

Scale: 5" / 100'  
Measured Depth Log

**Well Name** Antelope T34-19-18MRLNB

**Location** SESE Sec.19 T5N R62W

**State** Colorado

**Country** United States

**API Number** 05-123-48259-000C

**Geographic Region** D.J. Basin

**Spud Date** 3/5/2019

**Surface Coordinates** SESE Sec.19 T5N R62W 225' FSL 1228' FEL

**Bottom Hole Coordinates** SESE Sec.19 T5N R62W 250' FSL 1565' FEL

**County** Weld

**Rig Number** Atika 19

**AFE #** 18198

**Field** Wattenberg

**Drilling Completed** 4/3/2019

**Ground Elevation** 4,658

**K.B. Elevation** 4,675

**Logged Interval** 6,000 To 11,616

**Total Depth** 11,616

**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** Nick Bauer

**Company** Bonanza Creek Energy

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

## Other

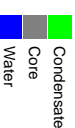
**Dan Kabala** Wellsite Geologist

**Ryan Scribner** Wellsite Geologist

## Color Coding



Oil  
Noise  
Error

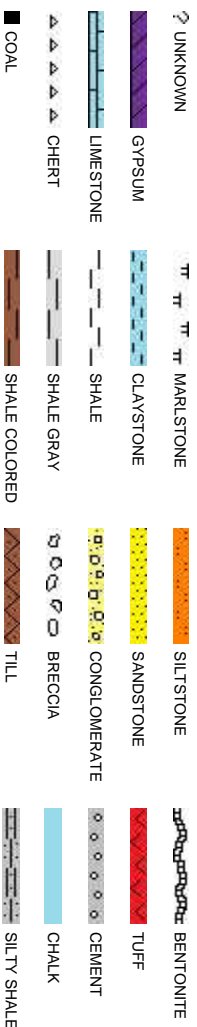


Condensate  
Core  
Water

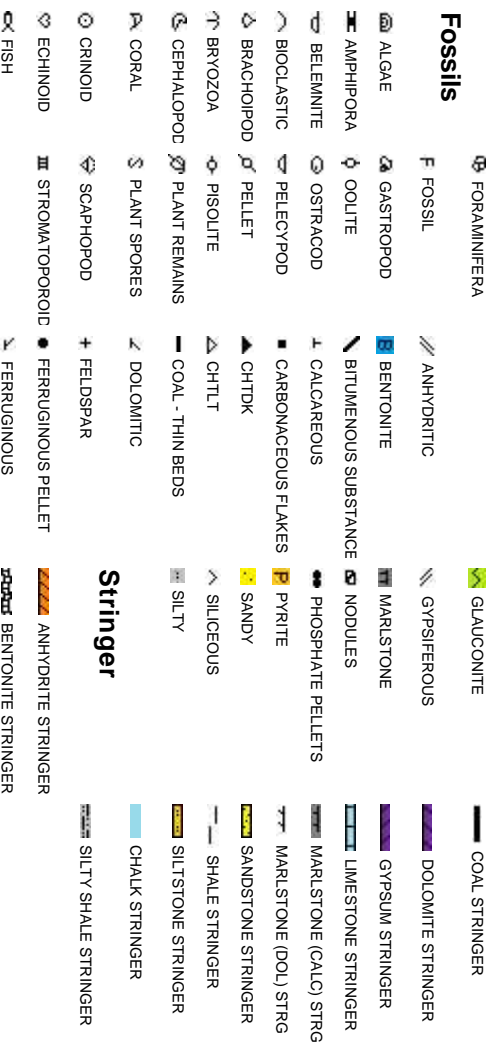


Gas  
Pre  
Seal

## Rock Types



## Accessories



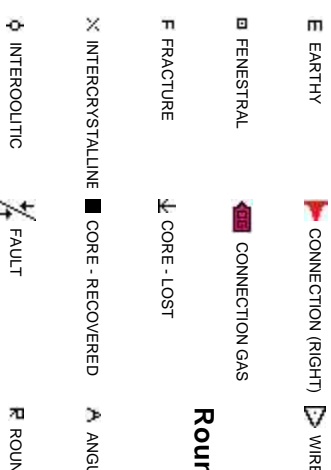
## Minerals

### Stringer

## Other S



### Porosity



# Symbols

FORMATION TOP    **B** SUBANG    **P** PACKSTONE

SHOW    **F** SUBRND    **M** WAKESTONE

WALL CORE (LEFT)

## Textures    Sorting

WALL CORE (RIGHT)

**B** BOUNDSTONE    **M** MODERATE

**C** CHALKY    **P** POOR

**C** CRYPTOXLN    **W** WELL

ELINE TESTED - LEFT    **E** EARTHY

ELINE TESTED - RT    **F** FINELYXLN

## Cut

**E** GRAINSTONE    **No Cut**

**L** LITHOGRAPHIC    **Fair Cut**

**M** MICROXLN    **Good Cut**

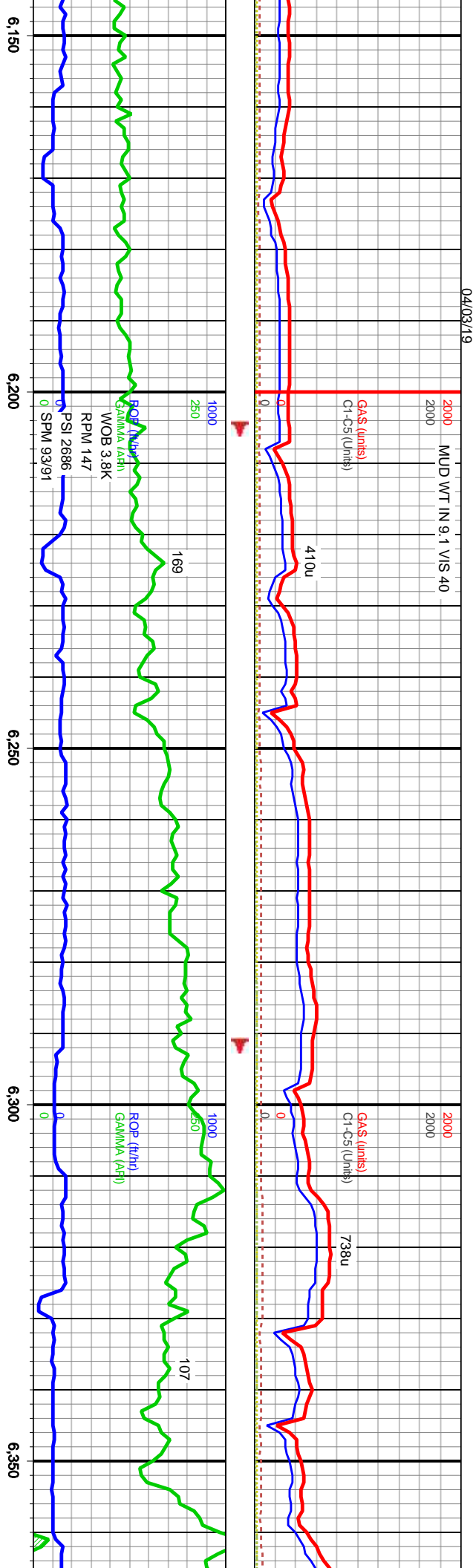
**M** MUDSTONE    **Blank**

## Grading

CLAR

DEDED



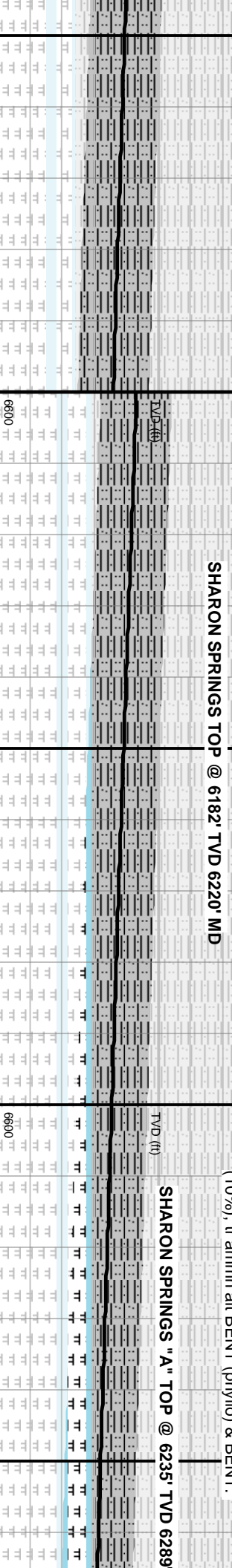


ply, sl carb, abnt carb frag, sl calc, silty, vf gr sdy silty lams, filky-chpy, rthy lstr feel, fis, frm, mrlly w



SLTY SH: (70%) gry-lt gry ip, ply-sb ply, sl carb, abnt carb frag, sl calc, silty, vf gr sdy locly, clyey w cly lam dislv H2O, thn silty lams, filky-chpy, rthy lstr feel, fis, frm, mrlly w blk carb mat to ip, SLTY SS: (10%), CARB SH: (20%).

**SHARON SPRINGS TOP @ 6182' TVD 6220' MD**



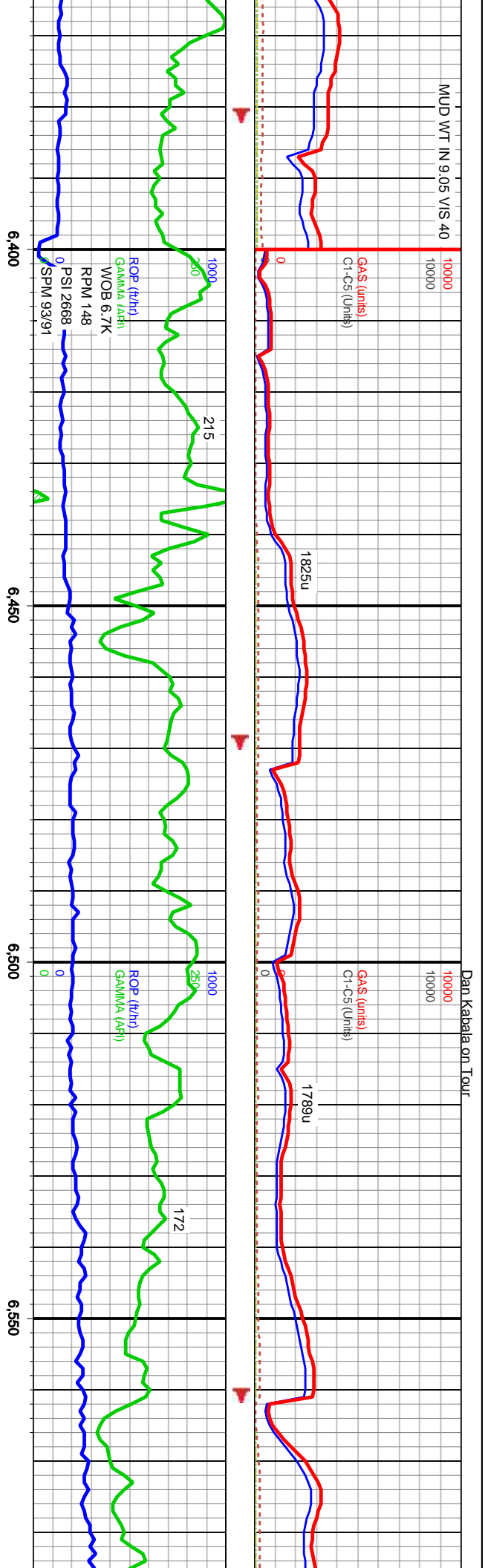
CARB SH: (40%): med drk gry-gryish brwn, ply-sb p carb, v clyey, HCL sensi, thnly lam sils, sbthy-sbwwxy sft-vfrm, tr silty snnds, abn blk carb mat to (SH), SLTY (10%), tr ammn alt BENT (phyllite) & BENT.

**SHARON SPRINGS "A" TOP @ 6235' TVD 6289 MD**

MD: 6,181'  
Inclination: 33°  
Azimuth: 341°  
TVD: 6,152'  
VS: -92'

MD: 6,268'  
Inclination: 41°  
Azimuth: 349°  
TVD: 6,221'  
VS: -41'

MD: 6,357'  
Inclination: 49°  
Azimuth: 2°  
TVD: 6,284'  
VS: 22'



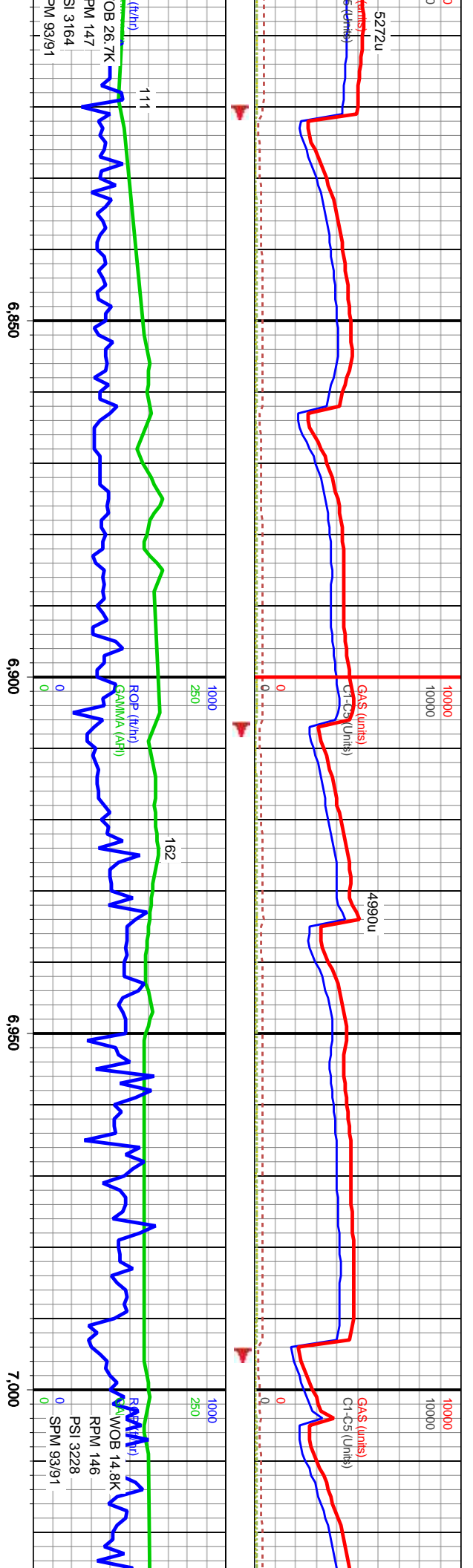
6600	MD	SHARON SPRINGS "B" TOP @ 6279' TVD 6351' MD	6600	MD	NIOBRARA "A" CHALK @ 6328' TVD 6435' MD	6600	MD	NIOBRARA "A" MARL @ 6338' TVD 6455' MD	6600	MD	NIOBRARA "B" CHALK @ 6584' TVD
		hly, shrip/iggd ctngs, hly , grtly-grisy ip, sl calc, sl SH: (50%), SLTY SS:			brttl, sbply, lent chky lns, no vis perm or por, cmmn blk carb mat (SH) to, NSFOC, OBM contm, CARB CHLK: (25%) vry tr alt BENT (phyll) w pyr nods.			dns crmbly ten, v carb, mic xin sug txt, frm, blk carb mat to, est 20-30% micrite, MARL: (20%), ARG CARB CHLK: (20%), abn ALT BENT (phyll) clvs) & BENT.			

MD: 6,445'  
Inclination: 60°  
Azimuth: 8°  
TVD: 6,334'  
VS: 94'

MD: 6,534'  
Inclination: 71°  
Azimuth: 5°  
TVD: 6,370'  
VS: 174'

Dan Kabala on Tour





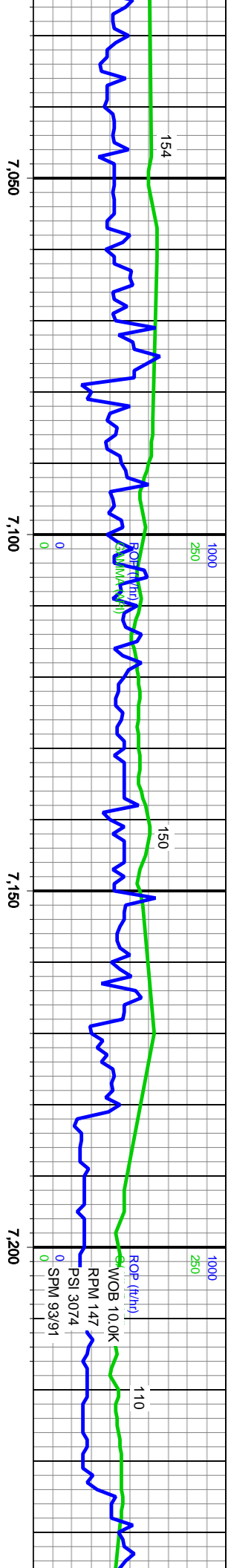
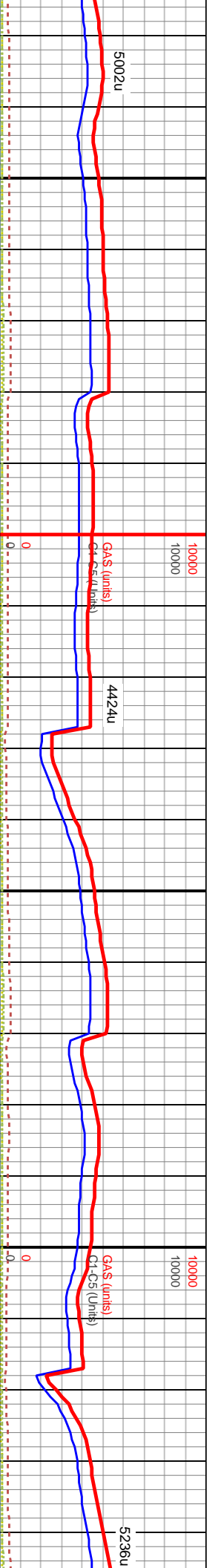
Depth (ft)	Gas (units)	C1-C5 (units)	ROP (ft/hr)	SAMMKA (API)	SPM (93/91)
5272u	~10000	~10000	111	~1000	~0
4990u	~10000	~10000	162	~1000	~0
7,000	~10000	~10000	~1000	~1000	~0

ARG CARB CHLK (80%): mtld drk-med gry, lt brwn gry lp, chlxky txt, dll rthy lstr, blkly-sbchnky, mod hrd frm, arg w ~ 20-30% cly mtrx, infer chlk por, blk carb mat to (SH), MRLSTN (20%): med -dkk gry brwn-brwn, fn smth - sb fss txt, dll lstr, blkly-pity, frm, tr lse whi chlk, calc w/est 30% micrite, mtld w ltr mic sps, CARB CHLK (tr).

**Niobrara B Chalk Target**

MD: 6,881'  
 Inclination: 90°  
 Azimuth: 355°  
 TVD: 6,402'  
 VS: 517'

MD: 6,969'  
 Inclination: 90°  
 Azimuth: 354°  
 TVD: 6,401'  
 VS: 605'



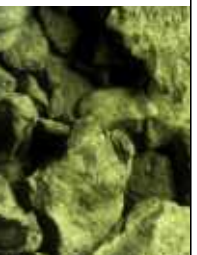
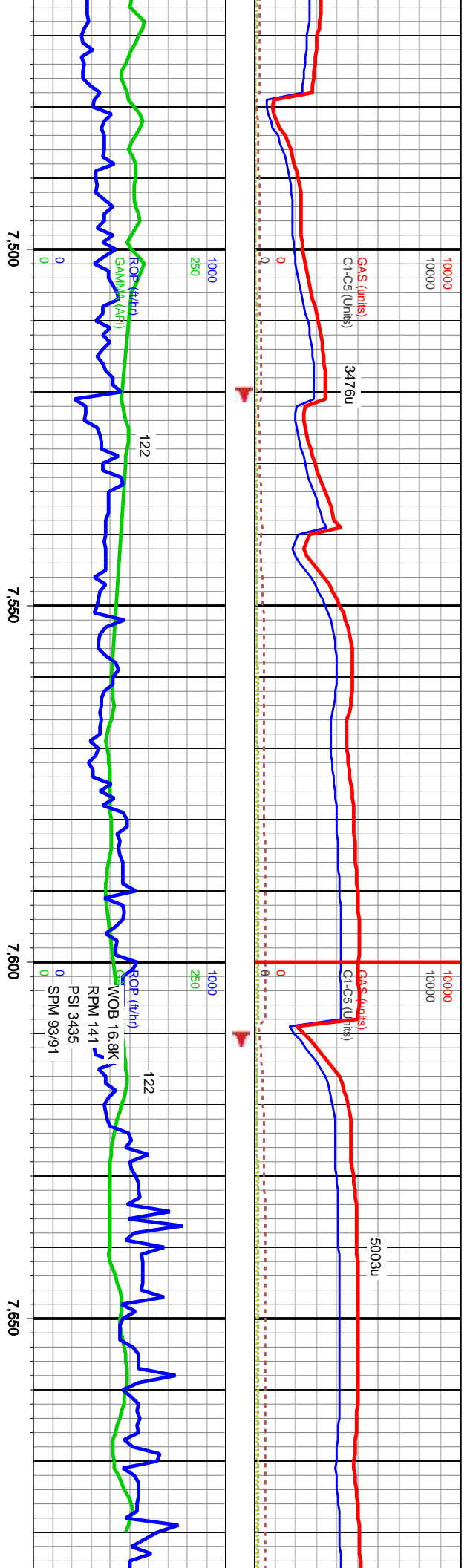
Depth (ft)	Stratigraphic Unit	Description
6600	5600	MRLY CHLK: (70%) It gry brwn-l-med gry ip, sb ply-sb blk, dll rhy lst, dns crmbly ten, v carb, mic xin sug txt, frm, blk carb mat to, est 30-40% micrite, MARL: (20%), CARB CHLK: (10%), abn ALT BENT (phyllite clys) & BENT.
6600	5600	MRLY CHLK: (70%) It gry brwn-l-med gry ip, sb ply-sb blk, dll rhy lst, dns crmbly ten, v carb, mic xin sug txt, frm, blk carb mat to, est 30-40% micrite, MARL: (20%), CARB CHLK: (10%), abn ALT BENT (phyllite clys) & BENT.
6600	5600	MRLY CHLK: (70%) It gry brwn-l-med gry ip, sb ply-sb blk, dll rhy lst, dns crmbly ten, v carb, mic xin sug txt, frm, blk carb mat to, est 30-40% micrite, MARL: (20%), CARB CHLK: (10%), abn ALT BENT (phyllite clys) & BENT.

MD: 7,058'  
 Inclination: 90°  
 Azimuth: 352°  
 TVD: 6,401'  
 VS: 694'

MD: 7,145'  
 Inclination: 90°  
 Azimuth: 352°  
 TVD: 6,401'  
 VS: 780'

MD: 7,234'  
 Inclination: 90°  
 Azimuth: 352°  
 TVD: 6,401'  
 VS: 869'





ARG CARB CHLK (50%): mtld drk-med grn, lt brwn gry ip, chky txt, dll rhy lstr, blk-sschky, mod hd-fm, arg w ~ 20-30% cly mtr, infer chlk por, blk carb mat to (SH), MRLSTN (25%): med -dk gry brwn-brwn, fn smth - sb fss txt, dll lstr, blk-ply, frm, tr lse whi chlk, calc w/est 30% micrite, mtld w ltr mic sps, CARB CHLK (25%).

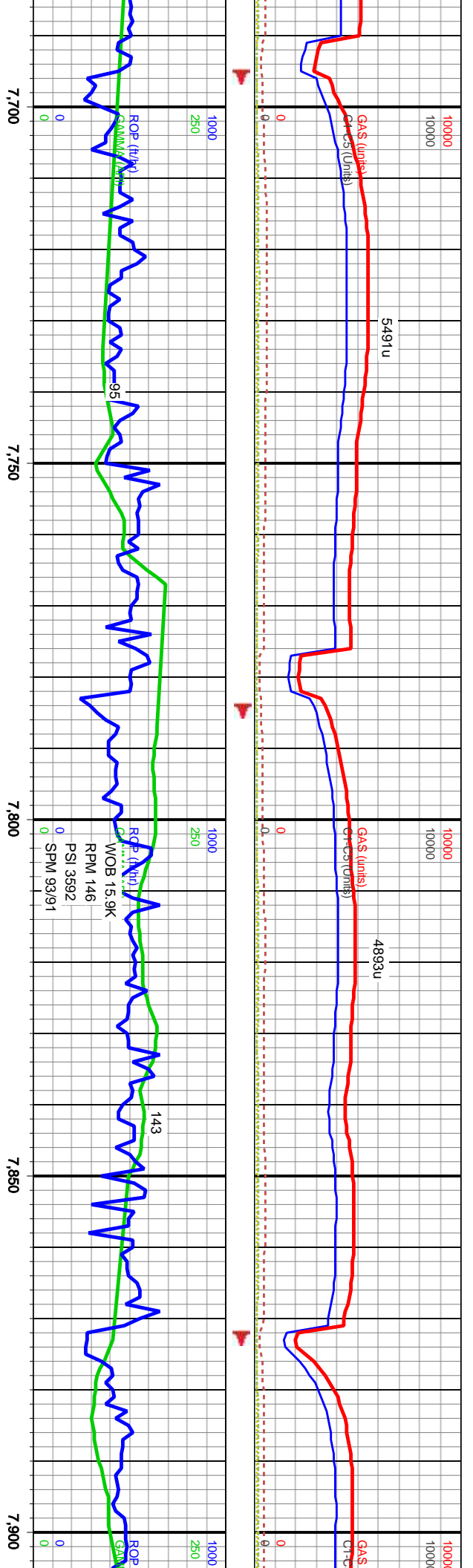
**Niobrara B Chalk Target**

Depth (ft)	ROP (ft/hr)	GAMMA (API)	C1-C5 (Units)	GDS (units)
7500	122	122	3476u	3476u
7550	122	122		
7600	122	122	5003u	5003u
7650	122	122		

MD: 7,496'  
 Inclination: 90°  
 Azimuth: 359°  
 TVD: 6,400'  
 VS: 1,131'

MD: 7,583'  
 Inclination: 90°  
 Azimuth: 1°  
 TVD: 6,400'  
 VS: 1,218'

MD: 7,671'  
 Inclination: 90°  
 Azimuth: 1°  
 TVD: 6,400'  
 VS: 1,305'

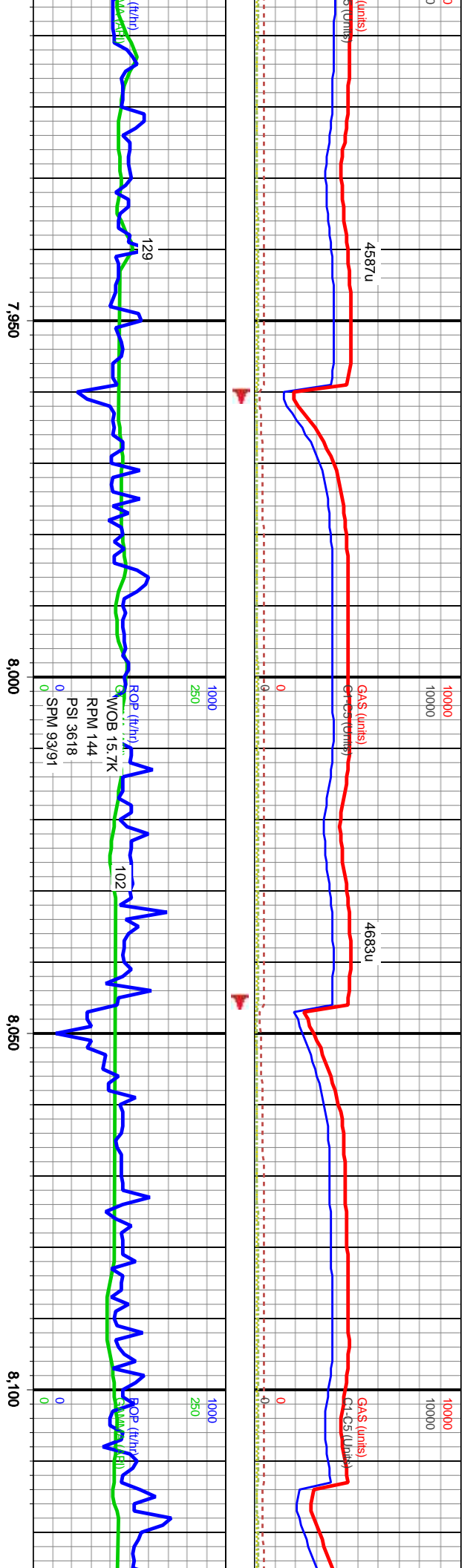


Depth (ft)	Gas (units)	Cl- (units)	ROP (ft/hr)	Cl- (units)
7,700	~1000	~1000	~95	~1000
7,750	~1000	~1000	~143	~1000
7,800	~1000	~1000	~143	~1000
7,850	~1000	~1000	~143	~1000
7,900	~1000	~1000	~143	~1000

CARB CHALK: (75%) lt gry-gry-whi, mttld w whi merte spks ip, chky txt, dill rthy lst, blk-y-rthy frac, elong-wdglk, dn-brit, pred cin, infer chlk por, MARL: (25%), abn ls FOSS frag.

MD: 7,759'  
 Inclination: 90°  
 Azimuth: 2°  
 TVD: 6,400'  
 VS: 1,393'

MD: 7,847'  
 Inclination: 90°  
 Azimuth: 1°  
 TVD: 6,400'  
 VS: 1,481'



Depth (ft)	ROP (ft/hr)	WOB (lb)	RPM	PSI	SPM	Gas (units)	G.I. (lb/ft³)
7,950	129	15.7K	144	3618	93/91	4587u	0
8,000	102	15.7K	144	3618	93/91	4683u	0
8,050	60	15.7K	144	3618	93/91	4683u	0
8,100	60	15.7K	144	3618	93/91	4683u	0

**Niobrara B Chalk Target**

CARB CHALK: (80%) lt gry-gry-whi, mttld w whi merte spks ip, chky txt, dll rthy lstr, blk-y-rthy frac, elong-wdglk, dn-brit, pred cin, infer chlk por, MARL: (20%), abn ls FOSS frag.

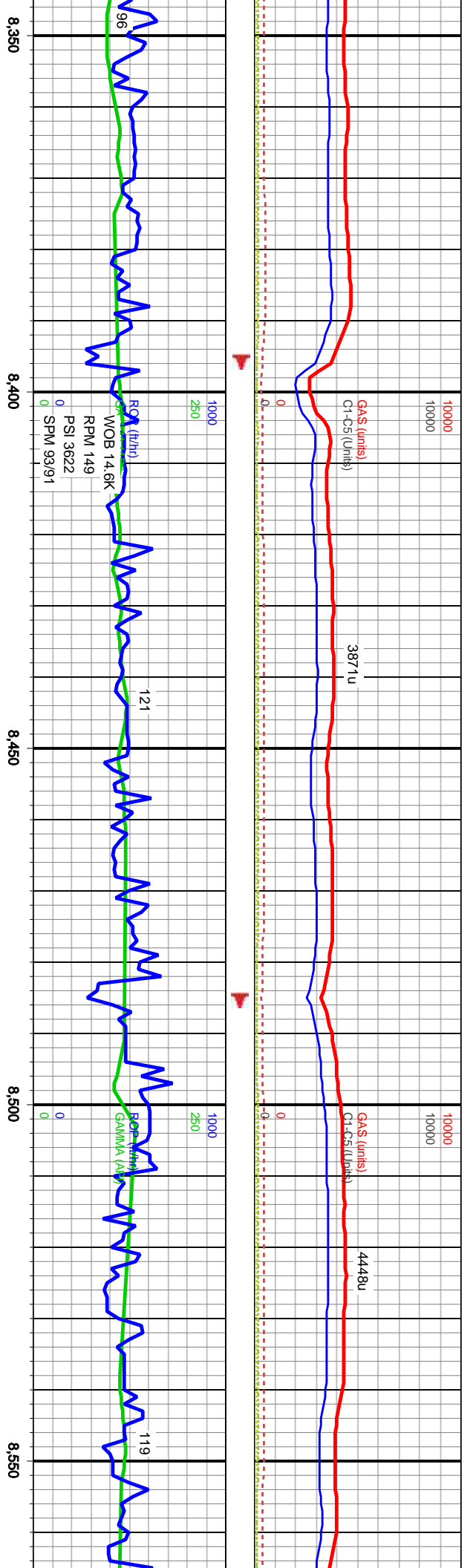
CARB CHALK: (10%) rthy lstr, blk-y-rthy lstr, abn ls F

MD: 7,934'  
Inclination: 90°  
Azimuth: 0°  
TVD: 6,400'  
VS: 1,568'

MD: 8,021'  
Inclination: 90°  
Azimuth: 359°  
TVD: 6,400'  
VS: 1,655'

MD: 8,107'  
Inclination: 90°  
Azimuth: 359°  
TVD: 6,400'  
VS: 1,740'





k-med gry, lt brwn gry ip, chky txt, dill rthy lstr.  
 ~20-30% cly mtrx, infer chlk por, blk carb  
 -dkk gry brwn-brwn, fn smth - sb fiss txt, dill  
 alic w/est 30% micrite, mttld w ltr mic sps,

Depth (ft)	Log Data	Stratigraphic Unit	Notes
8350 - 8400	Log Data	Target	Target
8400 - 8450	Log Data	Target	Target
8450 - 8500	Log Data	Target	Target
8500 - 8550	Log Data	Target	Target

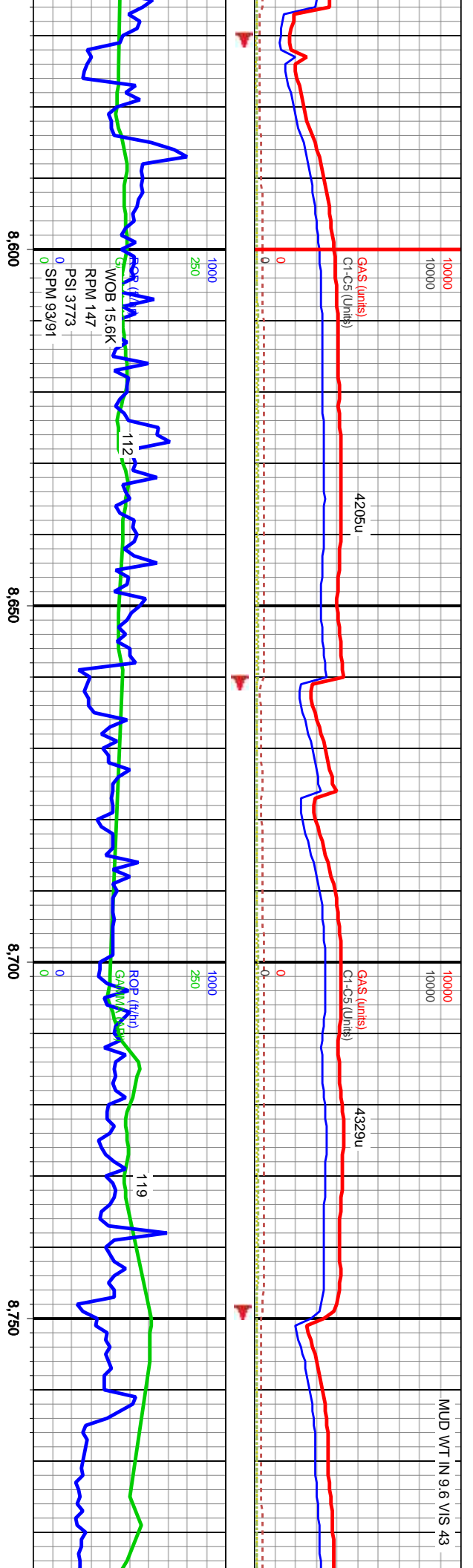
MD: 8,371'  
 Inclination: 90°  
 Azimuth: 359°  
 TVD: 6,400'  
 VS: 2,004'

MD: 8,459'  
 Inclination: 90°  
 Azimuth: 358°  
 TVD: 6,400'  
 VS: 2,092'

MD: 8,546'  
 Inclination: 90°  
 Azimuth: 355°  
 TVD: 6,400'  
 VS: 2,179'

**Niobrara B Chalk Target**

ARG CARB CHLK (90%): mttld dk-med gry, lt brwn g  
 bky-sbchky, mod hrd frm, arg w ~ 20-30% cly mtrx,  
 mat to (SH), MRLSTN (10%): med -dkk gry brwn-brwn  
 lstr, bky-ply, frm, tr lse whi chlk, calc west 30% micr  
 CARB CHLK (tr).

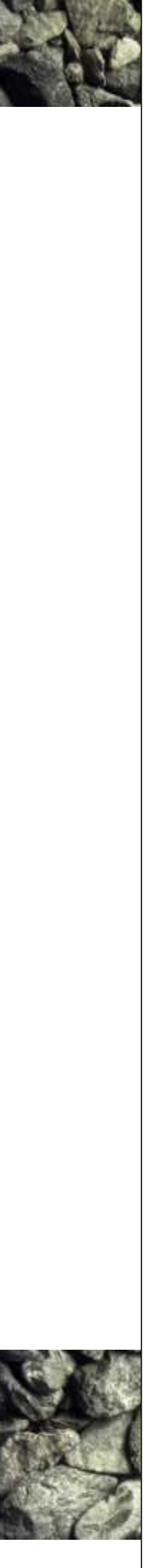
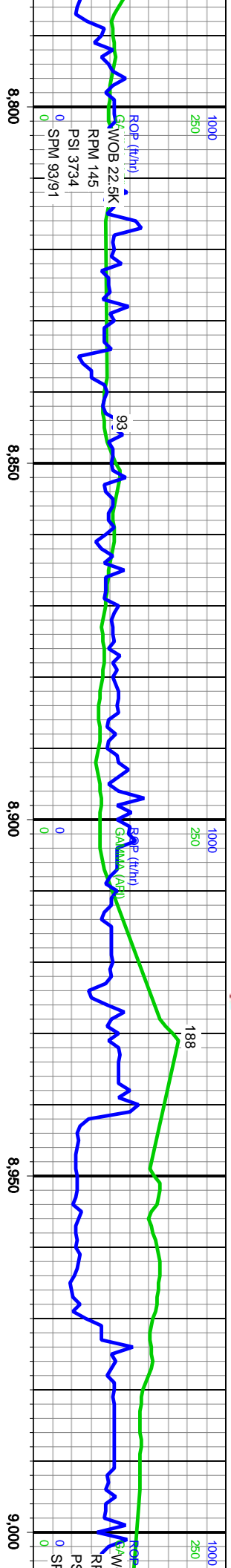
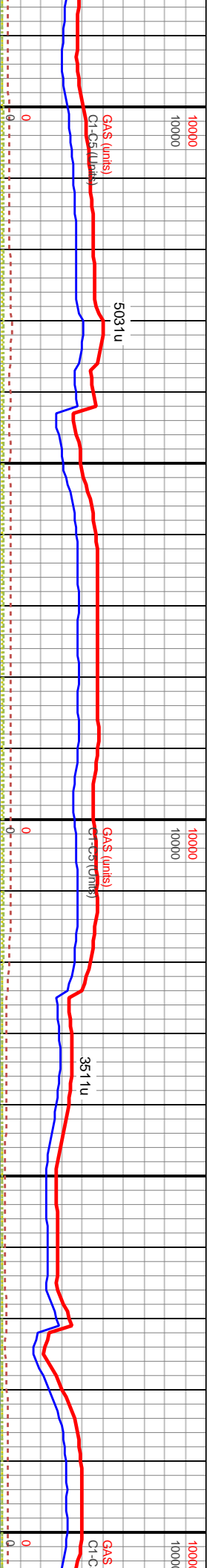


<p>ry ip, chilky txt, dll rthy lstr, infer chlk por, blk carb , fr smth - sb fiss txt, dll te, mttld w ltr mic spks,</p>	<p>5600 TVD (ft)</p>	<p>5600 TVD (ft)</p>	<p>5600 TVD (ft)</p>	<p>5600 TVD (ft)</p>
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CARB CHALK: (80%) lt gry-gry-whi, mttld w whi mtrc spks ip, chilky to rthy lstr, blkly-rthy frac, elong-wdglk, dn-brt, pred cln, infer chlk por, M (20%), abn ls FOSS frag.

MD: 8.635'  
Inclination: 90°  
Azimuth: 354°  
TVD: 6.400'  
VS: 2.268'

MD: 8.723'  
Inclination: 90°  
Azimuth: 354°  
TVD: 6.400'  
VS: 2.356'



MD: 8,812'	MD: 8,901'	MD: 8,990'
ARL: dlt dill	ARL: dill	ARL: dill
5600	5600	5600
TVD (ft)	TVD (ft)	TVD
6600	6600	6600

CARB CHALK: (90%) It gry-gry-whi mttld w whi mortc spks ip, chiky txt. dill rthy lstr, blk-y-rthy frac, elong-wdglk, dn-brit, pred chn, infer chlk por, MARL: (10%), abn ls FOSS frag.

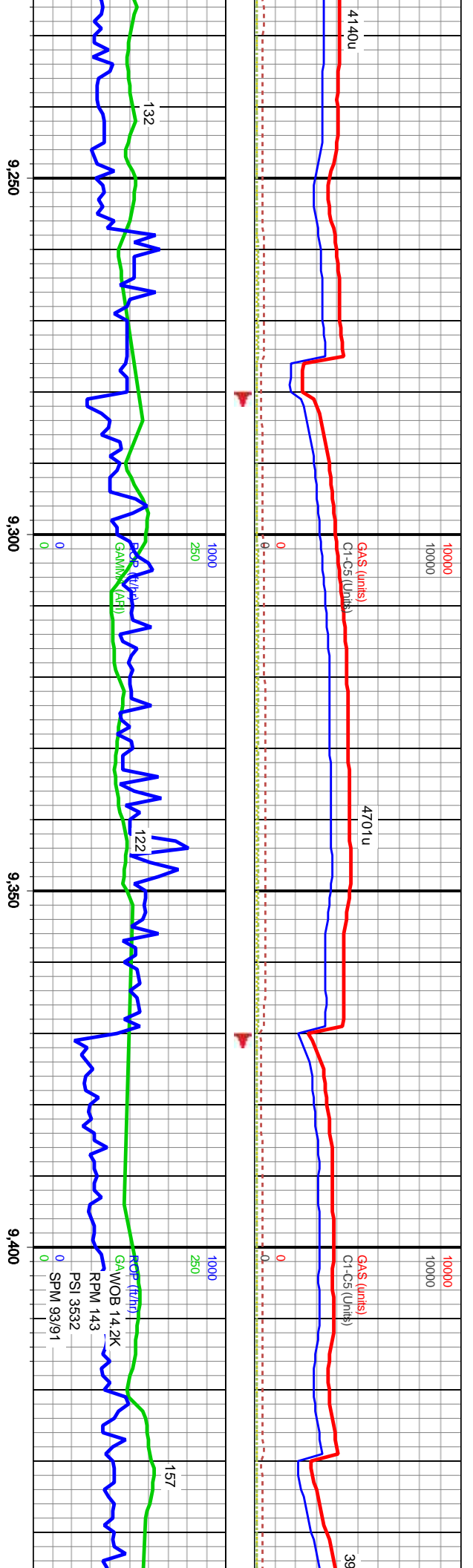
**Niobrara B Chalk Target**

MD: 8,812'  
 Inclination: 90°  
 Azimuth: 355°  
 TVD: 6,400'  
 VS: 2,445'

MD: 8,901'  
 Inclination: 90°  
 Azimuth: 355°  
 TVD: 6,400'  
 VS: 2,534'

MD: 8,990'  
 Inclination: 90°  
 Azimuth: 356°  
 TVD: 6,401'  
 VS: 2,623'



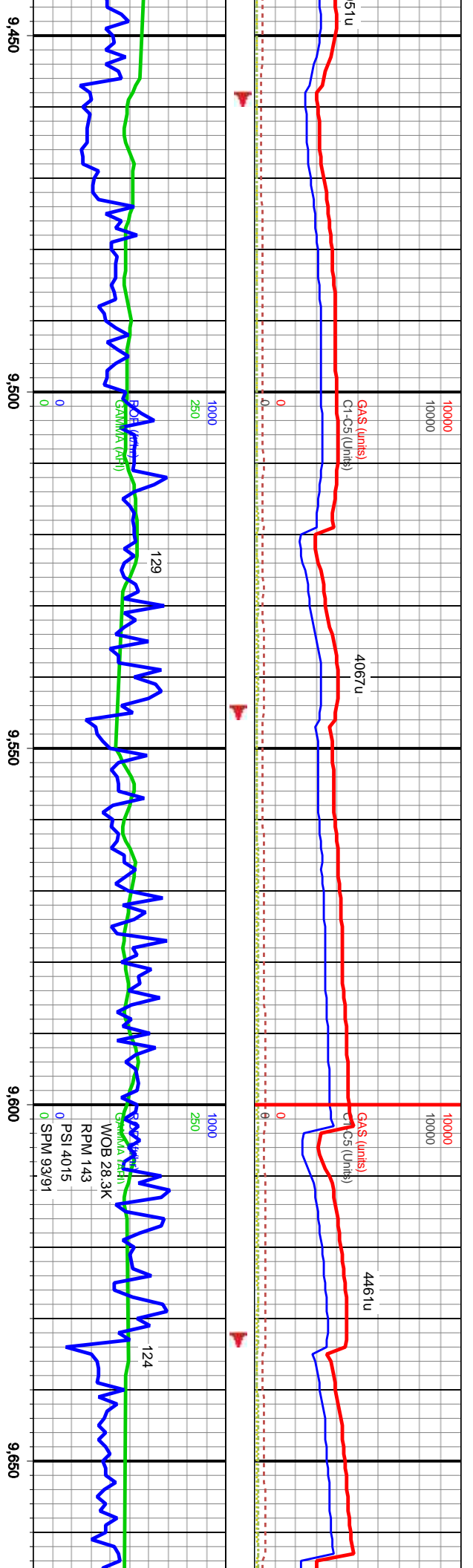


Depth (ft)	Stratigraphic Column	Notes
9250 - 9300	ARG CARB CHLK (60%); mttld drk-med grn, lt brwn gry ip, chlkx txt, dll rthy /str, blkly-sbchnky, mod hrd-firm, arg w ~ 20-30% cly mtrx, infer chlk por, blk carb mat to (SH), MRLSTN (40%); med -dk gry brwn-brwn, fn smth - sb fss txt, dll /str, blkly-ply, frm, tr lse whi chlk, calc w/est 30% micrite, mttld w ltr mic spts, CARB CHLK (tr).	5600 TVD (ft)
9300 - 9400	ARG CARB CHLK (60%); mttld drk-med grn, lt brwn gry ip, chlkx txt, dll rthy /str, blkly-sbchnky, mod hrd-firm, arg w ~ 20-30% cly mtrx, infer chlk por, blk carb mat to (SH), MRLSTN (40%); med -dk gry brwn-brwn, fn smth - sb fss txt, dll /str, blkly-ply, frm, tr lse whi chlk, calc w/est 30% micrite, mttld w ltr mic spts, CARB CHLK (tr).	5600 TVD (ft)

MD: 9,256'      Inclination: 90°  
 Azimuth: 3°  
 TVD: 6,401'  
 VS: 2,888'

MD: 9,344'      Inclination: 90°  
 Azimuth: 2°  
 TVD: 6,402'  
 VS: 2,976'

MD: 9,432'      Inclination: 89°  
 Azimuth: 1°  
 TVD: 6,402'  
 VS: 3,063'



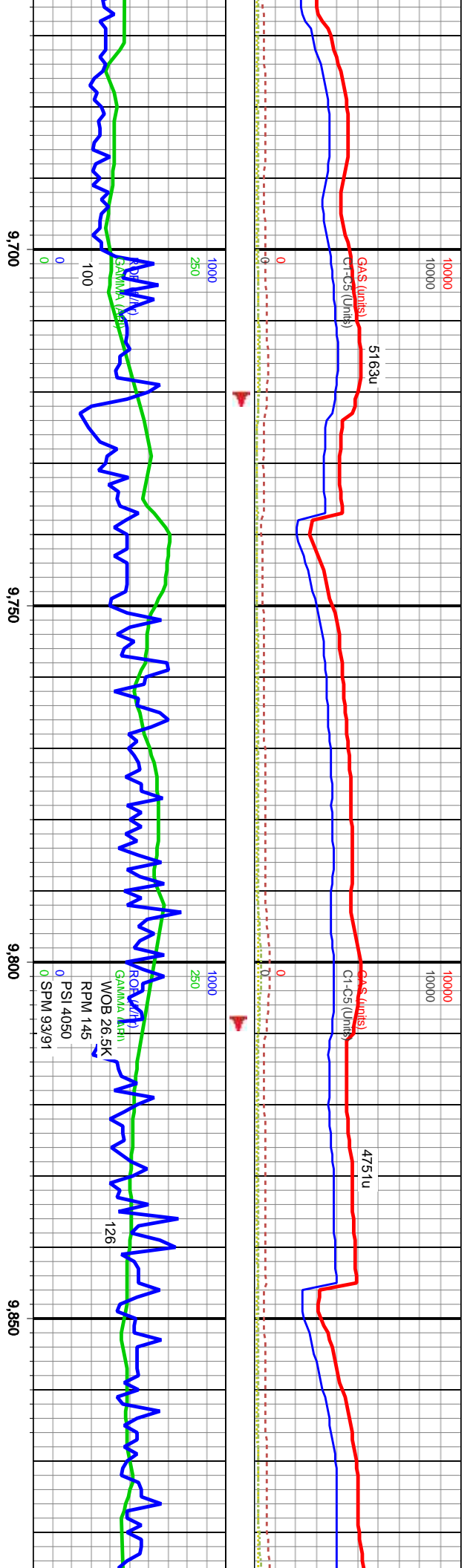
Depth (ft)	Gamma (API)	Gas (units)	C1-C3 (units)
9450	1000	10000	10000
9500	250	10000	10000
9550	250	10000	10000
9600	250	10000	10000
9650	250	10000	10000

**Niobrara B Chalk Target**

ARG CARB CHLK (50%): mttld drk-med gry, lt brwn gry lp, chlky txt, dill rthy lstr, blk-y-sbchnky, mod hrd frm, arg w ~ 20-30% cly mtrix, infer chl por, blk carb mat to (SH), MRLSTN (10%): med-drk gry brwn-brwn, fn smth - sb fiss txt, dill lstr, blk-y-pty, frm, tr lse whi chl, calc w/est 30% micrite, mttld w ltr mic sps, CARB CHLK (40%).

MD: 9,520' Inclination: 89° Azimuth: 360° TVD: 6,404' VS: 3,151'

MD: 9,608' Inclination: 89° Azimuth: 2° TVD: 6,405' VS: 3,239'

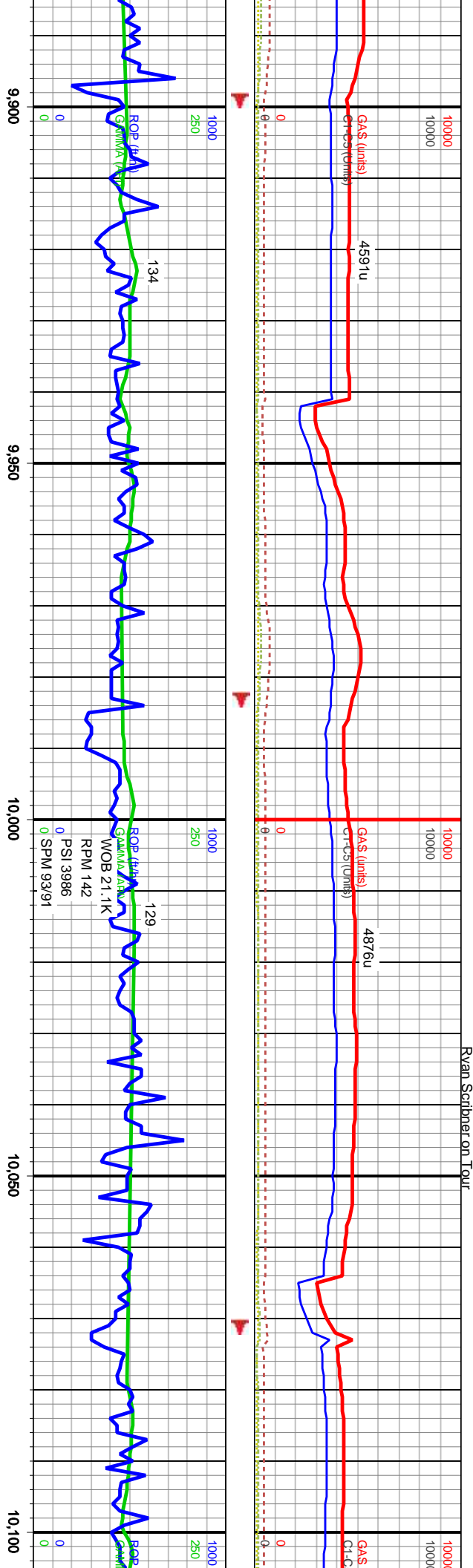


Depth (ft)	Stratigraphic Column	Well Log Data
5600	ARG CARB CHLK (50%): mttd drk-med gry, lt brwn gry ip, chiky txt, dll rthy lstr, blk-y-sbchnky, mod hrd-frm, arg w ~ 20-30% cly mtrx, infer chlk por, blk carb mat to (SH), MRLSTN (10%): med -dk gry brwn-brwn, fn smth - sb fss txt, dll lstr, blk-y-pty, frm, tr lse whi chlk, calc w/est 30% micrite, mttd w tr mic sps, CARB CHLK (40%).	Well log data for depth 5600
6600		Well log data for depth 6600
5600		Well log data for depth 5600
6600		Well log data for depth 6600
5600		Well log data for depth 5600
6600		Well log data for depth 6600

MD: 9,695'  
 Inclination: 90°  
 Azimuth: 2°  
 TVD: 6,405'  
 VS: 3,326'

MD: 9,783'  
 Inclination: 90°  
 Azimuth: 0°  
 TVD: 6,405'  
 VS: 3,413'

MD: 9,872'  
 Inclination: 91°  
 Azimuth: 360°  
 TVD: 6,405'  
 VS: 3,502'

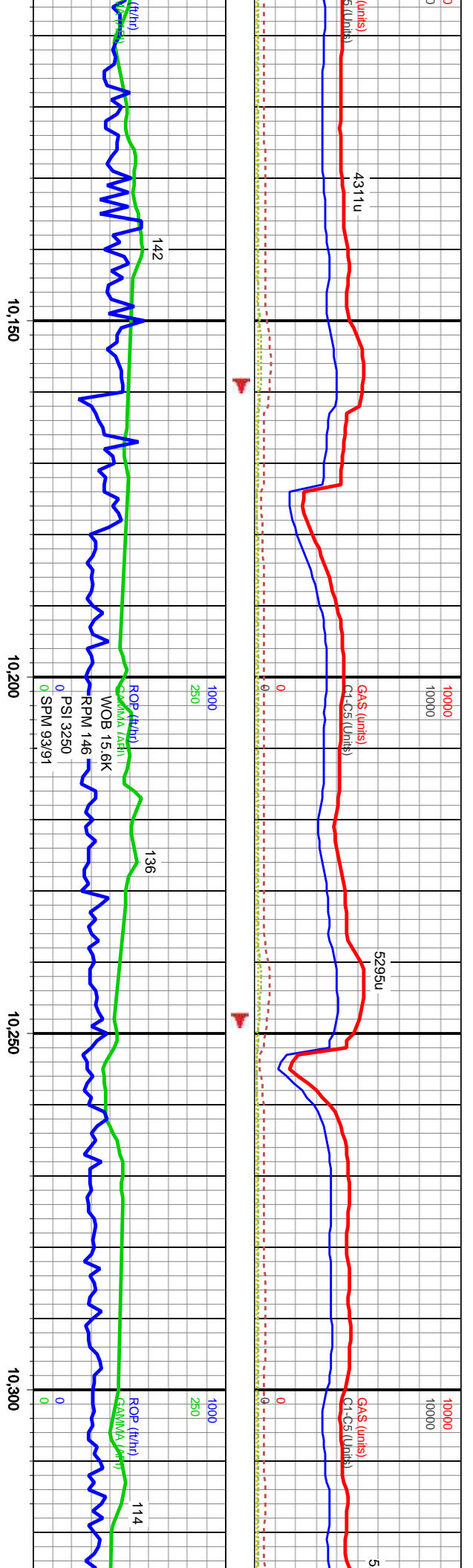


5600	ARG CARB CHLK (40%): mtld drk-med gry, lt brwn gry ip, chlyy txt, dll rthy lstr, blkly-sbchcky, mod hrd-frm, arg w ~ 20-30% cly mtrx, infer chlk por, blk carb mat to (SH), MRLSTN (20%): med -dk gry brwn-brwn, fn smth - sb fiss txt, dll lstr, blkly-pty, frm, tr lse whi chlk, calc w/est 30% micrite, mtld w ltr mic sps, CARB CHLK (40%).	5600		5600
6600		6600		6600

**Niobrara B Chalk Target**

MD: 9,959'  
 Inclination: 90°  
 Azimuth: 358°  
 TVD: 6,404'  
 VS: 3,589'

MD: 10,047'  
 Inclination: 91°  
 Azimuth: 359°  
 TVD: 6,404'  
 VS: 3,677'



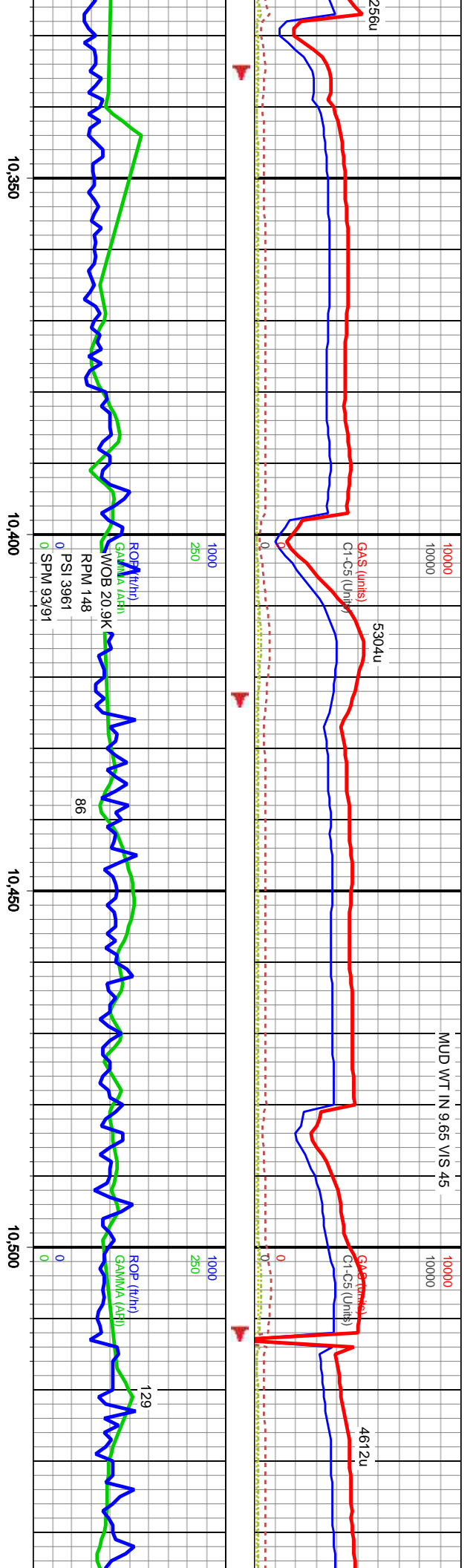
ARG CARB CHLK (40%): mtld drk-med gry, lt brwn gry ip, chiky txt, dll rhy lstr, blk-sbchnky, mod hd-frn, arg w ~ 20-30% cly mtr, infer chlk por, blk carb mat to (SH), MRLSTN (20%): med -drk gry brwn-brwn, fn smth - sb fiss txt, dll lstr, blk-ply, frm, tr lse whi chlk, calc w/est 30% micrite, mtld w ltr mic sps, CARB CHLK (40%).

Depth (ft)	Gas (units)	G.I. (units)	ROP (ft/hr)	WOB (lb)	PSI	SPM	Notes
10,150	4311u		142				
10,200			136	5600	3250	93.91	
10,250	5295u						
10,300			114	5600			
6800							

MD: 10,135'  
 Inclination: 91°  
 Azimuth: 359°  
 TVD: 6,402'  
 VS: 3,765'

MD: 10,224'  
 Inclination: 91°  
 Azimuth: 359°  
 TVD: 6,401'  
 VS: 3,854'

MD: 10,311'  
 Inclination: 89°  
 Azimuth: 357°  
 TVD: 6,401'  
 VS: 3,941'



Depth (ft)	ROP (ft/hr)	GAMMA (API)	PSI	SPM	Notes
10,350	~1000	~100	~3961	~9391	WOB 20.9K
10,400	~1000	~100	~3961	~9391	RPM 148
10,450	~1000	~100	~3961	~9391	86
10,500	~1000	~100	~3961	~9391	129

K (40%): mttld drk-med grn, lt brwn gry ip, chlky x't, dll rthy lstr,  
 od hrd-firm, arg w ~ 20-30% cly mtr, infer chlck por, blk carb  
 LSTN (20%): med -dk gry brwn-brwn, fn smth - sb fiss x't, dll  
 n, tr lse whi chlck, calc w/est 30% micrite, mttld w ltr mic sps,  
 (%).

MD: 10,399'  
 Inclination: 88°  
 Azimuth: 356°  
 TVD: 6,403'  
 VS: 4,029'

**Niobrara B Chalk Target**

MD: 10,488'  
 Inclination: 89°  
 Azimuth: 356°  
 TVD: 6,405'  
 VS: 4,118'

ARG CARB CHLK (40%): mttld  
 blkly-sbchnky, mod hrd-firm, arg  
 mat to (SH), MRLSTN (20%): m  
 lstr, blkly-pty, firm, tr lse whi chlck  
 CARB CHLK (40%).



Depth (ft)	Gas (units)	Gas (units)	Gas (units)	Gas (units)
10,550	10000	10000	10000	10000
10,600	10000	10000	10000	10000
10,650	10000	10000	10000	10000
10,700	10000	10000	10000	10000
10,750	10000	10000	10000	10000

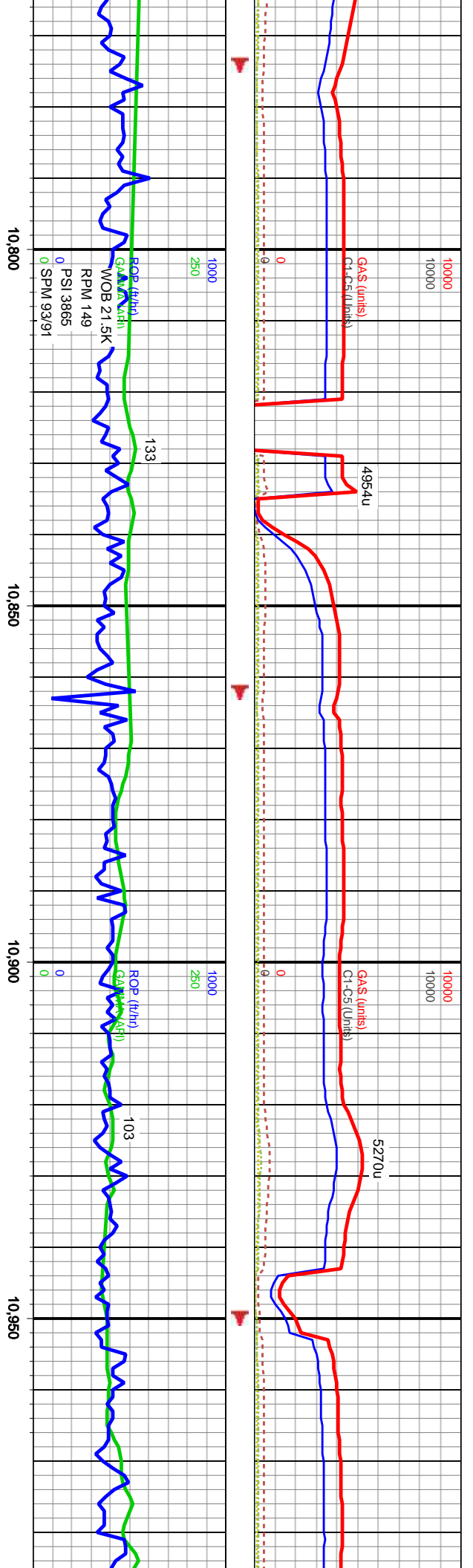
dk-med gry, lt brwn gry ip, chlky txt, dll rthy lstr, w ~ 20-30% cly mtr, infer chlck por, blk carb ed -dk gry brwn-brwn, fn smth - sb fiss txt, dll , calc w/est 30% micrite, mttld w ltr mic spts,

ARG CARB CHLK (50%): mttld dk-med gry, lt brwn bly-sbchnky, mod hrd-fm, arg w ~ 20-30% cly mtr, mat to (SH), MRLSTN (10%): med -dk gry brwn-brw lstr, bly-pty, frm, tr lse whi chlck, calc w/est 30% mic CARB CHLK (40%).

MD: 10,576'  
Inclination: 88°  
Azimuth: 355°  
TVD: 6,408'  
VS: 4,206'

MD: 10,663'  
Inclination: 90°  
Azimuth: 355°  
TVD: 6,409'  
VS: 4,293'

MD: 10,750'  
Inclination: 90°  
Azimuth: 355°  
TVD: 6,409'  
VS: 4,380'



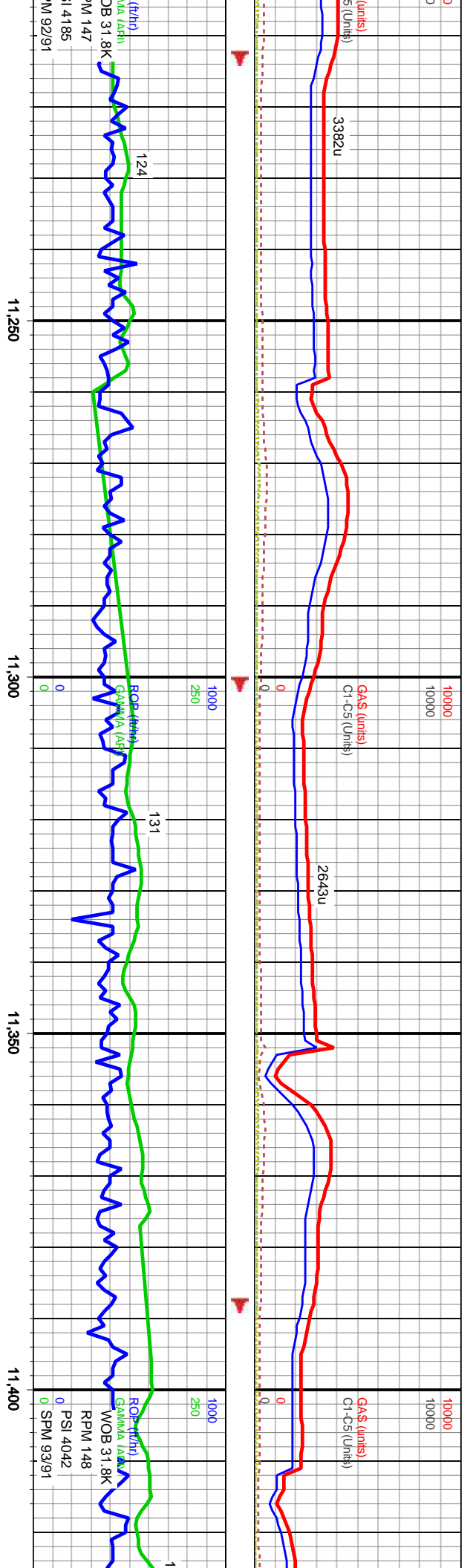
Depth (ft)	Log Description	ROP (ft/hr)	GPM (gals/hr)	WOB (21.5k)	RPM (149)	PSI (3865)	SPM (93/91)
5600	grly ip, chlky txt, dll rthy lstr, infer chl por, blk carb n, fn smth - sb fiss txt, dll tie, mttld w ltr mic sps.						
6600							
5600	ARG CARB CHLK (50%): mttld drk-med gry, lt brwn gry ip, chlky txt, dll blk-sbchnky, mod hrd-fm, arg w ~ 20-30% cly mtrx, infer chl por, blk mat to (SH), MRLSTN (10%): med-drk gry brwn-brwn, fn smth - sb fiss lstr, blk-pty, fm, tr lse whi chl; calc w/est 30% micrite, mttld w ltr mic CARB CHLK (40%).						
6600							

MD: 10,838'  
 Inclination: 90°  
 Azimuth: 355°  
 TVD: 6,409'  
 VS: 4,468'

MD: 10,926'  
 Inclination: 90°  
 Azimuth: 356°  
 TVD: 6,408'  
 VS: 4,556'

**Niobrara B Ch**



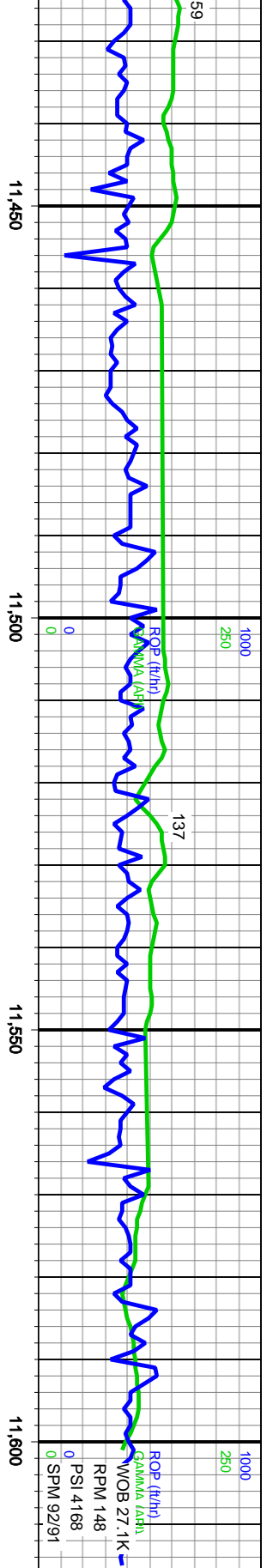
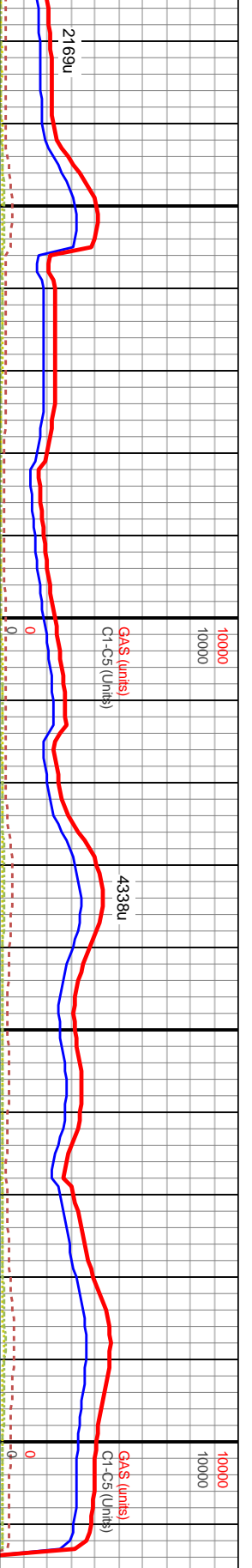


Depth (ft)	Gamma (API)	Gas (units)	C1-C5 (Units)
11,250	124	3382u	
11,300	131	2643u	
11,350			
11,400	1		

ARG CARB CHLK (40%): mttld drk-med gry, lt brwn gry ip, chiky txt, dll rthy lstr, blk-y-sbchnky, mod hrd-frm, arg w ~ 20-30% cly ntrx; infer chlk por, blk carb mat to (SH), MRLSTN (20%): med -dk gry brwn-brwn, fn smth - sb fiss txt, dll lstr, blk-y-pty, frm, tr lse whi chlk, calc w/est 30% micrite, mttld w ltr mic sps, CARB CHLK (40%).

MD: 11,276'  
 Inclination: 90°  
 Azimuth: 359°  
 TVD: 6,407'  
 VS: 4,906'

MD: 11,364'  
 Inclination: 90°  
 Azimuth: 359°  
 TVD: 6,407'  
 VS: 4,994'



Depth (ft)	Stratigraphic Column	Wellbore Data
11,450	Niobrara B Chalk Target	TT
11,455		TT
11,460		TT
11,465		TT
11,470		TT
11,475		TT
11,480		TT
11,485		TT
11,490		TT
11,495		TT
11,500	5600	TT
11,505	ARG CARB CHLK (50%): mttld drk-med gry, lt brwn gry ip, chlky txt, dill rthy lstr, blkly-sbchnky, mod hrd-fm, arg w ~ 20-30% cly mtrx, infer chl por, blk carb mat to (SH), MRLSTN (10%): med-drk gry brwn-brwn, fn smth - sb fiss txt, dill lstr, blkly-pty, frm, tr lse whi chl, calc w/west 30% micrite, mttld w ltr mic spets, CARB CHLK (40%).	TT
11,510	TT	
11,515	TT	
11,520	TT	
11,525	TT	
11,530	TT	
11,535	TT	
11,540	5600	TT
11,545	TT	
11,550	TT	
11,555	TT	
11,560	TT	
11,565	TT	
11,570	TT	
11,575	TT	
11,580	TT	
11,585	TT	
11,590	TT	
11,595	TT	
11,600	5600	TT
11,605	TT	
11,610	TT	
11,615	TT	
11,620	TT	
11,625	TT	
11,630	TT	
11,635	TT	
11,640	TT	
11,645	TT	
11,650	TT	
11,655	TT	
11,660	TT	
11,665	TT	
11,670	TT	
11,675	TT	
11,680	TT	
11,685	TT	
11,690	TT	
11,695	TT	
11,700	TT	
11,705	TT	
11,710	TT	
11,715	TT	
11,720	TT	
11,725	TT	
11,730	TT	
11,735	TT	
11,740	TT	
11,745	TT	
11,750	TT	
11,755	TT	
11,760	TT	
11,765	TT	
11,770	TT	
11,775	TT	
11,780	TT	
11,785	TT	
11,790	TT	
11,795	TT	
11,800	6600	TT

MD: 11,451'  
 Inclination: 90°  
 Azimuth: 359°  
 TVD: 6,407'  
 VS: 5,080'

MD: 11,540'  
 Inclination: 90°  
 Azimuth: 359°  
 TVD: 6,407'  
 VS: 5,169'

MD: 11,591'  
 Inclination: 90°  
 Azimuth: 359°  
 TVD: 6,407'  
 VS: 5,220'

MD: 11,616'  
 Inclination: 90°  
 Azimuth: 359°  
 TVD: 6,407'  
 VS: 5,245'

	MD	TVD
Sharon Springs	6220	6182
Sharon Springs A	6289	6235
Sharon Springs B	6351	6279
Niobrara A Chalk	6435	6328
Niobrara A Marl	6455	6338
Niobrara B Chalk	6584	6382

CALLED OUT on 04/02/2019. Bit #2:  
 HALLIBURTON. TYPE: GTD55KO. SERIAL  
 #: 13130901 IN @ 1,606' MD out on  
 04/03/2019 @ 11,616' MD.

11,650 11,650

DMTD 16,616' MD @ 22:34 04/03/2019	
Formation Tops picked by Dan Kabala and Ryan Scribner	
<b>Thank you for using Decollement Consulting Inc</b>	
Dan Kabala	Ryan Scribner