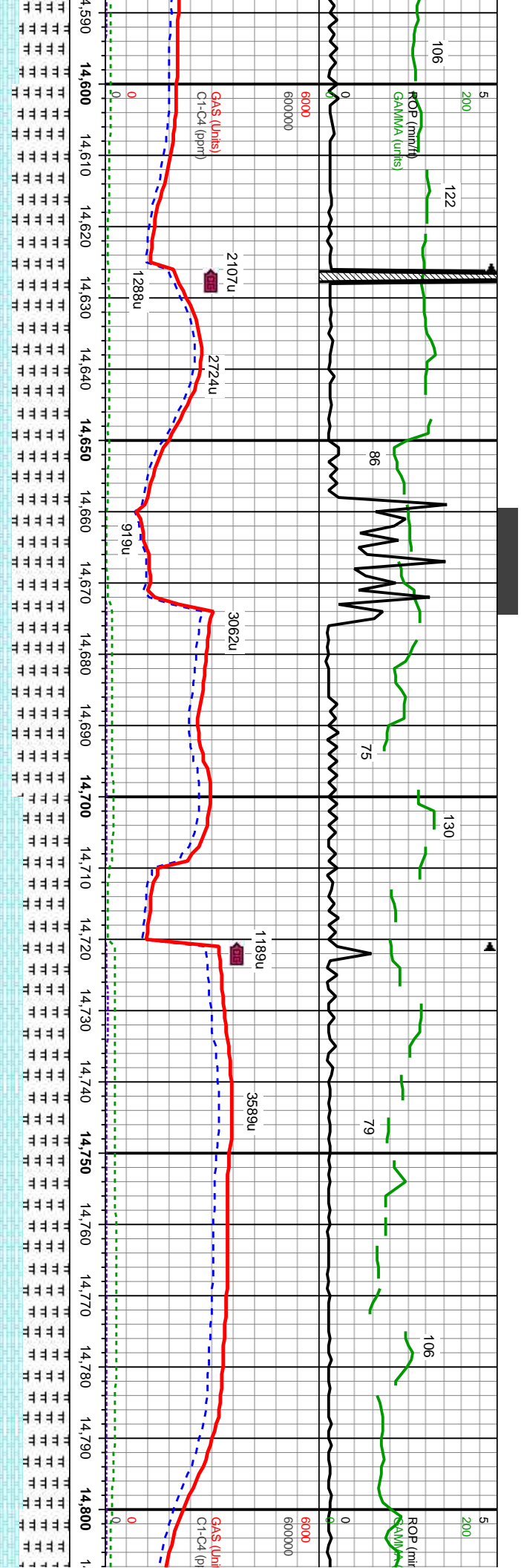
WT IN 10.2+ OUT 10.2+ VIS IN 54 OUT 53

MD: 14,383 '
TVD: 7,570.32 '
Inclination: 90.12 °
Azimuth: 179.68 °
VS: 6,649.52 '

MD: 14,478 '
TVD: 7,570.48 '
Inclination: 89.69 °
Azimuth: 179.2 °
VS: 6,744.51 '

MD: 14,572 '
TVD: 7,571.17 '
Inclination: 89.47 °
Azimuth: 180.63 °
VS: 6,838.5 '





WT IN 10.3 OUT 10.3
VIS IN 55 OUT 55

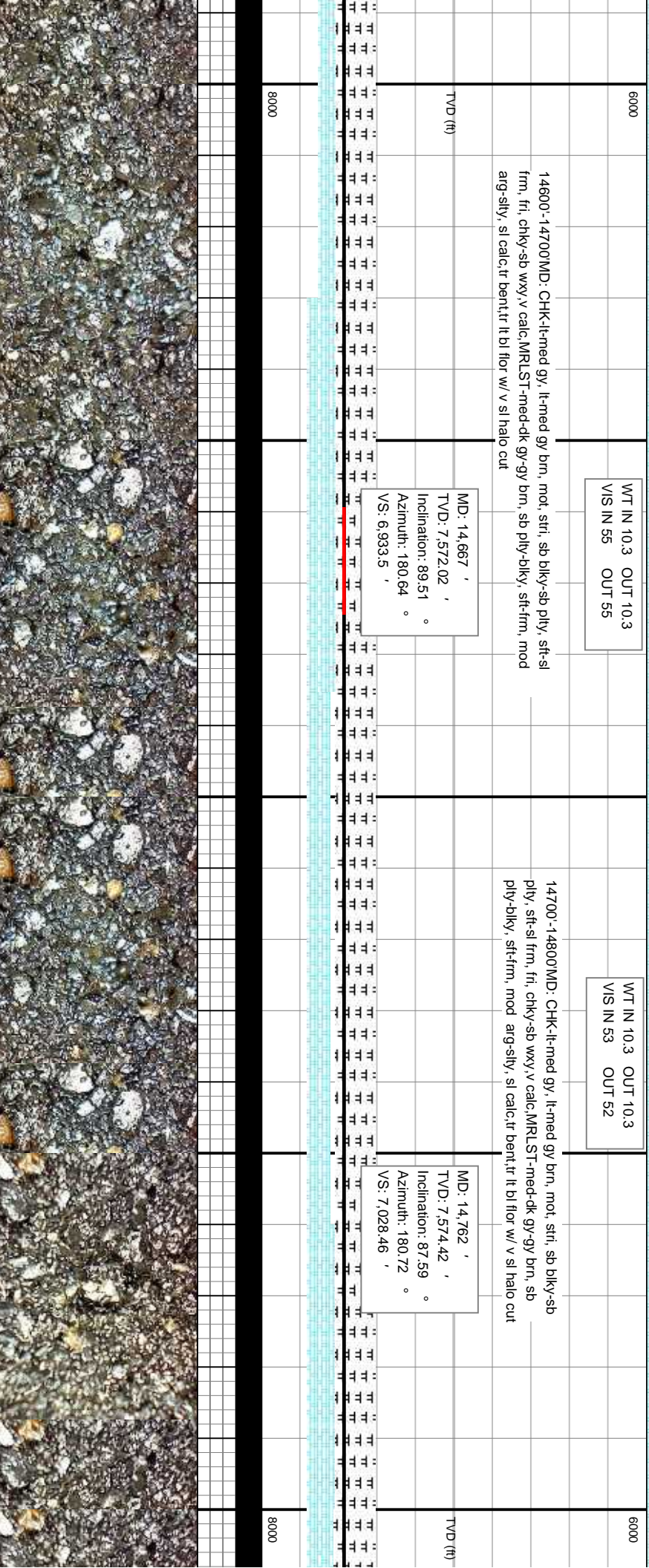
WT IN 10.3 OUT 10.3
VIS IN 53 OUT 52

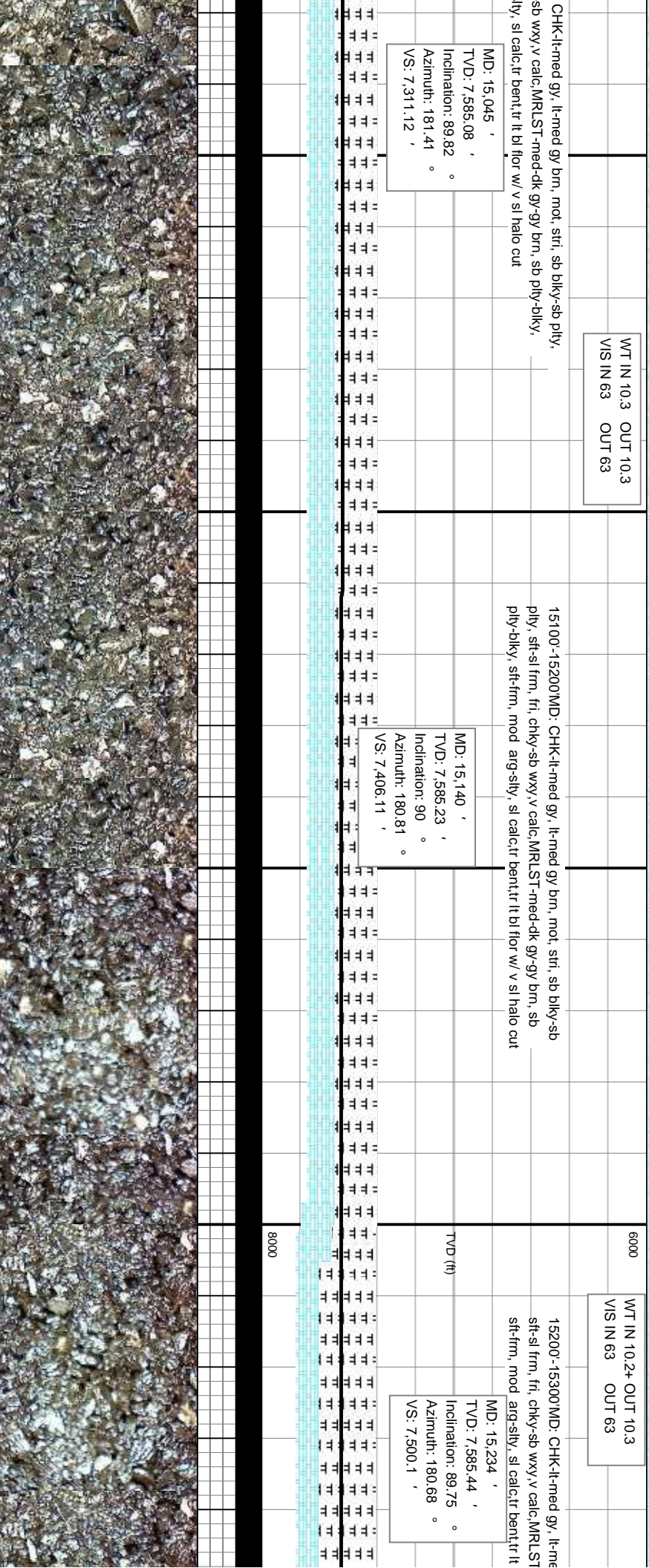
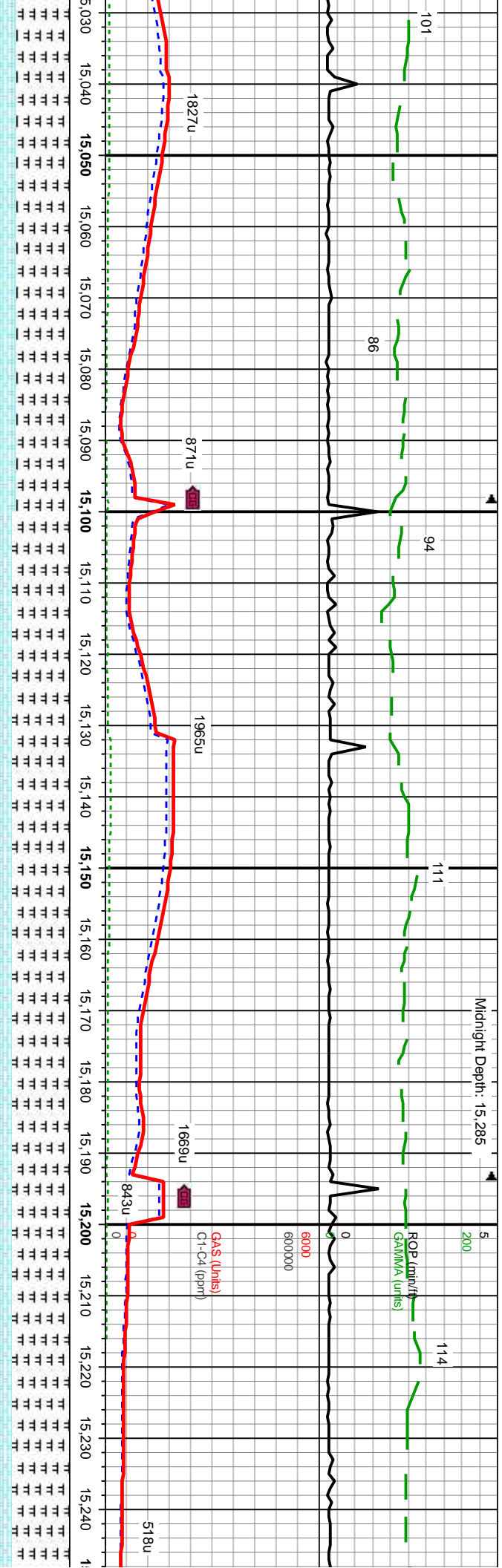
14600'-14700MD: CHK-lt-med gy, lt-med gy brn, mot, stri, sb biky-sb pily, sft-sl frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb pily-biky, sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flr w/ v sl halo cut

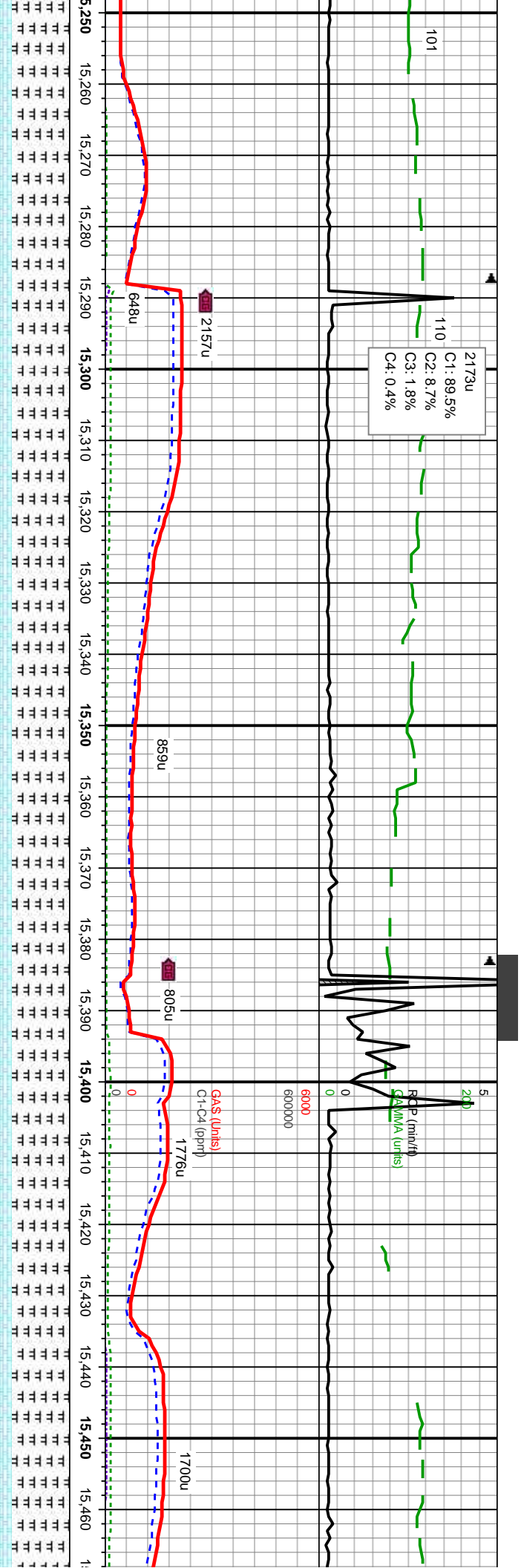
14700'-14800MD: CHK-lt-med gy, lt-med gy brn, mot, stri, sb biky-sb pily, sft-sl frm, fri, chky-sb wxy, v calc, MRLST-med-dk gy-gy brn, sb pily-biky, sft-frm, mod arg-sily, sl calc, tr bent, tr lt bl flr w/ v sl halo cut

MD: 14,667 '
TVD: 7,572.02 '
Inclination: 89.51 °
Azimuth: 180.64 °
VS: 6.933.5 '

MD: 14,762 '
TVD: 7,574.42 '
Inclination: 87.59 °
Azimuth: 180.72 °
VS: 7,028.46 '







15,250 15,260 15,270 15,280 15,290 15,300 15,310 15,320 15,330 15,340 15,350 15,360 15,370 15,380 15,390 15,400 15,410 15,420 15,430 15,440 15,450 15,460 1

WT IN 10.2 OUT 10.2+
VIS IN 63 OUT 63

6000

WT IN 10.2
VIS IN 64

med-gy brn, mot, stti, sb blk-y-sb pty,
-med-dk gy-gy brn, sb pty-blky,
bl flr w/ v sl halo cut

15300'-15400MD: MRLST-med-dk gy-gy brn, sb pty-blky, stf-frn, mod arg-sily, sl
calc, tr bent, cal frag, CHK-lt-med gy, lt-med gy brn, mot, stti, sb blk-y-sb pty, stf-sl
frn, fri, chky-sb wxy, v calc, tr lt bl flr w/ v sl halo cut

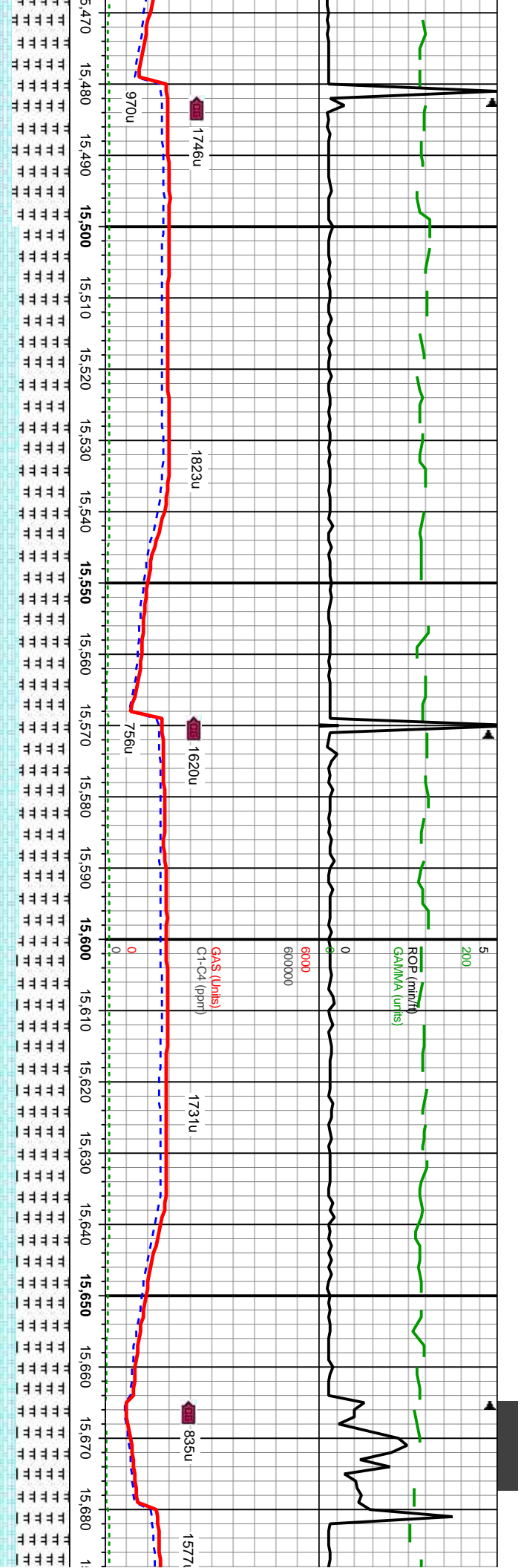
15400'-15500MD: MRLST-med-dk gy-gy brn, sb pty-blky, stf-frn, mod arg-sily, sl
bent, cal frag, CHK-lt-med gy, lt-med gy brn, mot, stti, sb blk-y-sb pty, stf-sl
wxy, v calc, tr lt bl flr w/ v sl halo cut

MD: 15,329 '
TVD: 7,586.05 '
Inclination: 89.51 °
Azimuth: 180.61 °
VS: 7,595.1 '

MD: 15,423 '
TVD: 7,586.24 '
Inclination: 90.26 °
Azimuth: 182.04 °
VS: 7,689.07 '

8000





+ OUT 10.2+
OUT 64

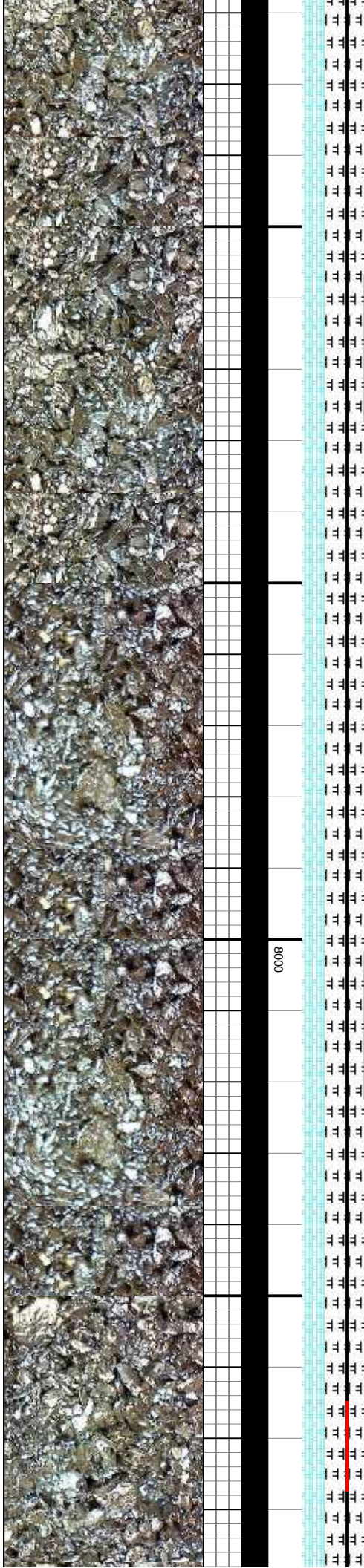
6000
WT IN 10.2+ OUT 10.2+
VIS IN 64 OUT 64

15500-15600MD: MRLST-med-dk gy-gy brn, sb ply-bkly, sft-fm, mod arg-sily, sl calc, tr bent, cal frag, CHK-lt-med gy, lt-med gy brn, mot, stri, sb bkly-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, tr lt bl flr w/ v sl halo cut

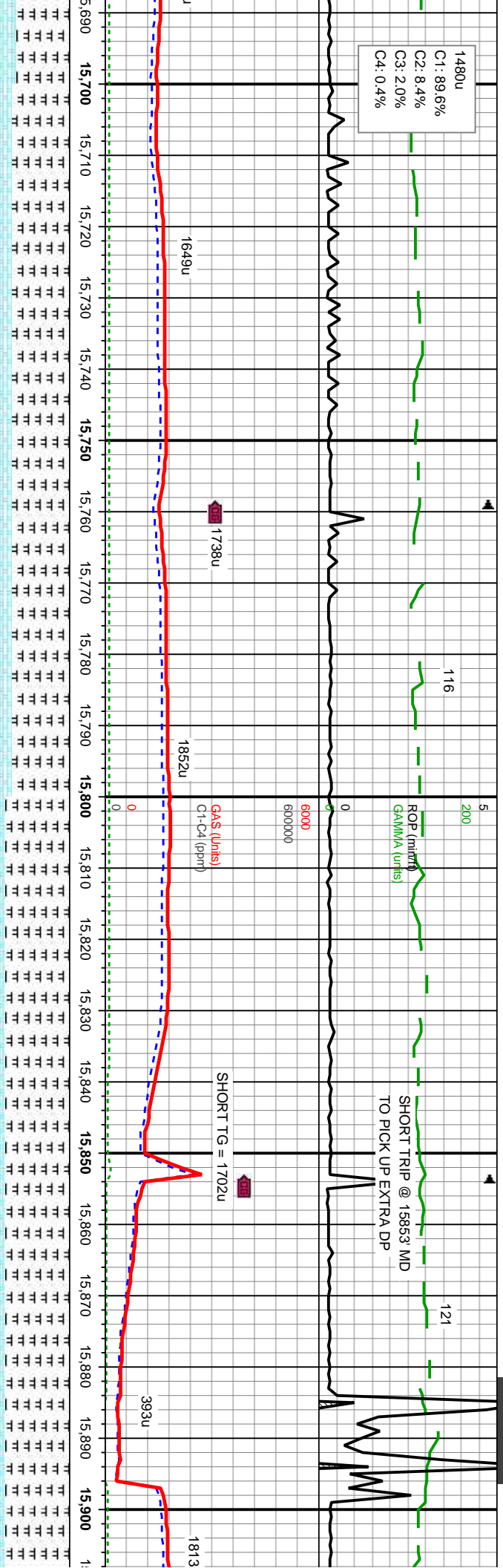
15600-15700MD: MRLST-med-dk gy-gy brn, sb ply-bkly, sft-fm, mod arg-sily, sl calc, tr bent, cal frag, CHK-lt-med gy, lt-med gy brn, mot, stri, sb bkly-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, tr lt bl flr w/ v sl halo cut

MD: 15,517 '
TVD: 7,586.28 '
Inclination: 89.69 °
Azimuth: 181.64 °
VS: 7,783.03 '

MD: 15,612 '
TVD: 7,587.1 '
Inclination: 89.32 °
Azimuth: 181.04 °
VS: 7,878.01 '



1480u
C1: 89.6%
C2: 8.4%
C3: 2.0%
C4: 0.4%



WT IN 10.3 OUT 10.3
VIS IN 69 OUT 70

WT IN 10.3 OUT 10.3
VIS IN 61 OUT 65

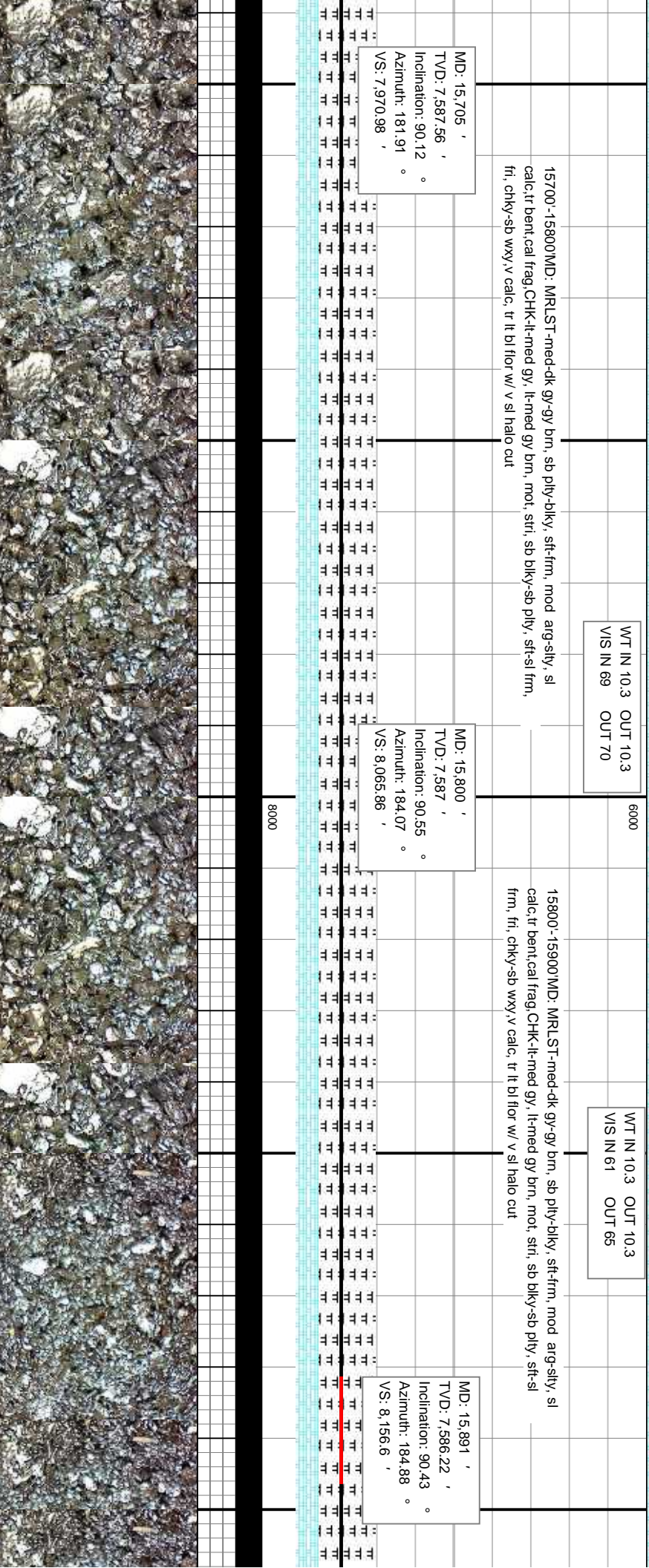
MD: 15,705 '
TVD: 7,587.56 '
Inclination: 90.12 °
Azimuth: 181.91 °
VS: 7,970.98 '

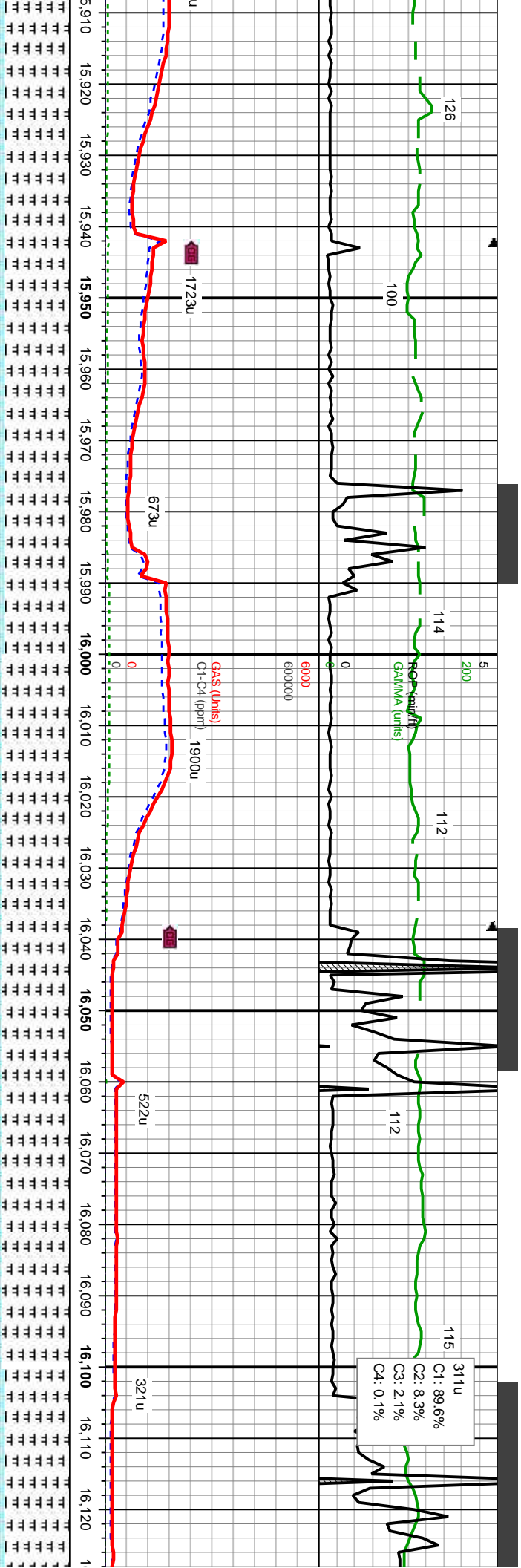
MD: 15,800 '
TVD: 7,587 '
Inclination: 90.55 °
Azimuth: 184.07 °
VS: 8,065.86 '

MD: 15,891 '
TVD: 7,586.22 '
Inclination: 90.43 °
Azimuth: 184.88 °
VS: 8,156.6 '

15700'-15800MD: MRLST-med-dk gy-gy brn, sb pily-blky, sft-frm, mod arg-sily, sl calc,tr bent,cal frag,CHK-lt-med gy, lt-med gy brn, mot, stri, sb blky-sb pily, sft-sl frm, fit, chky-sb wxy,v calc, tr lt bl flr w/ v sl halo cut

15800'-15900MD: MRLST-med-dk gy-gy brn, sb pily-blky, sft-frm, mod arg-sily, sl calc,tr bent,cal frag,CHK-lt-med gy, lt-med gy brn, mot, stri, sb blky-sb pily, sft-sl frm, fit, chky-sb wxy,v calc, tr lt bl flr w/ v sl halo cut





15900'-16000MD: MRLST-med-dk gy-gy brn, sb pily-biky, sft-frn, mod arg-sily, sl calc,lr bent,cal frag,CHK-lt-med gy, lt-med gy brn, mot, stri, sb biky-sb pily, sft-sl frn, fri, chky-sb wxy,v calc, tr lt bl flwr w/ v sl halo cut

MD: 15,985 '
TVD: 7,585.36 '
Inclination: 90.62 °
Azimuth: 186.34 °
VS: 8,250.17 '

TVD (ft)

6000 WT IN 10.2+ OUT 10.2+
VIS IN 65 OUT 64

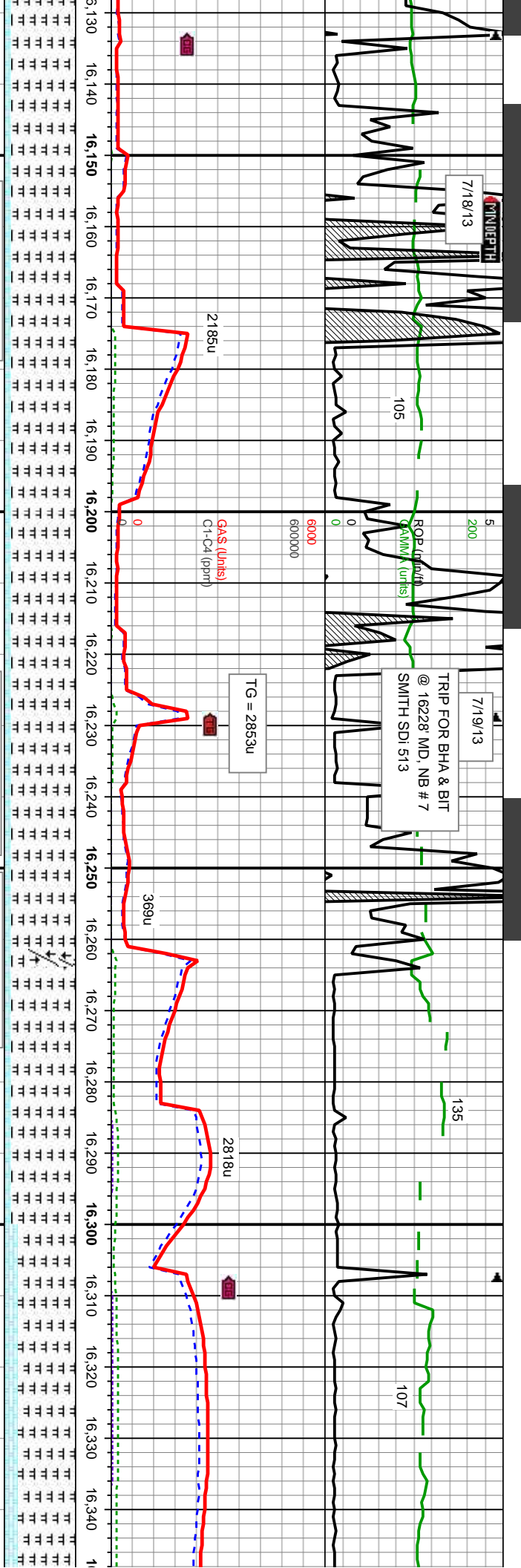
16000'-16100MD: MRLST-med-dk gy-gy brn, sb pily-biky, sft-frn, mod arg-sily, sl calc,lr bent,cal frag,CHK-lt-med gy, lt-med gy brn, mot, stri, sb biky-sb pily, sft-sl frn, fri, chky-sb wxy,v calc, tr lt bl flwr w/ v sl halo cut

MD: 16,080 '
TVD: 7,584.69 '
Inclination: 90.19 °
Azimuth: 186.88 °
VS: 8,344.57 '

WT IN 10.2 OUT 10.2
VIS IN 65 OUT 65

16100'-16200MD: MRLST-med-dk gy-gy brn, sb pily-biky, sft-frn, mod arg-sily, sl calc,lr bent,cal frag,CHK-lt-med gy, lt-med gy brn, mot, stri, sb biky-sb pily, sft-sl frn, fri, chky-sb wxy,v calc, tr lt bl flwr w/ v sl halo cut





WT IN 10.2	OUT 10.2
VIS IN 58	OUT 58

WT IN 10.2+	OUT 10.2+
VIS IN 55	OUT 55

WT IN 10.3+	OUT 10.4
VIS IN 60	OUT 55

MR.LST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod
ent,cal frag,CHK-It-med gy, lt-med gy brn, mot, sfti, sb
m, fri, chky-sb wxy v calc, tr lt bl flwr w/ v sl halo cut

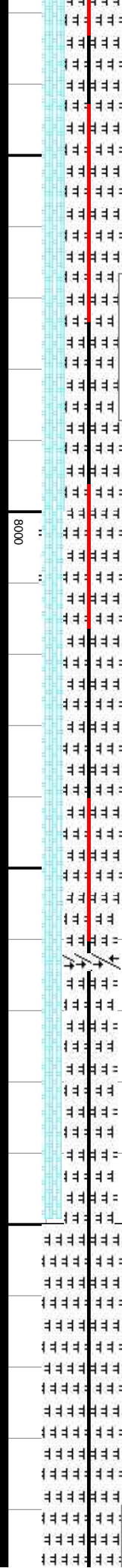
16200'-16300MD: MR.LST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod
arg-sily, sl calc,tr bent,cal frag,CHK-It-med gy, lt-med gy brn, mot, sfti, sb
blky-sb ply, sft-sl frm, fri, chky-sb wxy v calc, tr lt bl flwr w/ v sl halo cut

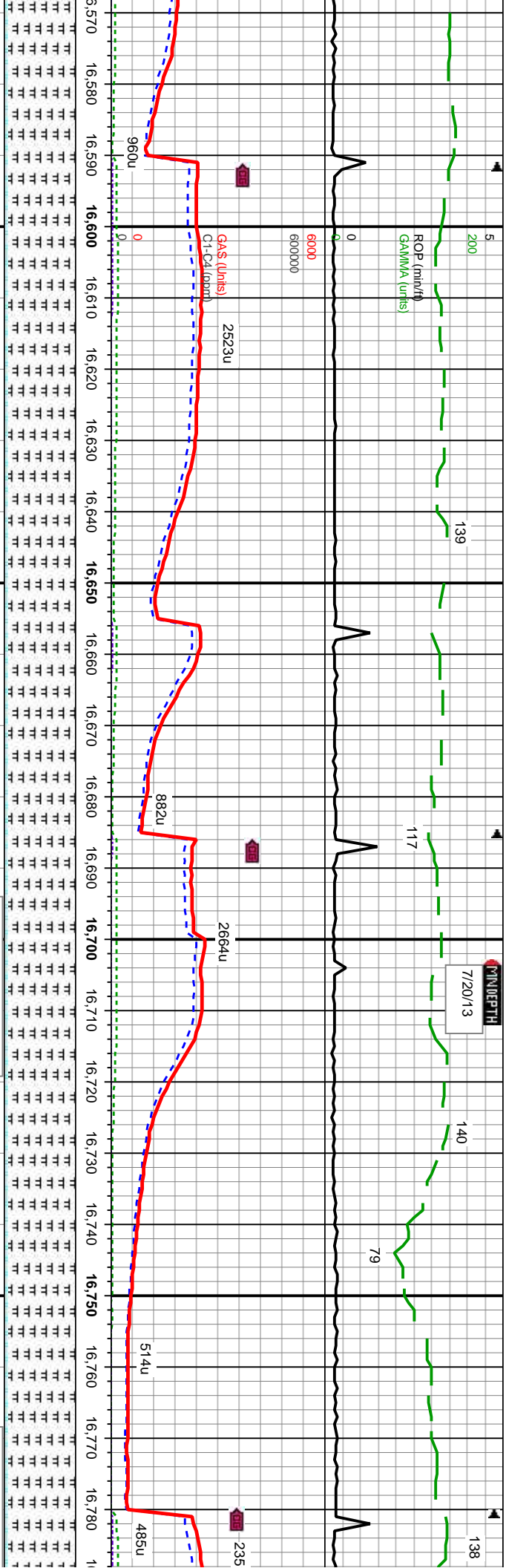
16300'-16400MD: MR.LST-med-dk gy
arg-sily, sl calc,tr bent,cal frag,CHK-It-
blky-sb ply, sft-sl frm, fri, chky-sb wxy

MD: 16,175 '
TVD: 7,584.37 '
Inclination: 90.19 °
Azimuth: 185.62 °
VS: 8,439.03 '

MD: 16254 '
TVD: 7584 '
Inclination: 90.37 °
Azimuth: 182.47 °
VS: 8517.77 '

MD: 163-
TVD: 756-
Inclination:
Azimuth:
VS: 8612





lt-firm, mod
mot, stri, sb
sl halo cut

TVD (ft)

MD: 16,632 '
TVD: 7,589.89 '
Inclination: 88.64 °
Azimuth: 177.36 °
VS: 8,895.61 '

16600'-16700MD: MRLST-med-dk gy-gy brn, sb ply-biky, sft-firm, mod
arg-sily, sl calc, tr bent, cal frag, CHK-lt-med gy, lt-med gy brn, mot, stri, sb
biky-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, tr lt bl flr w/ v sl halo cut

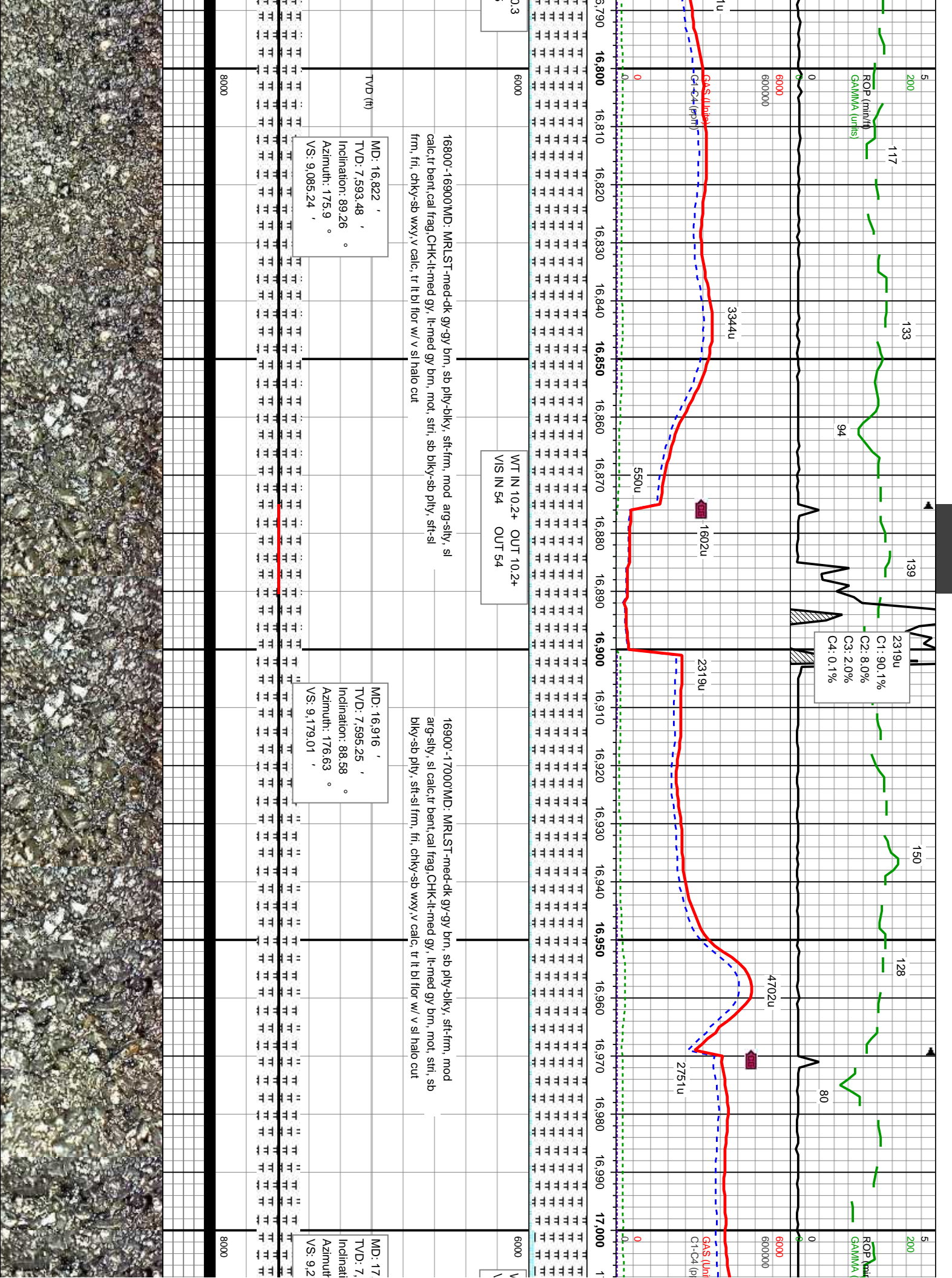
WT IN 10.2+ OUT 10.3
VIS IN 54 OUT 54

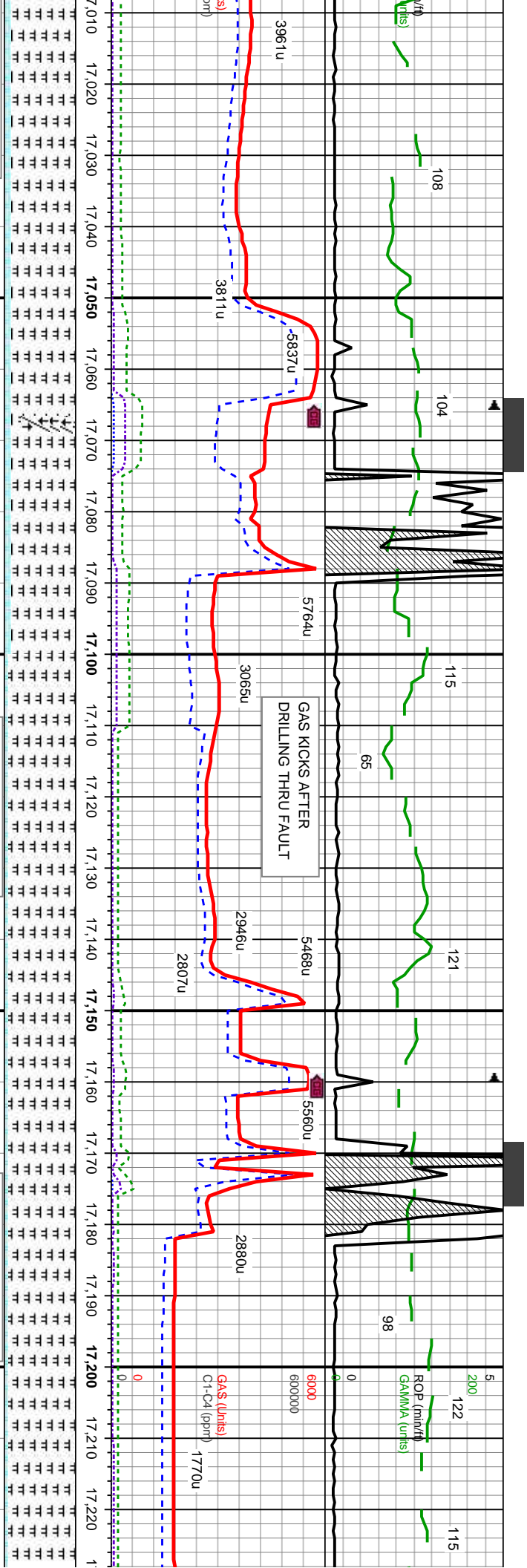
MD: 16,727 '
TVD: 7,591.94 '
Inclination: 88.89 °
Azimuth: 176.92 °
VS: 8,990.46 '

16700'-16800MD: MRLST-med-dk gy-gy brn, sb ply-biky, sft-firm, mod
arg-sily, sl calc, tr bent, cal frag, CHK-lt-med gy, lt-med gy brn, mot, stri, sb
biky-sb ply, sft-sl frm, fri, chky-sb wxy, v calc, tr lt bl flr w/ v sl halo cut

WT IN 10.2+ OUT 11.1
VIS IN 55 OUT 55







WT IN 10.2+ OUT 10.2+
VIS IN 54 OUT 54

WT IN 10.2 OUT 10.2+
VIS IN 55 OUT 54

WT IN 10.2+ OUT 10.2+
VIS IN 54 OUT 49

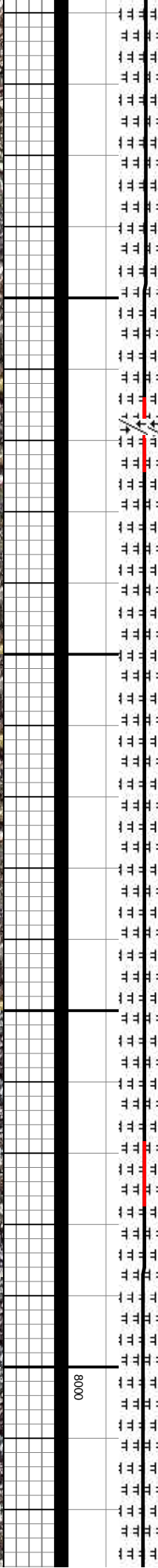
17000-17100MD: MRLST-med-dk gy-gy brn, sb pily-biky, sft-frn, mod arg-sily, sl calc, tr bent, cal frag, CHK-lt-med gy, lt-med gy brn, mot, stri, sb biky-sb pily, sft-sl frn, fri, chky-sb wxy v calc, tr lt bl flr w/ v sl halo cut

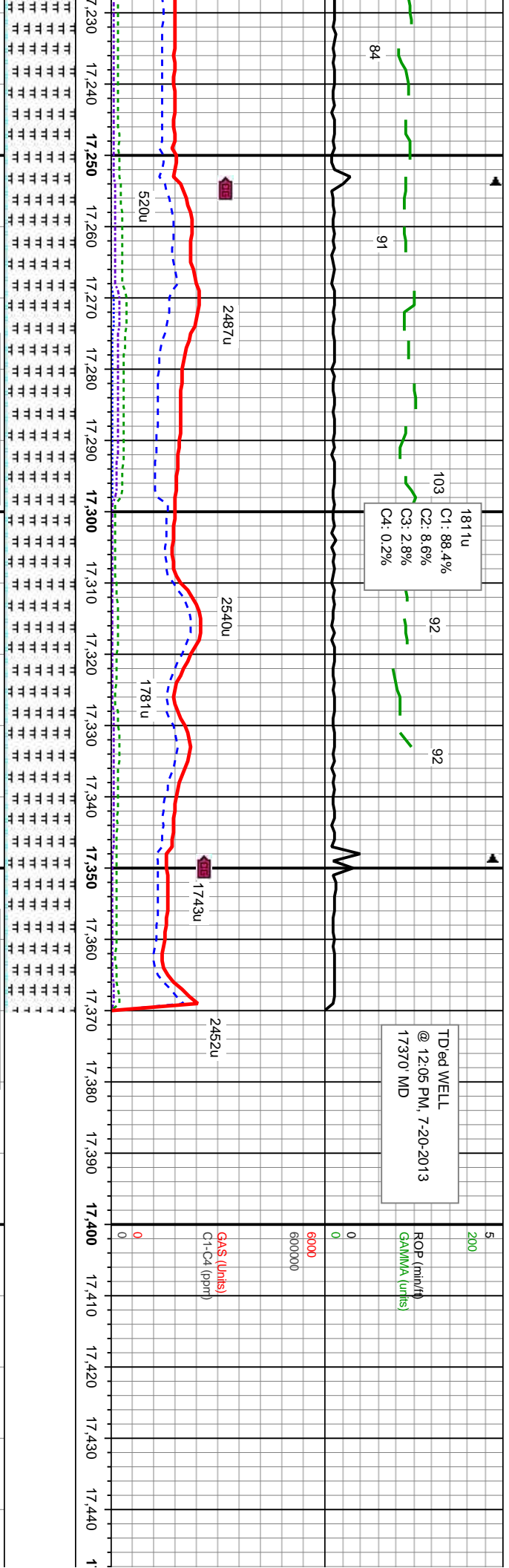
17100-17200MD: MRLST-med-dk gy-gy brn, sb pily-biky, sft-frn, mod arg-sily, sl calc, tr bent, cal frag, CHK-lt-med gy, lt-med gy brn, mot, stri, sb biky-sb pily, sft-sl frn, fri, chky-sb wxy v calc, tr lt bl flr w/ v sl halo cut

17200-17300MD: MRLST-med-dk gy-gy brn, sb pily-biky, sft-frn, mod arg-sily, sl calc, tr bent, cal frag, CHK-lt-med gy, lt-med gy brn, mot, stri, sb biky-sb pily, sft-sl frn, fri, chky-sb wxy v calc, tr lt bl flr w/ v sl halo cut

MD: 17,105 ' TVD: 7,602.67 ' Inclination: 86.73 ° Azimuth: 175.76 ° VS: 9.367.36 '

MD: 17,200 ' TVD: 7,608.19 ' Inclination: 86.61 ° Azimuth: 176.19 ° VS: 9.461.94 '





WT IN 10.2 OUT 10.2
VIS IN 51 OUT 52

WT IN 10.2+ OUT 10.2
VIS IN 49 OUT 50

MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod ent, cal frag, CHK-it-med gy, lt-med gy brn, mot, stri, sb frm, fti, chky-sb wxy, v calc, tr lt bl flor w/ v sl halo cut

17300'-17370MD: MRLST-med-dk gy-gy brn, sb ply-blky, sft-frm, mod arg-sily, sl calc, tr bent, cal frag, CHK-it-med gy, lt-med gy brn, mot, stri, sb blky-sb ply, sft-sl frm, fti, chky-sb wxy, v calc, tr lt bl flor w/ v sl halo cut

MD: 17,294 '
TVD: 7,613.49 '
Inclination: 86.92 °
Azimuth: 175.8 °
VS: 9,565.54 '

MD: 17,317 '
TVD: 7,614.7 '
Inclination: 87.04 °
Azimuth: 175.62 °
VS: 9,578.44 '

MD: 17,370 '
TVD: 7,617.43 '
Inclination: 87.04 °
Azimuth: 175.62 °
VS: 9,631 '

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