



Scale: 5" / 100'
Measured Depth Log

Well Name Waste Management 2Y-201

Location SESE SEC 2, T2N, 64W, 6TH

State COLORADO

Country USA

API Number 05-123-36986-0000

Region DJ BASIN

Spud Date 9/18/2013

Surface Coordinates 230' FSL x 986' FEL

Bottom Hole Coordinates 500' FNL x 149' FEL

County WELD

Rig Number ENSIGN 119

Field WATTENBERG

Drilling Completed 9/28/2013

Ground Elevation 4894'

K.B. Elevation 4917'

Logged Interval 6000' To 11229'

Total Depth 11229'

Formation PIERRE - NIOBRARA

Type of Drilling Fluid LSND - WATER POLY MUD

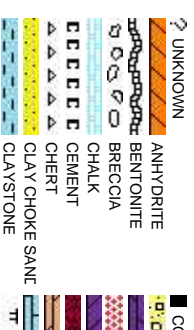
Company PDC Energy

Address 1775 Sherman
Denver, Colorado

Name Brian Hoffman

Company PDC Energy

Address 1775 Sherman
Denver, Colorado



Operator

Street, #3000
do 80203

Geologist
















































Street, #3000
do 80203

Rock Types

[illegible]

Accessories

Fossils

Fossils	 FOSSIL	 ARGILLACEOUS	 GLAUCONITE	 TUFFACEOUS
 GASTROPOD	 ARGILLITE GRAIN	 GYPSIFEROUS		
 OOLITE	 BENTONITE	 HEAVY MINERAL		
 OSTRACOD	 BITUMENOUS SUBSTANCE	 INOCERAMUS		
 BELEMNITE	 BRECCIA FRAGMENTS	 KAOLIN		
 BIOCLASTIC	 CALCAREOUS	 MARLSTONE		
 BRACHIOPOD	 CARBONACEOUS FLAKES	 MINERAL CRYSTALS		
 BRYOZOA	 CHERT	 NODULES		
 CEPHALOPOD	 CHERT	 PHOSPHATE PELLETS		
 CORAL	 COAL - THIN BEDS	 PYRITE		
 CRINOID	 DOLOMITIC	 SALT CAST		
 ECHINOID	 FELDSPAR	 SANDY		
 FISH	 FERRUGINOUS PELLET	 SILICEOUS		
 FORAMINIFERA	 ANHYDRITIC	 SILTY		
	 FERRUGINOUS			
		 SILTY		
			 SHALE STRINGER	
				 SILTSTONE STRINGER

Other Symbols

Oil Show





























Oil Show

☒ MOLDIC ☒ FAULT
☒ ORGANIC ☒ FORMATION TOP
☒ PINPOINT ☒ GAS SHOW
☒ VUGGY ☒ MN DEPTH
☒ DEAD ☒ MN DEPTH
☒ EVEN

Rounding

☒ WIRELINE TESTED - LEFT ☒ E EARTHY
☒ WIRELINE TESTED - RT ☒ Fx FINELYXLN
☒ GS GRAINSTONE ☒ L LITHOGRAPHIC

Porosity

	QUESTIONABLE		MX MICROXLN
	SPOTTED STAINING		MS MUDSTONE
Engineering			
	NORMAL FAULT		A ANGULAR
	OIL SHOW		R ROUNDED
	OVERTURNED STRATA		B SUBANG
	REVERSE FAULT		r SUBRAND
	CONNECTION (LEFT)		
	CONNECTION (RIGHT)		
	SIDEWALL CORE (LEFT)		
	SIDEWALL CORE (RIGHT)		
Textures			
	SLIDE		BS BOUNDSTONE
	SURVEY		C CHALKY
	TRIP GAS		CX CRYPTOXLN
Sorting			
	CORE - LOST		M MODERATE
	CORE - RECOVERED		P POOR
	DST INTERVAL		W WELL

Textures

Sorting

BS BOUNDSTONE **M** MODERATE
C CHALKY **P** POOR
XX CRYPTOXLN **W** WELL

Slide/Rotate

ROP
ROF
GAMMA

Columbine Logging2-Manned
Geosteering/Operational
09/19/2013 Bloodhound # 312

Total Gas & Chromatograph
GAS
C1
C2
C3
C4
CO2

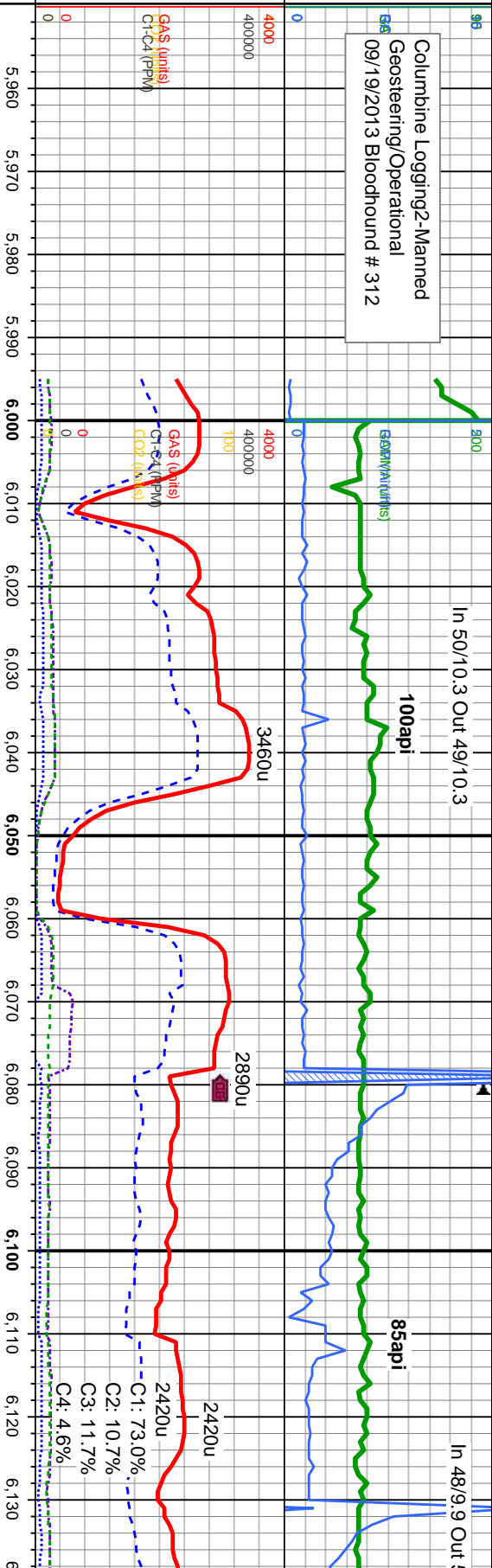
Depth Labels

% Lith

Well Bore
TVD

Oil Show

Images



Bit Data
Bit #: 2
Type: T505
Size: 8.75
Depth In: 950'
Jets: 5x20
S/N: 7146831

MD: 6,033'
TVD: 5,964.16'
Inclination: 1.3°
Azimuth: 97.9°
VS: -44.94'
TVD (ft)

SLTY SH: med-it gy, sft, sb pily - pily,
sily-grty tex, non calc, grdg to SLTST: it gy,
sft, sb blkly, sily, sl calc, SHY SS: it
gy-offwht, vfg, ang-sb rd, w srt, mod w
cons, sl calc cnt, rr pyr, no mnrl flr, fnt it
yel cut, no stn

MD: 6,080'
TVD: 6,011.15'
Inclination: 1.8°
Azimuth: 37.1°
VS: -44.27'

SLTY SH: med-it gy, sft, sb pily - pily,
sily-grty tex, non calc, grdg to SLTST: it gy,
sft, sb blkly, sily, sl calc, SHY SS: it gy-offwht,
vfg, ang-sb rd, w srt, mod w cons, sl calc
cnt, rr pyr, no mnrl flr, fnt it yel cut, no stn

MD: 6,129'
TVD: 6,060.03'
Inclination: 5.7°
Azimuth: 8.5°
VS: -41.15'

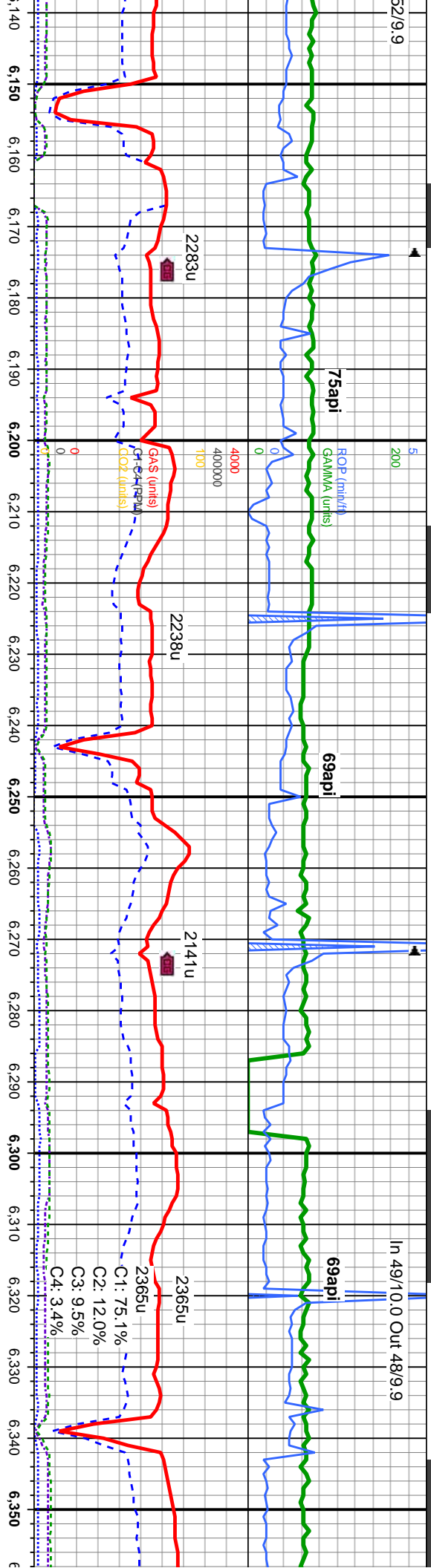
SLTY SH: med-it gy, sft, sb pily - p
sily-grty tex, non calc, grdg to SLTST: it gy,
sft, sb blkly, sily, sl calc, SHY SS: it
vfg, ang-sb rd, w srt, mod w cons,
cnt, rr pyr, no mnrl flr, fnt it yel cu

TR
P
FR
G
E



22/9.9

In 49/10.0 Out 48/9.9



75api

69api

69api

MD: 6,176
TVD: 6,106.5
Inclination: 11.3 °
Azimuth: 1.6 °
VS: -34.25 '

MD: 6,224
TVD: 6,153.28
Inclination: 14.5 °
Azimuth: 3.2 °
VS: -23.62 '

MD: 6,271
TVD: 6,198.41
Inclination: 17.9 °
Azimuth: 3 °
VS: -10.59 '

MD: 6,319
TVD: 6,243.75
Inclination: 20.4 °
Azimuth: 1.2 °
VS: 5.02 '

SLTY SH: med-it gy, sft, sb ply - ply,
sily-grfy tex, non calc, grdg to SLTST: It gy,
sft, sb blkly, sily, sl calc, SHY SS: It gy-offwht,
vfg, ang-sb rd, w srt, mod w cons, sl calc
cmt, rr pyr, no mnrl flor, fnt It yel cut, no stn

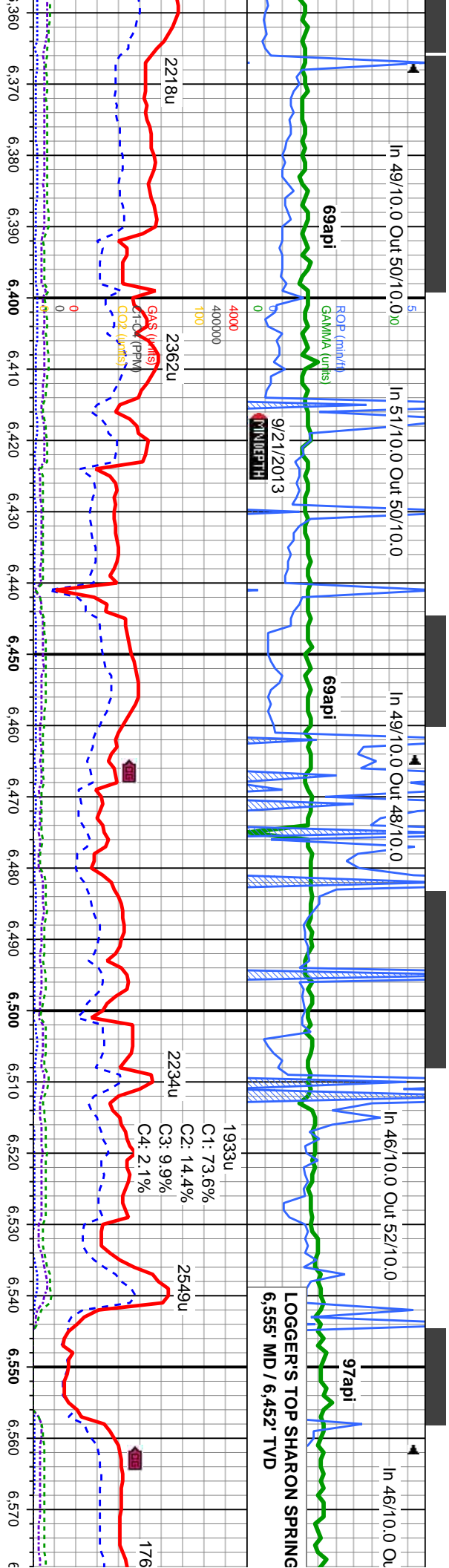
SLTY SH: med-it gy, sft, sb ply - ply,
sily-grfy tex, non calc, grdg to SLTST: It gy,
sft, sb blkly, sily, sl calc, SHY SS: It gy-offwht,
vfg, ang-sb rd, w srt, mod w cons, sl calc
cmt, rr pyr, str ss, no mnrl flor, fnt It yel cut,
no stn

SLTY SH: med-it gy, sft, sb ply - ply,
sily-grfy tex, non calc, grdg to SLTST: It gy,
sft, sb blkly, sily, sl calc, SHY SS: It gy-offwht,
vfg, ang-sb rd, w srt, mod w cons, sl calc
cmt, rr pyr, str ss, no mnrl flor, fnt It yel cut,
no stn

SLTY SH: med-it gy, sft, sb ply - ply,
sily-grfy tex, non calc, grdg to SLTST: It gy,
sft, sb blkly, sily, sl calc, SHY SS: It gy-offwht,
vfg, ang-sb rd, w srt, mod w cons, sl calc
cmt, rr pyr, str ss, no mnrl flor, fnt It yel cut,
no stn

SLTY SH: med-it gy, sft, sb ply - ply,
sily-grfy tex, non calc, grdg to SLTST: It gy,
sft, sb blkly, sily, sl calc, SHY SS: It gy-offwht,
vfg, ang-sb rd, w srt, mod w cons, sl calc
cmt, rr pyr, str ss, no mnrl flor, fnt It yel cut,
no stn





MD: 6,414
TVD: 6,331.24
Inclination: 25.9 °
Azimuth: 357.2 °
VS: 41.09

MD: 6,461
TVD: 6,373.06
Inclination: 28.4 °
Azimuth: 0.9 °
VS: 62.17

MD: 6,510
TVD: 6,415.27
Inclination: 32.6 °
Azimuth: 1.6 °
VS: 86.78

MD: 6,557
TVD: 6,453.74
Inclination: 37.5 °
Azimuth: 1.6 °
VS: 113.5 '

MD: 6,366
TVD: 6,287.48
Inclination: 22.6 °
Azimuth: 355.6 °
VS: 21.89 '

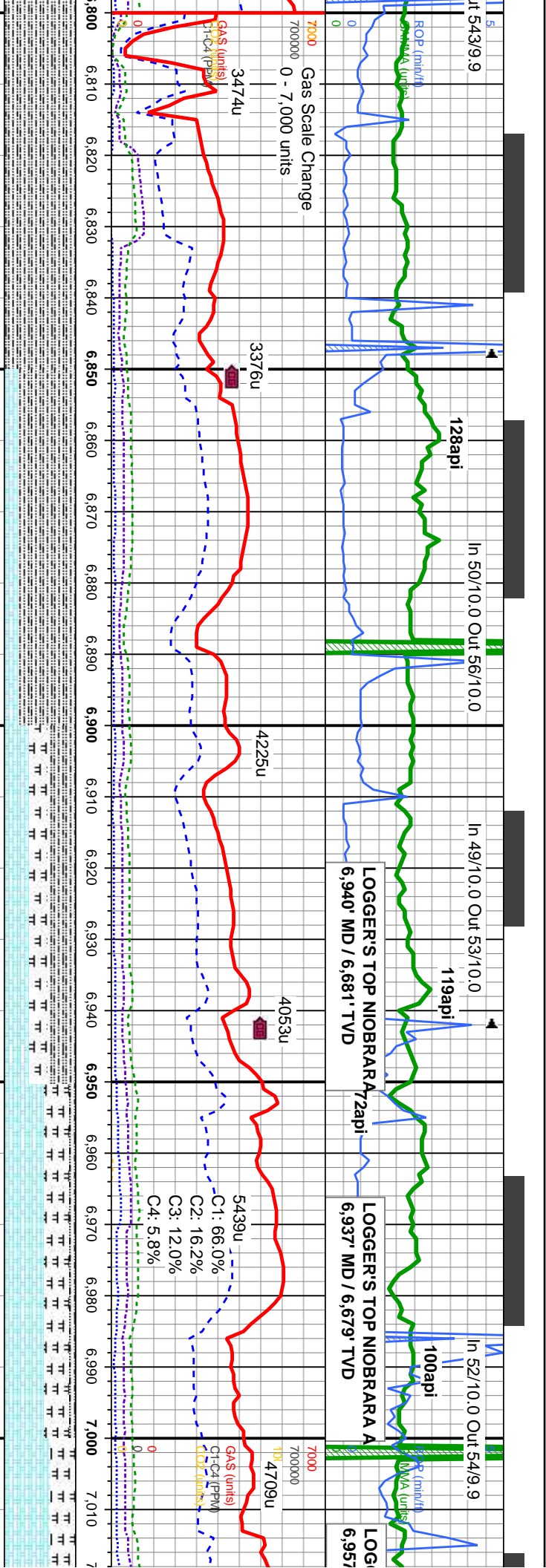
SLTY SH: med-It gy, sft, sb pty - pty, silty-grty tex, non calc, grdg to SLTST: It gy, sft, sb blk, silty, sl calc, SHY SS: It gy-offwht, vfg, ang-sb rd, w srd, mod w cons, sl calc cnt, rr pyr, str ss, no mnrl flr, fnt It yel cut, no stn

SLTY SH: med-It gy, sft, sb pty - pty, silty-grty tex, non calc, grdg to SLTST: It gy, sft, sb blk, silty, sl calc, SHY SS: It gy-offwht, vfg, ang-sb rd, w srd, mod w cons, sl calc cnt, rr pyr, str ss, no mnrl flr, fnt It yel cut, no stn

SLTY SH: med-It gy, sft, sb pty - pty, silty-grty tex, non calc, grdg to SLTST: It gy, sft, sb blk, silty, sl calc, SHY SS: It gy-offwht, vfg, ang-sb rd, w srd, mod w cons, sl calc cnt, rr pyr, str ss, no mnrl flr, fnt It yel cut, no stn

SLTY SH: med-It gy, sft, silty-grty tex, non calc, grdg to SLTST: It gy, sft, sb blk, silty, sl calc, SHY SS: It gy-offwht, vfg, ang-sb rd, w srd, mod w cons, sl calc cnt, rr pyr, str ss, no mnrl flr, fnt It yel cut, no stn





MD: 6,842'	MD: 6,890'	MD: 6,937'	MD: 6,986'
TVD: 6,636.14'	TVD: 6,658.93'	TVD: 6,679.61'	TVD: 6,699.34'
Inclination: 60.4 °	Inclination: 62.9 °	Inclination: 64.9 °	Inclination: 67.6 °
Azimuth: 359 °	Azimuth: 359.7 °	Azimuth: 358.4 °	Azimuth: 357.2 °
VS: 327.17'	VS: 368.75'	VS: 410.25'	VS: 454.15'

SLTY SH: med gy, tr lt gy, frm, sb ply - ply, silty-grly tex, non calc, grdg to SH, str bent, tr speckl pyr, str mnrl flor, fnt lt yel cut, no stn	SLTY SH: med gy, tr lt gy, frm, sb ply - ply, silty-grly tex, non calc, grdg to SH, str bent, tr speckl pyr, str mnrl flor, fnt lt yel cut, no stn	CHK: lt gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc intbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc tr SLTY SH: dk gy, sft, ply, silty, tr lt yel chk flor stmg bri yel cut, lt yel stn	CHK: lt gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc intbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc tr SLTY SH: dk gy, sft, ply, silty, tr lt yel chk flor stmg bri yel cut, lt yel stn
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5/10.1 Out 43/10.1

In 43/10.1 Out 40/10.1

In 42/10.1 Out

71api

120api

126api

9/25/2013

Gamma (units)

7000

7000.00

4357u

5574u

5320u

5440u

C1: 60.2%

C2: 17.4%

C3: 13.8%

C4: 8.6%

546 (units)

546 (units)

546 (units)

546 (units)

546 (units)

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546 (units)

546 (units)

MD: 7,547'

TVD: 6,759.81'

Inclination: 91.5 °

Azimuth: 359.1 °

VS: 996.52'

MD: 7,642'

TVD: 6,758.06'

Inclination: 90.6 °

Azimuth: 359.5 °

VS: 1,089.99'

<<< Base of Target Zone >>>

TVD (ft)

<<< Base of Target Zone >>>

t gy crm, sft, sb blk, sb fis, rthy lstr, chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, chk flr, sting bri yel cut, lt yel sin

CHK: lt gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr lt yel chk flr, sting bri yel cut, lt yel sin

CHK: lt gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr lt yel chk flr, sting bri yel cut, lt yel sin

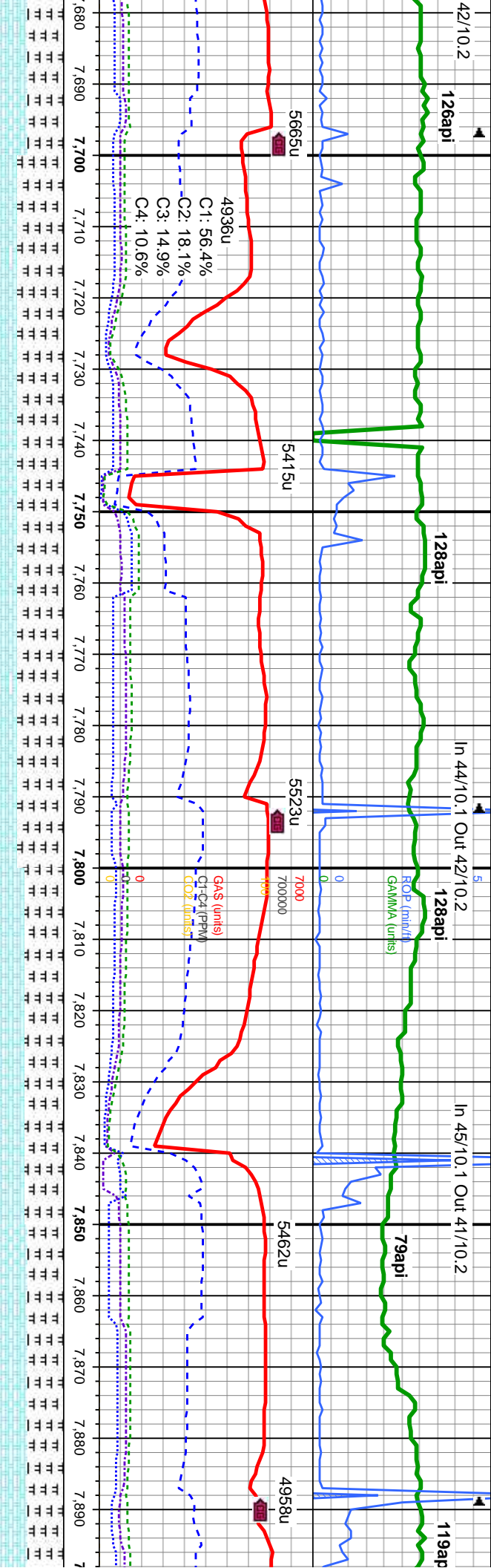
CHK: lt gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr lt yel chk flr, sting bri yel cut, lt yel sin

CHK: lt gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr lt yel chk flr, sting bri yel cut, lt yel sin

6800

6700





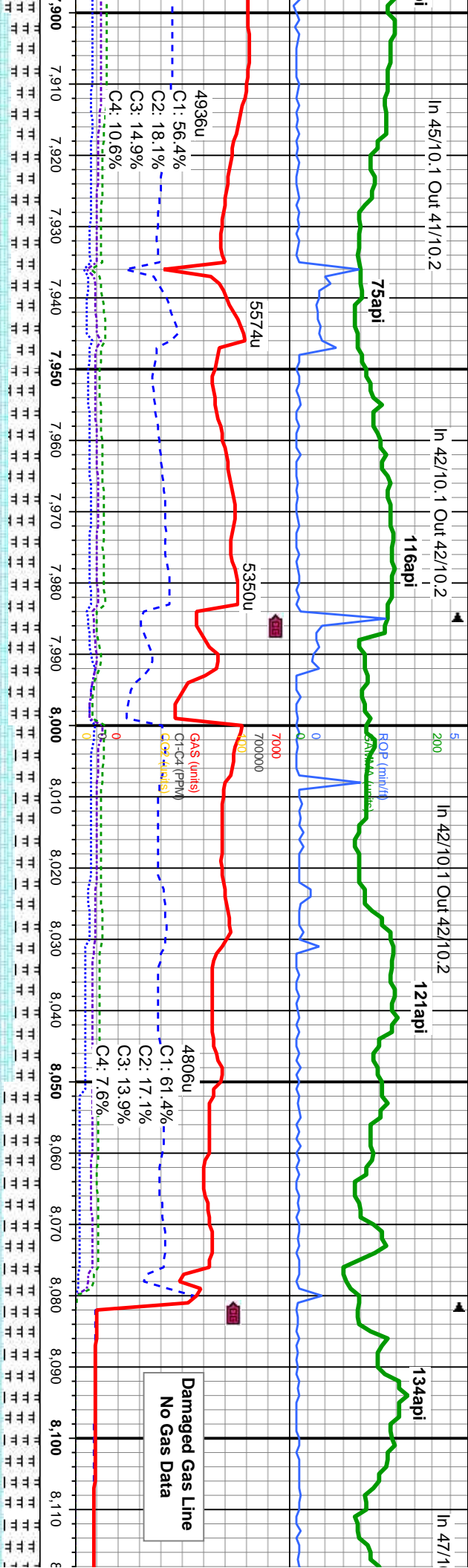
MD: 7,738 '
TVD: 6,757.48 '
Inclination: 90.1 °
Azimuth: 358.8 °
VS: 1,184.41 '

MD: 7,833 '
TVD: 6,758.64 '
Inclination: 88.5 °
Azimuth: 359.1 °
VS: 1,277.79 '

TVD (ft)
<<< Base of Target Zone >>>

gy, sb fis, rthy lstr, bnd w/ MRLST: d-dk silty org mat, v calc, tr ltr yel sin	CHK: It gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr ltr yel chk flor, sting bri yel cut, ltr yel sin	CHK: It gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr ltr yel chk flor, sting bri yel cut, ltr yel sin	CHK: It gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr ltr yel chk flor, sting bri yel cut, ltr yel sin
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MD: 7.928
TVD: 6,760.88
Inclination: 88.8 °
Azimuth: 358.4 °
VS: 1,371.08

MD: 8.023
TVD: 6,761.13
Inclination: 90.9 °
Azimuth: 359.5 °
VS: 1,464.45

MD: 8.023
TVD: 6,761.13
Inclination: 90.9 °
Azimuth: 359.5 °
VS: 1,464.45

<<< Base of Target Zone >>> TVD (ft)

CHK: It gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr It yel chk flr, sting bri yel cut, It yel sin

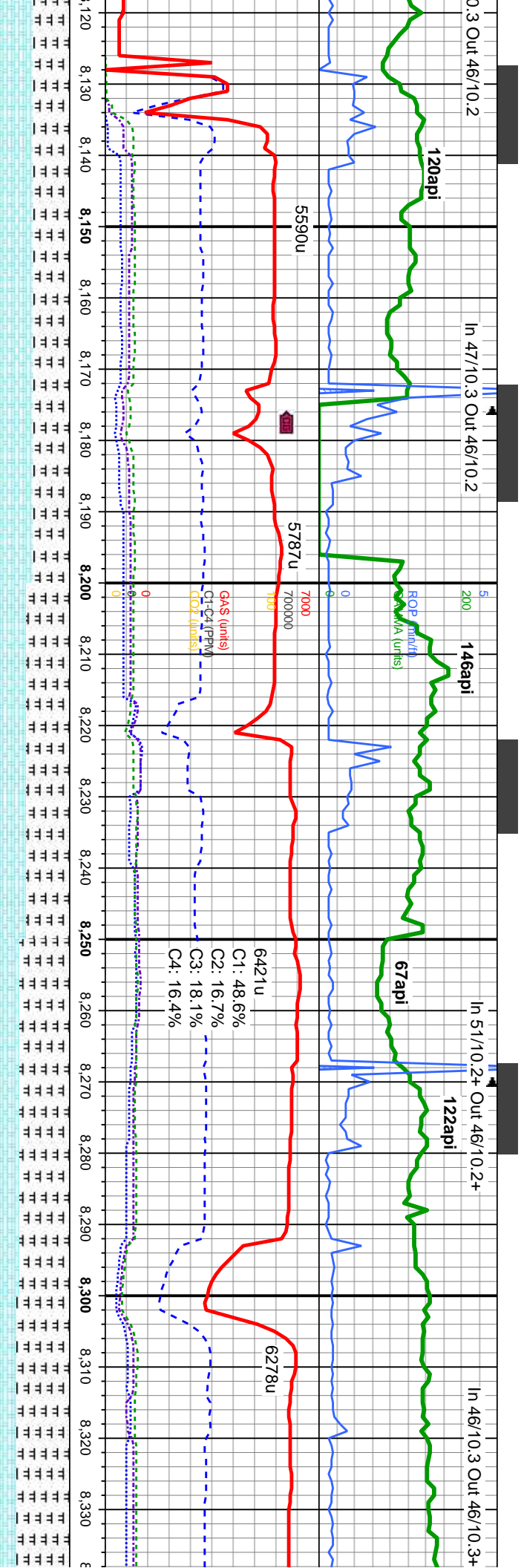
CHK: It gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr It yel chk flr, sting bri yel cut, It yel sin

CHK: It gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr It yel chk flr, sting bri yel cut, It yel sin

CHK: It gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr It yel chk flr, sting bri yel cut, It yel sin

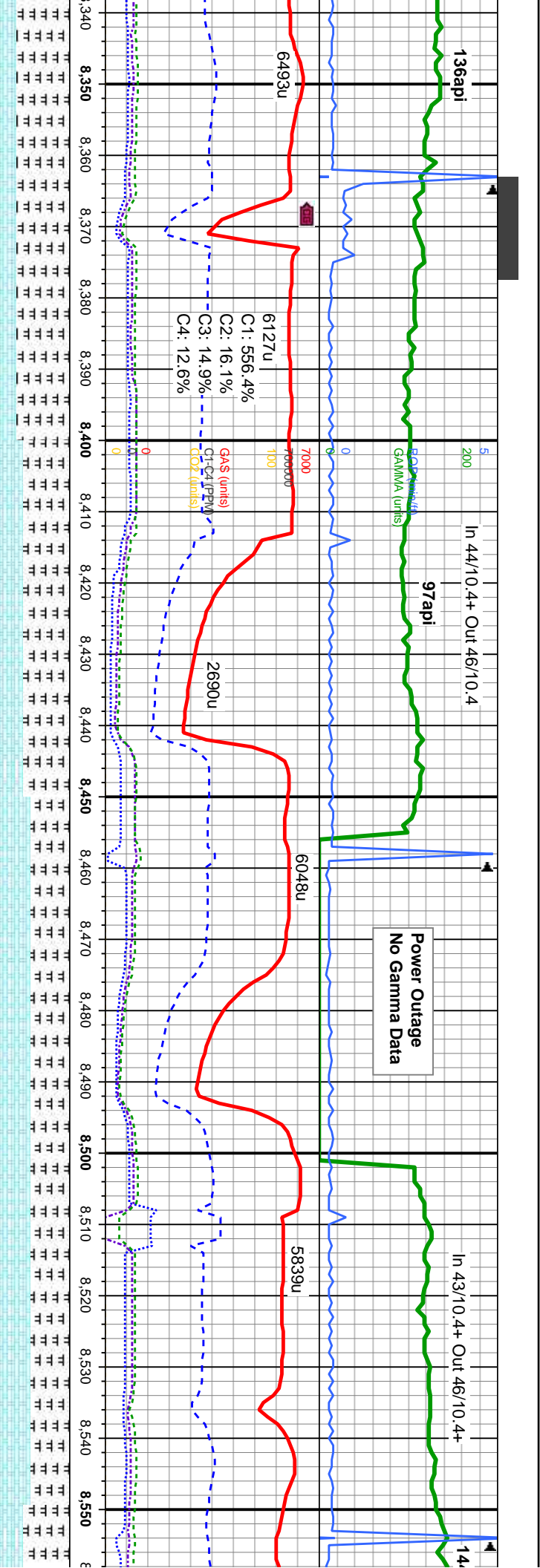
CHK: It gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc inbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr It yel chk flr, sting bri yel cut, It yel sin





18 758.06 Inclination: 92.8 ° Azimuth: 359.1 ° VS: 57.89'	MD: 8,214' TVD: 6,753.87' Inclination: 92.2 ° Azimuth: 0.7 ° VS: 1,652.44'	MD: 8,309' TVD: 6,752.21' Inclination: 89.8 ° Azimuth: 1.4 ° VS: 1,746.38'
<<< Base of Target Zone >>>		
sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc intbd w/ MRLST: d-dk blk, rthy-silty org mat, v calc, string bri yel cut, lt yel stn	CHK: lt gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc intbd w/ MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr lt yel chk flor, string bri yel cut, lt yel stn	MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, intbd wi CHK: lt gy crm, sft, sb blk, sb fis, rthy lstr, silty & chky tex, v calc, tr lt yel chk flor, string bri yel cut, lt yel stn





MD: 8.404
TVD: 6,752.21
Inclination: 90.2 °
Azimuth: 360 °
VS: 1,840.24'

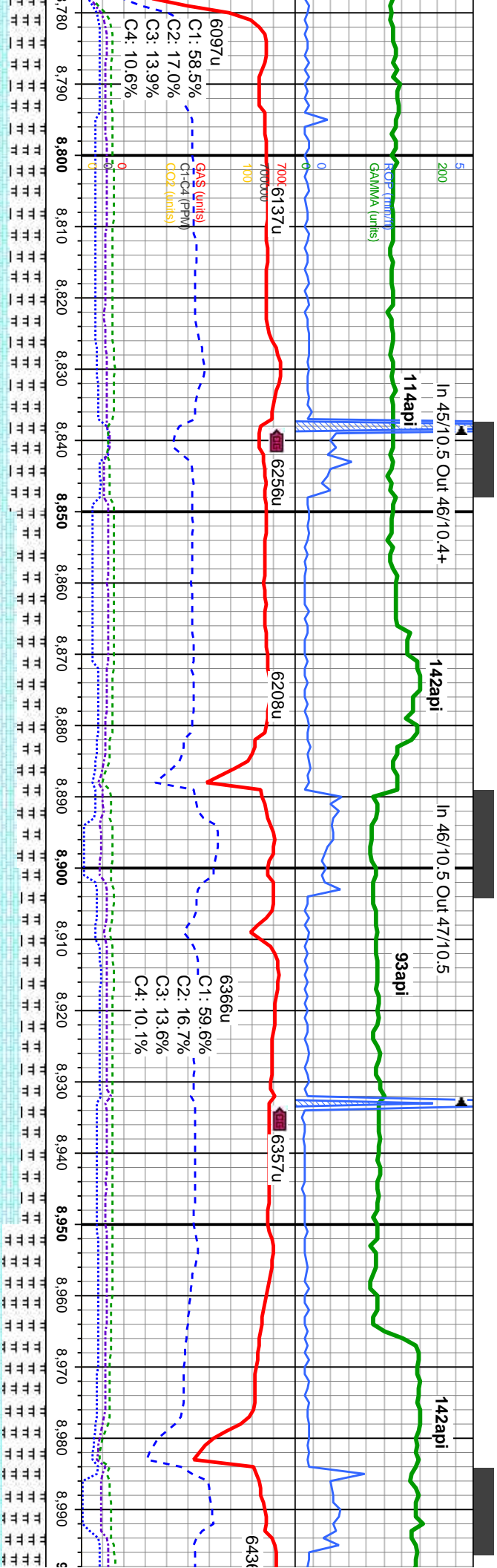
MD: 8.499
TVD: 6,751.63
Inclination: 90.5 °
Azimuth: 359.5 °
VS: 1,933.86'

et Zone >>>

<<< Base of Target Zone >>>

thy-silty orm, sft, v tex, v ut, lt yel	MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, intbd wi CHK: lt gy crm, sft, sb blk, rthy lstr, silty & chky tex, v calc, tr lt yel chk flr, sting bri yel cut, lt yel sin	MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, intbd wi CHK: lt gy, crm, occ m gy, sft, sb blk, rthy lstr, silty & chky tex, sl tr fos, abnt gm bent, v calc, tr lt yel chk flr, sting bri yel cut, lt yel sin	MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, intbd wi CHK: lt gy, crm, occ m gy, sft, sb blk, rthy lstr, silty & chky tex, sl tr fos, abnt gm bent, v calc, tr lt yel chk flr, sting bri yel cut, lt yel sin	MRLST: d-dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, intbd wi CHK: lt gy, crm, occ m gy, sft, sb blk, rthy lstr, silty & chky tex, sl tr fos, abnt gm bent, v calc, tr lt yel chk flr, sting bri yel cut, lt yel sin
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MD: 8,785 ' VD: 6,748.64 ' Inclination: 90.5 ° Azimuth: 358.8 ° VS: 2,215.53 ' 6700

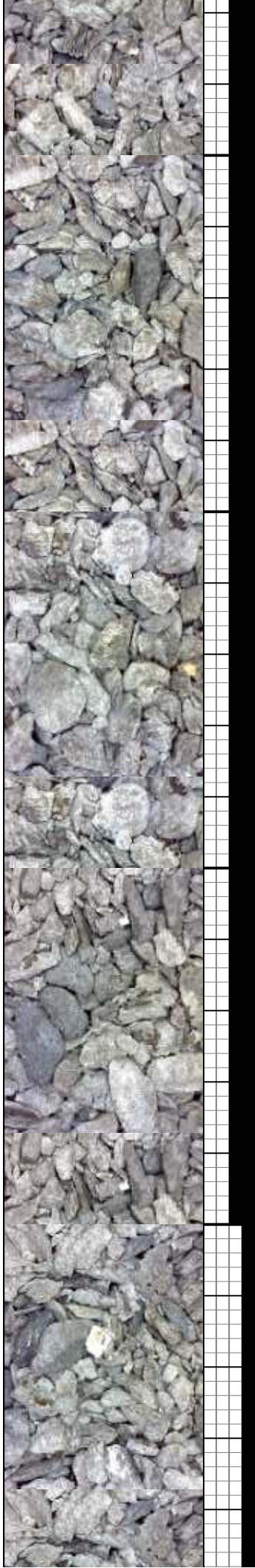
MD: 8,880 ' TVD: 6,747.64 ' Inclination: 90.7 ° Azimuth: 358.9 ° VS: 2,308.88 ' <<< Base of Target Zone >>>

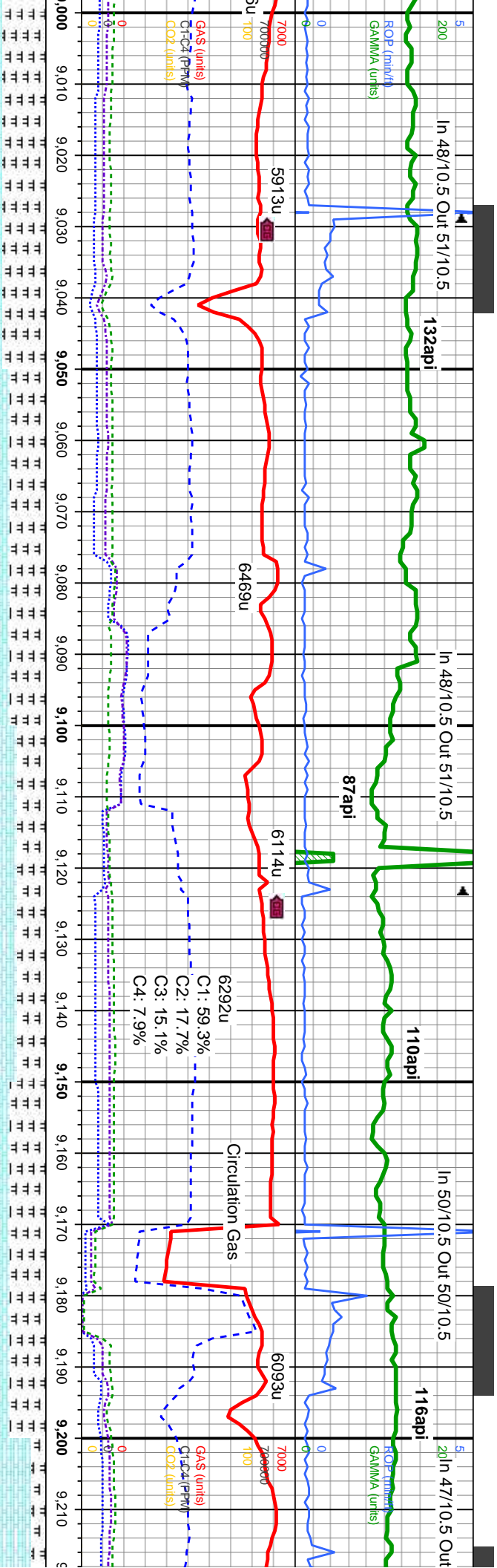
MD: 8,975 ' TVD: 6,746.65 ' Inclination: 90.5 ° Azimuth: 359.5 ° VS: 2,402.33 ' 6800

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lsfr, rthy & wxy, mot tex, tr fos, v calc inbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, stmg brl yel cut, lt yel sin

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lsfr, rthy & wxy, mot tex, tr fos, v calc inbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, stmg brl yel cut, lt yel sin

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lsfr, rthy & wxy, mot tex, tr fos, v calc inbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, stmg brl yel cut, lt yel sin





MD: 9.070
TVD: 6,747.39
Inclination: 88.6 °
Azimuth: 357.3 °
VS: 2,495.53 '

MD: 9.165
TVD: 6,749.38
Inclination: 89 °
Azimuth: 357.5 °
VS: 2,588.38 '

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blkly, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blkly, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, sting brt yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blkly, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blkly, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, sting brt yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blkly, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blkly, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, sting brt yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blkly, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blkly, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, sting brt yel cut, lt yel stn

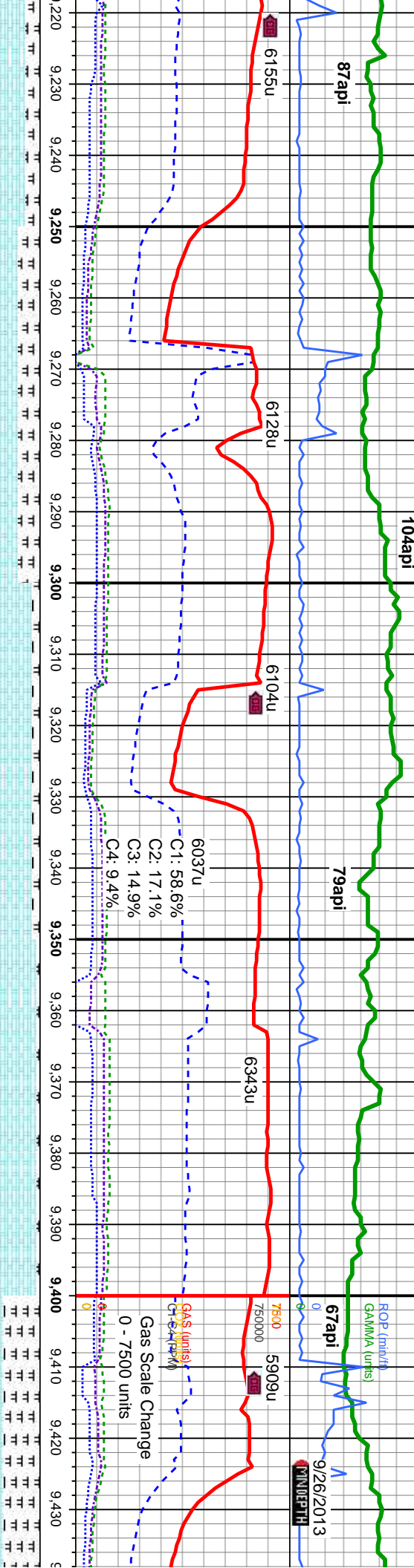
CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blkly, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blkly, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, sting brt yel cut, lt yel stn



51/10.6

In 45/10.5 Out 48/10.5

In 49/10.5 Out 47/10.



MD: 9,261
TVD: 6,749.89
Inclination: 90.4 °
Azimuth: 358 °
VS: 2,682.35 '

MD: 9,356
TVD: 6,750.3
Inclination: 89.1 °
Azimuth: 357.9 °
VS: 2,775.41 '

<<< Base of Target Zone >>>

CHK: It - m gy brn, crm, occ m gy, sft - frm, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brt yel cut, lt yel stn

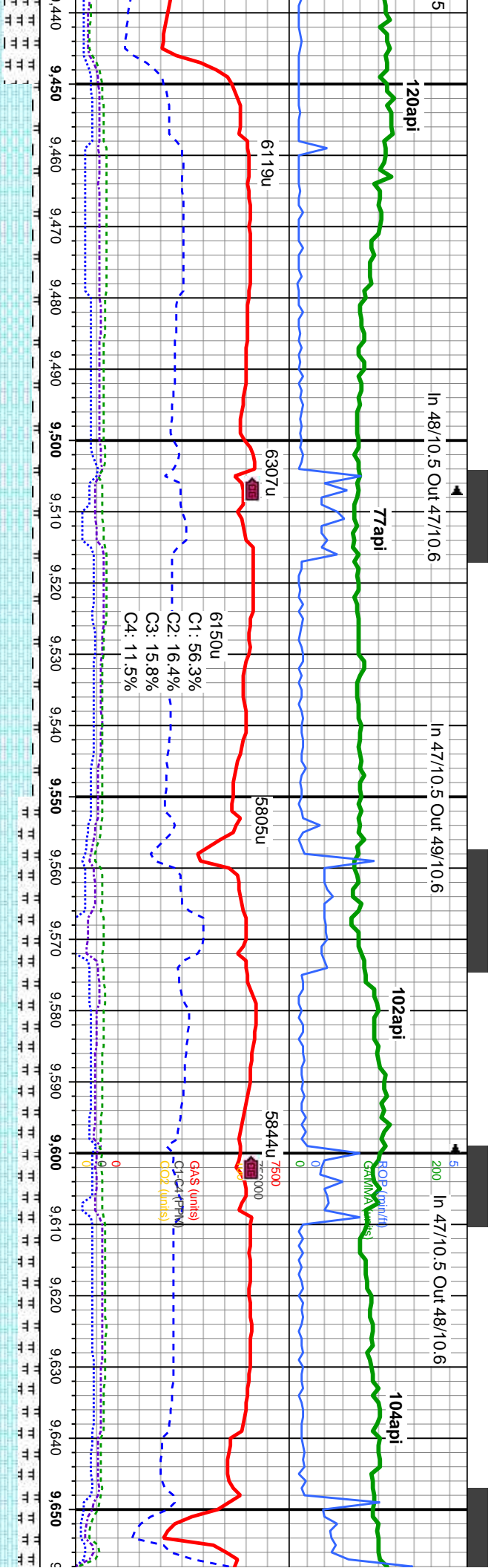
CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy istr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brt yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy istr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brt yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy istr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brt yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy istr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brt yel cut, lt yel stn





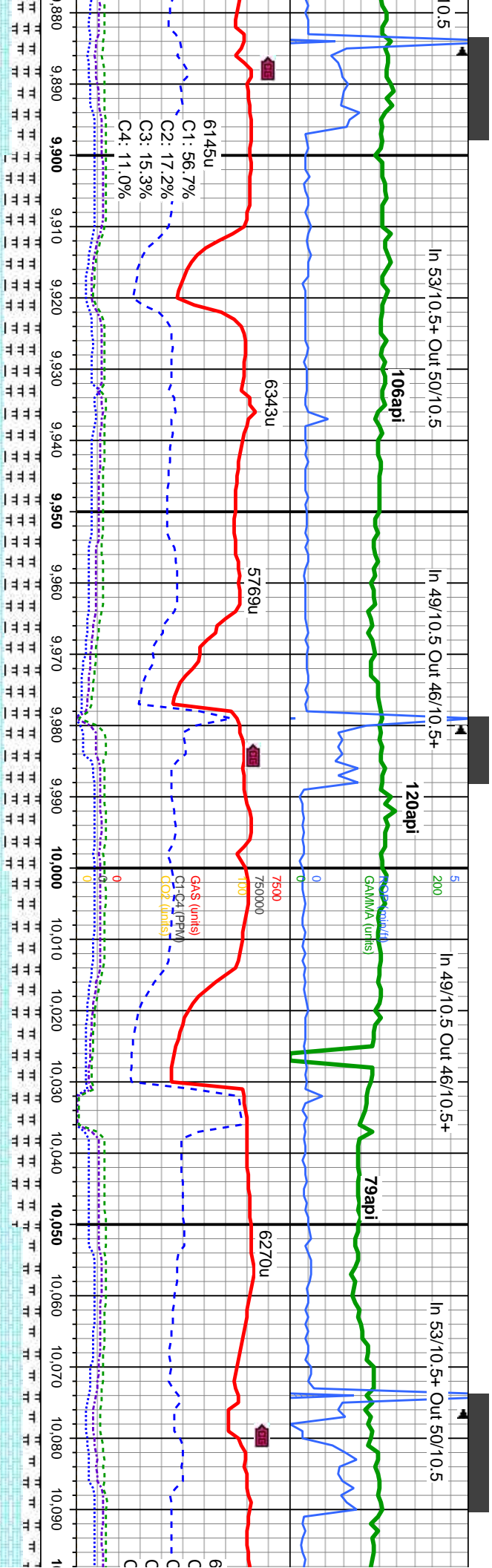
MD: 9,451
TVD: 6,751.38
Inclination: 89.6 °
Azimuth: 357.3 °
VS: 2,868.35 '

MD: 9,546
TVD: 6,750.8
Inclination: 91.1 °
Azimuth: 357.2 °
VS: 2,961.17 '

MD: 9,642
TVD: 6,749.29
Inclination: 90.7 °
Azimuth: 0.2 °
VS: 3,055.61 '

sft - frm, x, tr fos, v ft, sb blk, yel chk	CHK: lt - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	CHK: lt - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	CHK: lt - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn
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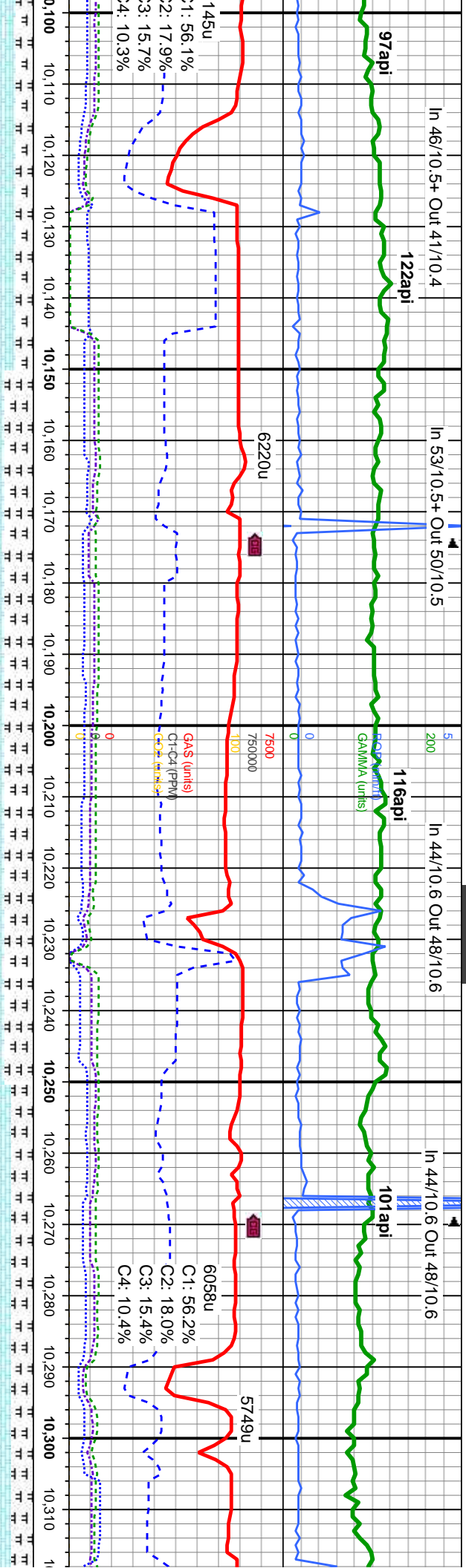
MD: 9,927'
TVD: 6,747.63'
Inclination: 89.3°
Azimuth: 358.8°
VS: 3,336.02'

MD: 10,023'
TVD: 6,748.89'
Inclination: 89.2°
Azimuth: 359.1°
VS: 3,430.38'

<<< Base of Target Zone >>>

occ m gy, sft - frm, xy, mot tex, tr fos, v gy, blk, sft, sb blk, rth fos, tr lt yel chk	CHK: lt - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brt yel cut, lt yel stn	CHK: lt - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brt yel cut, lt yel stn	CHK: lt - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brt yel cut, lt yel stn
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MD: 10,118
TVD: 6,749.55
Inclination: 90 °
Azimuth: 0.5 °
VS: 3,524 '

<<< Base of Target Zone >>>

MD: 10,213
TVD: 6,749.39
Inclination: 90.2 °
Azimuth: 360 °
VS: 3,617.75 '

MD: 10,309
TVD: 6,747.88
Inclination: 91.6 °
Azimuth: 1 °
VS: 3,712.55 '

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brl yel cut, lt yel stn

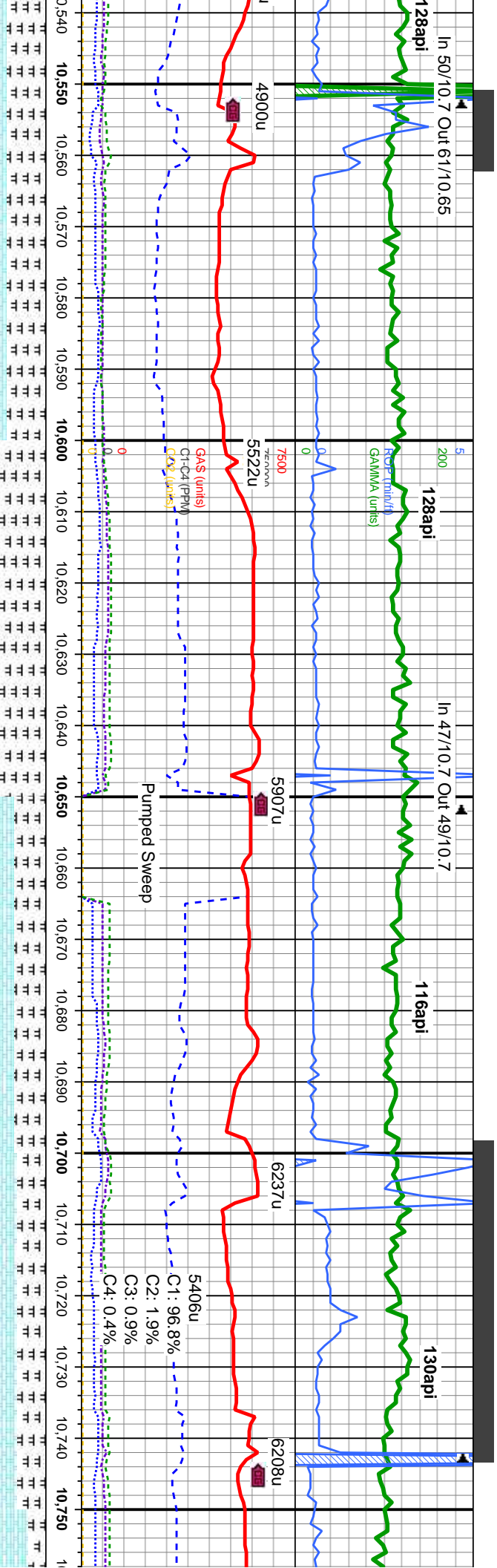
CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brl yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brl yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brl yel cut, lt yel stn

CHK: It - m gy l, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brl yel cut, lt yel stn



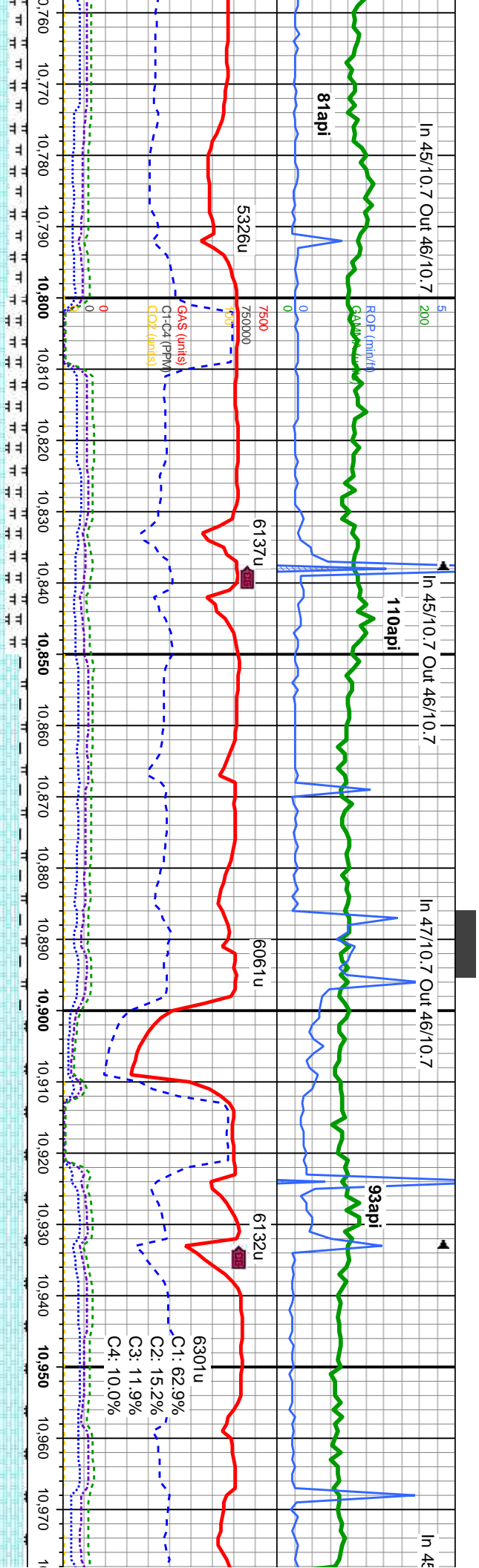


MD: 10,594 '
TVD: 6,739.92 '
Inclination: 90.2 °
Azimuth: 358.4 °
VS: 3,993.56 '

sft - frm, x, tr fos, v ft, sb blk, yel chk	CHK: It - m gy brn, crm, occ m gy,sft - frm, sb blk,y,rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk,y, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	TVD (ft)	6800
sft - frm, sb blk,y,rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk,y, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	CHK: It - m gy brn, crm, occ m gy,sft - frm, sb blk,y,rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk,y, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	TVD (ft)	6800
sft - frm, sb blk,y,rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk,y, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	CHK: It - m gy brn, crm, occ m gy,sft - frm, sb blk,y,rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk,y, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	TVD (ft)	6800

MD: 10,689 '
TVD: 6,739.17 '
Inclination: 90.7 °
Azimuth: 358.2 °
VS: 4,086.74 '

sft - frm, sb blk,y,rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk,y, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	CHK: It - m gy brn, crm, occ m gy,sft - frm, sb blk,y,rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk,y, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	TVD (ft)	6800
sft - frm, sb blk,y,rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk,y, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	CHK: It - m gy brn, crm, occ m gy,sft - frm, sb blk,y,rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk,y, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	TVD (ft)	6800
sft - frm, sb blk,y,rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk,y, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	CHK: It - m gy brn, crm, occ m gy,sft - frm, sb blk,y,rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk,y, rthy-silty org mat, v calc, tr fos, tr lt yel chk flor, string bri yel cut, lt yel stn	TVD (ft)	6800



MD: 10,784
TVD: 6,738.59
Inclination: 90 °
Azimuth: 358.4 °
VS: 4,179.91

MD: 10,880
TVD: 6,738.09
Inclination: 90.6 °
Azimuth: 358.4 °
VS: 4,274.1

MD: 10,97
TVD: 6,73
Inclination
Azimuth: 3
VS: 4,367

It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brl yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brl yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brl yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brl yel cut, lt yel stn

CHK: It - m gy brn, crm, occ m gy, sft - frm, sb blk, rthy lstr, rthy & wxy, mot tex, tr fos, v calc intbd w/ MRLST: dk gy, blk, sft, sb blk, rthy-silty org mat, v calc, tr fos, tr lt yel chk flr, string brl yel cut, lt yel stn



