

Scale: 5" / 100'
Measured Depth Log

Well Name	North Platte K-35-36MRLNB		
Location	SWSE Sec. 26 T5N R63W		
State	Colorado	County	Weld
Country	United States	Rig Number	Xtreme 19
API Number	05-123-46387-00	AFE #	18027
Geographic Region	D.J. Basin	Field	Wattenberg
Spud Date	3/27/2018	Drilling Completed	4/15/2018
Surface Coordinates	SWSE Sec.26 T5N R63W 540 FSL 2552 FEL		
Bottom Hole Coordinates	SWSE Sec.26 T5N R63W 40 FNL 470 FWL		
Ground Elevation	4,550	K.B. Elevation	4,567
Logged Interval	6,000 To 14080	Total Depth	14080
Formation	Niobrara B Chalk		
Type of Drilling Fluid	Oil Based Mud		

Operator

Company Bonanza Creek
Address Bonanza Creek Energy
410 17th Street
Suite 1400
Denver, CO 80202

Geologist

Name Paul McKay
Company Bonanza Creek Energy
Address Bonanza Creek Energy
410 17th Street
Suite 1400
Denver, CO 80202

Other

Robert Davis Wellsite Geologist
Dan Kabala Wellsite Geologist









































Zone Color Coding

Oil
Note
Error

Condensate
Core
Water





Gas
Pre
Sea

Rock Types

 UNKNOWN	   MARLSTONE	 SILTSTONE	 BENTONITE
 GYPSUM	   CLAYSTONE	 SANDSTONE	 TUFF
 LIMESTONE	   SHALE	 CONGLOMERATE	 CEMENT
     CHERT	   SHALE GRAY	    BRECCIA	 CHALK
 COAL	   SHALE COLORED	    TILL	 SILTY SHALE

Other S

Oil Show


 MOLDIC	
 ORGANIC	

 DEAD

 SIDEV

 EVEN

 SIDEV

 QUESTIONABLE

 SLIDE


Engineering

 SPOTTED STAINING

 SURF

Porosity

 BIT	 TRI
 CASING	 WIREF

 E EARTHY

 CONNECTION (RIGHT)  WIREF


 F FENESTRAL

 CONNECTION GAS

 F FRACTURE

 CORE - LOST

Round










































 INTERCRYSTALLINE

 ANGUI

 INTEROOLITIC

 FAULT  R ROUND

Accessories

 FORAMINIFERA	 GLAUCONITE	 COAL STRINGER
 F FOSSIL	 ANHYDRITIC	 GYPSIFEROUS
 ALGAE	 GASTROPOD	 DOLOMITE STRINGER
 AMPHIPORA	 OOLITE	 GYPSUM STRINGER
 BELEMNITE	 OSTRACOD	 LIMESTONE STRINGER
 BIOCLASTIC	 PELECYPOD	 MARLSTONE (CALC) STRG
 BRACHIOPOD	 PELLET	 MARLSTONE (DOL) STRG
 BRYOZOA	 PISOLUTE	 SANDSTONE STRINGER
 CEPHALOPOC	 PLANT REMAINS	 SHALE STRINGER
 CORAL	 PLANT SPORES	 SILTY STRINGER
 CRINOID	 SCAPHOPOD	 CHALK STRINGER
 ECHINOID	 STROMATOPOROID	 SILTY SHALE STRINGER
 FISH	 FERRUGINOUS PELLET	 ANHYDRITE STRINGER
	 FERRUGINOUS	 BENTONITE STRINGER

Stringer

Minerals

Symbols

FORMATION TOP **BS** SUBANG **PS** PACKSTONE

HOW **PS** SUBRND **WS** WACKESTONE

VALL CORE (LEFT)

Textures Sorting

VALL CORE (RIGHT)

BS BOUNDSTONE **M** MODERATE

VIEW **C** CHALKY **P** POOR


OGAS **CX** CRYPTOXLN **W** WELL

LINE TESTED - LEFT **E** EARTHY

Cut

LINE TESTED - RT **FX** FINELYXLN

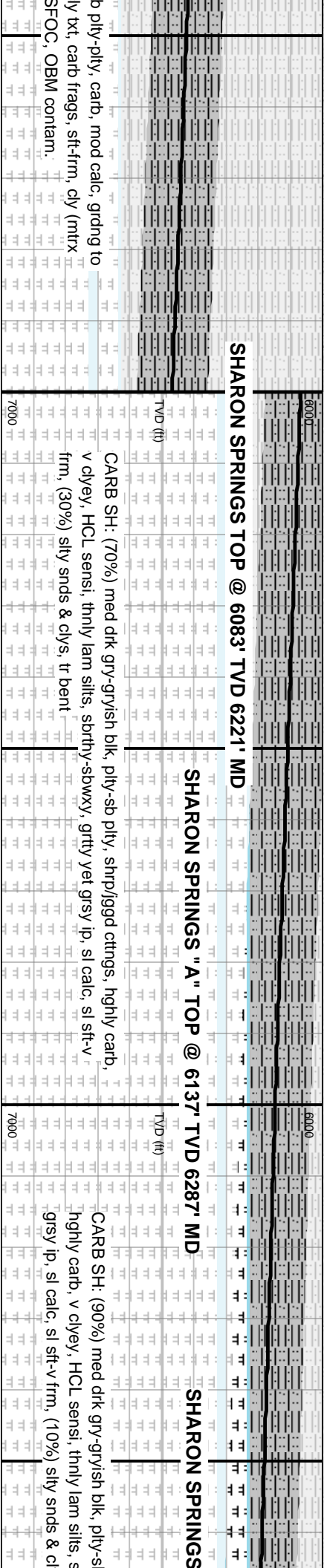
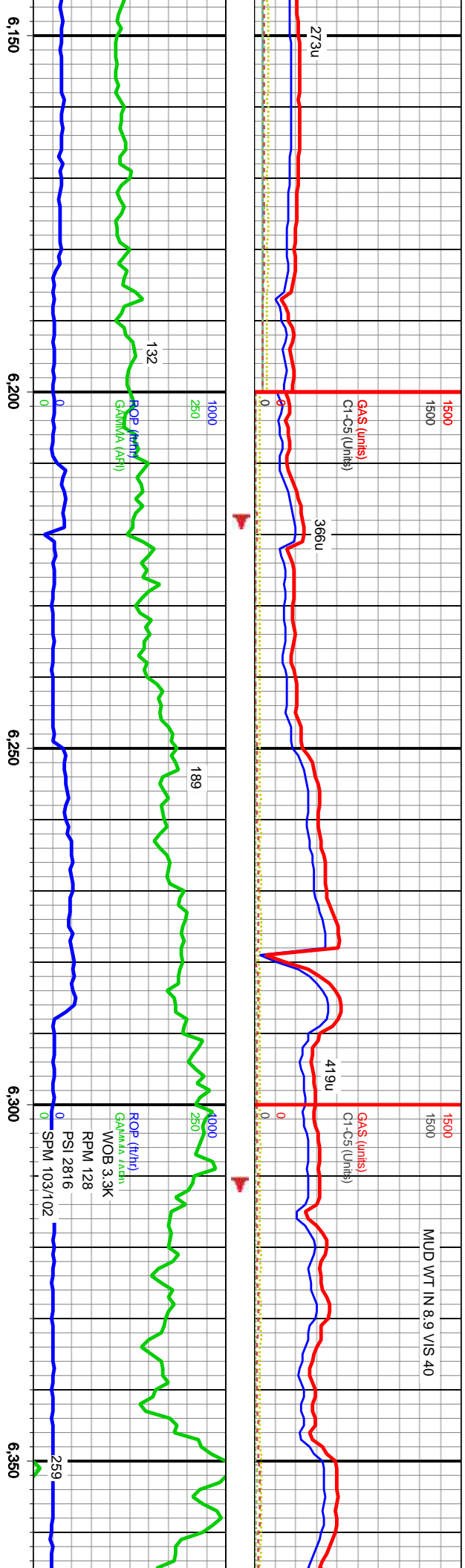
ES GRAINSTONE  No Cut

L LITHOGRAPHIC  Fair Cut

LAR **MX** MICROXLN  Good Cut

DED **MS** MUDSTONE Blank

ding



MD: 6,194'

Inclination: 31°

Azimuth: 87°

TVD: 6,062'

VS: -446'

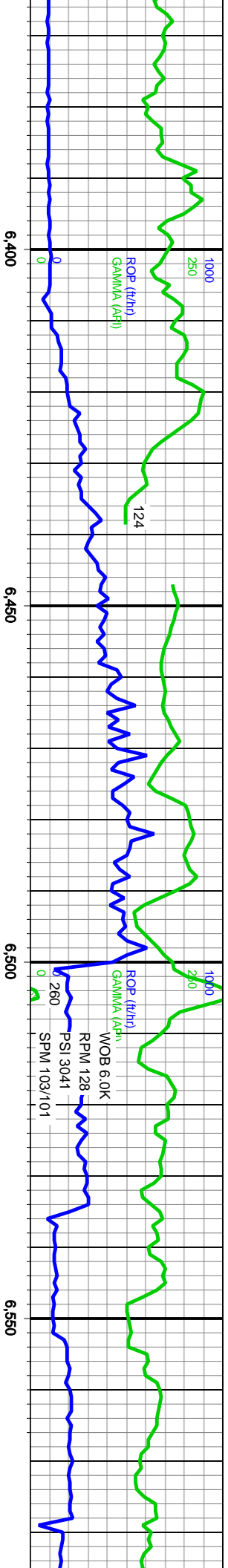
MD: 6,288'

Inclination: 41°

Azimuth: 90°

TVD: 6,138'

VS: -391'



"B" TOP @ 6175' TVD 6343' MD		NIOBRARA "A" CHALK @ 6228' TVD 6434' MD		NIOBRARA "A" MARL @ 6235' TVD 6448' MD			
b pty, shrp/jsgd ctngs, bbrthv-sbwy, grrty yet		MARLSTN: (50%) tr CARB SH, tr alt BENT (phyllo) w pyr nod & BENT, MRL Y CHLK (50%): lt brwn-lt gry brwn, sb pty-sb blk, vry carb, mic xln-sug txt, frm, mttld w whi micrite spks, est 30% micrite, cmnn blk carb mat to (mrl), lam cly intrbds		MARLSTN: (70%) tr CARB SH, tr alt BENT (phyllo) w pyr nod & BENT, MRL (30%): lt brwn-lt gry brwn, sb pty-sb blk, vry carb, mic xln-sug txt, frm, mttld spks, est 30% micrite, cmnn blk carb mat to (mrl), lam cly intrbds			
TVD (ft)		TVD (ft)		TVD (ft)		TVD (ft)	
6000		6000		6000		6000	
7000		7000		7000		7000	

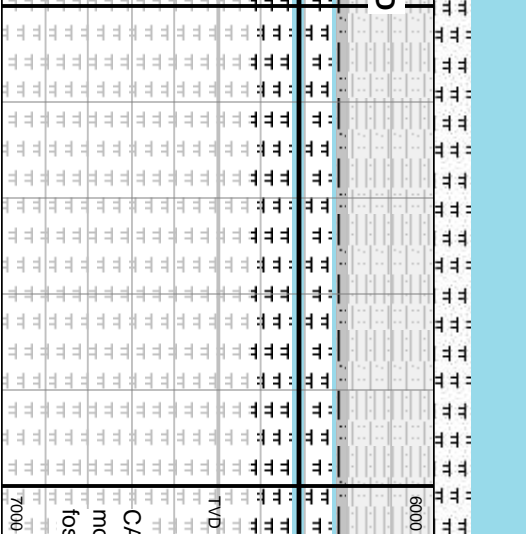
MD: 6,381'
Inclination: 53°
Azimuth: 94°
TVD: 6,201'
VS: -323'

MD: 6,475'
Inclination: 64°
Azimuth: 95°
TVD: 6,250'
VS: -243'

MD: 6,570'
Inclination: 71°
Azimuth: 94°
TVD: 6,286'
VS: -155'

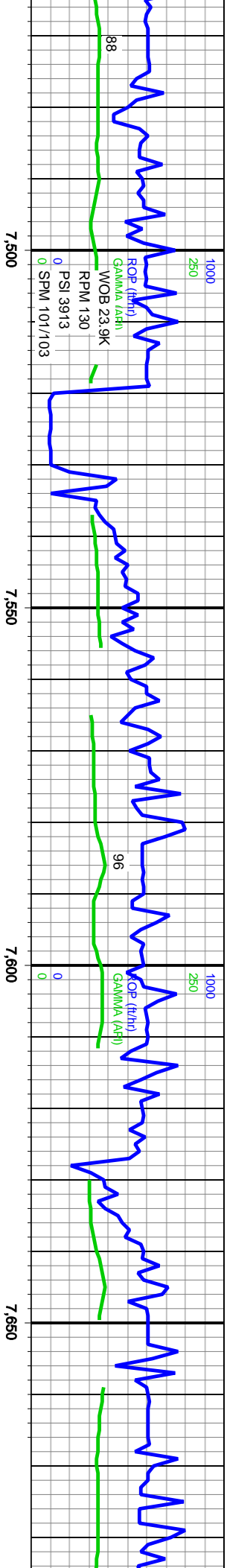
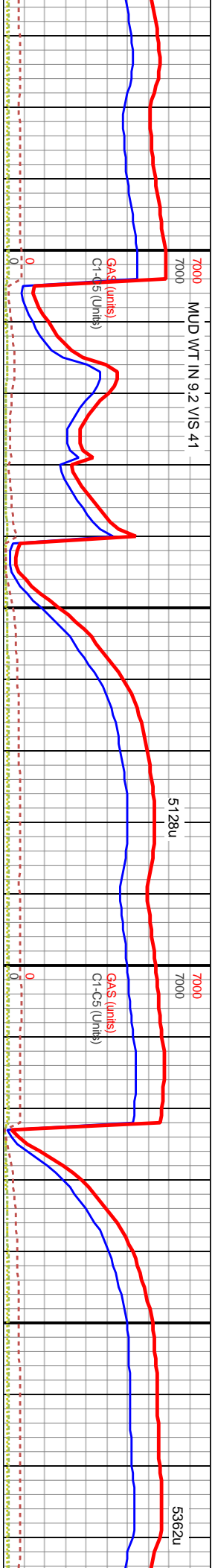


LANDED CURVE @ 6312.1 VD 6/49. MD



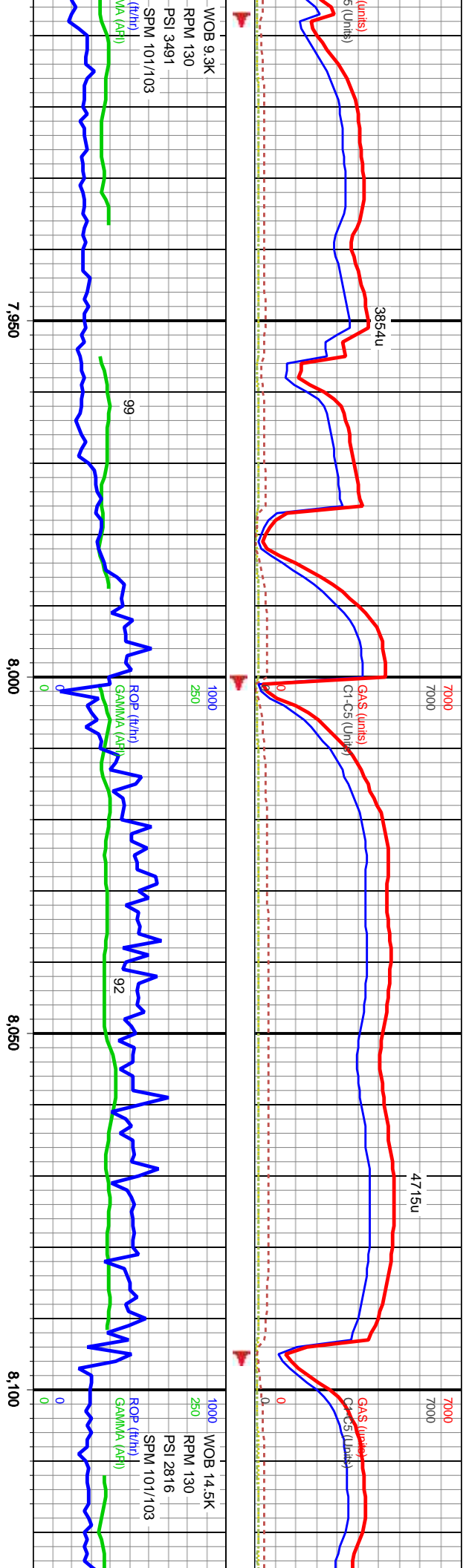
fos

MD: 6,664'	MD: 6,726'	MD: 6,758'
Inclination: 82°	Inclination: 90°	Inclination: 90°
Azimuth: 93°	Azimuth: 93°	Azimuth: 92°
TVD: 6,308'	TVD: 6,313'	TVD: 6,313'
VS: -64'	VS: -2'	VS: 30'

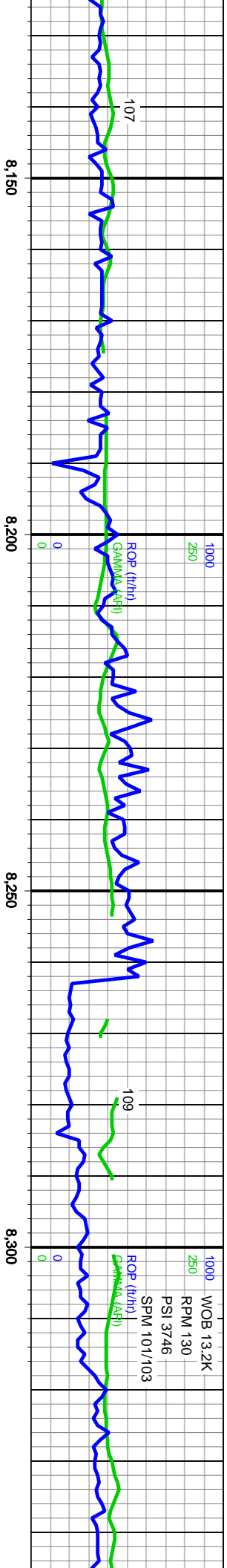
[illegible]

MD: 7,508'
Inclination: 90°
Azimuth: 90°
TVD: 6,313'
VS: 775'

MD: 7,601'
Inclination: 90°
Azimuth: 91°
TVD: 6,312'



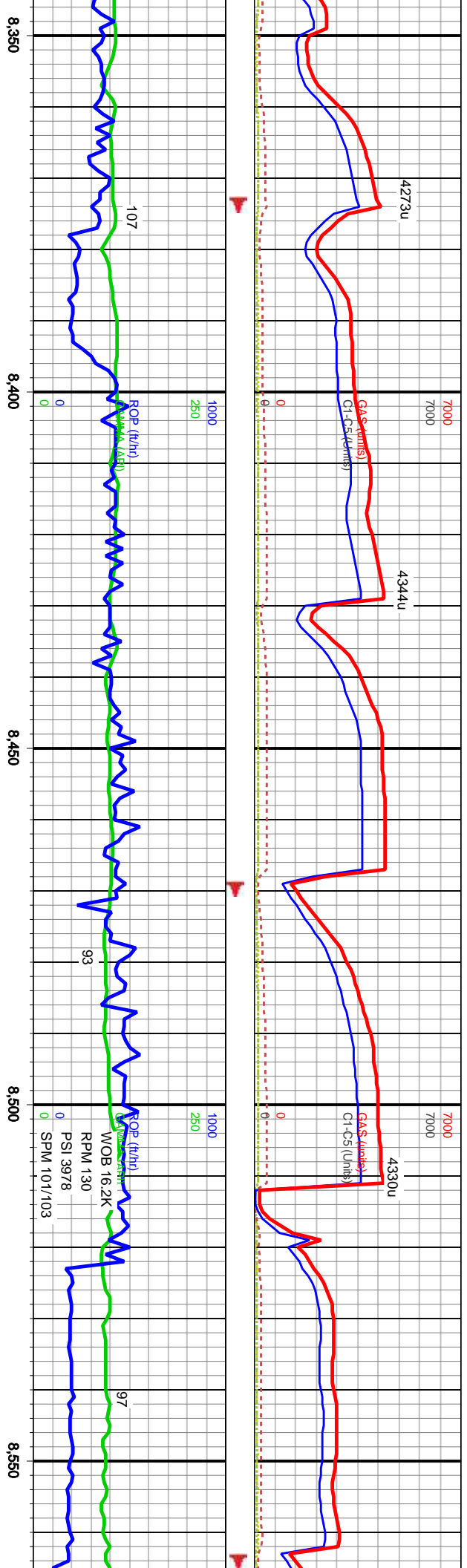
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[illegible]

MD: 8,164'
Inclination: 90°
Azimuth: 90°
TVD: 6,312'
VS: 1,429'

MD: 8,258'
Inclination: 90°
Azimuth: 86°
TVD: 6,312'
VS: 1,522'

M
In
A
T
V



		Niobrara B Chalk Target	
		6000	
		7000	
		TVD (ft)	
		CARB CHLK: (95%) med gry - dk gry, com sl brn, hghly mtld, chky txt, dull rthy	
		Istr, bkly-sbkly, occ tbr, mod hrd-fm, arg w ~30-40% cly mtrx, infr chlk por,	
		MARL: (5%), com calc frags; fos frags.	
		TVD (ft)	
		7000	

D: 8,351' Inclination: 90°
Azimuth: 85°
VD: 6,312'
S: 1,614'

MD: 8,445' Inclination: 90°
Azimuth: 88°
TVD: 6,311'
VS: 1,707'

MD: 8,539' Inclination: 90°
Azimuth: 94°
TVD: 6,311'
VS: 1,801'

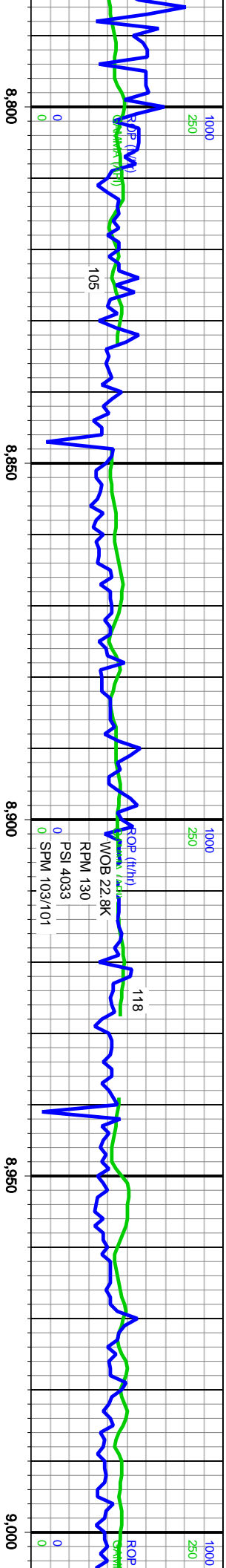
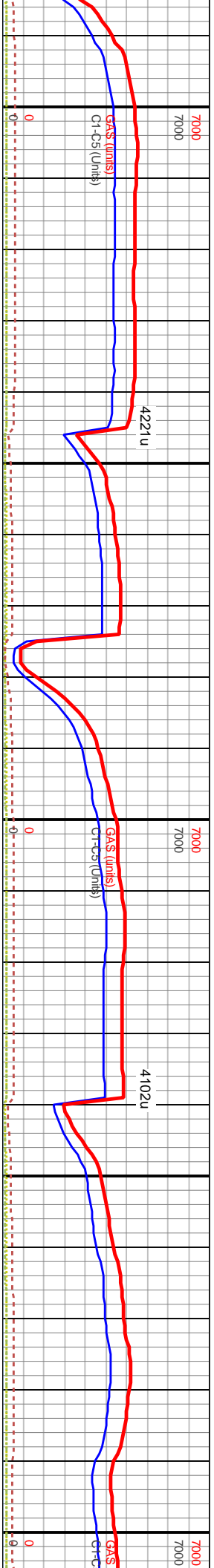
Off bottom @ 8655' MD to	MUD WT IN 9.3 VIS 45
X/O Rotating Head	



CARB CHALK: (90%) med gry - gry brwn dfk, mttld w whi mcrfc spks, chlkly txt, dll rthy lstr, blyk-rthy frac, elong-wdglik, dn-brit, pred arg, blk carb mat to, infer chlk por, MARL: (10%) med brwn-tt brwn, mod frm-frm, sbblky, rthy, occ calc incls, intrbd w med gry-blk carb mat, fossiliferous ip.

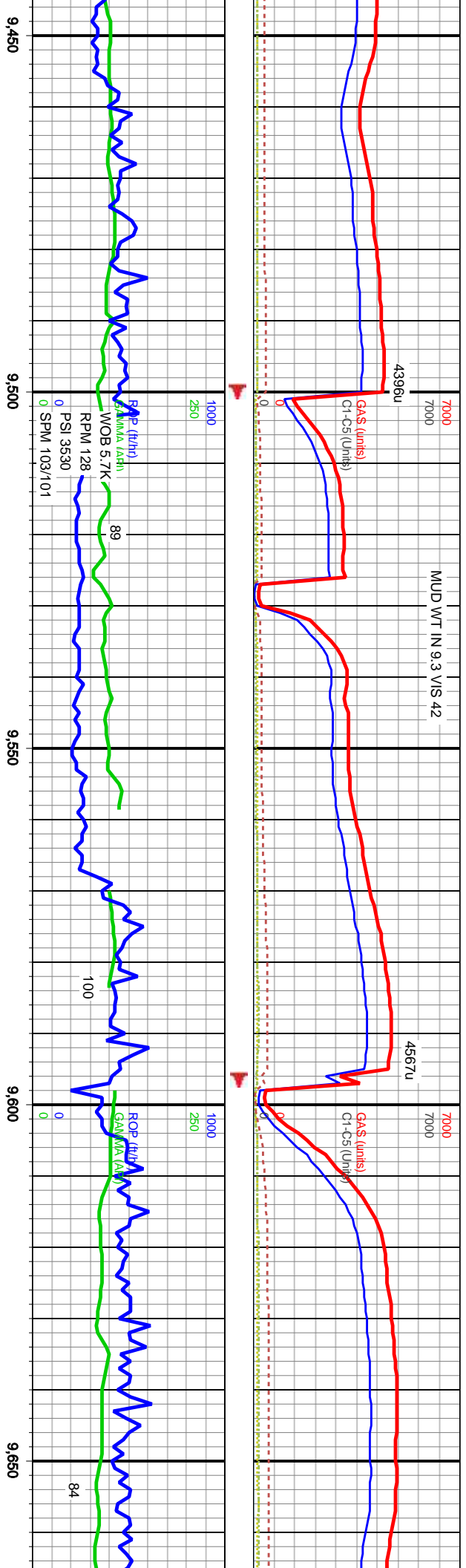
MD: 8,633'
Inclination: 90°
Azimuth: 88°
TVD: 6,311'
VS: 1,895'

MD: 8,727'
Inclination: 90°
Azimuth: 86°
TVD: 6,311'
VS: 1,988'

[illegible]

MD: 8,821'	MD: 8,915'
Inclination: 90°	Inclination: 90°
Azimuth: 85°	Azimuth: 86°
TVD: 6,311'	TVD: 6,311'
VS: 2,081'	VS: 2,174'

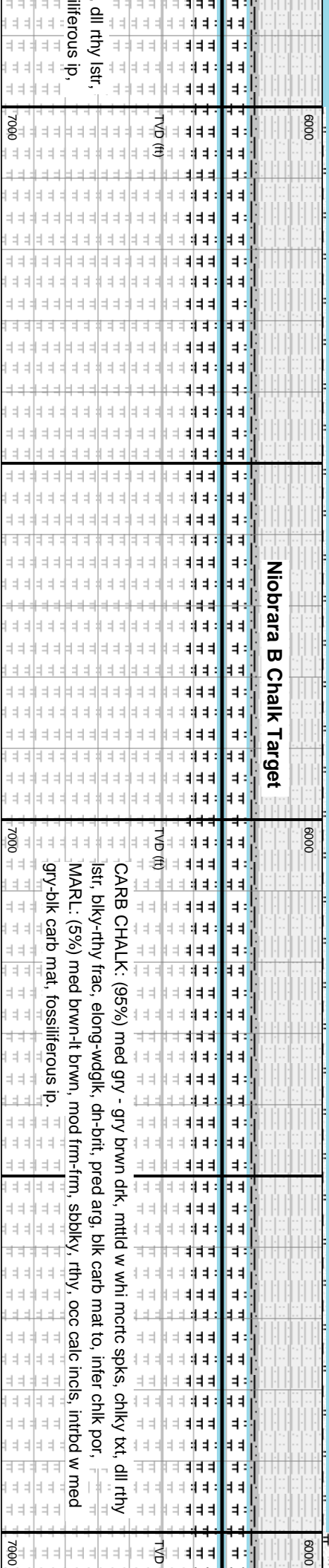
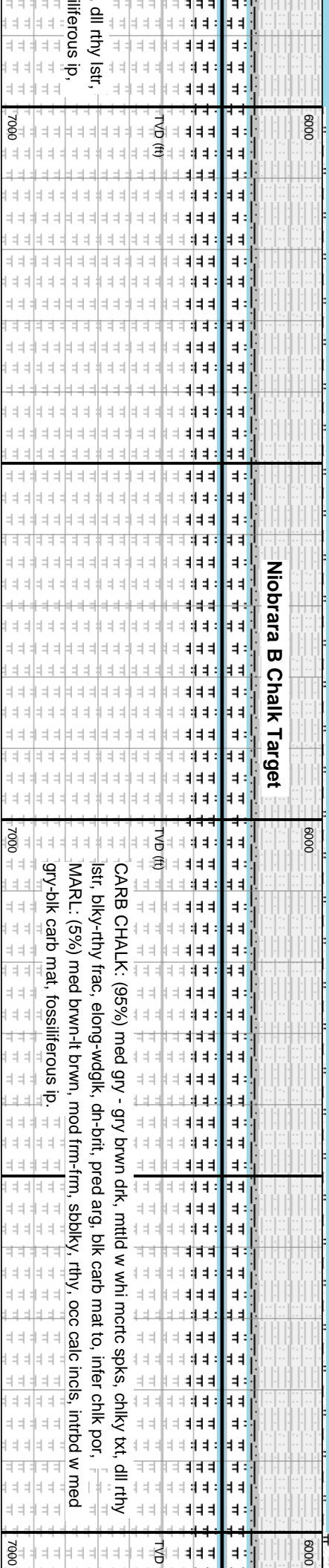
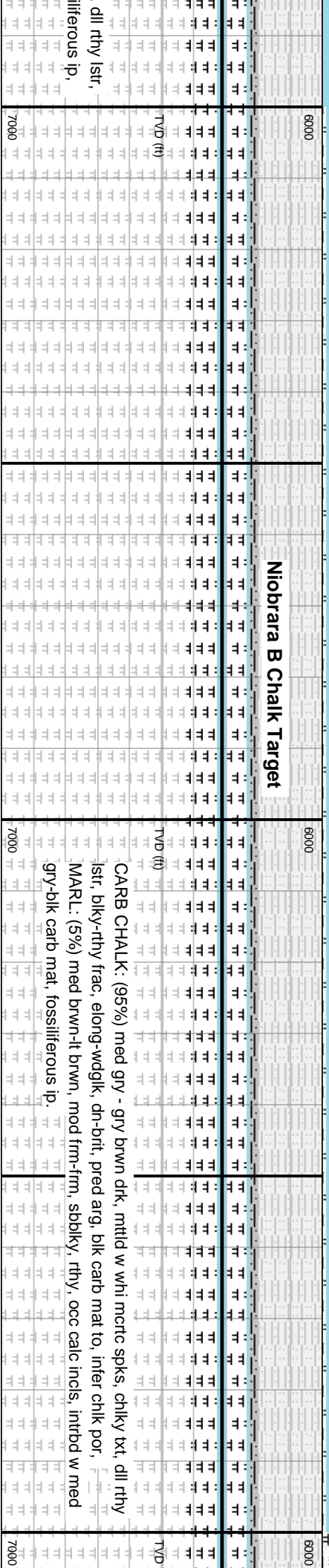
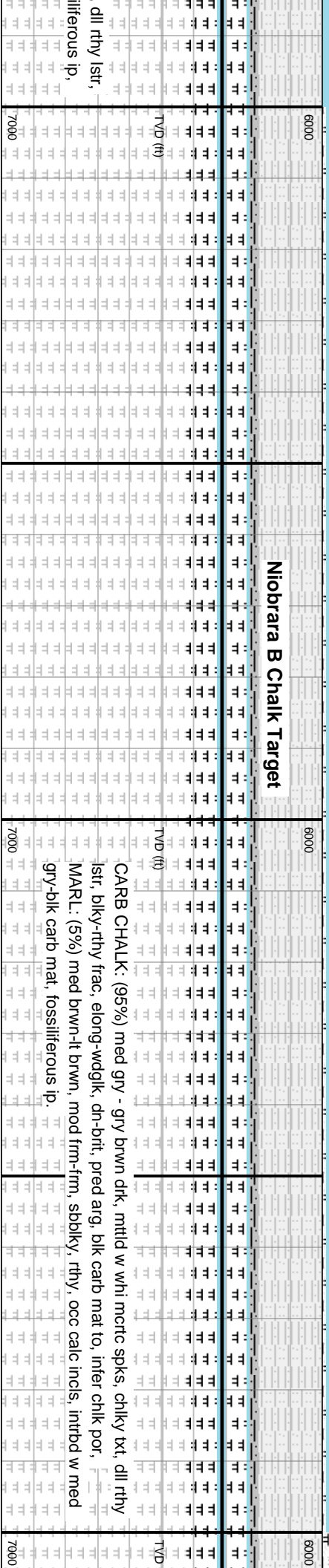
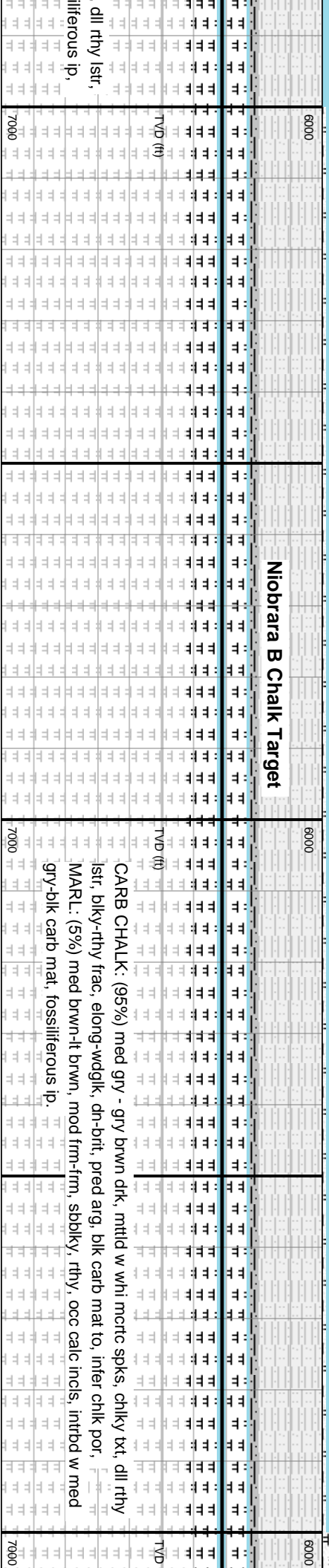
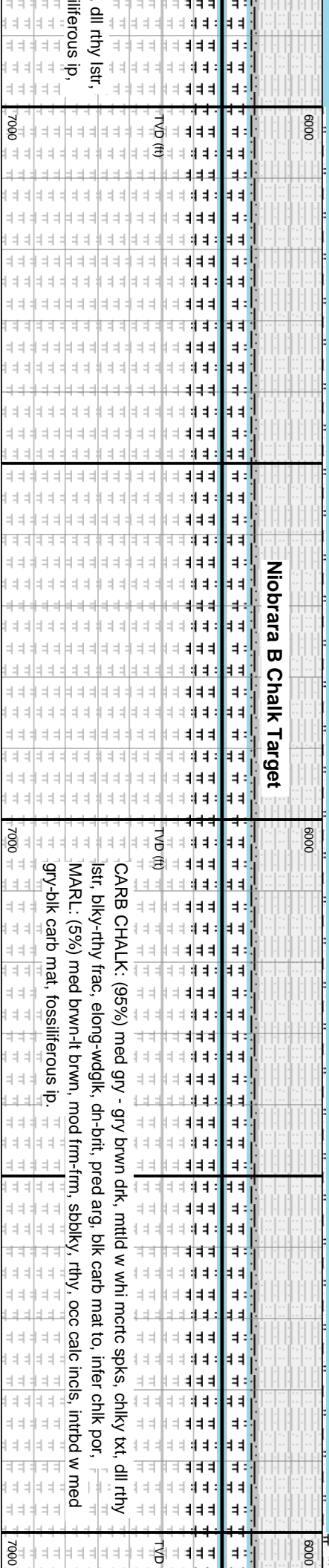
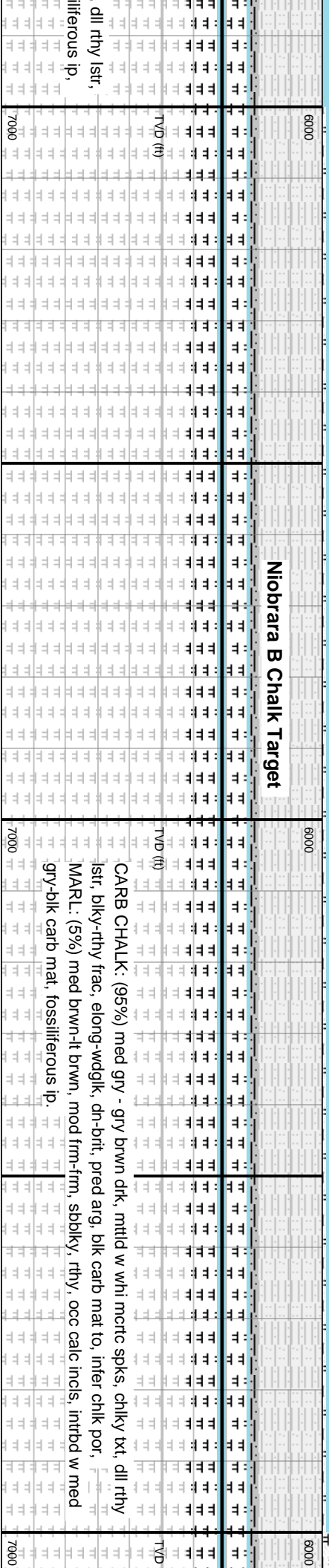
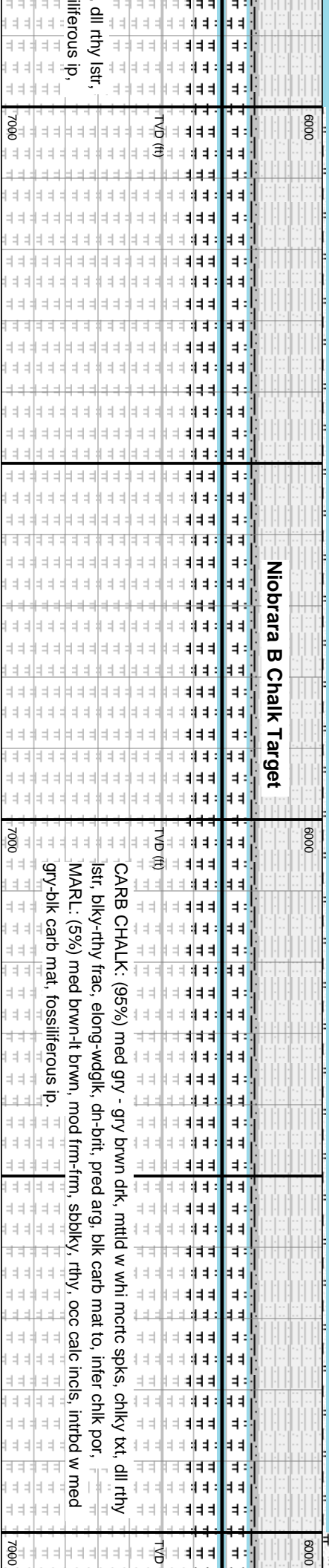
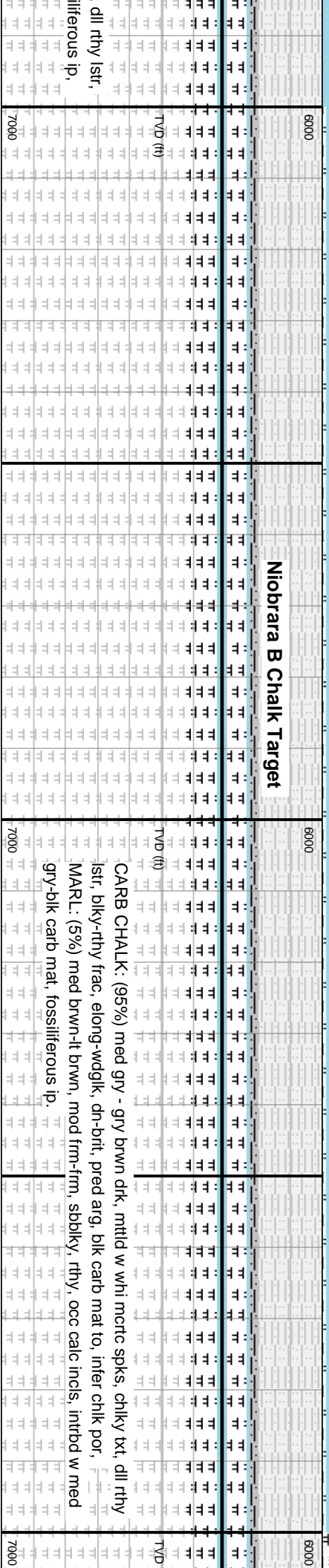
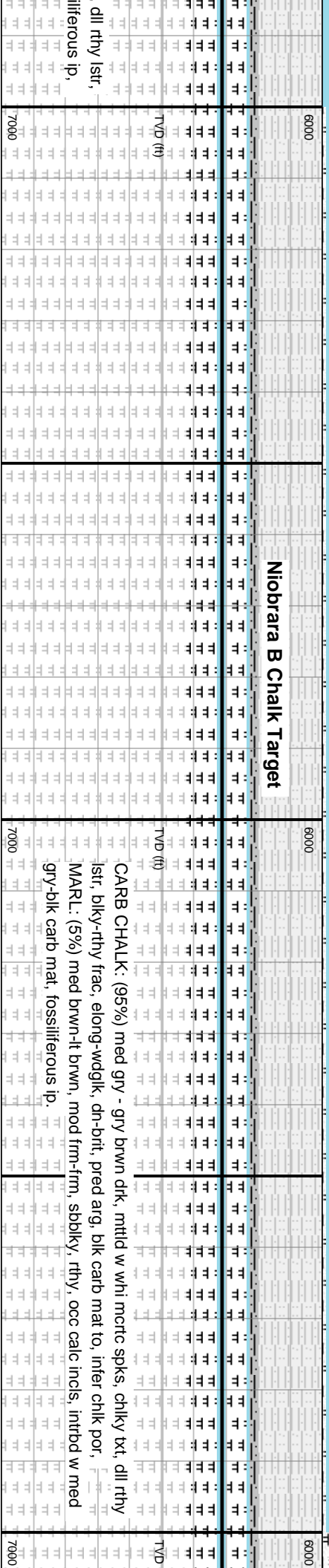
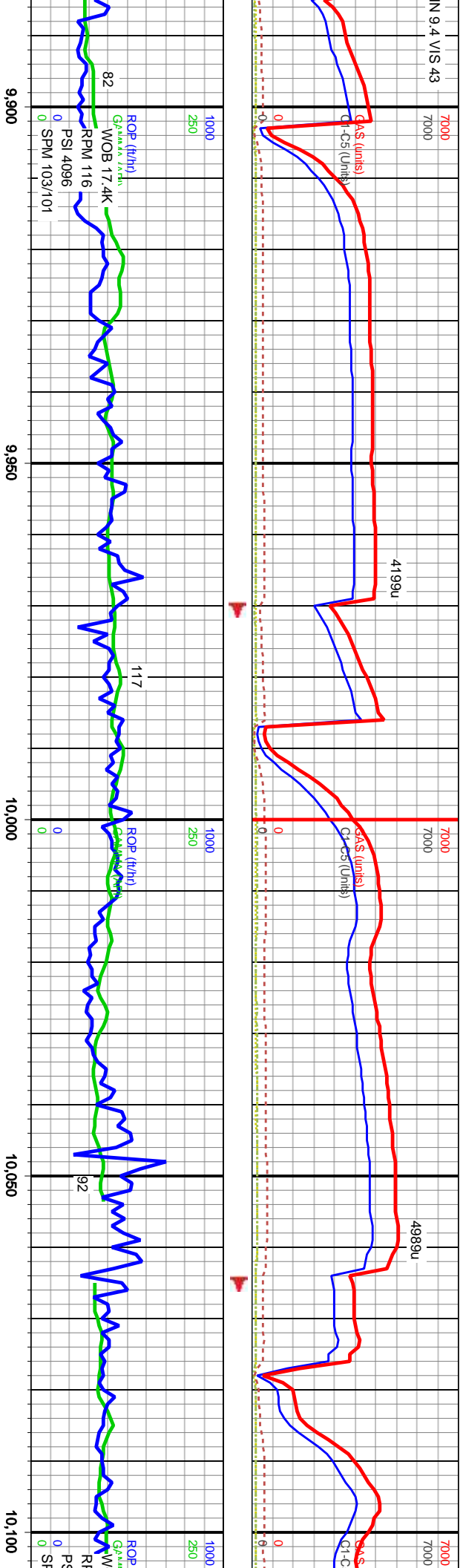
MD:
Inclit:
Azir:
TVL:
VS:

[illegible]

MD: 9,478'
Inclination: 90°
Azimuth: 89°
TVD: 6,312'
VS: 2,733'

MD: 9,572'
Inclination: 90°
Azimuth: 90°
TVD: 6,312'
VS: 2,826'

MD: 9,
Inclina
Azimut
TVD: 6
VS: 2,5



MD: 9,947'

Inclination: 90°

Azimuth: 94°

TV-D: 6.312

VS: 3,201'

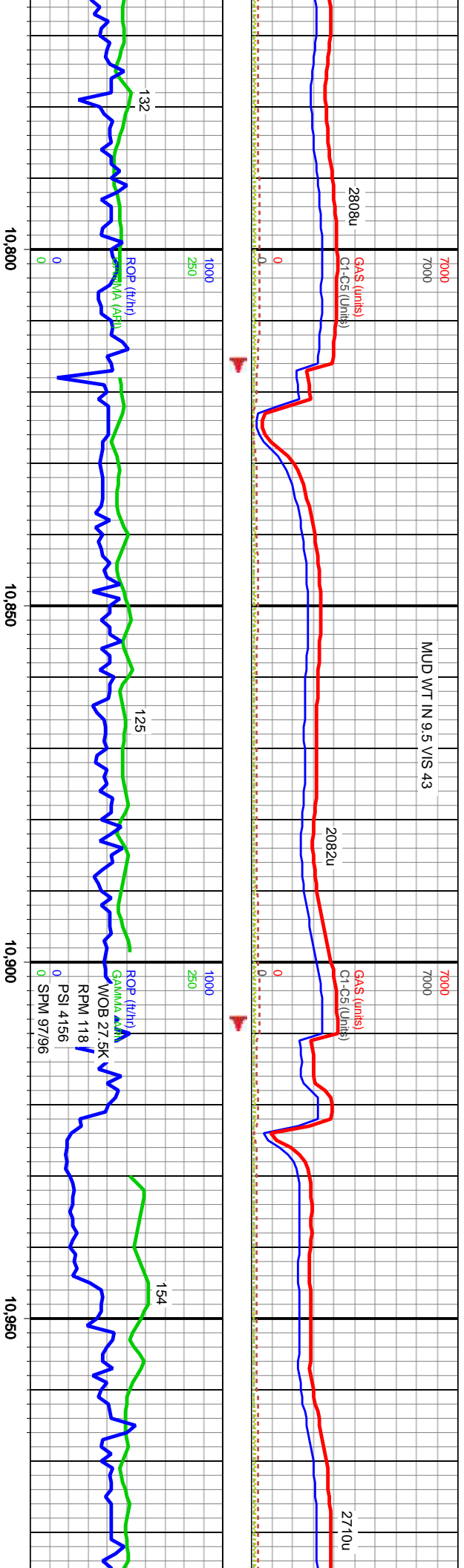
MD: 10,041'

Inclination: 90°

Azimuth: 93°

TV D: 6.312'

VS: 3.295'

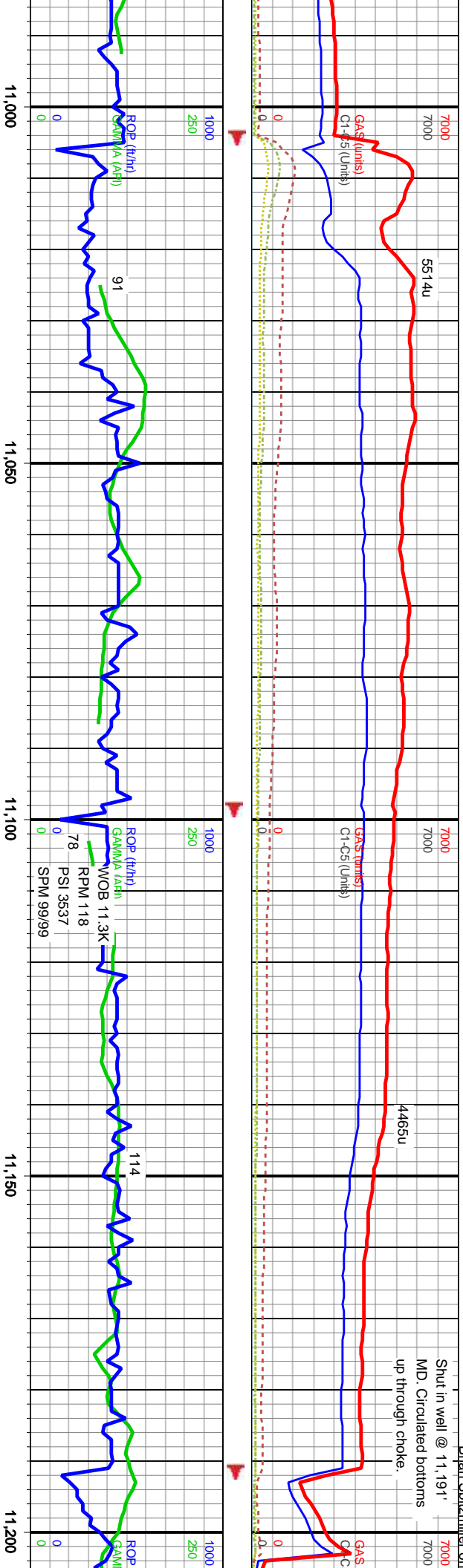
[illegible]

MD: 10,792'
Inclination: 90°
Azimuth: 87°
TVD: 6,312'
VS: 4,042'

MD: 10,886'
Inclination: 90°
Azimuth: 87°
TVD: 6,312'
VS: 4,135'

MD: 10,980'
Inclination: 9°
Azimuth: 89°
TVD: 6,312'
VS: 4,228'

Brian Spitzmiller on

[illegible]

MD: 11,074'

Inclination: 90°

Azimuth: 91°

TV D: 6,312"

VS: 4,322'

MD: 11.166

Inclination: 90°

Azimuth: 92°

TV D: 6,312'

VS: 4,414

TOT

MUD WT IN 9.8 OUT 9.5

MUD WT IN 9.7 OUT 9.8

5166u

GA-S (Units)
C1-C5 (Units)

3589u

GA-S (Units)
C1-C5 (Units)

GA-S (Units)
C1-C5 (Units)

GA-S (Units)
C1-C5 (Units)

3589u

GA-S (Units)
C1-C5 (Units)

GA-S (Units)
C1-C5 (Units)

GA-S (Units)
C1-C5 (Units)

3589u

GA-S (Units)
C1-C5 (Units)

GA-S (Units)
C1-C5 (Units)

11,250

11,300

11,350

11,400



NEW TARGET: 6307' TVD

MARL: (60%) dk brn-lt blk, mod frm-fm, sbbly, rthy, occ calc incls, intrbd w med
ry-blk carb mat, occ sl stly ip, CARB CHALK: (40%) med gry - gry brwn drk, mtlld w
hi mrtc spks, chly txt, dll rthy lstr, blk-ry rthy frac, elong-wdglik, dn-bit, pred arg, blk
carb mat to, infer chlk por, com calc frag

MARL: (70%) dk t
gry-blk carb mat, r
whi mrtc spks, ch
carb mat to, infer

MD: 11,260'

Inclination: 90°

Azimuth: 92°

TVD: 6,313'

VS: 4,508'

MD: 11,354'

Inclination: 90°

Azimuth: 92°

TVD: 6,313'

VS: 4,602'

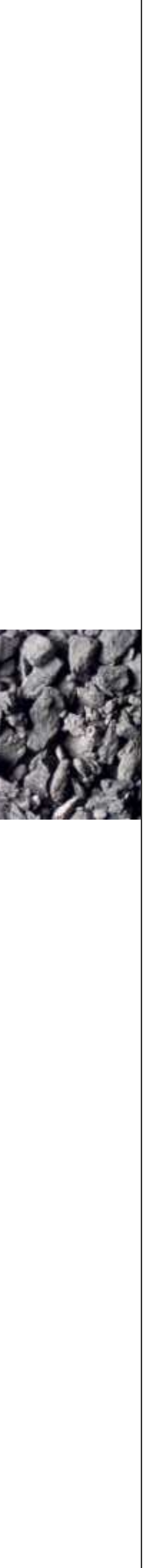
ff bottom @ 12090 MD
work on Mud Pump #2

MUD WT IN 9.7 VIS 43

7000 7000

IMMED DRILLING @ 07:53

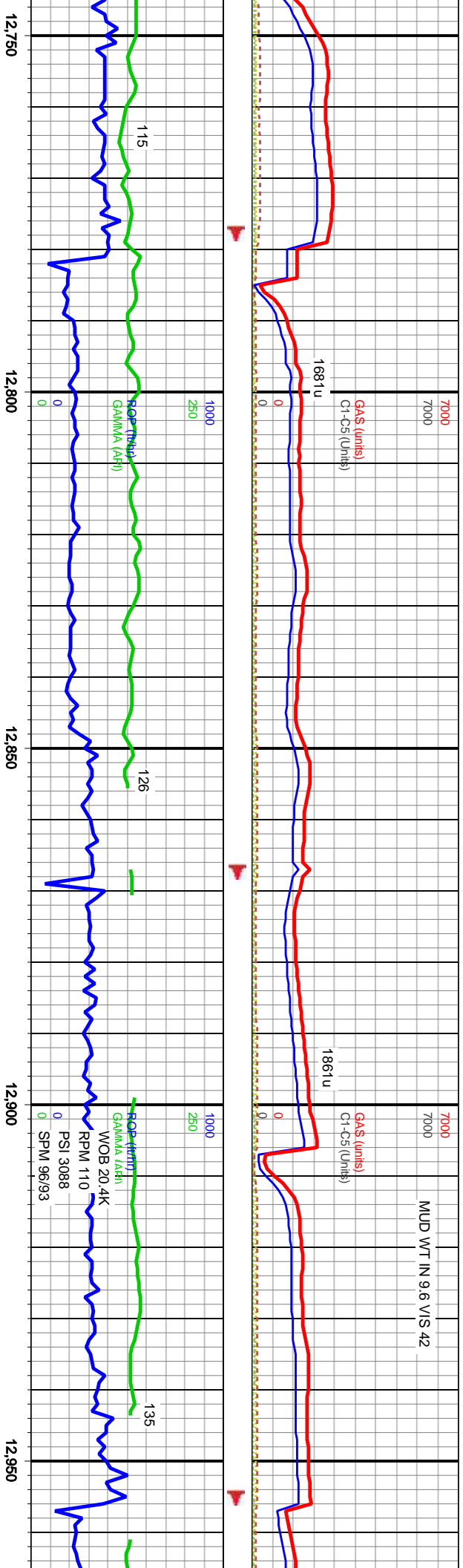
GA ₅ (units)	GA ₅ (units)
C1-C5 (Units)	C1-C5 (Units)
2764u	287.8u
	3135u
	C1-C

[illegible]

MD: 12,106'	MD: 12,200'	MD: 12,294'
Inclination: 90°	Inclination: 90°	Inclination: 90°
Azimuth: 87°	Azimuth: 87°	Azimuth: 87°
TVD: 6,307'	TVD: 6,307'	TVD: 6,307'
VS: 5,350'	VS: 5,443'	VS: 5,536'

MD: 12,106'	MD: 12,200'	MD: 12,294'
Inclination: 90°	Inclination: 90°	Inclination: 90°
Azimuth: 87°	Azimuth: 87°	Azimuth: 87°
TVD: 6,307'	TVD: 6,307'	TVD: 6,307'
VS: 5,350'	VS: 5,443'	VS: 5,536'

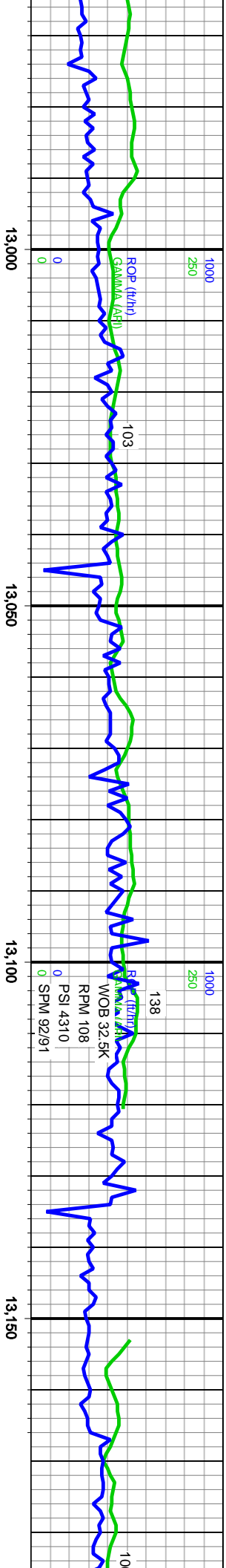
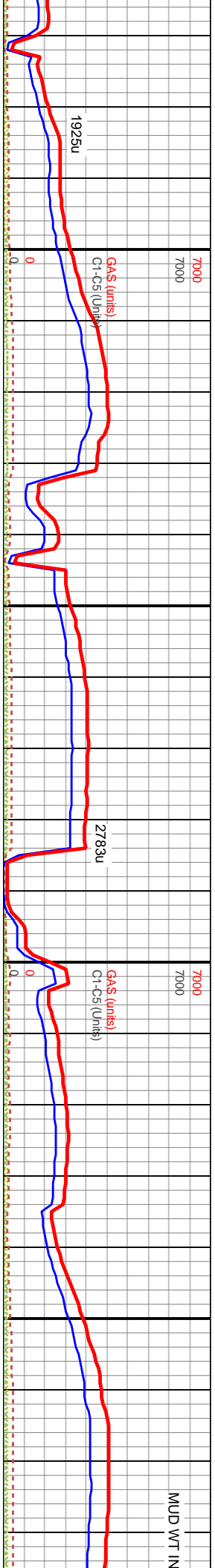
MD: 12,106'	MD: 12,200'	MD: 12,294'
Inclination: 90°	Inclination: 90°	Inclination: 90°
Azimuth: 87°	Azimuth: 87°	Azimuth: 87°
TVD: 6,307'	TVD: 6,307'	TVD: 6,307'
VS: 5,350'	VS: 5,443'	VS: 5,536'

[illegible]

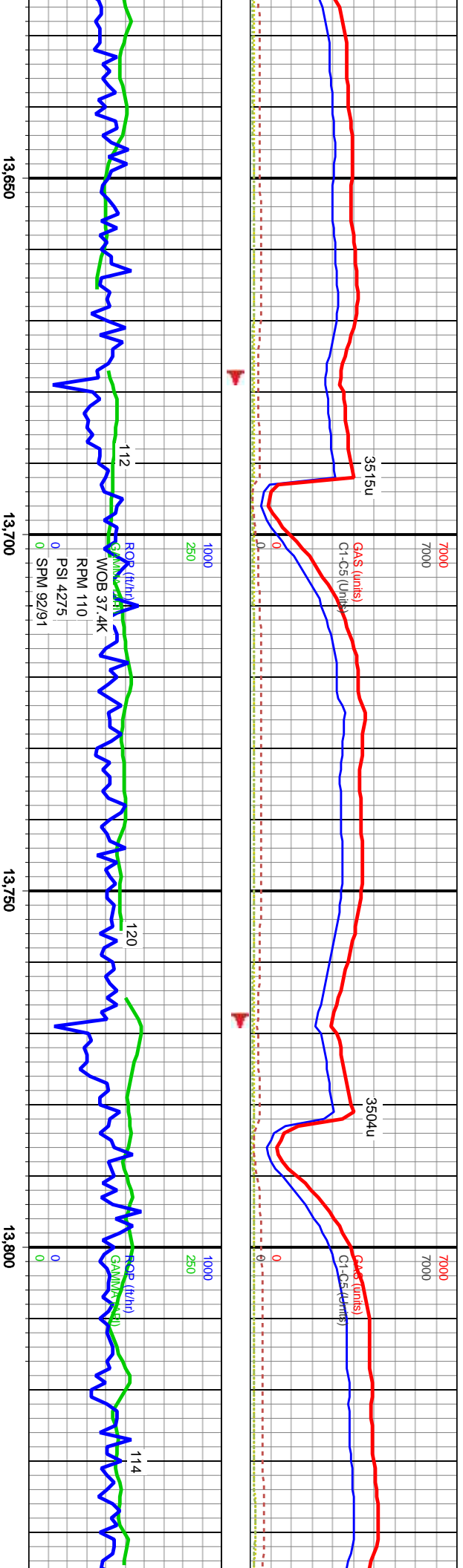
MD: 12,755'
Inclination: 90°
Azimuth: 96°
TVD: 6,308'
VS: 5,995'

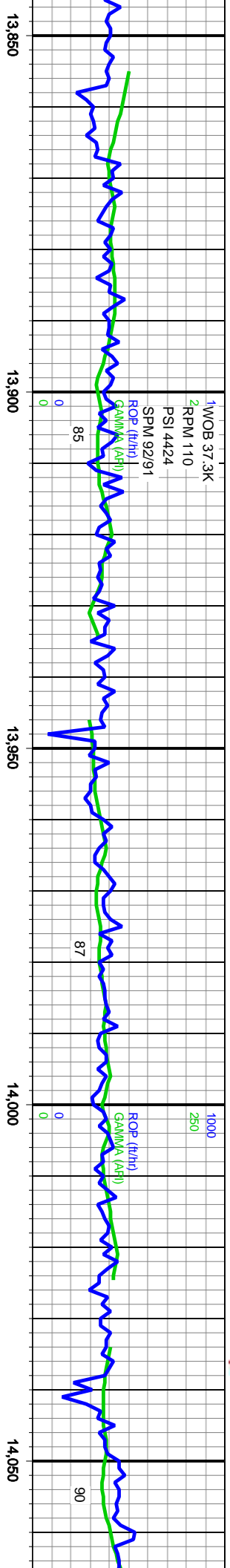
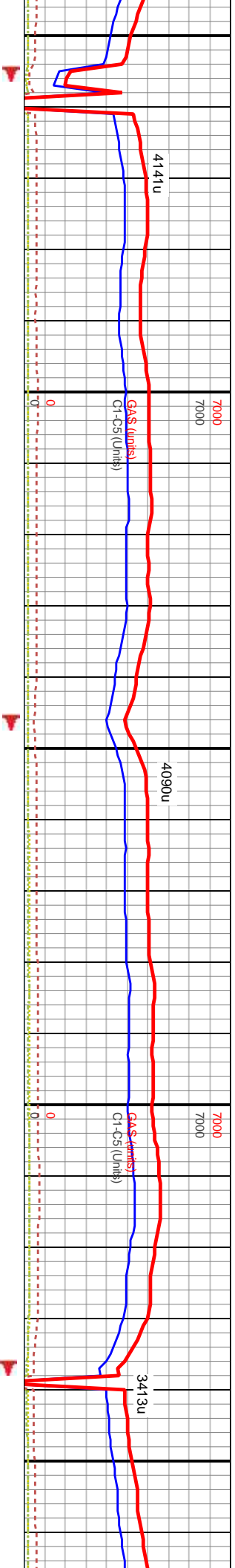
MD: 12,842'
Inclination: 90°
Azimuth: 93°
TVD: 6,308'
VS: 6,082'

MD: 12,931'
Inclination: 91°
Azimuth: 90°
TVD: 6,307'
VS: 6,171'

[illegible]

MD: 13,019'	MD: 13,108'
Inclination: 91°	Inclination: 91°
Azimuth: 87°	Azimuth: 85°
TVD: 6,305'	TVD: 6,304'
VS: 6,259'	VS: 6,347'

[illegible]



	6000	Niobrara B Chalk Target	6000
TVD (ft)			
CARB CHALK: (90%) med gry - gry brwn dk, mttld w whi mcric spks, cky txt, dll rthy lsrt, blk-y-rthy frac, elong-wdgik, dn-brt, pred arg, blk carb mat to, infer chlk por, MARL: (10%) brwn-lt brwn, mod frm-frn, sbblky, rthy, occ calc incis, intrbd w med gry-blk carb mat, fossiliferous ip, tr bent			
7000			7000

MD: 13,922'
Inclination: 90°
Azimuth: 89°
TVD: 6,301'
VS: 7,156'

MD: 14,012'
Inclination: 90°
Azimuth: 89°
TVD: 6,301'
VS: 7,246'

MD: 14,055'
Inclination: 90°
Azimuth: 89°
TVD: 6,301'
VS: 7,289'

