



Scale: 5" / 100'
Measured Depth Log

Well Name Pavistma South Well #3

Location 460' FWL 1096' FSL NWSW Sec. 32 T6N R67W

State Colorado

Country USA

API Number 05-123-36650-0000

Region DJ Basin

Spud Date 9-04-13(Curve) / 9-27-13(Lateral)

Surface Coordinates Lat: 40.440460
Long: -104.924860

Bottom Hole Coordinates (Upon Completion of lateral)
Lat: 40.43903
Long: -104.90796

Ground Elevation 4954

Logged Interval 5000 To 12018

Formation Niobrara

Type of Drilling Fluid Fresh Water

County Weld

Rig Number Frontier #10

Field Wattenburg

Drilling Completed 9-06-13(Curve) / 9-30-13(Lateral)

K.B. Elevation 4976.5

Total Depth 12018

Company Tekton Windsor
Address 640 Plaza Drive
Highlands Ranch

Name Dominic Pitre / D
Company Empirica
Address 6741 Satsuma D
Houston, TX 770
(713)-466-7400

ML-056
2 Man Logg
Start Date: 8/20/13
Release Date: 8/20/13

Operator

LLC
#290
n, CO 80129

Geologist

an Scott

10-01-13

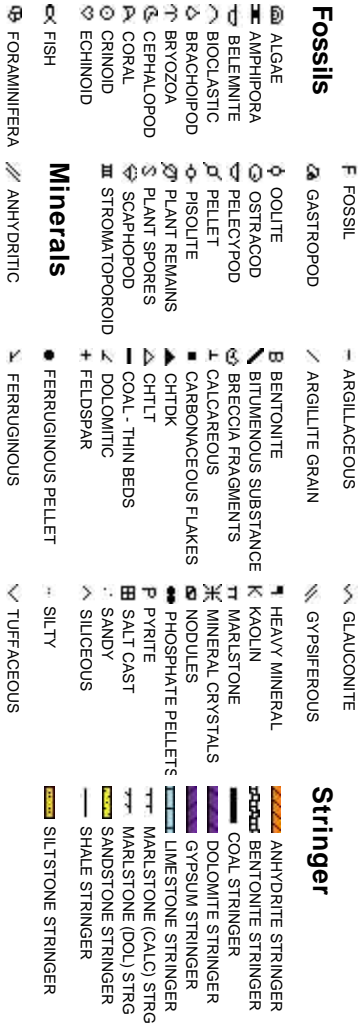
Other

ing Service
8-26-13
te: 10-01-13

Rock Types



Accessories



Oil

DE
EV
OL
ST
FE
FR
IN
IN

Other Symbols

Show

- MOLDIC
- ORGANIC
- PINPOINT
- VUGGY

QUESTIONABLE

NOTTED STAINING

osity

- BIT
- CONNECTION (LEFT)
- CONNECTION (RIGHT)
- CONNECTION GAS
- CORE - LOST
- CORE - RECOVERED
- DST INTERVAL

Engineering

- FAULT
- FORMATION TOP
- GAS SHOW
- MINDEPTH MN DEPTH
- NORMAL FAULT
- OIL SHOW
- OVERTURNED STRATA
- REVERSE FAULT
- SIDEWALL CORE (LEFT)
- SIDEWALL CORE (RIGHT)
- SLIDE
- SURVEY
- TRIP GAS

Rounding

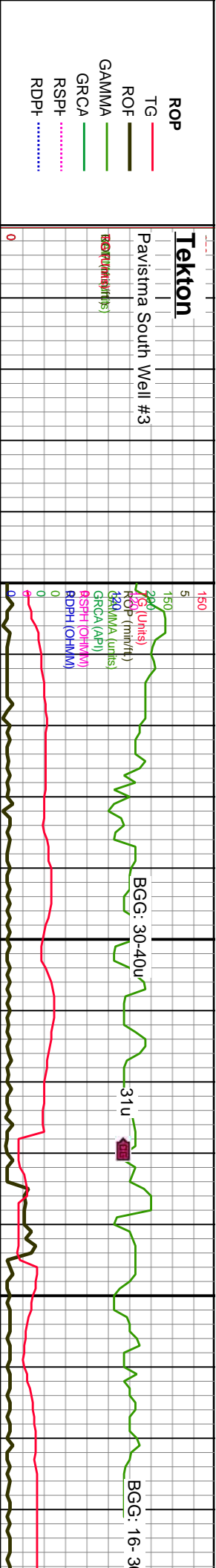
- WIRELINE TESTED - LEFT
- WIRELINE TESTED - RT
- ANGULAR
- ROUNDED
- SUBANG
- SUBRND
- FINELYXLN
- GRAINSTONE
- LITHOGRAPHIC
- MICROXLN
- MUDSTONE
- PACKSTONE
- WACKESTONE

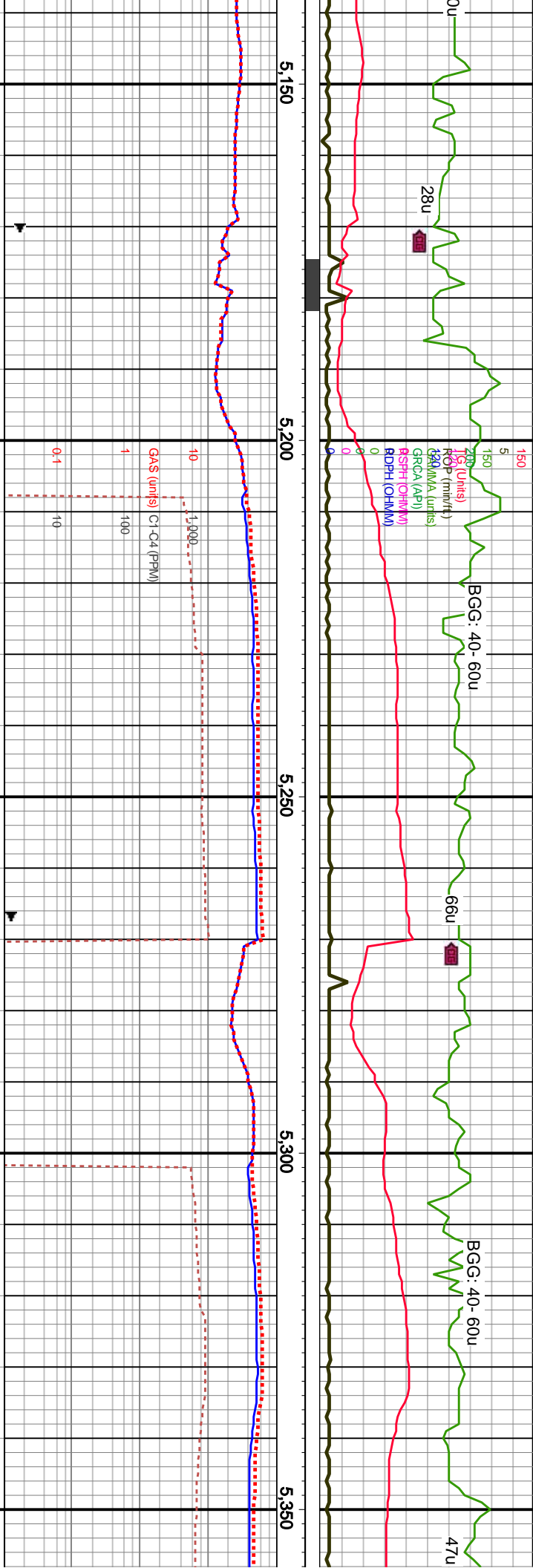
Textures

- BOUNDSTONE
- CHALKY
- CRYPTOXLN

Sorting

- MODERATE
- POOR
- WELL



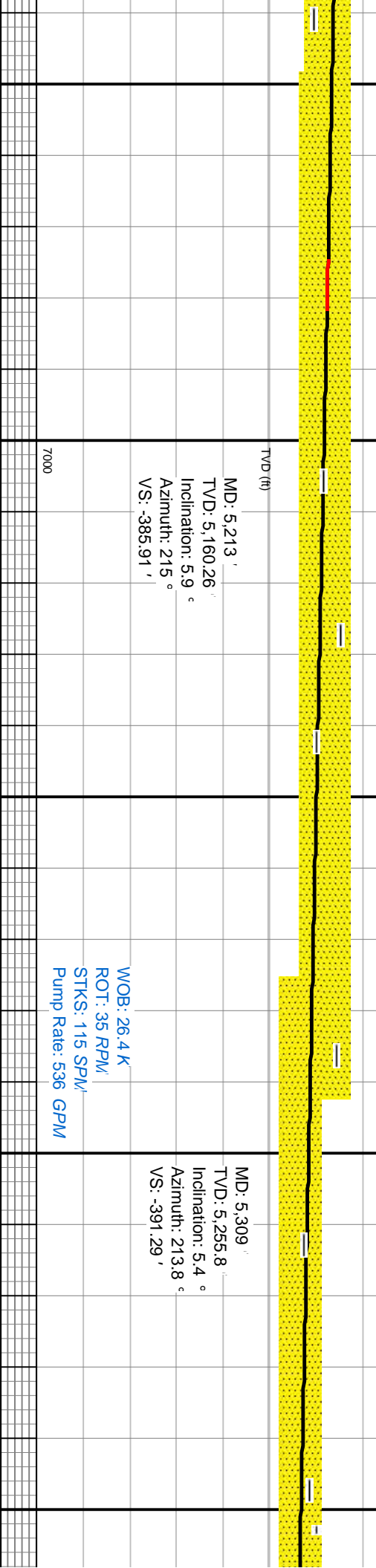


5,180-5,240 SS: pred gy, ip lt gy- off wh, mod
frm to mod hd, blkly- pty, v f gr, occ f gr, silty-
arg, ply srt, pred clus, ip unconcs, pred sil
cnt, occ calc, occ lith frags, pp por, SLTY
SH: med gy, frm, pty

5,240-5,300 SS: pred gy, ip lt gy- off wh, mod
frm to mod hd, blkly- pty, v f gr, occ f gr, silty-
arg, ply srt, pred clus, ip unconcs, calc, occ
lith frags, pp por, SLTY SH: med gy, frm, pty

5,300-5,360 SS: pred gy, ip lt gy- off wh, mod frm
to mod hd, blkly- pty, v f gr, occ f gr, silty- arg, ply
srt, pred clus, ip unconcs, calc, occ lith frags, pp
por, SLTY SH: med gy, frm, pty

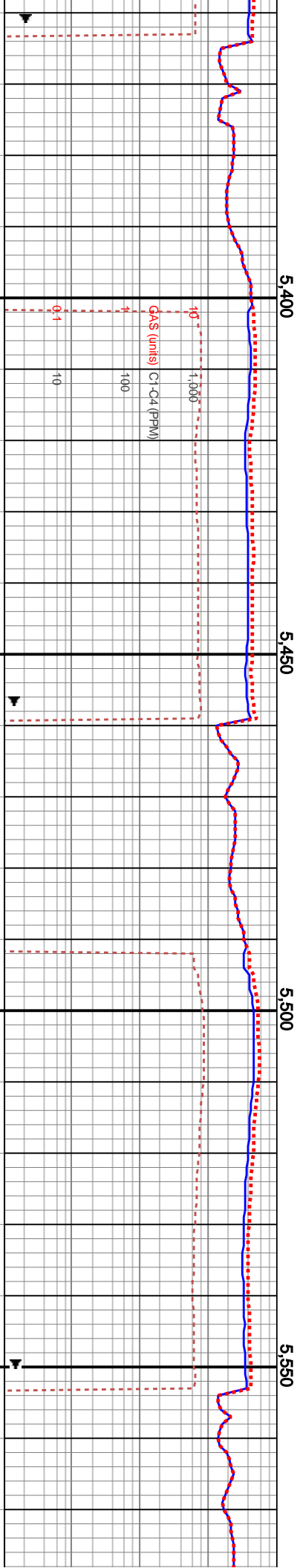
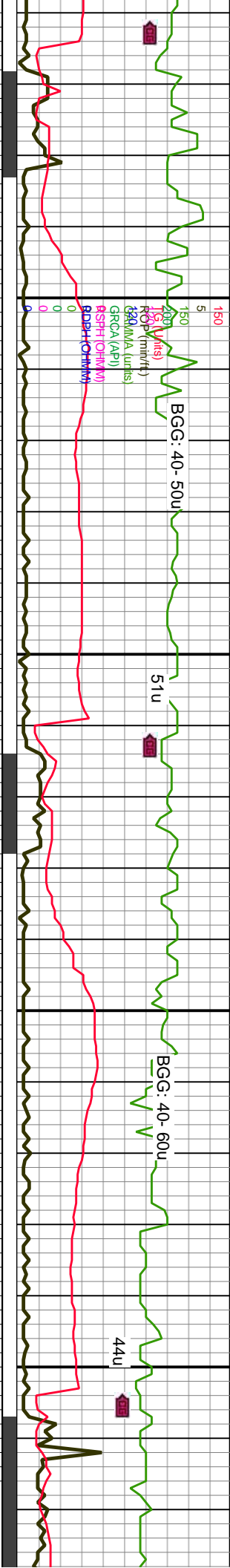
5,360-5,420 SS: pred gy, ip lt gy- off wh, mod
frm to mod hd, blkly- pty, v f gr, occ f gr, silty-
arg, ply srt, pred clus, ip unconcs, calc, occ lith frags, pp
por, SLTY SH: med gy, frm, pty



MD: 5,213 '
TVD: 5,160.26 '
Inclination: 5.9 °
Azimuth: 215 °
VS: -385.91 '

WOB: 26.4 K
ROT: 35 RPM
STKS: 115 SPM
Pump Rate: 536 GPM

MD: 5,309 '
TVD: 5,255.8 '
Inclination: 5.4 °
Azimuth: 213.8 °
VS: -391.29 '

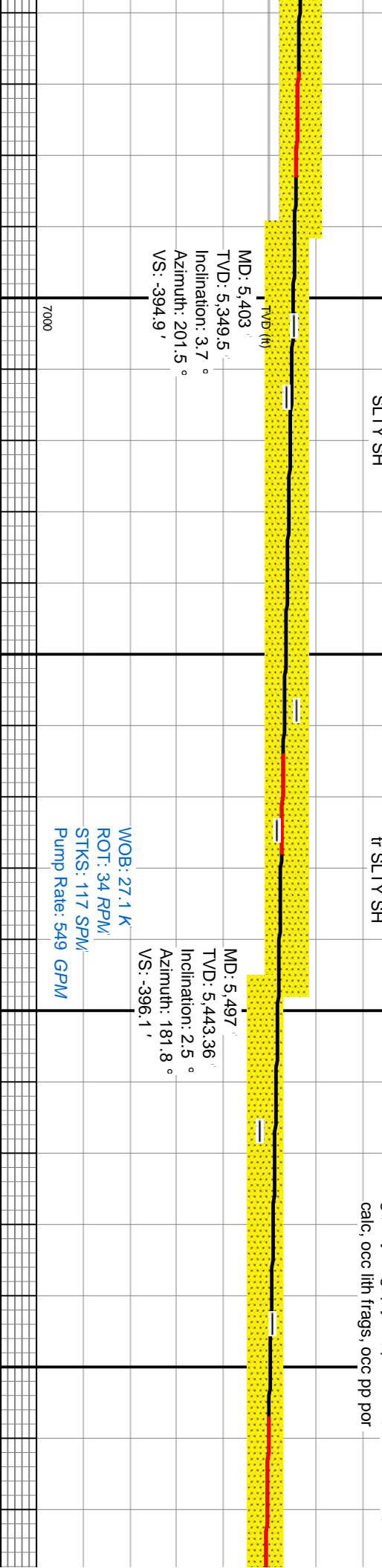


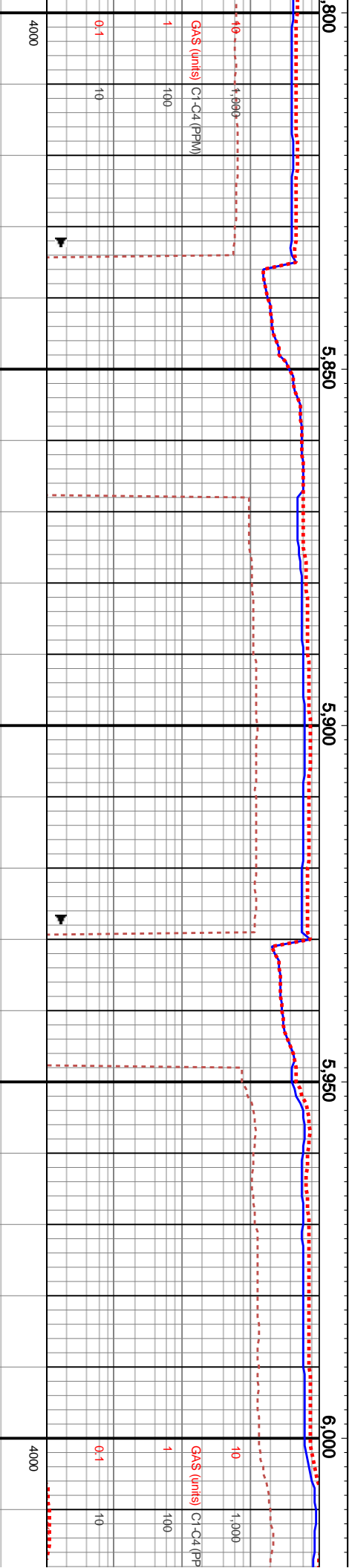
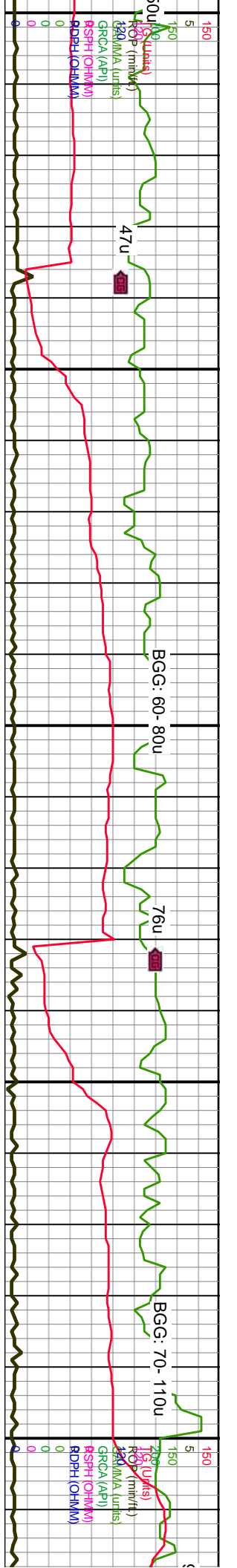
SS: pred gy, ip lt gy - off wh, mod
hd, blkly- pty, v f gr, occ f gr, silty-
i, pred clus, ip uncon, calc, occ
pp por; SLTY SH: med gy, frm, pty

5420-5480 SS: pred gy, ip lt gy, tr off wh,
mod frm to mod hd, blkly- pty, v f gr, occ
f gr, silty- arg, ply srt, pred clus, occ
uncon, calc, occ lith frags, pp por, tr
SLTY SH

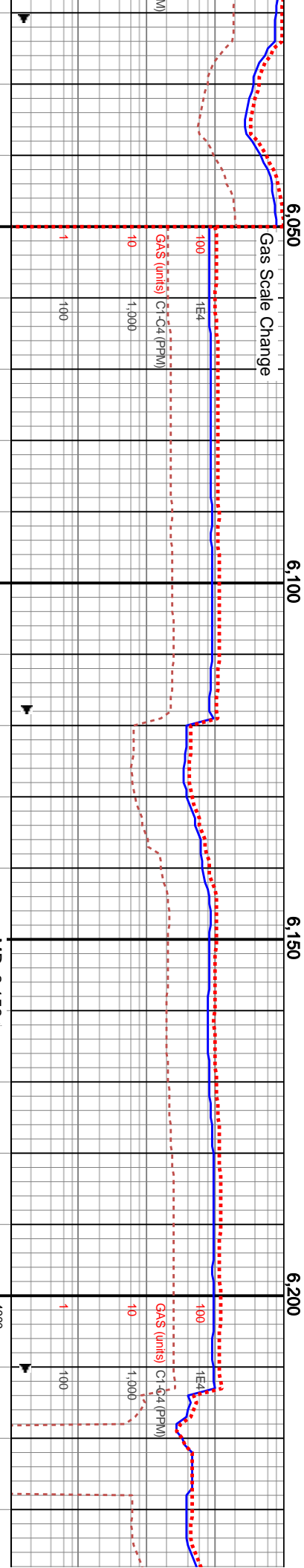
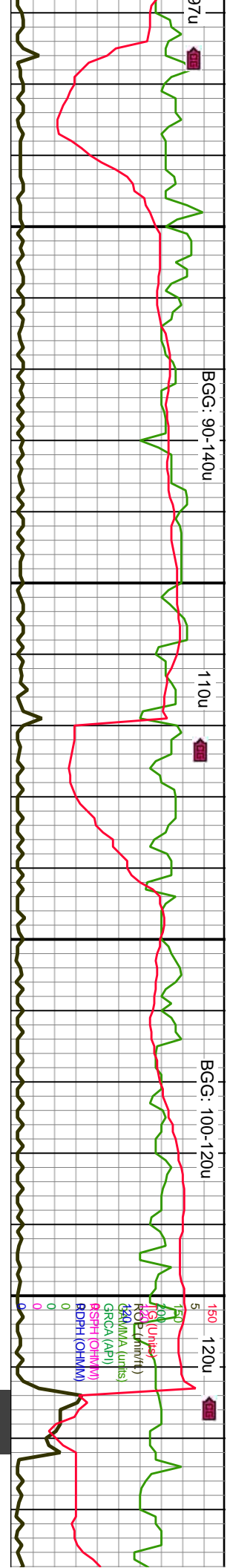
5480-5540 SS: pred gy, ip lt gy, tr off
wh, mod frm to mod hd, blkly- pty, v f
gr, occ f gr, silty- arg, ply srt, pred clus,
occ uncon, calc, occ lith frags, pp por,
tr SLTY SH

5540-5600 SS: pred gy, ip lt gy, tr off wh,
mod frm to mod hd, blkly- pty, v f gr, occ f
gr, silty- arg, ply srt, pred clus, occ uncon,
calc, occ lith frags, occ pp por





off wh, mod	5900-5960 SS: pred gy, ip lt gy, tr off wh, mod frm to mod hd, pred pty, ip blk, pred v f gr, silty- v arg, ply srt, pred clus, occ uncons, pred calc, occ lith frags, no vis por; STLY SH: med gy, frm- hd, pty, calc, arg	6020-6080 SS: pred gy, ip lt gy, tr off wh, mod hd, pred pty, ip blk, pred v f gr, silty- v arg, ply srt, pred clus, occ uncons, pred calc, occ lith frags, no vis por; STLY SH: med gy, frm- hd, pty, calc, arg
gr, silty- v arg, ic, occ lith	5840-5900 SS: pred gy, ip lt gy, tr off wh, mod frm to mod hd, pred pty, ip blk, pred v f gr, silty- v arg, ply srt, pred clus, occ uncons, pred calc, occ lith frags, no vis por	6020-6080 SS: pred gy, ip lt gy, tr off wh, mod hd, pred pty, ip blk, pred v f gr, silty- v arg, ply srt, pred clus, occ uncons, pred calc, occ lith frags, no vis por; STLY SH: med gy, frm- hd, pty, calc, arg
TVD (ft)	TVD (ft)	TVD (ft)
MD: 5,873' TVD: 5,819.27' Inclination: 0.7° Azimuth: 310.5° VS: -331.12'	MD: 5,967' TVD: 5,913.26' Inclination: 1° Azimuth: 272.7° VS: -332.41'	MD: 5,967' TVD: 5,913.26' Inclination: 1° Azimuth: 272.7° VS: -332.41'
WOB: 27.3 K ROT: 36 RPM STKS: 116 SPM Pump Rate: 539 GPM		



y, ip lt gy, tr off wh, mod frm to
biky, pred v f gr, silty- v arg, ply
ons, pred calc, occ lith frags,
med gy, frm- hd, ply, calc, arg

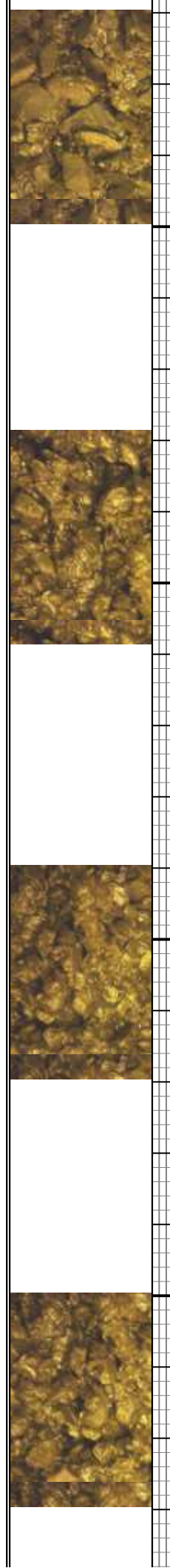
6080-6140 SS: pred gy, ip lt gy, tr off wh, mod frm to
mod hd, pred ply, ip biky, pred v f gr, silty- v arg, ply
srt, pred clus, occ uncon, pred calc, occ lith frags,
no vis por, SLTY SH: med gy, frm- hd, ply, calc, arg

6140 -6200 SS: pred gy, ip lt gy, tr off
wh, mod frm to mod hd, pred ply, ip
biky, pred v f gr, silty- v arg, ply srt, pred
clus, occ uncon, pred calc, occ lith
frags, no vis por, tr SLTY SH

6200-6260 SS: pred gy, ip lt gy, tr off
mod frm to mod hd, pred ply, ip biky,
pred v f gr, silty- v arg, ply srt, pred clu
occ uncon, pred calc, occ lith frags, r
vis por, tr SLTY SH

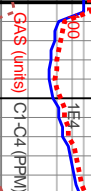
MD: 6,062 '
TVD: 6,008.24 '
Inclination: 1.4 °
Azimuth: 251.1 °
VS: -334.29 '

WOB: 25 K
ROT: 37 RPM
STKS: 115 SPM
Pump Rate: 535 GPM





93u



SG: 106u

VS: -336.65'

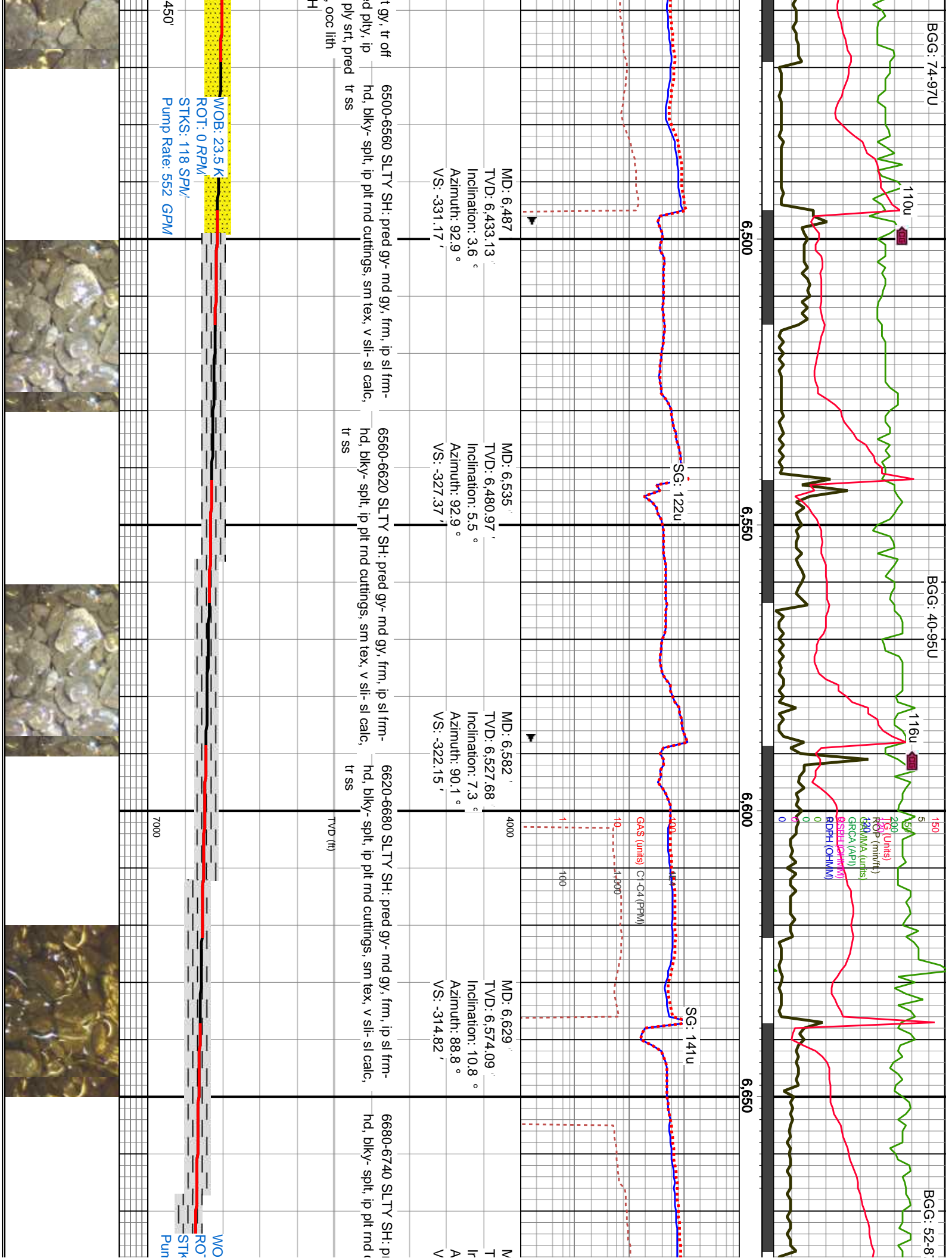
VS: -334.88'

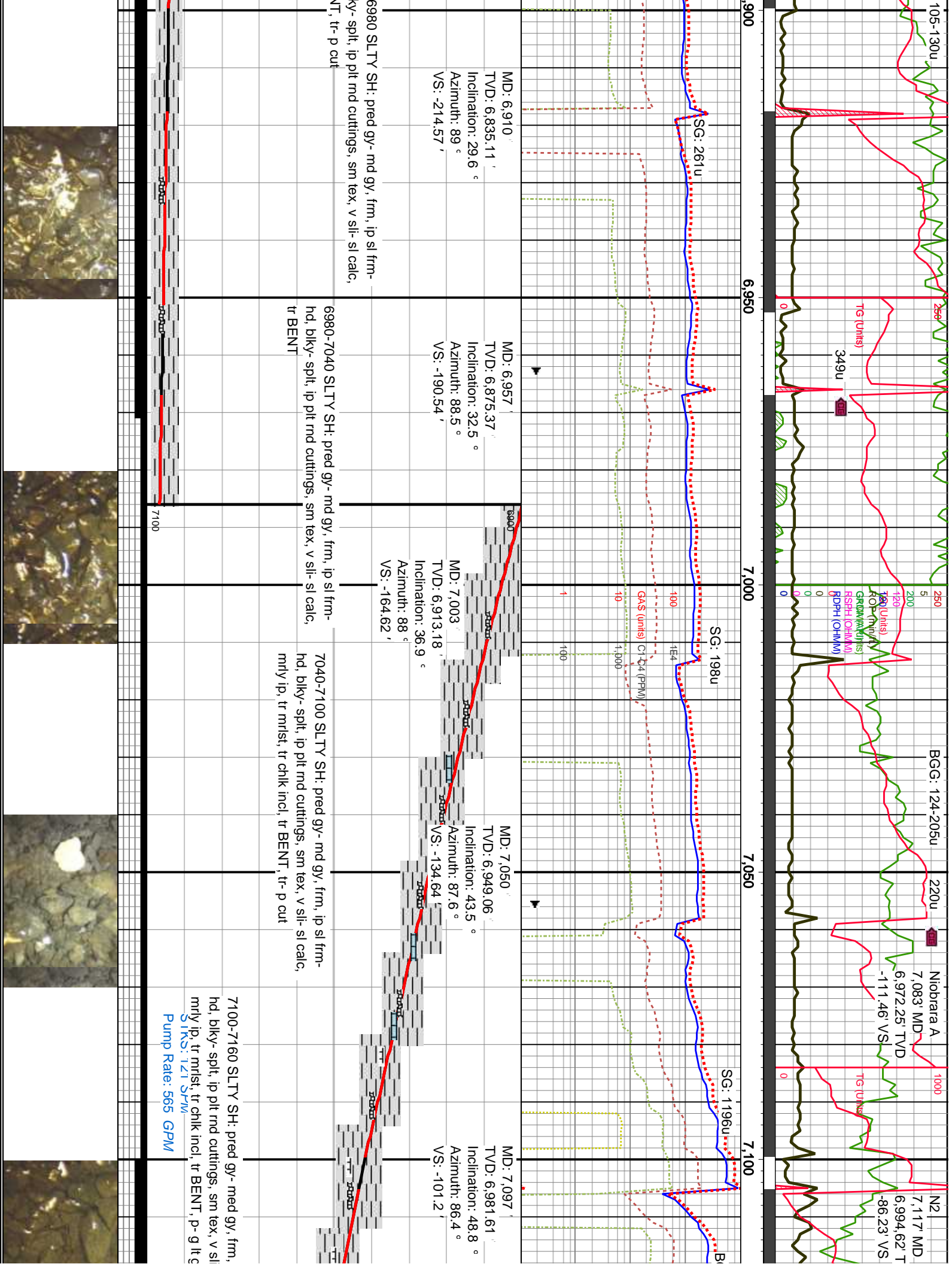
VS: -333.87 '

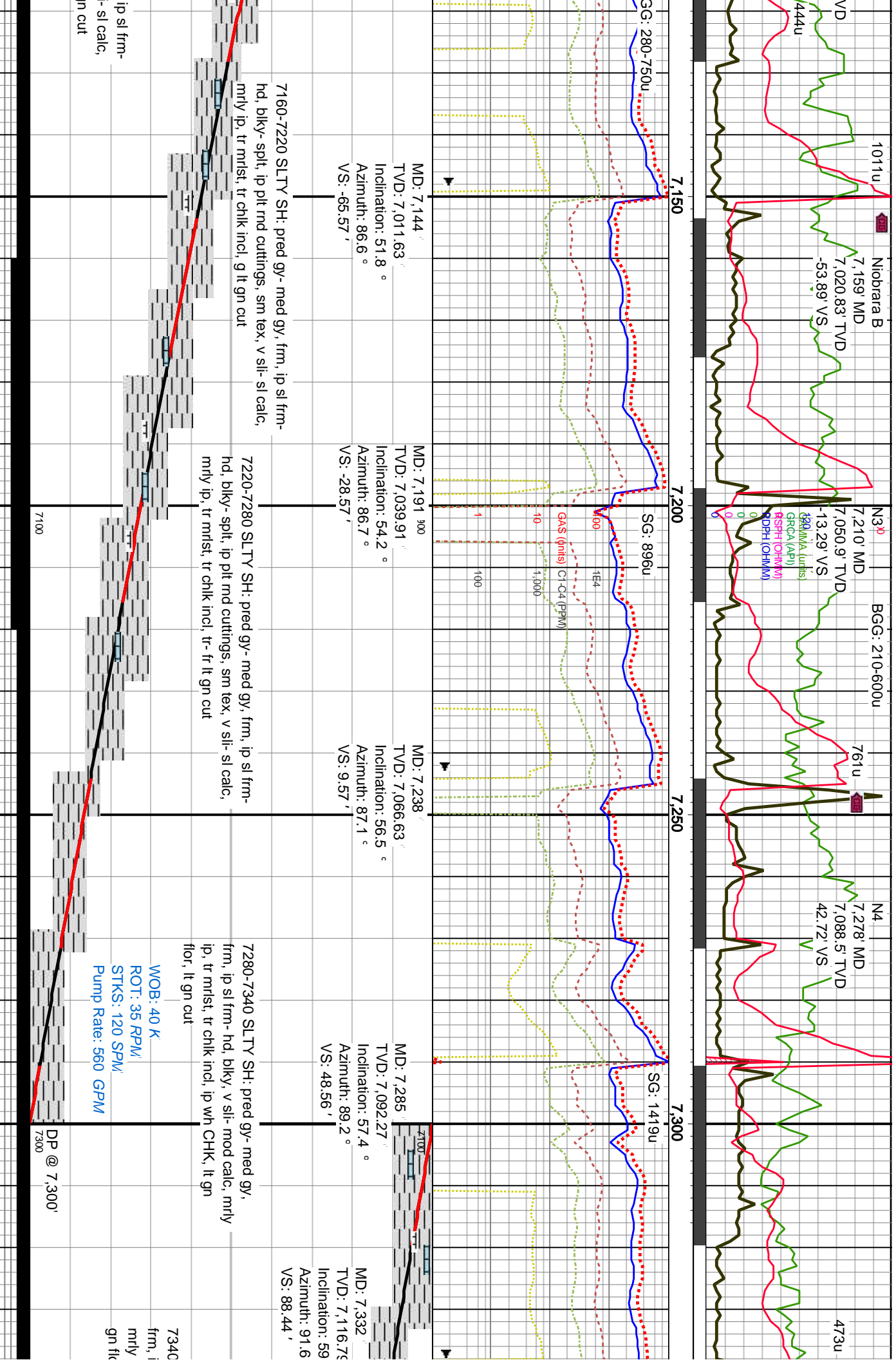
VS: -333.05 '

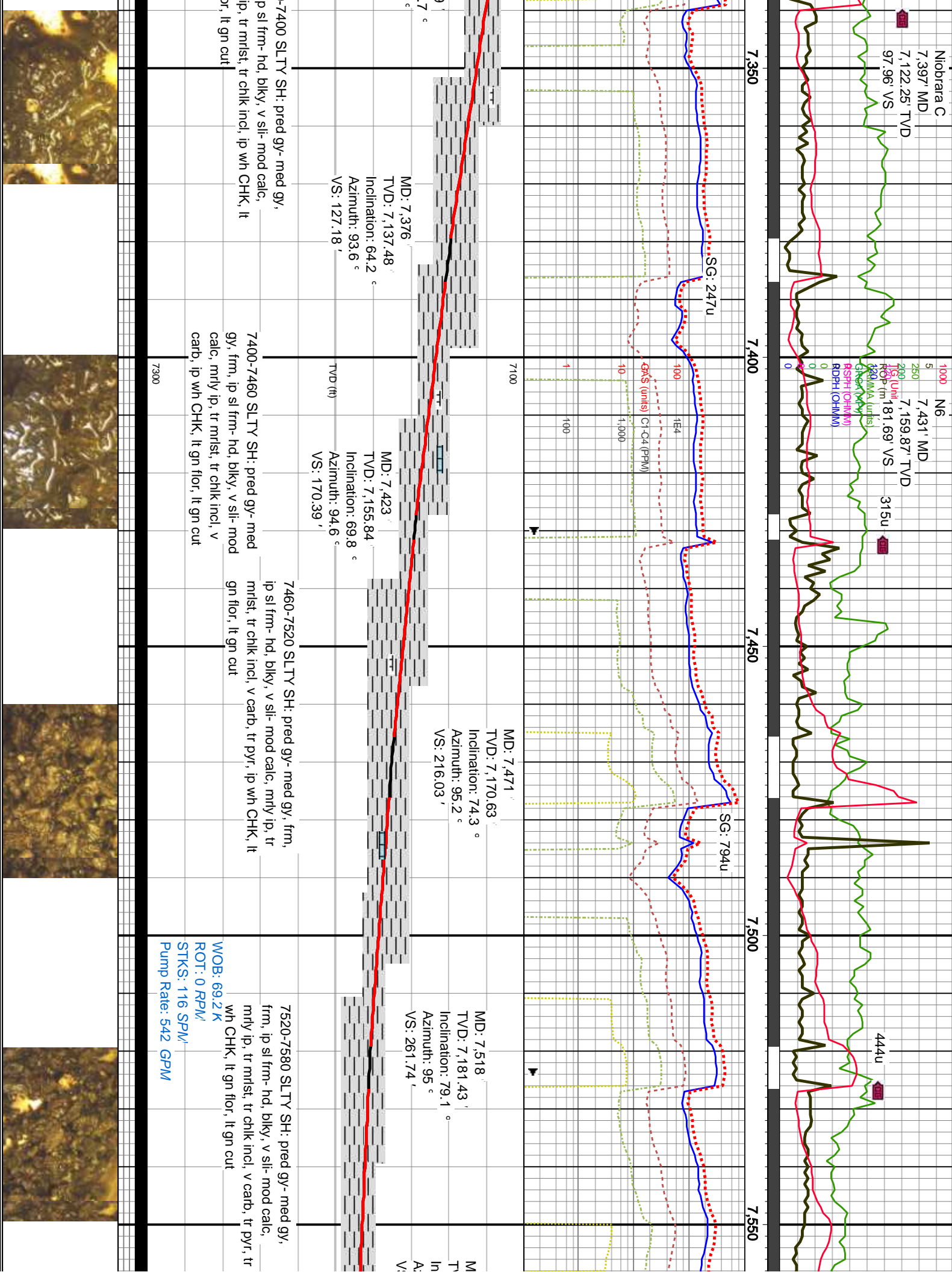
wh, mod firm to mod hd, pre
bly, pred v f gr, slty- v arg,
clus, occ uncons, pred calc
frags, no vis por, tr SLTY S

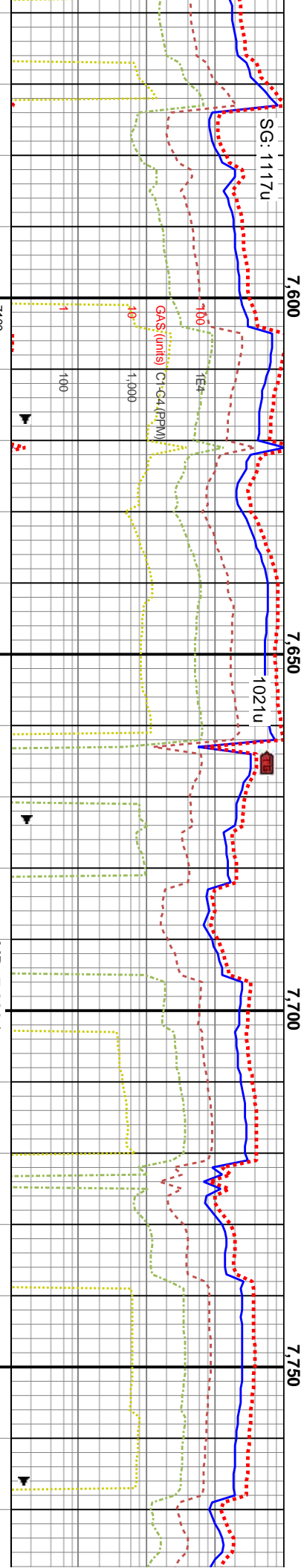
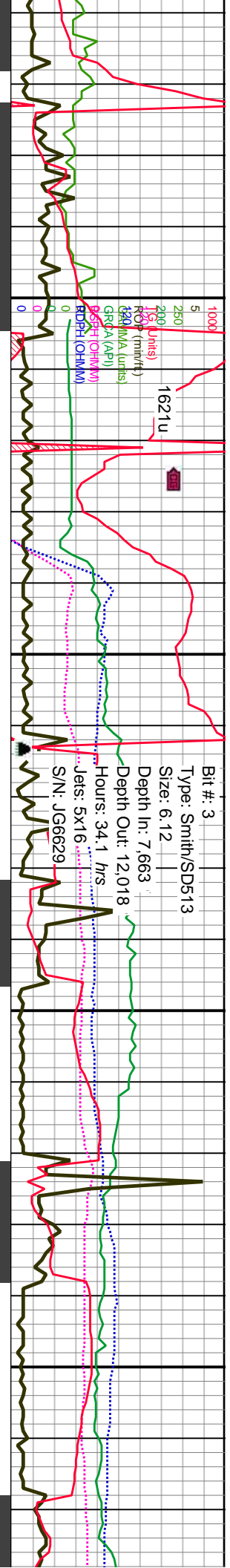
DS @ 6,











D: 7.566'
VD: 7.188.24'
Inclination: 84.6 °
Azimuth: 94.8 °
S: 309.23'

MD: 7.607'
TVD: 7.190.63'
Inclination: 88.7 °
Azimuth: 94.8 °
VS: 350.13'

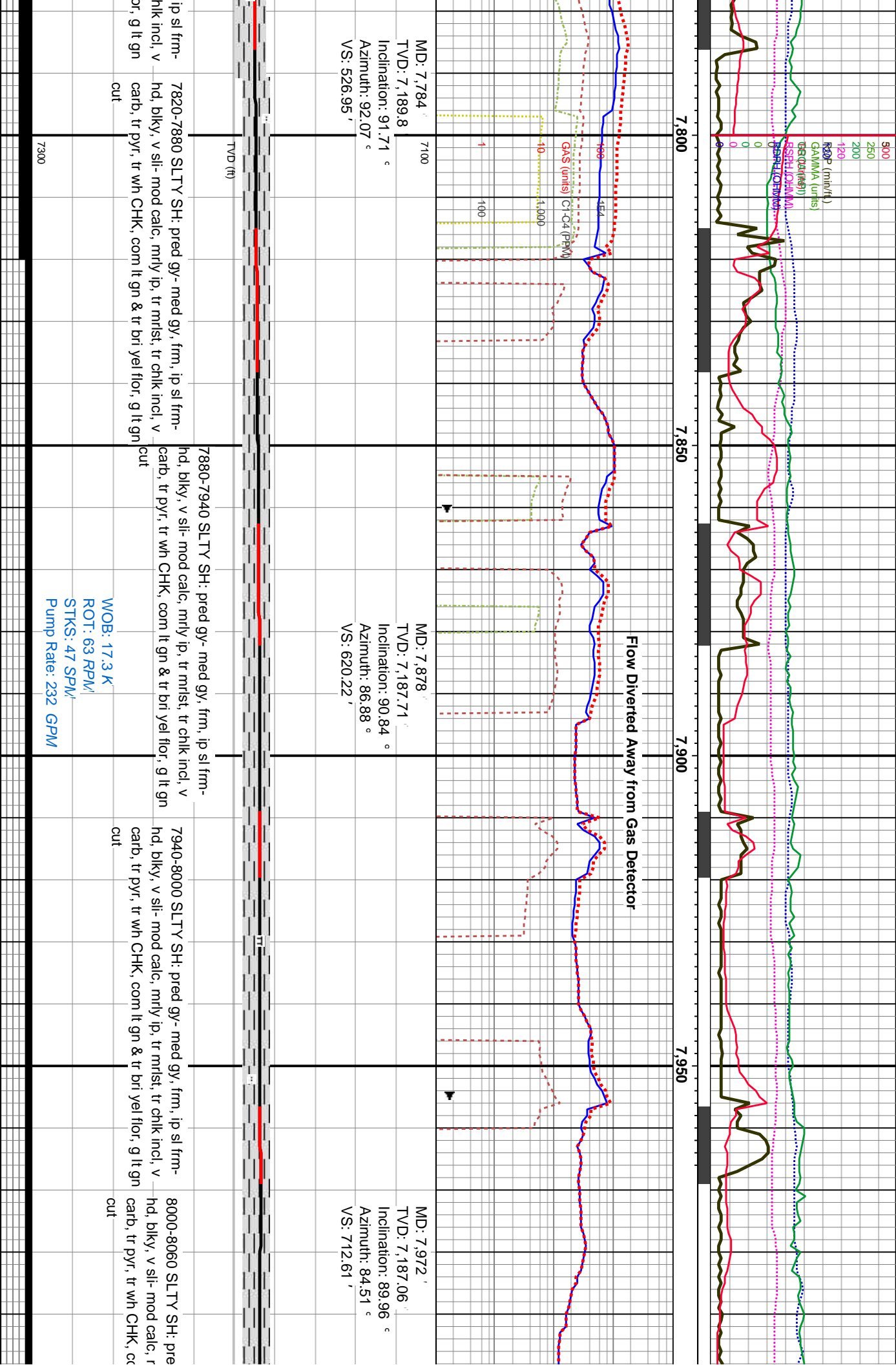
Intermediate Casing
Set @ 7650'

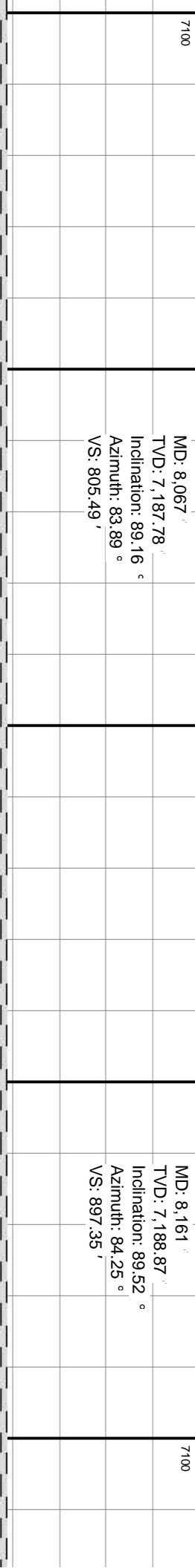
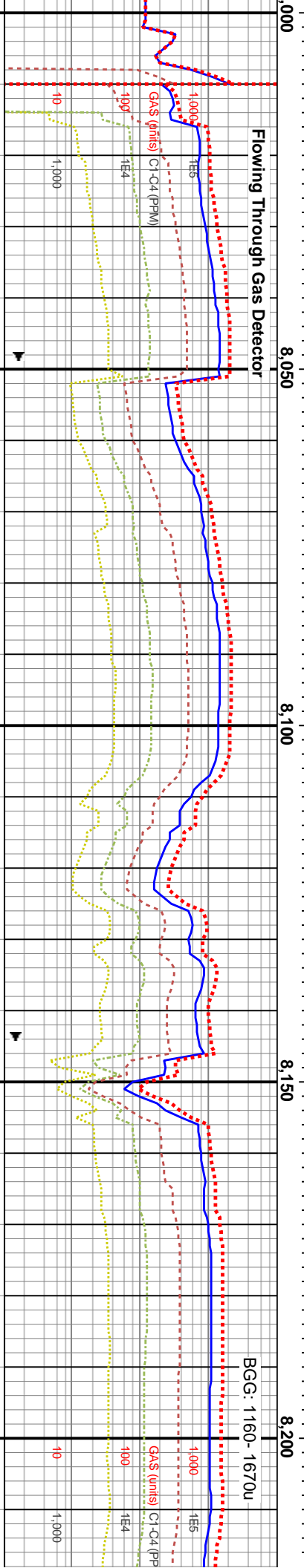
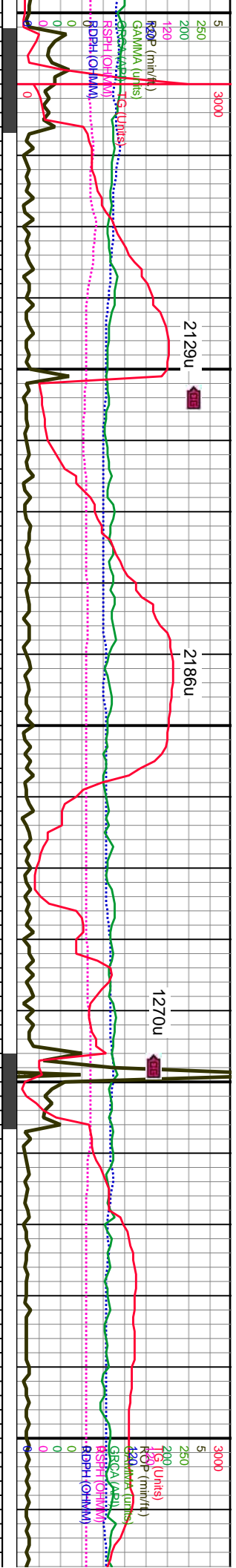
Curve TD Reached on 9-06-13
@ 1100hrs @ a depth of 7663'

MD: 7.689'
TVD: 7.191.4'
Inclination: 90.22 °
Azimuth: 94.7 °
VS: 432.1'

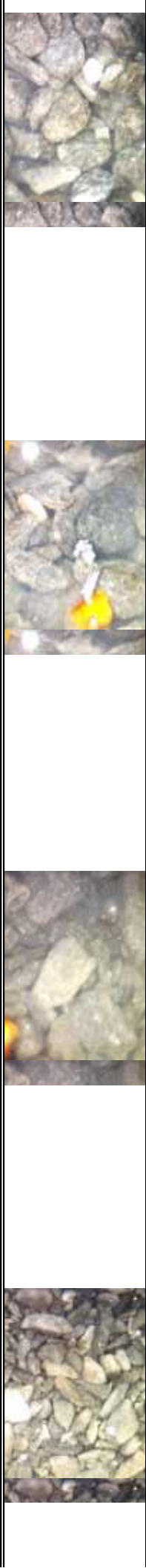
7580-7640 SLTY SH: pred gy- med gy, frm, ip sl frm- hd, blk, v sli- mod calc, mly ip, tr mlst, tr chl incl, v carb, tr pyr, tr wh CHK, abnt lt gn flr, g lt gn cut	7640-7700 SLTY SH: pred gy- med gy, frm, ip sl frm- hd, blk, v sli- mod calc, mly ip, tr mlst, tr chl incl, v carb, tr pyr, tr wh CHK, abnt lt gn & bri yel flr, g lt gn cut	7700-7760 SLTY SH: pred gy- med gy, frm, ip sl frm- hd, blk, v sli- mod calc, mly ip, tr mlst, tr chl incl, v carb, tr pyr, tr wh CHK, abnt lt gn & bri yel flr, g lt gn cut	7760-7820 SLTY SH: pred gy- med gy, frm, hd, blk, v sli- mod calc, mly ip, tr mlst, tr carb, tr pyr, tr wh CHK, abnt lt gn & bri yel flr cut
WOB: 13.1 K ROT: 66 RPM STKS: 47 SPM Pump Rate: 229 GPM	DS @ 7.663'	9-28-13	

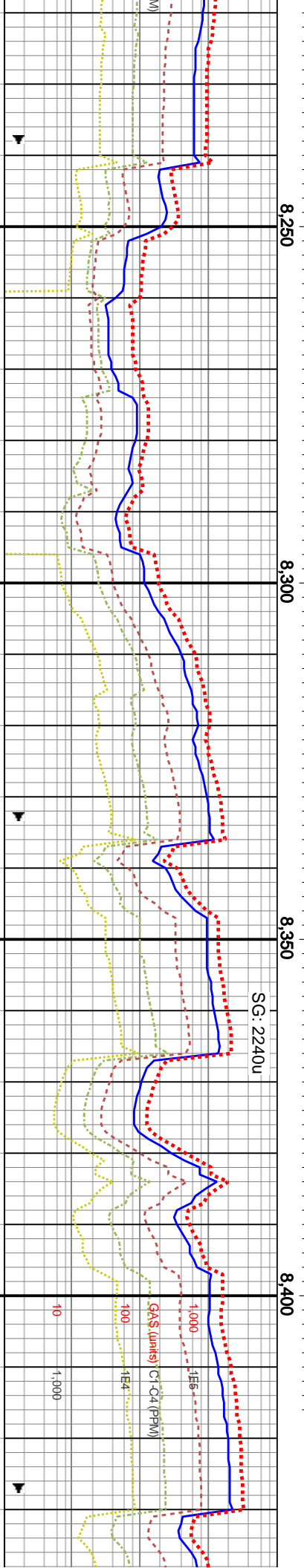
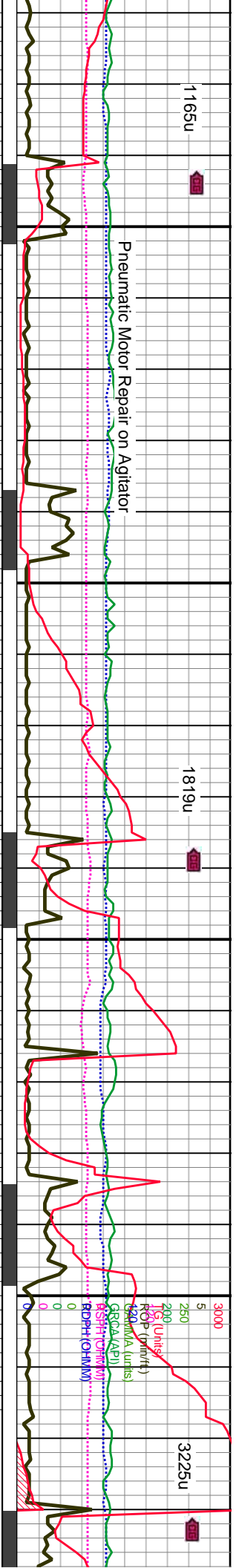






8060-8120 SLTY SH: pred gy- med gy, frm, ip sl frm- hd, blk, v sil- mod calc, mrlly ip, tr mrlst, tr chlk incl, v carb, tr pyr, tr wh CHK, com lt gn & tr bri yel flr, g lt gn cut	8120-8180 SLTY SH: pred gy- med gy, frm, ip sl frm- hd, blk, v sil- mod calc, mrlly ip, tr mrlst, tr chlk incl, v carb, tr pyr, tr wh CHK, com lt gn & tr bri yel flr, g lt gn cut	8180-8240 SLTY SH: pred gy- med gy, frm, ip sl frm- hd, blk, mod- v calc, pred mrlly, mrlst, tr chlk incl, v carb, tr pyr, tr wh CHK, com lt gn & tr bri yel flr, tr- p lt gn cut
WOB: 17.2 K ROT: 62 RPM STKS: 48 SPM Pump Rate: 236 GPM		DP @ 8,200'



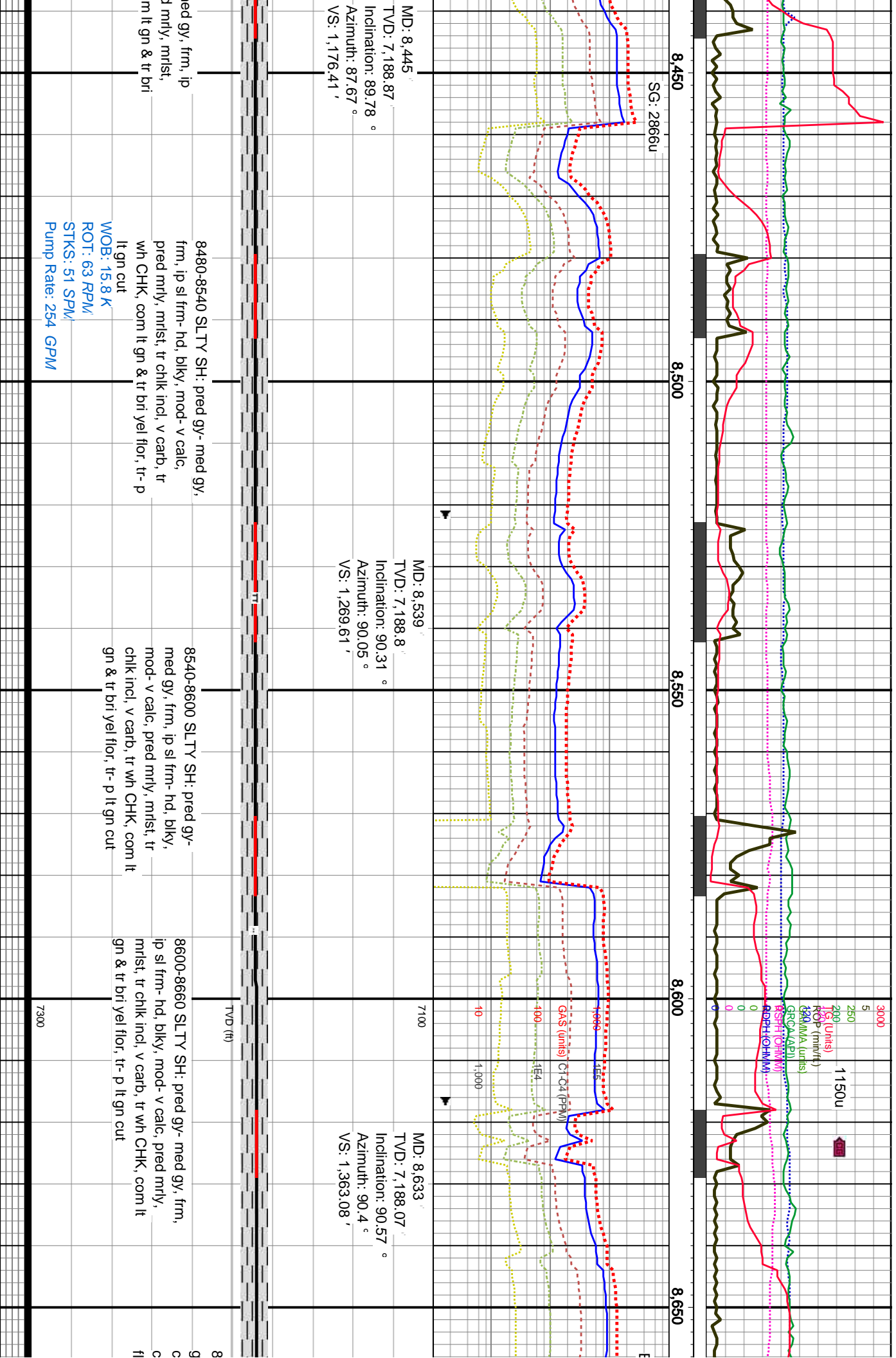


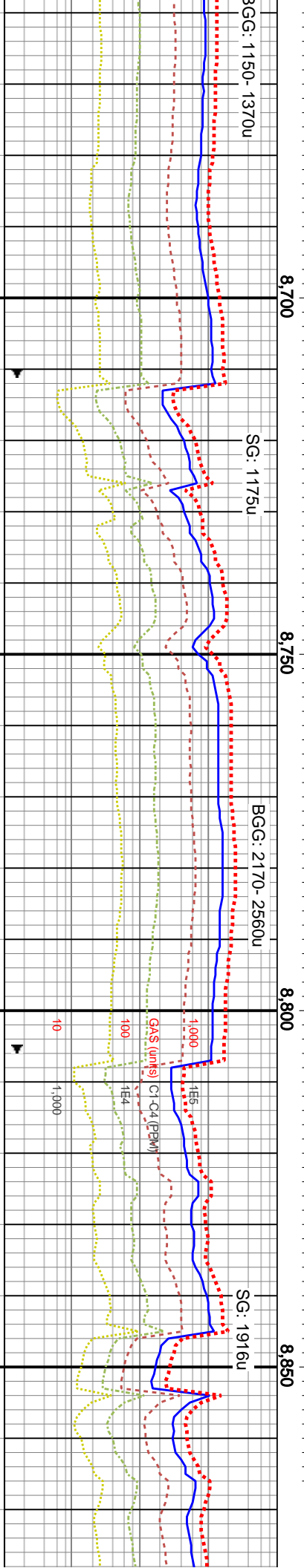
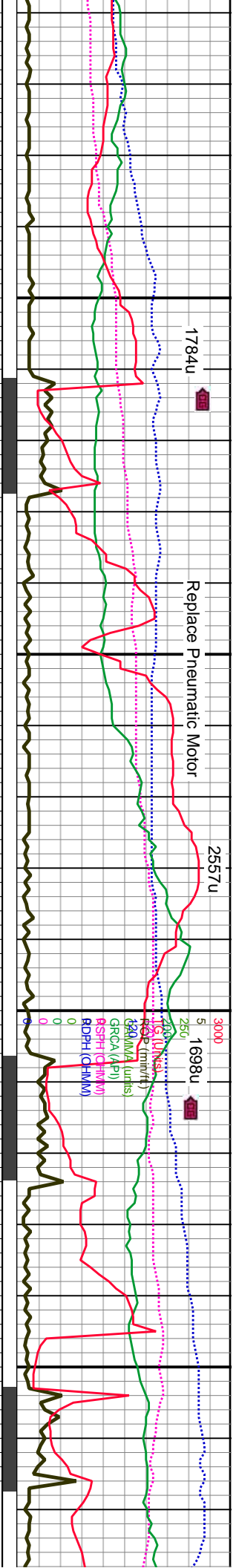
MD: 8,256'
TVD: 7,188.87'
Inclination: 90.48 °
Azimuth: 84.77 °
VS: 990.34'

MD: 8,350'
TVD: 7,188.58'
Inclination: 89.87 °
Azimuth: 86.27 °
VS: 1,082.67'

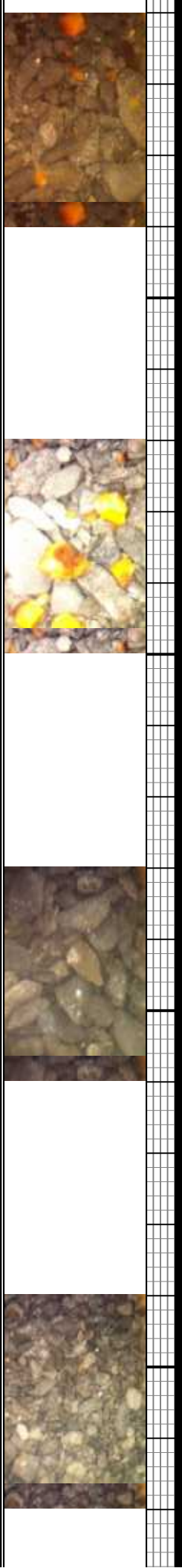
8240-8300 SLTY SH: pred gy- med gy, frm, ip sl frm-hd, blkly, mod- v calc, pred mrlly, mltst, tr chlkl incl, v carb, rr pyr, tr wh CHK, com lt gn & tr bri yel flor, tr- p lt gn cut	8300-8360 SLTY SH: pred gy- med gy, frm, ip sl frm-hd, blkly, mod- v calc, pred mrlly, mltst, tr chlkl incl, v carb, rr pyr, tr wh CHK, com lt gn & tr bri yel flor, tr- p lt gn cut	8360-8420 SLTY SH: pred gy- med gy, frm, ip sl frm-hd, blkly, mod- v calc, pred mrlly, mltst, tr chlkl incl, v carb, rr pyr, tr wh CHK, com lt gn & tr bri yel flor, tr- p lt gn cut	8420-8480 SLTY SH: pred gy- r sl frm-hd, blkly, mod- v calc, pred tr chlkl incl, v carb, tr wh CHK, co yel flor, tr- p lt gn cut
WOB: 15.9 K ROT: 31 RPM STKS: 49 SPM Pump Rate: 226 GPM			
TVD (ft)			7300

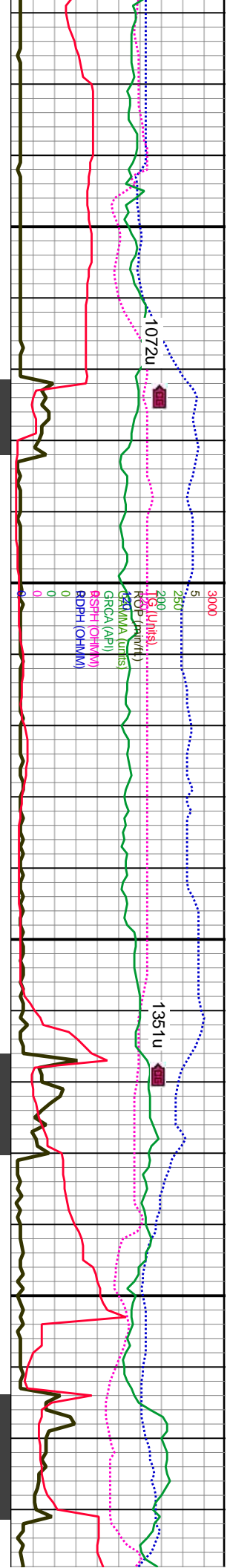




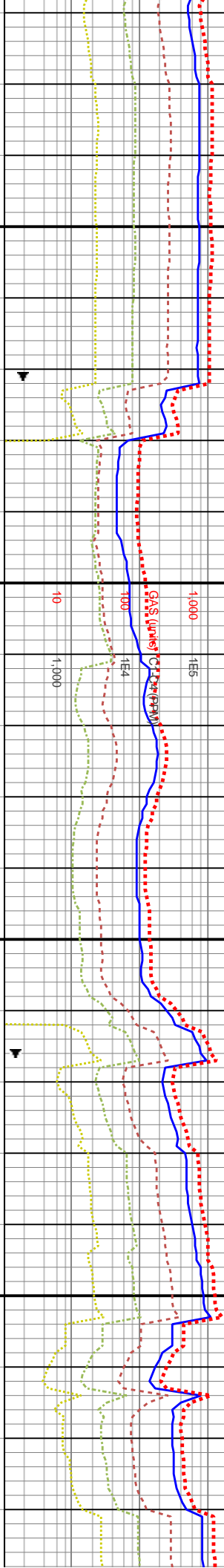


660-8720 SLTY SH: pred gy- med y, frm, ip sl frm- hd, blk, mod- v alc, pred mrl, mrlst, tr chlk incl, v carb, tr wh CHK, com lt gn & tr bri yel or, tr- p lt gn cut		8720-8780 SLTY SH: pred gy- med gy, frm, ip sl frm- hd, blk, mod- v calc, pred mrl, mrlst, tr chlk incl, v carb, tr wh CHK, com lt gn & tr bri yel flr, tr- p lt gn cut		8780-8840 SLTY SH: pred gy- med gy, frm, ip sl frm- hd, blk, mod- v calc, pred mrl, mrlst, tr chlk incl, v carb, rr wh CHK, com lt gn & tr bri yel flr, tr- p lt gn cut		8840-8900 SLTY SH: pred gy- med gy, frm, ip sl frm- hd, blk, mod- v calc, pred mrl, mrlst, rr chlk incl, v carb, rr wh CHK, com lt gn & tr bri yel flr, tr- p lt gn cut	
WOB: 18.1 K ROT: 61 RPM STKS: 54 SPM Pump Rate: 264 GPM		MD: 8,728 ' TVD: 7,187.06 ' Inclination: 90.66 ° Azimuth: 89.7 ° VS: 1,457.5 '		MD: 8,822 ' TVD: 7,185.54 ' Inclination: 91.19 ° Azimuth: 88.64 ° VS: 1,550.76 '		TVD (ft) 7300	





CG: 780-1170u



MD: 9,389.100
TVD: 7,186.99'
Inclination: 90.13 °
Azimuth: 93.39 °
VS: 2,115.31'

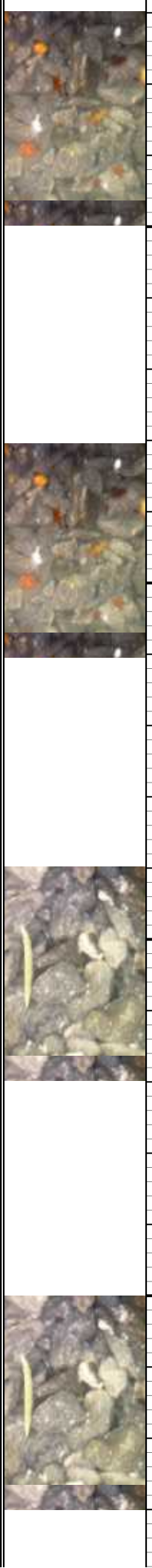
9380-9440 SLTY SH: pred med gy,ip dk gy, frm, ip sl
frm-hd, blkly, mod-v calc, pred mrlly, mrlst, abnt chlk
incl, v carb, tr wh CHK, com lt gn & tr brl yel flr, tr-p lt
gn cut

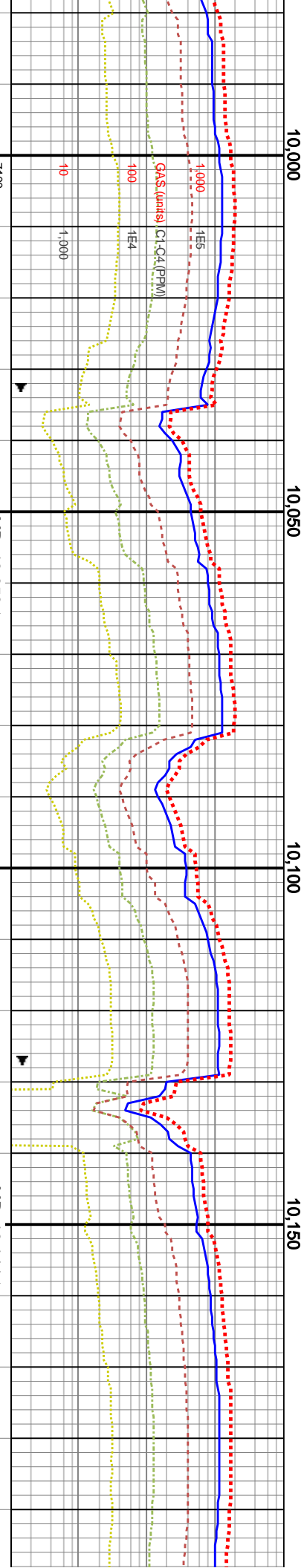
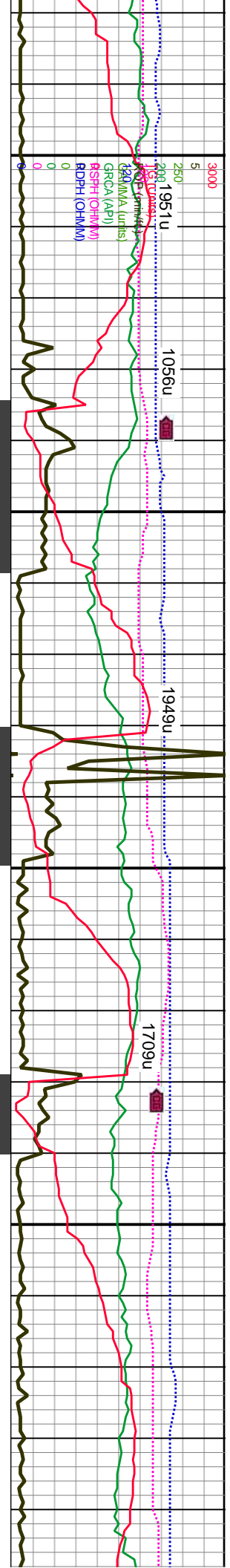
9440-9500 SLTY SH: pred med gy,ip dk gy, frm, ip sl
frm-hd, blkly, mod-v calc, pred mrlly, mrlst, abnt chlk
incl, v carb, tr wh CHK, com lt gn & tr brl yel flr, tr-p lt
gn cut

9500-9560 SLTY SH: pred med gy,ip dk gy, frm, ip sl
frm-hd, blkly, mod-v calc, pred mrlly, mrlst, abnt chlk
incl, v carb, tr wh CHK, com lt gn & tr brl yel flr, tr-p lt
gn cut

9560-9620 SLTY SH: pred med gy,ip dk gy, frm, ip sl
frm-hd, blkly, mod-v calc, pred mrlly, mrlst, abnt chlk
incl, v carb, tr wh CHK, com lt gn & tr brl yel flr, tr-p lt
gn cut

WOB: 13.2 K
ROT: 61 RPM
STKS: 57 SPM
Pump Rate: 279 GPM
DS @ 9467'



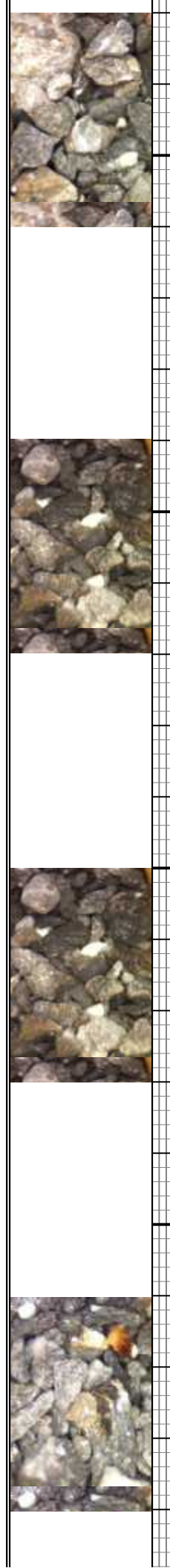


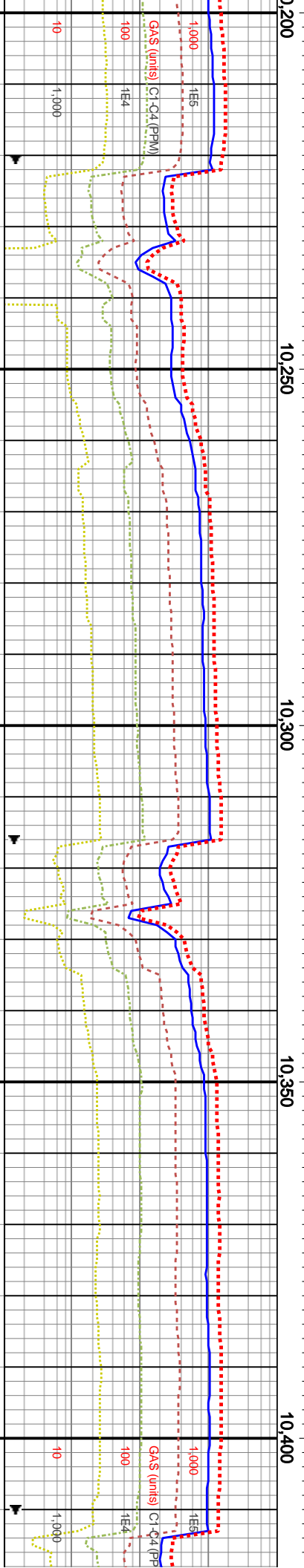
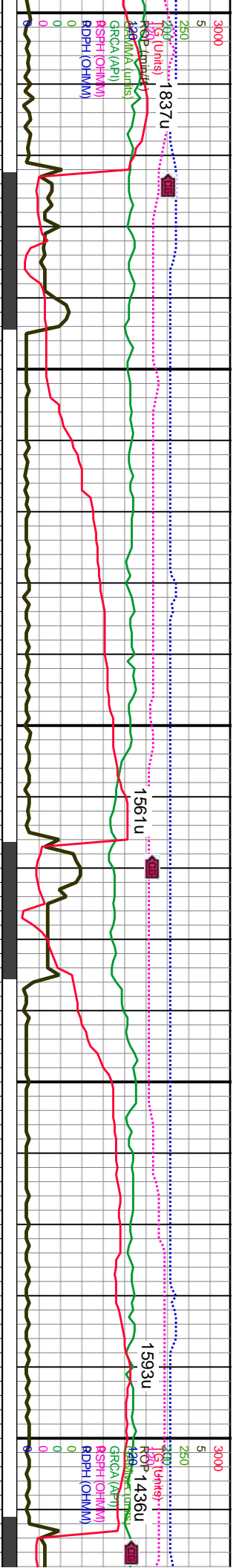
MD: 10,050 '
TVD: 7,180.93 '
Inclination: 90.75 °
Azimuth: 89.26 °
VS: 2,768.36 '

MD: 10,144 '
TVD: 7,180.34 '
Inclination: 89.96 °
Azimuth: 90.22 °
VS: 2,861.74 '

7100	10040-10100 SLTY SH: pred med gy,ip dk gy, frm, ip sl frm- hd, bky, mod- v calc, pred mrly, mlst, abnt chlk incl, v carb, tr wn CHK, com lt gn & tr bri yel flr, ti- p lt gn cut	10100-10160 SLTY SH: pred med gy,ip dk gy, frm, ip sl frm- hd, bky, mod- v calc, pred mrly, mlst, abnt chlk incl, v carb, tr wn CHK, com lt gn & tr bri yel flr, ti- p lt gn cut	10160-10220 SLTY SH: pred med gy,ip dk gy, frm, ip sl frm- hd, bky, mod- v calc, pred mrly, mlst, abnt chlk incl, v carb, tr wn CHK, com lt gn & tr bri yel flr, ti- p lt gn cut	10220
7300				

WOB: 13 K
ROT: 61 RPM
STKS: 60 SPW
Pump Rate: 297 GPM





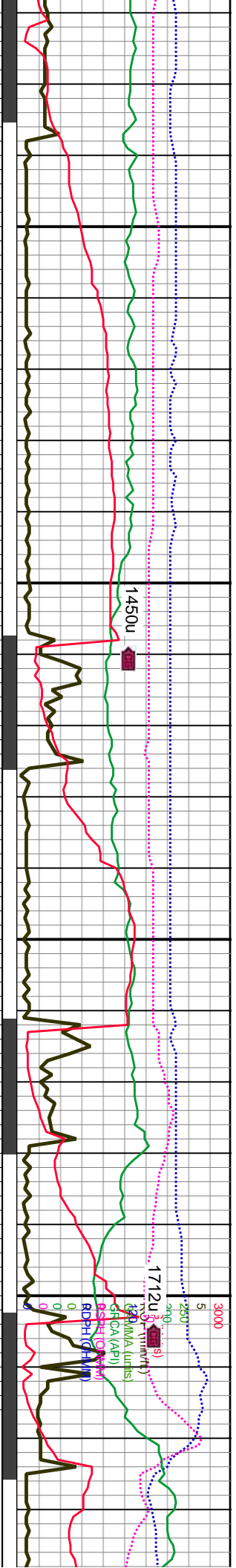
MD: 10,239 '
TVD: 7,179.9 '
Inclination: 90.57 °
Azimuth: 90.31 °
VS: 2,956.21 '

MD: 10,333 '
TVD: 7,179.47 '
Inclination: 89.96 °
Azimuth: 89.7 °
VS: 3,049.64 '

10280-10340 SLTY SH: pred med gy,ip dk gy, frm, ip hd, blk, mod- v calc, pred mnt, mnt, abt cl, v carb, tr wh CHK, com lt gn & tr brl yel flr, tr- cut		10340-10400 SLTY SH: pred med gy,ip dk gy, frm, ip sl frm- hd, blk, mod- v calc, pred mnt, mnt, abt chlk incl, v carb, tr wh CHK, com lt gn & tr brl yel flr, tr- p lt gn cut		10400-10460 SLTY SH: f ip dk gy, frm, ip sl frm- hd calc, pred mnt, mnt, abt carb, ip wh CHK, lt gn & t p lt gn cut	
TVD (ft)		TVD (ft)		TVD (ft)	
7300		7300		7300	

WOB: 16.2 K
ROT: 61 RPM
STKS: 59 SPM
Pump Rate: 290 GPM





10,450

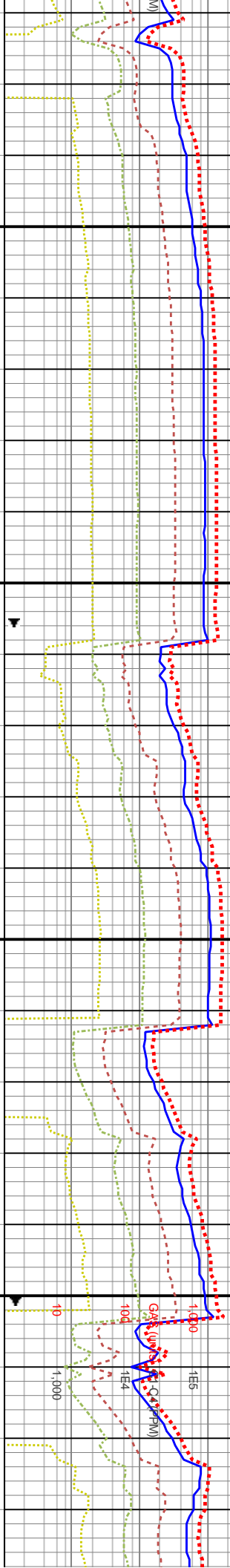
10,500

10,550

10,600

BGG: 990 - 1380u

1557u



MD: 10,428'

TVD: 7,179.17'

Inclination: 90.4 °

Azimuth: 89.43 °

VS: 3,143.98'

MD: 10,523'

TVD: 7,178.66'

Inclination: 90.22 °

Azimuth: 89.43 °

VS: 3,238.3'

MD: 10,617'

TVD: 7,179.23'

Inclination: 89.08 °

Azimuth: 90.93 °

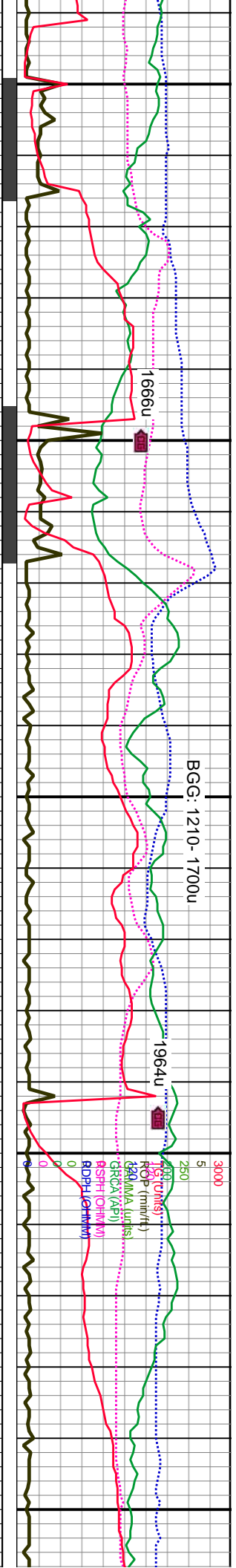
VS: 3,331.76'



10460-10520 SLTY SH: pred med gy, ip dk gy, frm, ip sl frm- hd, blk- split, v calc, pred mrlst, abnt chlk incl, v carb, ip wh tr p lt gn cut	10520-10580 SLTY SH: pred med gy, ip dk gy, frm, ip sl frm- hd, blk- split, v calc, pred mrlst, abnt chlk incl, v carb, ip wh CHK, lt gn & tr bri yel flr, tr- p lt gn cut	10580-10640 SLTY SH: pred med gy, ip dk gy, frm, ip sl frm- hd, blk- split, v calc, pred mrlst, abnt chlk incl, v carb, ip wh CHK, lt gn & tr bri yel flr, tr- p lt gn cut	10640-10700 SLTY SH: pred med gy, ip dk gy, frm, ip sl frm- hd, blk- split, v calc, pred mrlst, abnt chlk incl, v carb, ip wh CHK, lt gn & tr bri yel flr, tr- p lt gn cut
WOB: 16.8 K ROT: 61 RPM STKS: 61 SPM Pump Rate: 298 GPM			
DP @ 10,460'			

7300





10,650

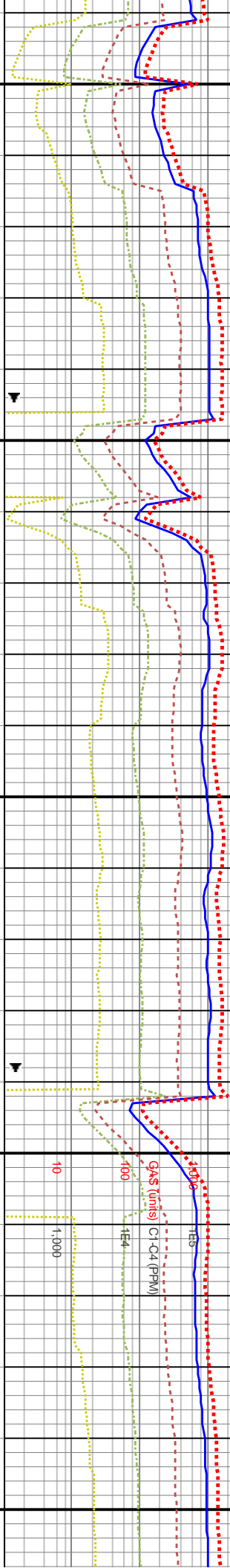
BGG: 120-1640u

10,700

10,750

10,800

10,850



MD: 10,712 '
TVD: 7,181.27 '
Inclination: 88.46 °
Azimuth: 92.51 °
VS: 3,426.43 '

MD: 10,806 '
TVD: 7,183.15 '
Inclination: 89.25 °
Azimuth: 92.24 °
VS: 3,520.18 '

10-10700 SLTY SH: pred med gy, ip
/ frm, ip sl frm- hd, biky- spl, v calc,
mrly, mrst, abnt chlk incl, v carb,
wh CHK, lt gn & tr bri yel flr, tr- p lt

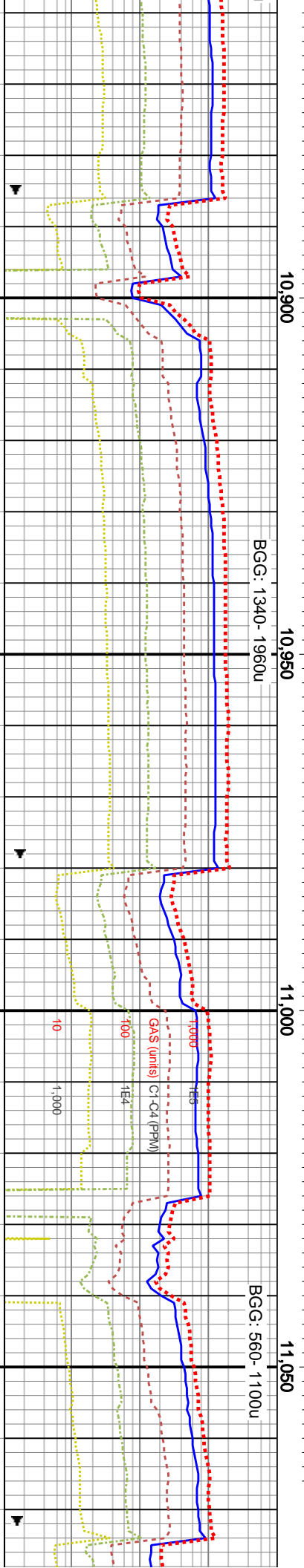
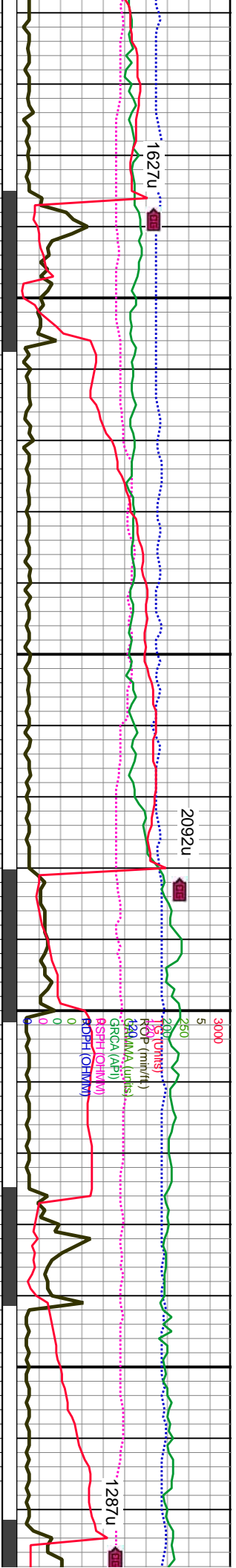
10700-10760 SLTY SH: pred med gy,
ip dk gy, frm, ip sl frm- hd, biky- spl, v
calc, pred mrly, mrst, abnt chlk incl, v
carb, abnt wh CHK, lt gn & tr bri yel flr,
tr- p lt gn cut

10760-10820 SLTY SH: pred med
gy, ip dk gy, frm, ip sl frm- hd, biky-
spl, v calc, pred mrly, mrst, abnt
chlk incl, v carb, abnt wh CHK, lt gn &
tr bri yel flr, tr- p lt gn cut

10820-10880 SLTY SH: pred med gy, ip dk
gy, frm, ip sl frm- hd, biky- spl, v calc, pred
mrly, mrst, sme chlk incl, v carb, occ wh CHK,
lt gn & tr bri yel flr, tr- p lt gn cut

7300





MD: 10,900 '
TVD: 7,183.66 '
Inclination: 90.13 °
Azimuth: 92.6 °
VS: 3,613.97 '

MD: 10,995 '
TVD: 7,182.79 '
Inclination: 90.92 °
Azimuth: 91.8 °
VS: 3,708.72 '

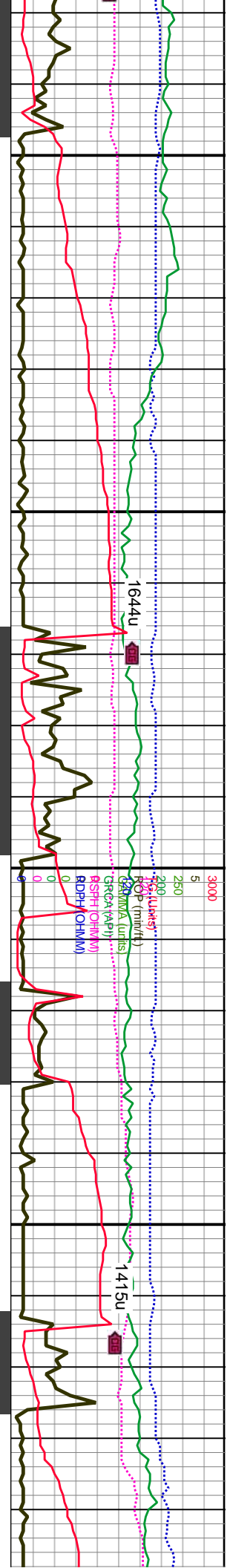
10880-10940 SLTY SH: pred med gy, ip dk gy, frm, ip sl frm- hd, blkly- splt, v calc, pred mrlly, mrlst, sme chlk incl, v carb, occ wh CHK, lt gn & tr bri yel flor, tr- p lt gn cut

10940-11000 SLTY SH: pred med gy, ip dk gy, frm, ip sl frm- hd, blkly- splt, v calc, ip mot, pred mrlly, mrlst, sme chlk incl, v carb, occ wh CHK, lt gn & tr bri yel flor, tr- p lt gn cut

11000-11060 SLTY SH: pred med gy, ip dk gy, frm, ip sl frm- hd, blkly- splt, v calc, ip mot, pred mrlly, mrlst, sme chlk incl, v carb, occ wh CHK, lt gn & tr bri yel flor, tr- p lt gn cut

11060-11120 SLTY SH: pred med gy, ip dk gy, frm, ip sl frm- hd, blkly- splt, v calc, ip mot, pred mrlly, mrlst, sme chlk incl, v carb, occ wh CHK, lt gn & tr bri yel flor, tr- p lt gn cut





11,100

11,150

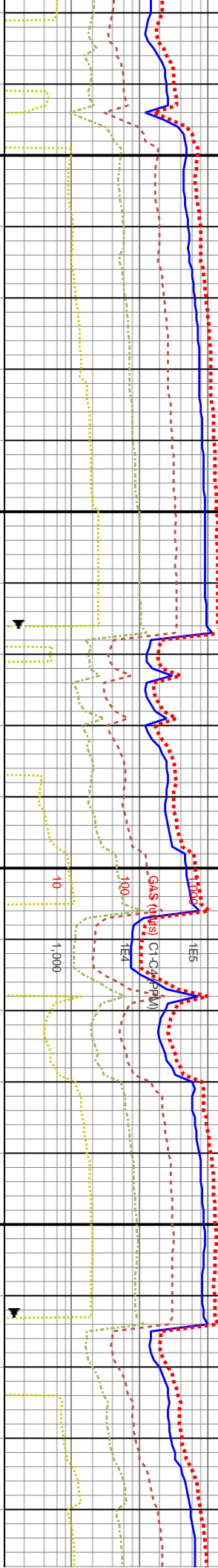
11,200

11,250

BGC: 740-1400u

1079u

1329u



D: 11,089'
D: 7,182.14'
Inclination: 89.87°
Azimuth: 90.4°
VS: 3,802.32'

MD: 11,184'
TVD: 7,181.91'
Inclination: 90.4°
Azimuth: 89.34°
VS: 3,896.72'

MD: 11,278'
TVD: 7,182.56'
Inclination: 88.81°
Azimuth: 89.26°
VS: 3,990.01'

pred med gy, ip
dk gy, frm, ip sl frm- hd, blk- spl, v calc,
sme chlk incl, v
& tr bri yel flr,

11120-11180 SLTY SH: pred med gy, ip
dk gy, frm, ip sl frm- hd, blk- spl, v calc,
ip mot, pred mrl, mrlst, sme chlk incl, v
carb, occ wh CHK, lt gn & tr bri yel flr, tr-
p lt gn cut

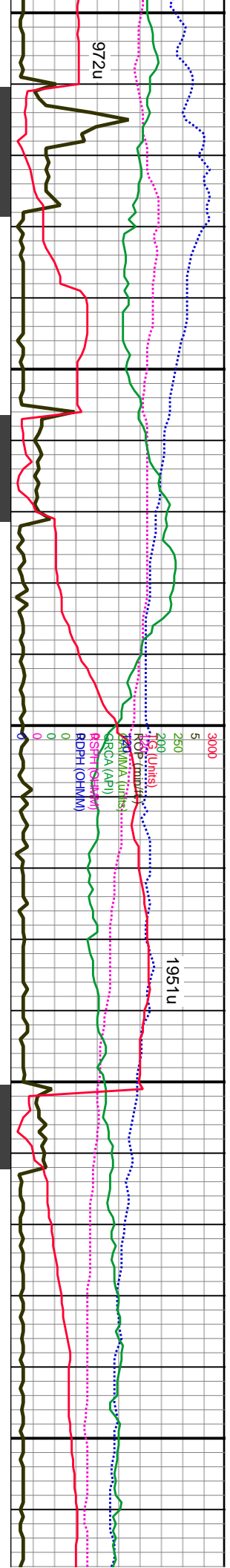
11180-11240 SLTY SH: pred med gy-
dk gy, frm, ip sl frm- hd, pred blk, v
calc, occ mot, occ mrl, ip mrlst, tr chlk
incl, v carb, tr wh CHK, lt gn & tr bri yel
flr, tr- p lt gn cut

11240-11300 SLTY SH: pred med gy- dk
gy, frm, ip sl frm- hd, pred blk, v calc, occ
mot, occ mrl, ip mrlst, tr chlk incl, v carb,
occ wh CHK, lt gn & tr bri yel flr, tr- p lt gn
cut

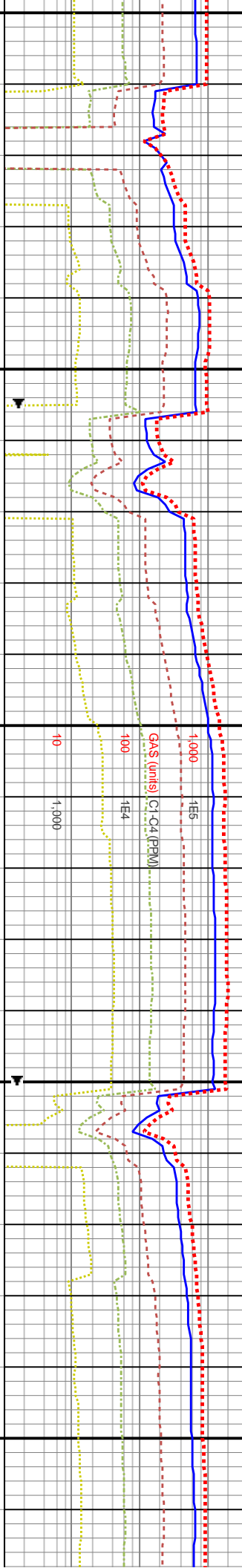
11300-11360 SLTY SH: f
frm- hd, pred blk, v calc,
chlk incl, v carb, occ wh C
lt gn cut

7300





11,300 BGG: 400-1400u 11,350 11,400 11,450 11,500 BGG: 500-1900u



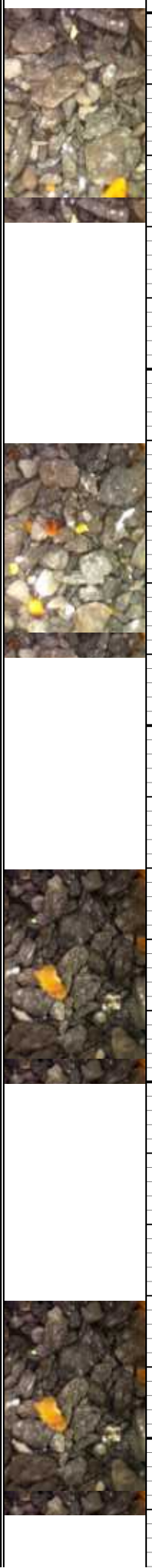
MD: 11,373 '
TVD: 7,185.41 '
Inclination: 87.76 °
Azimuth: 90.93 °
VS: 4,084.41 '

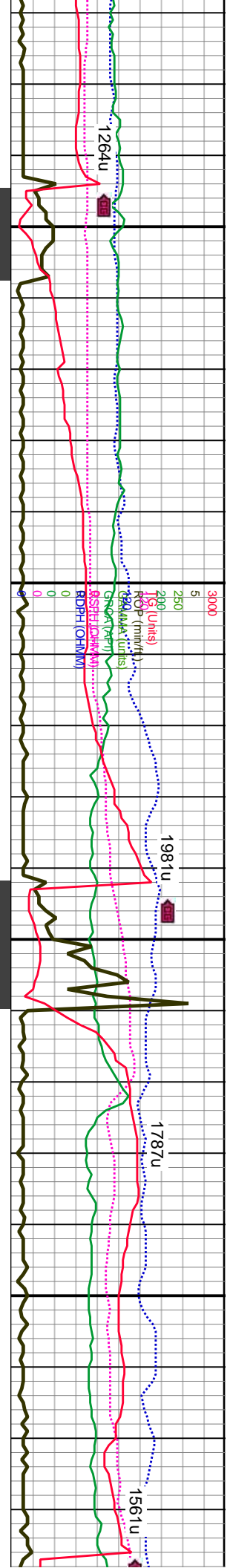
MD: 11,467 '
TVD: 7,187.35 '
Inclination: 89.87 °
Azimuth: 90.66 °
VS: 4,177.95 '

11360-11420 SLTY SH: pred med gy- dk gy, frm, ip sl
11420-11480 SLTY SH: pred med gy- dk gy, frm, ip sl
11480-11540 SLTY SH: pred med gy- dk gy, frm, ip sl
11540-11600 SLTY SH: pred med gy- dk gy, frm, ip sl

DS @ 11,400'

7300





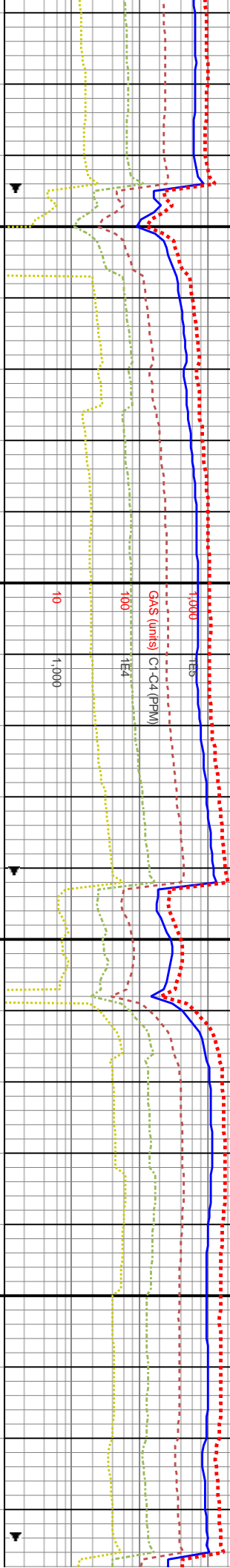
11,550

11,600

11,650

11,700

BGG: 900-1600u



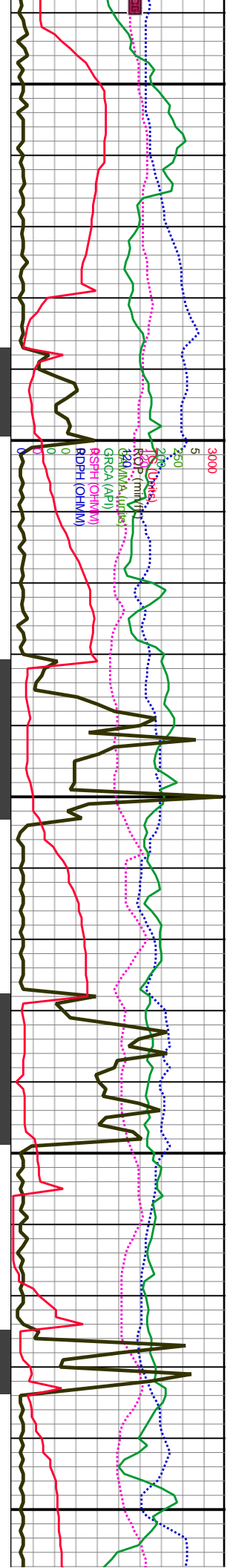
MD: 11,561
TVD: 7,186.84
Inclination: 90.75 °
Azimuth: 90.05 °
VS: 4,271.44 '

7100

MD: 11,656
TVD: 7,185.67
Inclination: 90.66 °
Azimuth: 88.99 °
VS: 4,365.76 '

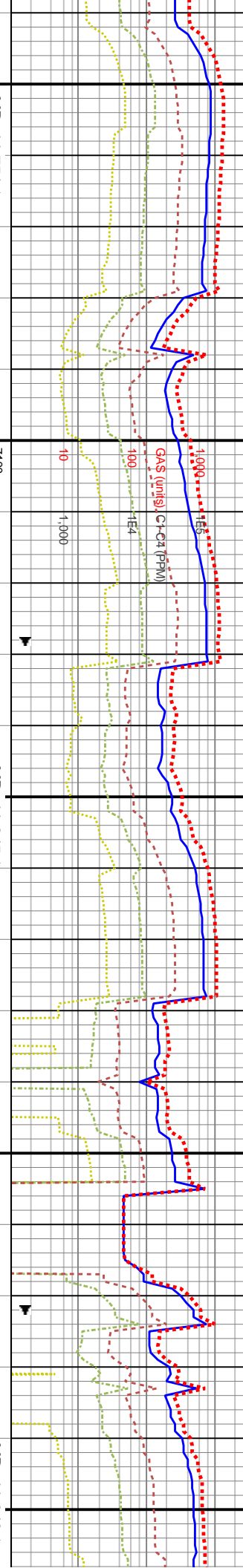
11600 SLTY SH: pred med gy- dk gy, frm, ip sl	11600-11660 SLTY SH: pred med gy- dk gy, frm, ip sl	11660-11720 SLTY SH: pred med gy- dk gy, frm, ip sl	11720-11780 SLTY SH: pred med gy- dk gy
pred blkly, v calc, occ mot, occ mrlly, ip mrlst, tr	frm- hd, pred blkly, v calc, occ mot, occ mrlly, ip mrlst, tr	frm- hd, pred blkly, v calc, occ mot, occ mrlly, ip mrlst, tr	frm- hd, pred blkly, v calc, occ mot, occ mrlly,
ci, v carb, occ wh CHK, lt gn & tr bri yel flor, tr- p	chlk incl, v carb, occ wh CHK, lt gn & tr bri yel flor, tr- p	chlk incl, v carb, occ wh CHK, lt gn & tr bri yel flor, tr- p	chlk incl, v carb, occ wh CHK, lt gn & tr bri yel
lt	lt gn cut	lt gn cut	lt gn cut
WOB: 16 K			
ROT: 65 RPM			
STKS: 58 SPM			
Pump Rate: 285 GPM			
TVD (ft)			
7300			





11,750 11,800 11,850 11,900 11,950

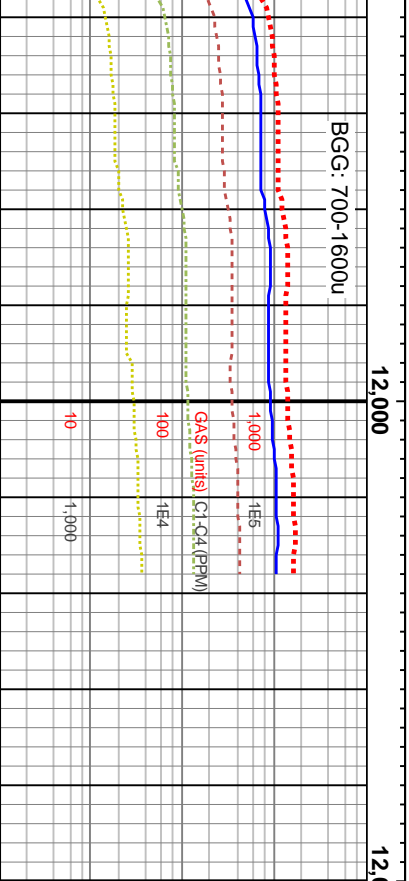
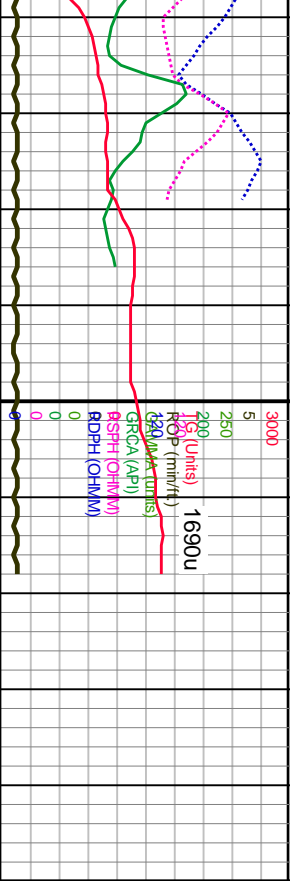
BGG: 1100-1700u BGG: 250-1000u



MD: 11,751' TVD: 7,182.83' Inclination: 92.77° Azimuth: 88.2° VS: 4,459.85'	MD: 11,845' TVD: 7,177.28' Inclination: 94° Azimuth: 87.94° VS: 4,552.72'	MD: 11,940' TVD: 7,172.84' Inclination: 91.36° Azimuth: 85.92° VS: 4,646.33'
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11780-11840 SLTY SH: pred med dk gy-med gy, frm, ip sl frm- hd, pred blkly, v calc, occ mot, occ mrlly, ip mrlst, com chlk incl, v carb, com wh CHK, tr nodr pyr, lt gn & tr bri yel flor, tr- p lt gn cut	11840-11900 SLTY SH: pred med dk gy-med gy, frm, ip sl frm- hd, pred blkly, v calc, occ mot, occ mrlly, ip mrlst, com chlk incl, v carb, com wh CHK, tr nodr pyr, tr lt gn & abnt bri yel flor, tr- p lt gn cut	11900-11960 SLTY SH: pred med dk gy-med gy, frm, ip sl frm- hd, pred blkly, v calc, occ mot, occ mrlly, ip mrlst, com chlk incl, v carb, com wh CHK, tr nodr pyr, tr lt gn & abnt bri yel flor, tr- p lt gn cut	11960-12018 SLTY SH: frm, ip sl frm- hd, pred blkly, v calc, occ mot, occ mrlly, ip mrlst, abnt chlk incl, v carb, com wh CHK, tr nodr pyr, tr lt gn & abnt bri yel flor, tr- p lt gn cut
WOB: 12 K ROT: 62 RPM STKS: 58 SPM Pump Rate: 287 GPM			





Projection to Bit
MD: 12,018'
TVD: 7,170.99'
Inclination: 91.36 °
Azimuth: 85.92 °
VS: 4,723.03'



pred med dk gy-med gy,
ky, v calc, occ mot, pred
ncl, v carb, abnt wh CHK, tr

TVD (ft)

**TD Reached on 9/30/13 @
0245hrs at a depth of 12,018'**

7300

