



Scale: 5" / 100'
Measured Depth Log

Well Name Reliance E23-65-1HC Horz

Location NESE 23 6N 65W 6 PM

State COLORADO County WELD

Country UNITES STATES Rig Number H&P 326

API Number 05-123-37603 Field WATTENBERG

Region DJ BASIN Drilling Completed 3/9/2015

Spud Date 3/4/2015

Surface Coordinates
NESE 23 6N 65W 6 PM
2103 FSL 280 FEL
Lat/Long: 40.46998/-104.62185

Bottom Hole Coordinates
PROJECTED
NESE 23 6N 65W
2310 FSL 535 FFWLL

Ground Elevation 4695' K.B. Elevation 4725'

Logged Interval 1000' To 11352 Total Depth 11352'

Formation CODELL

Type of Drilling Fluid LSND, WATER BASED MUD

Operator

Company NOBLE ENERGY INC.

Address 1625 Broadway Suite 2200
Denver, CO 80202

Geologist

Name HOLLY DUNCAN

Company NOBLE ENERGY INC.

Address 1625 Broadway Suite 2200
Denver, CO 80202

Other

Well Site Geologist (Days) Brad Wilson

Well Site Geologist (Nights) Irene Kadel-Harder



































Zone Color Coding

Oil
Note
Error

























































Condensate
Core
Water

Gas
Pre
Sea

Rock Types

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







Accessories

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

Oil Show

-  PINPOINT
-  VUGGY






































Engineering

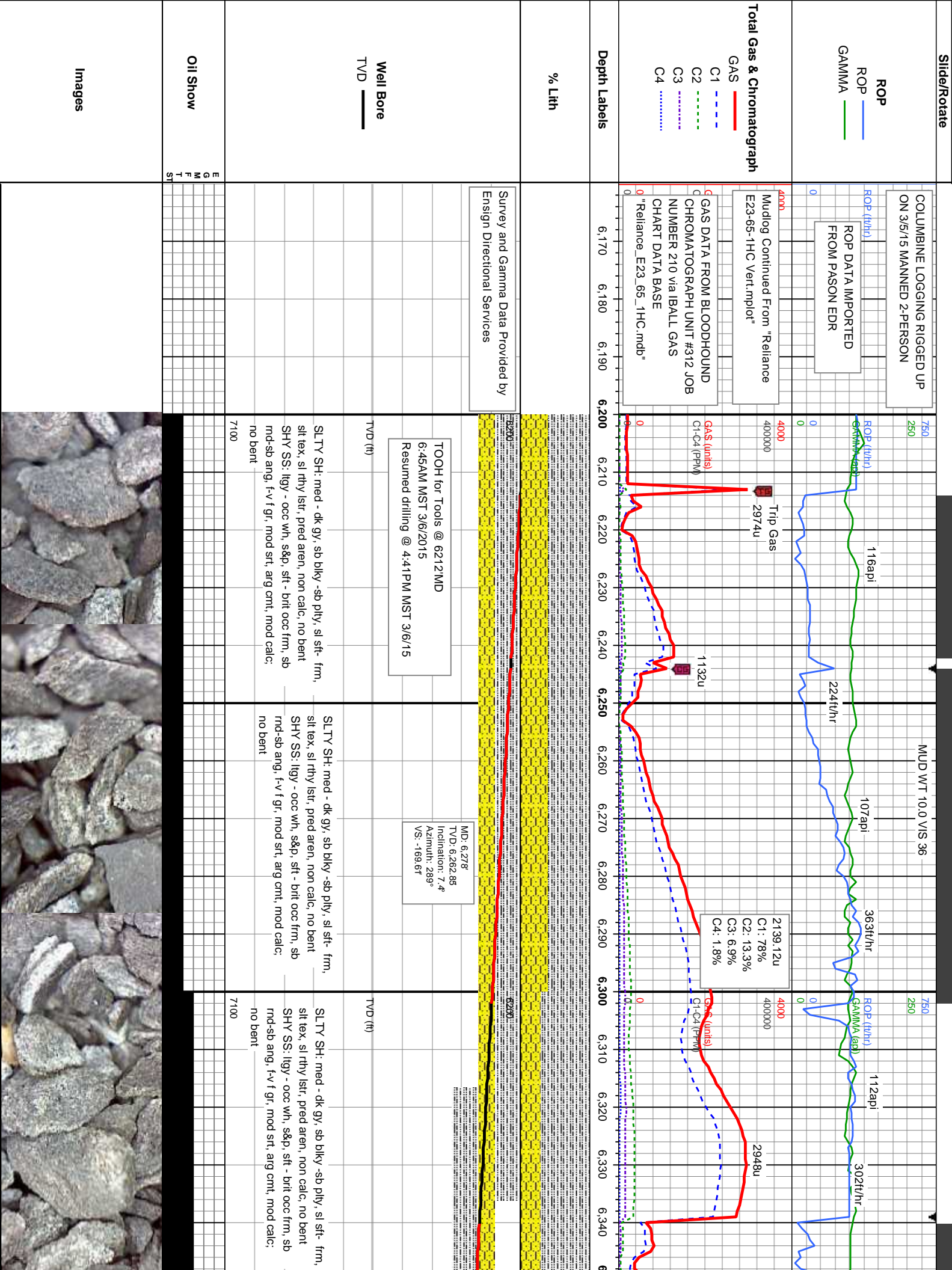
-  DEAD
-  EVEN
-  QUESTIONABLE
-  BIT
-  SPOTTED STAINING
-  CONNECTION (UP)

Porosity

-  CONNECTION (DOWN)
-  CONNECTION GAS
-  CONNECTION GAS
-  TRIP GAS
-  TRIP GAS (LEFT)
-  FRACTURE
-  INTERCRYSTALLINE
-  DOWN TIME GAS
-  INTEROOLITIC
-  DOWN TIME GAS
-  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		BS GRAINSTONE
	GAS SHOW		MN DEPTH		L LITHOGRAPHIC
	OIL SHOW				MX MICROXLN
	MN DEPTH UP	Rounding			
					MX MUDSTONE
	MN DEPTH (DOWN)		A ANGULAR		PS PACKSTONE
	NORMAL FAULT		R ROUNDED		WX WACKSTONE
	OVERTURNED STRATA		B SUBANG		
	REVERSE FAULT		N SUBRND	Sorting	
	CASING				M MODERATE
Textures					
	SIDEWALL CORE (LEFT)				P POOR
	SIDEWALL CORE (RIGHT)		BS BOUNDSTONE		W WELL
	SLIDE		C CHALKY		
	SURVEY		CX CRYPTOXLN		



MUD WT 10.0 VIS 36

116api

ROP (ft/hr)

ROP DATA IMPORTED
FROM PASON EDR

ROP
ROP
GAMMA

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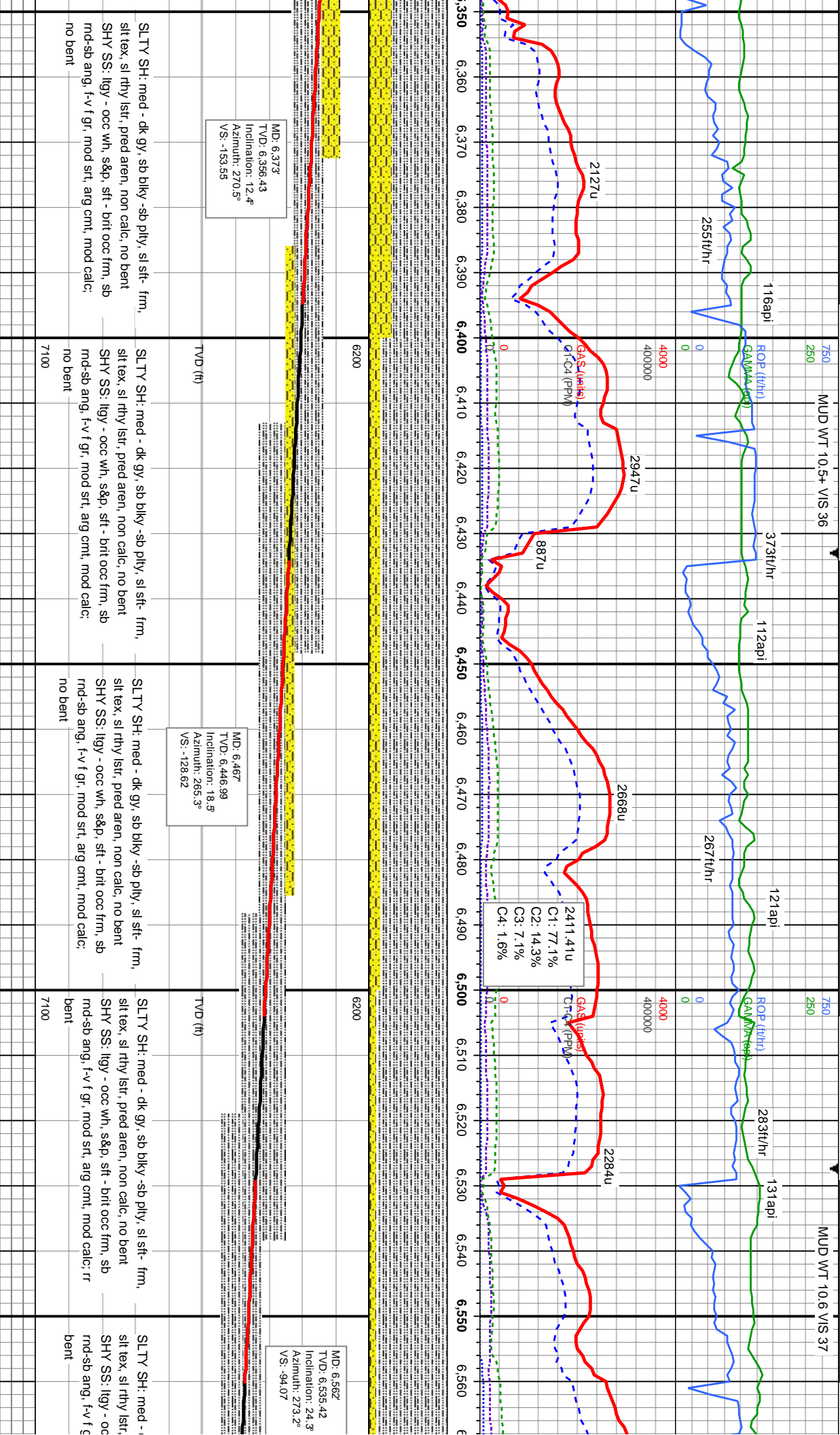
ROP

ROP (ft/hr)

ROP

MUD WT 10.5+ VIS 36

MUD WT 10.6 VIS 37

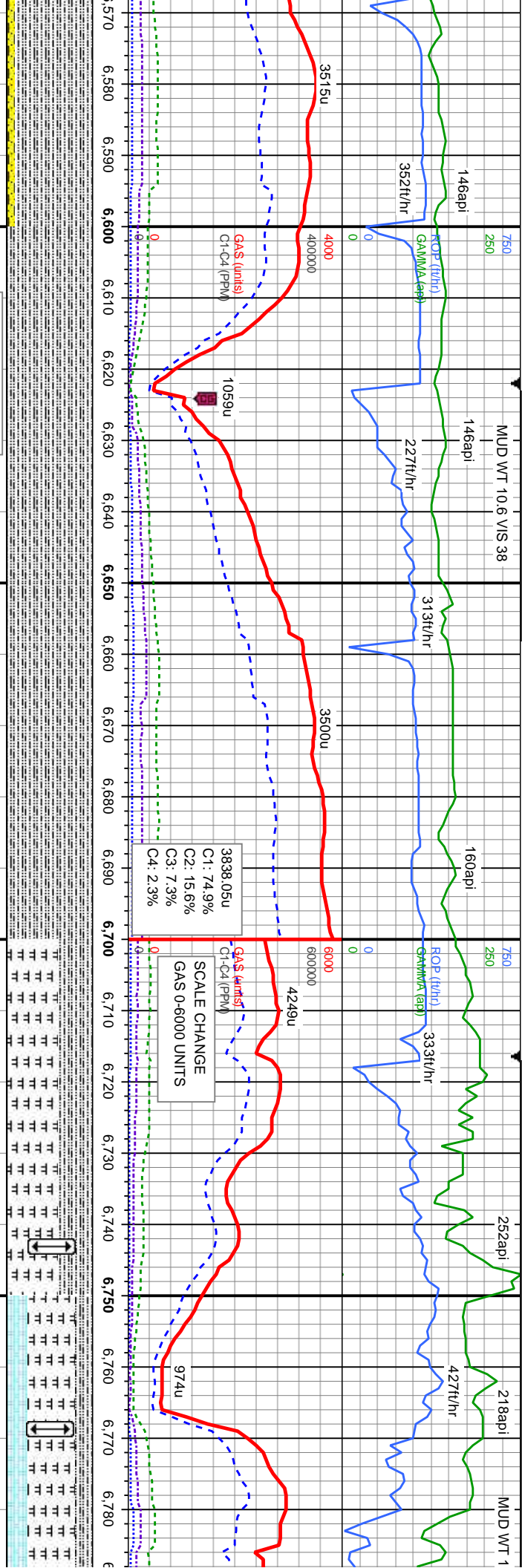


MD: 6,373
TVD: 6,356.43
Inclination: 12.4°
Azimuth: 270.5°
VS: -153.55

MD: 6,467
TVD: 6,446.99
Inclination: 18.8°
Azimuth: 265.3°
VS: -128.62

MD: 6,562
TVD: 6,535.42
Inclination: 24.3°
Azimuth: 273.2°
VS: -94.07

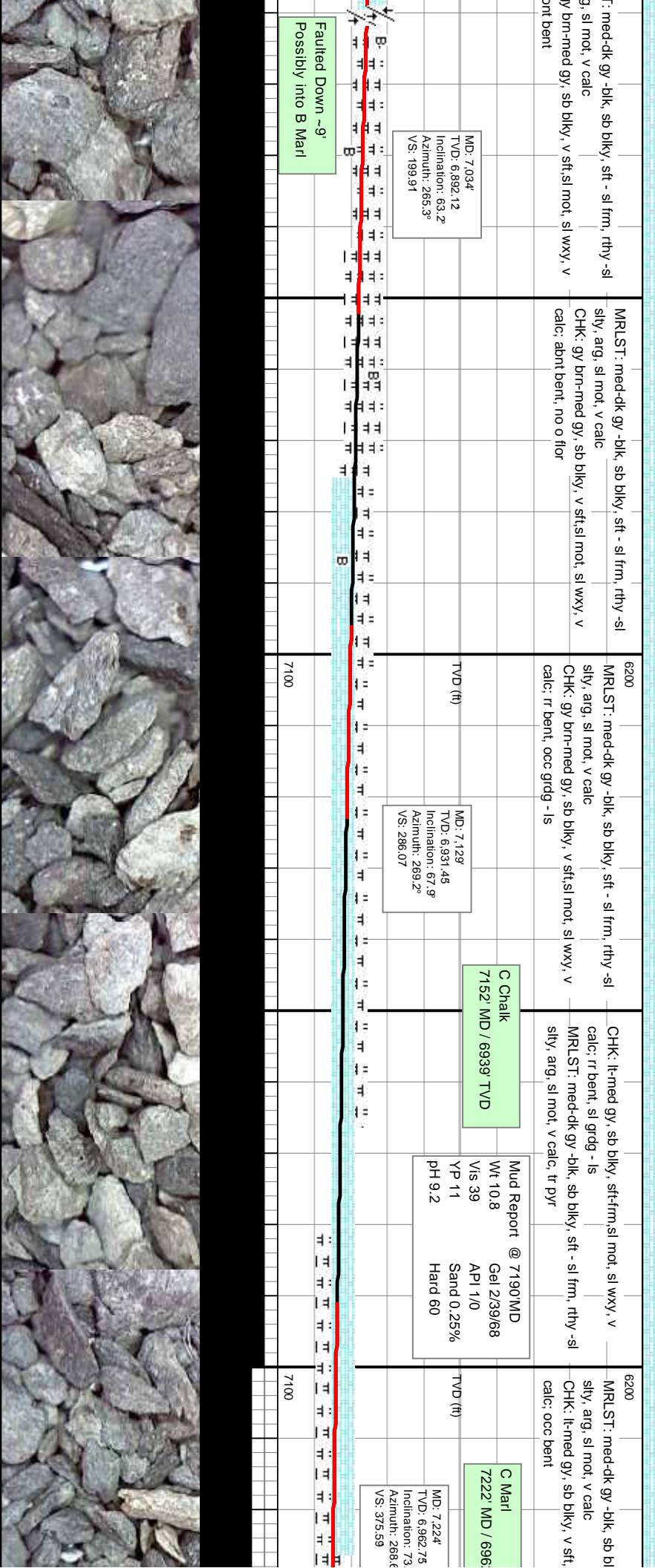


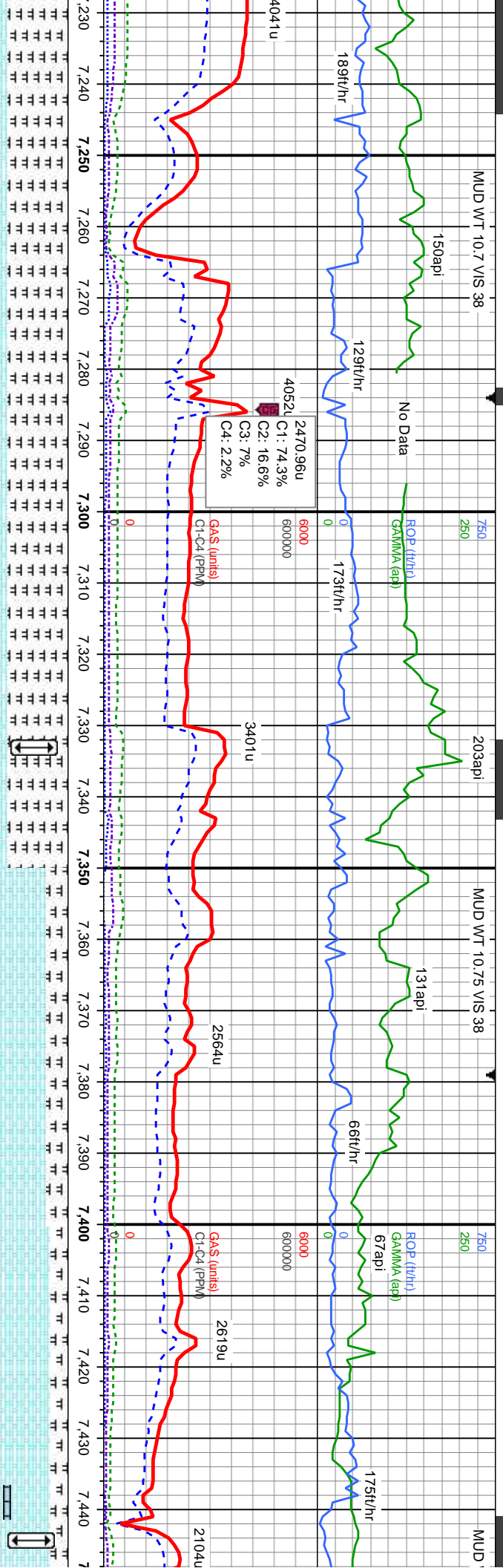


BEGIN 50' SAMPLES	
6200	MD: 6.656' TVD: 6.619,86 Inclination: 27.8° Azimuth: 275.5° VS: -52.84
6200	MR.LST: med-dk gy -blk, sb blk, sft - sl frm, rthy - sl sily, arg, sl mot, v calc
6200	SLTY SH: med - dk gy, sb blk -sb ply, sl sft- frm, silt tex, sl rthy istr, pred aren, non calc; abnt bent
6200	MR.LST: med-dk gy -blk, sb blk, sft - sl frm, rthy - sl sily, arg, sl mot, v calc
6200	SLTY SH: med - dk gy, sb blk -sb ply, sl sft- frm, silt tex, sl rthy istr, pred aren, non calc
6200	CHK: gy brn-med gy, sb blk, v sft,sl mot, calc; scat bent
6200	MD: 6.750' TVD: 6.701,04 Inclination: 32.7° Azimuth: 273.9° VS: -5.56
6200	MR.LST: med-dk gy -blk, sb blk, sft - sl frm, rthy - sl sily, arg, sl mot, v calc
6200	SLTY SH: med - dk gy, sb blk -sb ply, sl sft- frm, silt tex, sl rthy istr, pred aren, non calc
6200	CHK: gy brn-med gy, sb blk, v sft,sl mot, calc; scat bent



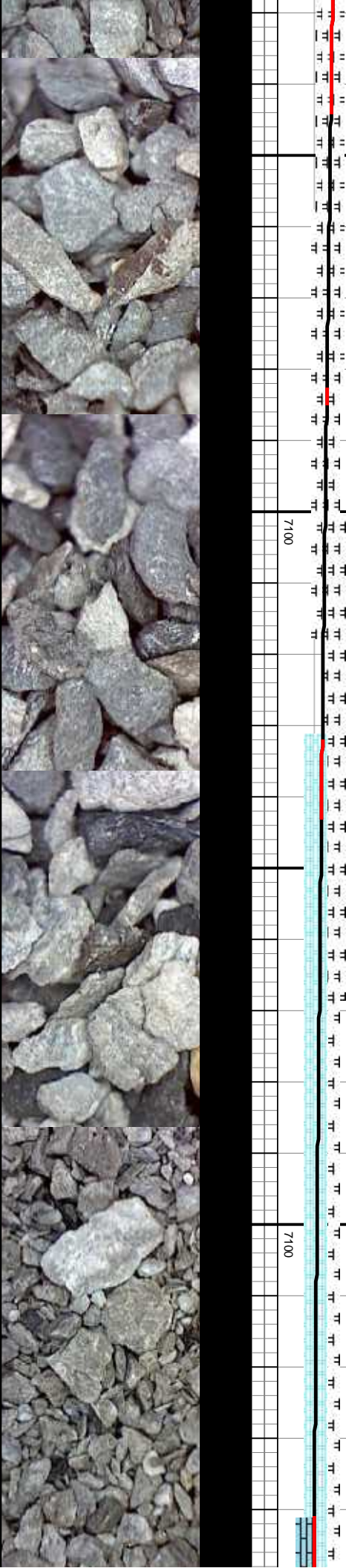




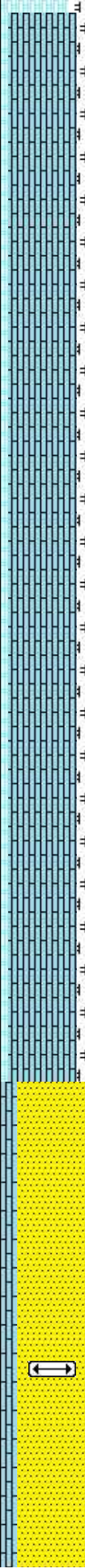
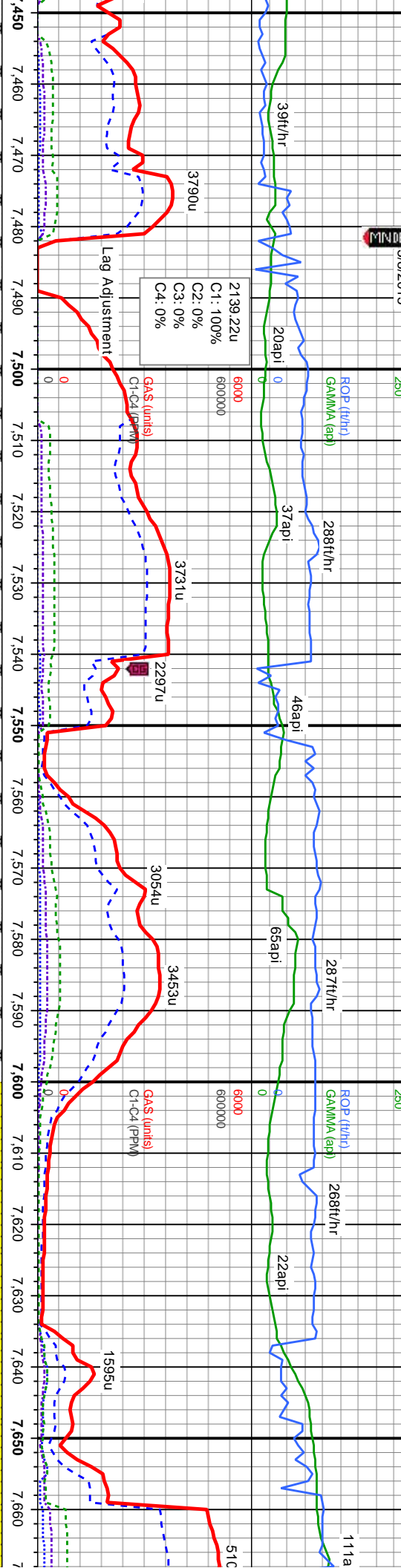


Log Type	Log Description
Arg. v. calc	MRSLST: med-dk gy -blk, sb blk, sl frm, rthy -sl silty, arg. v calc
CHK: gy brn-med gy, sb blk, v sft, sl mot, sl wxy, v calc; occ bent	MRSLST: med-dk gy -blk, sb blk, sl frm, rthy -sl silty, arg. v calc
CHK: It gy brn-med gy, sb blk, sft, sl mot, sl wxy, v calc; occ bent	MRSLST: med-dk gy -blk, sb blk, sl frm, rthy -sl silty, arg. v calc

Log Type	Log Description
MD: 7.319'	MD: 7.319'
TVD: 6.986.46	TVD: 7.006
Inclination: 77.5°	Inclination: 80.4°
Azimuth: 268.4°	Azimuth: 267.5°
VS: 467.41	VS: 567.27



WT 10.8 VIS 39 3/8/2015 MINDEPTH



LS: tan-brn, sb blk, sl frm - hd occ sft, sl
suc -sl wxy tex, tr imbed pyr
CHK: lt gy -off wh, occ med gy, sb blk, frm, sl
suc, sl wxy, v calc, sl grdg - ls
MRLST: med-dk gy -blk, sb blk-sb ply occ ply, sl
frm, rthy -sl sily, arg, sl-v calc, tr bent, tr fos, tr lse
pyr

6200
LS: tan-brn, sb blk, sl frm - hd occ sft, sl
suc -sl wxy tex
CHK: lt gy -off wh, occ med gy, sb blk, frm, sl
suc, sl wxy, v calc, sl grdg - ls
MRLST: med-dk gy -blk, sb blk-sb ply occ ply, sl
frm, rthy -sl sily, arg, sl-v calc, scat bent

6975
SS: cl-r-r wh- op-lt gy-lt gy brn, f-c gr, ply srt, sb
md-sb ang, frm-brt, gy brn ang mod calc cmt,
pred cons
LS: tan-brn, sb blk, sl frm - hd occ sft, sl
suc -sl wxy tex, tr imbed pyr, tr dul ong flr

SS: cl-r-r wh- op-lt
md-sb ang, frm-brt
pred cons
LS: tan-brn, sb blk
suc -sl wxy tex, tr i

TD Curve and TOOH for 7" Casing
@ 7481 MD 9:15AM MST 3/7/15
Resumed drilling @ 9:19PM MDT 3/8/15

Mud Report @ 7481 MD
Wt 10.9 Gel 3/41/72
Vis 40 API 1/0
YP 12 Sand 0.2%
pH 9.1 Hard 40

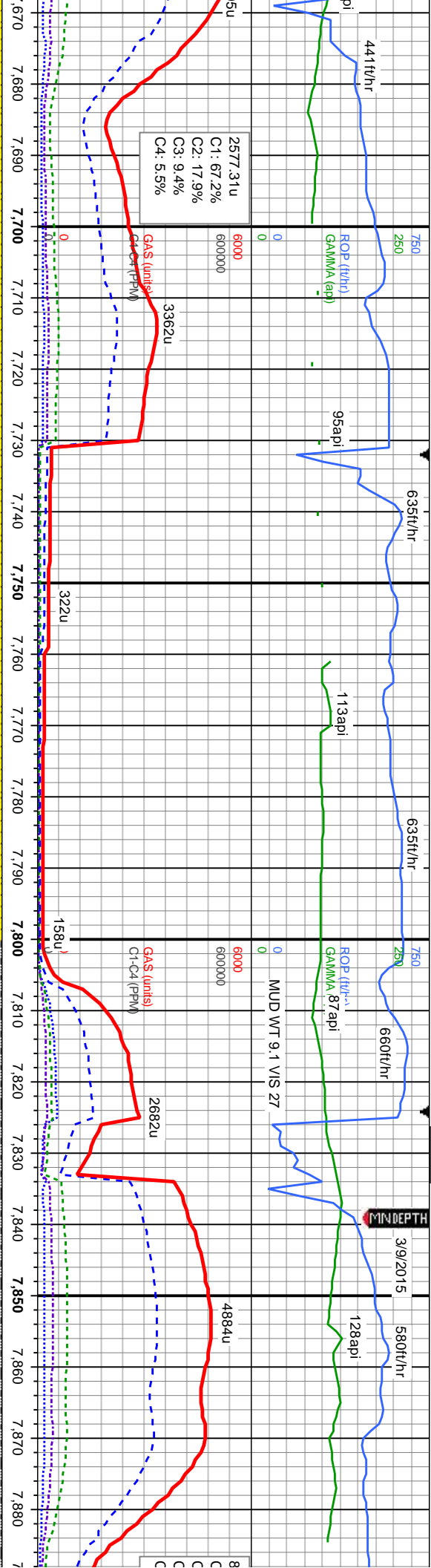
MD: 7.575
TVD: 7.023.03
Inclination: 86.9°
Azimuth: 268.3°
VS: 719.87

SCALE CHANGE
TVD 6975-7075'

Codell
7640 MD / 7025' TVD

MD: 7
TVD: 7
Incline
Azimu
VS: 81





6975 SS: clr-wh-op-llt gy-llt gy brn, vf-c gr, ply srt, sb rnd-sb ang, frm-brlt, gy brn arg mod calc cmt, pred cons
v - blkly, sl frm - hd occ sft, sl occ sft, sl suc - sl wxy tex; tr dul onrg flr

SS: clr-wh-op-llt gy-llt gy brn, vf-c gr, srt, sb rnd-sb ang, frm-brlt, gy brn arg mod calc cmt, pred cons
LS: off-wh-tan-v lt brn, sb blkly - blkly, sl frm - hd occ sft, sl suc - sl wxy tex; tr dul onrg flr

(SS: clr-wh-op-llt gy-llt gy brn, vf-med gr, mod w srt, sb rnd-sb ang, frm-brlt, gy brn arg mod calc cmt, pred cons
LS: off-wh-tan-v lt brn, sb blkly - blkly, sl frm - hd occ sft, sl suc - sl wxy tex;
SLTY SH: med - dk gy, sb blkly -sb ply, sl sft- frm, slt tex, sl rthy lstr, pred aren, non calc; scat dul onrg flr

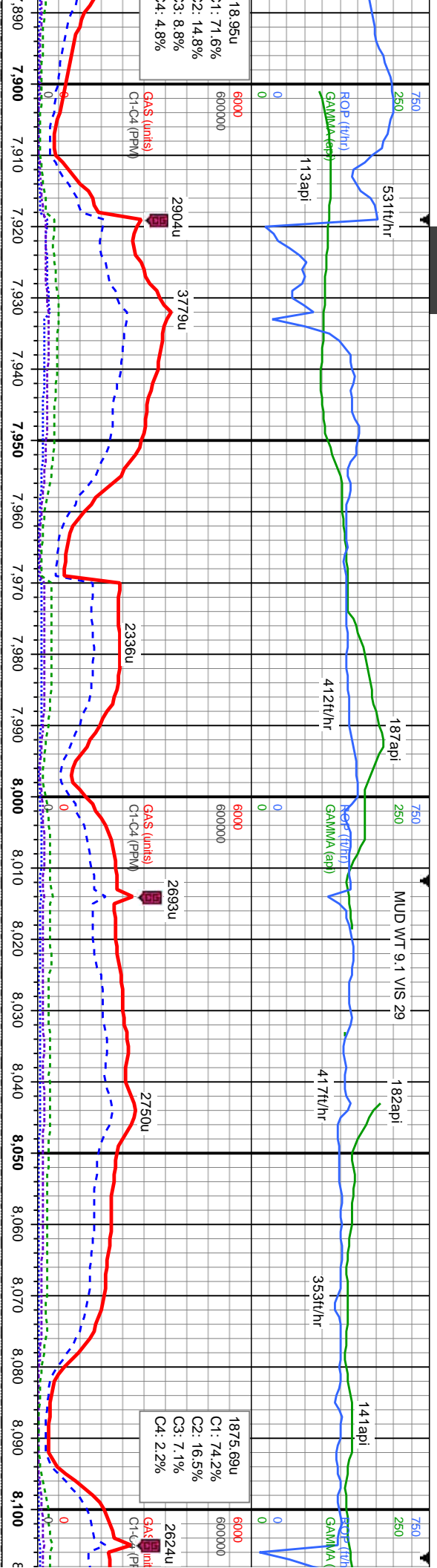
6669' 0.02565
tion: 89.9°
th: 268.9°
3.66

MD: 7.764'
TVD: 7.025.57
Inclination: 90.2°
Azimuth: 269°
VS: 908.54

MD: 7.858'
TVD: 7.026.14
Inclination: 89.1°
Azimuth: 269.2°
VS: 1.002.42

Codell





6975	SLTY SH: med - dk gy, sb blkly -sb ply, sl sft- frm, silt-gt tex, sl rthy lst, mod calc	SLTY SH: med - dk gy, sb blkly -sb ply, sl sft- frm, silt-gt tex, sl rthy lst, mod calc	SLTY SH: med - dk gy, sb blkly -sb ply, sl sft- frm, silt-gt tex, sl rthy lst, mod calc	SLTY SH: med - dk gy, sb blkly -sb ply, sl sft- frm, silt-gt tex, sl rthy lst, mod calc	SLTY S
SS: cl- wh-op- lt gy- lt gy brn, vf- med gr, mod w srt, sb md- sb ang, frm- brit, gy brn arg mod calc cnt, pred cons	SS: cl- wh-op- lt gy- lt gy brn, vf- med gr, mod w srt, sb md- sb ang, frm- brit, gy brn arg mod calc cnt, pred cons	SS: cl- wh-op- lt gy- lt gy brn, vf- med gr, mod w srt, sb md- sb ang, frm- brit, gy brn arg mod calc cnt, pred cons	SS: cl- wh-op- lt gy- lt gy brn, vf- med gr, mod w srt, sb md- sb ang, frm- brit, gy brn arg mod calc cnt, pred cons	SS: cl- wh-op- lt gy- lt gy brn, vf- med gr, mod w srt, sb md- sb ang, frm- brit, gy brn arg mod calc cnt, pred un	LS: off v
LS: off wh- tan- v lt brn, sb blkly - blkly, sl frm - hd	LS: off wh- tan- v lt brn, sb blkly - blkly, sl frm - hd	LS: off wh- tan- v lt brn, sb blkly - blkly, sl frm - hd	LS: off wh- tan- v lt brn, sb blkly - blkly, sl frm - hd	LS: off wh- tan- v lt brn, sb blkly - blkly, sl frm - hd	LS: off v
occ sft, sl suc -sl wxy tex; abnt dul orng flr	occ sft, sl suc -sl wxy tex; abnt dul orng flr	occ sft, sl suc -sl wxy tex; tr dul orng flr	occ sft, sl suc -sl wxy tex; tr dul orng flr	occ sft, sl suc -sl wxy tex; tr dul orng flr	occ sft,

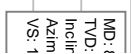
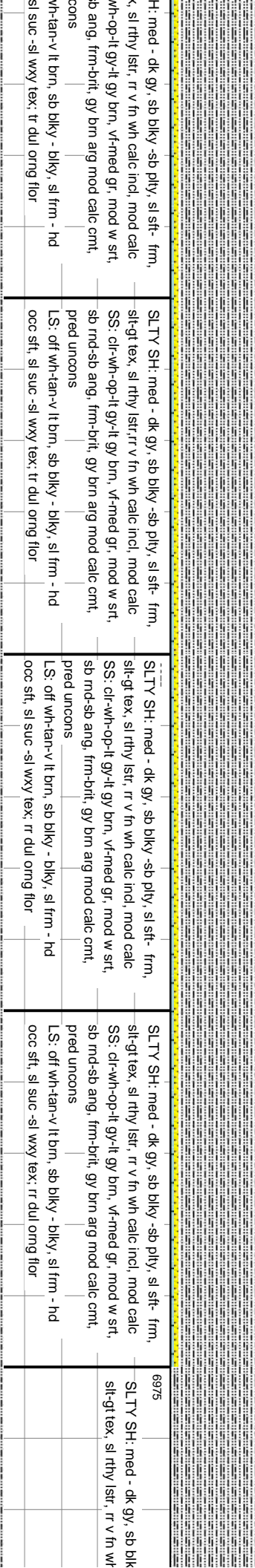
MD: 7.951'
TVD: 7.027.52
Inclination: 89.2°
Azimuth: 270.2°
VS: 1.095.34

Carlie Shale
7980' MD / 7028' TVD

MD: 8.046'
TVD: 7.028.43
Inclination: 89.7°
Azimuth: 270.5°
VS: 1.190.3

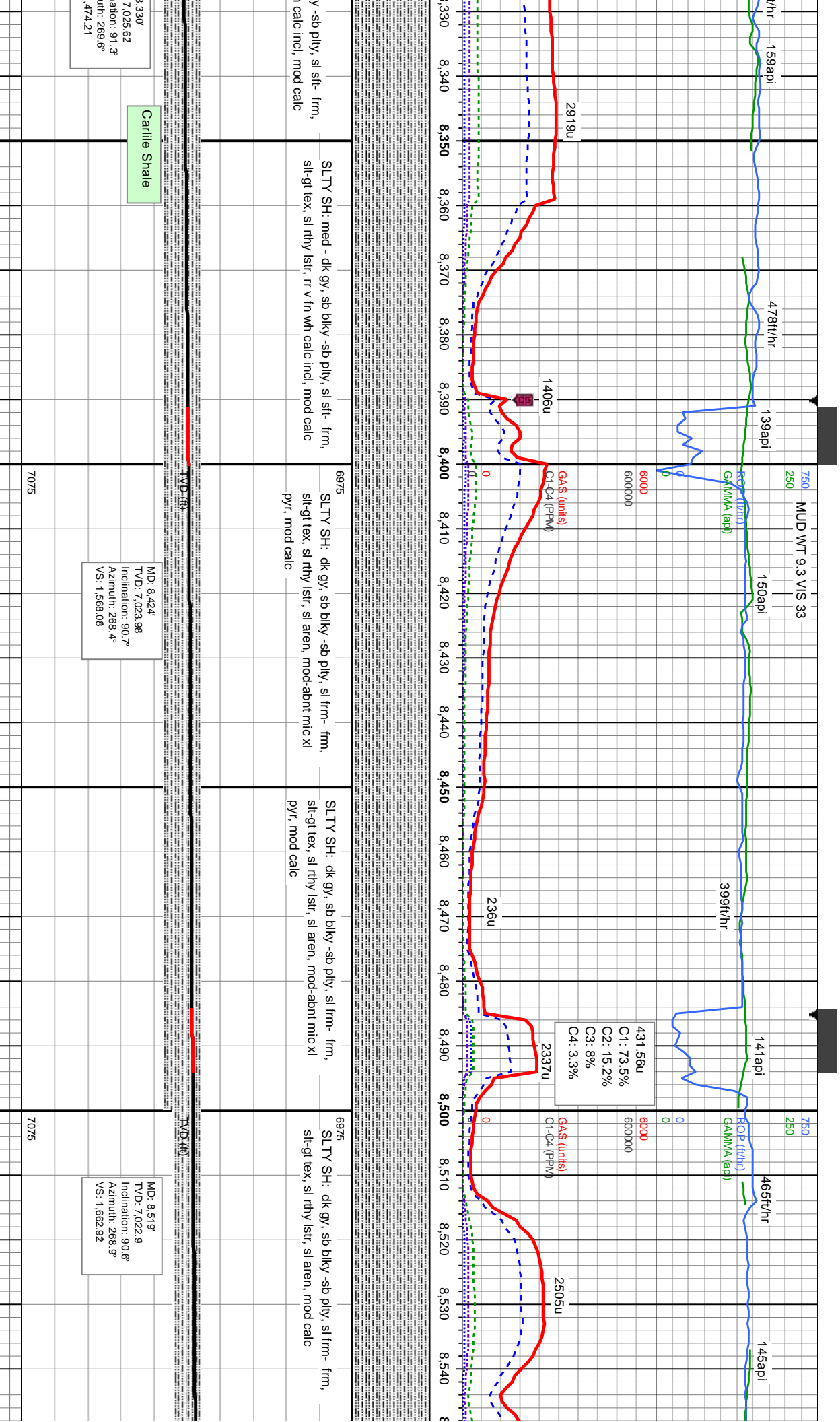
Carlie Shale

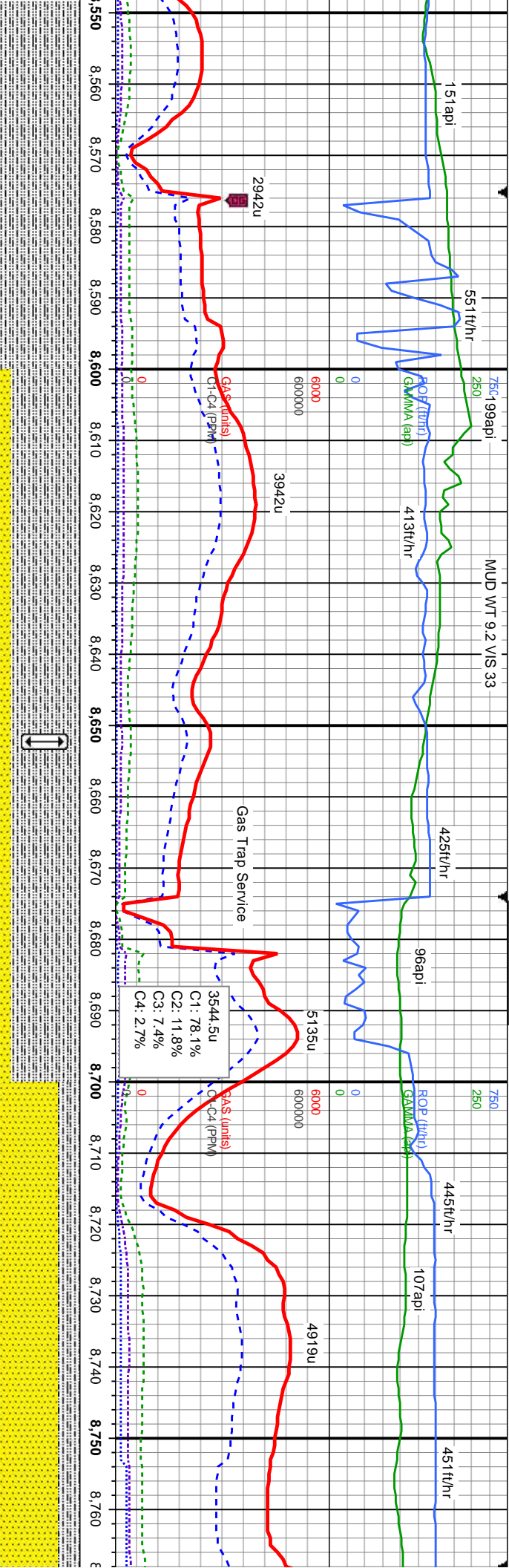




TVB (H)







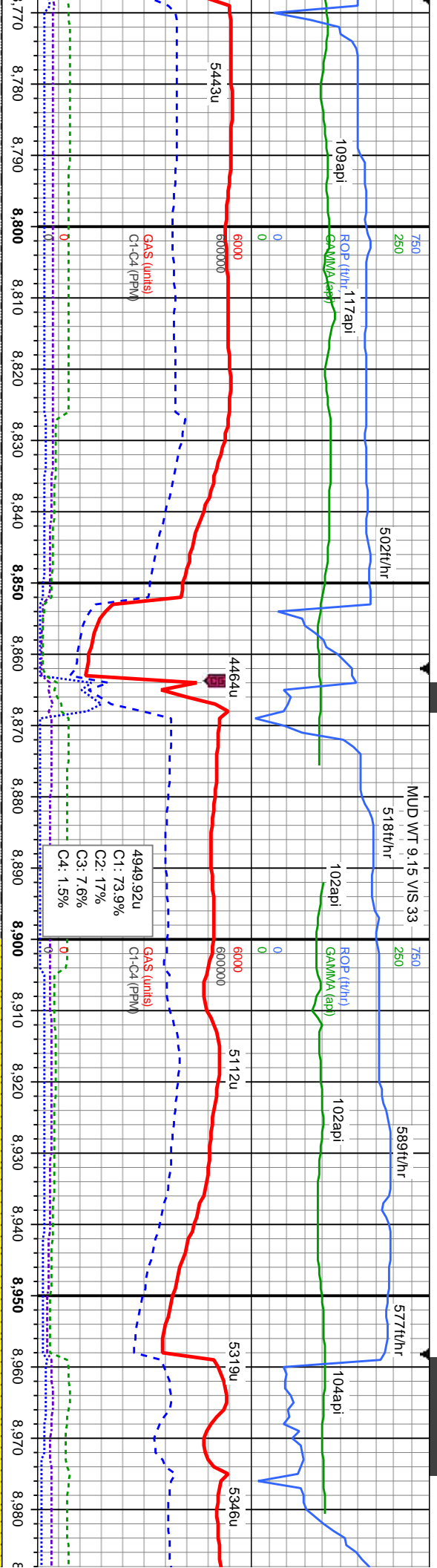
SLTY SH: dk gy, sb blkly -sb ply, sl frm- frm, silt-gt tex, sl rthy lstr, sl aren, mod calc	6975 SLTY SH: dk gy, sb blkly -sb ply, sl frm- frm, silt-gt tex, sl rthy lstr, sl aren, mod calc SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb md-sb ang, frm-brit, arg,cons, sl-mod calc cnt	6975 SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb md-sb ang, frm-brit, arg,cons, sl-mod calc cnt	SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb md-sb ang, frm-brit, arg,cons, sl-mod calc cnt
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Carlie Shale

MD: 8.614'
TVD: 7.021.24
Inclination: 91.4°
Azimuth: 269.3°
VS: 1.757.79

Codell





off wh - op, o sin, f gr, ang, frm-brit, arg,cons, sb blkly -sb ply, sl frm- frm, tr, sl aren, mod calc	6975	SS: brn-gy brn occ off wh - op, o sin, f gr, mod srt, sb md-sb ang, frm-brit, arg,cons, sl-mod calc cnt	6975	SS: brn-gy brn occ off wh - op, o sin, f gr, mod srt, sb md-sb ang, frm-brit, arg,cons, sl-mod calc cnt	6975	SS: brn-gy brn occ off wh - op, o sin, f gr, mod srt, sb md-sb ang, frm-brit, arg,cons, sl-mod calc cnt; occ sh, rr fos frags
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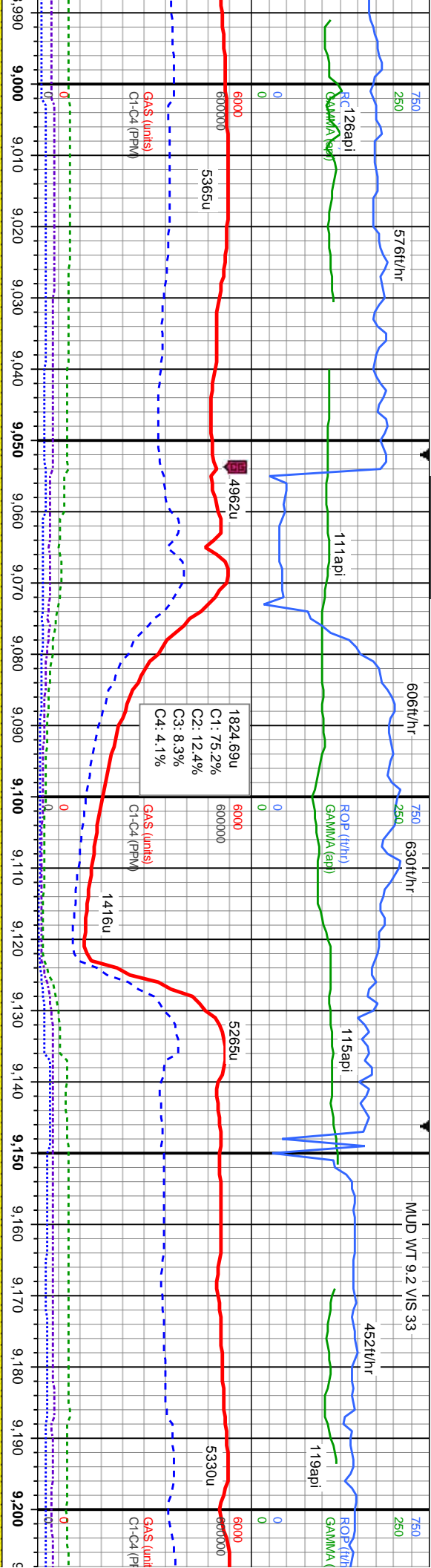
MD: 8.803
TVD: 7,020.92
Inclination: 90.2°
Azimuth: 288°
VS: 1,946.37

MD: 8.898
TVD: 7,019.84
Inclination: 91.4°
Azimuth: 267.7°
VS: 2,041.13

Codell

MD: 8.898
TVD: 7,019.84
Incl: 91.4°
Azim: 267.7°
VS: 2,041.13





6975
SS: brn-gy brn occ off wh - op, o stn, f gr,
mod srt, sb md-sb ang, frm-brit, arg,cons,
sl-mod calc cnt; occ sh, rr fos frags

6975
SS: brn-gy brn occ off wh - op, o stn, f gr,
mod srt, sb md-sb ang, frm-brit, arg,cons,
sl-mod calc cnt; occ sh, rr fos frags

6975
SS: brn-gy brn occ off wh - op, o stn, f gr,
mod srt, sb md-sb ang, frm-brit, arg,cons,
sl-mod calc cnt; occ sh

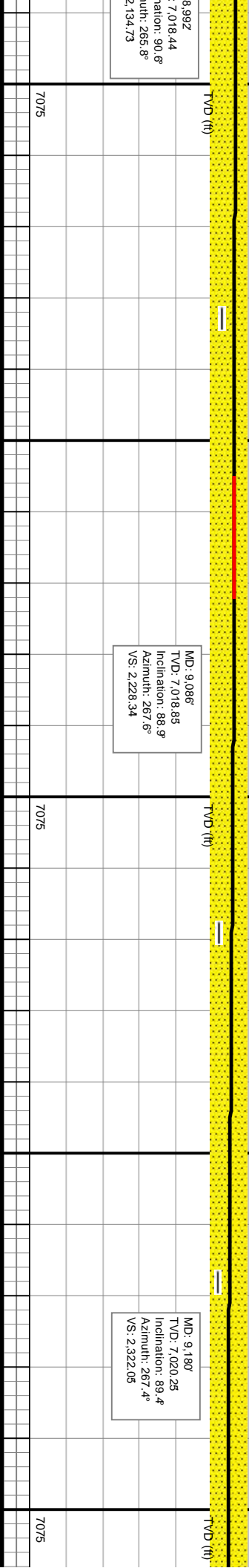
6975
SS: brn-gy brn occ off wh - op, o stn, f gr,
mod srt, sb md-sb ang, frm-brit, arg,cons,
sl-mod calc cnt; occ sh

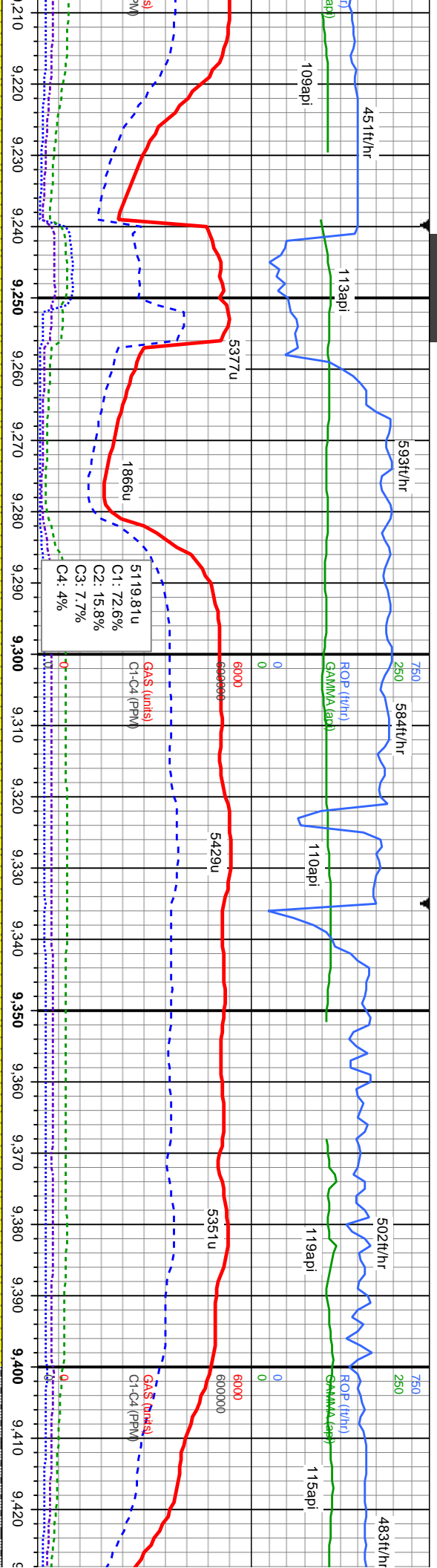
6975
SS: br
srt, sb
cnt; o

8.992
7,018.44
ation: 90.6°
uth: 265.8°
2,134.73

MD: 9.086°
TVD: 7,018.85
Inclination: 88.9°
Azimuth: 267.6°
VS: 2,228.34

MD: 9.180°
TVD: 7,020.25
Inclination: 89.4°
Azimuth: 267.4°
VS: 2,322.05





SS: brn-gy brn occ off wh - op, o stn, f gr, mod
srt, sb md-sb ang, frm-brlt, arg,cons, sl-mod calc
cnt; occ sh

SS: brn-gy brn occ off wh - op, o stn, f gr, mod
srt, sb md-sb ang, frm-brlt, arg,cons, sl-mod calc
cnt; occ sh

SS: brn-gy brn occ off wh - op, o stn, f gr, mod
srt, sb md-sb ang, frm-brlt, arg,cons, sl-mod calc
cnt; occ sh

SS: brn-gy brn occ off wh - op, o stn, f gr, mod
srt, sb md-sb ang, frm-brlt, arg,cons, sl-mod calc
cnt; occ sh

SS: brn-gy brn occ off wh - op, o stn, f gr, mod
srt, sb md-sb ang, frm-brlt, arg,cons, sl-mod calc
cnt; occ sh

SS: brn-gy brn occ off wh - op, o stn, f gr, mod
srt, sb md-sb ang, frm-brlt, arg,cons, sl-mod calc
cnt; occ sh

Code

MD: 9.275
TVD: 7.020.83
Inclination: 89.9°
Azimuth: 269.3°
VS: 2.416.86

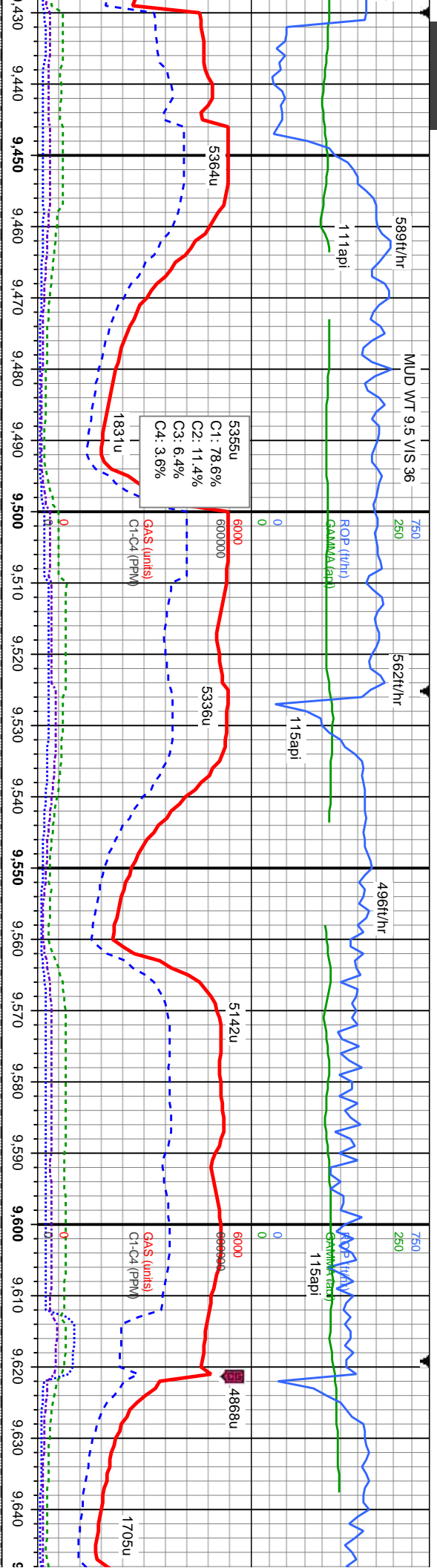
TVD (ft)

MD: 9.370
TVD: 7.019.83
Inclination: 91.3°
Azimuth: 269.8°
VS: 2.511.78

TVD (ft)

Code





o stn, f gr, mod srt, ns, sl-mod calc cnt
bly, sl frm- frm, slt-gt
alc

SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb rnd-sb ang, frm-brt, arg,cons, sl-mod calc cnt
SLTY SH: dk gy, sb bly -sb ply, sl frm- frm, slt-gt
tex, sl rthy lstr, sl aren, mod calc

6975

SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb rnd-sb ang, frm-brt, arg,cons, sl-mod calc cnt
SLTY SH: dk gy, sb bly -sb ply, sl frm- frm, slt-gt
tex, sl rthy lstr, sl aren, mod calc

6975

SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb rnd-sb ang, frm-brt, arg,cons, sl-mod calc cnt
SLTY SH: dk gy, sb bly -sb ply, sl frm- frm, slt-gt
tex, sl rthy lstr, sl aren, mod calc

6975

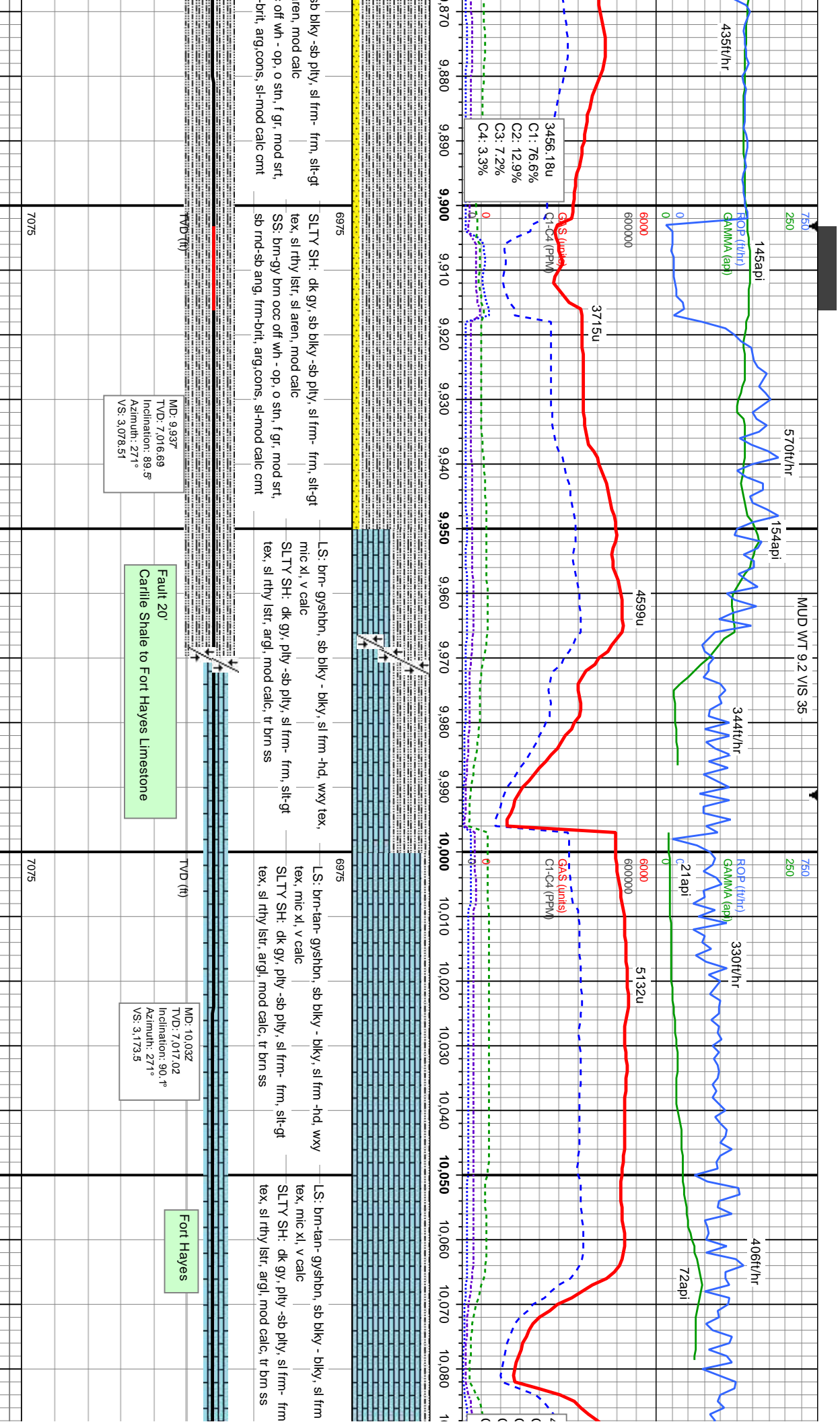
SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb rnd-sb ang, frm-brt, arg,cons, sl-mod calc cnt
SLTY SH: dk gy, sb bly -sb ply, sl frm- frm, slt-gt
tex, sl rthy lstr, sl aren, mod calc

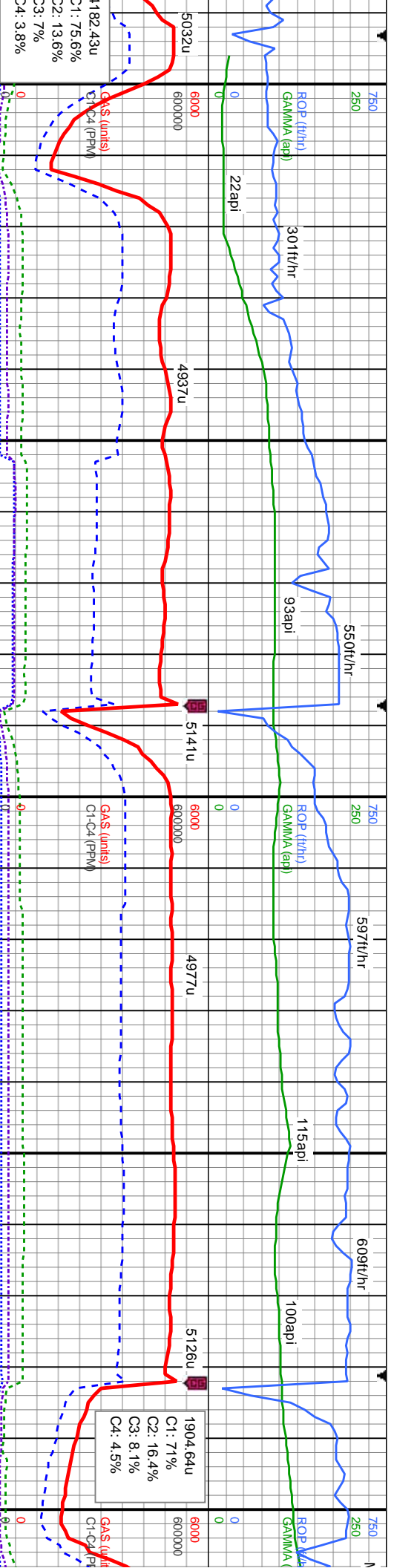
MD: 9.465
TVD: 7,019.07
Inclination: 89.7°
Azimuth: 270.8°
VS: 2,606.73

MD: 9.559
TVD: 7,019.25
Inclination: 90°
Azimuth: 270.1°
VS: 2,700.7

Codell







SS: brn-gy brn occ off wh - op, occ o sind clus, f-vf gr, mod srt, sb md-sb ang, frm-brit, arg, pred uncons, sl -mod calc
LS: brn-tan-gyshbn, sb blkly - blkly, sl frm -hd, wxy tex, mic xl, v calc; v g o od

SS: brn-gy brn occ off wh - op, occ o sind clus, f-vf gr, mod srt, sb md-sb ang, frm-brit, arg, pred uncons, sl -mod calc
LS: brn-tan-gyshbn, sb blkly - blkly, sl frm -hd, wxy tex, mic xl, v calc; v g o od

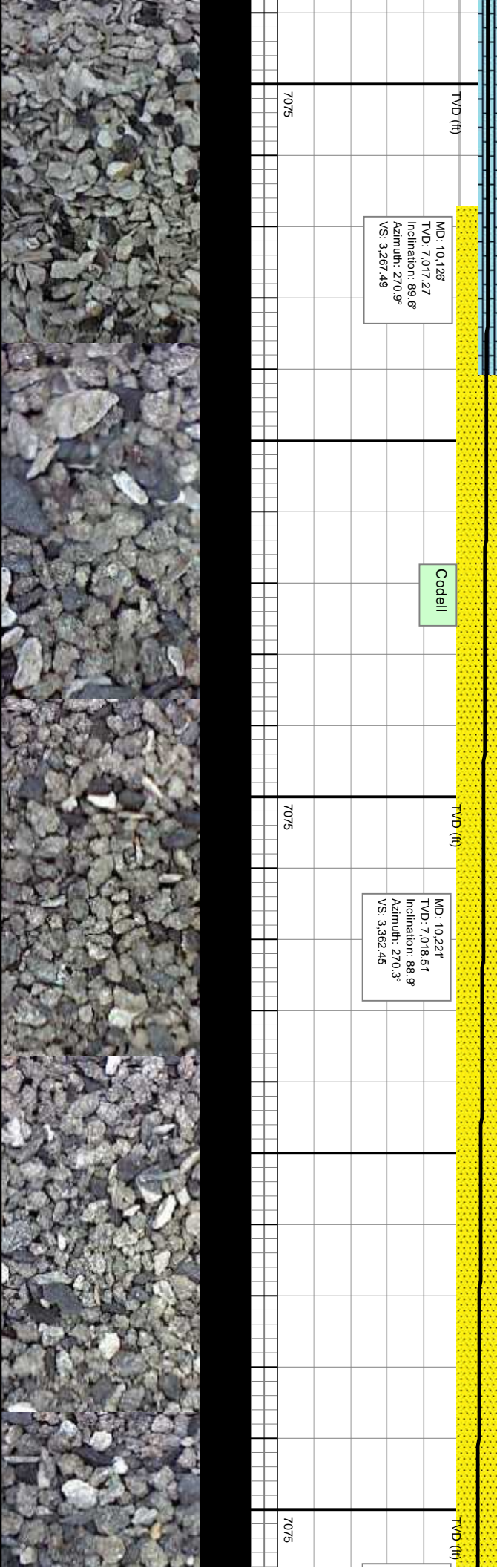
SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb md-sb ang, frm-brit, arg, cons, sl-mod calc cmf, occ sh

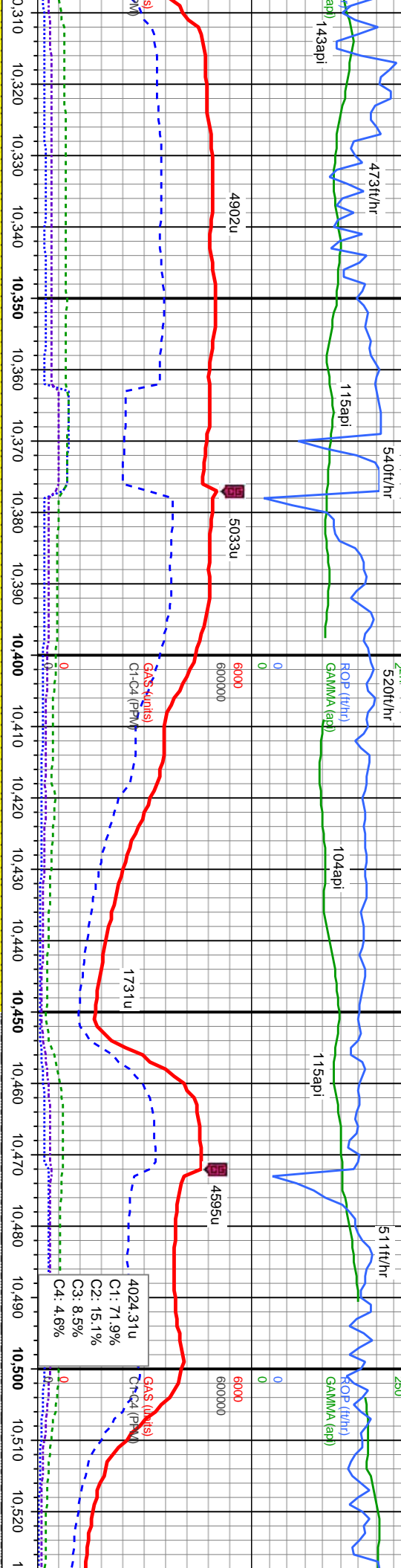
SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb md-sb ang, frm-brit, arg, cons, sl-mod calc cmf, occ sh

MD: 10.126'
TVD: 7.017.27
Inclination: 89.6°
Azimuth: 270.9°
VS: 3.267.49

Codeil

MD: 10.221'
TVD: 7.018.51
Inclination: 88.9°
Azimuth: 270.3°
VS: 3.362.45





SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb md-sb ang, frm-brit, arg,cons, sl-mod calc cntl, occ sh	SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb md-sb ang, frm-brit, arg,cons, sl-mod calc cntl, occ sh	SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb md-sb ang, frm-brit, arg,cons, sl-mod calc cntl, occ sh	SS: brn-gy brn occ off wh - op, o stn, f gr, mod srt, sb md-sb ang, frm-brit, arg,cons, sl-mod calc cntl, occ sh
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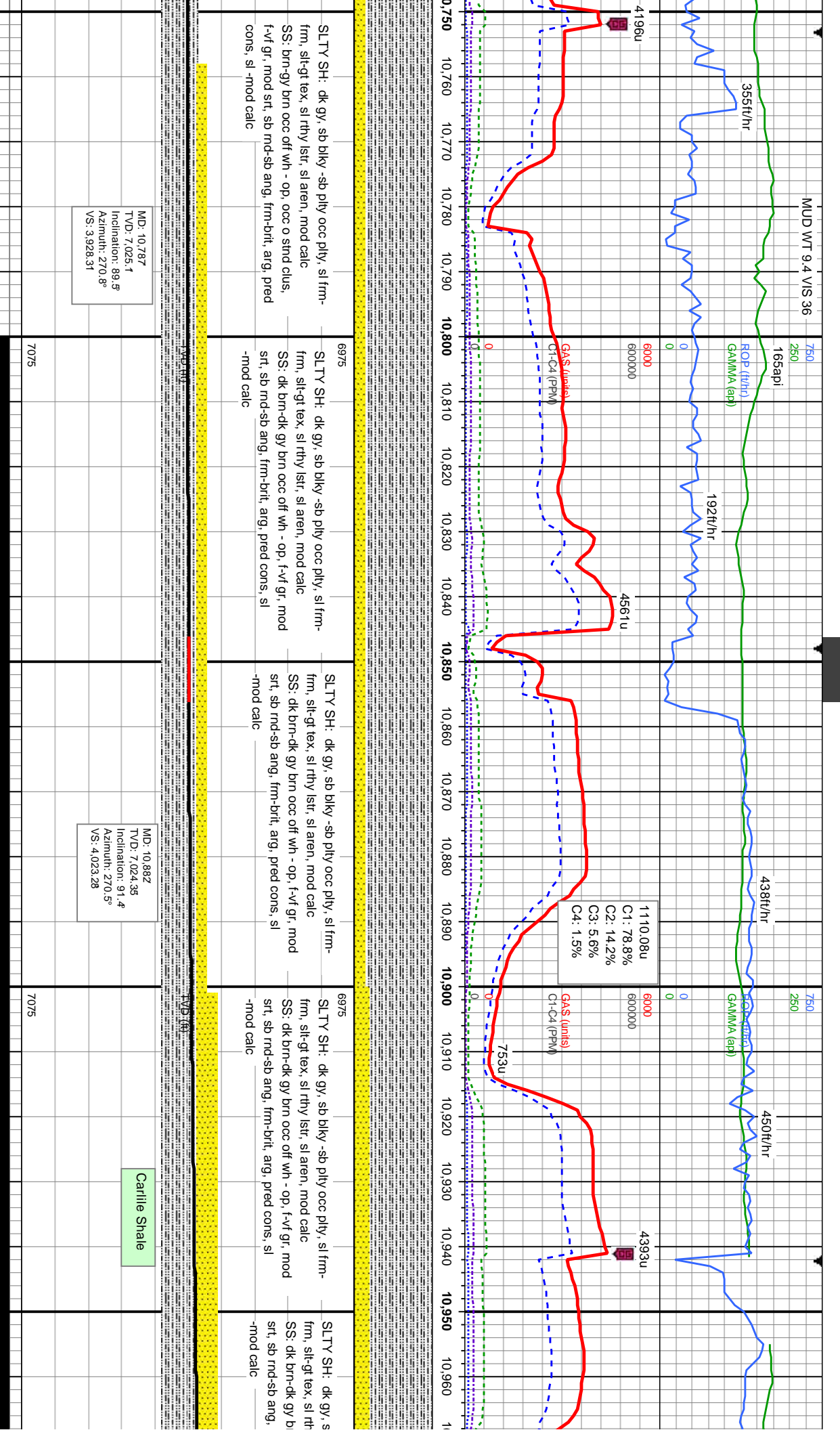
MD: 10.315
TVD: 7.020.15
Inclination: 89.1°
Azimuth: 270.7°
VS: 3.456.41

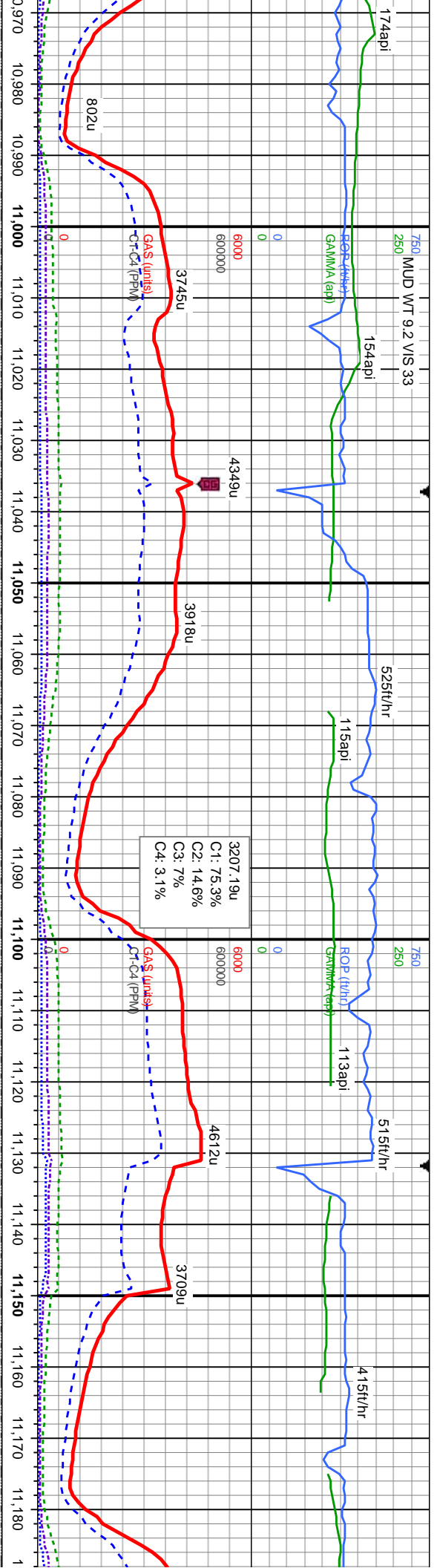
Codell

MD: 10.410
TVD: 7.021.81
Inclination: 88.9°
Azimuth: 270.7°
VS: 3.551.38

MD: 10.504
TVD: 7.023.29
Inclination: 89.3°
Azimuth: 270.9°
VS: 3.645.35







b blkly -sb ply occ ply, sl frm-
y lstr, sl aren, mod calc
n occ off wh - op, f-vf gr, mod
frm-brt, arg, pred cons, sl

6975
SS: dk brn-dk gy brn occ off wh - op, f-vf gr, mod
srt, sb md-sb ang, frm-brt, arg, pred cons, sl
-mod calc
SLTY SH: med-dk gy, sb blkly -sb ply occ ply, sl
frm- frm, slt-gt tex, sl rthy lstr, sl aren, mod calc

6975
SS: dk brn-dk gy brn occ off wh - op, f-vf gr, mod
srt, sb md-sb ang, frm-brt, arg, pred cons, sl
-mod calc
SLTY SH: med-dk gy, sb blkly -sb ply occ ply, sl
frm- frm, slt-gt tex, sl rthy lstr, sl aren, mod calc

6975
SS: dk brn-dk gy brn occ off wh - op, f-vf gr, mod
srt, sb md-sb ang, frm-brt, arg, pred cons, sl
-mod calc
SLTY SH: med-dk gy, sb blkly -sb ply occ ply, sl
frm- frm, slt-gt tex, sl rthy lstr, sl aren, mod calc

MD: 10.977
TVD: 7.022.03
Inclination: 91.4°
Azimuth: 270.5°
VS: 4.118.23

MD: 11.071
TVD: 7.019.57
Inclination: 91.6°
Azimuth: 270.3°
VS: 4.212.16

MD: 11.165
TVD: 7.016.95
Inclination: 91.6°
Azimuth: 270.4°
VS: 4.306.09

Co dell



