

COLUMBINE LOGGING

Scale: 5.69" / 100'
Measured Depth Log

Well Name Prosper Farms 4-65 2-1 4CH

Location Section 2, T4S, R64W

State COLORADO

County ARAPAHOE

Country USA

Rig Number H&P 448

API Number 50050725000

AFE # WAYYU.CDR.0042

Geographic Region DJ BASIN

Field DJ Basin

Spud Date 5/31/2017

Drilling Completed 6/12/2017

Surface Coordinates Section 2 T4S R64W

1180' FSL & 510' FWL

Latitude 39° 43' 43.460°N

Longitude 104° 38' 19.560°W

Bottom Hole Coordinates Section 1 T4S R65W

' FSL & ' FEL

Latitude 39°43'36.785"N

Longitude 104°36'49.774"W

Ground Elevation 5632

K.B. Elevation 5658

Logged Interval 6000 **To** 14617

Total Depth 14617

Formation Niobrara **Type of**

Drilling Fluid OBM

Operator

Company Conoco Phillips

Address 600 N. Dairy Ashford Rd.
Houston, TX 77079-1175



Geologist

Name Dave Aldridge

Company Conoco Phillips Central Rockies Implementation

Address Dave.E.Aldridge@conocophillips.com

Office:(832)486-3983

600 N Dairy Ashford EC3 14-W134

Houston, TX 77079



Other


Columbine Logging Inc. Mud Logging Company


Geologists/Geosteers on Location: Robert Davis, Todd Thiesse



Gas Detection: Bloodhound chromatograph gas unit #0316


DD/MMWD: Baker Hughes-Reed Klein, Paul Jevne DD's. Brent Cass LWD



Zone Color Coding


-  Oil


 Note

 Error
-  Condensate


 Core


 Water
-  Gas


 Pressure


 Seal


Rock Types


-  UNKNOWN


 ANHYDRITE


 BENTONITE



 BRECCIA


 CHALK


 CEMENT


 CHERT


 CLAY CHOKE SAND


 CLAYSTONE
-  COAL


 CONGLOMERATE


 DOLOMITE



 DOLOMITIC LIMESTONE


 GRANITE


 GYPSUM


 IGNEOUS


 SIDERITE or LIMONITE


 LIMESTONE
-  MARLSTONE


 METAMORPHIC


 NO SAMPLE



 SALT


 SANDSTONE


 SALT-PEPPER SAND


 SHALE


 SHALE COLORED


 SHALE GRAY
-  SHALY SANDSTONE


 SHALY SILTSTONE

 SILTY SHALE


 SILTSTONE


 TILL


 TUFF


 WELDED TUFF


Fossils


-  GASTROPOD


 INOCERAMUS


 OOLITE


 AMPHIPODA


 OSTRACOD


 BELEMNITE


 BIOCLASTIC


 PELLET


 BRACHIOPOD


 PISOLITE


 PLANT REMAINS


 CERHALOPOD



 CORAL


 CRINOID

 ECHINOID

 FISH

 FORAMINIFERA

 FOSSIL
-  ANHYDRITE

 ARGILLACEOUS

Minerals

Oil Show


-  P PINPOINT
-  V VUGVY

Engineering



-  DEAD


 EVEN


 QUESTIONABLE



 SPOTTED STAINING
-  BIT
-  CONNECTION (UP)


Porosity


-  CONNECTION (DOW)
-  CONNECTION GAS



 CONNECTION GA


 TRIP GAS


 TRIP GAS (LEFT)
-  INTERCRYSTALLINE


 INTEROOLITIC

 MOLDIC

 ORGANIC
-  DOWN TIME GAS

 DOWN TIME GAS

 CORE - LOST

 CORE - RECOVERABLE

Accessories

ARGILLITE GRAIN	↑ HEAVY MINERAL
BENTONITE	Ⓚ KAOLIN
BITUMENOUS SUBSTANCE	Ⓜ MARCASTE
↳ BRECCIA FRAGMENTS	↳ MARLSTONE
↳ CALCAREOUS	↳ MICACEOUS
↳ CARBONACEOUS FLAKES	↳ MINERAL CRYSTALS
↳ CHITCK	↳ NODULES
↳ CHITLT	↳ PHOSPHATE PELLETS
↳ COAL - THIN BEDS	↳ PYRITE
↳ DOLOMITC	↳ FILL CAST
↳ FELDSPAR	↳ SANDY
FERRUGINOUS PELLET	↳ SIDERITE
FERRUGINOUS	↳ SILICEOUS
↳ GLAUCONITE	↳ SILTY
↳ GYPSIFEROUS	↳ TUFFACEOUS

Other Symbols

[illegible]



ROP
ROP ———
GAMMA ———

Columbine Logging Inc. Rigged Up 2 man
logging 6/4/2017 Chromatograph Gas Unit
#0316, began logging from 6000' MD at 16:56
MDT on 6/5/2017

Gamma Data and Survey Data Provided by
Baker Hughes

Gas Data From Bloodhound Unit #0316, data
imported via Pason and Gaschart

Total Gas & Chromatograph
GAS ———
C1 ———
C2 ———
C3 ———
C4 ———

Depth Labels

% Lith

Well Bore
TVD ———

Images

Provided for

ConocoPhillips

Pr

Bit Data

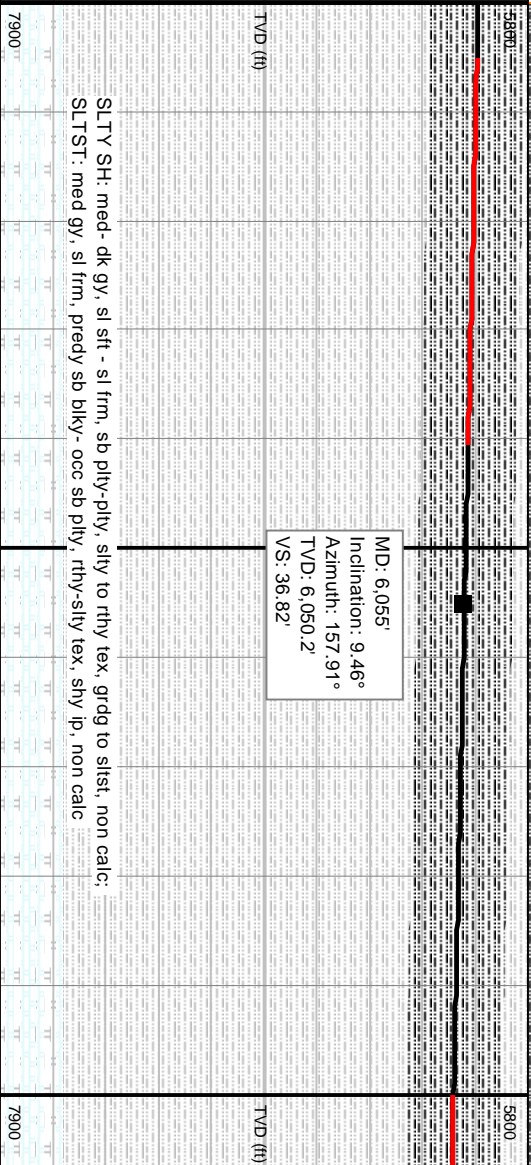
Bit #: 1
Type: HCC AT505F
Size: 8.5
Depth In: 2,176'
Depth Out: 7,656'
Jets: 5x14
SN: 7163766

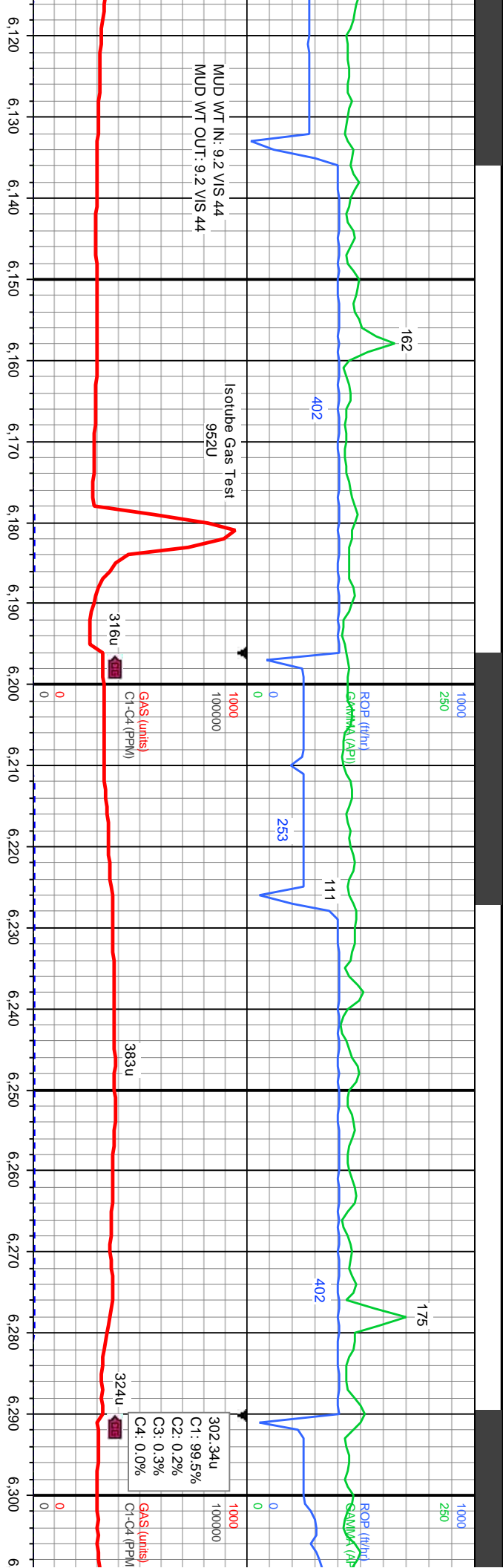
Mud motor is 1.3°
Survey is 46.45' behind bit
Gamma is 43.04' behind bit

ROP: 403 ft/hr
RPM: 30 rpm
SPP: 4152 PSI
STRK 1: 101 SPM
STRK 2: 101 SPM
WOB: 11.3 klbs

MD: 6,055'
Inclination: 9.46°
Azimuth: 157.91°
TVD: 6,050.2'
VS: 36.82'

SLTY SH: med-dk gy, sl sft - sl frm, sb ply-ply, silty to rthy tex, grdg to slst, non calc;
SLTST: med gy, sl frm, predy sb blk-occ sb ply, rthy-silty tex, shv jp, non calc





MD: 6,149'
Inclination: 11.9°
Azimuth: 161.68°
TVD: 6,142.57'
VS: 44.37'

SH: med- dk gy, sl sft - sl frm, sb ply-pty, silty to rthy tex, grdg to slst, non calc;
T: med gy, sl frm, predy sb blk- occ sb ply, rthy-silty tex, shy ip, non calc

TVD (ft)

MD: 6,243'
Inclination: 13.42°
Azimuth: 160.7°
TVD: 6,234.28'
VS: 62.92'

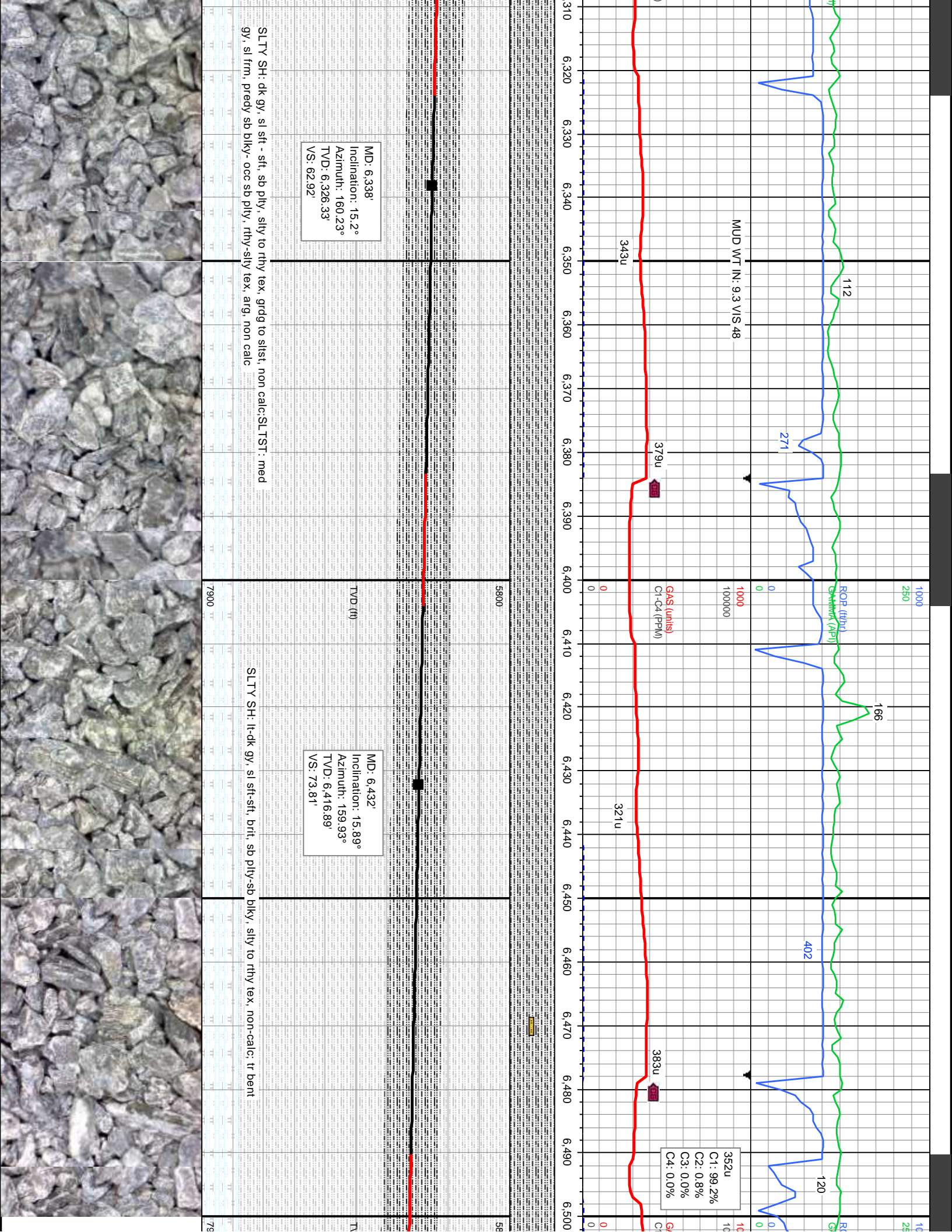
SLTY SH: dk gy, sl sft - sft, sb ply, silty to rthy tex, grdg to slst, non calc;
SLTST: med gy, sl frm, predy sb blk- occ sb ply, rthy-silty tex, arg, non calc

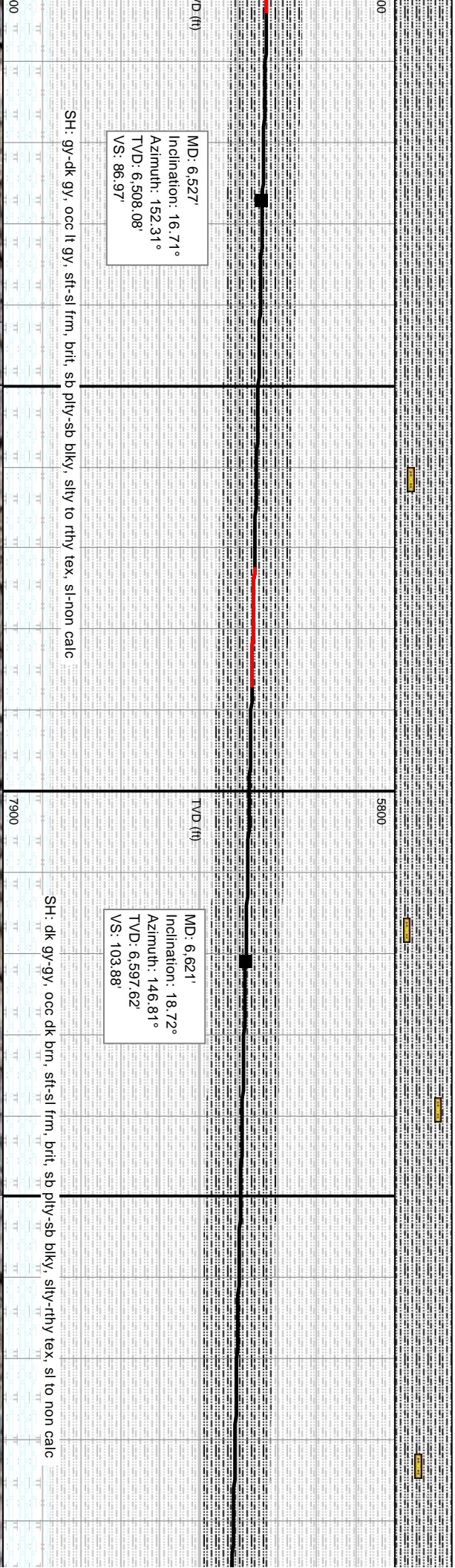
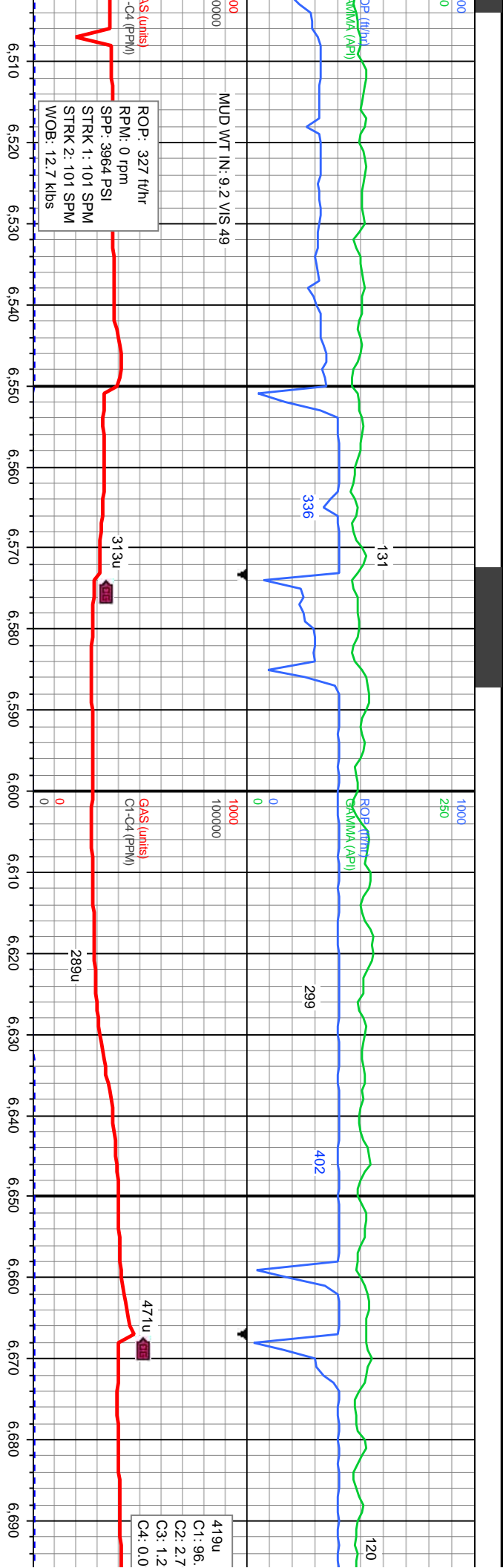
TVD (ft)

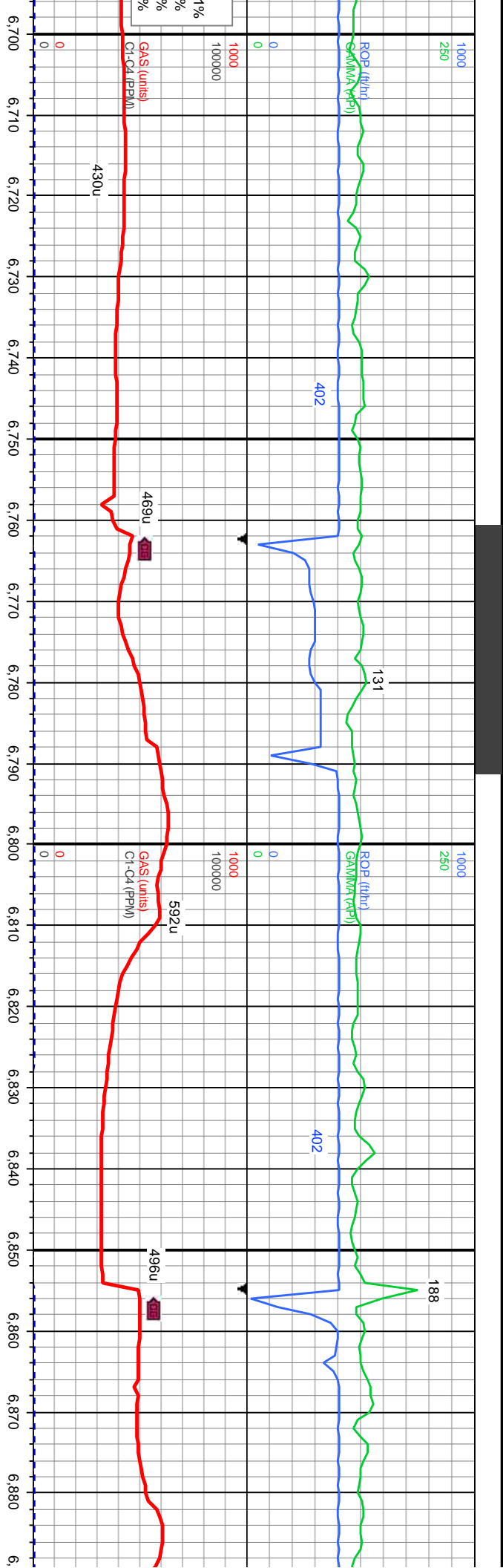
302.34u
C1: 99.5%
C2: 0.2%
C3: 0.3%
C4: 0.0%

Gas (units)
C1-C4 (PPM)







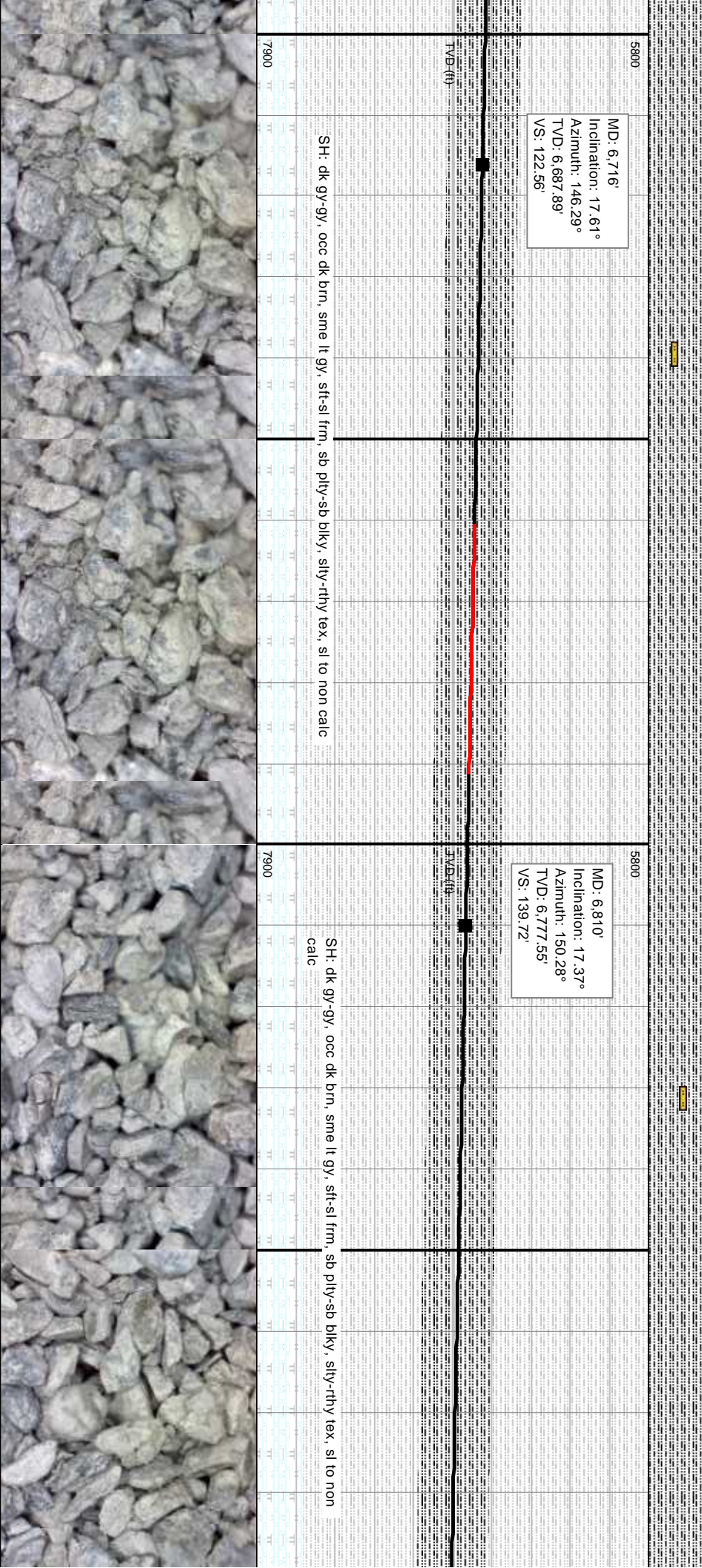


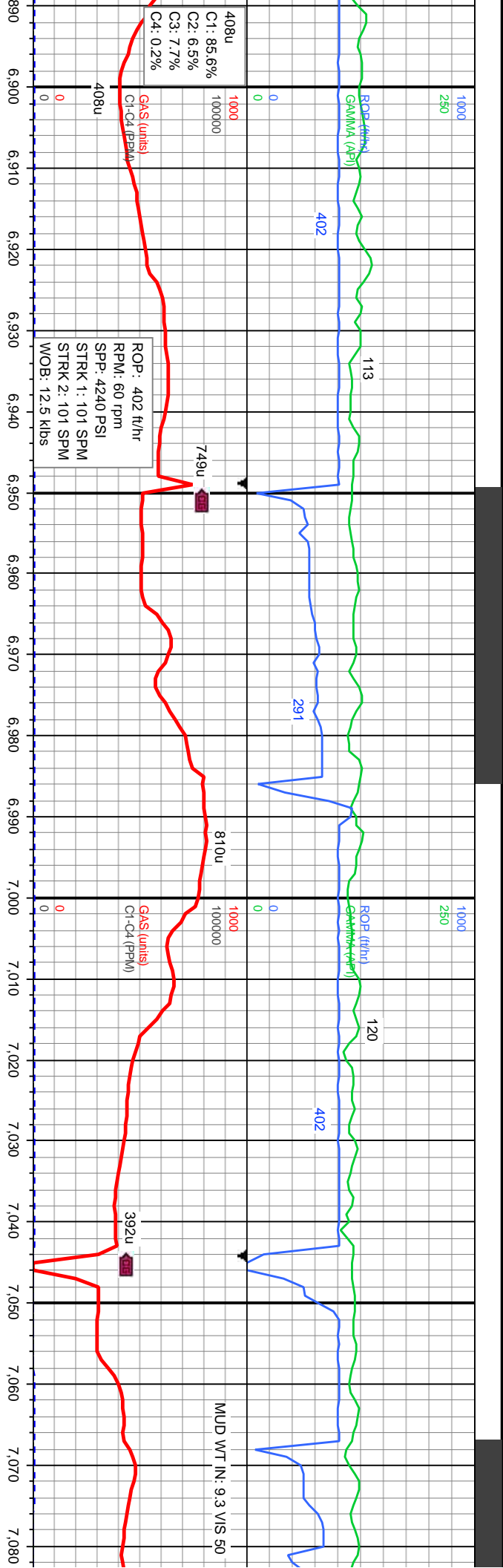
MD: 6,716'
Inclination: 17.61°
Azimuth: 146.29°
TVD: 6,687.89'
VS: 122.56'

MD: 6,810'
Inclination: 17.37°
Azimuth: 150.28°
TVD: 6,777.55'
VS: 139.72'

SH: dk gy-gy, occ dk brn, sme lt gy, stf-sf frm, sb ply-sb blk, silty-rthy tex, sl to non calc

SH: dk gy-gy, occ dk brn, sme lt gy, stf-sf frm, sb ply-sb blk, silty-rthy tex, sl to non calc



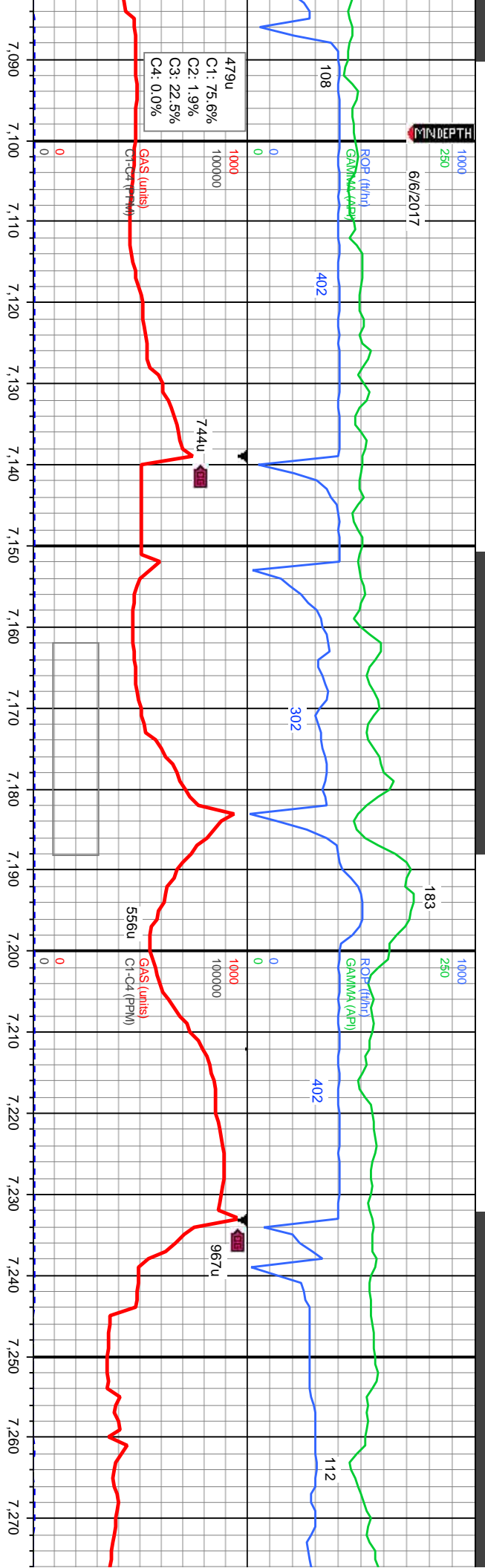


MD: 6.905'
Inclination: 16.12°
Azimuth: 149.96°
TVD: 6.868.51'
VS: 155.63'

SH: gy-dk gy, sme dk brn, sft-sl frm, sb ply-sb blk, silty-rthy tex, sl-non calc

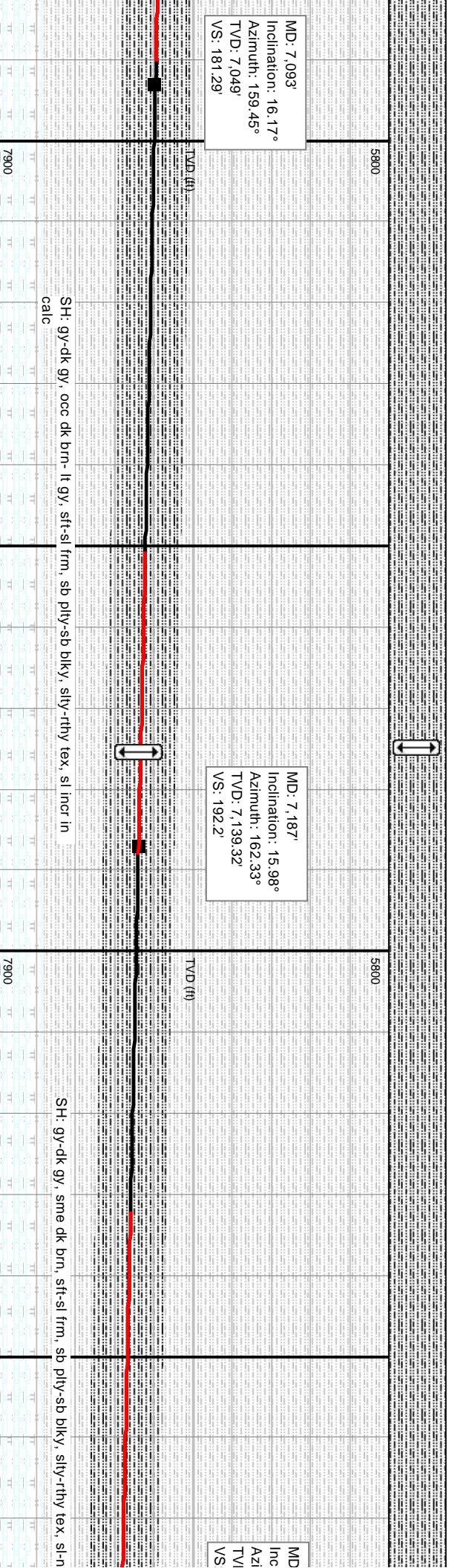
MD: 6.999'
Inclination: 16.4°
Azimuth: 158.19°
TVD: 6.958.77'
VS: 169.38'

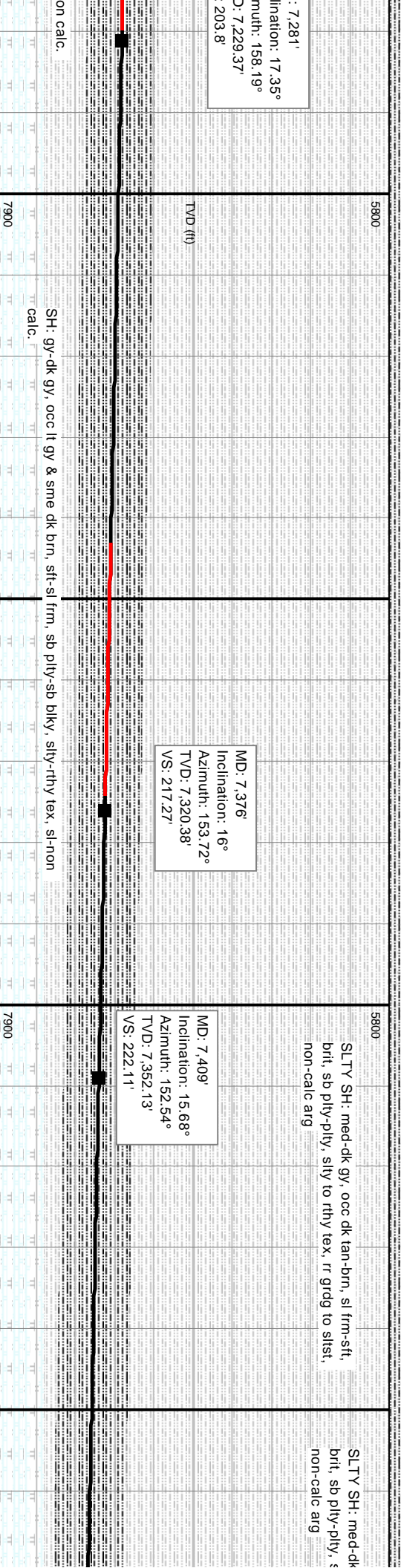
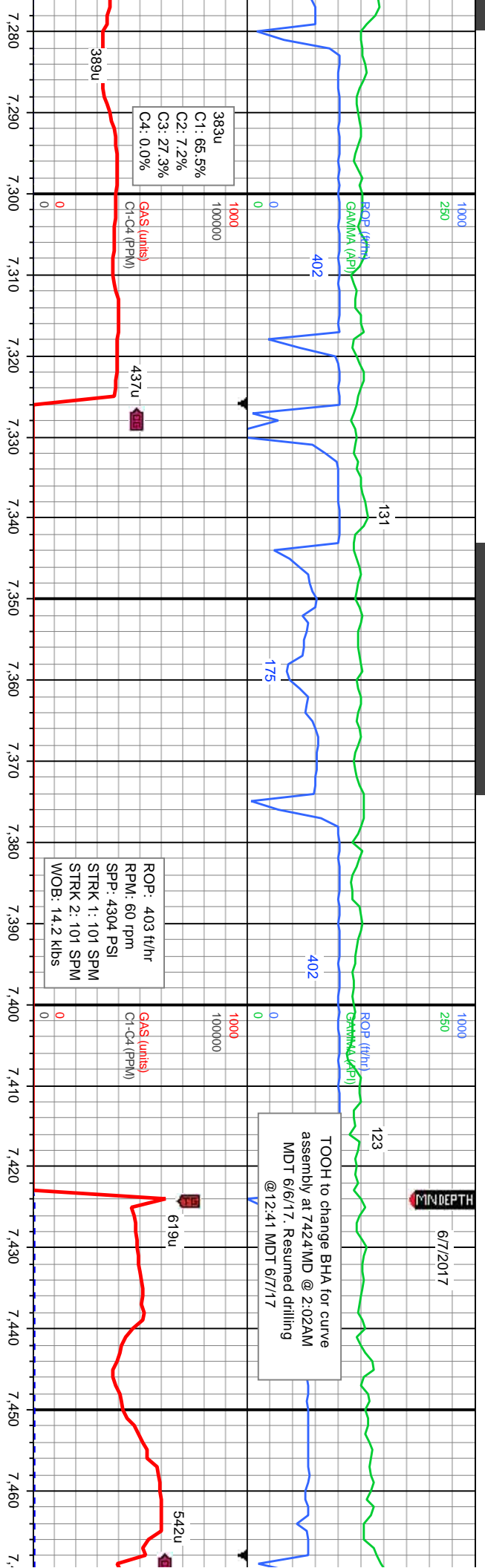
SH: gy-dk gy, occ dk brn- lt gy, sft-sl frm, sb ply-sb blk, silty-rthy tex, sl-calc

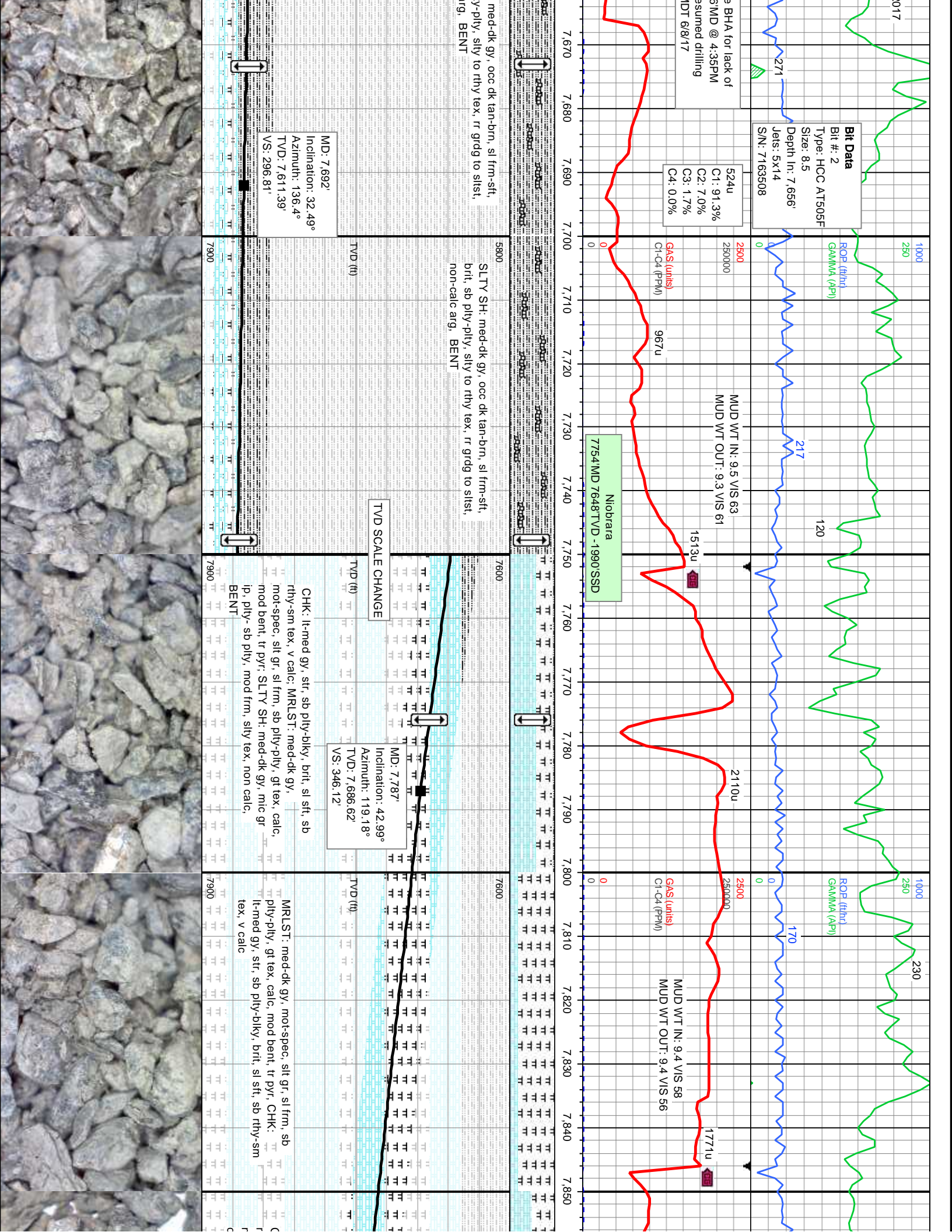


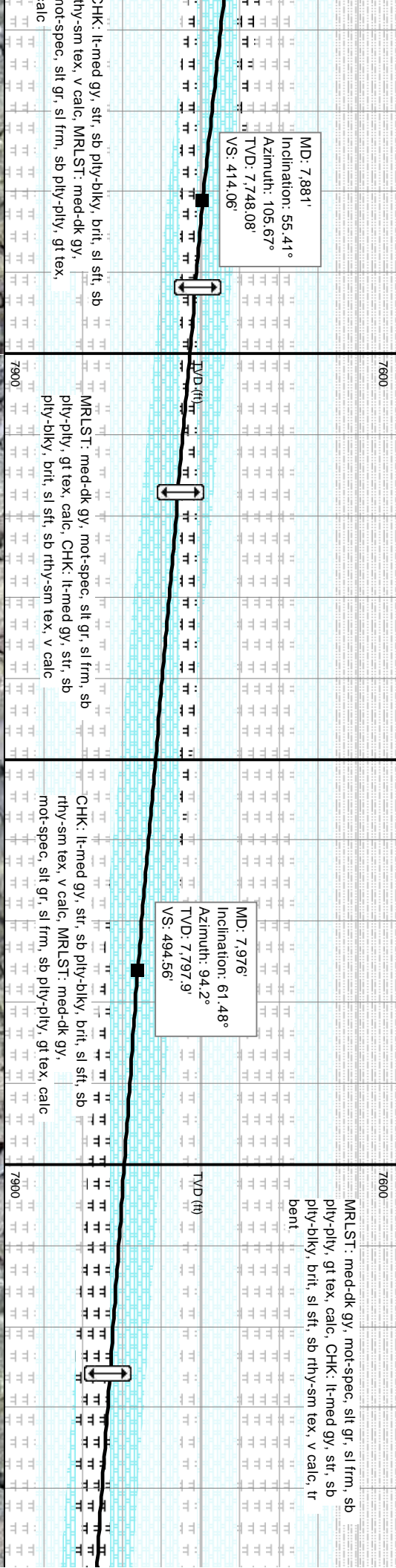
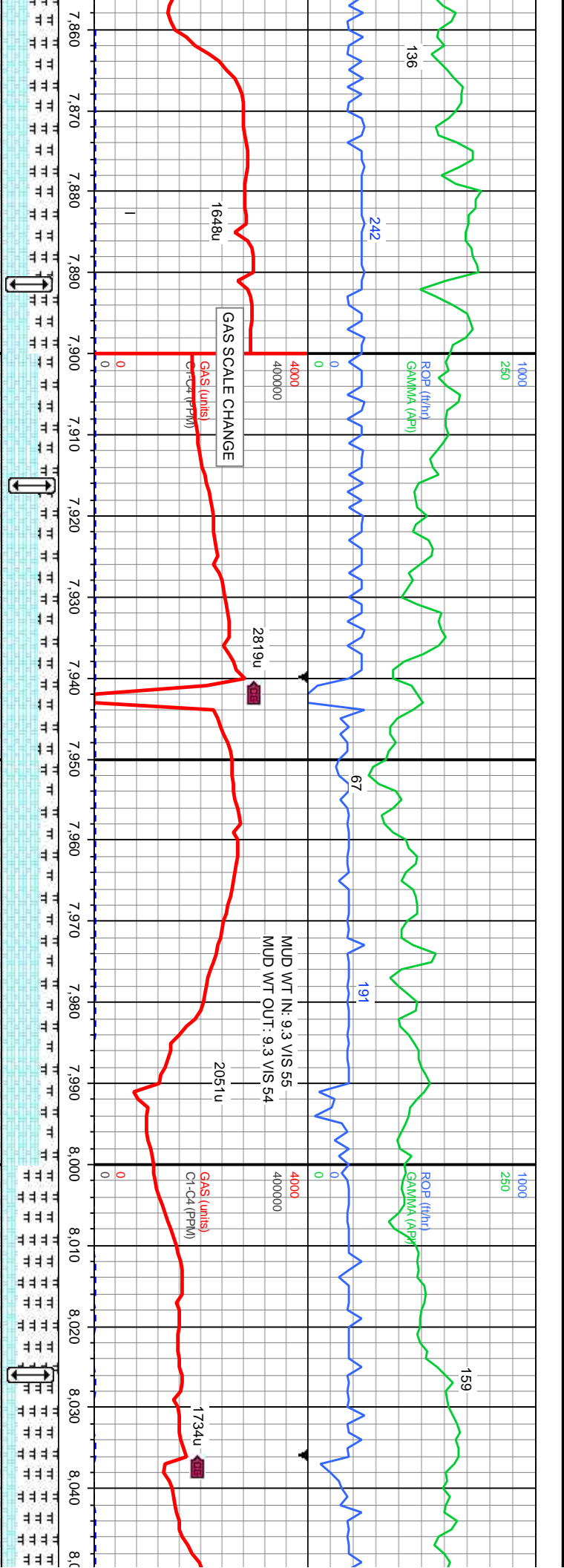
MD: 7.093
Inclination: 16.17°
Azimuth: 159.45°
TVD: 7.049'
VS: 181.29'

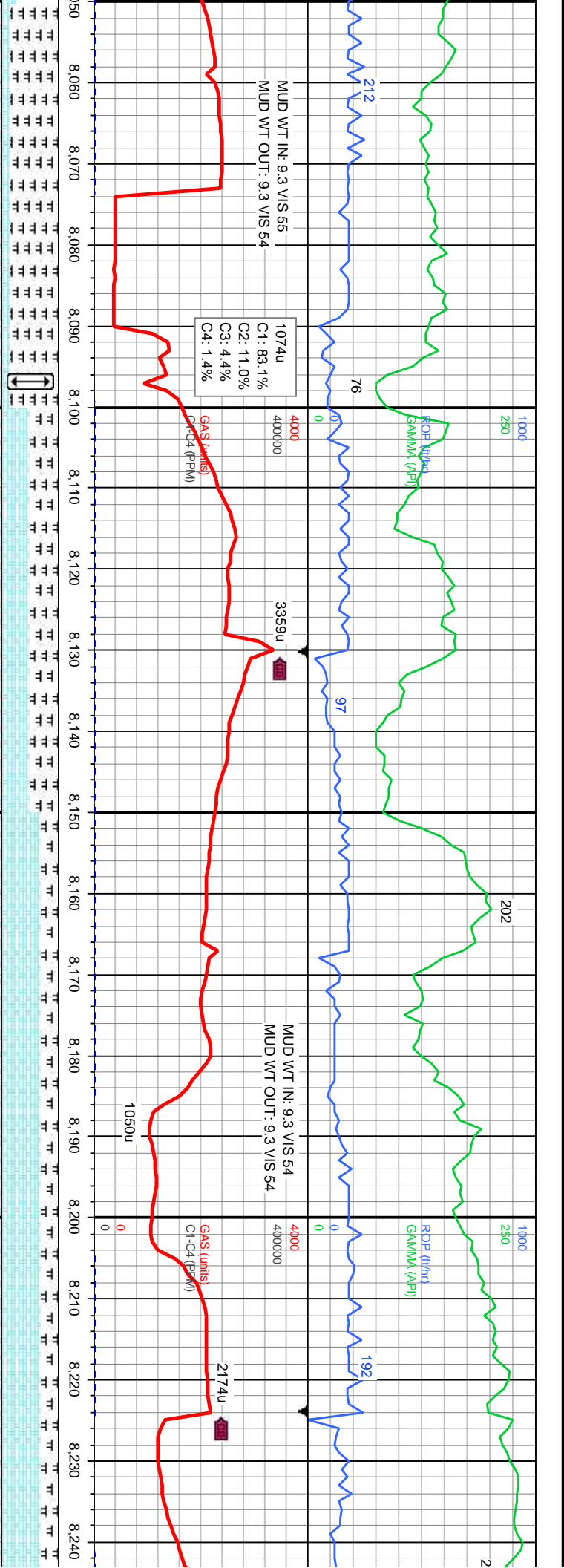
MD: 7.187
Inclination: 15.98°
Azimuth: 162.33°
TVD: 7.139.32'
VS: 192.2'

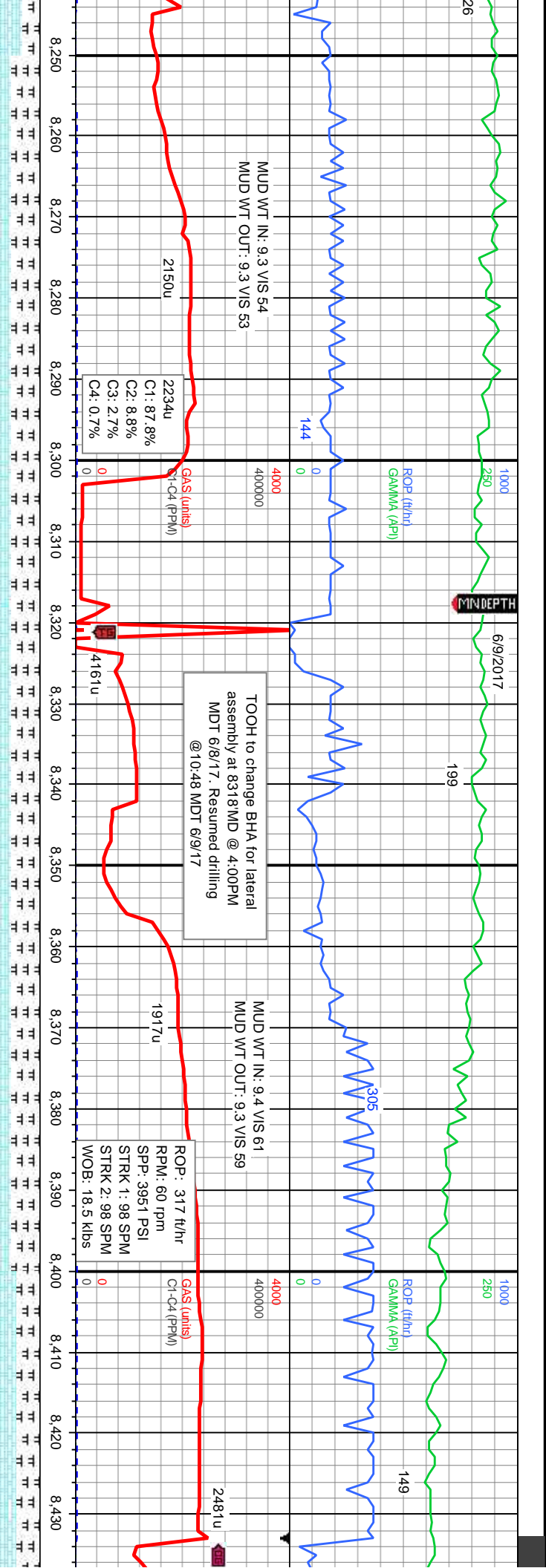












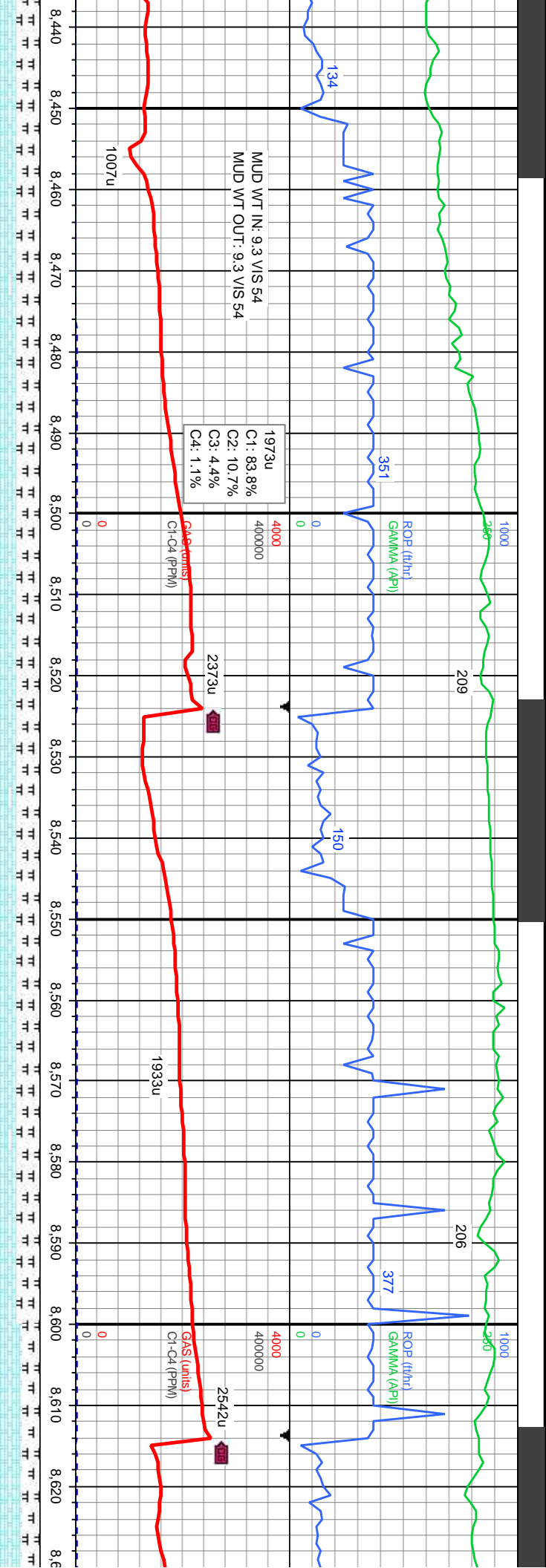
CHK: lt-med gy, str, sb pily-biky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr, MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc

7600
CHK: lt-med gy, str, sb pily-biky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr, MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc

CHK: lt-med gy, str, sb pily-biky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr, MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc

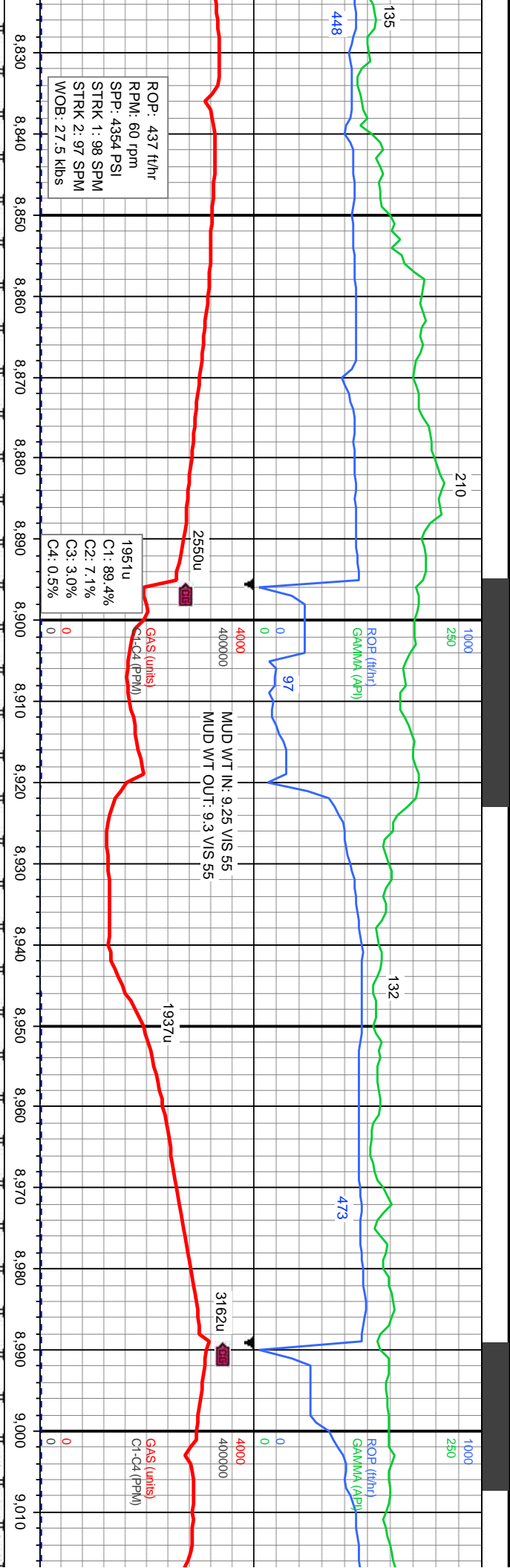
7600
CHK: lt-med gy, str, sb pily-biky, brit, s rthy-sm tex, v calc, tr bent, tr pyr, MRL: med-dk gy, mot-spec, slt gr, sl frm, sb tex, calc





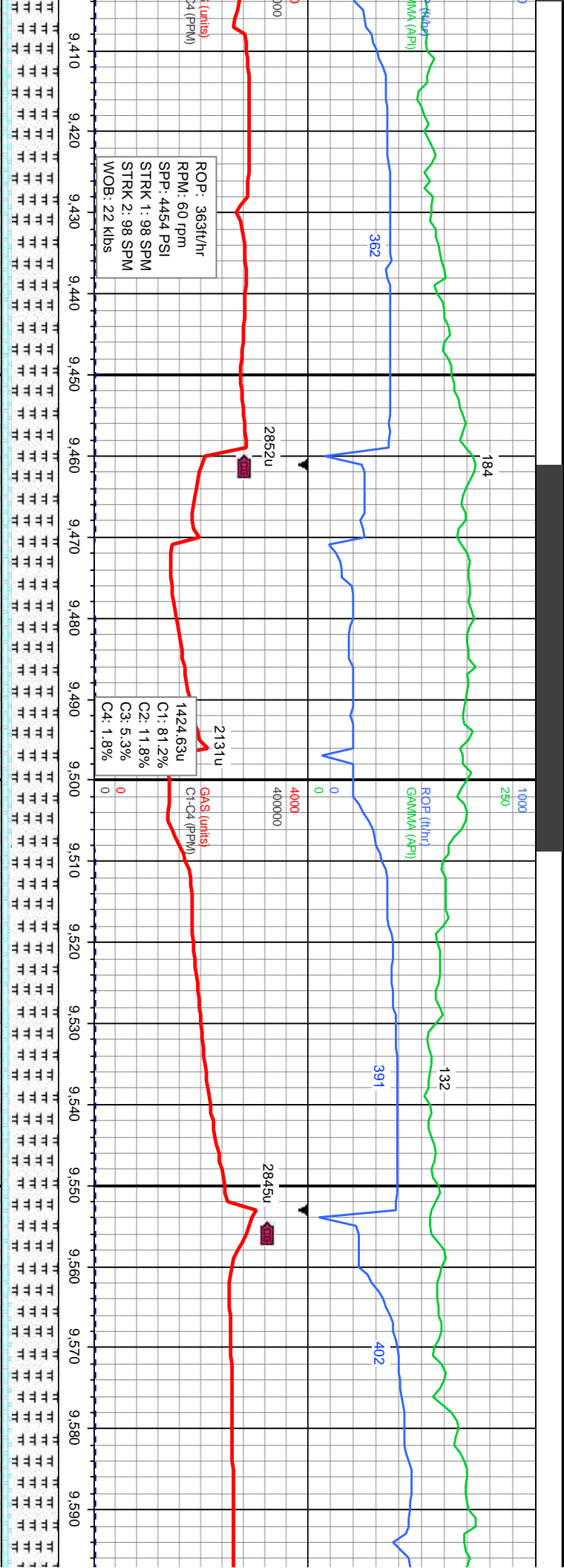
sft, sb ST:	CHK: lt-med gy, str, sb ply-blky, bri, sl sft, sb rhy-sm tex, v calc, tr bent, tr pyr, MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, calc	7600	TVD (ft)	MD: 8.459 Inclination: 91.69° Azimuth: 95.33° TVD: 7.870.54 VS: 963.69'	TVD (ft)	MD: 8.550 Inclination: 91.45° Azimuth: 93.41° TVD: 7.866.04 VS: 1,054.63'	TVD (ft)	7600	CHK: lt-med gy, str, sb ply-blky, bri, sl sft, sb rhy-sm tex, v calc, tr bent, tr pyr, MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, calc





ply-blky, brit, sl sft, sb ent, tr pyr, MRLST: st gr, sl frm, sb ply-pty,	CHK: lt-med gy, str, sb ply-blky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr, MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, calc	7600 CHK: lt-med gy, str, sb ply-blky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr, MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, calc	CHK: lt-med gy, str, sb ply-blky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr, MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, calc	7600 CHK: lt-med gy, str, sb ply-blky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr, MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, calc
8.830 8.840 8.850 8.860 8.870 8.880 8.890 8.900 8.910 8.920 8.930 8.940 8.950 8.960 8.970 8.980 8.990 9.000 9.010	8.830 8.840 8.850 8.860 8.870 8.880 8.890 8.900 8.910 8.920 8.930 8.940 8.950 8.960 8.970 8.980 8.990 9.000 9.010	7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600	7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600	7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600 7600
8.828' Inclination: 92.13° Azimuth: 89.14° VS: 1.331.44'	8.828' Inclination: 92.13° Azimuth: 89.14° VS: 1.331.44'	MD: 8.921' Inclination: 91.69° Azimuth: 89.35° TVD: 7.856.08' VS: 1.423.8'	MD: 8.921' Inclination: 91.69° Azimuth: 89.35° TVD: 7.856.08' VS: 1.423.8'	MD: 9.014' Inclination: 91.69° Azimuth: 89.35° TVD: 7.853.9° VS: 1.516.2'



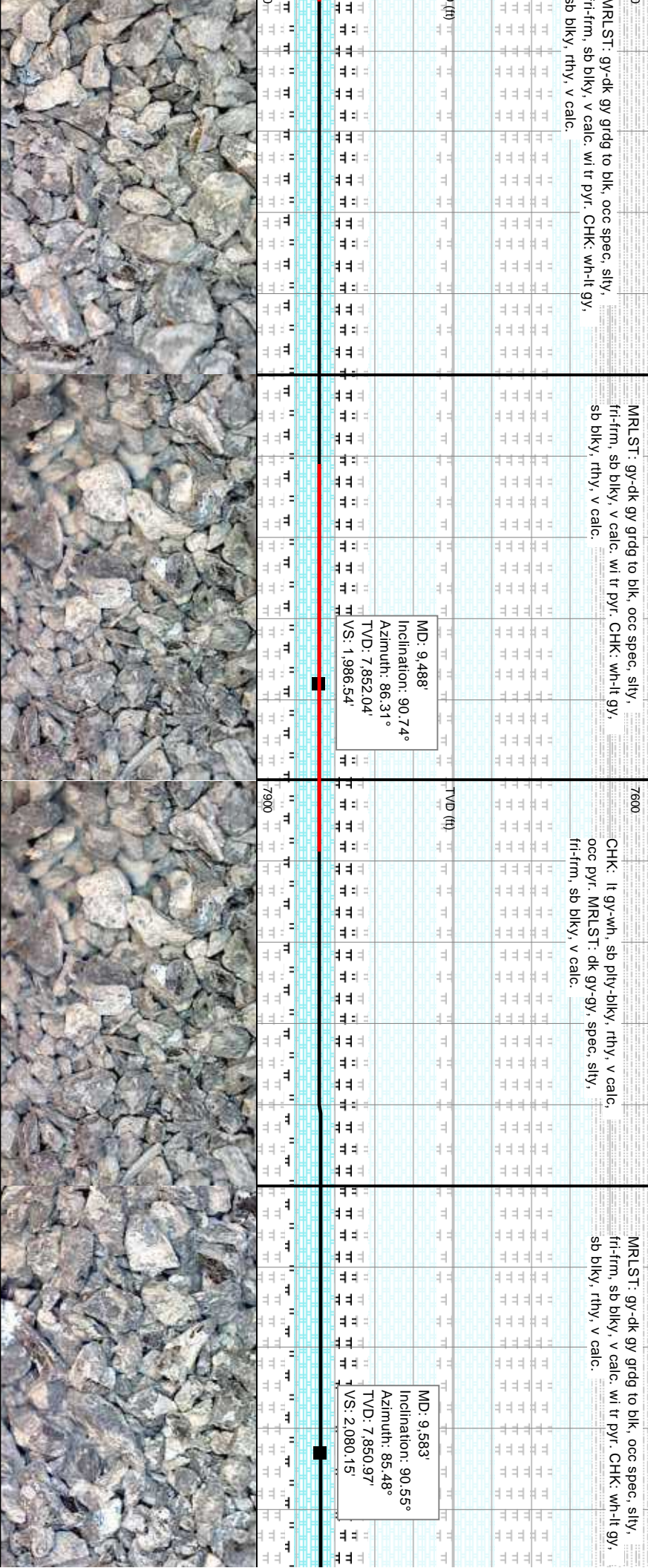


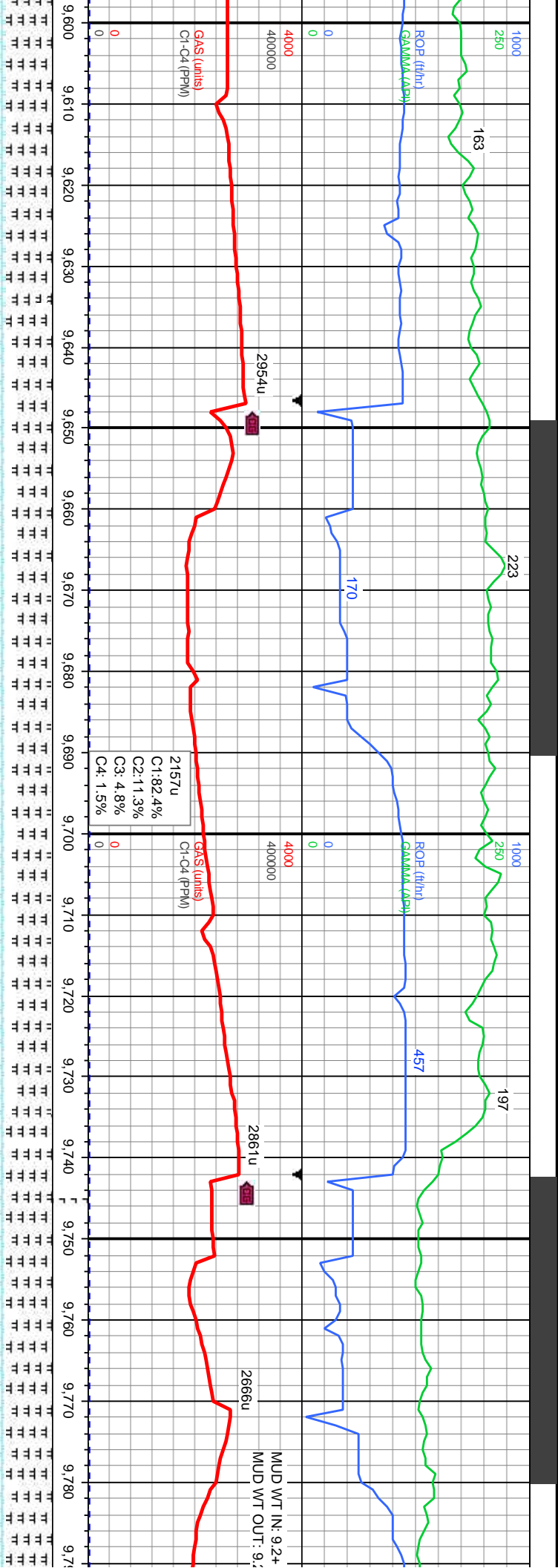
ROP: 363ft/hr
RPM: 60 rpm
SPP: 4454 PSI
STRK 1: 98 SPM
STRK 2: 98 SPM
WOB: 22 klbs

C1: 81.2%
C2: 11.8%
C3: 5.3%
C4: 1.8%

MD: 9.488'
Inclination: 90.74°
Azimuth: 86.31°
TVD: 7.85204'
VS: 1.98654'

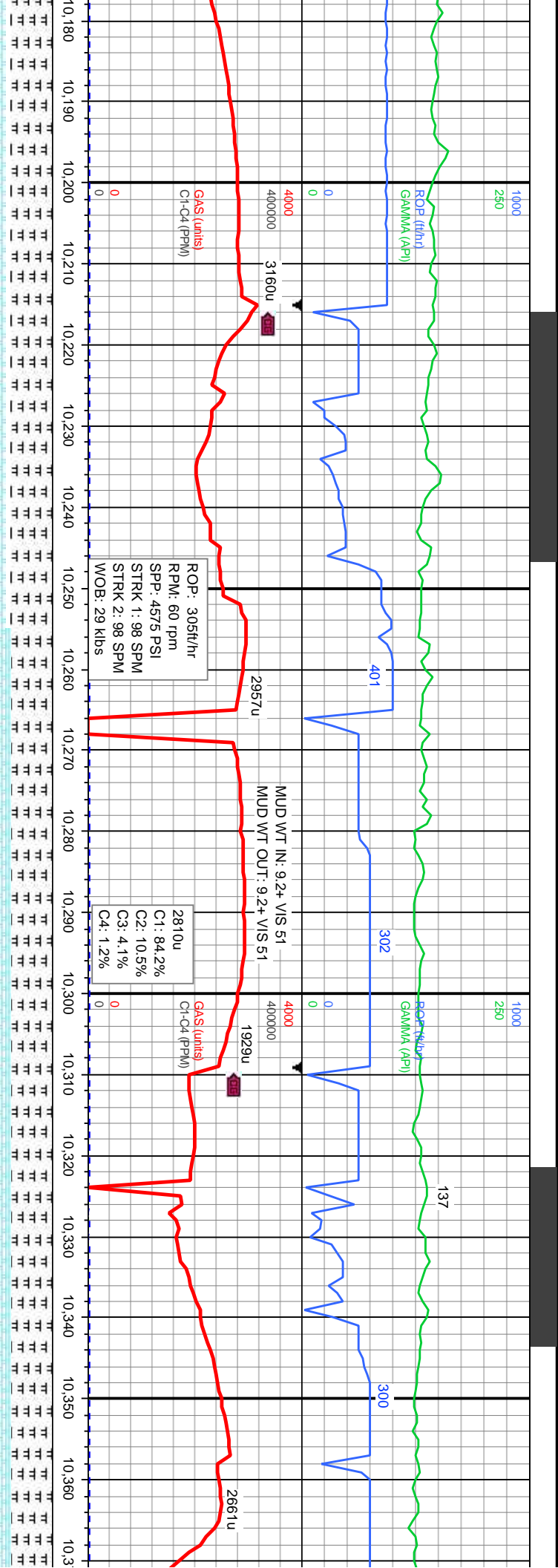
MD: 9.583'
Inclination: 90.55°
Azimuth: 85.48°
TVD: 7.85097'
VS: 2.08015'





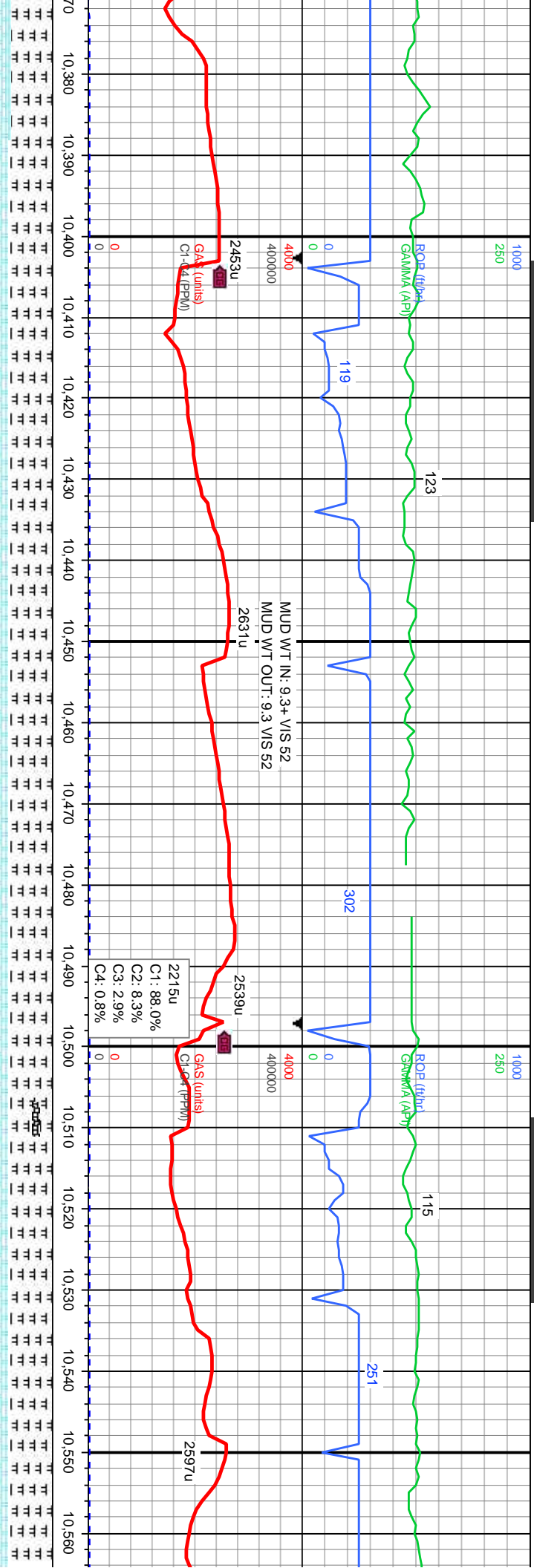
7600	MRSLT: dk gy-blk, occ spec, silty, fri-firm, sb blkly, v calc, sme pyr. CHK: lt gy-wh, sb blkly, rthy, v calc.	7600	MRSLT: gy-dk gy grdg to blk, occ spec, silty, fri-firm, sb blkly, v calc, wt tr pyr. CHK: wh-lt gy, sb blkly, rthy, v calc.	7600	MRSLT: dk gy-blk, occ spec, silty, fri-firm, sb blkly, v calc, sme pyr. CHK: lt gy-wh, sb blkly, rthy, v calc.	7600	MRSLT: dk gy-blk, sme med gy, occ spec, fri-firm, sb blkly, conch frac, v calc, sme pyr. CHK: lt gy-off wh, sb blkly, rthy, stf-firm, v calc.
TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)	
7900		7900		7900		7900	





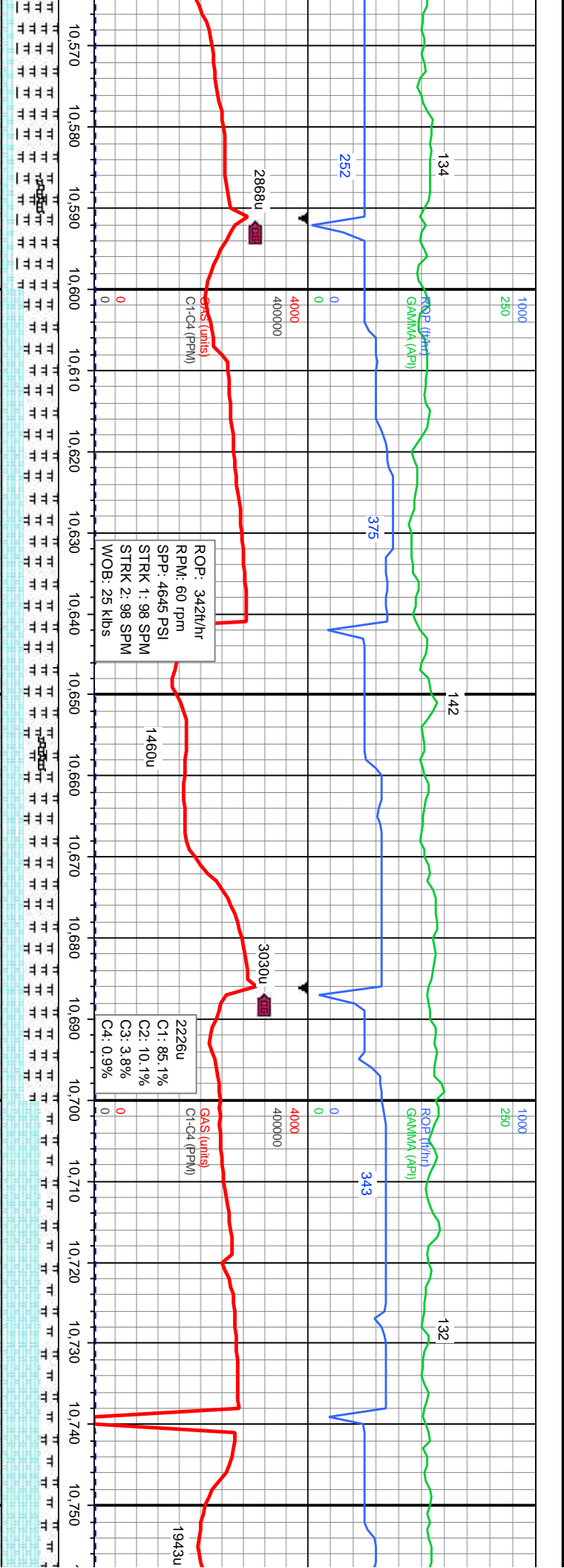
7600	MRSLT: blk-dk gy, ooc dk brn, spec, silty, fri-frm, sb blk, conch frac, v calc, incr tr pyr. CHK: off wh-it gy, sb blk, rthy, sft-ooc frm, v calc, sl decr in percentage.	7600	MRSLT: dk gy, gy, blk, spec, silty, fri-frm, sb blk, conch frac, v calc, sme incr pyr. CHK: lt gy-wh, sb blk, rthy, sft-frm, v calc.	7600	MRSLT: dk gy, gy, blk, spec, silty, fri-frm, sb blk, conch frac, v calc, sme incr pyr. CHK: lt gy-wh, sb blk, rthy, sft-frm, v calc.	7600	MRSLT: dk gy, gy, blk, spec, silty, fri-frm, sb blk, conch frac, v calc, sme incr pyr. CHK: lt gy-wh, sb blk, rthy, sft-frm, v calc.
TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)	
7900		7900		7900		7900	



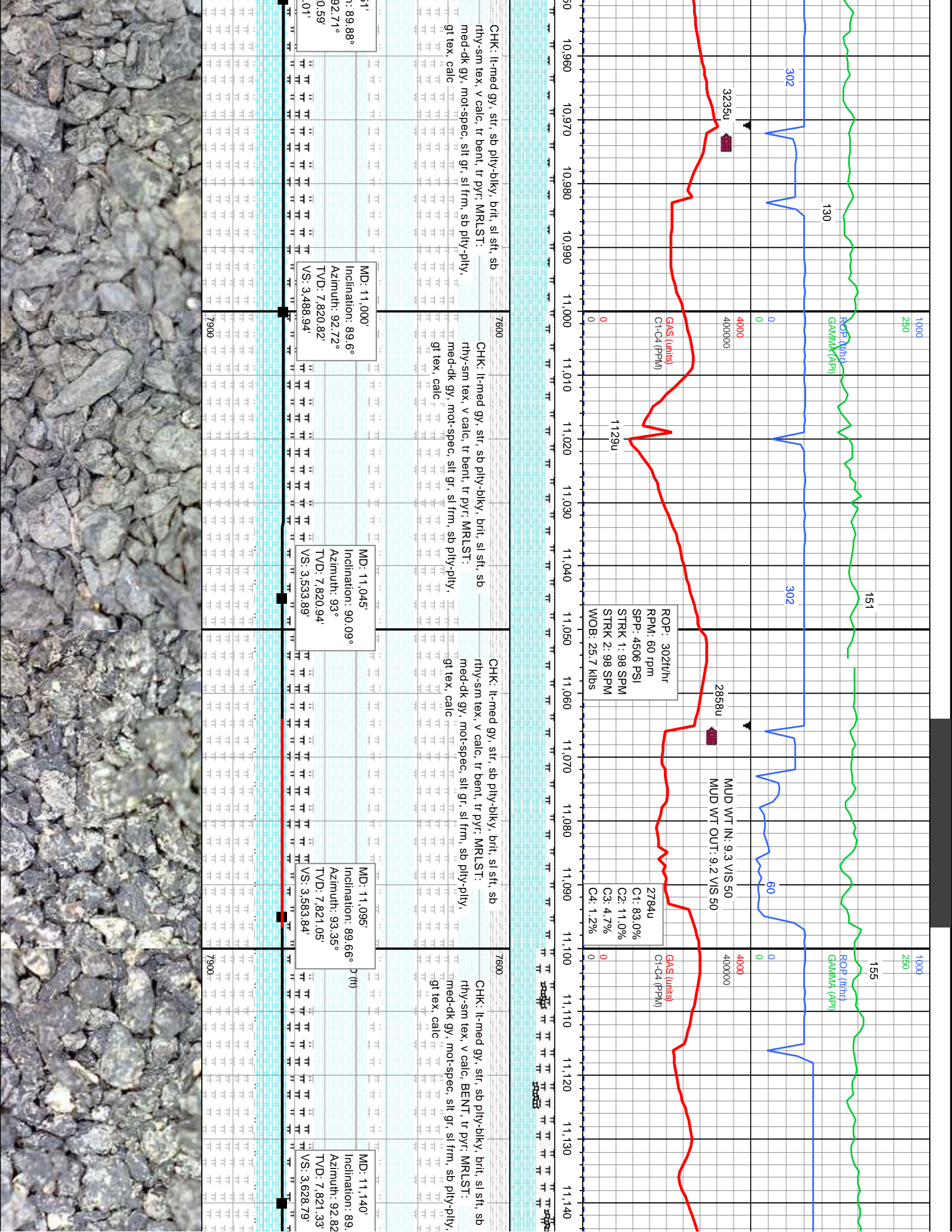


k, spec, silty, fri-frm, sb blk, me pyr. CHK: lt gy-wh, sb calc.		7600	MRLST: blk-dk gy, occ dk brn, spec, silty, fri-frm, sb blk, conch frac, v calc, off wh-lt gy, sb blk, rthy, sft-occ frm, v calc		7600	MRLST: dk gy-gy, blk, occ dk brn, spec in pt, silty, fri-frm, sb blk, conch frac, v calc, tr pyr. CHK: off wh-lt gy, sb blk, rthy, sft-frm, v calc.		7600	MRLST: blk-dk gy, gy, spec in pt, silty, fri-frm, sb blk, conch frac, v calc, sme pyr. CHK: lt gy-wh, sb blk, rthy, sft-occ frm, v calc.		7600	MRLST: b sb blk, cc gy-wh, sb		7600
TVD (ft)		7900	MD: 10.434° Inclination: 90.8° Azimuth: 90.93° TVD: 7.821.7' VS: 2.924.79'		7900	MD: 10.482° Inclination: 90.4° Azimuth: 90.26° TVD: 7.821.2' VS: 2.972.6'		7900	MD: 10.528° Inclination: 89.72° Azimuth: 90.2° TVD: 7.821.15' VS: 3.018.39'		7900			7900

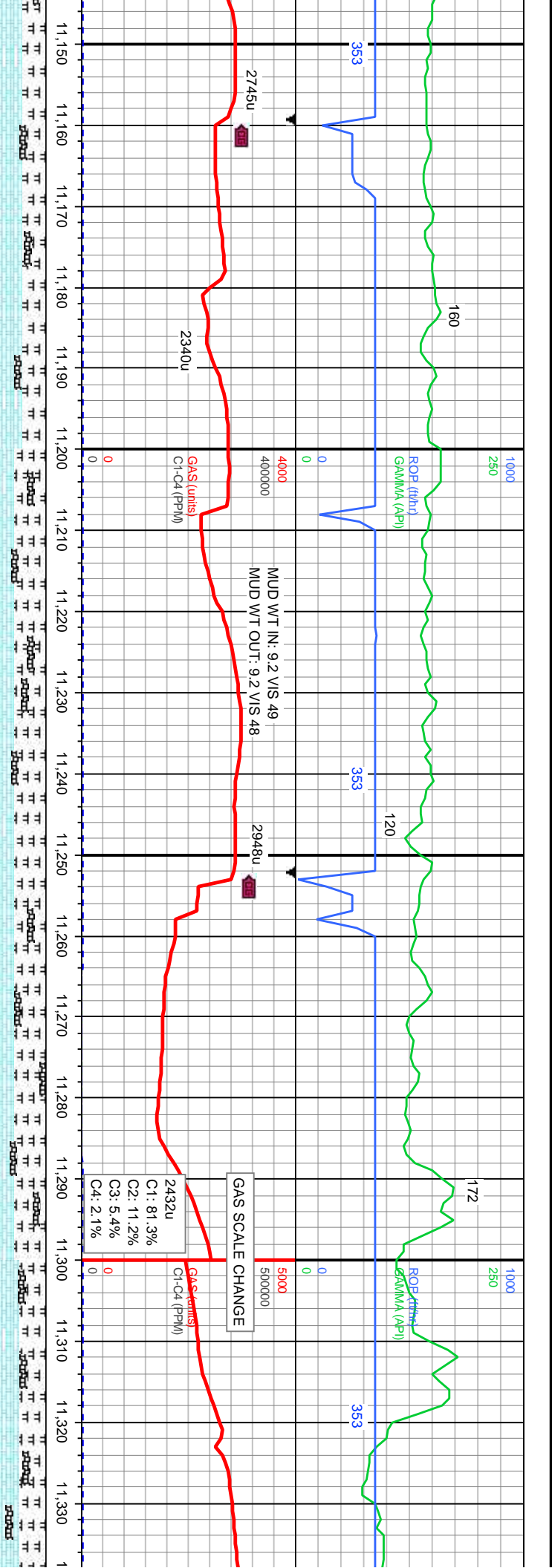




MD: 10.572' Inclination: 89.72° Azimuth: 90.21° TVD: 7.821.37'		MD: 10.623' Inclination: 89.82° Azimuth: 90.29° TVD: 7.821.57'		MD: 10.668' Inclination: 90.25° Azimuth: 90.79° TVD: 7.821.54'		MD: 10.717' Inclination: 90.06° Azimuth: 90.56° TVD: 7.821.41'		MD: 10.717' Inclination: 90.06° Azimuth: 90.56° TVD: 7.821.41'
k-dk gy, gy, spec in pt, silty, fri-fri, mch frac, v calc, sme pyr. CHK: lt blkly, rthy, sft-occ frm, v calc.		MRLST: dk gy-dk brn, blk, spec in pt, silty, fri-fri, sb blkly, conch frac, v calc, sl incr in pyr. CHK: gy-m gy, wh, sb blkly, rthy, sft-fri, v calc.		MRLST: dk gy-dk brn, blk, spec in pt, silty, fri-fri, sb blkly, conch frac, v calc, sl incr in pyr. CHK: gy-m gy, wh, sb blkly, rthy, sft-fri, v calc.		CHK: lt-med gy, str, sb pily-blky, brn, sl sft, sb rthy-sm tex, v calc, lt bent, tr pyr. MRLST: med-dk gy, mot-spec, silt gr, sl frm, sb pily-pily, gt tex, calc		CHK: rthy-med
7600		7600		7600		7600		7600
7900		7900		7900		7900		7900

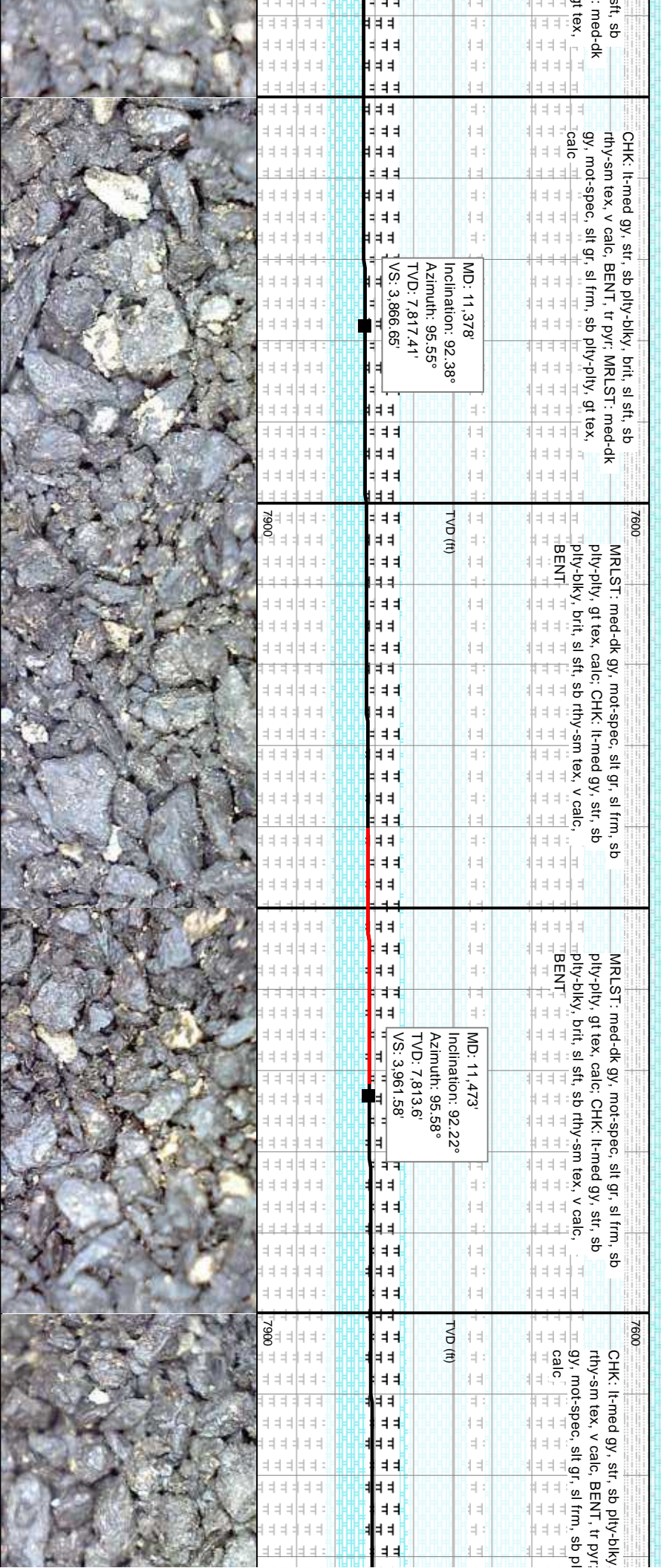


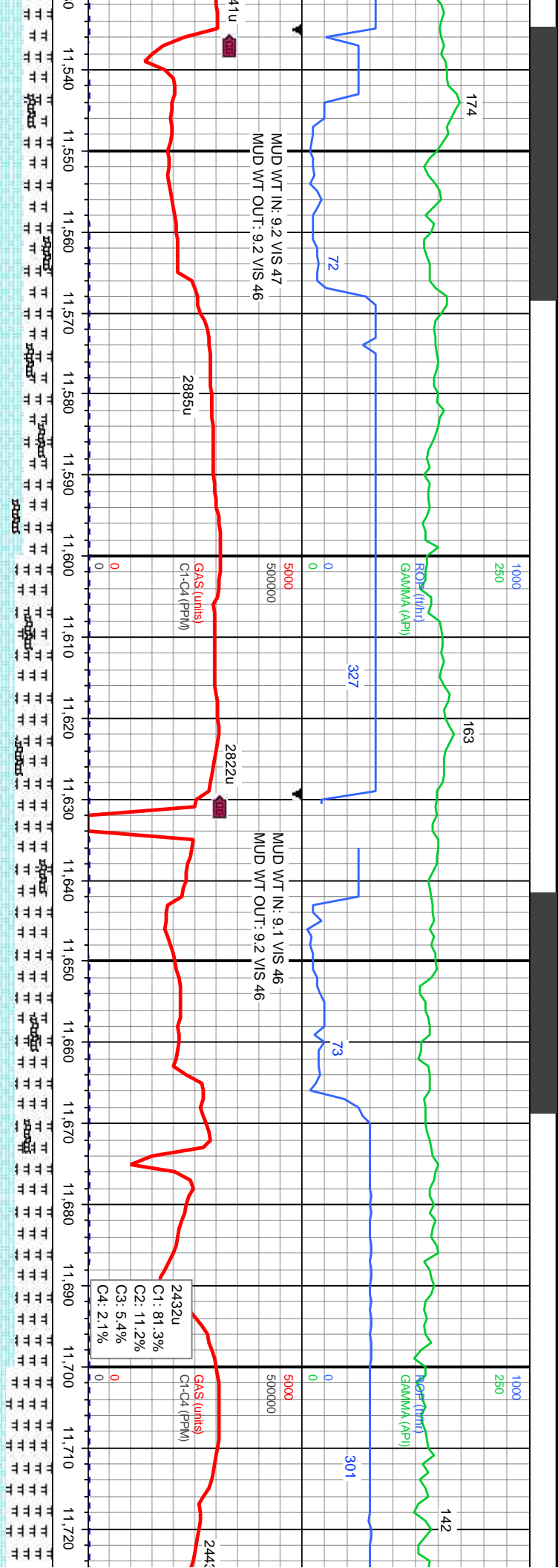
CHK: lt-med gy, str, sb pily-biky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr; MR.LST: med-dk gy, mot-spec, silt gr, sl frm, sb pily-pily, gt tex, calc		MD: 11,000' Inclination: 89.6° Azimuth: 92.72° TVD: 7,820.82' VS: 3,488.94'	
CHK: lt-med gy, str, sb pily-biky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr; MR.LST: med-dk gy, mot-spec, silt gr, sl frm, sb pily-pily, gt tex, calc		MD: 11,045' Inclination: 90.09° Azimuth: 93° TVD: 7,820.94' VS: 3,533.89'	
CHK: lt-med gy, str, sb pily-biky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr; MR.LST: med-dk gy, mot-spec, silt gr, sl frm, sb pily-pily, gt tex, calc		MD: 11,095' Inclination: 89.66° Azimuth: 93.35° TVD: 7,821.05' VS: 3,583.84'	
CHK: lt-med gy, str, sb pily-biky, brit, sl sft, sb rthy-sm tex, v calc, BENT, tr pyr; MR.LST: med-dk gy, mot-spec, silt gr, sl frm, sb pily-pily, gt tex, calc		MD: 11,140' Inclination: 89° Azimuth: 92.82° TVD: 7,821.33' VS: 3,628.79'	



CHK: lt-med gy, str, sb pily-biky, brlt, sl sft, sb rthy-sm tex, v calc, BENT, tr pyr; MRLST: -med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc BENT		MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc; CHK: lt-med gy, str, sb pily-biky, brlt, sl sft, sb rthy-sm tex, v calc, BENT		MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc; CHK: lt-med gy, str, sb pily-biky, brlt, sl sft, sb rthy-sm tex, v calc, BENT		CHK: lt-med gy, str, sb pily-biky, brlt, sl sft, sb rthy-sm tex, v calc, BENT, tr pyr; MRLST: gy, mot-spec, slt gr, sl frm, sb pily-pily, sl calc	
MD: 11,189' Inclination: 90.31° Azimuth: 93.8° TVD: 7,821.35'		MD: 11,284' Inclination: 91.05° Azimuth: 94.44° TVD: 7,820.22'		MD: 11,284' Inclination: 91.05° Azimuth: 94.44° TVD: 7,820.22'		MD: 11,284' Inclination: 91.05° Azimuth: 94.44° TVD: 7,820.22'	
TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)	
7900		7900		7900		7900	







bri, sl sft, sb MRLST: med-dk ply-pty, gt tex,		CHK: lt-med gy, str, sb ply-bky, bri, sl sft, sb rthy-sm tex, v calc, BENT, tr pyr: MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, calc		MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, calc, CHK: lt-med gy, str, sb ply-bky, bri, sl sft, sb rthy-sm tex, v calc, BENT		MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, calc, CHK: lt-med gy, str, sb ply-bky, bri, sl sft, sb rthy-sm tex, v calc, BENT		MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb ply-pty, gt tex, calc, CHK: lt-med gy, str, sb ply-bky, bri, sl sft, sb rthy-sm tex, v calc, BENT	
MD: 11,567' Inclination: 92.15° Azimuth: 95.19° TVD: 7,810.01' VS: 4,055.51'		MD: 11,662' Inclination: 92.13° Azimuth: 94.92° TVD: 7,806.47' VS: 4,150.43'		MD: 11,662' Inclination: 92.13° Azimuth: 94.92° TVD: 7,806.47' VS: 4,150.43'		MD: 11,662' Inclination: 92.13° Azimuth: 94.92° TVD: 7,806.47' VS: 4,150.43'		MD: 11,662' Inclination: 92.13° Azimuth: 94.92° TVD: 7,806.47' VS: 4,150.43'	
TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)	
7900		7900		7900		7900		7900	



Bit Data
Bit #: 4
Type: HCC AT505F
Size: 8.5
Depth In: 11,753'
Jets: 5x15
S/N: 716817

MINDEPTH

6/11/2017

Tripping out at 11753' @ 5:40PM MDT in order to inspect/change the BHA and bit due to inability to slide down. Resumed drilling @ 12:55 MDT on 6/11/2017.

MUD WT IN: 9.2 VIS 46
MUD WT OUT: 9.2 VIS 45

1976u

2190u

GAS (units)
C1-C4 (PPM)

2643u

ROP: 303 ft/hr
RPM: 60 rpm
SPP: 4618 PSI
STRK 1: 99 SPM
STRK 2: 98 SPM
WOB: 19.1 kbs

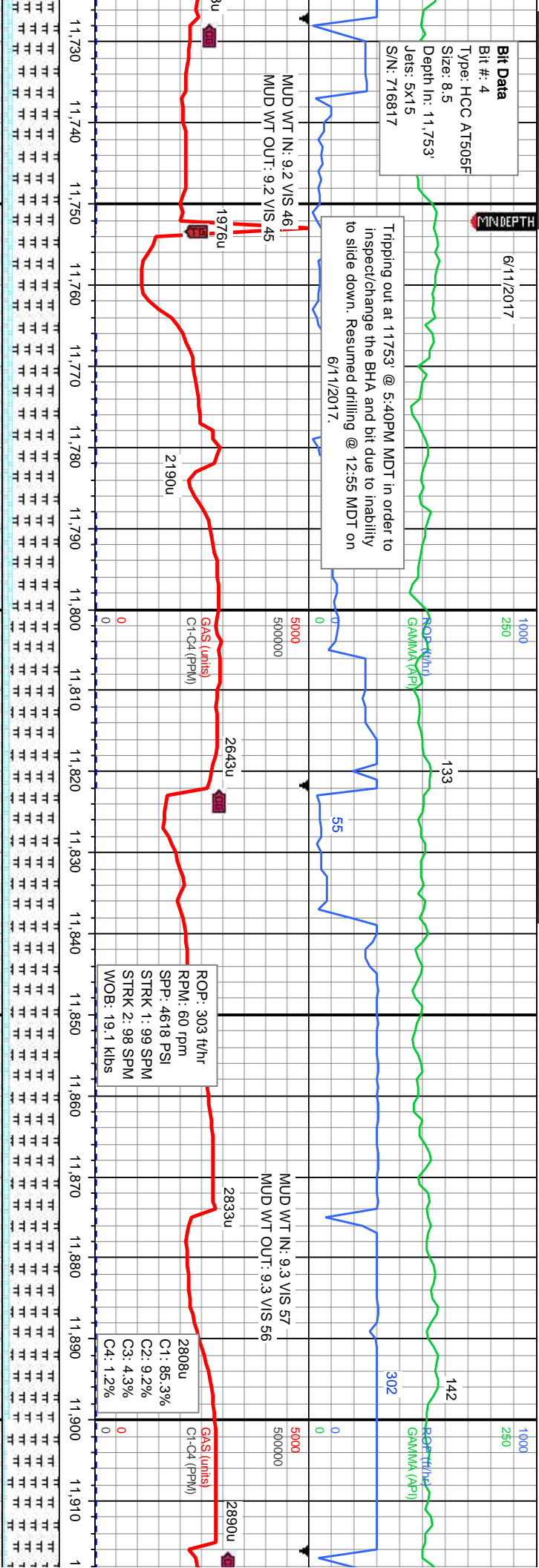
MUD WT IN: 9.3 VIS 57
MUD WT OUT: 9.3 VIS 56

2833u

C1: 85.3%
C2: 9.2%
C3: 4.3%
C4: 1.2%

GAS (units)
C1-C4 (PPM)

2890u



-spec, slt gr, sl frm, sb
AK: lt-med gy, str, sb
thly-sm tex, v calc, tr

MRSLT: med-dk gy, mot-spec, slt gr, sl frm, sb
ply-pty, gt tex, calc, CHK: lt-med gy, str, sb
ply-bkly, brlt, sl sft, sb rthy-sm tex, v calc, tr
bent

MD: 11,756'
Inclination: 92°
Azimuth: 95.21°
TVD: 7,803.08'
VS: 4,244.37'

MRSLT: med-dk gy, mot-spec, slt gr, sl frm, sb
ply-pty, gt tex, calc, CHK: lt-med gy, str, sb
ply-bkly, brlt, sl sft, sb rthy-sm tex, v calc, tr
bent

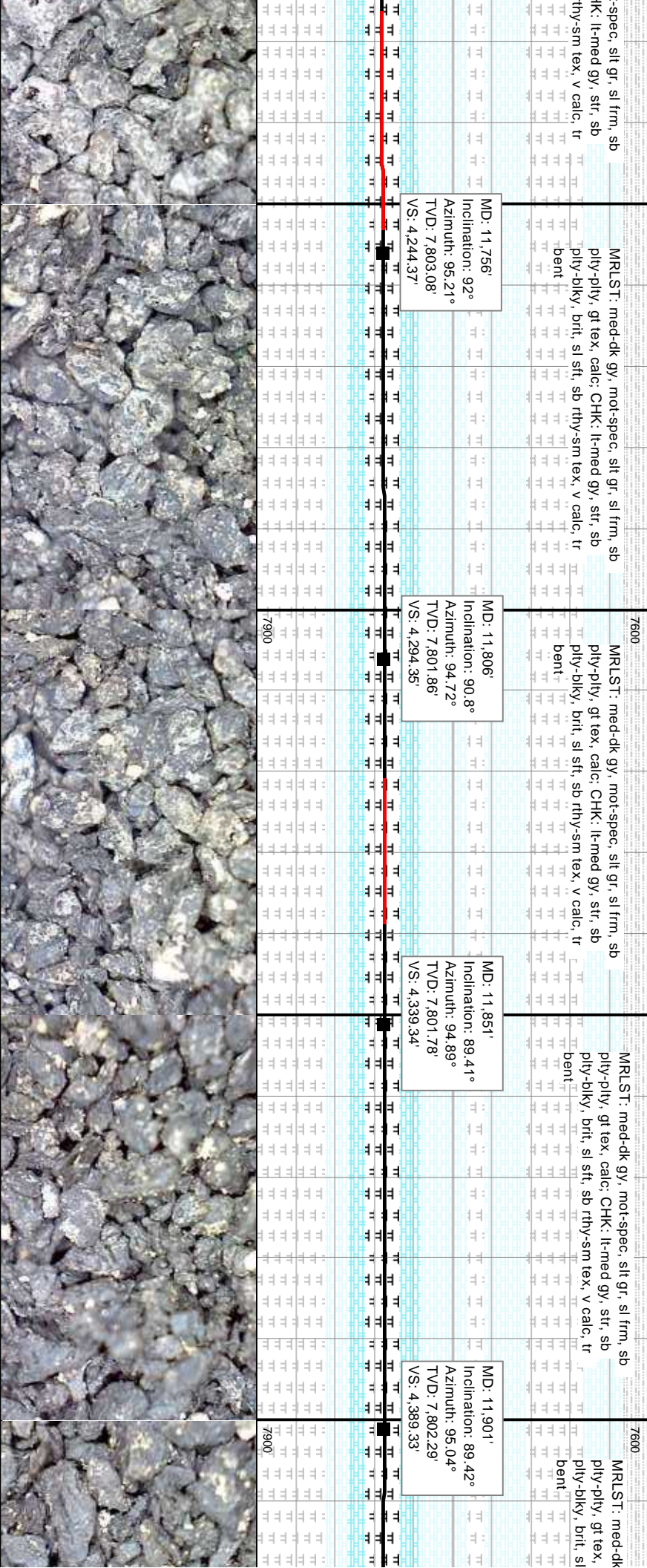
MD: 11,806'
Inclination: 90.8°
Azimuth: 94.72°
TVD: 7,801.86'
VS: 4,294.35'

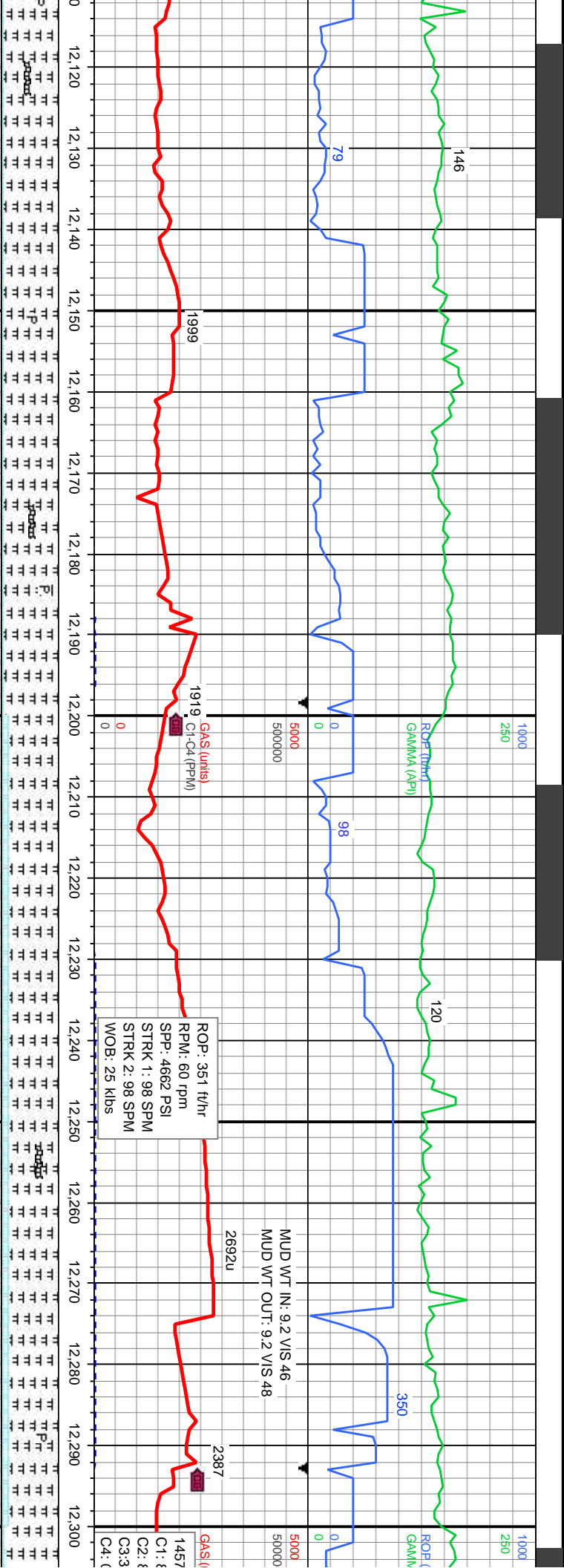
MRSLT: med-dk gy, mot-spec, slt gr, sl frm, sb
ply-pty, gt tex, calc, CHK: lt-med gy, str, sb
ply-bkly, brlt, sl sft, sb rthy-sm tex, v calc, tr
bent

MD: 11,851'
Inclination: 89.41°
Azimuth: 94.89°
TVD: 7,801.78'
VS: 4,339.34'

MRSLT: med-dk
ply-pty, gt tex,
ply-bkly, brlt, sl
bent

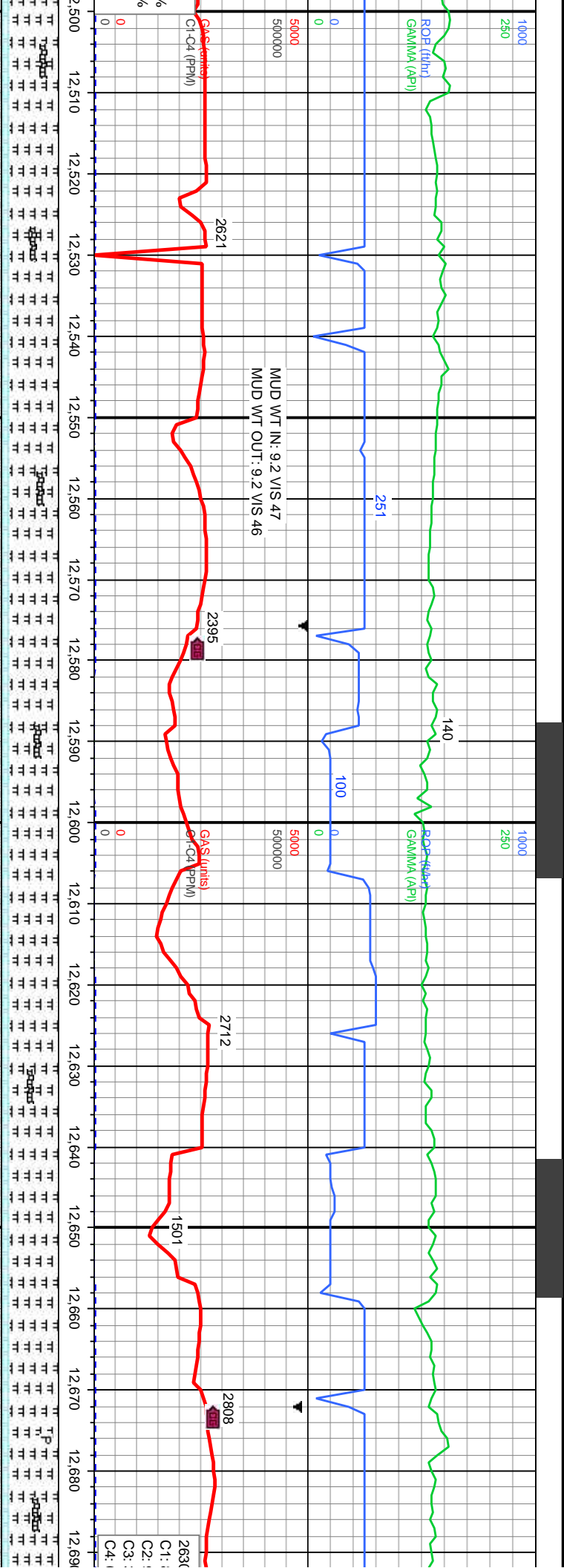
MD: 11,901'
Inclination: 89.42°
Azimuth: 95.04°
TVD: 7,802.29'
VS: 4,389.33'





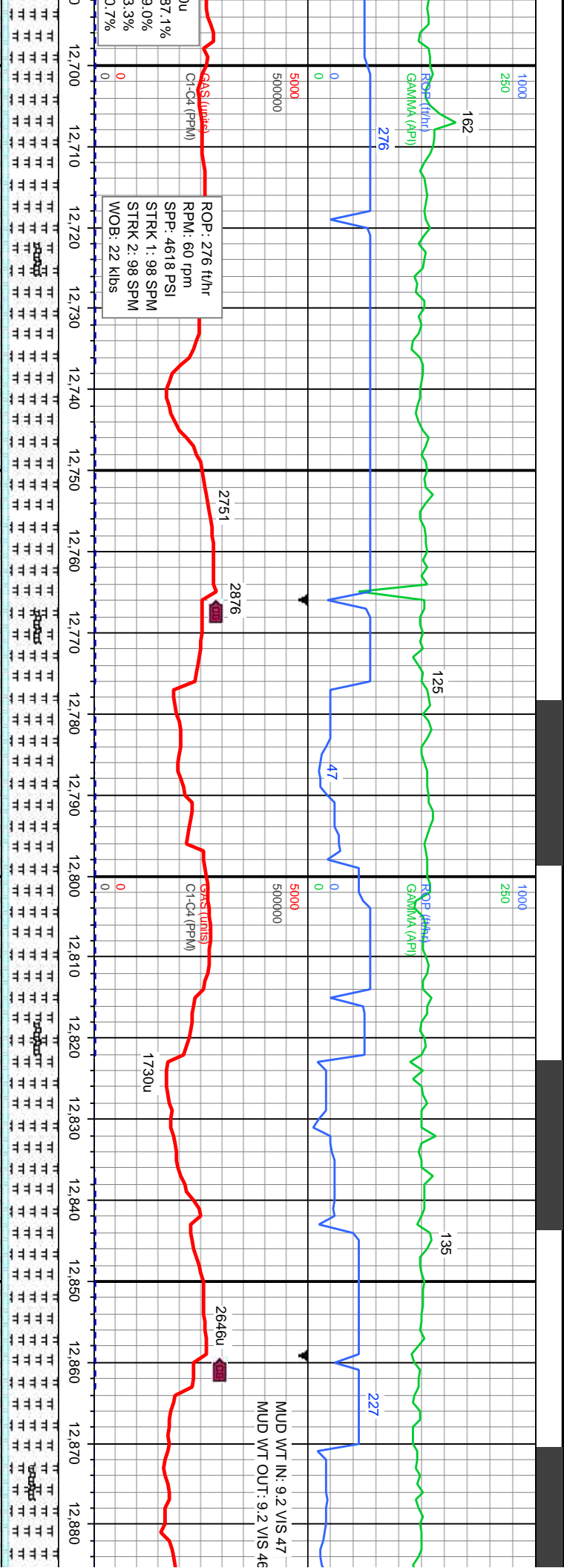
dk gy-gy, occ spec, silt gr, frm, sb ply, v calc, CHK: lt gy, occ wh, sb ply-blky, sft, rthy tex, v calc, si decr in bent, tr PYR.	MRLST: dk gy-gy, occ spec, silt gr, frm, sb ply, v calc, CHK: lt gy, occ wh, sb ply-blky, sft, rthy tex, v calc, si decr in bent, tr PYR.	7600	MRLST: gy-dk gy, sme spec, silt gr, fri-frm, sb ply-sb blky, v calc, CHK: lt gy, off wh, sft-frm, rthy tex, v calc, decr in bent & pyr.	MRLST: gy-dk gy, sme spec, silt gr, fri-frm, sb ply-sb blky, v calc, CHK: lt gy, off wh, sft-frm, rthy tex, v calc, decr in bent & pyr.	7600
MD: 12.134° Inclination: 88.64° Azimuth: 95.24° TVD: 7.805.25' VS: 4.622.3'	MD: 12.183° Inclination: 89.32° Azimuth: 95.65° TVD: 7.806.12' VS: 4.671.29'	TVD (ft)	MD: 12.228° Inclination: 90.4° Azimuth: 95.39° TVD: 7.806.23' VS: 4.716.29'	MD: 12.272° Inclination: 91.17° Azimuth: 95.76° TVD: 7.805.63' VS: 4.760.28'	TVD (ft)





7600	MRLST: dk gy- gy, occ v dk gy-blk, sme spec, silt gr, fri-frm, sb ply-sb blkly, v calc. CHK: lt gy, off wh, sft-frm, rthy tex, v calc. sl incr in bent.	MD: 12,512' Inclination: 92.16° Azimuth: 91.46° TVD: 7,798.84' VS: 4,999.77'	7600	MRLST: dk gy- gy, occ v dk gy-blk, sme spec, silt gr, fri-frm, sb ply-sb blkly, v calc. CHK: lt gy, off wh, sft-frm, rthy tex, v calc. sl incr in bent.	MD: 12,574' Inclination: 92.47° Azimuth: 91.73° TVD: 7,796.33' VS: 5,061.56'	7600	MRLST: dk gy- gy, occ v dk gy-blk, some spec, silt gr, fri-frm, sb ply-sb blkly, v calc. CHK: lt gy, off wh, sft-frm, rthy tex, v calc. some bent.	MD: 12,606' Inclination: 91.6° Azimuth: 91.41° TVD: 7,795.2' VS: 5,093.46'	7600	MRLST: dk gy- gy, occ v dk gy-blk, some spec, silt gr, fri-frm, sb ply-sb blkly, v calc. CHK: lt gy, off wh, sft-frm, rthy tex, v calc. some bent & tr py	MD: 12,655' Inclination: 90.99° Azimuth: 90.44° TVD: 7,794.09' VS: 5,142.28'





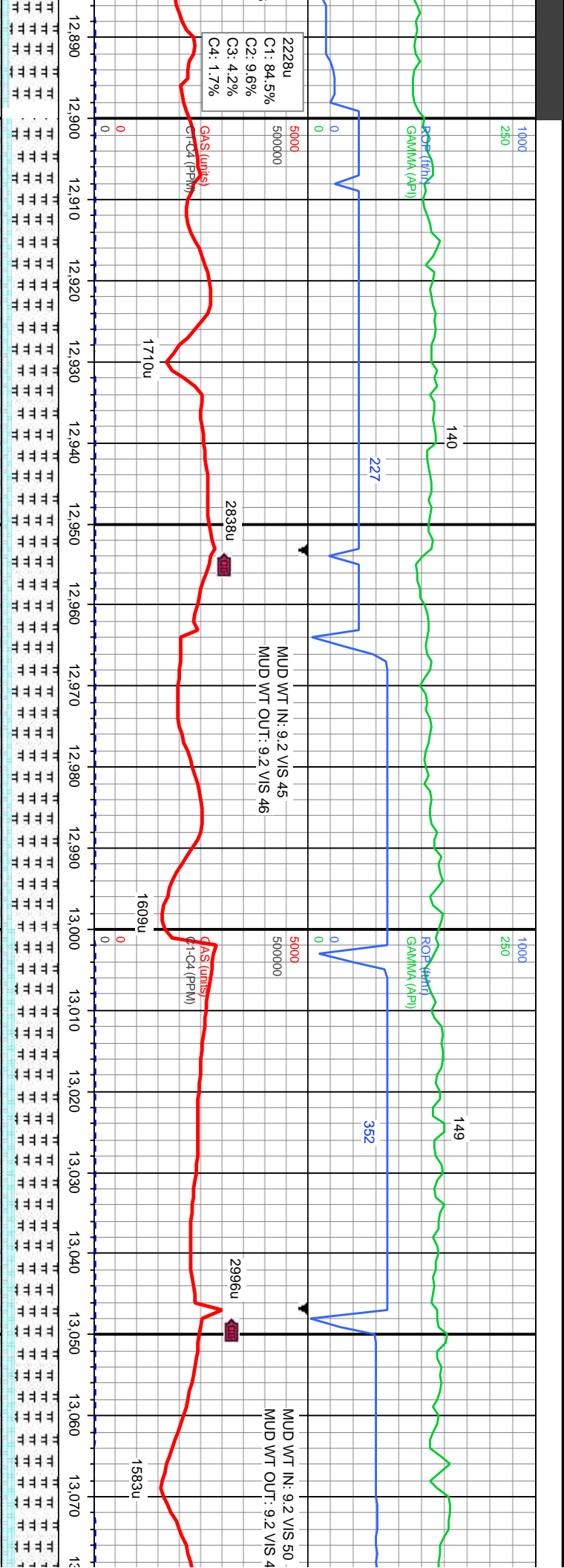
MD: 12,701' Inclination: 91.2° Azimuth: 90.23° TVD: 7,793.21' VS: 5,188.07'

MD: 12,747' Inclination: 91.51° Azimuth: 90.62° TVD: 7,792.12' VS: 5,233.86'

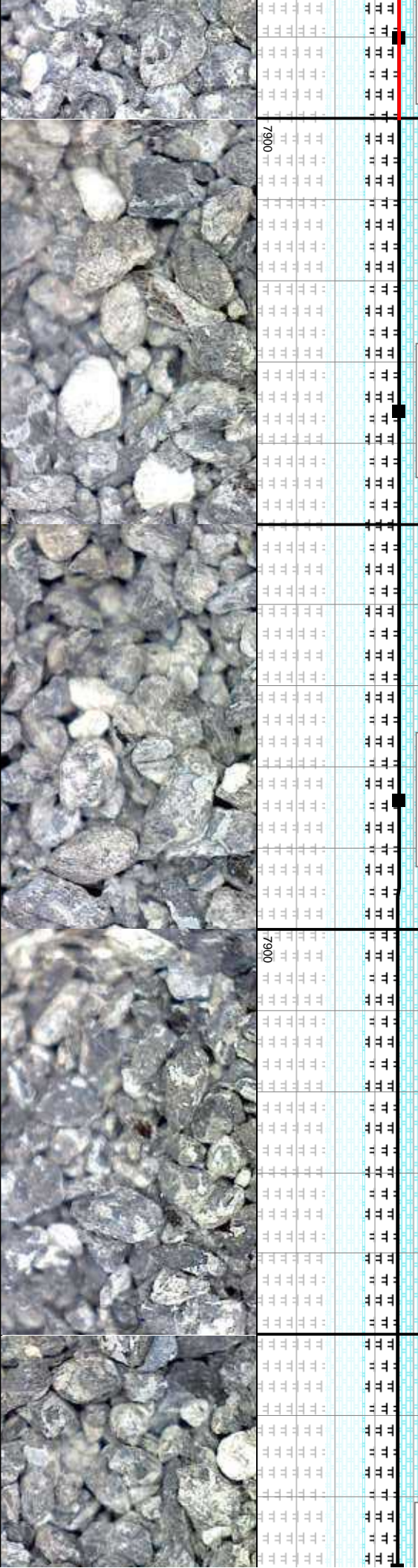
MD: 12,795' Inclination: 90.65° Azimuth: 90.25° TVD: 7,791.22' VS: 5,281.65'

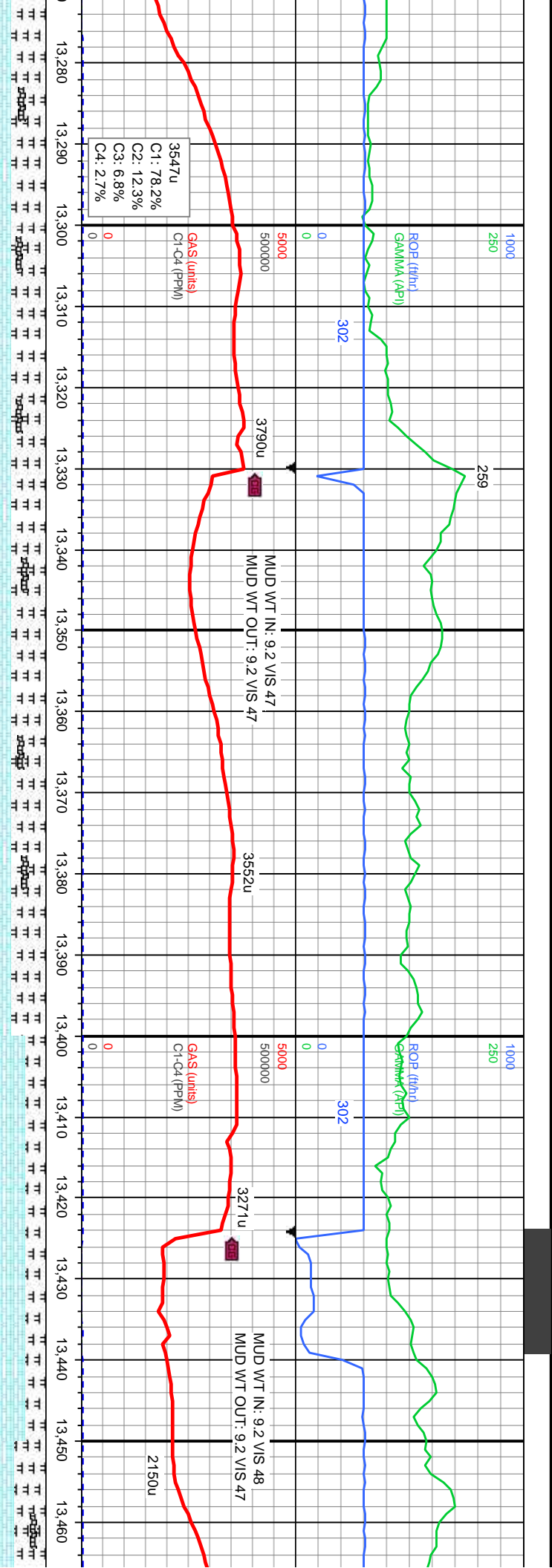
MD: 12,841' Inclination: 90.62° Azimuth: 89.73° TVD: 7,790.71' VS: 5,327.42'





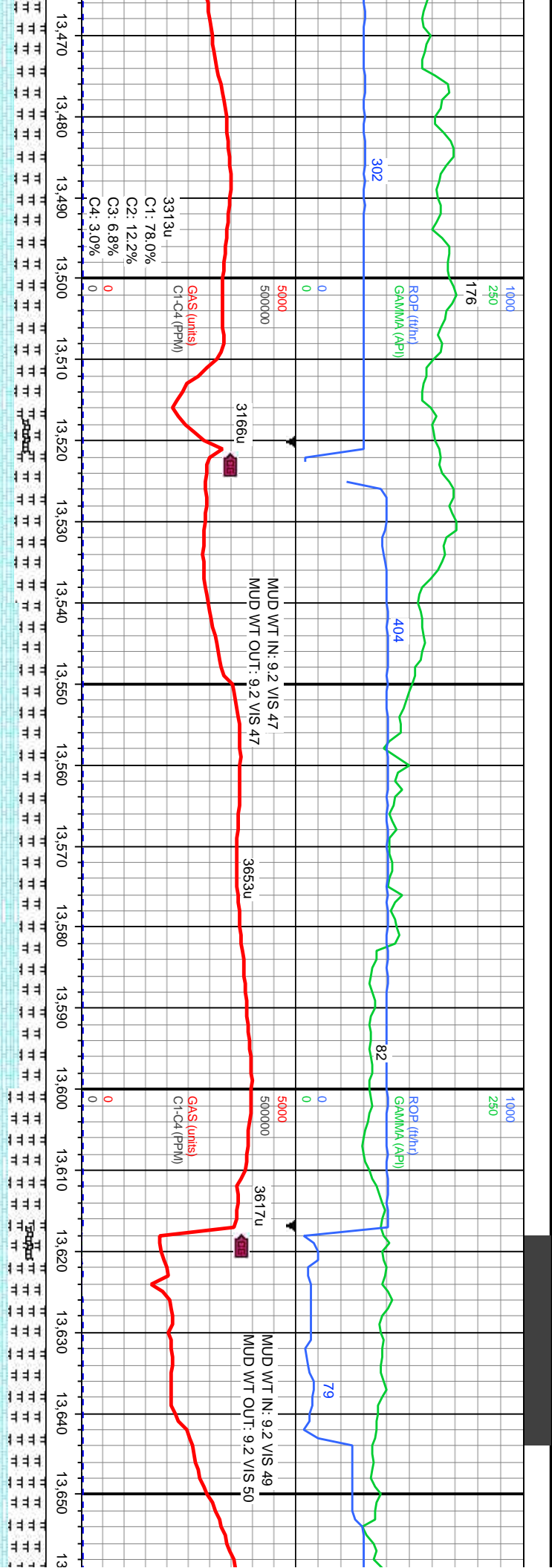
fir-firm, sb n, sft-firm,		MRLST: dk gy- gy, some spec, sft gr, fir-firm, sb ply-sb blkly, v calc. CHK: lt gy, off wh, sft-firm, rthy tex, v calc, occ bent		MD: 12,936' Inclination: 89.38° Azimuth: 88.68° TVD: 7,790.88' VS: 5,421.78'	
12,890'					
12,895'					
12,900'					
12,905'					
12,910'					
12,915'					
12,920'					
12,925'					
12,930'					
12,935'					
12,940'					
12,945'					
12,950'					
12,955'					
12,960'					
12,965'					
12,970'					
12,975'					
12,980'					
12,985'					
12,990'					
12,995'					
13,000'					
13,005'					
13,010'					
13,015'					
13,020'					
13,025'					
13,030'					
13,035'					
13,040'					
13,045'					
13,050'					
13,055'					
13,060'					
13,065'					
13,070'					





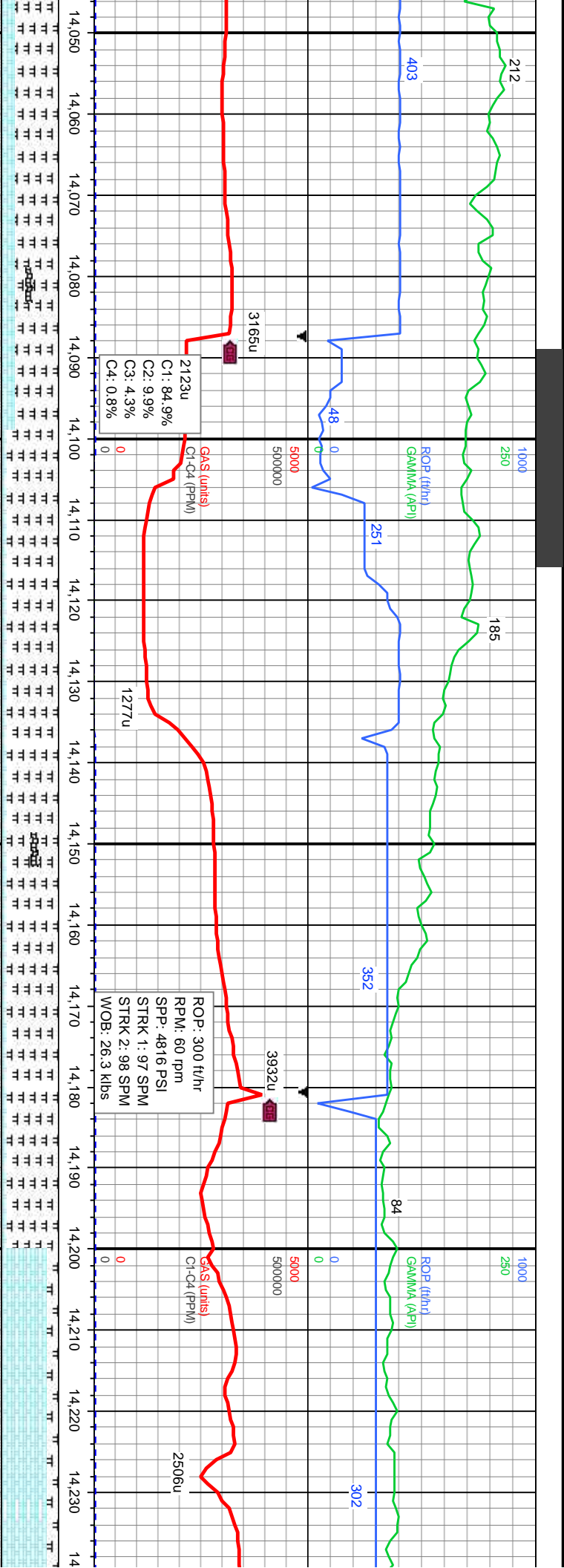
mot-spec, silt gr, sl frm, sb CHK: lt-med gy, str, sb sb rthy-sm tex, v calc,		7600	MRLST: med-dk gy, mot-spec, silt gr, sl frm, sb pily-pily, gt tex, calc, CHK: lt-med gy, str, sb pily-biky, brit, sl sft, sb rthy-sm tex, v calc, BENT	7600	MRLST: med-dk gy, mot-spec, silt gr, sl frm, sb pily-pily, gt tex, calc, CHK: lt-med gy, str, sb pily-biky, brit, sl sft, sb rthy-sm tex, v calc, BENT	7600	CHK: lt-med rthy-sm tex, v med-dk gy, n gt tex, calc
98°		TVD (ft)	MD: 13.362' Inclination: 88.92° Azimuth: 88.96° TVD: 7.797.69 VS: 5.844.82'	TVD (ft)	MD: 13.457' Inclination: 89.17° Azimuth: 89.32° TVD: 7.799.27 VS: 5.939.19'		





gy, str, sb pily-biky, brit, sl sft, sb v calc, tr bent, tr pyr: MRLST: not-spec, slt gr, sl frm, sb pily-pily,	7600	CHK: lt-med gy, str, sb pily-biky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr: MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc	MD: 13.551' Inclination: 88.68° Azimuth: 89.24° TVD: 7.801.03' VS: 6.032.58'	TVD (ft)	7900
MR sb p sft-l	7600	MRLST: dk gy- gy, some spec, slt gr, fri-frm, sb pily-sb biky, v calc. CHK: lt gy, off wh, sft-frm, rthy tex, v calc, with tr BENT.	MD: 13.646' Inclination: 89.02° Azimuth: 88.8° TVD: 7.802.94' VS: 6.126.92'	TVD (ft)	7900





MRLST: dk gy-dk brn, occ gy, spec in pt, silt gr, fri-frm, sb pily-sb blkly, v calc, with occ BENT.
CHK: lt gy-off wh, silt-frm, rthy tex, v calc.

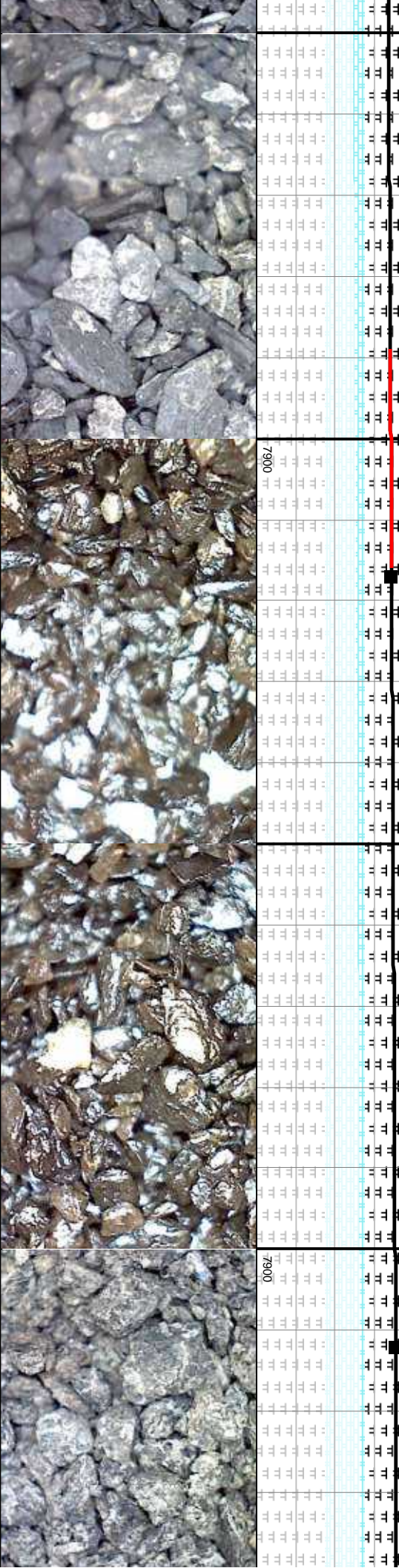
MRLST: gy-dk gy, dk brn, spec in pt, silt gr, fri-frm, sb pily-sb blkly, v calc. CHK: lt gy-wh, silt-frm, rthy tex, v calc, with some BENT and PYR.

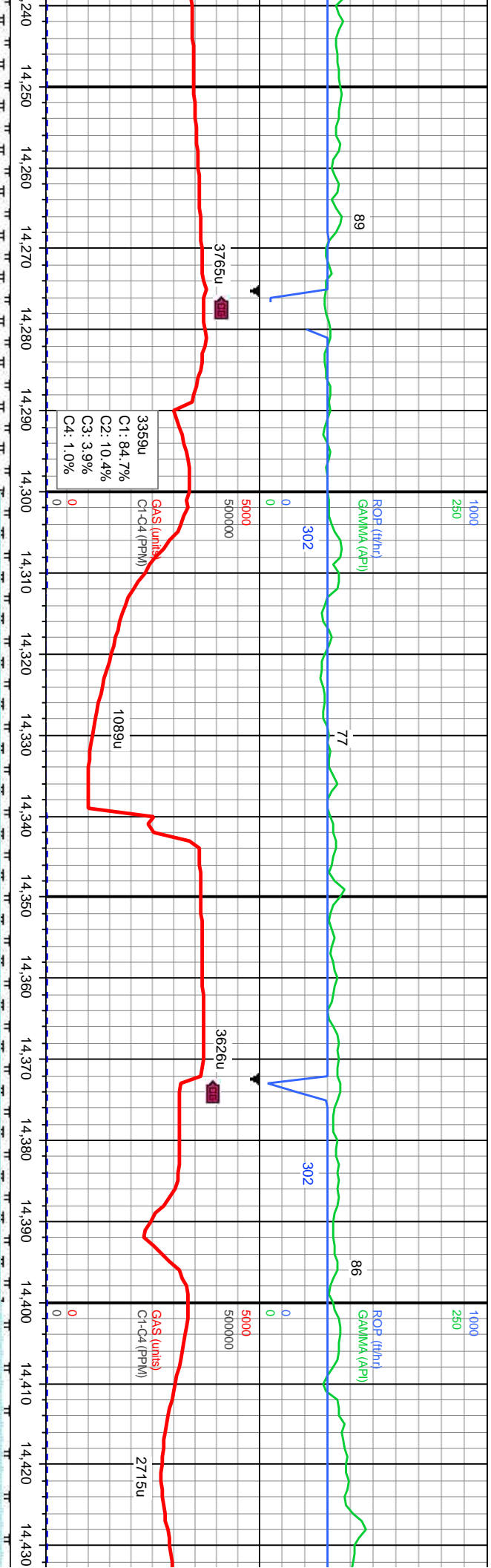
MRLST: gy-dk gy, dk brn, spec in pt, silt gr, fri-frm, sb pily-sb blkly, v calc. CHK: lt gy-wh, silt-frm, rthy tex, v calc, with some BENT and PYR.

CHK: lt-med gy, str, sb pily-blky, brt, sl sft, st tex, v calc, tr bent, tr pyr. MRLST: med-dk gy, rmtot-spec, silt gr, sl frm, sb pily-pily, gt tex, cal

MD: 14,117'
Inclination: 91.88°
Azimuth: 89.62°
TVD: 7,796.28'
VS: 6,594.22'

MD: 14,212'
Inclination: 91.76°
Azimuth: 89.24°
TVD: 7,793.26'
VS: 6,688.61'

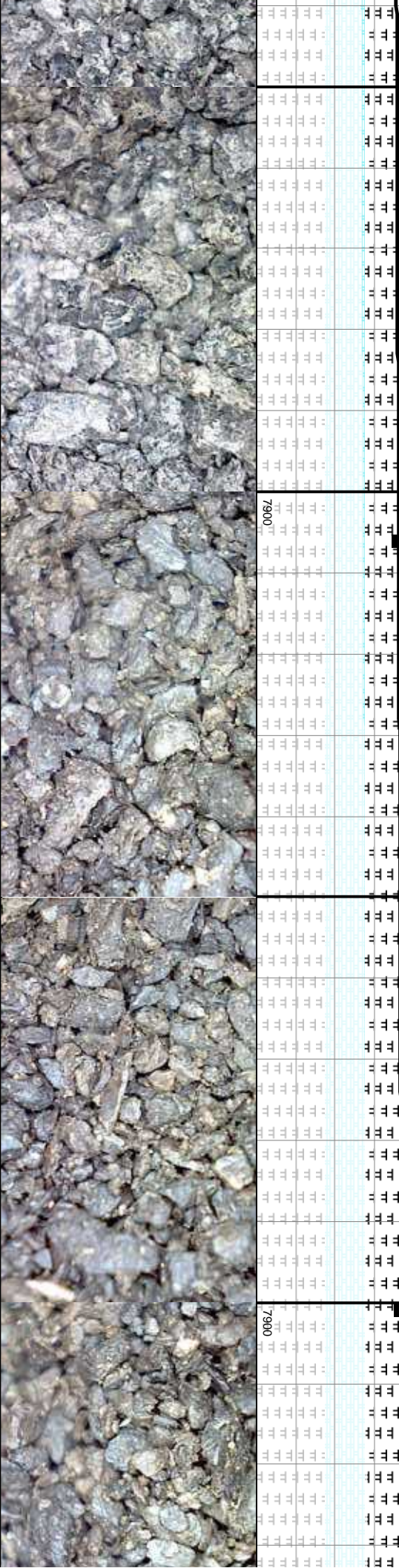




Depth (ft)	Description
14,240	CHK: lt-med gy, str, sb pily-blky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr: MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc
14,280	CHK: lt-med gy, str, sb pily-blky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr: MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc
14,320	CHK: lt-med gy, str, sb pily-blky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr: MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc
14,360	CHK: lt-med gy, str, sb pily-blky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr: MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc
14,400	CHK: lt-med gy, str, sb pily-blky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr: MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc
14,430	CHK: lt-med gy, str, sb pily-blky, brit, sl sft, sb rthy-sm tex, v calc, tr bent, tr pyr: MRLST: med-dk gy, mot-spec, slt gr, sl frm, sb pily-pily, gt tex, calc

MD: 14,306'
Inclination: 91.14°
Azimuth: 88.99°
TVD: 7,790.88'
VS: 6,781.96'

MD: 14,401'
Inclination: 91.54°
Azimuth: 89.83°
TVD: 7,788.66'
VS: 6,876.37'



0517' MD on 6/12/2017
18:26 hrs. MDT.

**Thank you for Choosing
Line Logging Inc.**

14,630	14,640	14,650
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[illegible]