

COLUMBINE LOGGING

Scale: 5" / 100'
Measured Depth Log

Well Name DEEPE 35C_27HZ(HORZ)

Location SEC 22; TWP 2N; R 67W

State COLORADO

County WELD

Country USA

Rig Number PRECISION 595

API Number 05123385630000

AFE # 2085047

Region DJ BASIN

Field WATTENBERG

Spud Date 5/5/2014

Drilling Completed 5/15/2014

Surface Coordinates LAT: 40.1292272°

LONG 104.8824558°

656' FNL

870' FWL

Bottom Hole Coordinates PROJECTED:

LAT: 40.1292272°

LONG 104.8824558°

460' FSL

1400' FWL

Ground Elevation 5007'

K.B. Elevation 5032'

Logged Interval 7087 To 17318'

Total Depth 17318'

Formation CODELL

Type of Drilling Fluid LSND/PHNA

Operator

Company ANADARKO PETROLEUM CORPORATION

Address Granite Tower

1099 18th St. #1800

Denver, CO 80202

(JG)(JS)

Geologist

Name MIKE GREENE; BEN KATKA

Company COLUMBINE LOGGING INC.

Address 2385 S. Lipan Street

Denver, CO 80223

Phone: 303-289-7764









































































Zone Color Coding

Oil
Note
Error
























































Condensate
Core
Water

Gas
Pressu
Seal

Rock Types

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

Accessories

Fossils		Stringer	
 GASTROPOD	 ARGILLITE GRAIN	 HEAVY MINERAL	
 INOCERAMUS	 B BENTONITE	 K KAOLIN	
 ALGAE	 O OOLITE	 BITUMENOUS SUBSTANCE	 ANHYDRITE STRINGER
 AMPHIPORA	 O OSTRACOD	 BRECCIA FRAGMENTS	 B BENTONITE STRINGER
 BELEMNITE	 P PELECYPOD	 C CALCAREOUS	 COAL STRINGER
 BIOCLASTIC	 P PELLET	 C CARBONACEOUS FLAKES	 DOLOMITE STRINGER
 BRACHIOPOD	 P PISOLITE	 CHTDK	 GYPSUM STRINGER
 BRYOZOA	 P PLANT REMAINS	 CHLILT	 LIMESTONE STRINGER
 CEPHALOPOD	 S PLANT SPORES	 COAL - THIN BEDS	 MARLSTONE (CALC) STRG
 CORAL	 S SCAPHOPOD	 D DOLOMITIC	 MARLSTONE (DOL) STRG
 CRINOID	 S STROMATOPOROID	 F FELDSPAR	 SANDSTONE STRINGER
 ECHINOID		 F FERRUGINOUS PELLET	 SHALE STRINGER
 FISH		 F FERRUGINOUS	 SILTSTONE STRINGER
 FORAMINIFERA	 A ANHYDRITIC	 G GLAUCONITE	
 F FOSSIL	 A ARGILLACEOUS	 G GYPSIFEROUS	 T TUFFACEOUS

Oil Show

P PINPOINT

Engineering





































- EVEN
- QUESTIONABLE
- BIT
- SPOTTED STAINING
- ▲ CONNECTION (UP)

Porosity

Porosity

- ▼ CONNECTION (DOWN)
 - 🏠 CONNECTION GAS
- 🌍 EARTHY
 - 🔌 CONNECTION GAS
- 🏠 FENESTRAL
 - TRIP GAS
- 🔪 F FRACTURE
 - 🔌 TRIP GAS (LEFT)
- ✕ INTERCRYSTALLINE
 - 📉 DOWN TIME GAS
- 🌀 INTERPOOLITIC
 - 🕒 DOWN TIME GAS (L)
- 🍄 MOLDIC
 - ⬇️ CORE - LOST
- 🌱 ORGANIC
 - 🏠 CORE - RECOVERED

Other Symbols

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

Slide/Rotate

BEGIN DEEPE 35C-27HZ AT 7.087' MD. DRILLING 8.75' HOLE.
BIT #1, SMITH, SD1611, DEPTH IN: 1,052 MD. KOP: 7.087' MD.

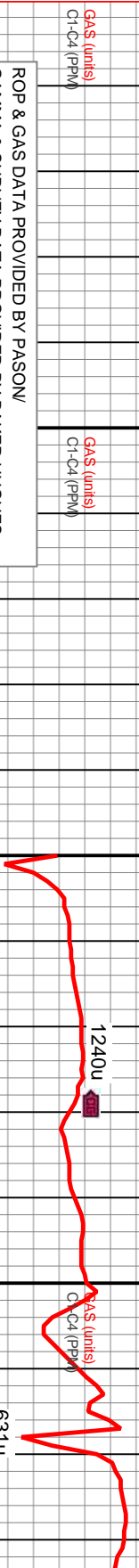
WT IN 10.0/ OUT 9.9+
VIS IN 42/ OUT 40

ROP
ROF
GAMMA

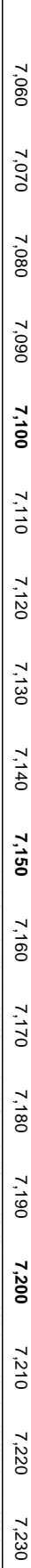


Total Gas & Chromatograph

GAS
C1
C2
C3
C4



Depth Labels



% Lith

THE IDEALIZED INTERPRETATION OF THE WELLBORE LITHOLOGY IS NOT TO SCALE.



Well Bore
TVD

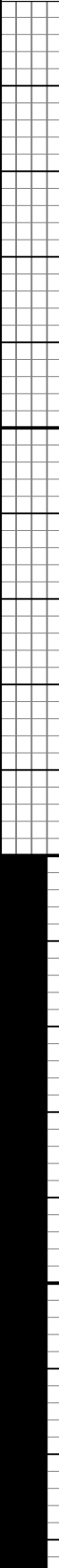


ACETONE WAS USED AS THE CUTTING AGENT WITH THE DIMPLE FILLED TO THE RIM. THE RATINGS ARE BASED ON 7 DESCRIPTORS: NONE, SLIGHT TRACE, TRACE, FAIR, MODERATE, GOOD, AND EXCELLENT. THE DESCRIPTOR USED IS BASED ON THE LOGGERS' OBSERVATIONS AND BEST JUDGEMENT OF BRILLIANCE, COLOR, AND LONGEVITY OF THE CUT.

SLTY SH: med-dk gy-blk, sb blkly-sb pty - pty, frm- mod frm, sl fri, silty, sl gt; difse string dul bl cut, thin dul bl resd ring

SLTY SH: med gy-med-dk gy-blk, sb blk pty - pty, frm- mod frm, occ sft, sl fri, silty, tr ss strg, rr bent; difse string dul bl thin dul bl resd ring

Oil Show



Images



5/07/2014

WT IN 10.2 OUT 10.2
VIS IN 47 OUT 55

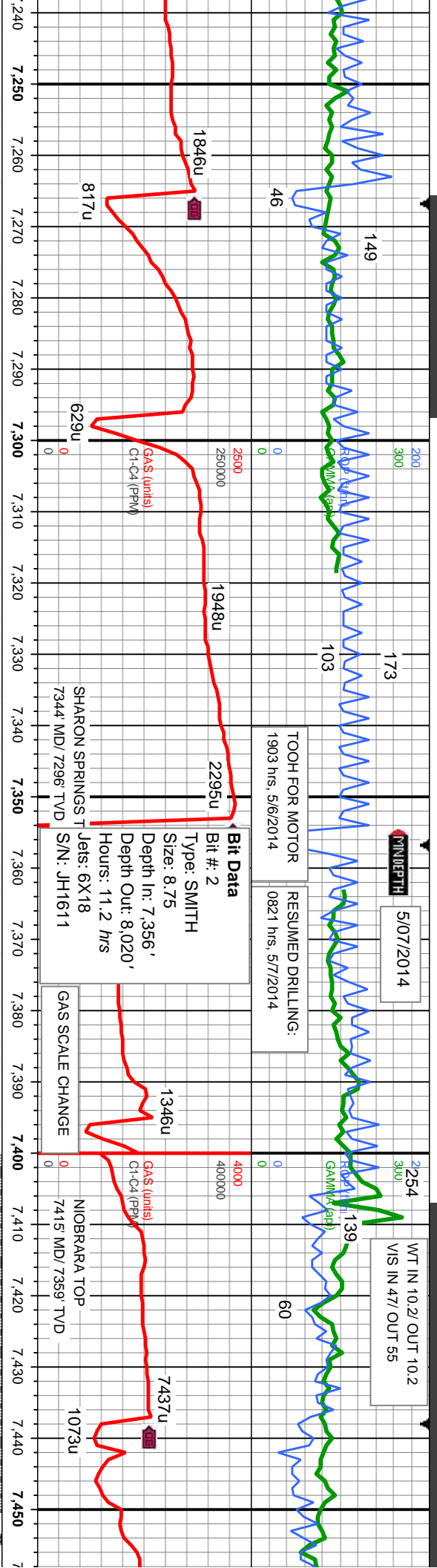
TOOH FOR MOTOR
1903 hrs, 5/6/2014

RESUMED DRILLING:
0821 hrs, 5/7/2014

Bit Data

Bit #: 2
Type: SMITH
Size: 8.75
Depth In: 7,356'
Depth Out: 8,020'
Hours: 11.2 hrs
Jets: 6X18
S/N: JH1611

GAS SCALE CHANGE



PROJ:
SHARON SPRINGS TOP
7323 MD/ 7275 TVD

PROJ:
NIOBRARA TOP
7407 MD/ 7351 TVD

MD: 7,443'
TVD: 7,385.9'
Inclination: 30.09 °
Azimuth: 180.34 °
VS: 88.4'

MD: 7,263'
TVD: 7,218.46'
Inclination: 13.03 °
Azimuth: 191.5 °
VS: 24.78'

MD: 7,308'
TVD: 7,261.98'
Inclination: 16.36 °
Azimuth: 189.52 °
VS: 36.02'

MD: 7,353'
TVD: 7,304.62'
Inclination: 20.85 °
Azimuth: 191.12 °
VS: 50.15'

MD: 7,398'
TVD: 7,346.04'
Inclination: 25.17 °
Azimuth: 185.48 °
VS: 67.57'

SLTY SH: med gy-med-dk gy-blk, sb blk-y-sb ply -
ply, frm, mod frm, occ sft, sl fri, slty, sl gt ip, tr ss
strg, rr bent, disse string dul bl cut, thn dul bl resd
ring

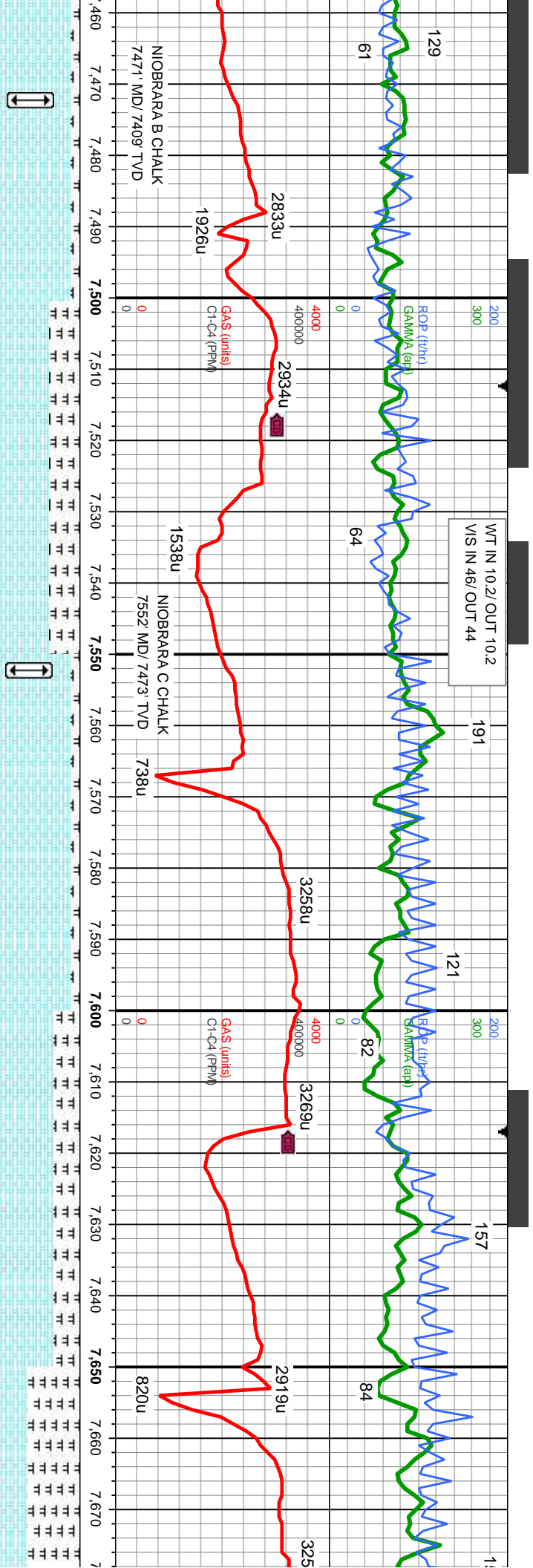
SLTY SH: med-dk gy-blk, sb ply - ply, occ sb
blk-y, mod frm-frm, occ sft, sl fri, slty, v sl calc, rr
bent flk (>= 2mm), disse string dul bl cut, thn dul
bl resd ring

SLTY SH: med-dk gy-blk, sb ply - ply, occ sb
blk-y, mod frm-frm, occ sft, sl fri, slty, v sl calc, rr
bent flk (>= 2mm), disse string dul bl cut, thn dul
bl resd ring

CHK: med gy-lt gy, sl mot tex, sb blk-y-sb ply, sft-sl
frm, sl arg, v calc; MRLST: med-dk gy, sb blk-y-sb
ply, frm, arg-sl slty, v calc; SLTY SH: mod string
dul bl cut, thn dul bl resd ring

CHK: t
ip, sb t
tr fos fr
frm, arg
cut, thr





MD: 7,488'
TVD: 7,423.84'
Inclination: 34.93 °
Azimuth: 176.78 °
VS: 112.55'

MD: 7,532'
TVD: 7,458.83'
Inclination: 39.69 °
Azimuth: 174.42 °
VS: 139.11'

MD: 7,577'
TVD: 7,492.1'
Inclination: 44.89 °
Azimuth: 174.62 °
VS: 169.22'

MD: 7,622'
TVD: 7,522.23'
Inclination: 51.02 °
Azimuth: 177.61 °
VS: 202.52'

MD: 7,667'
TVD: 7,548.71'
Inclination: 56.85 °
Azimuth: 175.83 °
VS: 238.8'

RA B CHALK
D/ 7,409' TVD

CHK: bf - brn, gy brn, mot dk gy, sft - frm, brit - fri
ip, sb blkly, sb wxy - rthy tex, arg calc mtx, v calc,
tr fos; MRLST: med-dk gy, sb blkly-sb ply, frm, arg-
sl sily, v calc; difse string wi mod-g bl-wh
cut, thn bri bl-wh resdl ring

CHK: bf - brn, gy brn, mot dk gy, sft - frm, brit - fri
ip, sb blkly, sb wxy - rthy tex, arg calc mtx, v calc,
tr fos; MRLST: med-dk gy, sb blkly-sb ply, frm, arg-
sl sily, v calc; difse string wi mod-g bl-wh cut, thn
bri bl-wh resdl ring

CHK: brn, gy-wh brn, mot dk gy, sft - frm, brit - fri
ip, sb blkly, sb wxy - rthy tex, arg calc mtx, v calc,
tr fos frag; MRLST: med-dk gy, sb blkly-sb ply,
frm, arg- sl sily, v calc; difse string wi mod-g bl-wh
cut, thn bri bl-wh resdl ring

MRLST: med-dk gy, sb blkly-st
v calc; CHK: brn, gy-brn, mot c
fri ip, sb blkly, sb wxy - rthy tex,
calc, tr bent; difse string wi moc
bri bl-wh resdl ring

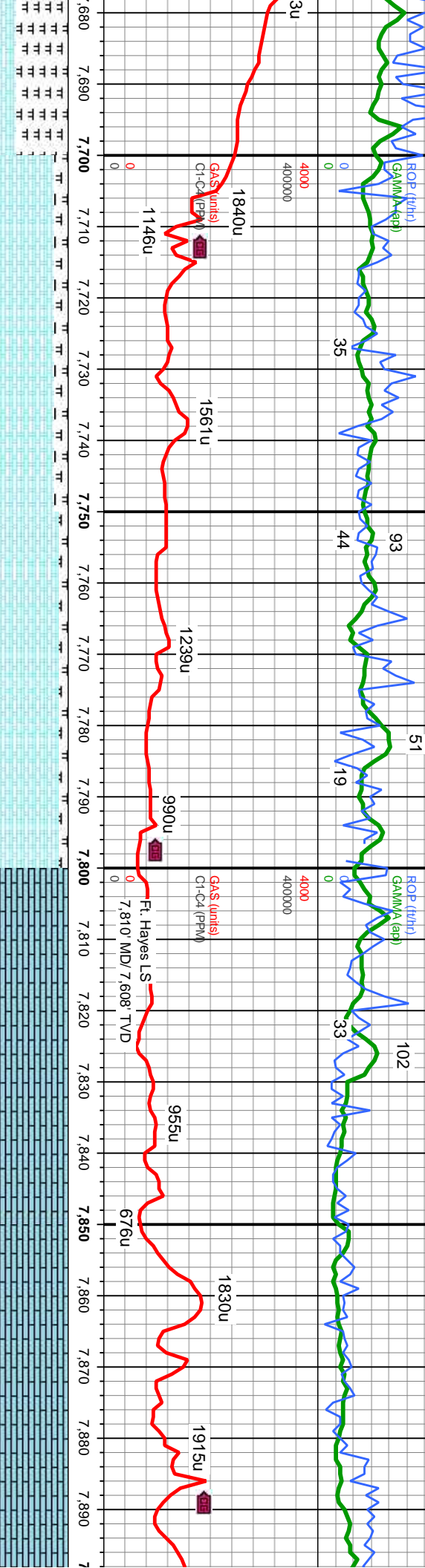


WT IN 10.2/ OUT 10.2
VIS IN 45/ OUT 44

WT IN 10.2+/ OUT 10.3
VIS IN 46/ OUT 45

WT IN 10.3/ OUT 10.3
VIS IN 48/ OUT 46

WT IN 10.3/ OUT 10.3
VIS IN 49/ OUT 49



MD: 7,712'
TVD: 7,571.42'
Inclination: 62.51 °
Azimuth: 176.26 °
VS: 277.51'

MD: 7,757'
TVD: 7,590.39'
Inclination: 67.62 °
Azimuth: 177.11 °
VS: 318.22'

MD: 7,802'
TVD: 7,605.96'
Inclination: 71.87 °
Azimuth: 177.13 °
VS: 360.35'

MD: 7,847'
TVD: 7,618.15'
Inclination: 76.7 °
Azimuth: 178.24 °
VS: 403.61'

MD: 7,892'
TVD: 7,626.45'
Inclination: 82. °
Azimuth: 178.8 °
VS: 447.79'

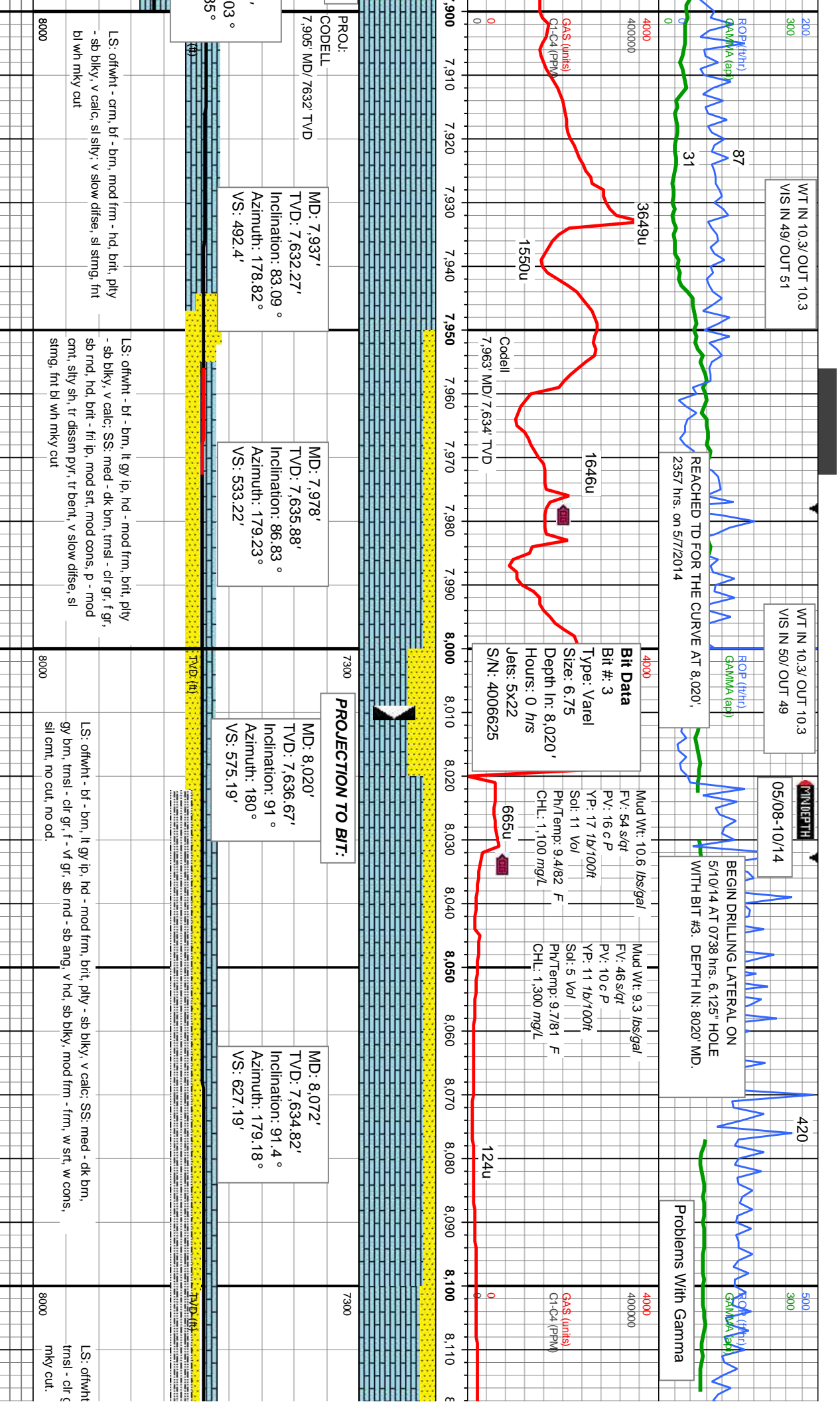
CHK: wh - brn, occ crm col, mod dk gy, sft - frm
ip, brt - fri, sb blk, sb wxy tex, arg calc - silty mtx,
MRLST: med gy - blk, frm, brt, gt tex, sb ply - sb
blk, arg - silty mtx, v calc, tr fos frag inoc, occ
bent wi dissm pyr, com brt yel flor, mod - fast
disse, string, brt bl wh mky cut

LS: offwht - crm, bf - brn, mod frm - hd, brt, ply -
sb blk, v wxy tex, sl silty, CHK: crm - bf, lt gy, hd,
brt, sb ply - sb blk, wxy tex, arg calc mtx, v calc,
tr msst, tr dissm pyr, bent, com brt yel flor, mod -
fast disse, string, brt bl wh mky cut

LS: offwht - crm, bf - brn, mod frm - hd, brt, ply -
sb blk, v wxy tex, sl silty, sl orng flor, v slow disse,
sl string, fnt bl wh mky cut



TVD SCALE CHANGE



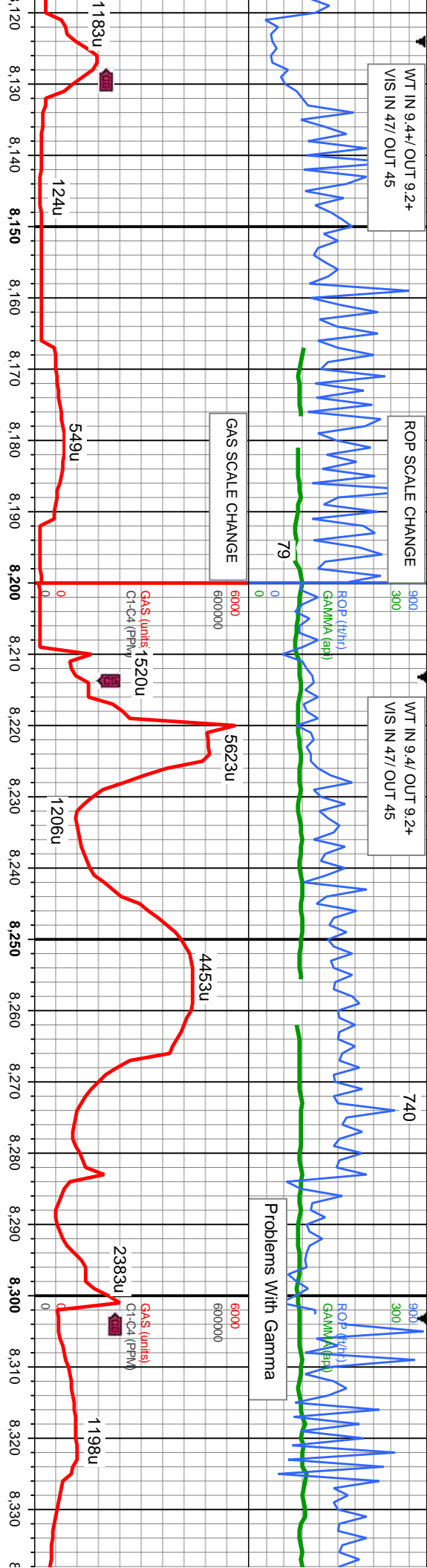
WT IN 9.4/ OUT 9.2+
VIS IN 47/ OUT 45

ROP SCALE CHANGE

WT IN 9.4/ OUT 9.2+
VIS IN 47/ OUT 45

740

Problems With Gamma



MD: 8,161'
TVD: 7,634.95'
Inclination: 88.43°
Azimuth: 179.13°
VS: 716.16'

MD: 8,251'
TVD: 7,637.71'
Inclination: 88.06°
Azimuth: 179.19°
VS: 806.09'

MD: 8,330'
TVD: 7,637.71'
Inclination: 88.06°
Azimuth: 179.19°
VS: 806.09'

- bf - brn, lt gy ip, hd - mod frm, brt, ply - sb blk, v calc; SS: med - dk brn, gy brn, w srt, w cons, sil cnt; LS: ofwht - bf - brn, lt gy ip, hd - mod frm, brt, ply - sb blk, v calc; SS: med - dk brn, gy brn, w srt, w cons, sil cnt, tr lt bl

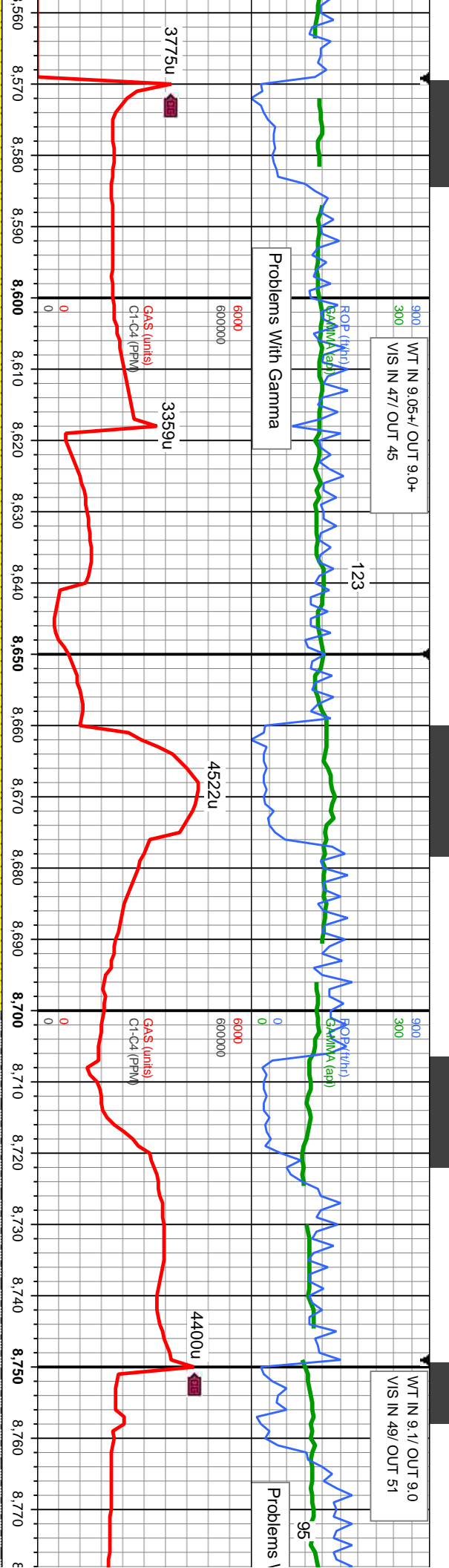
SS: med - dk brn, gy brn, trnsi - clr gr, f - vf gr, sb rnd - sb ang, v hd, sb blk, mod frm - frm, w srt, w cons, sil cnt; LS: ofwht - bf - brn, lt gy ip, hd - mod frm, brt, ply - sb blk, v calc; SS: med - dk brn, gy brn, trnsi - clr gr, f - vf gr, sb rnd - sb ang, v hd, sb blk, mod frm - frm, w srt, w cons, sil cnt, tr lt bl

SS: med - dk brn, gy brn, trnsi - clr gr, f - vf gr, sb rnd - sb ang, v hd, sb blk, mod frm - frm, w srt, w cons, sil cnt; LS: ofwht - bf - brn, lt gy ip, hd - mod frm, brt, ply - sb blk, v calc; SS: med - dk brn, gy brn, trnsi - clr gr, f - vf gr, sb rnd - sb ang, v hd, sb blk, mod frm - frm, w srt, w cons, sil cnt, tr lt bl



WT IN 9.05+ / OUT 9.0+
VIS IN 47 / OUT 45

WT IN 9.1 / OUT 9.0
VIS IN 49 / OUT 51



MD: 8,610'
TVD: 7,649.35'
Inclination: 89.85 °
Azimuth: 181.79 °
VS: 1,164.8'

MD: 8,700'
TVD: 7,649.45'
Inclination: 90.03 °
Azimuth: 182.06 °
VS: 1,254.77'

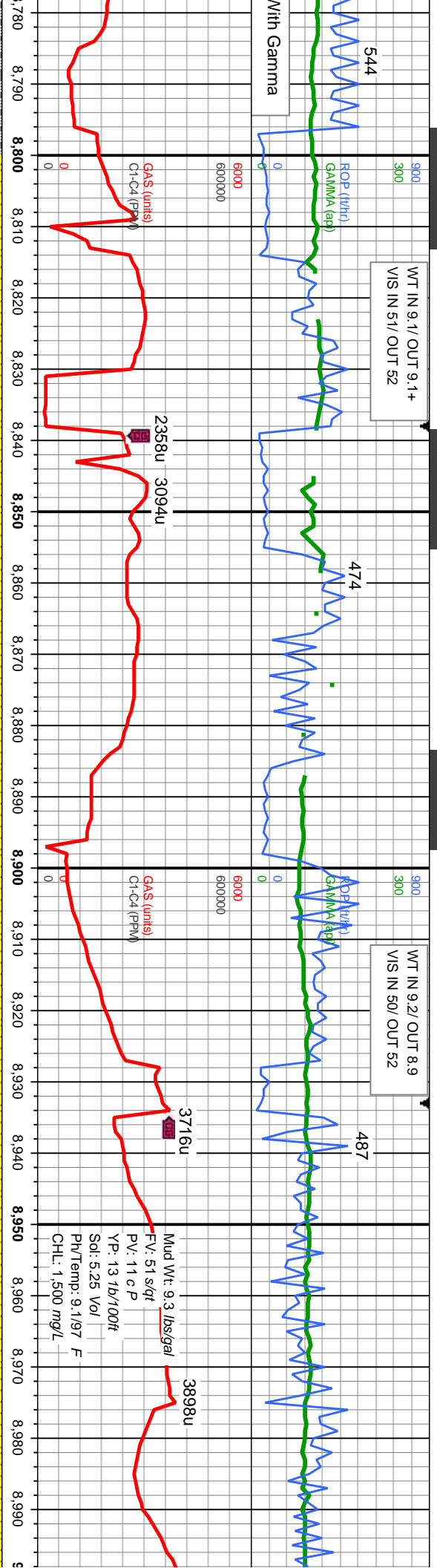
SS: med - dk brn, gy brn, trns l - clr gr, v f gr, sb rnd - sb ang, v hd, brt, w srl, w cons, mod cnt, tr sily sh, br lt bl - wh, slow string, mky, no stn, no od

SS: med - dk brn, gy brn, trns l - clr gr, f - v f gr, sb md - sb ang, v hd, sb blk, mod srl, w cons, sil cnt, SLTY SH: med - dk gy, occ blk, v f gr ip, frm, pried ply - sb blk, gt tex, arg - sily mix, br lt bl - wh mky cut, slow string, no stn, frt od



WT IN 9.1/ OUT 9.1+
VIS IN 51/ OUT 52

WT IN 9.2/ OUT 8.9
VIS IN 50/ OUT 52



MD: 8,790'
TVD: 7,649.81'
Inclination: 89.51 °
Azimuth: 181.76 °
VS: 1,344.74'

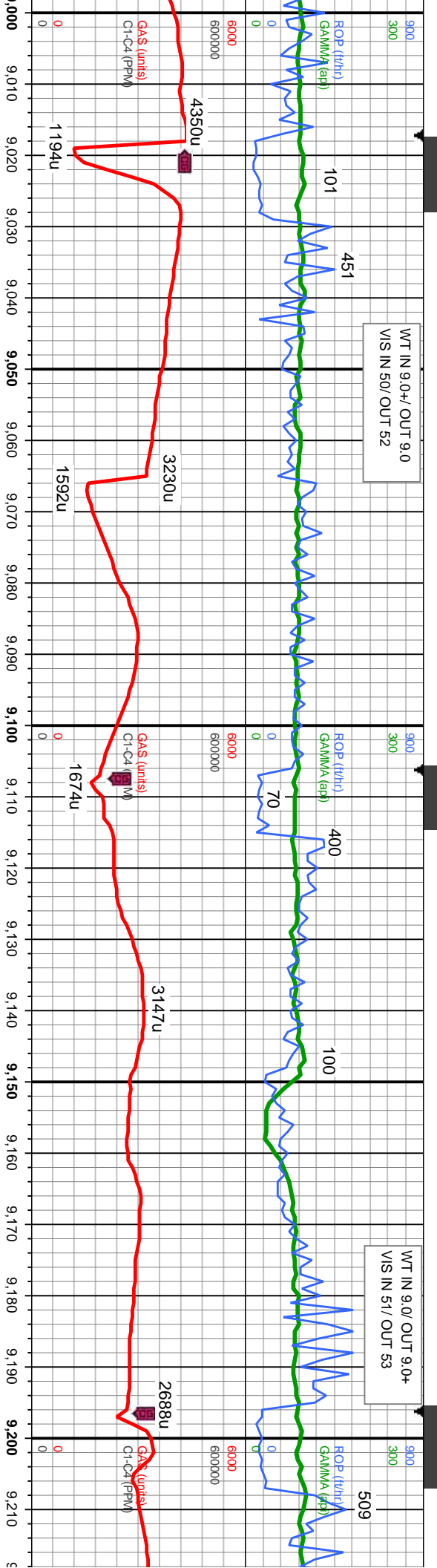
MD: 8,879'
TVD: 7,649.64'
Inclination: 90.71 °
Azimuth: 183.9 °
VS: 1,433.66'

MD: 8,969'
TVD: 7,648.5'
Inclination: 90.74 °
Azimuth: 183.78 °
VS: 1,523.49'

SS: med - dk brn, gy brn, trnsi - clr gr, vf gr, sb rnd - sb ang, v hd, brit, w srt, w cons, mod cmt, tr sily sh, br lt bl - wh mky cut, slow string, no sin, fnt od

SS: med - dk brn, gy brn, trnsi - clr gr, vf gr, sb rnd - sb ang, v hd, brit, w srt, w cons, mod cmt, tr sily sh, tr ls, br lt bl - wh mky cut, slow string, no sin, fnt od





MD: 9,059'
TVD: 7,647.36'
Inclination: 90.71 °
Azimuth: 183.72 °
VS: 1,613.34'

MD: 9,148'
TVD: 7,646.33'
Inclination: 90.62 °
Azimuth: 183.56 °
VS: 1,702.19'

SS: med - dk brn, gy brn, trnsi - clr gr, vf gr, sb md - sb ang, v hd, brit, w srt, w cons,
mod cnt, tr silty sh, bri lt bl - wh mky cut, slow string, no sin, fnt od

SS: med - dk brn, gy brn, trnsi - clr gr, f - vf gr, sb md - sb ang, v hd, sb blk, mod frm - frm, w
srt, w cons, sil cnt; SLTY SH: med - dk gy, occ blk, v f gr lp, frm, pred pty - sb pty, occ sb
blk, gt tex, arg - silty mtx, bri lt bl - wh mky cut, slow string, no sin, fnt od

SS: med - dk brn, gy brn, trnsi - clr gr, vf gr, sb md - sb ang, v hd, brit, w srt, w cons,
mod cnt, tr silty sh, bri lt bl - wh mky cut, slow string, no sin, fnt od

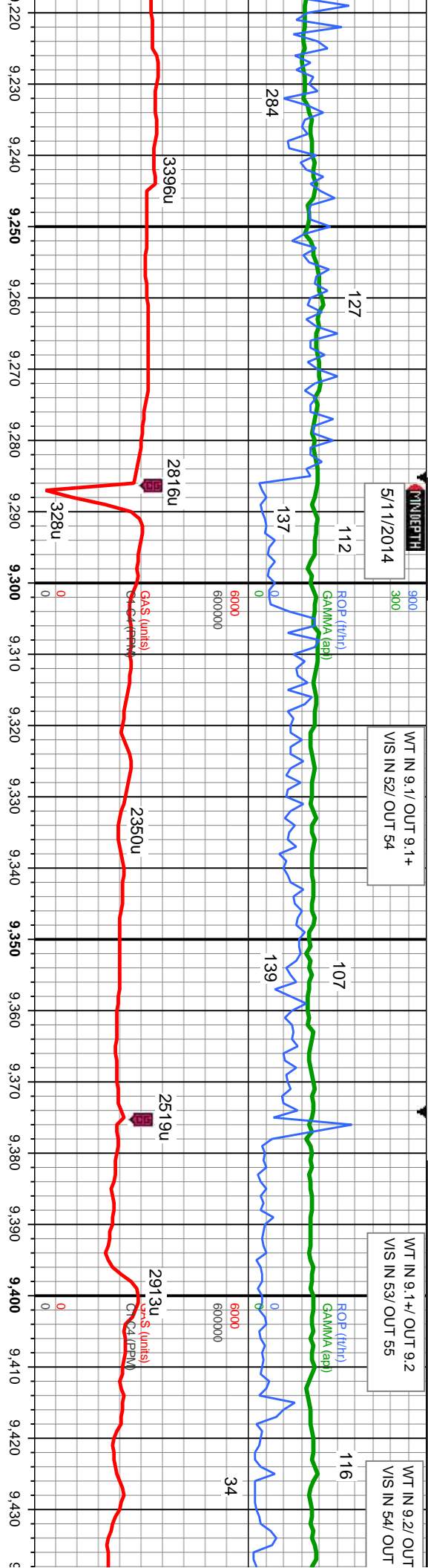
RTN DEPTH

5/11/2014

WT IN 9.1/ OUT 9.1+
VIS IN 52/ OUT 54

WT IN 9.1+ OUT 9.2
VIS IN 53/ OUT 55

WT IN 9.2/ OUT
VIS IN 54/ OUT



MD: 9,238'
TVD: 7,646.01'
Inclination: 90.31 °
Azimuth: 184.19 °
VS: 1,792.01'

MD: 9,328'
TVD: 7,644.91'
Inclination: 91.08 °
Azimuth: 183.91 °
VS: 1,881.82'

MD: 9,420'
TVD: 7,643.36'
Inclination: 90.86 °
Azimuth: 183.48 °
VS: 1,973.66'

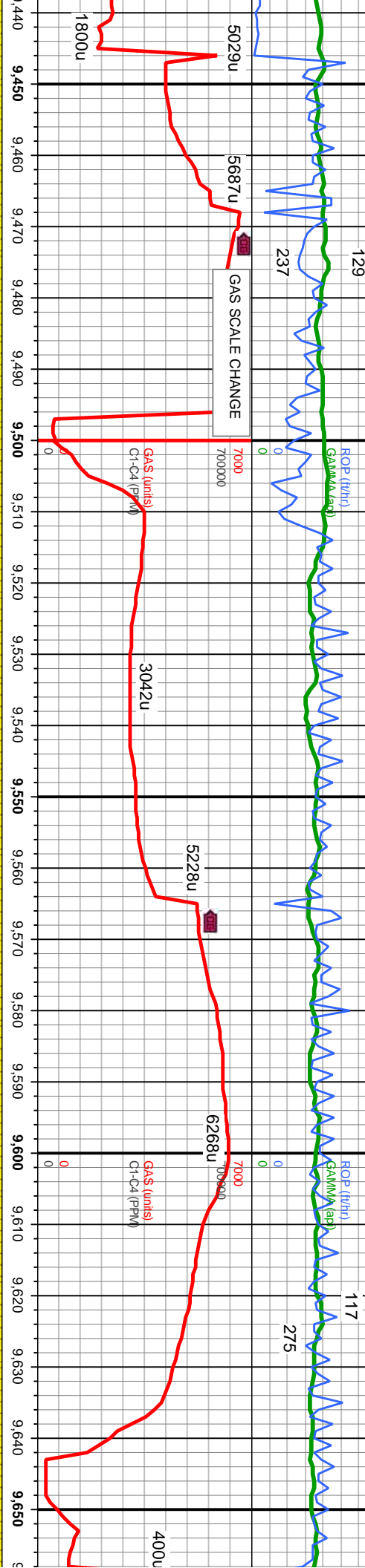
md - dk brn, gy brn, trnsi - clr gr, vf gr, sb rnd - sb ang, v hd, brlt, w srt, w cons,
mod cmt, sl alt ip, tr silty sh, tr is, brlt bl - wh mky cut, slow string, no sn, frnt od

SS: med - dk brn, gy brn, trnsi - clr gr, vf gr, sb rnd - sb ang, v hd, brlt, w srt, w cons,
mod cmt, sl alt ip, tr silty sh, tr is, frnt bl - wh mky cut, v slow string, no sn, frnt od

SS: med - dk brn, gy brn, trnsi
mod cmt, sl alt ip, tr silty sh, tr is

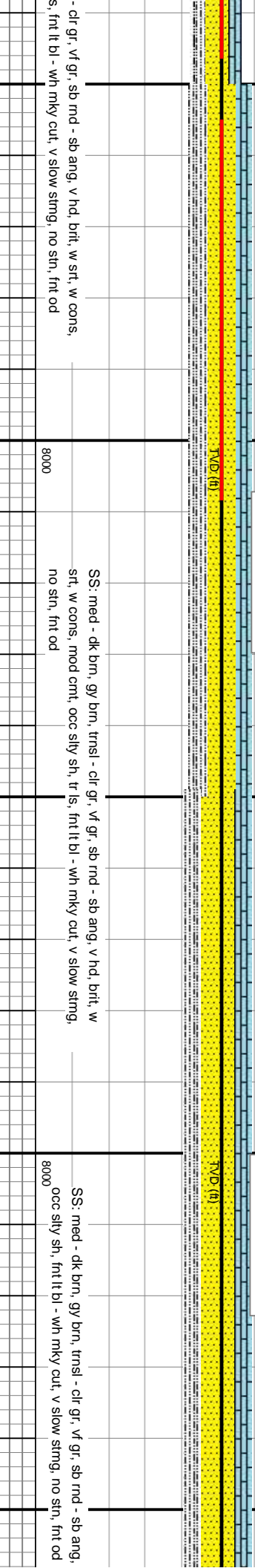


9.2
51



MD: 9,517'
TVD: 7,642.07'
Inclination: 90.65 °
Azimuth: 183.67 °
VS: 2,070.51'

MD: 9,611'
TVD: 7,641.39'
Inclination: 90.18 °
Azimuth: 183.32 °
VS: 2,164.37'



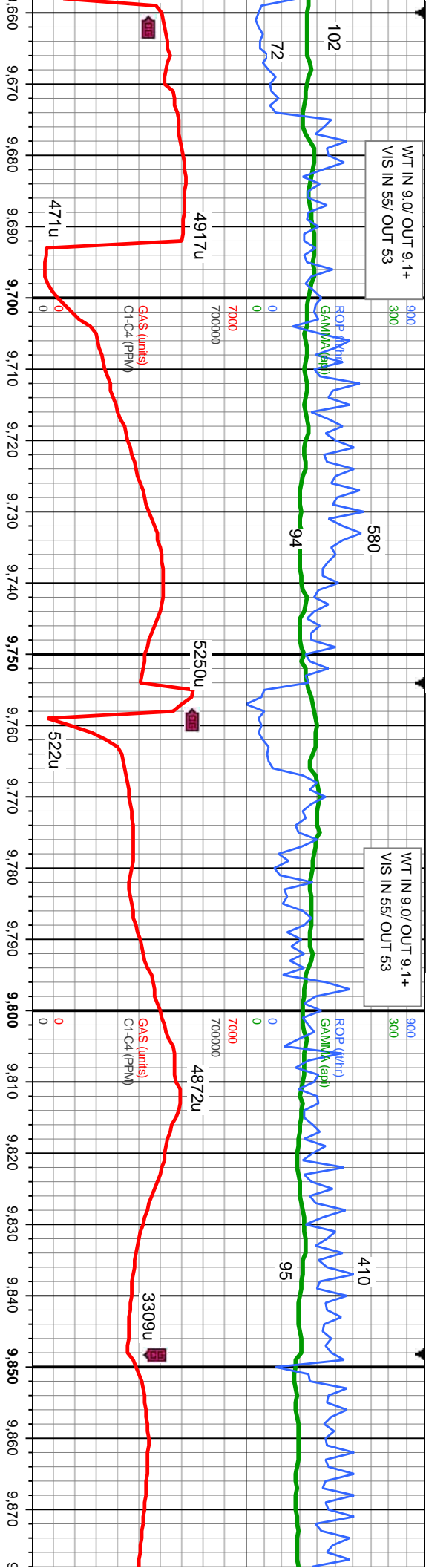
- clt gr, vf gr, sb rnd - sb ang, v hd, brt, w srt, w cons, s, frnt lt bl - wh mky cut, v slow strng, no str, frnt od

SS: med - dk brn, gy brn, trnsf - clt gr, vf gr, sb rnd - sb ang, v hd, brt, w srt, w cons, mod cnt, occ silty sh, tr ls, frnt lt bl - wh mky cut, v slow strng, no str, frnt od

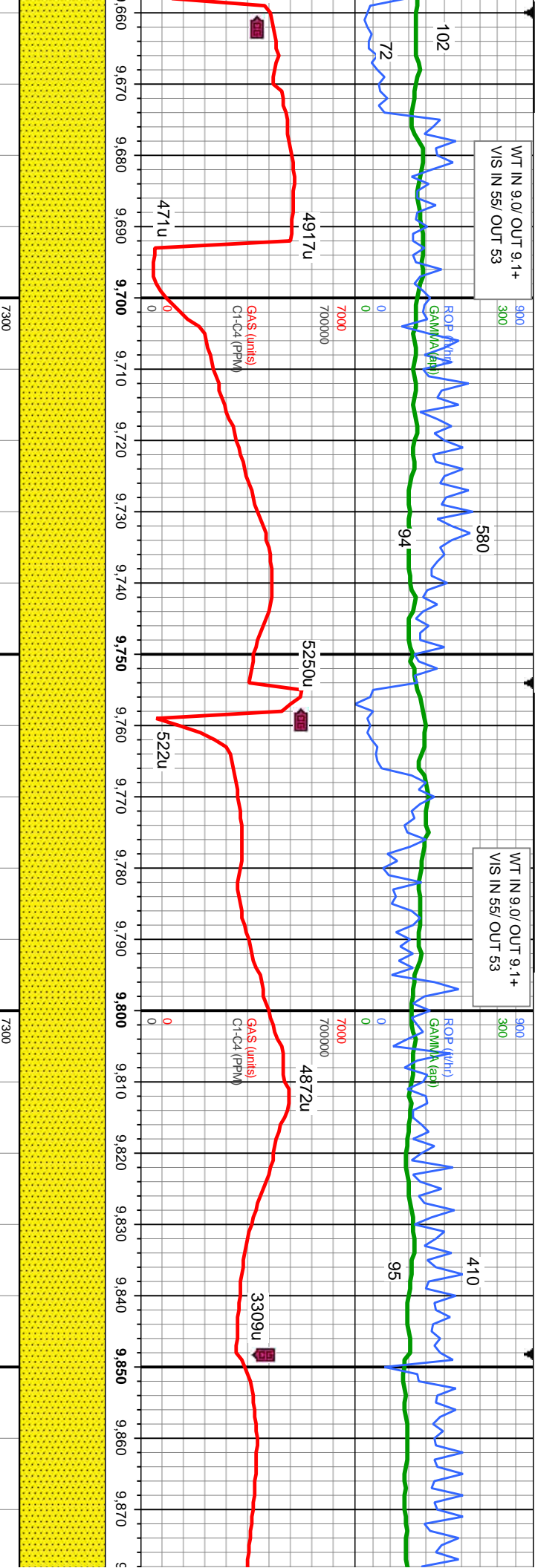
SS: med - dk brn, gy brn, trnsf - clt gr, vf gr, sb rnd - sb ang, occ silty sh, frnt lt bl - wh mky cut, v slow strng, no str, frnt od



WT IN 9.0/ OUT 9.1+
VIS IN 55/ OUT 53



WT IN 9.0/ OUT 9.1+
VIS IN 55/ OUT 53



MD: 9,706'
TVD: 7,640.6'
Inclination: 90.77 °
Azimuth: 182.7 °
VS: 2,259.27'

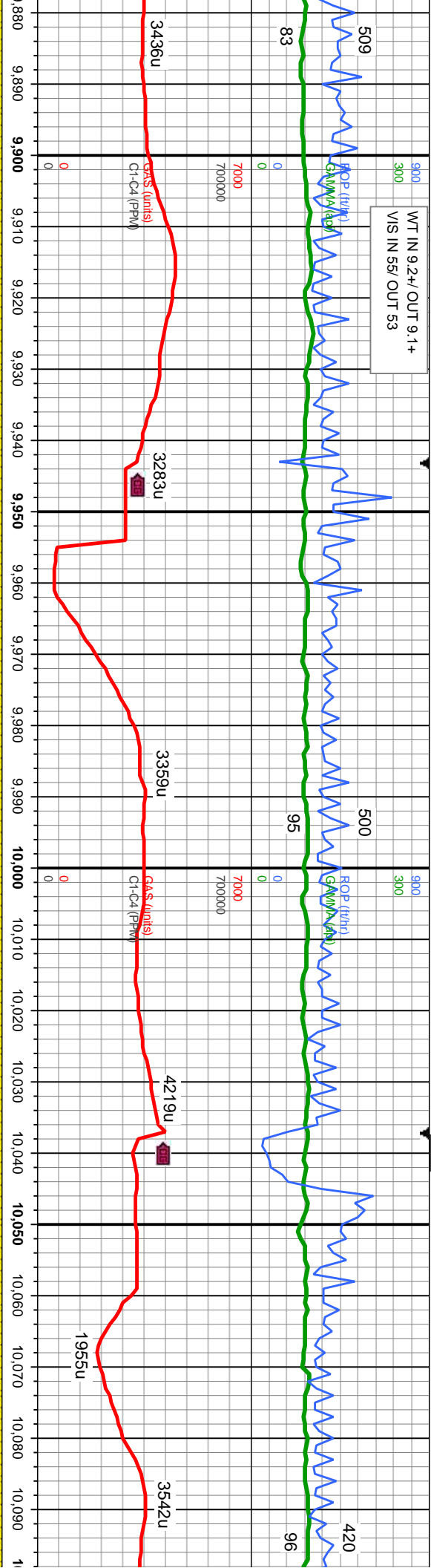
MD: 9,800'
TVD: 7,638.98'
Inclination: 91.21 °
Azimuth: 185.05 °
VS: 2,353.09'

7300	TVD (ft)	SS: med - dk brn, gy brn, trnsi - clr gr, v'f gr, sb rnd - sb ang, v hd, brt, w srt, w cons, mod cmt, occ silty sh, fnt lt bl - wh mky cut, v slow stmg, no sin, fnt od
8000		

7300	TVD (ft)	SS: med - dk brn, gy brn, trnsi - clr gr, v'f gr, sb rnd - sb ang, v hd, brt, w srt, w cons, mod cmt, occ silty sh, bri lt bl - wh mky cut, v slow stmg, no sin, fnt od
8000		



WT IN 9.2+ OUT 9.1+
VIS IN 55/ OUT 53



MD: 9.894'
TVD: 7,637.53'
Inclination: 90.56 °
Azimuth: 184.78 °
VS: 2,446.79'

MD: 9.989'
TVD: 7,636.65'
Inclination: 90.5 °
Azimuth: 183.65 °
VS: 2,541.58'

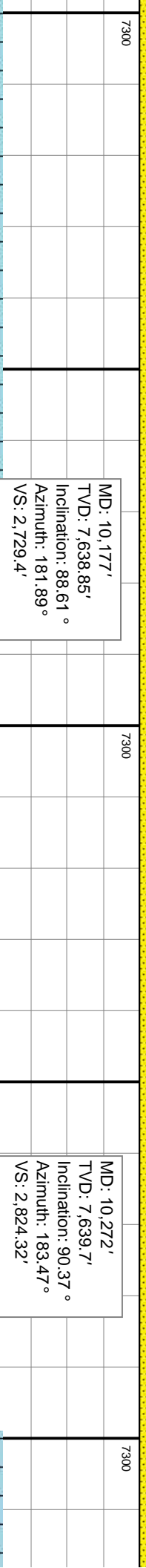
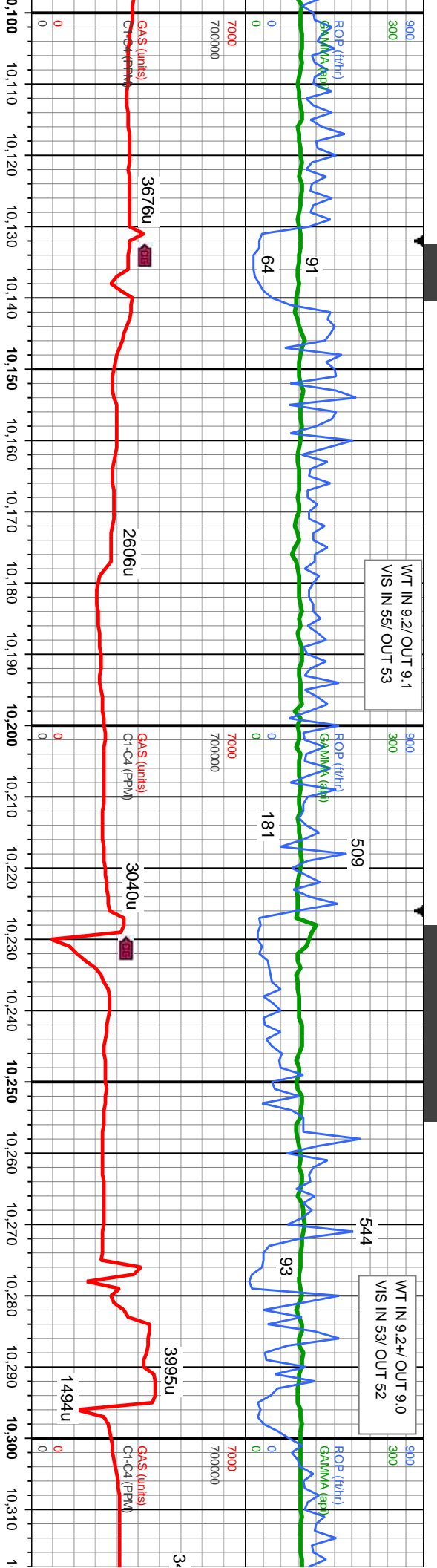
MD: 10.083'
TVD: 7,636.98'
Inclination: 89.1 °
Azimuth: 182.69 °
VS: 2,635.47'

, w cons, mod

SS: med - dk brn, gy brn, trnsf - clt gr, vf gr, sb md - sb ang, v hd, brt, w srt, w cons, mod
cmt, occ silty sh, brt lt bl - wh mky cut, v slow stmg, no stn, mod od

SS: med - dk brn, gy brn, trnsf - clt gr, vf gr, sb md - sb ang, v hd, brt, w srt, w cons, mod
cmt, occ silty sh, tr dissn pyr, frnt lt bl - wh mky cut, v slow stmg, frnt sn, frnt od

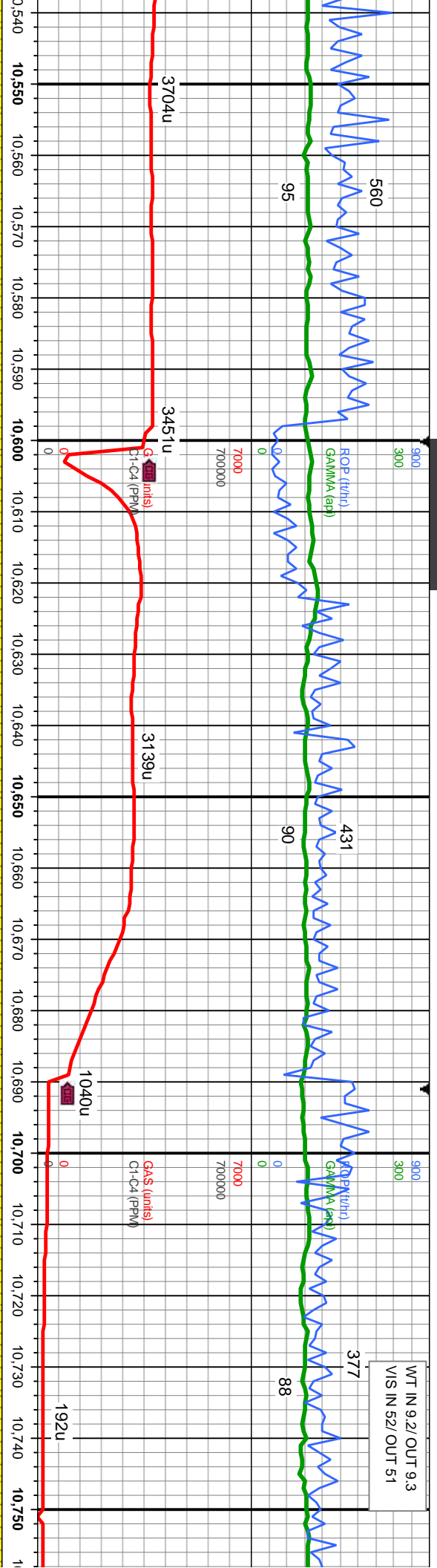




TV D (ft)	TV D (ft)	TV D (ft)
SS: med - dk brn, gy brn, trnsi - clr gr, v' gr, sb md - sb ang, v hd, brit, w srl, w cons, mod cnt, occ silty sh, tr dissn pyr, fnt lt bl - wh mky cut, v slow stmg, no srl, fnt od	SS: med - dk brn, gy brn, trnsi - clr gr, v' gr, sb md - sb ang, v hd, brit, w srl, w cons, mod cnt, sl alt lp, tr silty sh, tr dissn pyr, fnt lt bl - wh mky cut, v slow stmg, no srl, fnt od	SS: med - c cnt, occ str
8000	8000	8000



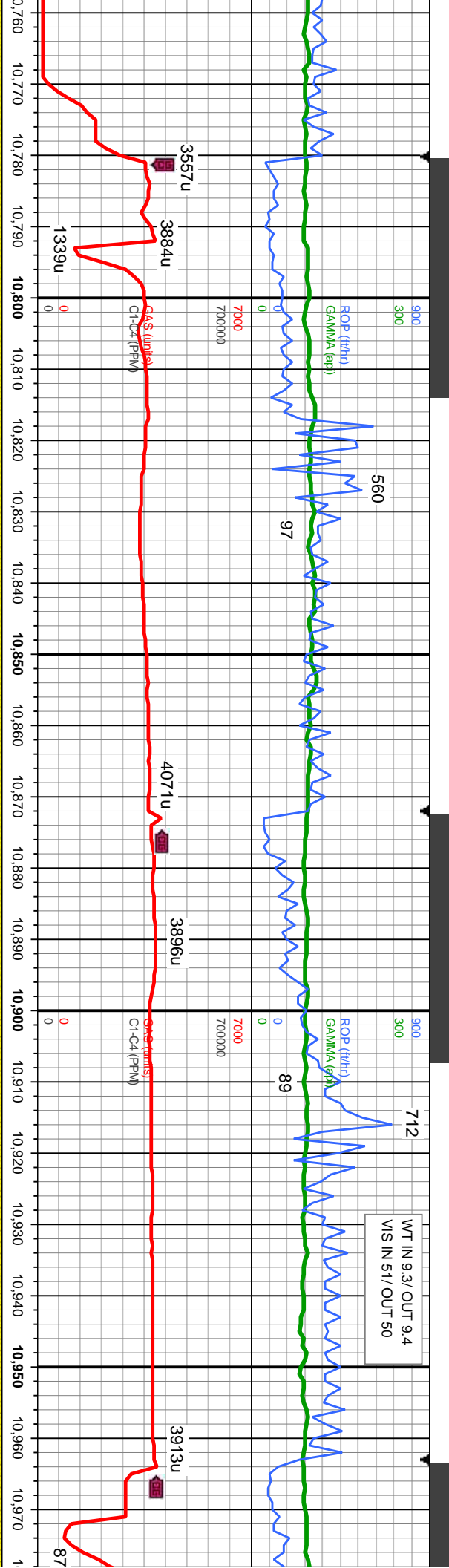
WT IN 9.2/ OUT 9.3
VIS IN 5.2/ OUT 5.1



MD: 10,548' TVD: 7,640.15' Inclination: 89.69 ° Azimuth: 181.97 ° VS: 3,100.13'	7300	MD: 10,640' TVD: 7,639.92' Inclination: 90.59 ° Azimuth: 183.08 ° VS: 3,192.06'	7300	MD: 10,732' TVD: 7,639.82' Inclination: 89.54 ° Azimuth: 183.24 ° VS: 3,283.96'
---	------	---	------	---

- clr gr, vf gr, sb md - sb ang, v hd, brt, w srt, w cons, mod fast stmg, mod mky cut, fnt od	8000	SS: med - dk brn, gy brn, trns - clr gr, vf gr, sb rnd - sb ang, v hd, brt, w srt, w cons, mod cmt, occ silty sh, lt bl - wh mod fast stmg, mod mky cut, fnt od	8000	SS: med - dk brn, gy brn, trns - clr gr, vf gr, sb rnd - sb ang, v hd, brt, w srt, w cons, mod cmt, tr silty sh, lt bl - wh mod fast stmg, mod mky cut
---	------	---	------	--



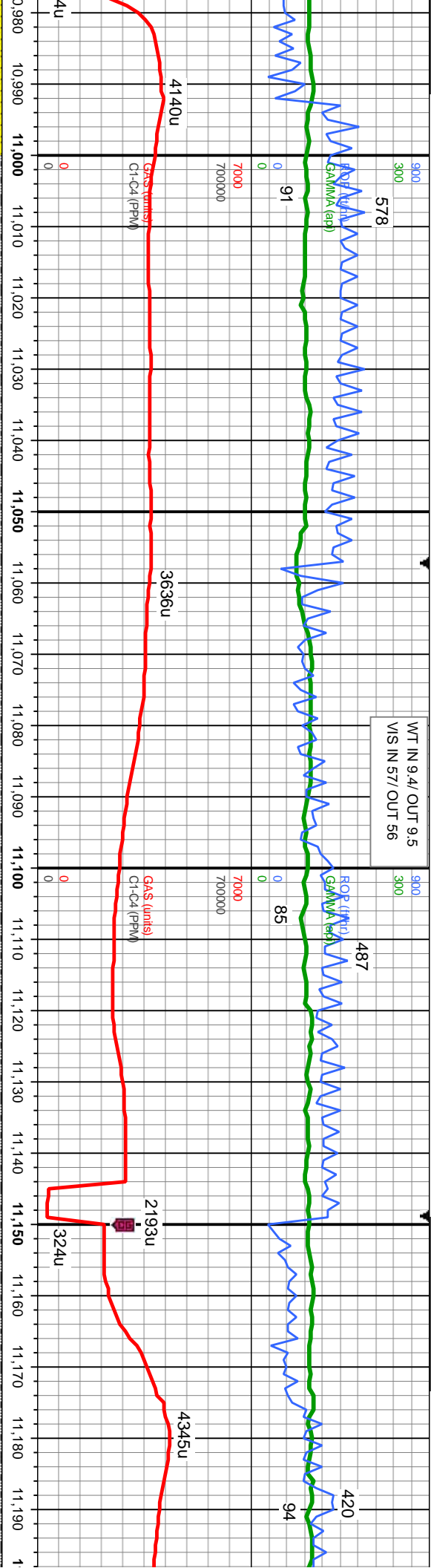


MD: 10,824'
TVD: 7,640.78'
Inclination: 89.26 °
Azimuth: 181.78 °
VS: 3,375.89'

MD: 10,916'
TVD: 7,641.4'
Inclination: 89.97 °
Azimuth: 181.07 °
VS: 3,467.88'

sb ang, v hd, brit, w srt, w cons, mod , fnt od	SS: med - dk brn, gy brn, tmsl - clr gr, vt gr, sb md - sb ang, v hd, brit, w srt, w cons, mod cnt, occ sily sh, lt bl - wh mod fast stmg, mod mky cut, fnt od,
--	--





MD: 11,009'
TVD: 7,640.54'
Inclination: 91.09 °
Azimuth: 181.04 °
VS: 3,560.86'

MD: 11,100'
TVD: 7,639.55'
Inclination: 90.16 °
Azimuth: 180.59 °
VS: 3,651.86'

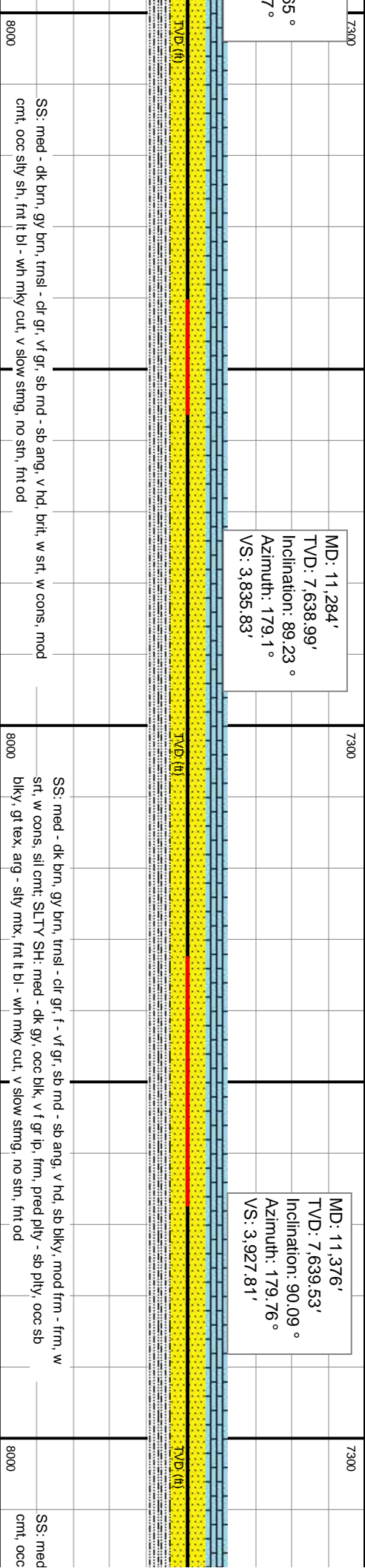
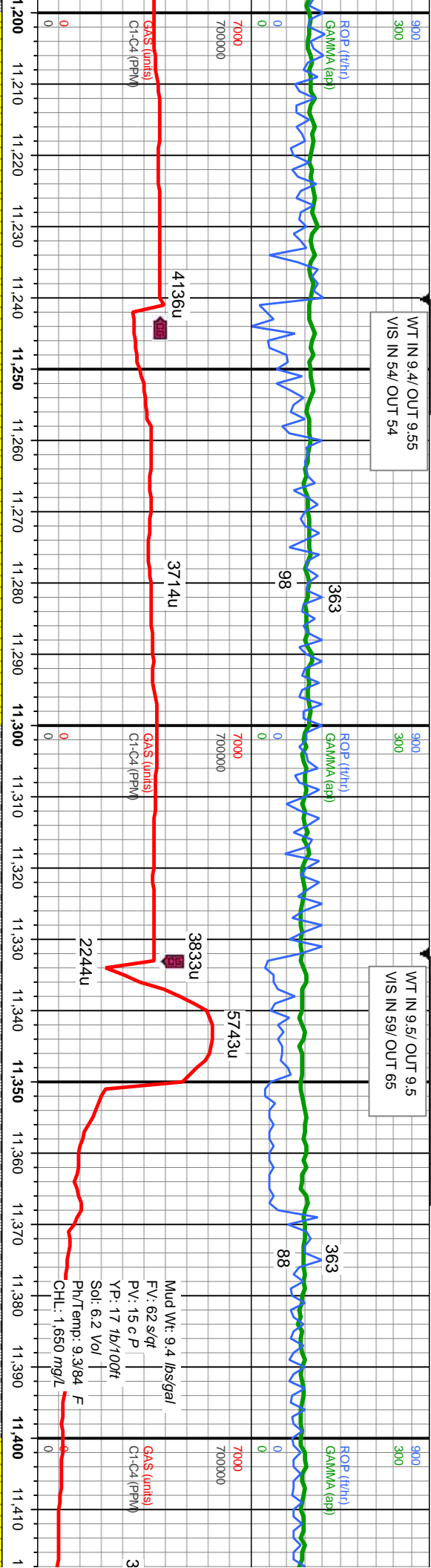
MD: 11,193'
TVD: 7,638.89'
Inclination: 90.6
Azimuth: 179.6
VS: 3,744.85'

SS: med - dk brn, gy brn, trnsi - clr gr, f - vf gr, sb rnd - sb ang, v hd, sb blk, mod frm - frm, w	SS: med - dk brn, gy brn, trnsi - clr gr, f - vf gr, sb rnd - sb ang, v hd, sb blk, mod frm - frm, w
srt, w cons, sil cnt; SLTY SH: med - dk gy, occ blk, v f gr ip, frm, pred ply - sb ply, occ sb	srt, w cons, sil cnt; SLTY SH: med - dk gy, occ blk, v f gr ip, frm, pred ply - sb ply, occ sb
blk, gt tex, arg - silty mix, lt bl - wh mod fast smg, mod mky cut, frt od	blk, gt tex, arg - silty mix, lt bl - wh mod fast smg, mod mky cut, frt od
8000	8000



WT IN 9.4/ OUT 9.55
VIS IN 54/ OUT 54

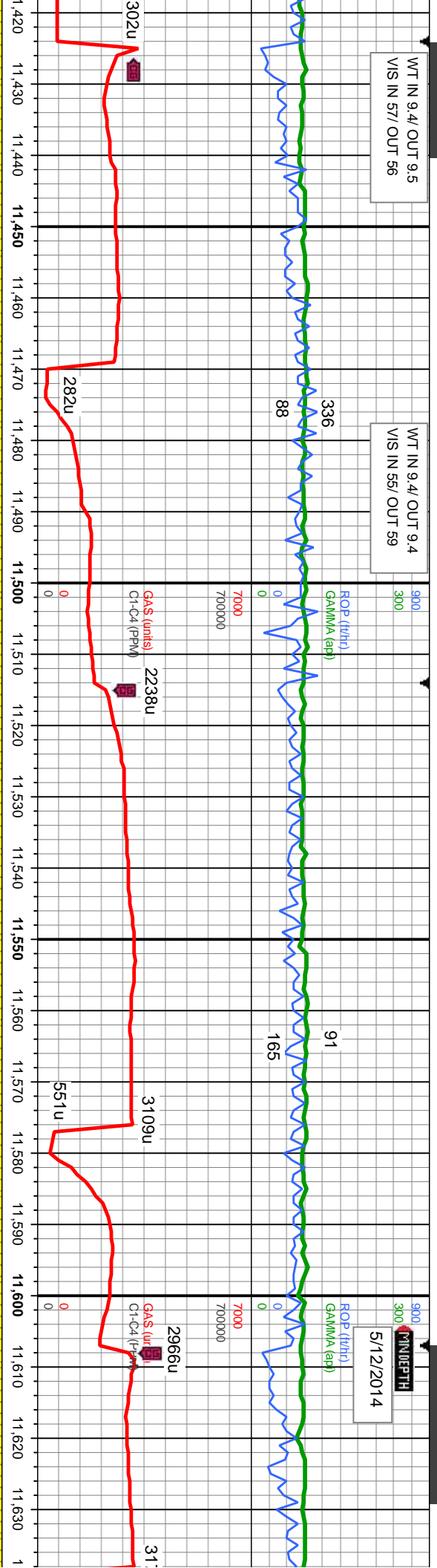
WT IN 9.5/ OUT 9.5
VIS IN 59/ OUT 65



WT IN 9.4/ OUT 9.5
VIS IN 57/ OUT 56

WT IN 9.4/ OUT 9.4
VIS IN 55/ OUT 59

MINDEPTH
5/12/2014



MD: 11,467'
TVD: 7,638.72'
Inclination: 90.93 °
Azimuth: 179.55 °
VS: 4,018.8'

MD: 11,560'
TVD: 7,638.32'
Inclination: 89.57 °
Azimuth: 177.94 °
VS: 4,111.75'

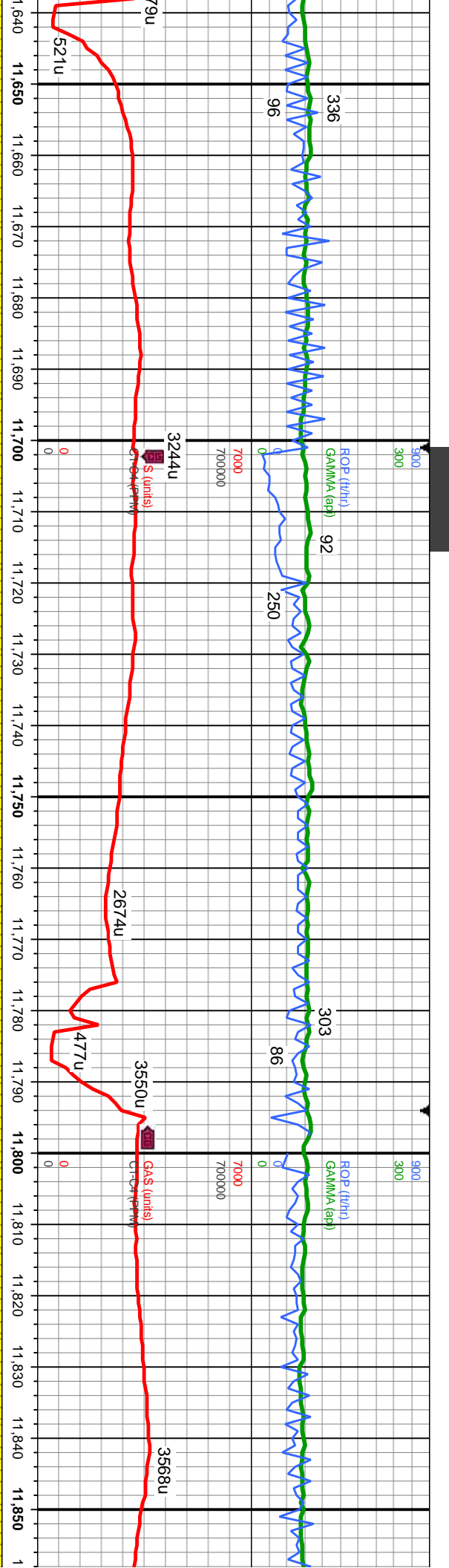
TVD (ft)		TVD (ft)
7300		7300
8000		8000

- dk brn, gy brn, trns l - clr gr, vf gr, sb md - sb ang, v hd, brit, w srt, w cons, mod
sily sh, fnt lt bl - wh mky cut, v slow string, no sfn, fnt od

SS: med - dk brn, gy brn, trns l - clr gr, vf gr, sb md - sb ang, v hd, brit, w srt, w cons, mod
cmt, occ sily sh, fnt lt bl - wh mky cut, v slow string, no sfn, fnt od

SS: med - dk brn, gy brn, trns l - clr
cmt, occ sily sh, fnt lt bl - wh mky c

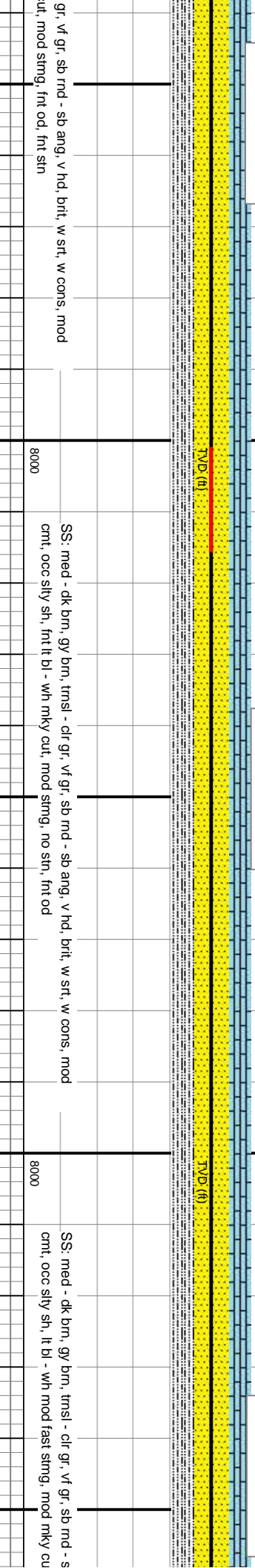




MD: 11,655'
TVD: 7,638.82'
Inclination: 89.82 °
Azimuth: 180.11 °
VS: 4,206.72'

MD: 11,749'
TVD: 7,638.41'
Inclination: 90.68 °
Azimuth: 180.8 °
VS: 4,300.72'

MD: 11,843'
TVD: 7,638.08'
Inclination: 89.72 °
Azimuth: 181.23 °
VS: 4,394.71'



gr, vif gr, sb md - sb ang, v hd, brit, w srt, w cons, mod
cut, mod string, fnt od, fnt sin

SS: med - dk brn, gy brn, trnsf - clr gr, vif gr, sb md - sb ang, v hd, brit, w srt, w cons, mod
cmt, occ silty sh, fnt lt bl - wh mky cut, mod string, no str, fnt od

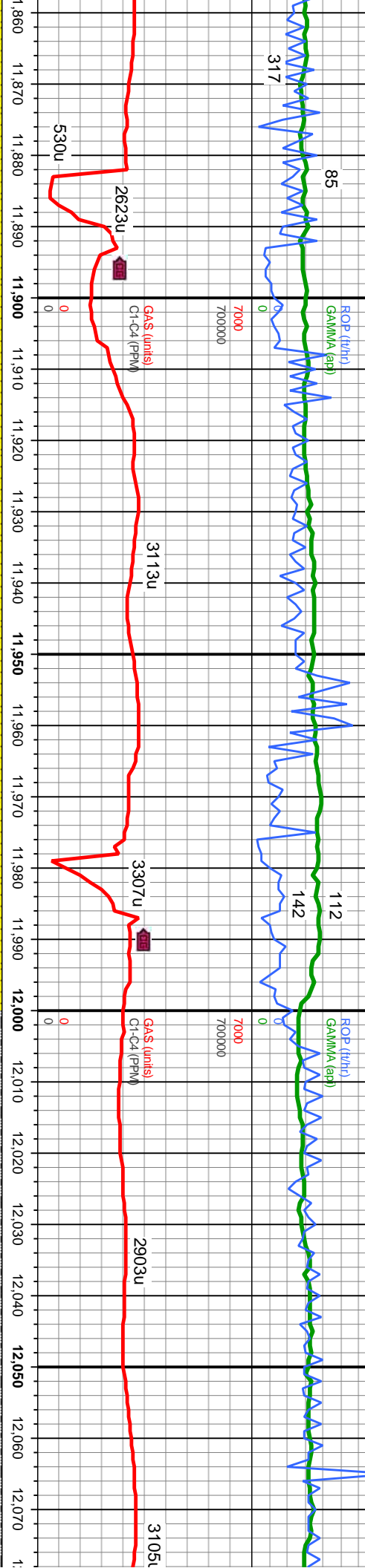
SS: med - dk brn, gy brn, trnsf - clr gr, vif gr, sb md - s
cmt, occ silty sh, lt bl - wh mod fast string, mod mky cu



WT IN 9.3/ OUT 9.2
VIS IN 55/ OUT 64

WT IN 9.3/ OUT 9.2+
VIS IN 55/ OUT 66

WT IN 9.3+/ OUT 9.3+
VIS IN 55/ OUT 64



MD: 11,938'
TVD: 7,638.72'
Inclination: 89.51 °
Azimuth: 180.7°
VS: 4,489.7'

MD: 12,032'
TVD: 7,639.12'
Inclination: 90 °
Azimuth: 180.35°
VS: 4,583.7'

b ang, v hd, brlt, w srt, w cons, mod	SS: med - dk brn, gy brn, trnsf - clr gr, vif gr, sb md - sb ang, v hd, brlt, w srt, w cons, mod
t, fnt od, fnt sin	cnt, occ sily sh, lt bl - wh mod fast sting, mod mky cut, fnt od, no sin
8000	8000



WT IN 9.3/ OUT 9.4
VIS IN 49/ OUT 55

487

114

900
300

ROP (ft/hr)
GAMMA (api)

7000
700000

GAS (units)
G/C (PPM)

0
0

12,300 12,310 12,320 12,330 12,340 12,350 12,360 12,370 12,380 12,390 12,400 12,410 12,420 12,430 12,440 12,450 12,460 12,470 12,480 12,490 12,500 12,510

Mud Wt: 9.4 lbs/gal
F.V: 53 s/qt
PV: 12 c P
Sol: 6.7 Vol
YP: 14 lb/100ft
PluTemp: 9.3/76 F
CHL: 1,600 mg/L

3285u

115

125

900
300
WT IN 9.3+ OUT
VIS IN 53/ OUT

ROP (ft/hr)
GAMMA (api)

7000
700000

GAS (units)
G/C (PPM)

0
0

7300

D: 12,307'
D: 7,642.35'
Inclination: 90.28 °
imuth: 180.17 °
S: 4,858.61'

MD: 12,396'
TVD: 7,642.42'
Inclination: 89.63 °
Azimuth: 181.55 °
VS: 4,947.6'

7300

TVD (ft)

TVD (ft)

TVD (ft)

SS: med - dk brn, gy brn, trns l - clr gr, v' gr, sb rnd - sb ang, v hd, brit, w srt, w cons, mod cnt; SH: med - dk gy, sdy ip, frm, sb blk, gt tex, arg - silty mtx, lt bl - wh mod fast string, mod mky cut, fnt od

SS: med - dk brn, gy brn, trns l - clr gr, v' gr, sb rnd - sb ang, v hd, brit, w srt, w cons, mod cnt; SH: med - dk gy, sdy ip, frm, sb blk, gt tex, arg - silty mtx, lt bl - wh mod fast string, mod mky cut, fnt od

SS: cons

8000

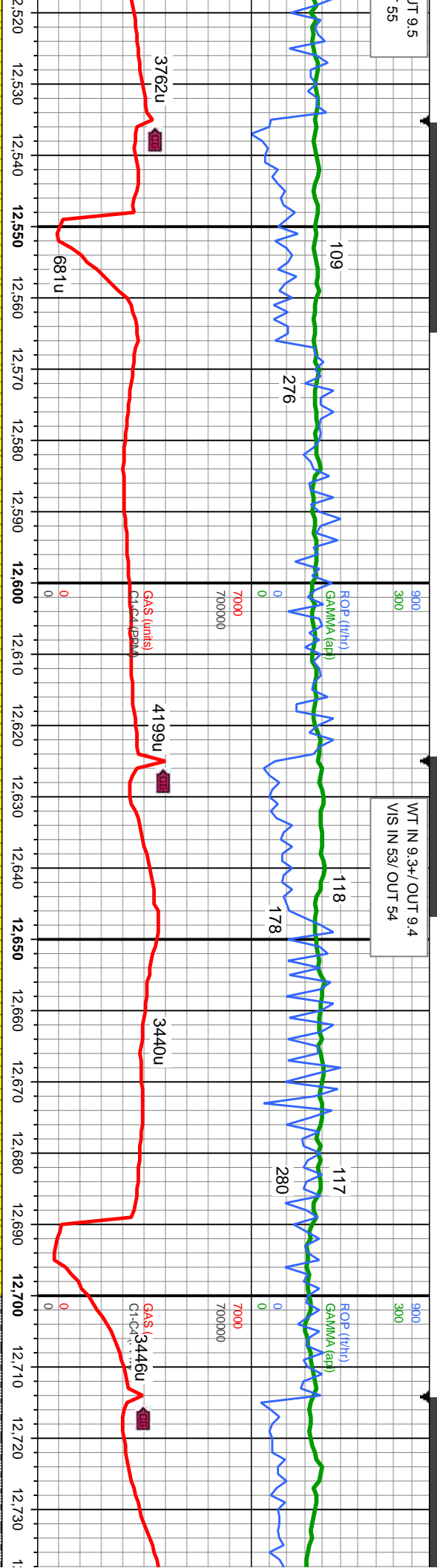
8000

8000



JT 9.5
55

WT IN 9.3+ / OUT 9.4
VIS IN 53/ OUT 54



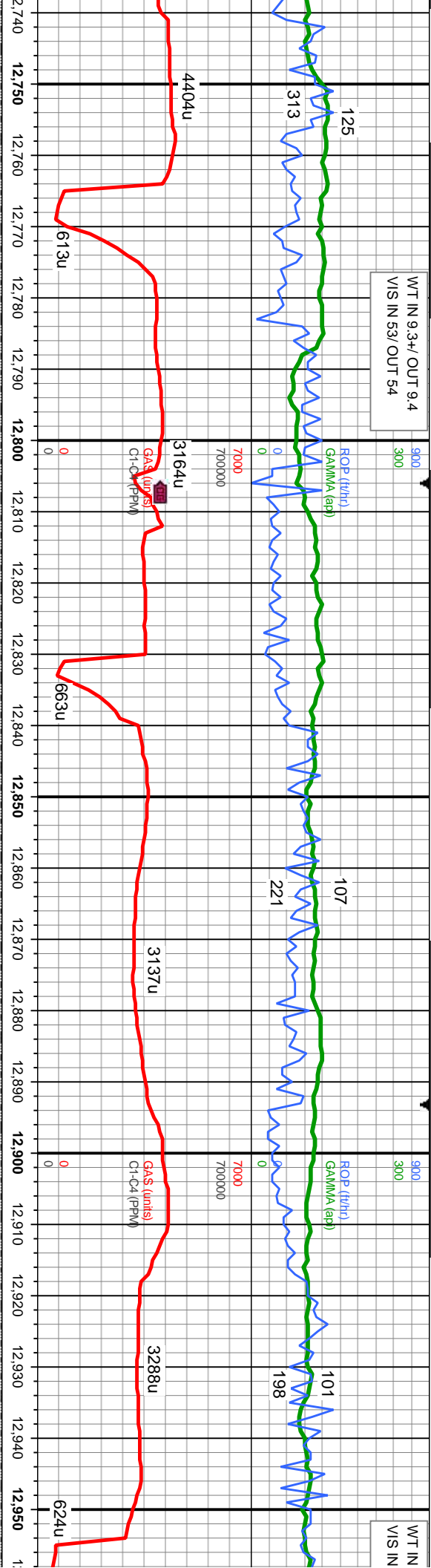
MD: 12,575'
TVD: 7,642.04'
Inclination: 90.68 °
Azimuth: 180.04 °
VS: 5,126.59'

MD: 12,665'
TVD: 7,641.2'
Inclination: 90.4 °
Azimuth: 180.23 °
VS: 5,216.59'

med - dk brn, gy brn, trnsl - clr gr, v f gr, sb rnd - sb ang, v hd, brit, w srt, w	SS: med - dk brn, gy brn, trnsl - clr gr, v f gr, sb rnd - sb ang, v hd, brit, w srt, w cons, mod cnt, occ silty sh, lt bl - wh mod fast stmg, mod mky cut, fnt od
mod cnt, occ silty sh, lt bl - wh mod fast stmg, mod mky cut, fnt od	SS: med - dk brn, gy brn, trnsl - clr gr, v f gr, sb rnd - sb ang, v hd, brit, w srt, w cons, mod cnt, occ silty sh, lt bl - wh mod fast stmg, mod mky cut, fnt od



WT IN 9.3+/- OUT 9.4
VIS IN 53/ OUT 54



MD: 12,755'
TVD: 7,640.54'
Inclination: 90.43°
Azimuth: 179.56°
VS: 5,306.58'

MD: 12,845'
TVD: 7,639.89'
Inclination: 90.4°
Azimuth: 178.84°
VS: 5,396.56'

MD: 12,934'
TVD: 7,639.46'
Inclination: 90.15°
Azimuth: 177.22°
VS: 5,485.47'

v/ gr, sb rmd - sb ang, v hd, brt, w srt, w cons, mod
dkly, gt tex, arg - slty mtx, lt bl - wh mod fast stmg, mod

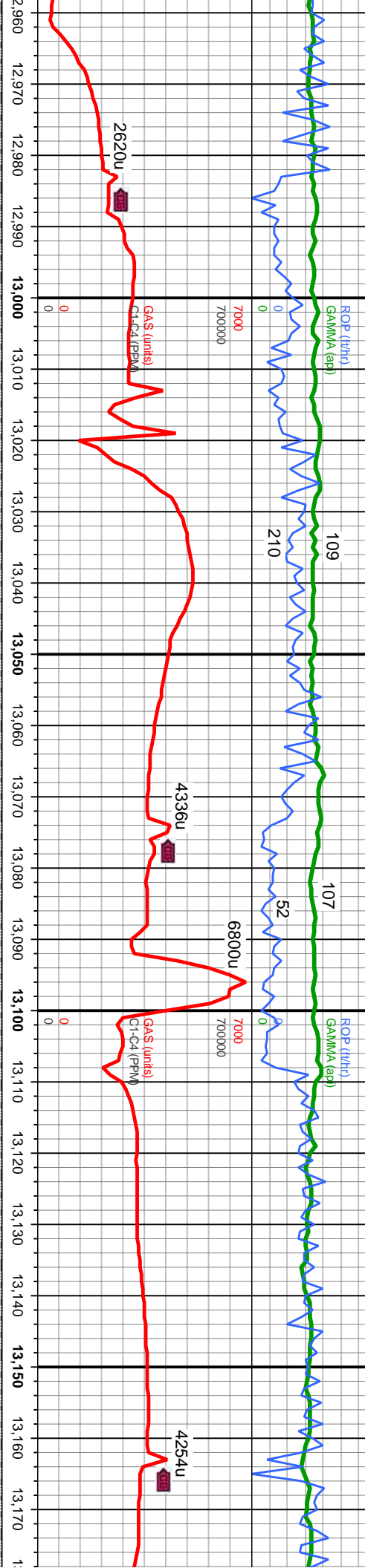
SS: med - dk brn, gy brn, trnsf - clr gr, v/ gr, sb rmd - sb ang, v hd, brt, w srt, w cons, mod
cmt: SH: med - dk gy, sdy ip, frm, sb bkly, gt tex, arg - slty mtx, lt bl - wh mod fast stmg,
mod mky cut, fnt od, fnt stn



9.4+ / OUT 9.4+
55/ OUT 54

WT IN 9.5 / OUT 9.4
VIS IN 55/ OUT 54

WT IN 9.4 / OUT 9.5
VIS IN 56/ OUT 57



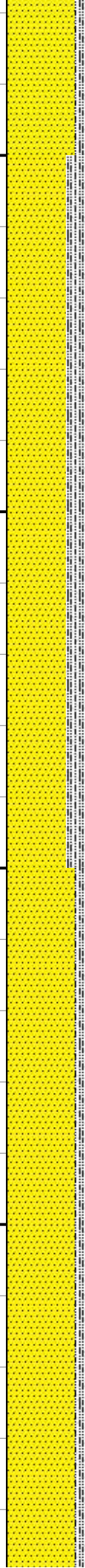
MD: 13,024'
TVD: 7,639.57'
Inclination: 89.72 °
Azimuth: 177.46 °
VS: 5,575.34'

MD: 13,114'
TVD: 7,638.75'
Inclination: 91.32 °
Azimuth: 178.39 °
VS: 5,665.24'

sb ang, v hnd, brit, w srt, w cons, mod kly, gt tex, arg - sily mtx, lt bl - wh mod	SS: med - dk brn, gy brn, trns l - clr gr, v f gr, sb md - sb ang, v hnd, brit, w srt, w cons, mod cmt; SH: med - dk gy, occ black ip, sdy ip, frm, sb blk, gt tex, arg - sily mtx, lt bl - wh mod fast sting, mod mky cut, fnt od
--	--



WT IN 9.45/ OUT 9.5
VIS IN 57/ OUT 56

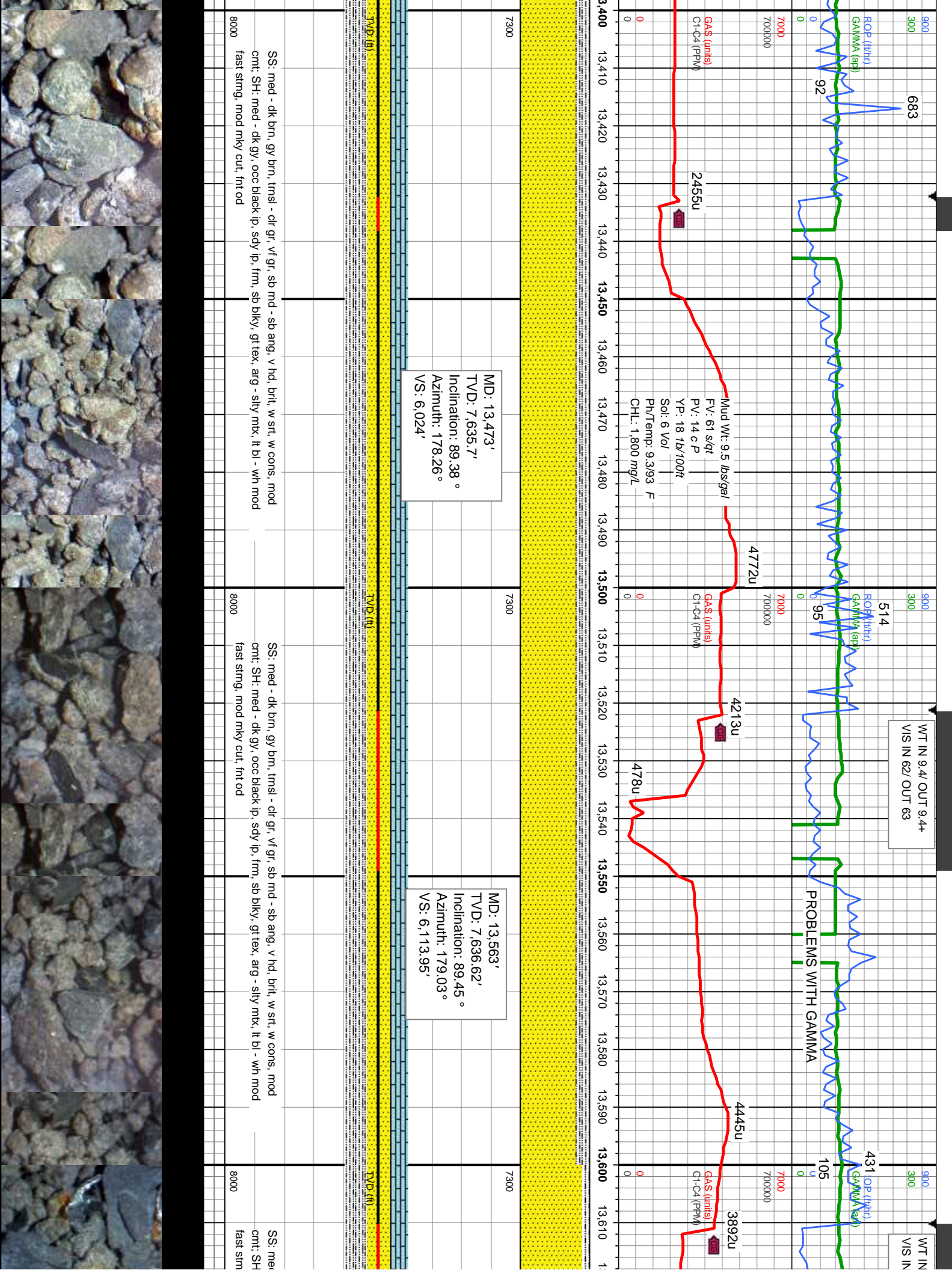


MD: 13,383'
TVD: 7,635.02'
Inclination: 89.75 °
Azimuth: 178.85 °
VS: 5,934.06'



SS: med - dk brn, gy brn, trnsl - cil gr, v' gr, sb md - sb ang, v h'd, bril, w srt, w cons, mod
cm't; SH: med - dk gy, occ black ip, sdy' ip, frm, sb bkly, gt tex, arg - stly mtz, lt bl - wh modd
fast strng, mod mky cut, frt od

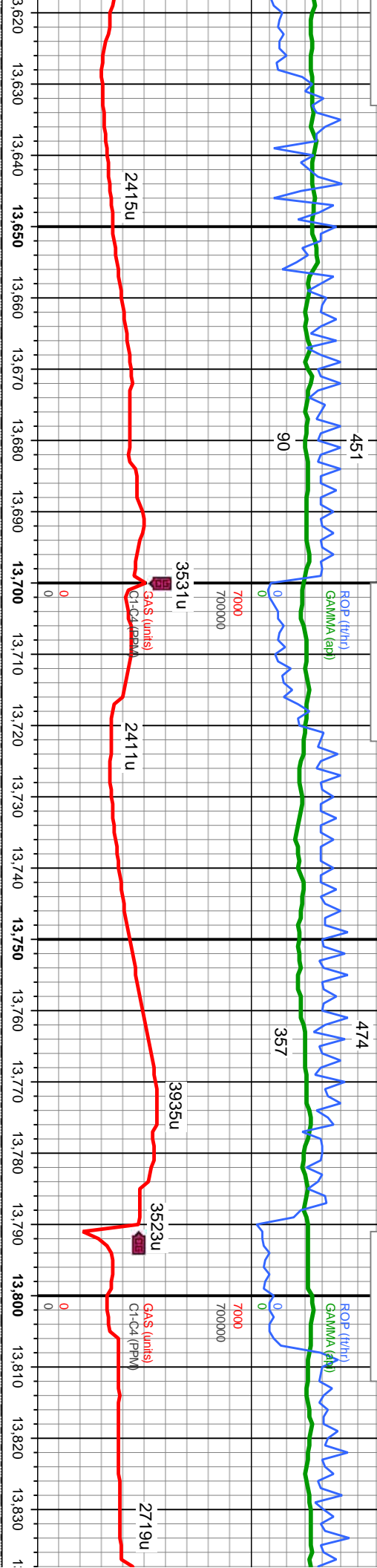




9.4/ OUT 9.5
62/ OUT 67

WT IN 9.3+/ OUT 9.5
VIS IN 61/ OUT 66

WT IN 9.3/ OUT 9.4
VIS IN 55/ OUT 61



MD: 13,652'
TVD: 7,636.96'
Inclination: 90.12 °
Azimuth: 180.62 °
VS: 6,202.94'

MD: 13,742'
TVD: 7,637.98'
Inclination: 88.58 °
Azimuth: 179.21 °
VS: 6,292.93'

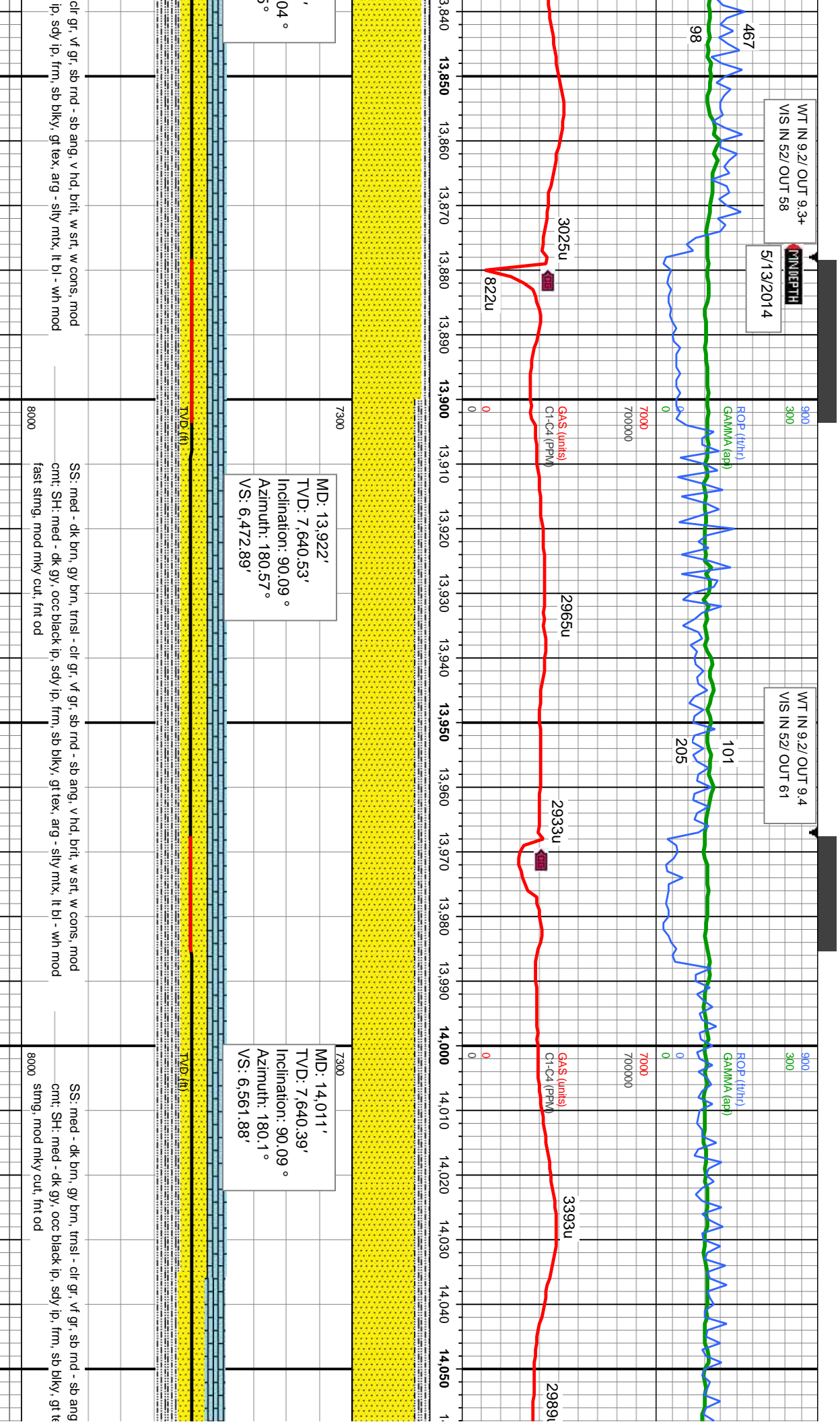
MD: 13,832'
TVD: 7,639.85'
Inclination: 89.
Azimuth: 179.8
VS: 6,382.89'

d - dk brn, gy brn, trnsl - clr gr, v f gr, sb md - sb ang, v hd, brlt, w srt, w cons, mod
: med - dk gy, occ black ip, sdy ip, frm, sb blkly, gt tex, arg - slty mltx, lt bl - wh mod
g, mod mky cut, fnt od

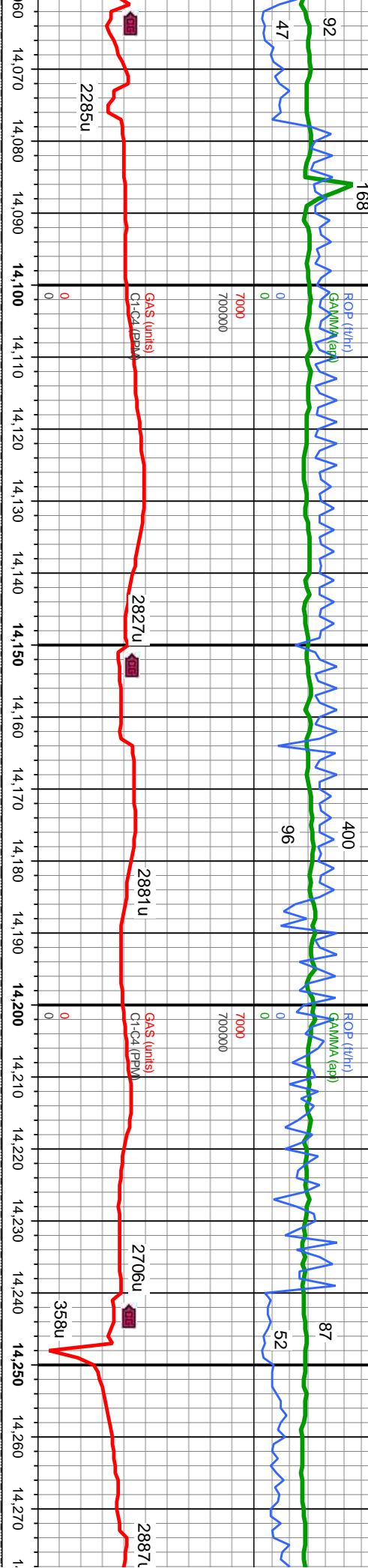
SS: med - dk brn, gy brn, trnsl - clr gr, v f gr, sb md - sb ang, v hd, brlt, w srt, w cons, mod
cnt, SH: med - dk gy, occ black ip, sdy ip, frm, sb blkly, gt tex, arg - slty mltx, lt bl - wh mod
fast string, mod mky cut, fnt od

SS: med - dk brn, gy brn, trnsl -
cnt, SH: med - dk gy, occ black
fast string, mod mky cut, fnt od

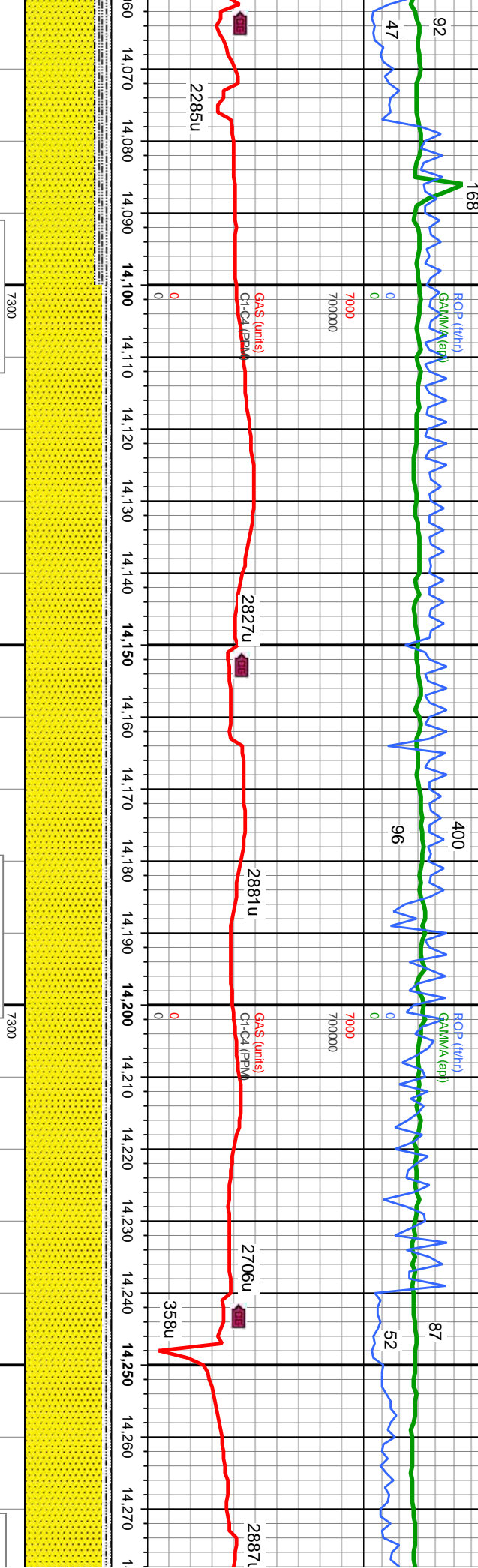




WT IN 9.2/ OUT 9.4
VIS IN 52/ OUT 64



WT IN 9.2/ OUT 9.4
VIS IN 53/ OUT 63



MD: 14,101'
TVD: 7,640'
Inclination: 90.4 °
Azimuth: 180.9 °
VS: 6,651.88'

MD: 14,190'
TVD: 7,640.34'
Inclination: 89.17 °
Azimuth: 180.7 °
VS: 6,740.88'

MD: 14,190'
TVD: 7,640.34'
Inclination: 89.17 °
Azimuth: 180.7 °
VS: 6,740.88'

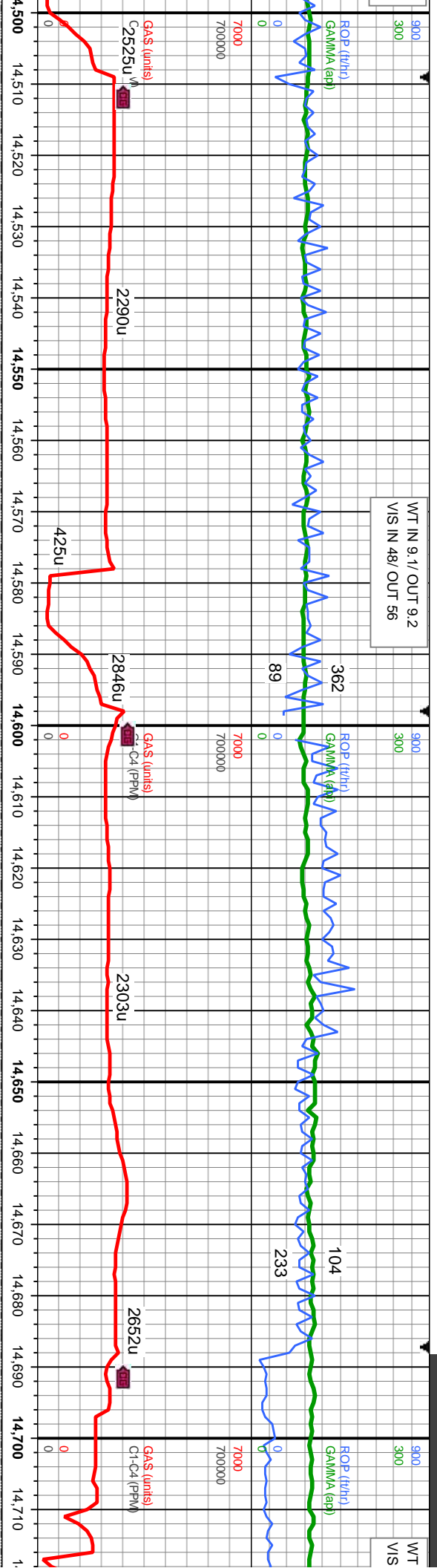
v h.d. brit, w srt, w cons, mod
x, arg - silty mtx, lt bl - wh fast

SS: med - dk brn, gy brn, trmsl - clr gr, v'f gr, sb rnd - sb ang, v h.d. brit, w srt, w cons, mod
cnt; SH: med - dk gy, occ black ip, sdy ip, frm, sb blk, gt tex, arg - silty mtx, lt bl - wh
mod fast stmg, mod mky cut, fnt od

SS: med - dk brn, gy brn, trmsl - clr gr, v'f gr, sb rnd - sb ang, v h.d. brit, w srt, w cons, mod
cnt; SH: med - dk gy, occ black ip, sdy ip, frm, sb blk, gt tex, arg - silty mtx, lt bl - wh
stmg, mod mky cut, fnt od



WT IN 9.1/ OUT 9.2
VIS IN 48/ OUT 56



MD: 14,549'
TVD: 7,639.04'
Inclination: 89.78 °
Azimuth: 180.07°
VS: 7,099.79'

MD: 14,639'
TVD: 7,639.94'
Inclination: 89.07 °
Azimuth: 180.73°
VS: 7,189.78'

SS: med - dk brn, gy brn, trns l - clr gr, v f gr, sb rnd - sb ang, v hd, brit, w srt, w cons, mod
cmt: SH: med - dk gy, occ black ip, sdy ip, frm, sb blkly, gt tex, arg - slty mtz, lt bl - wh
mod fast stmg, mod mky cut, fnt od

SS: med - dk brn, gy brn, trns l - clr gr, v f gr, sb rnd - sb ang, v hd, brit, w srt, w cons, mod
cmt: SH: med - dk gy, occ black ip, sdy ip, frm, sb blkly, gt tex, arg - slty mtz, lt bl - wh
mod fast stmg, mod mky cut, fnt od

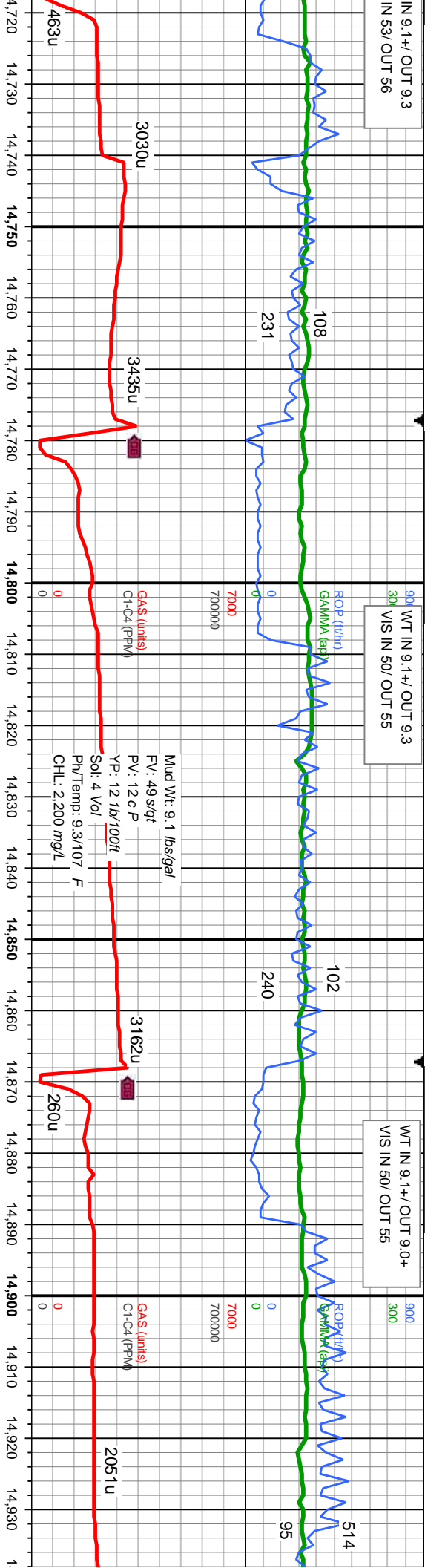
SS: med -
cmt: SH: r
mod fast s



IN 9.1+ OUT 9.3
IN 53/ OUT 56

WT IN 9.1+ OUT 9.3
VIS IN 50/ OUT 55

WT IN 9.1+ OUT 9.0+
VIS IN 50/ OUT 55



MD: 14,729'
TVD: 7,640.72'
Inclination: 89.94 °
Azimuth: 181.2 °
VS: 7,279.78'

MD: 14,819'
TVD: 7,640.65'
Inclination: 90.15 °
Azimuth: 180.18 °
VS: 7,369.77'

MD: 14,908'
TVD: 7,640.7'
Inclination: 89.78 °
Azimuth: 180.64 °
VS: 7,458.77'

dk brn, gy brn, trnsf - clr gr, vf gr, sb md - sb ang, v hd, brit, w srt, w cons, mod
med - dk gy, occ black ip, sdy ip, frm, sb blkly, gt tex, arg - silty mtx, lt bl - wh
fitting, mod mky cut, fnt od

SS, med - dk brn, gy brn, trnsf - clr gr, vf gr, sb md - sb ang, v hd, brit, w srt, w cons, mod
cmt, SH: med - dk gy, occ black ip, sdy ip, frm, sb blkly, gt tex, arg - silty mtx, lt bl - wh mod
fast string, mod mky cut, fnt od

SS, med - dk brn, gy brn, trnsf - clr
cmt, SH: med - dk gy, occ black ip,
mod fast string, mod mky cut, fnt od

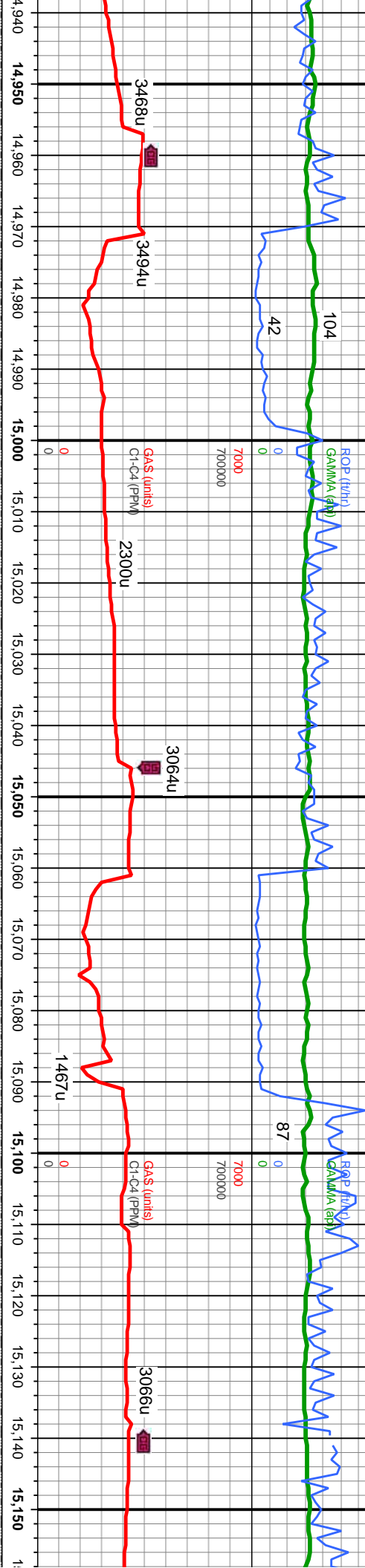


WT IN 9.1/ OUT 9.1
VIS IN 56/ OUT 55

WT IN 9.2/ OUT 9.2
VIS IN 55/ OUT 57

WT IN 9.1/ OUT 9.1
VIS IN 52/ OUT 53

900
300



MD: 14,998'
TVD: 7,640.75'
Inclination: 90.16°
Azimuth: 179.37°
VS: 7,548.77'

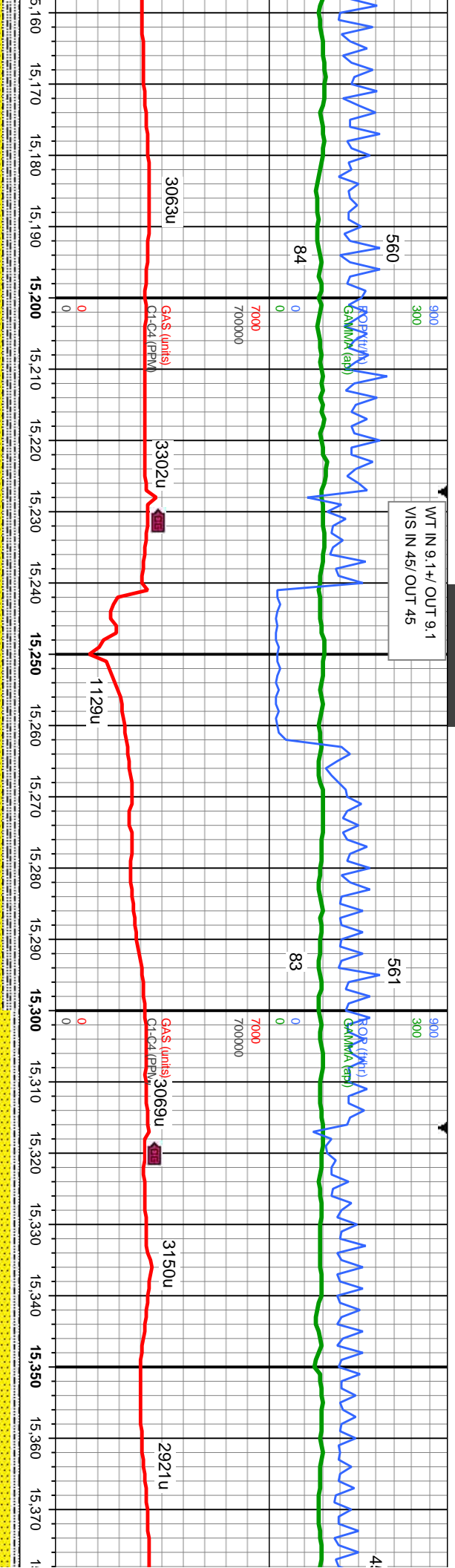
MD: 15,088'
TVD: 7,639.77'
Inclination: 91.08°
Azimuth: 179.46°
VS: 7,638.75'

gr, v/ gr, sb rnd - sb ang, v hd, brlt, w srt, w cons, mod	SS: med - dk brn, gy brn, trnsf - cl gr, v/ gr, sb rnd - sb ang, v hd, brlt, w srt, w cons, mod
sdv ip, frm, sb blk, gt tex, arg - slty mtx, lt bl - wh	cnt: SH: med - dk gy, ooc black ip, sdv ip, frm, sb blk, gt tex, arg - slty mtx, lt bl - wh fast
	stmg, mod mky cut, fnt od
	8000

SS: med - dk brn, gy brn, trnsf - cl gr, v/ gr, sb rnd - sb	SS: med - dk brn, gy brn, trnsf - cl gr, v/ gr, sb rnd - sb
cnt: SH: med - dk gy, ooc black ip, sdv ip, frm, sb blk, gt	cnt: SH: med - dk gy, ooc black ip, sdv ip, frm, sb blk, gt
stmg, mod mky cut, fnt od	stmg, mod mky cut, fnt od
8000	8000



WT IN 9.1+ OUT 9.1
VIS IN 45/ OUT 45



MD: 15,178'
TVD: 7,638.9'
Inclination: 90.03 °
Azimuth: 178.46 °
VS: 7,728.71'

MD: 15,268'
TVD: 7,638.52'
Inclination: 90.46 °
Azimuth: 178.81 °
VS: 7,818.66'

MD: 15,357'
TVD: 7,638.4'
Inclination: 89.69 °
Azimuth: 178.51 °
VS: 7,907.62'

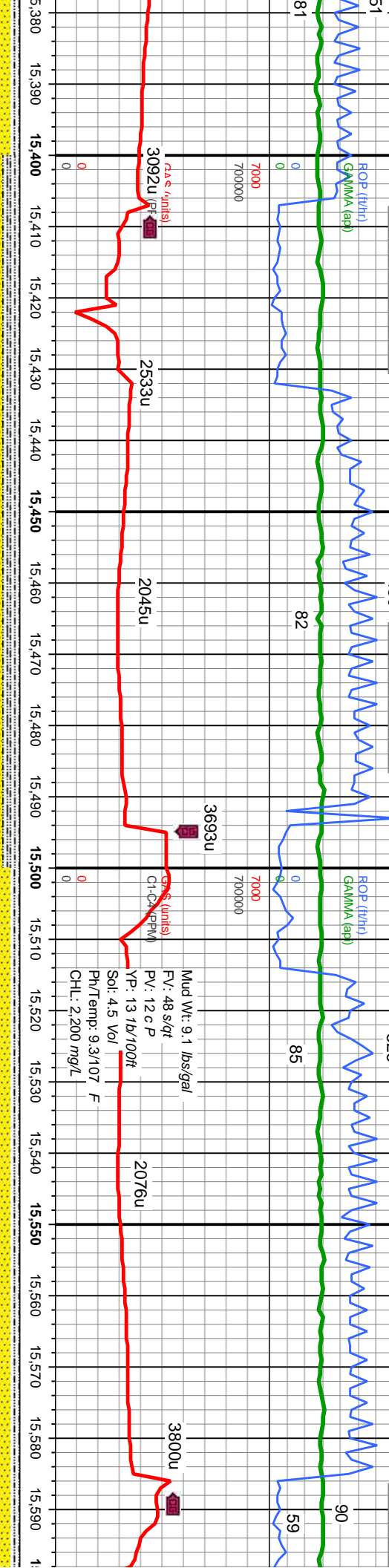
TVD (ft)	
7300	
8000	
SS: med - dk brn, gy brn, trnsl - cl gr, vf gr, sb rnd - sb ang, v hd, brit, w srt, w cons, mod cnt; SH: med - dk gy, occ black ip, sdy ip, frm, sb blk, gt tex, arg - slty mtx, lt bl - wh slow stmg, mod mky cut, fnt od	



WT IN 9.05/ OUT 9.0+
VIS IN 48/ OUT 54

WT IN 9.1/ OUT 9.1
VIS IN 48/ OUT 56

WT IN 9.1/ C
VIS IN 46/ O

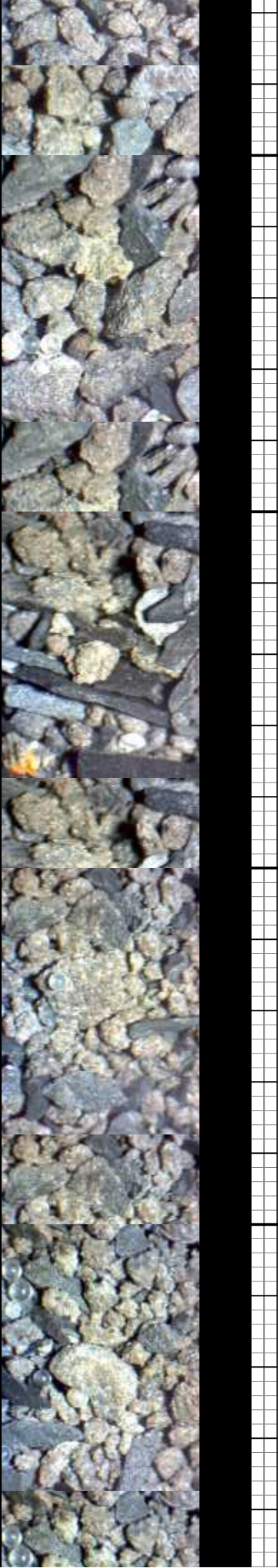


MD: 15,447'
TVD: 7,638.76'
Inclination: 89.85 °
Azimuth: 178.36 °
VS: 7,997.56'

MD: 15,537'
TVD: 7,639.92'
Inclination: 88.67 °
Azimuth: 178.17 °
VS: 8,087.49'

SS: med - dk brn, gy brn, trns l - clr gr, v f gr, sb md - sb ang, v hd, brit, w srt, w cons, mod
cnt; SH: med - dk gy, occ black ip, sdy ip, frm, sb blk, gt tex, arg - slty mtx, lt bl - wh
slow stmg, mod mky cut, fnt od

SS: med - dk brn, gy brn, trns l - clr gr, v f gr, sb md - sb ang, v hd, brit, w srt, w cons, mod
cnt; SH: med - dk gy, occ black ip, sdy ip, frm, sb blk, gt tex, arg - slty mtx, lt bl - wh
fast stmg, mod mky cut, fnt od

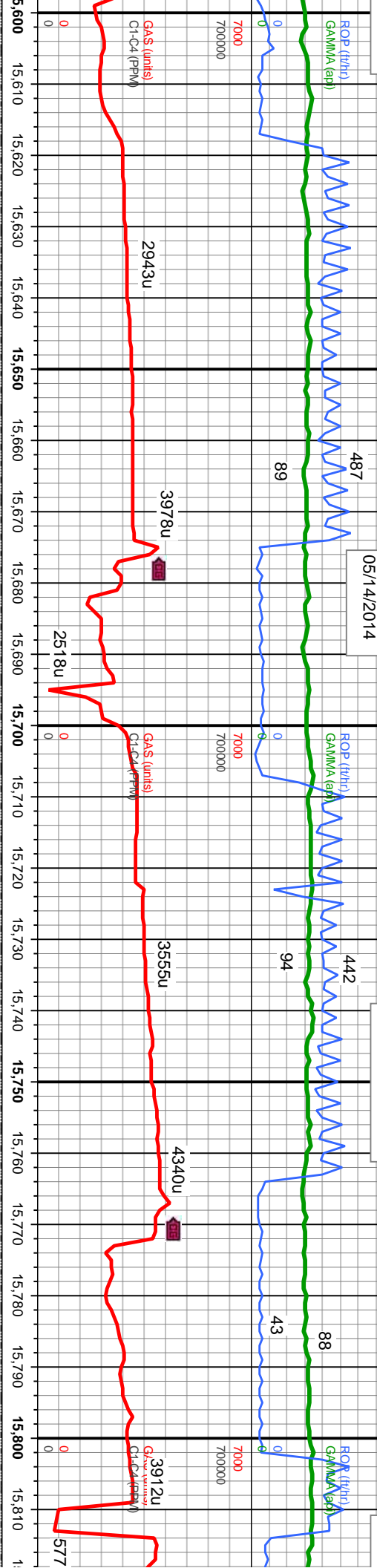


OUT 9.1+
UT 53

MIN DEPTH
05/14/2014

WT IN 9.1/ OUT 9.1+
VIS IN 47/ OUT 56

WT IN 9.1
VIS IN 47



MD: 15,627'
TVD: 7,642.03'
Inclination: 88.65 °
Azimuth: 178.08 °
VS: 8,177.39'

MD: 15,716'
TVD: 7,644.01'
Inclination: 88.8 °
Azimuth: 178.14 °
VS: 8,266.29'

MD: 15,806'
TVD: 7,645.85'
Inclination: 88.86 °
Azimuth: 179.05 °
VS: 8,356.23'

SS: med - dk brn, gy brn, trnsl - clr gr, vf gr, sb rnd - sb ang, v hd, brit, w srt, w cons, mod
cnt; SH: med - dk gy, occ black ip, sdy ip, frm, sb blkly, gt tex, arg - slty mtx, lt bl - wh mod
fast stmg, mod mky cut, fnt od

SS: med - dk brn, gy brn, trnsl - clr gr, vf gr, sb rnd - sb ang, v hd, brit, w srt, w cons, mod
cnt; SH: med - dk gy, occ black ip, sdy ip, frm, sb blkly, gt tex, arg - slty mtx, lt bl - wh
mod fast stmg, mod mky cut, fnt od

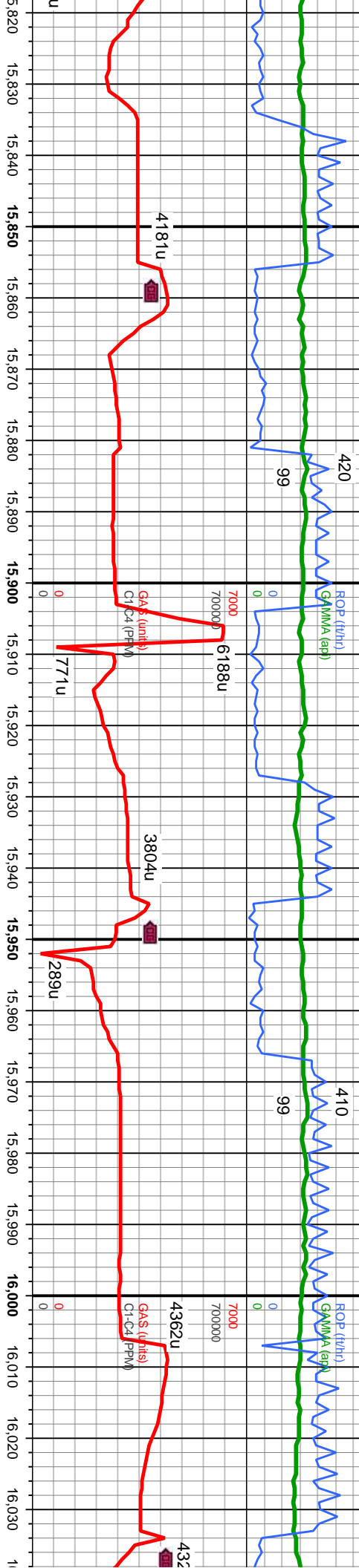
SS: med - c
cnt; SH: m
fast stmg, n



9.1/ OUT 9.1+
8/ OUT 58

WT IN 9.1+ OUT 9.1+
VIS IN 49/ OUT 60

WT IN 9.1+ OUT 9.2
VIS IN 49/ OUT 59



MD: 15,896'
TVD: 7,647.03'
Inclination: 89.63 °
Azimuth: 179.96 °
VS: 8,446.21'

MD: 15,986'
TVD: 7,647.83'
Inclination: 89.35 °
Azimuth: 181.15 °
VS: 8,536.2'

dk brn, gy brn, trns l - clr gr, v f gr, sb rnd - sb ang, v hd, brt, w srt, w cons, mod
sed - dk gy, occ black ip, sdy ip, frm, sb blk y, gt tex, arg - slty mtx, lt bl - wh mod
mod mky cut, fnt od

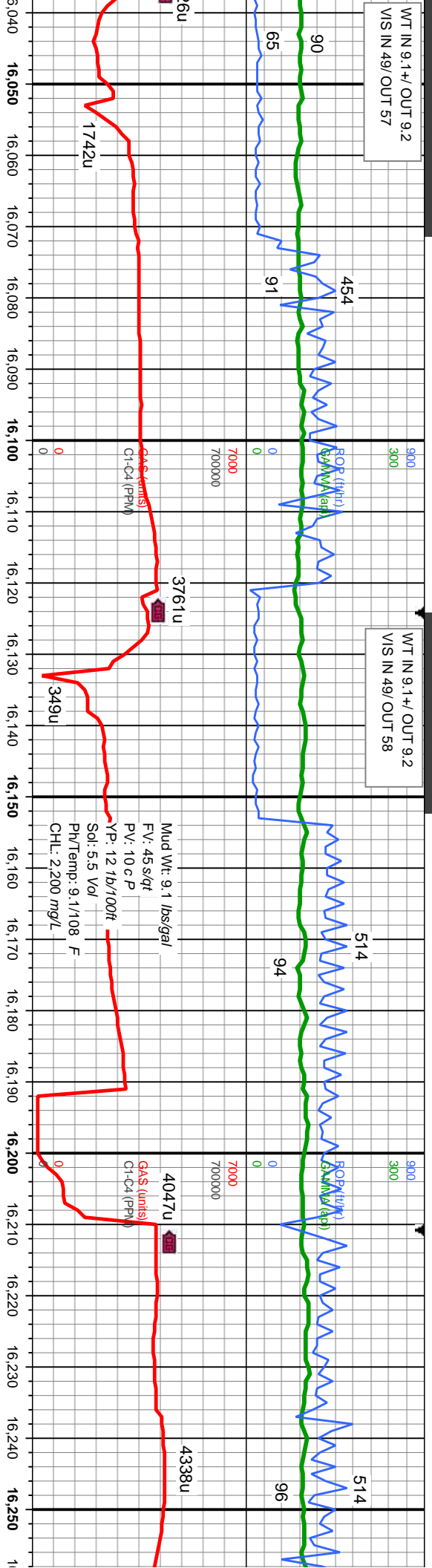
SS: med - dk brn, gy brn, trns l - clr gr, v f gr, sb rnd - sb ang, v hd, brt, w srt, w cons, mod
cmt, tr slty sh, lt bl - wh mod fast stmg, mod mky cut, fnt od

SS: med - dk brn, gy brn, trns l - clr
cmt, SH: med - dk gy, occ black ip
fast stmg, mod mky cut, fnt od



WT IN 9.1+/- OUT 9.2
VIS IN 49/ OUT 57

WT IN 9.1+/- OUT 9.2
VIS IN 49/ OUT 58



MD: 16,076'
TVD: 7,648.42'
Inclination: 89.91 °
Azimuth: 180.06 °
VS: 8,626.2'

MD: 16,165'
TVD: 7,647.98'
Inclination: 90.65 °
Azimuth: 179.34 °
VS: 8,715.19'

MD: 16,255'
TVD: 7,647.
Inclination: 8
Azimuth: 17
VS: 8,805.1'

gr, vf gr, sb md - sb ang, v hd, brit, w srt, w cons, mod
sdy ip, frm, sb blk, gt tex, arg - sily mtx, lt bl - wh mod

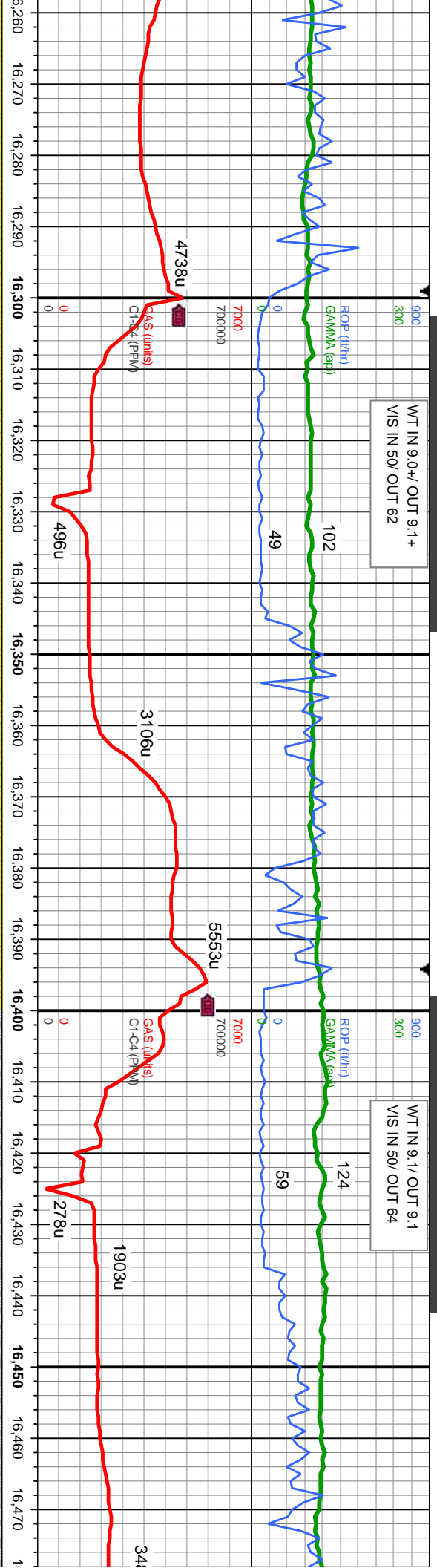
SS: med - dk brn, gy brn, tmsl - clr gr, vf gr, sb md - sb ang, v hd, brit, w srt, w cons, mod
cnt, occ sily sh, lt bl - wh mod slow stmg, mod mky cut, fnt od

SS: med - dk brn, gy brn, tmsl - clr gr, vf gr, sb md - sb ang, v hd, brit, w srt, w cons, mod
mod cnt, occ sily sh, lt bl - wh mod slow stmg, mod mky



WT IN 9.0+ / OUT 9.1+
VIS IN 50/ OUT 62

WT IN 9.1 / OUT 9.1
VIS IN 50/ OUT 64



93' 19.41° 8.32° 5'

MD: 16,345'
TVD: 7,648.57'
Inclination: 89.78°
Azimuth: 178.53°
VS: 8,895.09'

MD: 16,435'
TVD: 7,649.37'
Inclination: 89.2°
Azimuth: 178.76°
VS: 8,985.04'

ang, v hd, brit, w srt, w cons, cut, fnt od

SS: med - dk brn, gy brn, trns - clr gr, v f gr, sb md - sb ang, v hd, brit, w srt, w cons, mod cnt, occ silty sh, lt bl - wh mod slow stmg, mod mky cut, fnt od

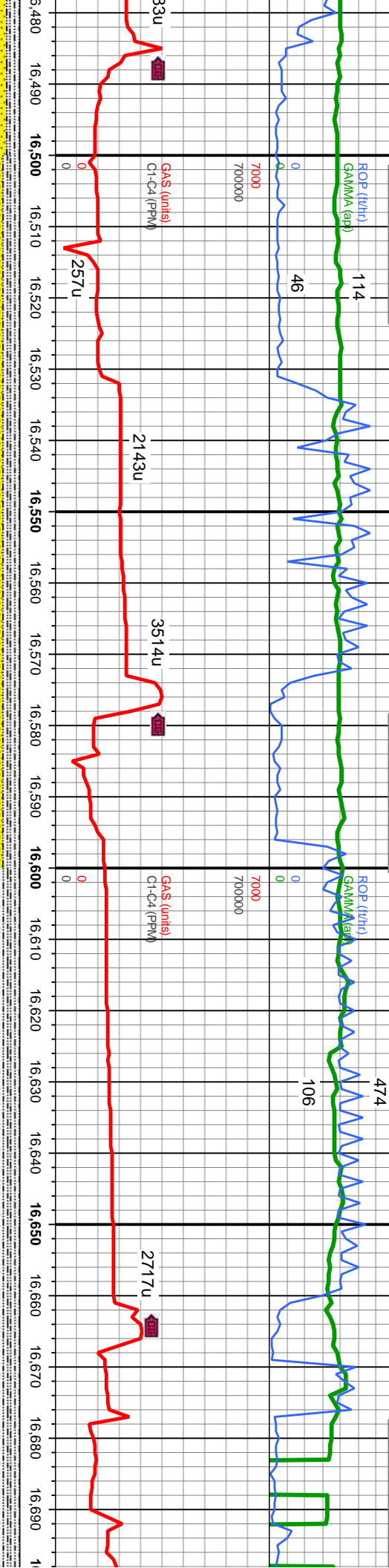
SS: med - dk brn, gy brn, trns - clr gr, v f gr, sb md - sb ang, v hd, brit, w srt, w co cnt, SH: med - dk gy, occ black lp, sdy lp, frm, sb blk, gt tex, arg - silty mtx, lt bl slow stmg, mod mky cut, fnt od



WT IN 9.1/ OUT 9.1+
VIS IN 46/ OUT 57

WT IN 9.1/ OUT 9.1+
VIS IN 46/ OUT 55

WT IN 9.1/ OUT 9.1
VIS IN 44/ OUT 52



MD: 16,524'
TVD: 7,649.77'
Inclination: 90.28 °
Azimuth: 178.51 °
VS: 9,073.99'

MD: 16,614'
TVD: 7,649.67'
Inclination: 89.85 °
Azimuth: 178.88 °
VS: 9,163.95'

MD: 1
TVD: :
Inclina
Azimu
VS: 9,

SS: med - dk brn, gy brn, trnsI - clr gr, vI gr, sb md - sb ang, v hd, brlt, w srt, w cons, mod	SS: med - dk brn, gy brn, trnsI - clr gr, vI gr, sb rnd - sb ang, v hd, brlt, w srt, w cons, mod
cmI: SH: med - dk gy, occ black ip, sdy ip, frm, sb blkY, gt tex, arg - slty mtx, lt bl - wh mod	cmI: SH: med - dk gy, occ black ip, sdy ip, frm, sb blkY, gt tex, arg - slty mtx, lt bl - wh mod
slow string, mod mky cut, fnt od	slow string, mod mky cut, fnt od
8000	8000



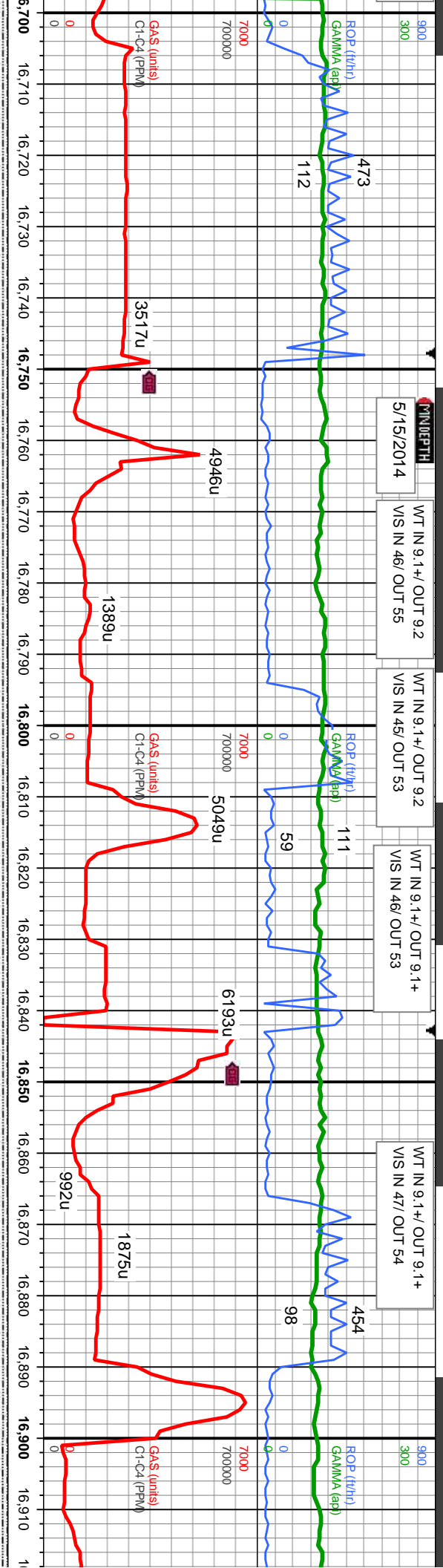
DATE: 5/15/2014

WT IN 9.1+ / OUT 9.2
VIS IN 46 / OUT 55

WT IN 9.1+ / OUT 9.2
VIS IN 45 / OUT 53

WT IN 9.1+ / OUT 9.1+
VIS IN 46 / OUT 53

WT IN 9.1+ / OUT 9.1+
VIS IN 47 / OUT 54



MD: 6,704'
TVD: 7,651.12'
Inclination: 88.31 °
Azimuth: 179.3 °
VS: 2253.91'

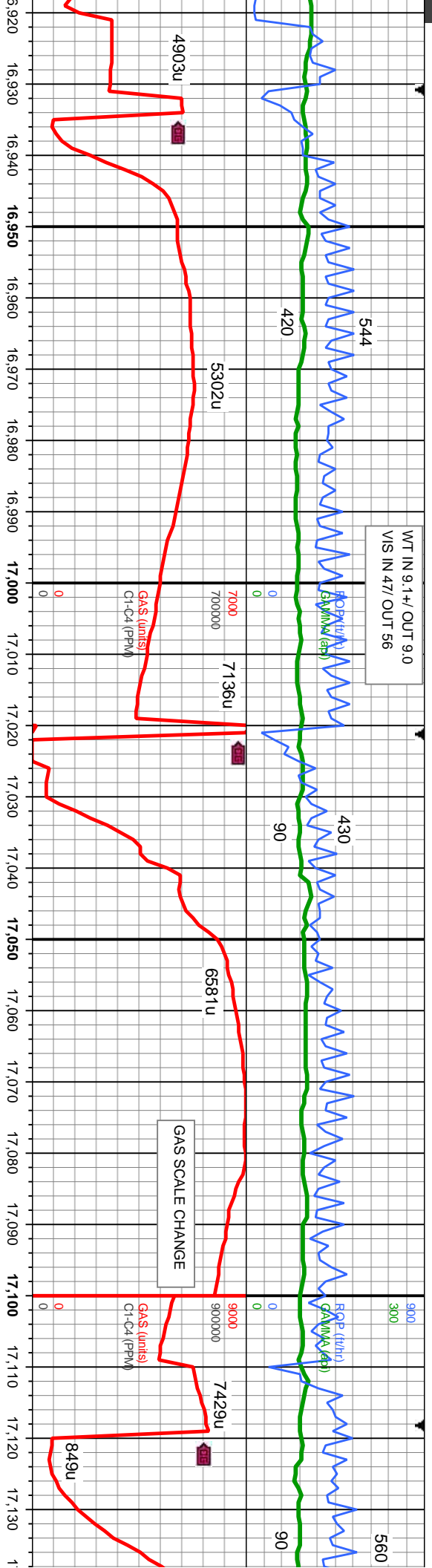
MD: 16,794'
TVD: 7,652.44'
Inclination: 90 °
Azimuth: 180.11 °
VS: 9,343.89'

MD: 16,884'
TVD: 7,651.5'
Inclination: 91.2 °
Azimuth: 181.1 °
VS: 9,433.88'

SS: med - dk brn, gy brn, trns - clr gr, v' gr, sb md - sb ang, v hd, brt, w srt, w cons, mod	SS: med - dk brn, gy brn, trns - clr gr, v' gr, sb md - sb ang, v hd, brt, w srt, w cons, mod	SS: med - dk brn, gy brn, trns - clr gr, v' gr, sb md - sb ang, v hd, brt, w srt, w cons, mod
cm; SH: med - dk gy, occ black ip, sdy ip, frm, sb blk, gt tex, arg - sily mtk, lt bl - wh mod	cm; SH: med - dk gy, occ black ip, sdy ip, frm, sb blk, gt tex, arg - sily mtk, lt bl - wh mod	cm; SH: med - dk gy, occ black ip, sdy ip, frm, sb blk, gt tex, arg - sily mtk, lt bl - wh mod
slow stmg, mod mky cut, fnt od	slow stmg, mod mky cut, fnt od	slow string



WT IN 9.1+ OUT 9.0
VIS IN 47/ OUT 56



MD: 16,974'
TVD: 7,649.59'
Inclination: 91.23 °
Azimuth: 181.61 °
VS: 9.523.85'

MD: 17,064'
TVD: 7,647.87'
Inclination: 90.96 °
Azimuth: 181.32 °
VS: 9,613.82'

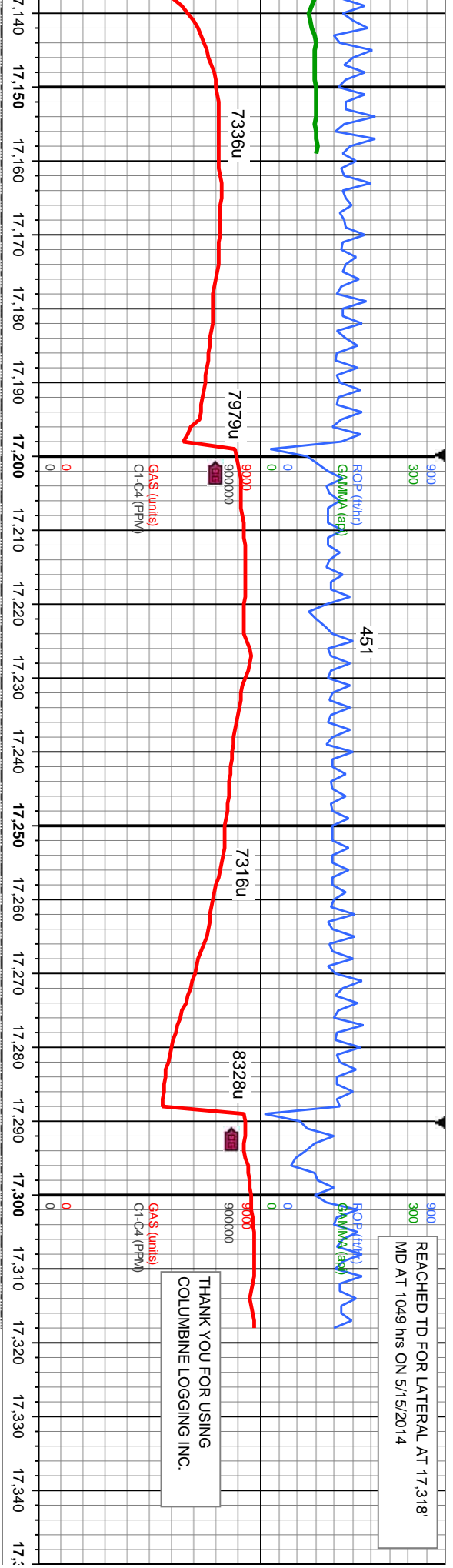
dk brn, gy brn, tmsl - clr gr, vf gr, sb md - sb ang, v hd, brlt, w srt, w cons, mod
red - dk gy, occ black ip, sdy ip, frm, sb blkly, gt tex, arg - slty mtb, lt bl - wh mod
mod mky cut, fnt od

SS: med - dk brn, gy brn, tmsl - clr gr, vf gr, sb md - sb ang, v hd, brlt, w srt, w cons, mod
cnt; SH: med - dk gy, occ black ip, sdy ip, frm, sb blkly, gt tex, arg - slty mtb, lt bl - wh mod
slow string, mod mky cut, fnt od

SS: med - dk brn, gy brn, tmsl - clr g
cnt; SH: med - dk gy, occ black ip, s
slow string, mod mky cut, fnt od



REACHED TD FOR LATERAL AT 17,318'
MD AT 1049 hrs ON 5/15/2014



THANK YOU FOR USING
COLUMBINE LOGGING INC.

MD: 17,153'
TVD: 7,646.62'
Inclination: 90.65 °
Azimuth: 181.38 °
VS: 9,702.8'

MD: 17,266'
TVD: 7,647.2'
Inclination: 88.77 °
Azimuth: 180.05 °
VS: 9,815.79'

MD: 17,318'
TVD: 7,648.31'
Inclination: 88.77 °
Azimuth: 180.05 °
VS: -9,867.78'

PROJECTED TO BIT

1, v f gr, sb md - sb ang, v hd, bit, w srt, w cons, mod
dy ip, frm, sb blk, gr tex, arg - silty mtx, lt bl - wh mod

SS: med - dk brn, gy brn, trns l - clr gr, v f gr, sb md - sb ang, v hd, bit, w srt, w cons, mod
cnt; SH: med - dk gy, occ black ip, sdy ip, frm, sb blk, gr tex, arg - silty mtx, lt bl - wh mod
slow string, mod mky cut, fnt od

