

Scale: 5" / 100'
Measured Depth Log

Well Name	North Platte F-J-28HNC		
Location	NESW Sec. 21 T5N R63W		
State	Colorado	County	Weld
Country	United States	Rig Number	Atika 19
API Number	05-123-47012-00	AFE #	18078
Geographic Region	D.J. Basin	Field	Wattenberg
Spud Date	9/6/2018	Drilling Completed	9/21/2018
Surface Coordinates	NESW Sec.21 T5N R63W 1,431' FSL 1,424' FWL		
Bottom Hole Coordinates	NESW Sec.21 T5N R63W 470' FSL 1,323' FWL		
Ground Elevation	4,553	K.B. Elevation	4,570
Logged Interval	6,000' To 11,610	Total Depth	11,610
Formation	Niobrara C 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

Dan Kabala Wellsite Geologist
Ryan Scribner Wellsite Geologist

Zone Color Coding

Oil
Note
Error

Condensate
Core
Water

Gas
Prod
Seal

Symbols

FORMATION TOP **B** SUBANG **PS** PACKSTONE

SHOW **P** SUBRND **WIS** WACKESTONE

EWALL CORE (LEFT)

Textures Sorting

EWALL CORE (RIGHT)

E **B** BOUNDSTONE **M** MODERATE

IRVEY **C** CHALKY **P** POOR

IP GAS **CX** CRYPTOXLN **W** WELL


ELINE TESTED - LEFT **E** EARTHY

Cut

ELINE TESTED - RT **FX** FINELYXLN

BS GRAINSTONE  No Cut

L LITHOGRAPHIC  Fair Cut

MX MICROXLN  Good Cut

ULAR **MIS** MUDSTONE Blank

ending

Logger on Shift

Curve/Survey Data

GAS

GAS SCALE 0 TO 2000 (200 UNITS/DIVISION)

2000
2000

2000
2000

GAS (units)

GAS (units)

GAS (units)

C1

C1-C5 (Units)

942u

497u

C1-C5 (Units)

C1-C5 (Units)

C1-C5 (Units)

C2

C2-C5 (Units)

C2-C5 (Units)

C2-C5 (Units)

C2-C5 (Units)

C2-C5 (Units)

C2-C5 (Units)

C3

C3-C5 (Units)

C3-C5 (Units)

C3-C5 (Units)

C3-C5 (Units)

C3-C5 (Units)

C3-C5 (Units)

C4

C4-C5 (Units)

C4-C5 (Units)

C4-C5 (Units)

C4-C5 (Units)

C4-C5 (Units)

C4-C5 (Units)

C5

C5-C5 (Units)

C5-C5 (Units)

C5-C5 (Units)

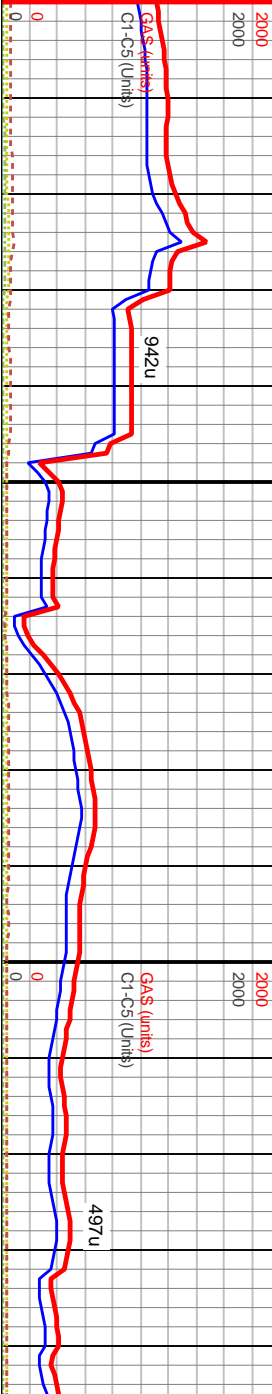
C5-C5 (Units)

C5-C5 (Units)

C5-C5 (Units)

Connections

CONNECTIONS MARKED WITH RED TRIANGLES



Curve/Survey Data

ROP

ROP SCALE 0-1000

1000

1000

ROP (ft/hr)

ROP (ft/hr)

ROP (ft/hr)

GAMMA

GAMMA SCALE 0-250

250

250

GAMMA (API)

GAMMA (API)

GAMMA (API)

Depth Labels

(GAMMA & SURVEYS RECEIVED FROM BAKER HUGHES)

6,000

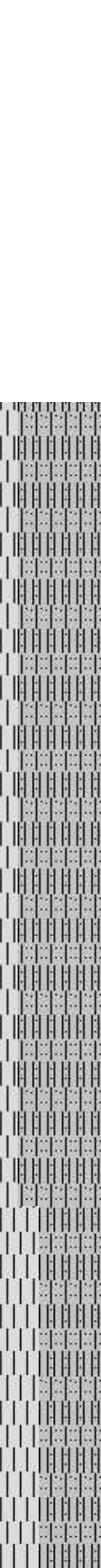
6,050

6,100

Sample Photographs

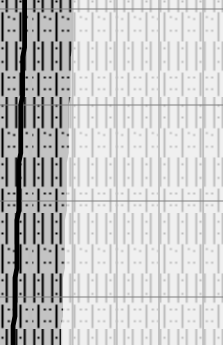
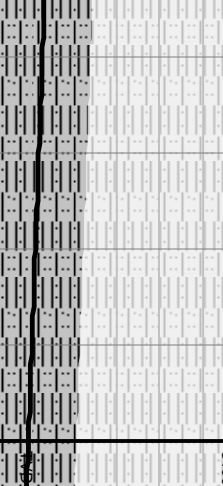
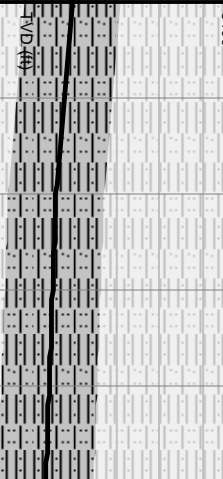


% Lith



Well Bore

BONANZA CREEK ENERGY NORTH
PLATTE F-J-28HNC SEC 21. T5N
R63W WELD CO., CO



LOGGERS: DANIEL KABALA & RYAN SCRIBNER

Started logging @ 15:13, on 9/20/2018, Bit

#2: BAKER, TYPE: ATD505T, SERIAL #: 52288245 IN @ 1,615 MD out on 9/21/2018 @ 11,610' MD

SLTY SH: (80%) gry-lt gry ip, ply-sb ply, sl carb, abnt carb frag, sl calc, silty, vt gr

sdly locly, clayey w clay lam dislv H2O, thn silty lams, flky-chpy, rthy lstr feel, fis, frm,

mrly w blk carb mat to ip, CARB SH: (20%), NSFOC, OBM contm.

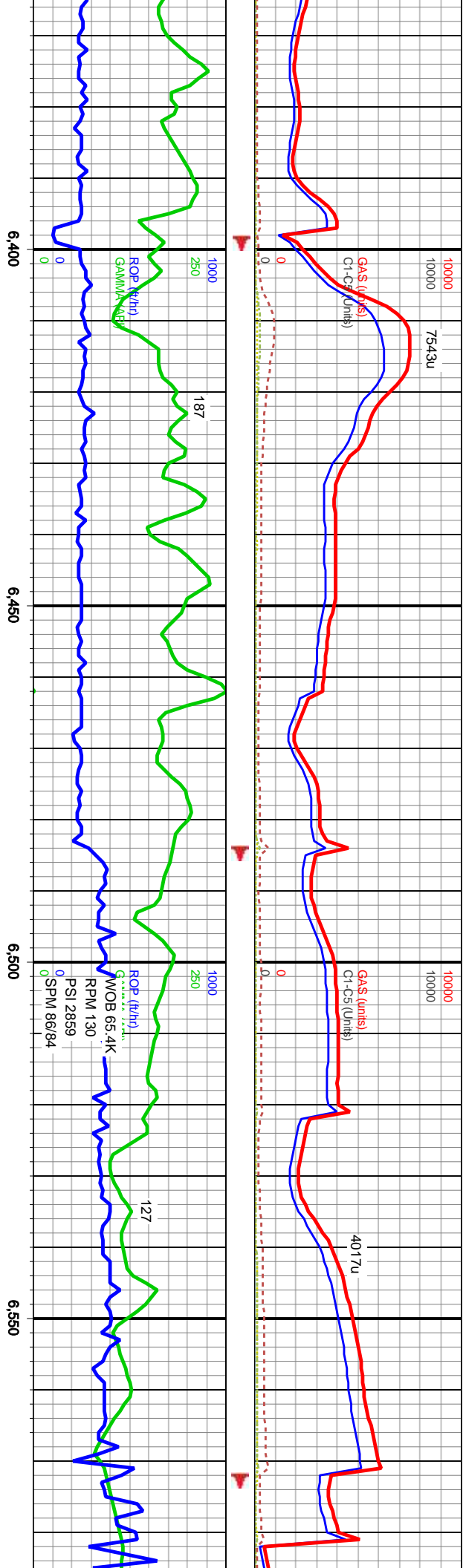
MD: 6,019' Inclination: 13° Azimuth: 192° TVD: 5,925' VS: 874'

MD: 6,108' Inclination: 18° Azimuth: 183° TVD: 6,010' VS: 897'

Survey Data

MD: 6,019' Inclination: 13° Azimuth: 192° TVD: 5,925' VS: 874'

MD: 6,108' Inclination: 18° Azimuth: 183° TVD: 6,010' VS: 897'

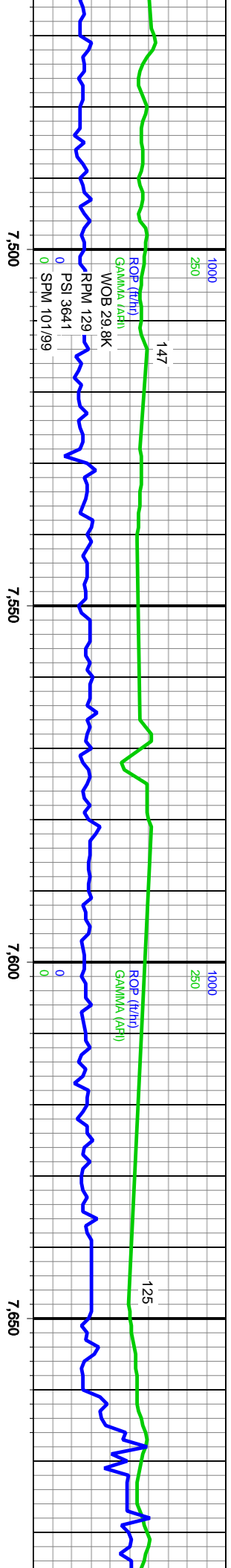
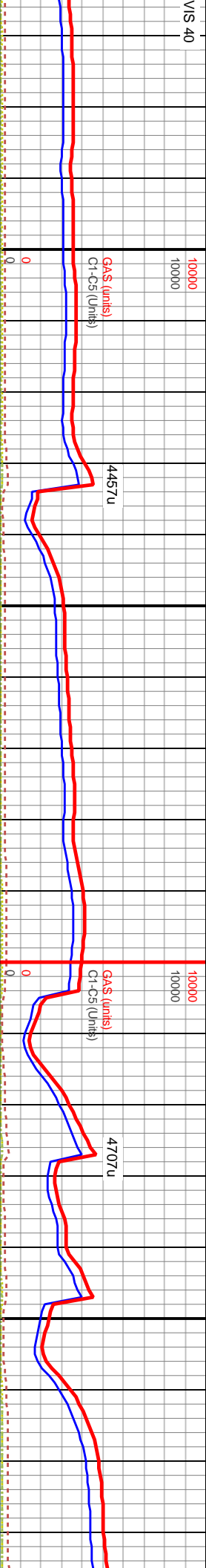


TVD 6338' MD		NIOBRARA "A" CHALK @ 6249' TVD 6398' MD		NIOBRARA "A" MARL @ 6260' TVD 6415' MD		New Target 6403' T		NIOBRARA "B" CHALK @ 6324' TVD	
MARL: (20%), abn BENT		MARLSTN: (80%) med-med drk gry-brwn, rthy, sbchky, occ sbwxy spikng ip, frm		CHALK: (80%) med-lt gry brwn, mtlld w whi mcrfc spks ip, chiky txt, dll rthy		CHALK: (80%) med-lt gry brwn, mtlld w whi mcrfc spks ip, chiky txt, dll rthy		CHALK: (80%) med-lt gry brwn, mtlld w whi mcrfc spks ip, chiky txt, dll rthy	
bntt, sbply, lent chiky lns, no vis pem or por, cmnn blk carb mat (SH) to,		bntt, sbply, lent chiky lns, no vis pem or por, cmnn blk carb mat (SH) to,		bntt, sbply, lent chiky lns, no vis pem or por, cmnn blk carb mat (SH) to,		bntt, sbply, lent chiky lns, no vis pem or por, cmnn blk carb mat (SH) to,		bntt, sbply, lent chiky lns, no vis pem or por, cmnn blk carb mat (SH) to,	
NSFOC, OBM contn, CHLK: (20%), abn alt BENT (phyllo) w pyr nods.		NSFOC, OBM contn, CHLK: (20%), abn alt BENT (phyllo) w pyr nods.		NSFOC, OBM contn, CHLK: (20%), abn alt BENT (phyllo) w pyr nods.		NSFOC, OBM contn, CHLK: (20%), abn alt BENT (phyllo) w pyr nods.		NSFOC, OBM contn, CHLK: (20%), abn alt BENT (phyllo) w pyr nods.	
infer chlk por, cmnn calc inc. MARL: (20%).		infer chlk por, cmnn calc inc. MARL: (20%).		infer chlk por, cmnn calc inc. MARL: (20%).		infer chlk por, cmnn calc inc. MARL: (20%).		infer chlk por, cmnn calc inc. MARL: (20%).	

MD: 6,372'
Inclination: 45°
Azimuth: 178°
VD: 6,233'
VS: 1,034'

MD: 6,459'
Inclination: 54°
Azimuth: 180°
TVD: 6,289'
VS: 1,100'

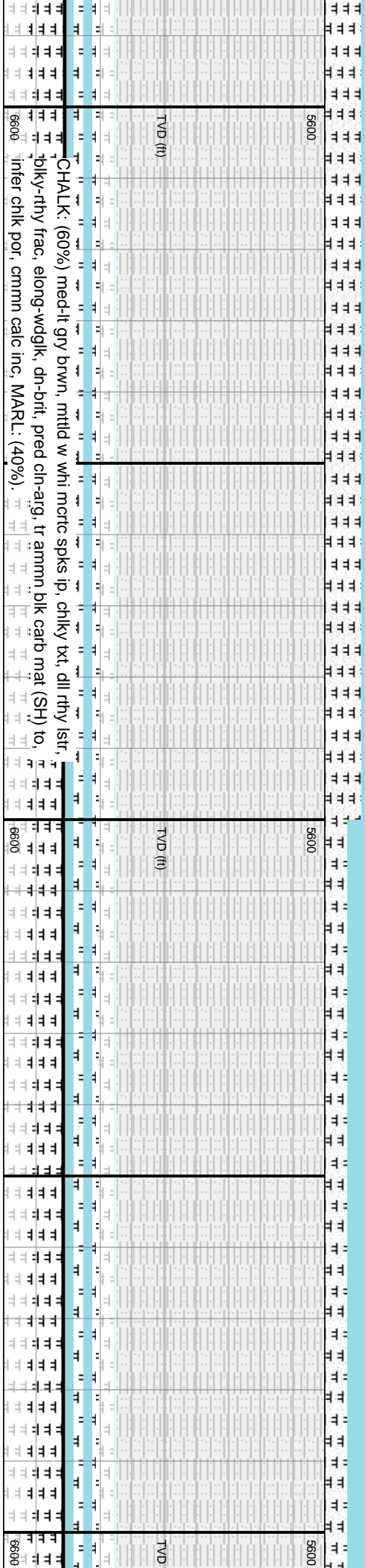
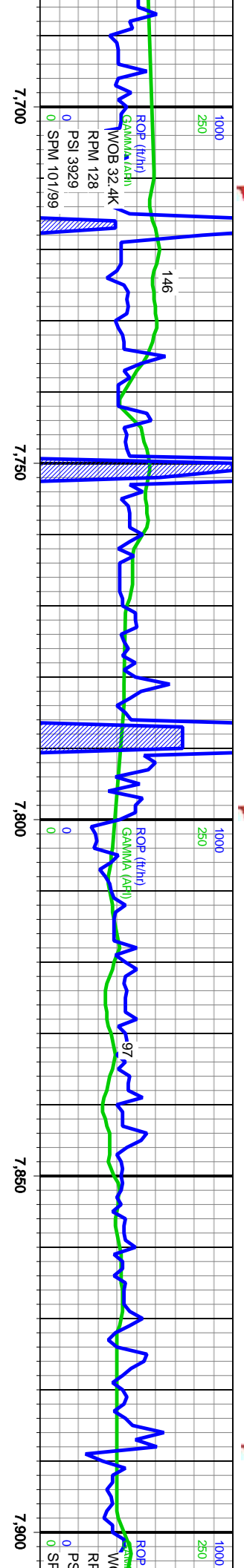
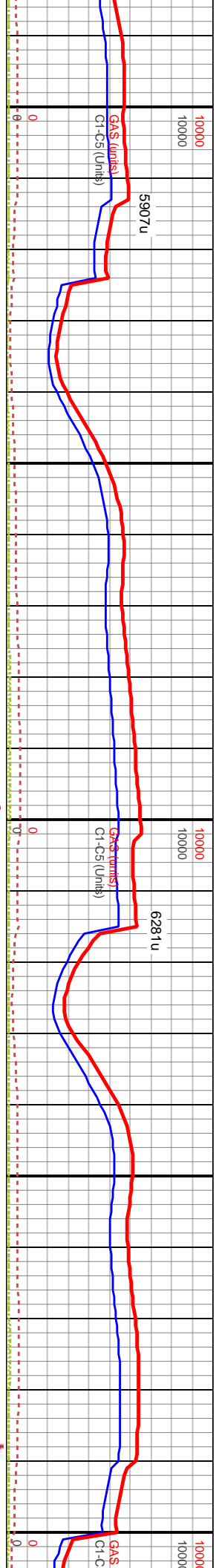
MD: 6,548'
Inclination: 64°
Azimuth: 181°
TVD: 6,335'
VS: 1,176'



Niobrara C Chalk Target	
5600	5600
TVD (ft)	TVD (ft)
6600	6600
MRLSTN: (70%) med-med dk gry-brwn, rthy, sbchky, occ slowy spikng ip, firm brtl, soplty, lent chky lns, no vis perm or por, crmm blk carb mat (SH) to, NSFOC, OBM contn, CHLK: (30%), abn alt BENT (phyll) w pyr nods.	

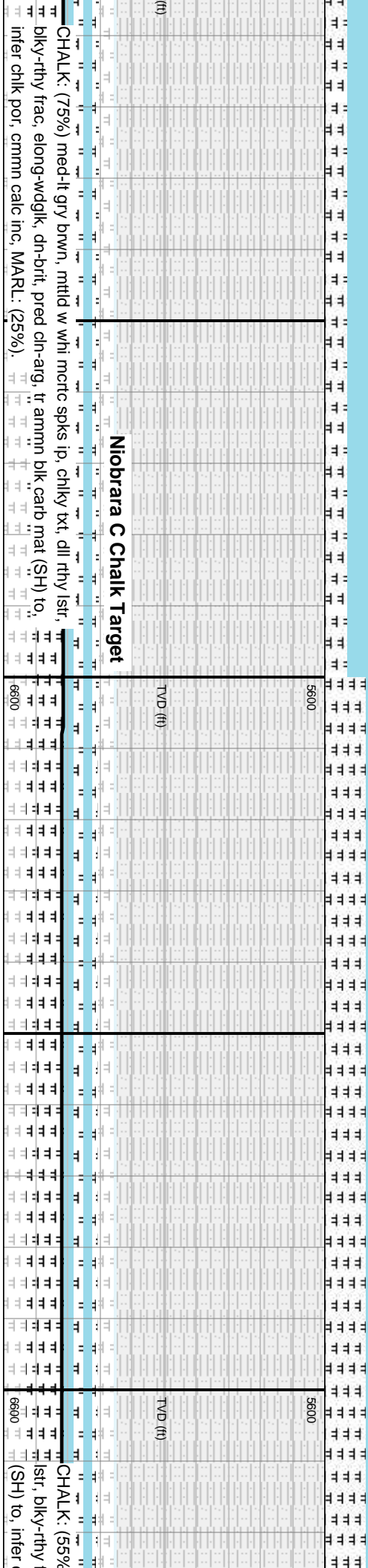
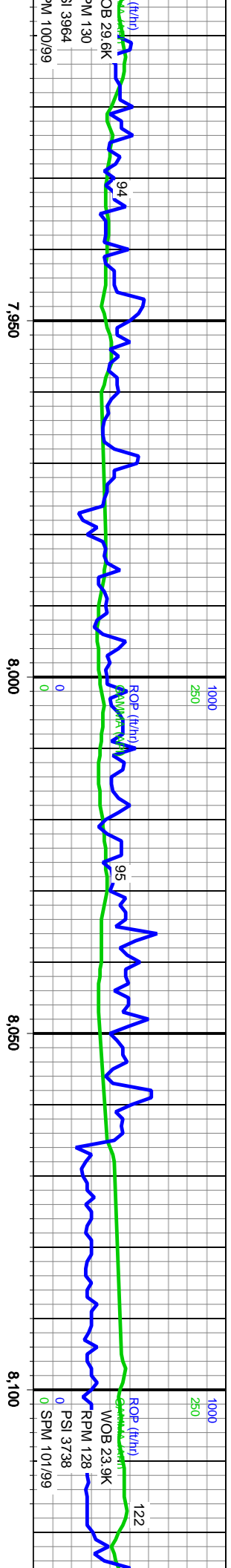
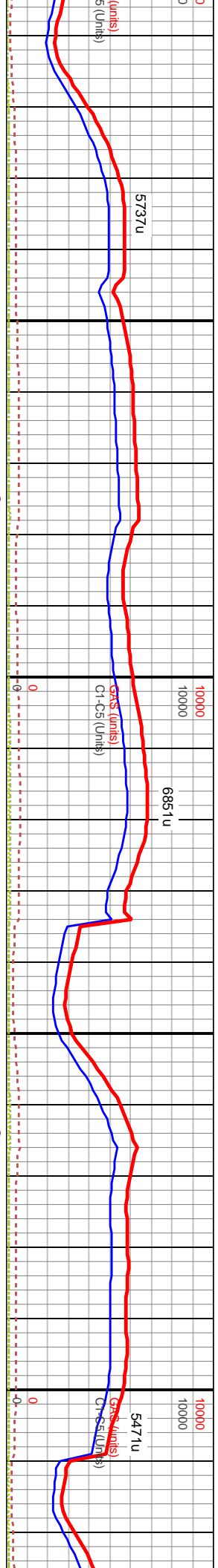
MD: 7,512'
Inclination: 90°
Azimuth: 177°
TVD: 6,407'
VS: 2,124'

MD: 7,601'
Inclination: 89°
Azimuth: 182°
TVD: 6,408'
VS: 2,213'



7,688' MD: 7,775
Inclination: 89°
Azimuth: 184°
TVD: 6,409
VS: 2,299

7,685' MD: 7,865
Inclination: 89°
Azimuth: 182°
TVD: 6,413
VS: 2,476



Niobrara C Chalk Target

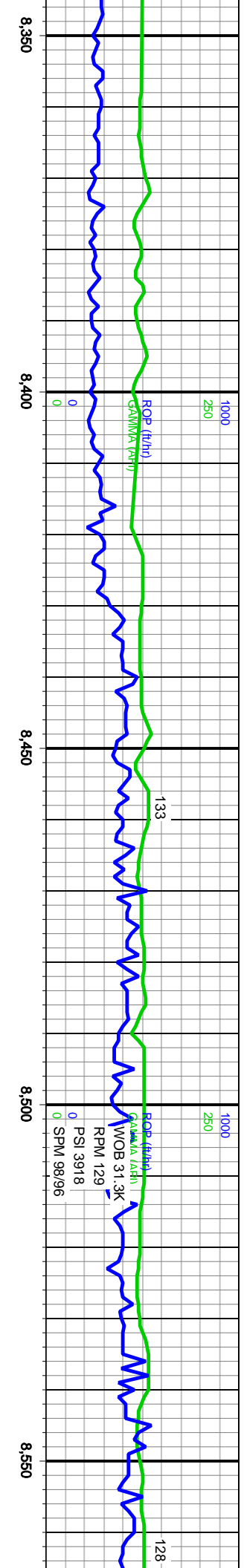
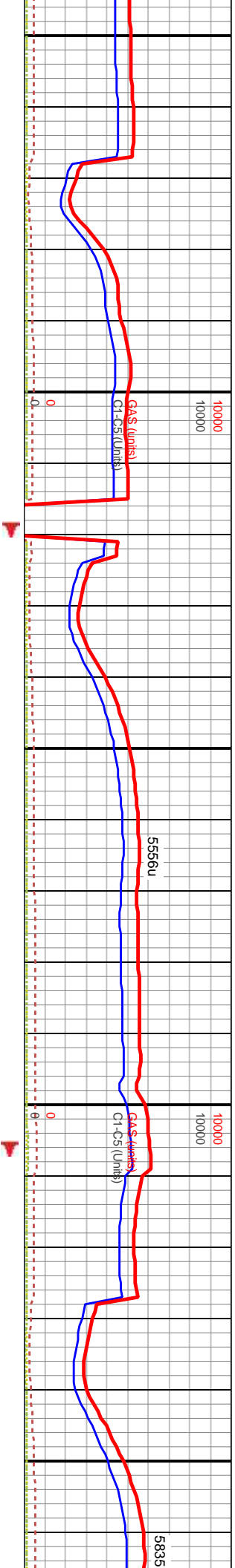
CHALK: (75%) med-lt gry brwn, mttld w whi mortc spks ip, chiky txt, dll rthy lstr, blkly-rthy frac, elong-wdgk, dn-brt, pred cin-arg, tr ammn blk carb mat (SH) to, infer chlk por, cmmn calc inc, MARL: (25%).

CHALK: (55%) med-lt gry brwn, mttld w whi mortc spks ip, chiky txt, dll rthy lstr, blkly-rthy frac, elong-wdgk, dn-brt, pred cin-arg, tr ammn blk carb mat (SH) to, infer chlk por, cmmn calc inc, MARL: (25%).

MD: 7,952'
Inclination: 89°
Azimuth: 181°
TVD: 6,414'
VS: 2,563'

MD: 8,041'
Inclination: 89°
Azimuth: 179°
TVD: 6,416'
VS: 2,652'

MD:
Ino:
Azi:
TV:
VS:

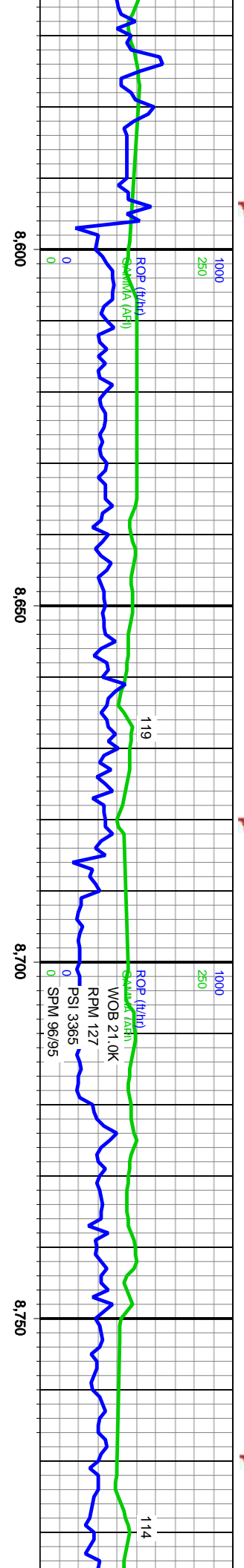
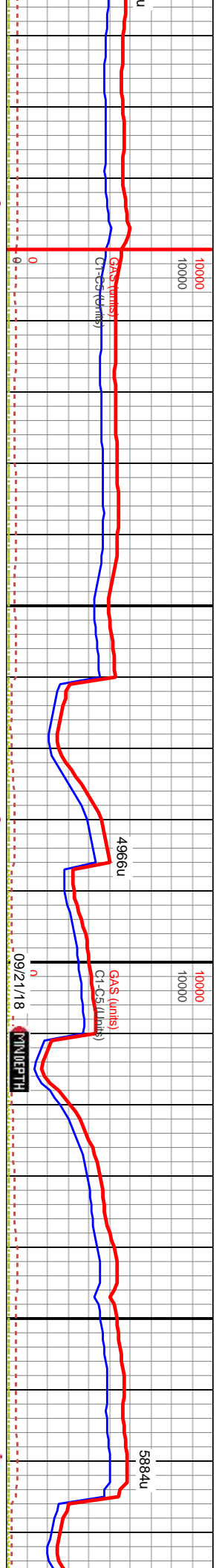


d w whi mctic spks ip, chiky txt, dll rthy lstr, red cin-arg, tr ammn blk carb mat (SH) to, : (35%).	5600	TVD (ft)	Niobrara C Chalk Target	5600	TVD (ft)	CHALK: (70%) med lt gry brwn, mtlld w whi mctic spk, jolky-rthy frac, elong-wdgk, dn-brit, pred cin-arg, tr ammn blk carb mat (SH) to, infer chlk por, cmmn calc inc, MARL: (30%).

MD: 8,395'
Inclination: 90°
Azimuth: 189°
TVD: 6,417'
VS: 3,005'

MD: 8,482'
Inclination: 90°
Azimuth: 187°
TVD: 6,417'
VS: 3,091'

MD:
Ino:
Azi:
TV:
VS:

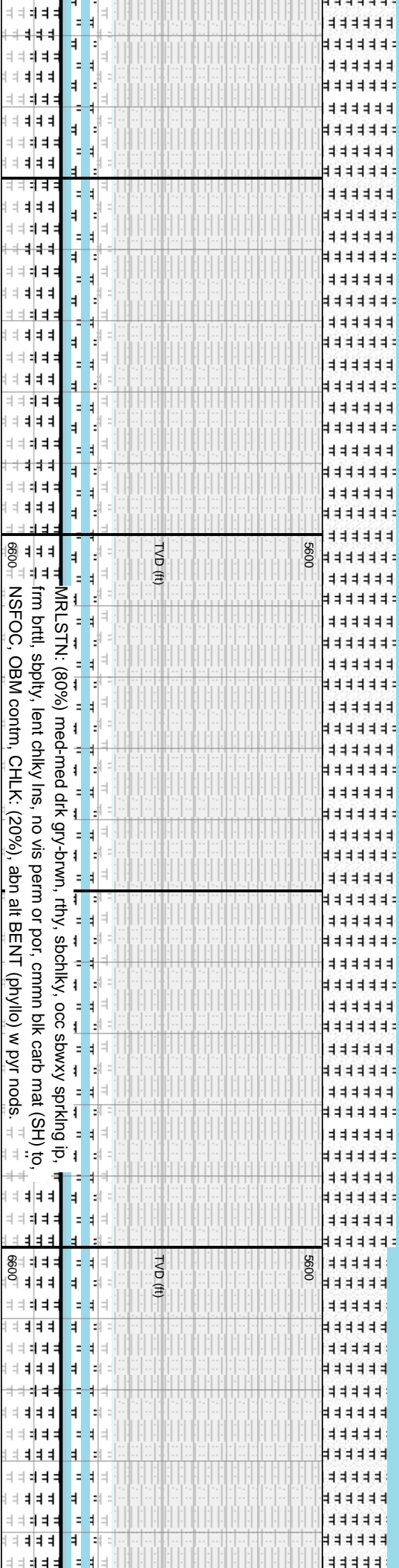
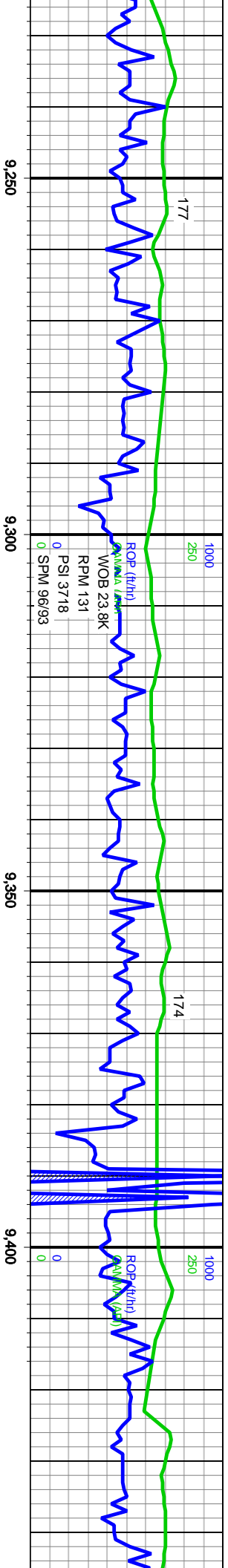
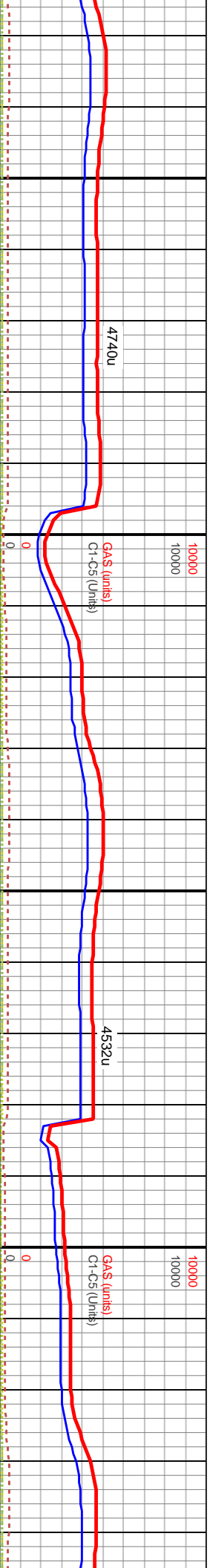


MD: 8,570'	MD: 8,657'	MD: 8,746'
Inclination: 90°	Inclination: 90°	Inclination: 90°
Azimuth: 185°	Azimuth: 184°	Azimuth: 182°
D: 6,417	TVD: 6,417	TVD: 6,417
VS: 3,179'	VS: 3,266'	VS: 3,355'

MD: 8,570'
Inclination: 90°
Azimuth: 185°
D: 6,417
VS: 3,179'

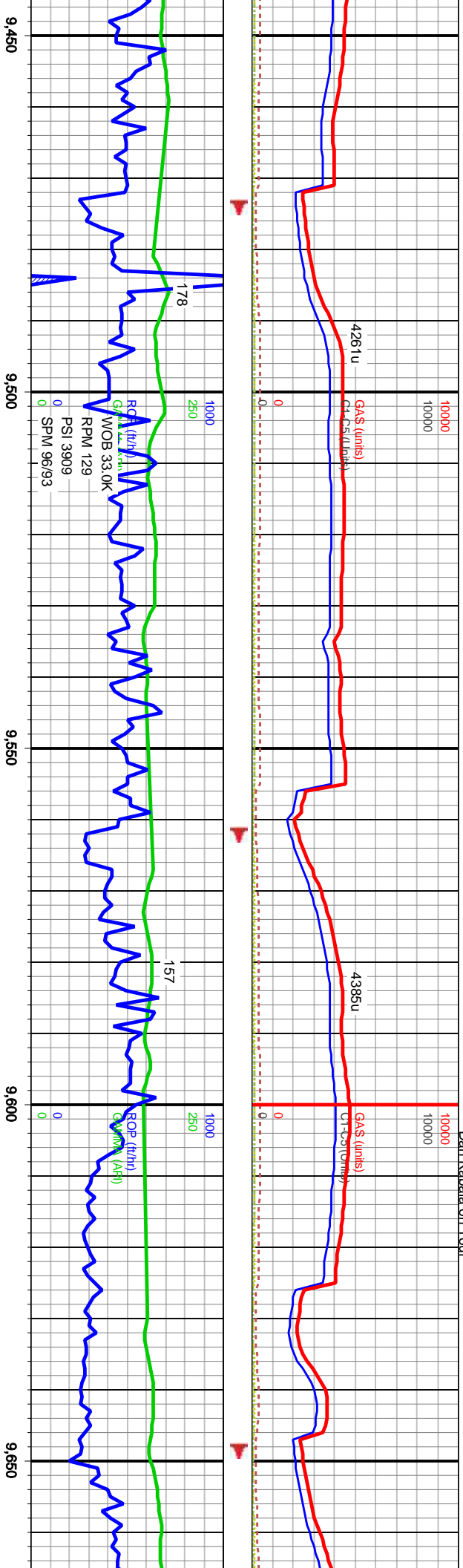
MD: 8,657'
Inclination: 90°
Azimuth: 184°
TVD: 6,417
VS: 3,266'

MD: 8,746'
Inclination: 90°
Azimuth: 182°
TVD: 6,417
VS: 3,355'



MD: 9,274'
Inclination: 90°
Azimuth: 177°
TVD: 6,415'
VS: 3,881'

MD: 9,361'
Inclination: 90°
Azimuth: 178°
TVD: 6,415'
VS: 3,968'

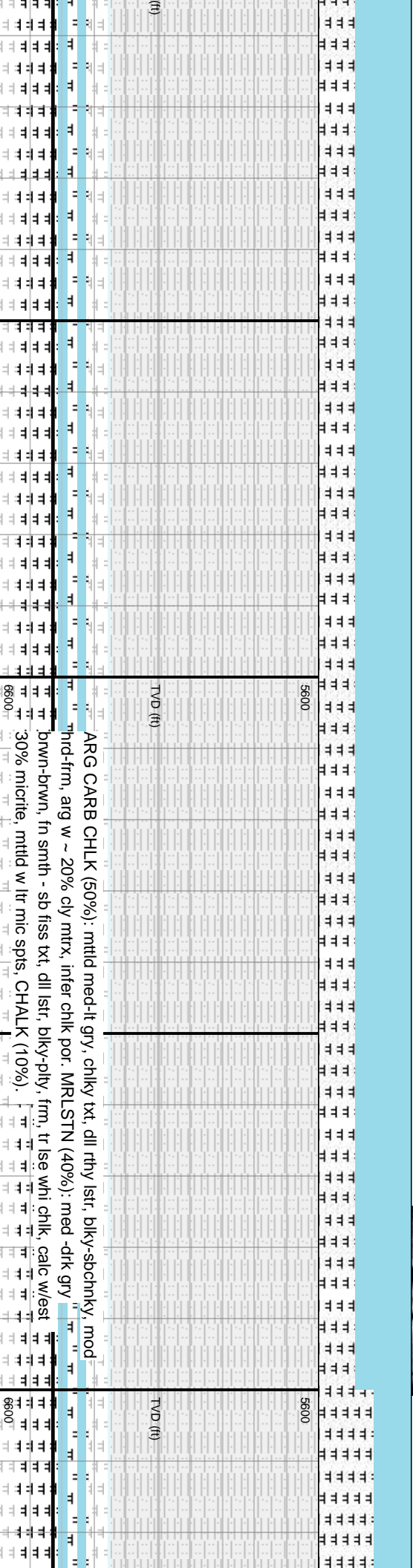
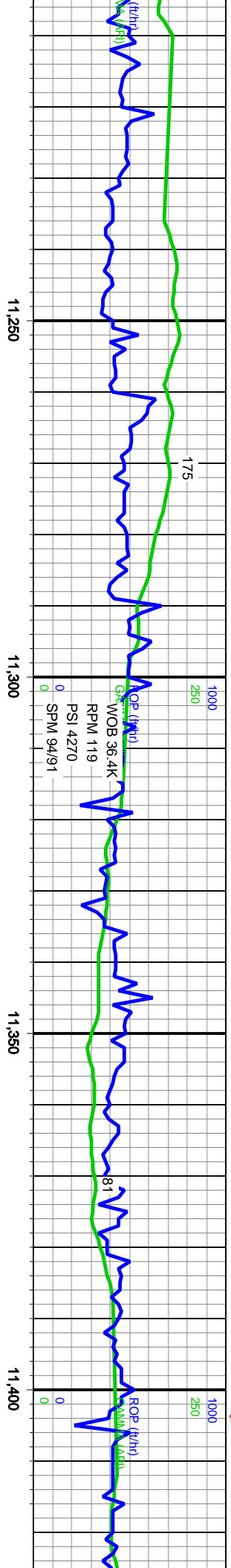
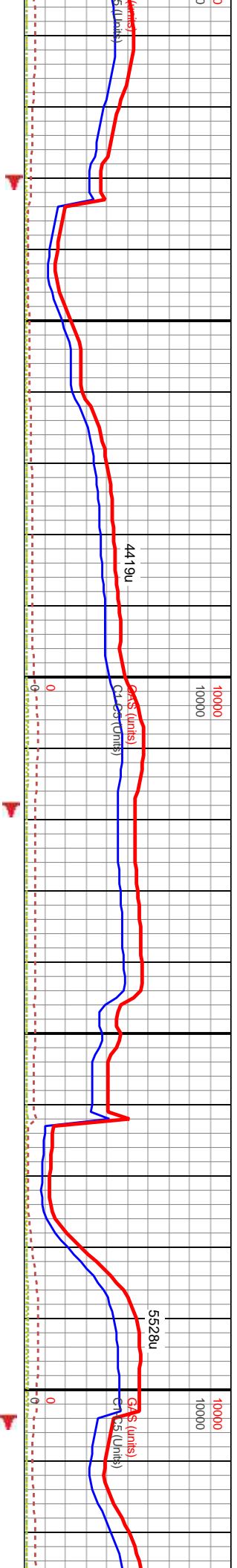


Niobrara C Chalk Target		New Target 6426 TVD	
TVD (ft)		TVD (ft)	
MRLSTN: (70%) med-med dfk gry-brwn, rthy, sbchiky, occ sbwxy spkling lp, firm brtl, sbply, lent chiky lns, no vis perm or por, cmnn blk carb mat (SH) to NSFOC, OBM contin, CHLK: (30%), abn alt BENT (phyll) w pyr nods.			

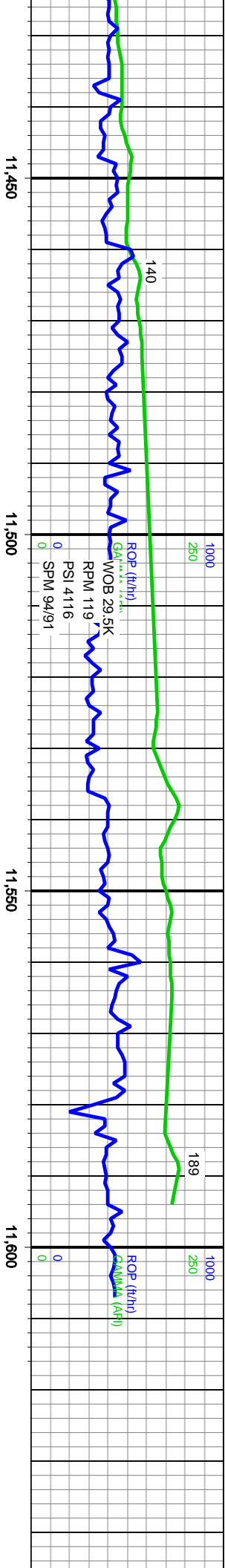
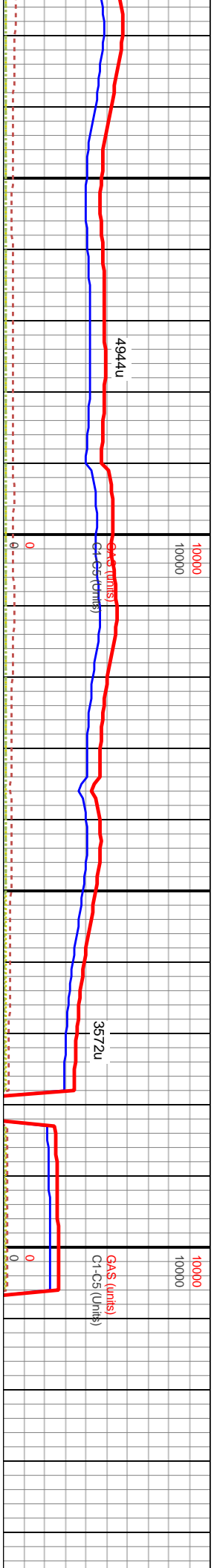
MD: 9,450'
Inclination: 90°
Azimuth: 179°
D: 6.415
VS: 4.057

MD: 9,538'
Inclination: 90°
Azimuth: 180°
TVD: 6.415
VS: 4.145

MD: 9,625'
Inclination: 90°
Azimuth: 181°
TVD: 6.415
VS: 4.232



MD: 11,380'
Inclination: 90°
Azimuth: 178°
TVD: 6,426'
VS: 5.985'



Niobrara C Chalk Target		5600	5600
TVD (ft)		5600	5600
MRLSTN: (60%) med-med drk gry-brwn, rthy, sbchiky, occ sbwxy spking ip, PTB		5600	5600
frm brtl, sbply, lent chiky lns, no vis perm or por, cmnn blk carb mat (SH) to, NSFOC, OBM contn, ARG CARB CHALK: (30%), CHLK: (10%).		5600	5600

MD: 11,468'
Inclination: 90°
Azimuth: 176°
TVD: 6,427'
VS: 6,073'

MD: 11,557'
Inclination: 90°
Azimuth: 174°
TVD: 6,427'
VS: 6,161'

MD: 11,610'
Inclination: 90°
Azimuth: 174°
TVD: 6,427'
VS: 6,214'

	MD	TVD
Sharon Springs	6232	6122
Sharon Springs "A"	6267	6152
Sharon Springs "B"	6338	6207
Niobrara "A" Chalk	6398	6249
Niobrara "A" Marl	6415	6260
Niobrara "B" Chalk	6528	6324
Niobrara "B" Marl	6596	6352
Niobrara "C" Chalk	6703	6383

	Circ & Condition Hole, TOOH	
Started logging @ 15:13, on 9/20/2018, Bit		
#2: BAKER, TYPE: ATD505T, SERIAL #:		
52288245 IN @ 1,615' MD out on		
9/21/2018 @ 11,610' MD		

11,650

11,650

DMTD 11,610 MD @ 10:20 09/21/2018

Formation Tops picked by Paul McKay
(Bonanza Creek)

Dan Kabala
Ryan Scribner

Thank you for using
Decollement Consulting
Inc