



# Empirica

Scale: 5" / 100'  
Measured Depth Log

**Well Name** RainDance #6

**Location** Raindance Pad Sec.30-T6N-R67W

**State** Colorado

**Country** USA

**API Number** #05-123-36175-000

**Region** DJ Basin

**Surface Coordinates** Lat: 40.451210

Long: -104.928170

SHL: 188'FSL, 464'FEL, Sec.30

**Bottom Hole Coordinates** Lat:

Long:

BHL: 1320'FNL, 460'FEL, Sec.32

**Ground Elevation** 4,982.5'

**Logged Interval** 5,000'

**To** 12,093'

**K.B. Elevation** 5004.5'

**Total Depth** 12,093'

**Formation** Codell Sand

**Type of Drilling Fluid** Fresh Water

**County** Weld

**Rig Number** Frontier #10

**Field** Wattenberg

**Company** Tektion Windsor

**Address** 640 Plaza Drive  
Highlands Ranch

**Name** Dominic Pitre

**Company** Empirica

**Address** 6741 Satsuma D  
Houston, TX 770  
(713)-466-7400

**Equipment** ML-131

**Comments** Start Date: 3-  
Standby: 3-13

**Notes** Curve TD: 3-  
Release Date

Operator

LLC

#290

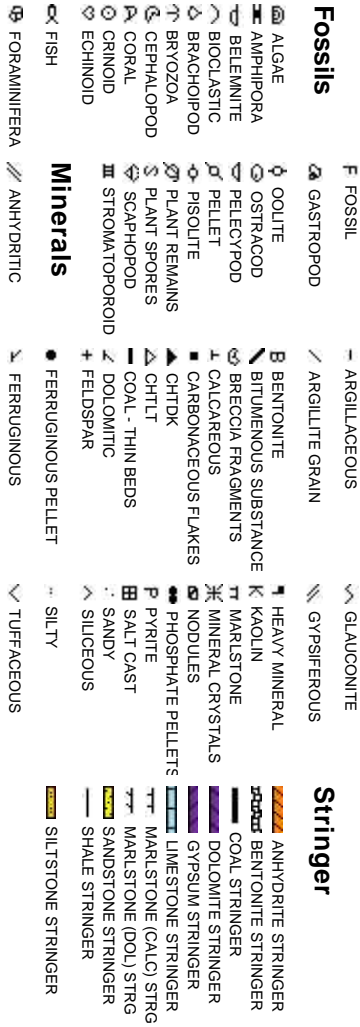
1, CO 80129

Geologist

Rock Types



Accessories



Other

10-14 (Curve) / 4-08-14 (Lateral)  
3-14, 4-07-14, 4-11-14  
12-14 / TD Lateral: 4-10-14  
4-11-14

Oil

DE  
EV  
OL  
ST  
POL  
E  
FE  
FR  
IN  
IN

Other Symbols

Show

- MOLDIC
- ORGANIC
- PINPOINT
- VUGGY

QUESTIONABLE  
DOTTED STAINING

osity

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

Engineering

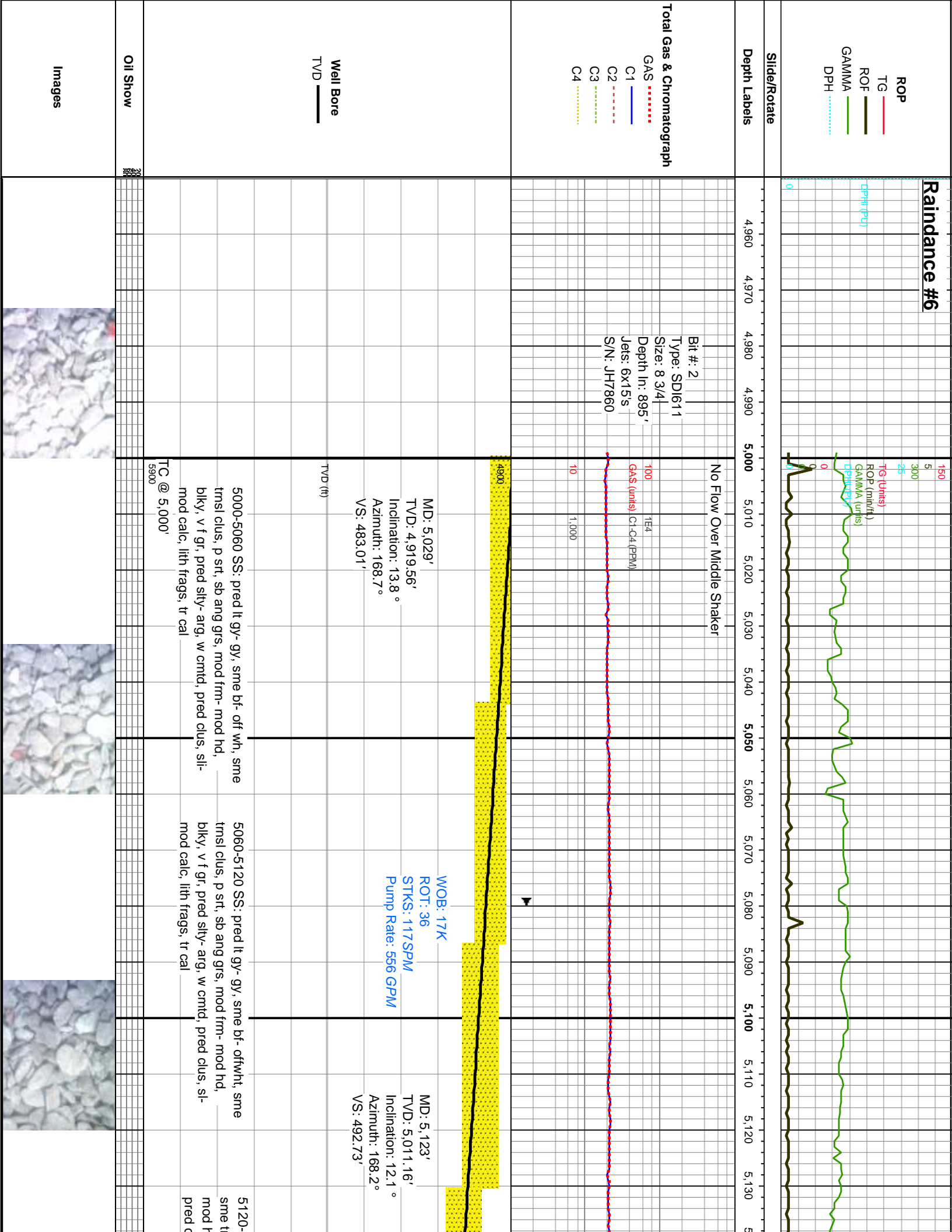
- FAULT
- FORMATION TOP
- GAS SHOW
- MINDEPTH MN DEPTH
- NORMAL FAULT
- OIL SHOW
- OVERTURNED STRATA
- REVERSE FAULT
- SIDEWALL CORE (LEFT)
- SIDEWALL CORE (RIGHT)
- SLIDE
- SURVEY
- TRIP GAS

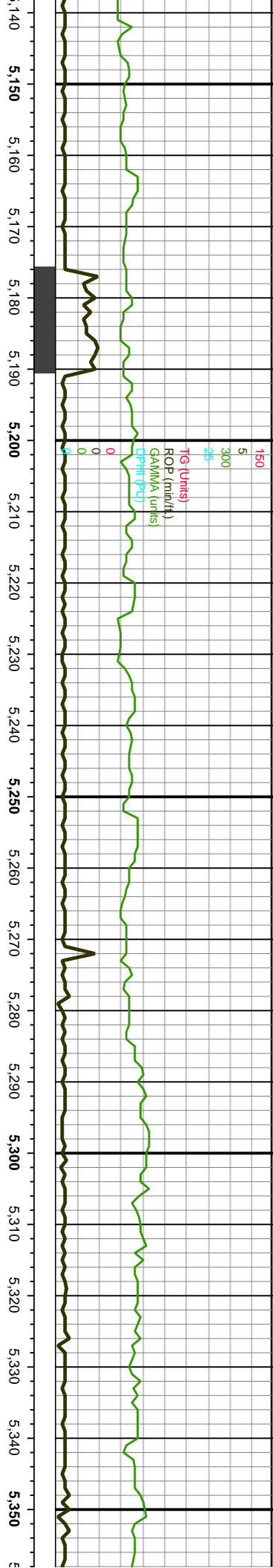
Rounding

- WIRELINE TESTED - LEFT
- WIRELINE TESTED - RT
- FINELYXLN
- GRAINSTONE
- LITHOGRAPHIC
- MICROXLN
- MUDSTONE
- PACKSTONE
- WACKESTONE
- ANGULAR
- ROUNDED
- SUBANG
- SUBRND
- BOUNDSTONE
- CHALKY
- CRYPTOXLN
- MODERATE
- POOR
- WELL

Textures

Sorting





NO Flow Over Middle Shaker

100 1E4  
GAS (units) C1-C4 (PPM)  
10 1,000

4900

MD: 5,217'  
TVD: 5,103.02'  
Inclination: 12.4 °  
Azimuth: 167.3 °  
VS: 502.16'

WOB: 18K  
ROT: 34  
STKS: 112SPM  
Pump Rate: 552 GPM

MD: 5,311'  
TVD: 5,195.09'  
Inclination: 10.9 °  
Azimuth: 167.7 °  
VS: 511.2'

5180 SS: lt gy- gy, sme bf- offwht, ms clus, p srt, sb ang grs, mod frm- d, blk, v f gr, pred silty- arg, w cntd, clus, sl- mod calc, lith frags, tr cal

5180-5240 SS: lt gy- gy, sme bf- offwht, sme trns clus, p srt, sb ang grs, mod frm- mod hd, blk, v f gr, pred silty- arg, w cntd, pred clus, sl- mod calc, tr cal

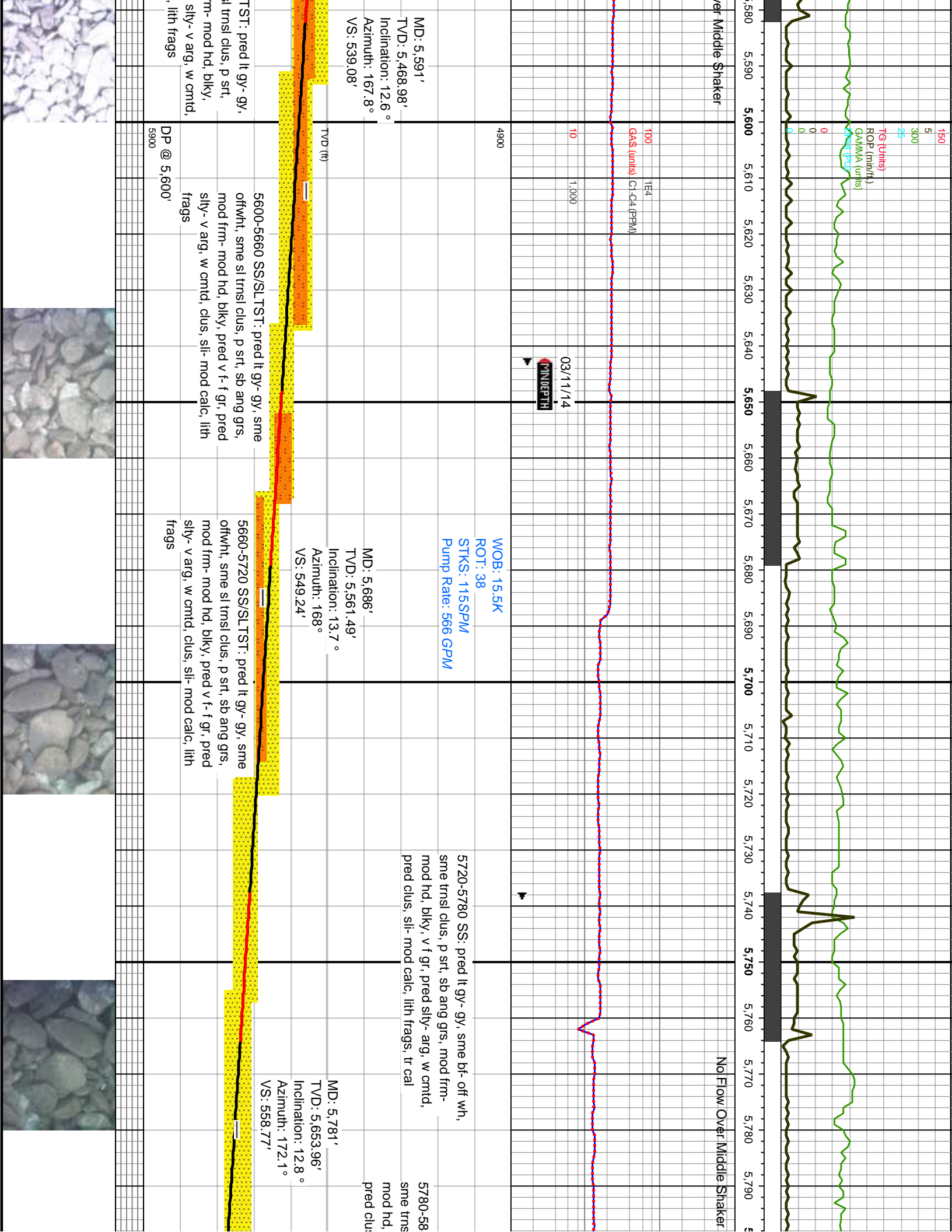
5240-5300 SS: lt gy- gy, sme bf- offwht, sme trns clus, p srt, sb ang grs, mod frm- mod hd, blk, v f gr, pred silty- arg, w cntd, pred clus, sl- mod calc, tr glau, tr cal

5300-5360 SS: lt gy- gy, sme bf- offwht, sme trns clus, p srt, sb ang grs, mod frm- mod hd, blk, v f gr, pred silty- arg, w cntd, pred clus, sl- mod calc, tr glau, tr cal









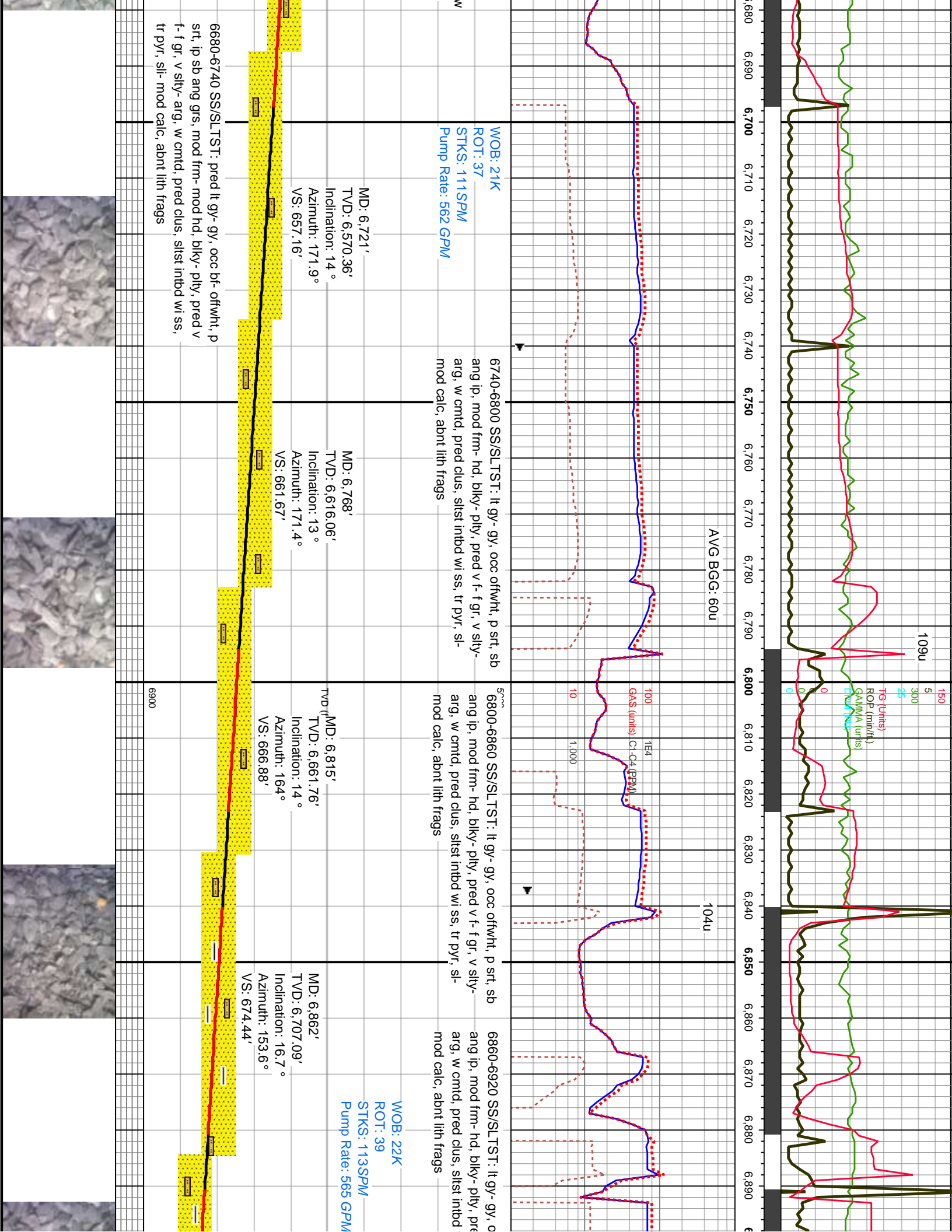




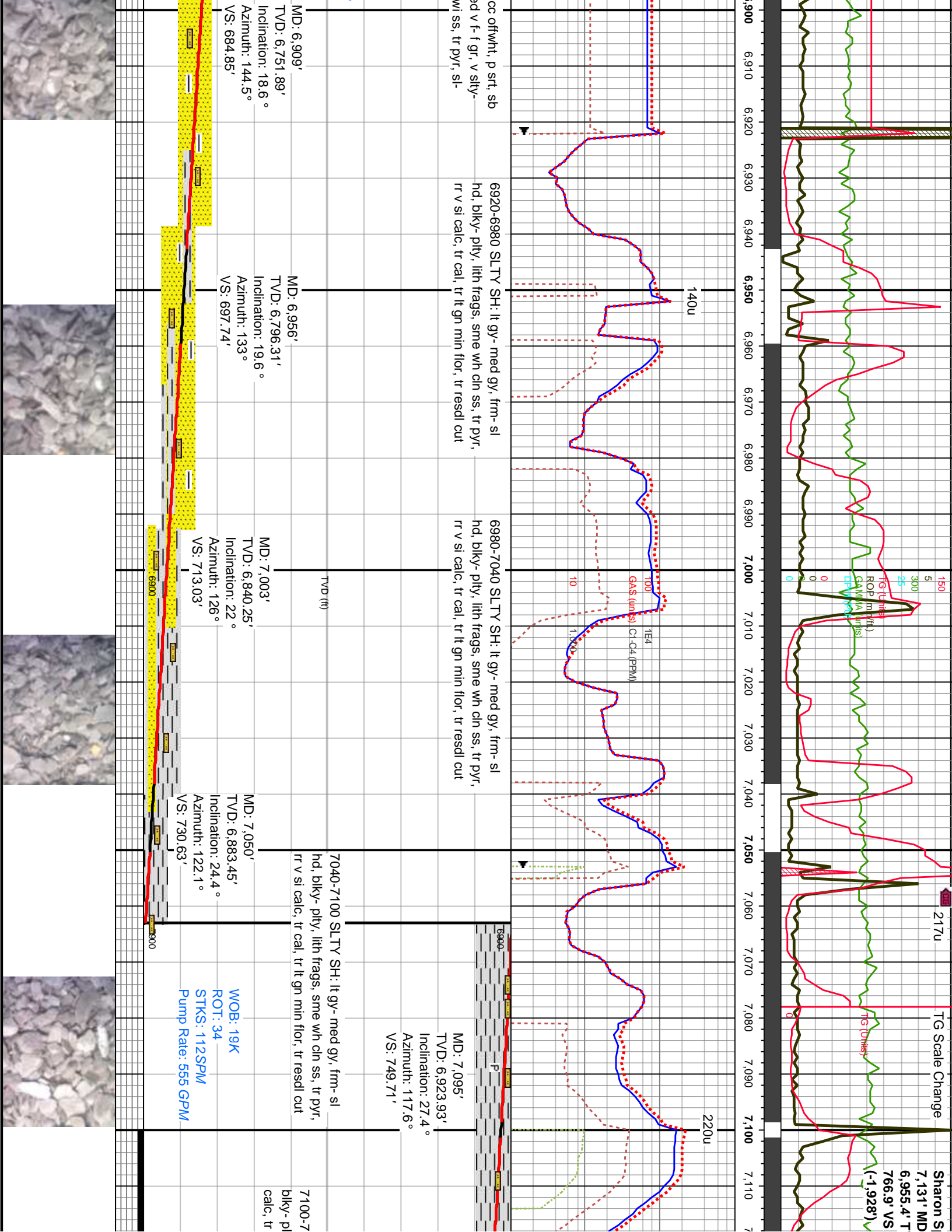




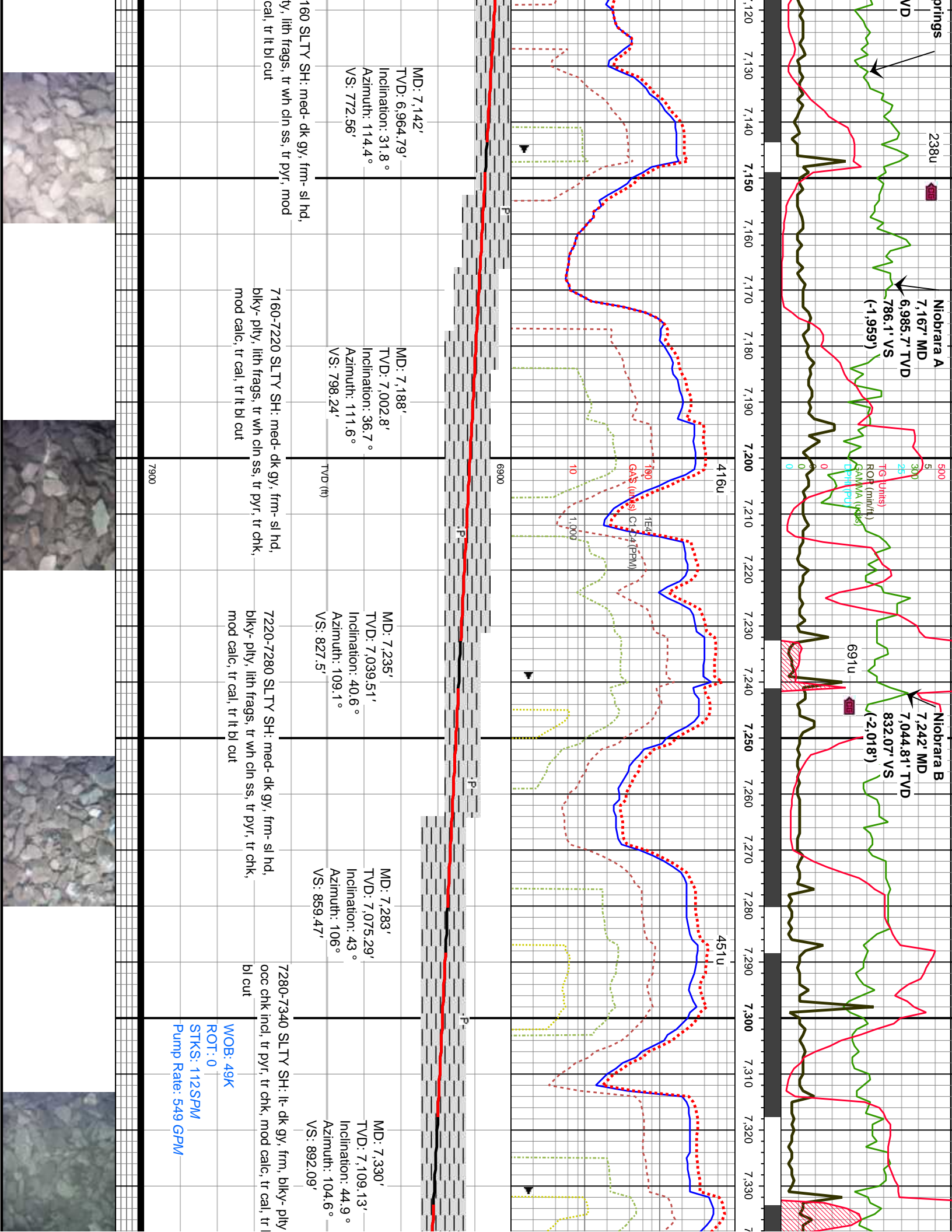




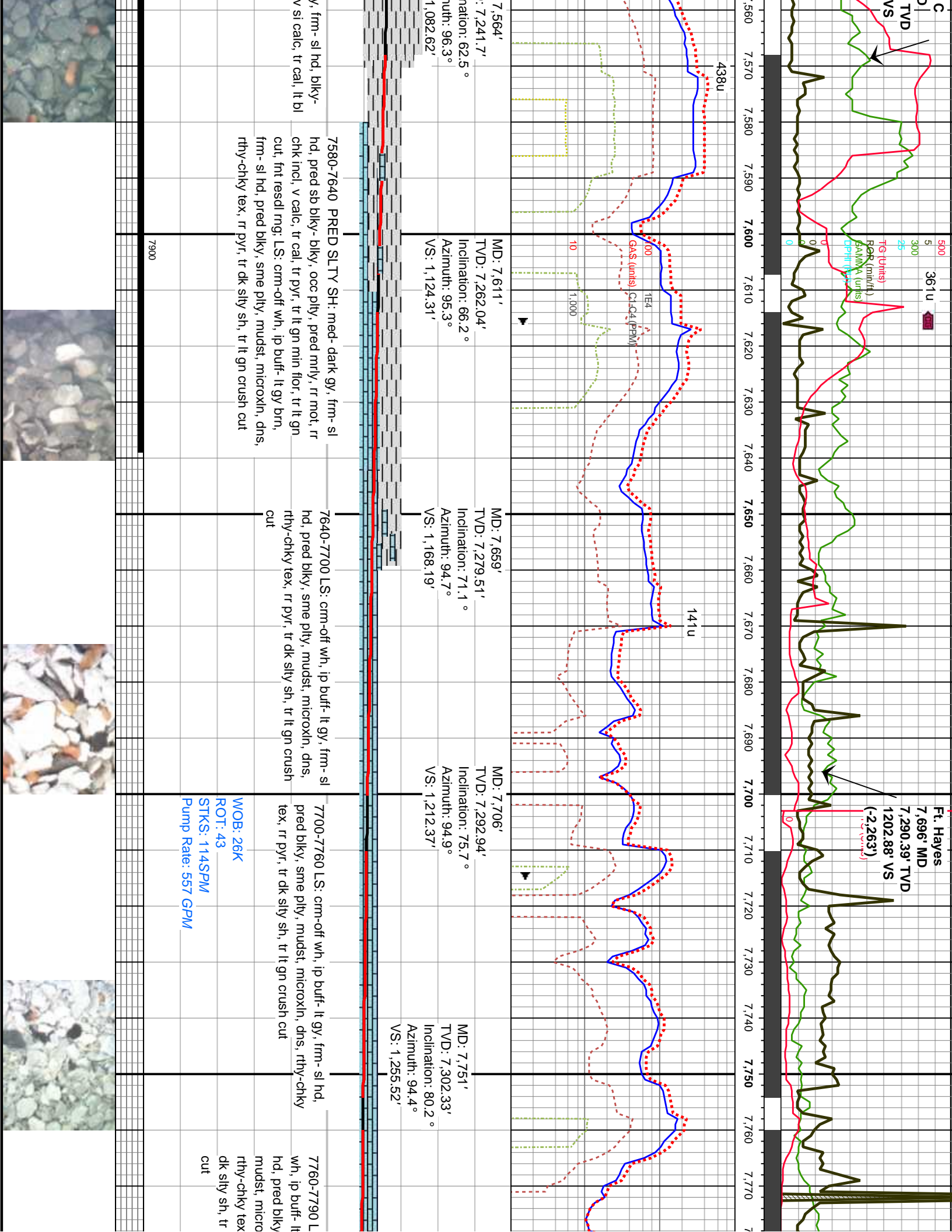






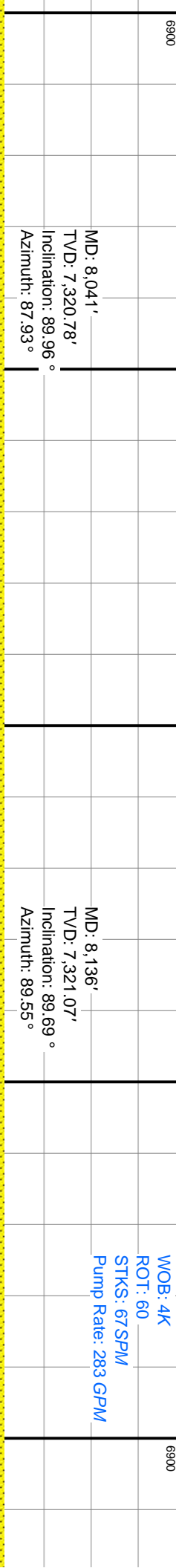
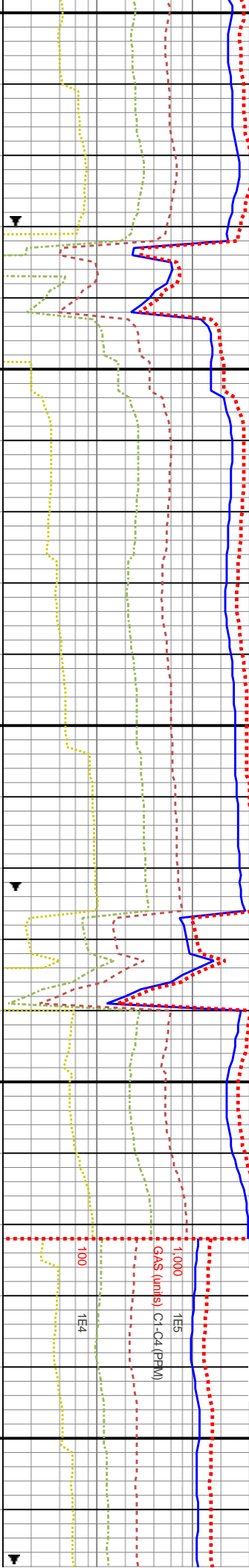
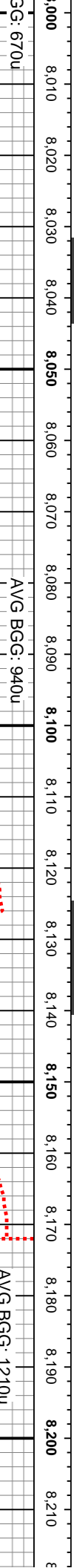
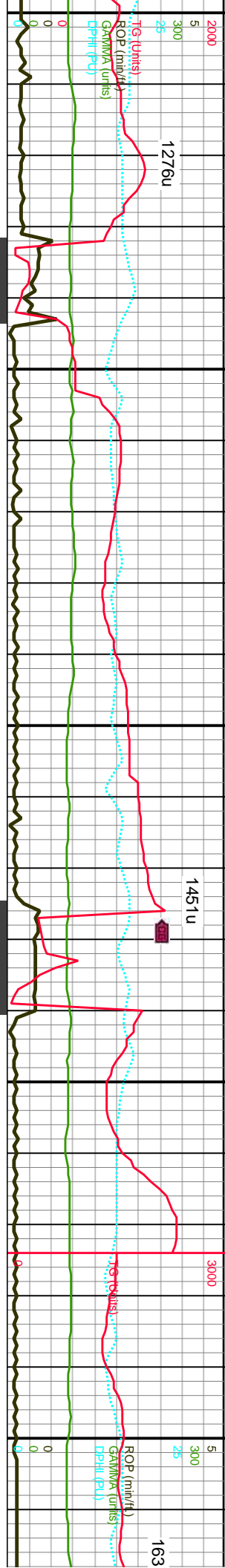










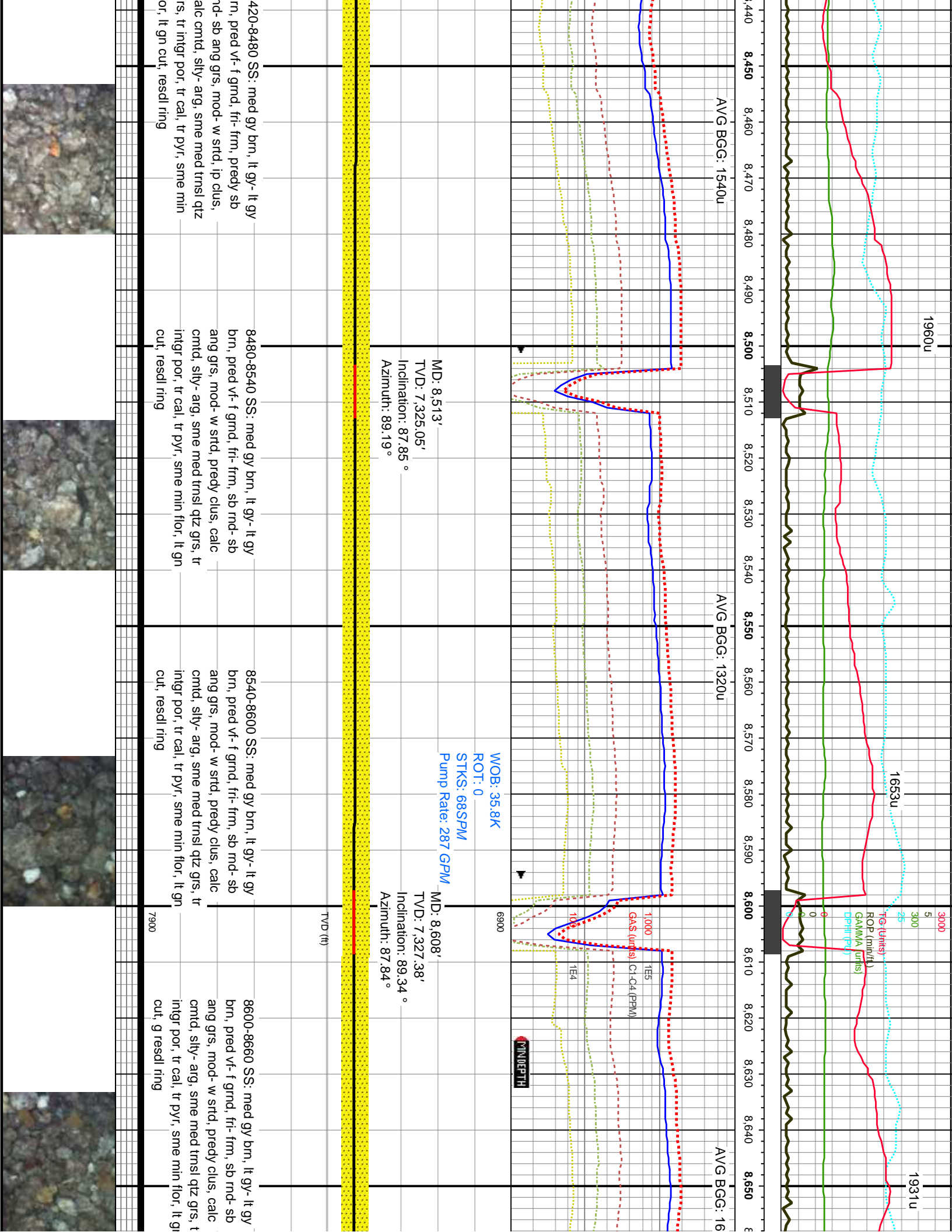


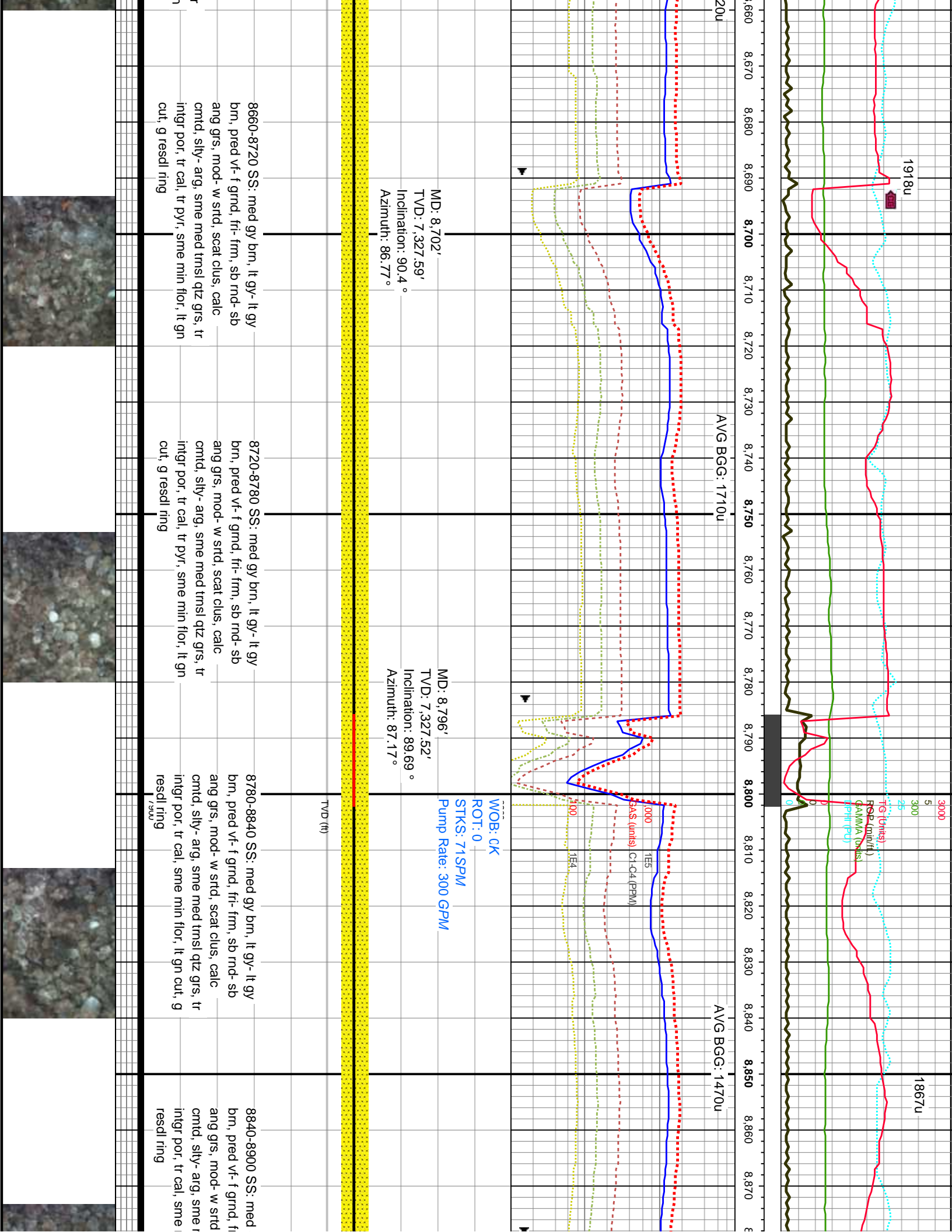
MD: 8,041'	MD: 8,136'	MD: 8,136'	MD: 8,136'
TVD: 7,320.78'	TVD: 7,321.07'	TVD: 7,321.07'	TVD: 7,321.07'
Inclination: 89.96 °	Inclination: 89.69 °	Inclination: 89.69 °	Inclination: 89.69 °
Azimuth: 87.93 °	Azimuth: 89.55 °	Azimuth: 89.55 °	Azimuth: 89.55 °
8000-8060 SS: med gy brn, lt gy- lt gy brn, pred vf- f gmd, fri- frm, sb rnd- sb ang grs, mod- w strd, sme clus, calc cmtd, silty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, lt gn cut, resdl ring	8060-8120 SS: med gy brn, lt gy- lt gy brn, pred vf- f gmd, fri- frm, sb rnd- sb ang grs, mod- w strd, sme clus, calc cmtd, silty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, lt gn cut, resdl ring	8120-8180 SS: med gy brn, lt gy- lt gy brn, pred vf- f gmd, fri- frm, sb rnd- sb ang grs, mod- w strd, sme clus, calc cmtd, silty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, lt gn cut, resdl ring, tr LS	8180-8240 SS: med brn, pred vf- f gmd, fri- frm, sb rnd- sb ang grs, mod- w strd, sme clus, calc cmtd, silty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, lt gn cut, resdl ring



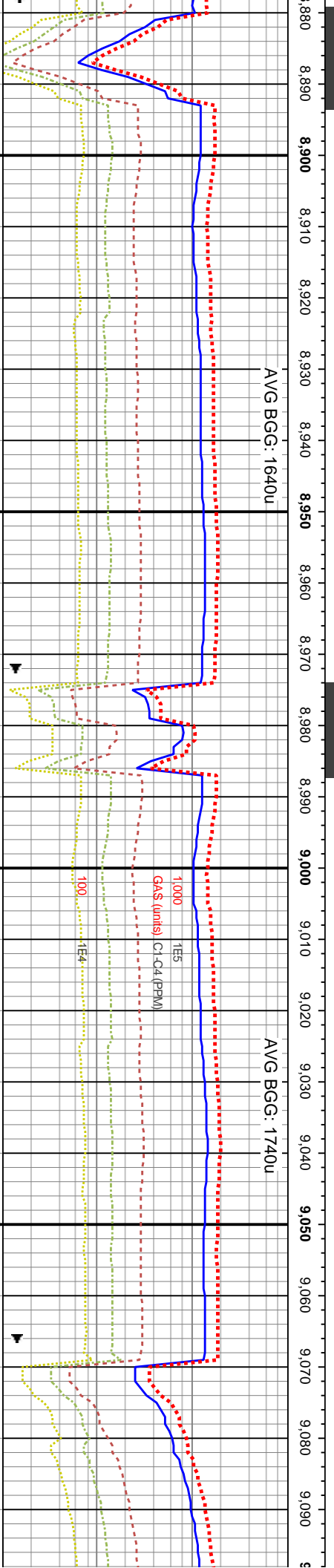
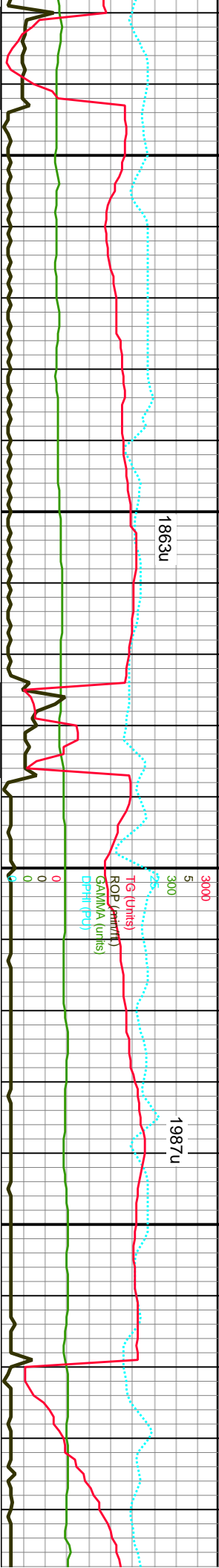












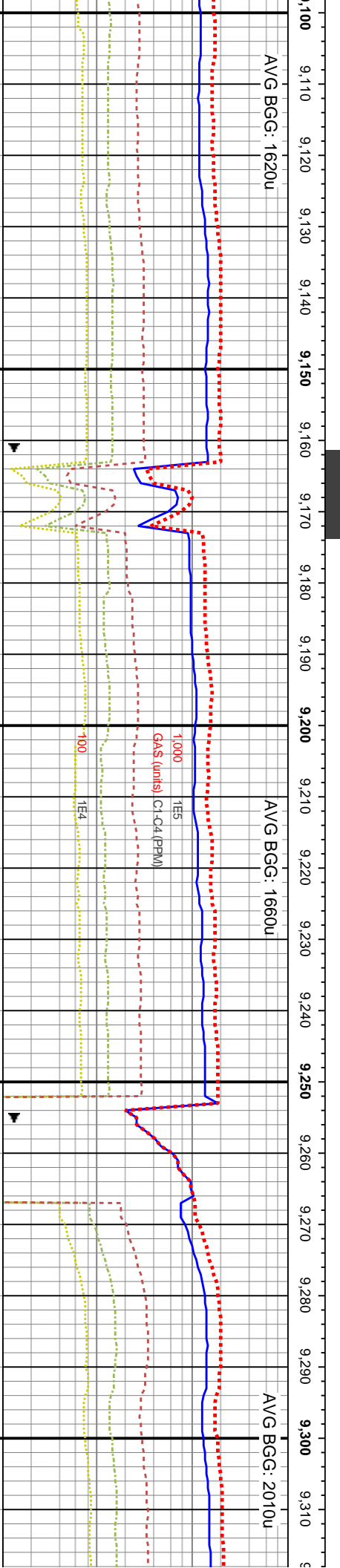
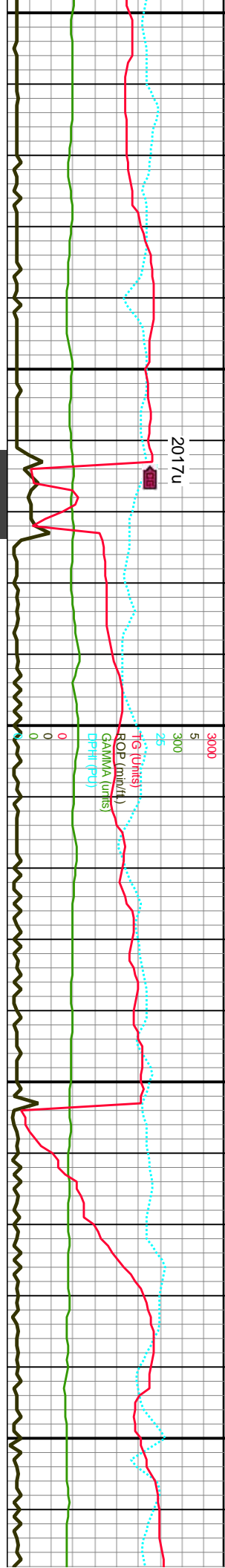
MD: 8,891'  
TVD: 7,328.1'  
Inclination: 89.6 °  
Azimuth: 88.52 °

MD: 8,985'  
TVD: 7,328.61'  
Inclination: 89.78 °  
Azimuth: 90.71 °

MD: 9,079'  
TVD: 7,328.9'  
Inclination: 89.87 °  
Azimuth: 90.25 °

gy brn, lt gy- lt gy i- frm, sb rnd- sb scat clus, calc med trnsl qtz grs, tr min flor, lt gn cut,	8900-8960 SS: med gy brn, lt gy- lt gy brn, pred vf- f grnd, fri- frm, sb rnd- sb ang grs, mod- w strd, scat clus, calc cmtd, silty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, tr glau, sme min flor, lt gn cut, resdl ring	8960-9020 SS: med gy brn, lt gy- lt gy brn, pred vf- f grnd, fri- frm, sb rnd- sb ang grs, mod- w strd, scat clus, calc cmtd, silty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, tr glau, sme min flor, lt gn cut, resdl ring <sub>300</sub>	9020-9080 SS: med gy brn, lt gy- lt gy brn, pred vf- f grnd, fri- frm, sb rnd- sb ang grs, mod- w strd, scat clus, calc cmtd, silty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, tr glau, sme min flor, lt gn cut, resdl ring, tr LS
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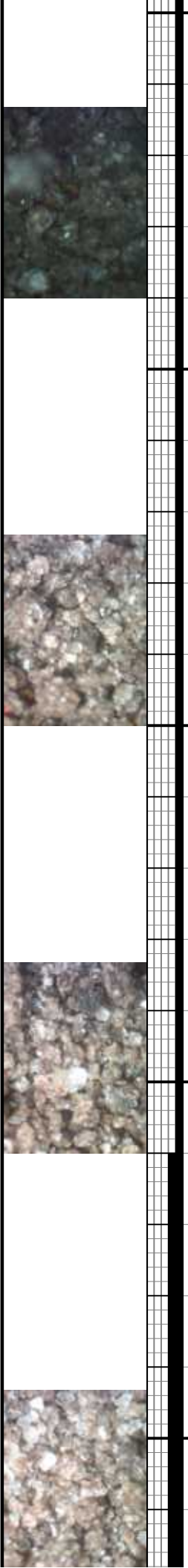




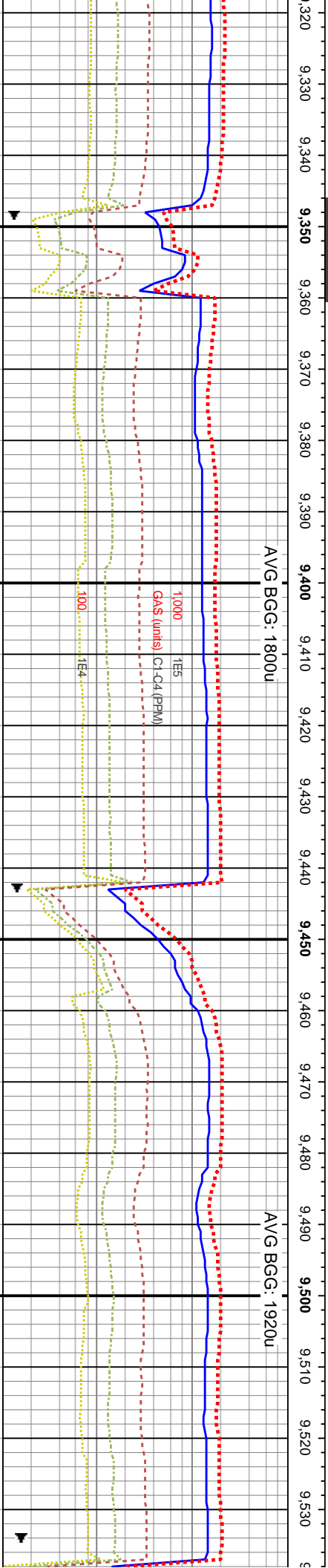
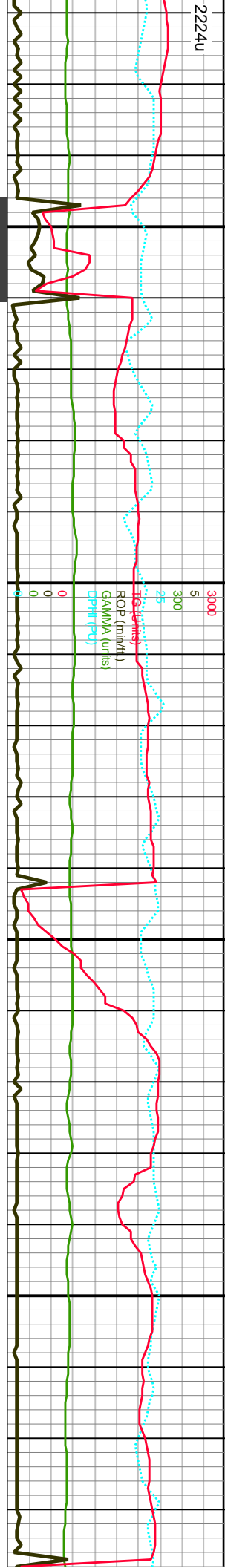
WOB: 10K  
ROT: 56  
STKS: 70SPM  
Pump Rate: 293 GPM  
MD: 9,174'  
TVD: 7,329.26'  
Inclination: 89.69 °  
Azimuth: 89.6 °

MD: 9,268'  
TVD: 7,329.49'  
Inclination: 90.04 °  
Azimuth: 89.37 °

080-9140 SS: med gy brn, lt gy- lt gy brn, pred vf- f gmd, fri- frm, sb rnd- sb ang grs, mod- w strd, scat clus, calc cmtd, sily- arg, sme med tmsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, lt gn cut, resdl ring	9140-9200 SS: med gy brn, lt gy- lt gy brn, pred vf- f gmd, fri- frm, sb rnd- sb ang grs, mod- w strd, predy clus, calc cmtd, sily- arg, sme med tmsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, lt gn cut, resdl ring	9200-9260 SS: med gy brn, lt gy- lt gy brn, pred vf- f gmd, fri- frm, sb rnd- sb ang grs, mod- w strd, predy clus, calc cmtd, sily- arg, sme med tmsl qtz grs, tr intgr por, tr cal, tr min flor, lt gn cut, resdl ring	9260-9320 SS: med gy brn, lt gy- lt gy brn, pred vf- f gmd, fri- frm, sb rnd- sb ang grs, mod- w strd, pred unconcs, ip clus calc cmtd, sily- arg, sme med tmsl qtz grs, tr intgr por, tr cal, tr min flor, lt gn cut, resdl ring
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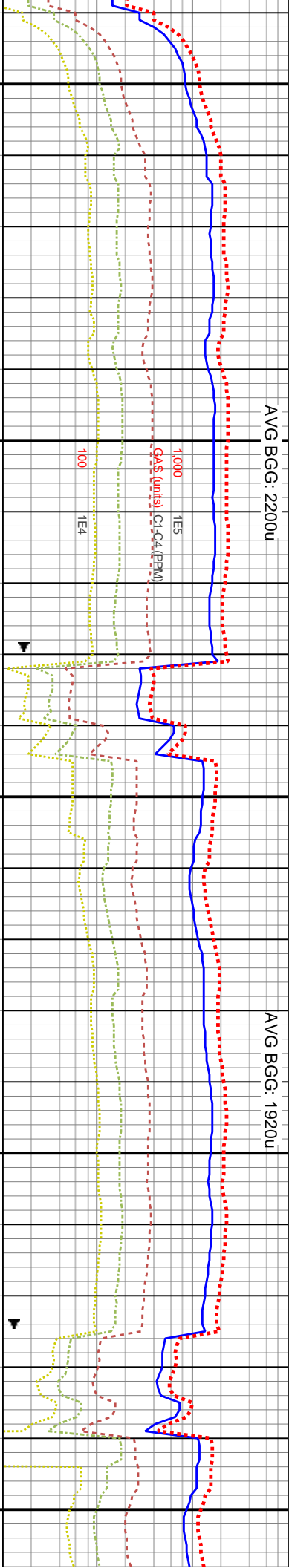
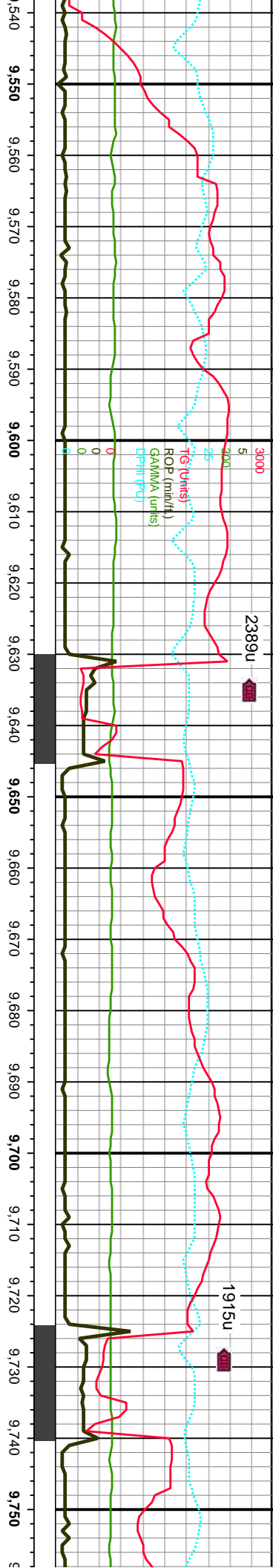






9320-9380 SS: med gy brn, lt gy- lt gy brn, pred vf- f grnd, fri- frm, sb rnd- sb ang grs, mod- w srted, pred unconcs, bcm clus, calc cntd, silty- arg, sme med trnsd qtz grs, tr intgr por, tr cal, tr min flor, lt gn cut, resd ring	9380-9440 SS: med gy brn, lt gy- lt gy brn, pred vf- f grnd, fri- frm, sb rnd- sb ang grs, mod- w srted, pred unconcs, bcm clus, calc cntd, silty- arg, sme med trnsd qtz grs, tr intgr por, tr cal, tr min flor, lt gn cut, resd ring	9440-9500 SS: med gy brn, lt gy- lt gy brn, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w srted, unconcs- clus, bcm clus, calc cntd, silty- arg, sme med trnsd qtz grs, tr intgr por, tr cal, tr min flor, lt gn cut, resd ring	9500-9560 SS: med gy b pred u f grnd, fri- frm, sb mod- w srted, unconcs- clus cntd, silty- arg, sme med por, tr cal, tr pyr, sme mtr resd ring
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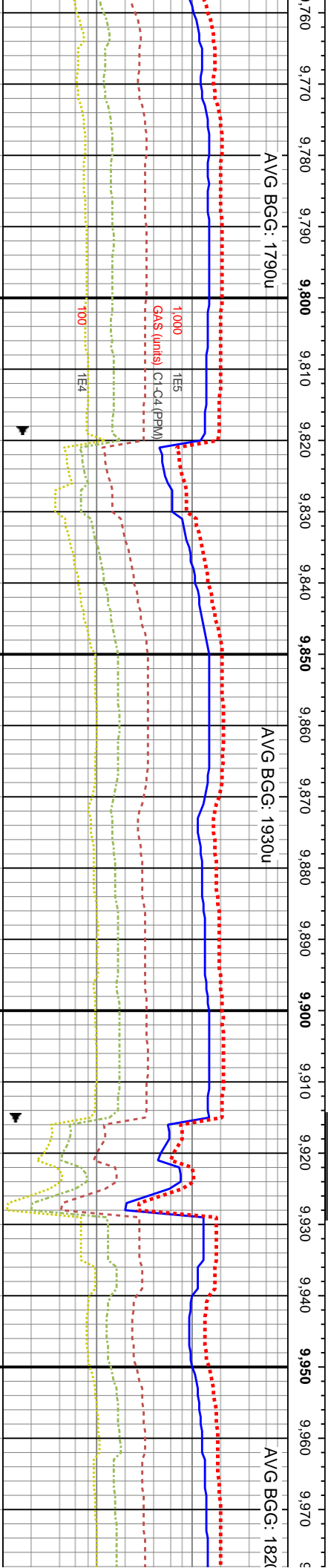
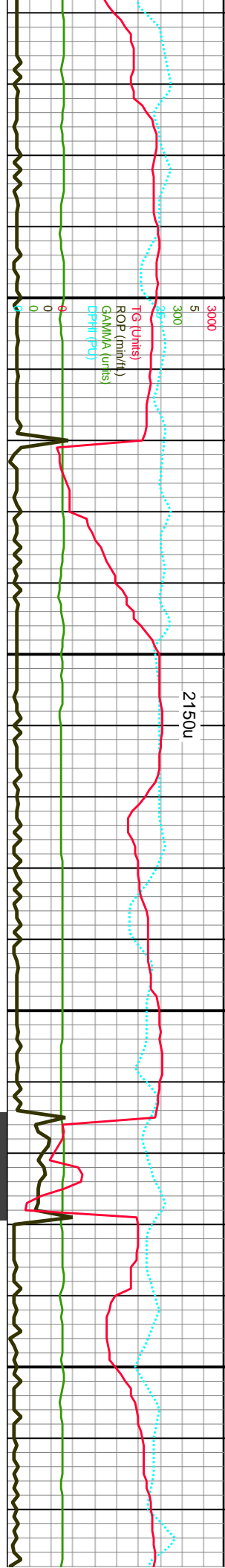




MD: 9,550'	WOB: 18.8K	6900	MD: 9,645'	MD: 9,739'
TVD: 7,331.03'	ROT: 61		TVD: 7,331.03'	TVD: 7,331.31'
Inclination: 89.87 °	STKS: 72SPM		Inclination: 90.13 °	Inclination: 89.52 °
Azimuth: 88.25 °	Pump Rate: 302 GPM		Azimuth: 88.96 °	Azimuth: 90.01 °
VS: 2,987.49'			VS: 3,078.17'	VS: 3,168.31'

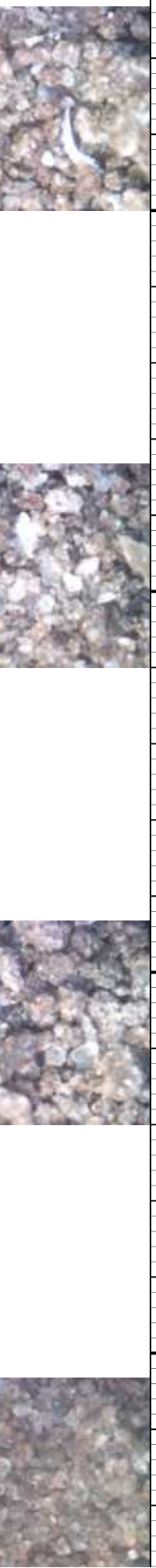
9560-9620 SS: med gy brn, lt gy- lt gy brn, pred u f grnd, fri- frm, sb md- sb ang grs, mod- w strd, uncon- clus, bcm clus, calc cmtd, sily- arg, sme med trns qtz grs, tr intgr por, tr cal, tr pyr, sme min flr, p- g lt gn cut, resd ring	9620-9680 SS: med gy brn, lt gy- lt gy brn, pred u f grnd, fri- frm, sb md- sb ang grs, mod- w strd, uncon- clus, bcm clus, calc cmtd, sily- arg, sme med trns qtz grs, tr intgr por, tr cal, tr pyr, sme min flr, p- g lt gn cut, resd ring	9680-9740 SS: med gy brn, lt gy- lt gy brn, pred u f grnd, fri- frm, sb md- sb ang grs, mod- w strd, uncon- clus, bcm clus, calc cmtd, sily- arg, sme med trns qtz grs, tr intgr por, tr cal, tr pyr, sme min flr, p- g lt gn cut, resd ring	9740-9800 SS: med gy brn, lt gy- lt gy brn, pred u f grnd, fri- frm, sb md- sb ang grs, mod- w strd, uncon- clus, bcm clus, calc cmtd, sily- arg, sme med trns qtz grs, tr intgr por, tr cal, tr pyr, sme min flr, p- g lt gn cut, resd ring
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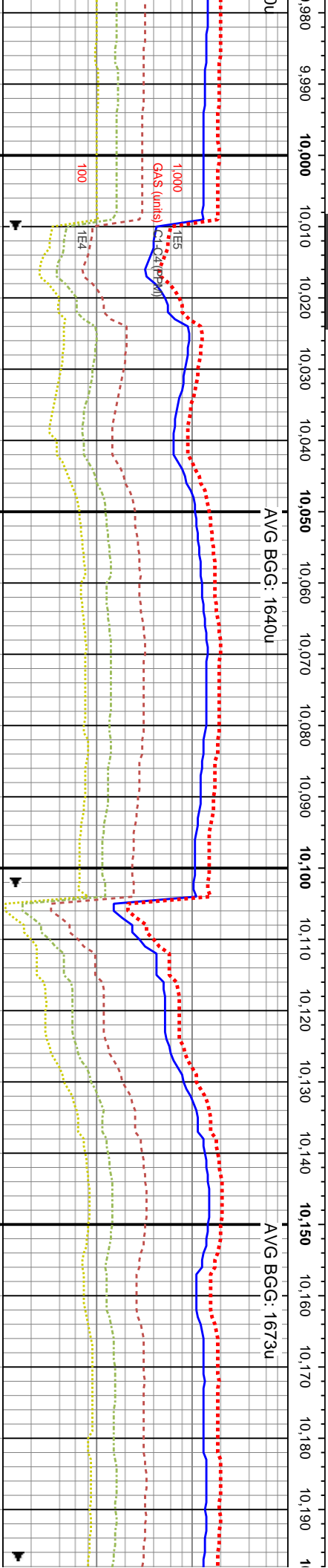
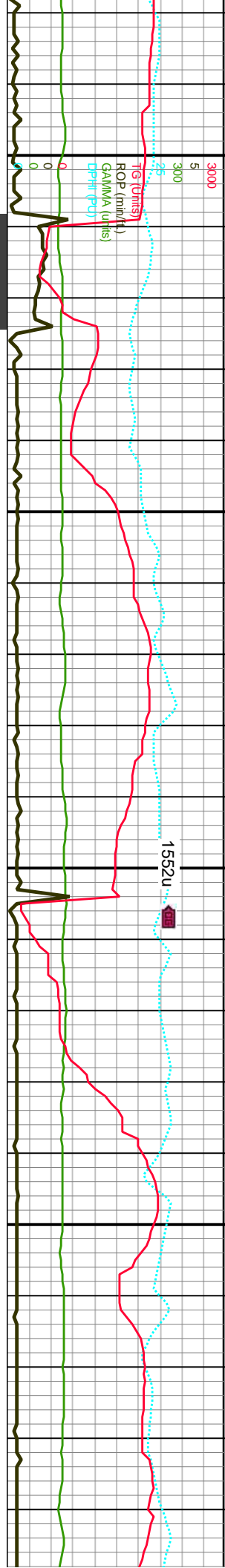


WOB: 18.2K ROT: 60 STKS: 72SPM Pump Rate: 301 GPM	6900	MD: 9,833' TVD: 7,331.67' Inclination: 90.04 ° Azimuth: 89.92 ° VS: 3,258.68'	AVG BGG: 1790u	AVG BGG: 1930u	AVG BGG: 182u
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9800 SS: med gy brn, lt gy- lt gy brn, f grnd, fri- frm, sb rnd- sb ang grs, v strd, unconcs- clus, bcm clus, calc cmlty- arg, sme med trnsl qtz grs, tr por, tr cal, tr pyr, sme min flor, p- g lt gn resdl ring	7900	9800-9860 SS: med gy brn, lt gy- lt gy brn, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w strd, unconcs- clus, bcm clus, calc cmtd, slty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, p- g lt gn cut, resdl ring	9860-9920 SS: med gy brn, lt gy- lt gy brn, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w strd, clus- unconcs, calc cmtd, slty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, p- g lt gn cut, resdl ring	9920-9980 SS: med gy brn, lt gy- lt gy brn- anb, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w strd, pred clus, calc cmtd, slty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, p- g lt gn cut, resdl ring
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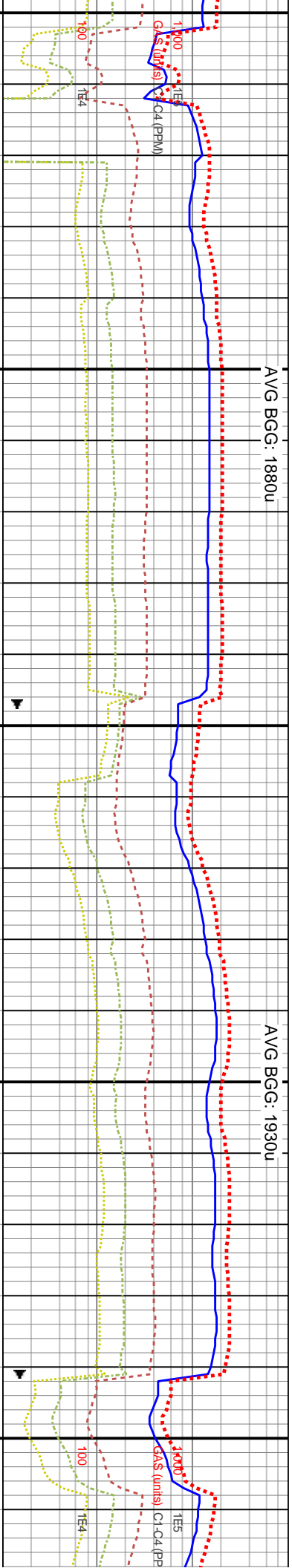
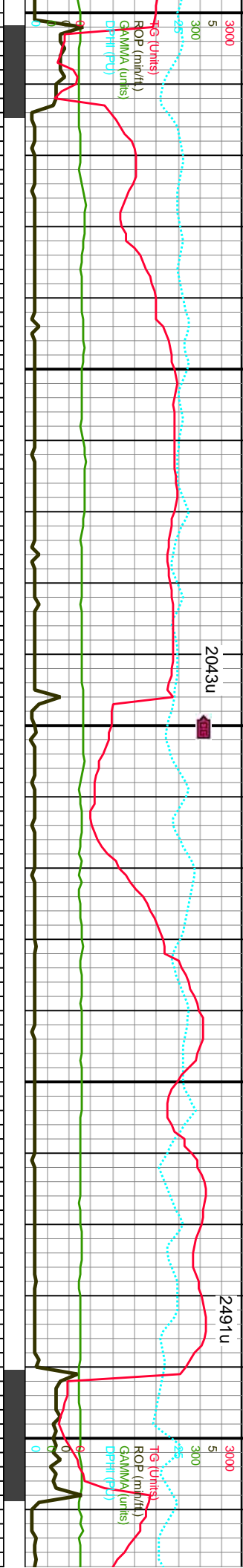




OB: 19.3K T: 61 K: 72SPM p Rate: 303 GPM	MD: 10,022' TVD: 7,330.81' Inclination: 89.87° Azimuth: 90.38° VS: 3,440.42'	MD: 10,117' TVD: 7,331.17' Inclination: 89.69° Azimuth: 90.7° VS: 3,532.01'	WOB: 50.3K ROT: 0 STKS: 75SPM Pump Rate: 315 GPM
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9980-10040 SS: med gy brn, lt gy- lt gy brn-amb, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w strd, pred clus, calc cntd, silty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, p- g lt gn cut, resd ring	10040-10100 SS: med gy brn, lt gy- lt gy brn-amb, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w strd, pred clus, calc cntd, silty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, p- g lt gn cut, resd ring	10100-10160 SS: med gy brn, lt gy- lt gy brn-amb, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w strd, pred clus, calc cntd, silty- arg, sme med trnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, p- g lt gn cut, resd ring	10160-10220 SS: med gy t amb, pred u f grnd, fri- frm, grs, mod- w strd, pred clus, arg, sme med trnsl qtz grs, pyr, sme min flor, p- g lt gn
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MD: 10,211'  
TVD: 7,331.53'  
Inclination: 89.87 °  
Azimuth: 90.23 °  
VS: 3,622.6'

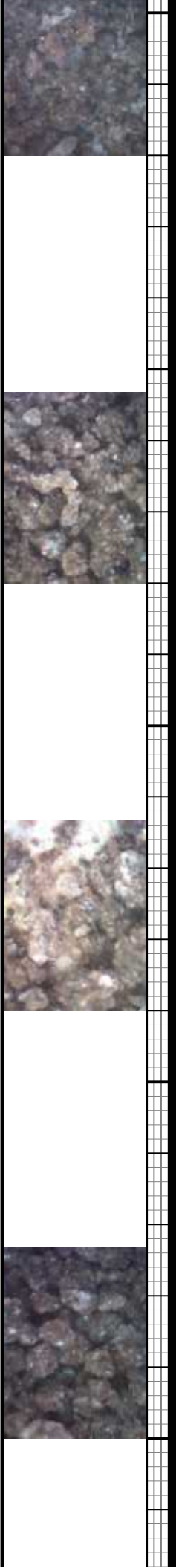
MD: 10,306'  
TVD: 7,331.46'  
Inclination: 90.22 °  
Azimuth: 89.87 °  
VS: 3,713.96'

MD: 10,400'  
TVD: 7,330.95'  
Inclination: 90.4 °  
Azimuth: 89.54 °  
VS: 3,804.21'

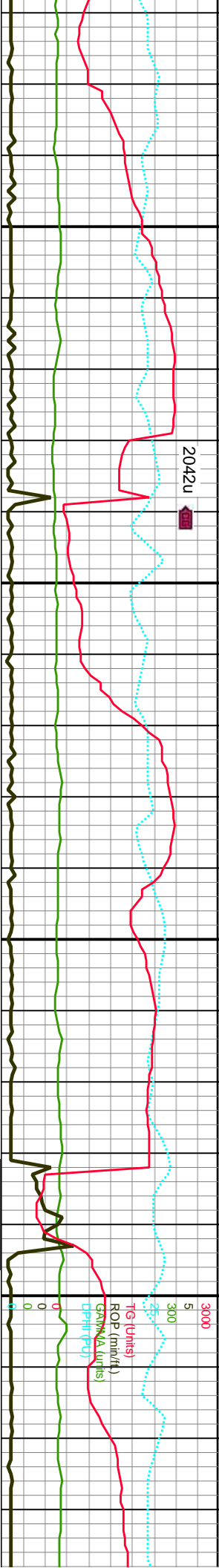
10220-10280 SS: med gy brn, lt gy- lt gy brn- amb, pred u f grnd, fri- frm, sb md- sb ang grs, mod- w srl, pred clus, calc cmtd, slty- arg, sme med trsl qtz grs, tr intgr por, tr cal, tr cut, resdl ring

10280-10340 SS: med gy brn, lt gy- lt gy brn- amb, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w srl, pred clus, calc cmtd, slty- arg, sme med trsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flr, p- g lt gn cut, resdl ring

10340-10400 SS: med gy brn, lt gy- lt gy brn- amb, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w srl, pred clus, calc cmtd, slty- arg, sme med trsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flr, p- g lt gn cut, resdl ring



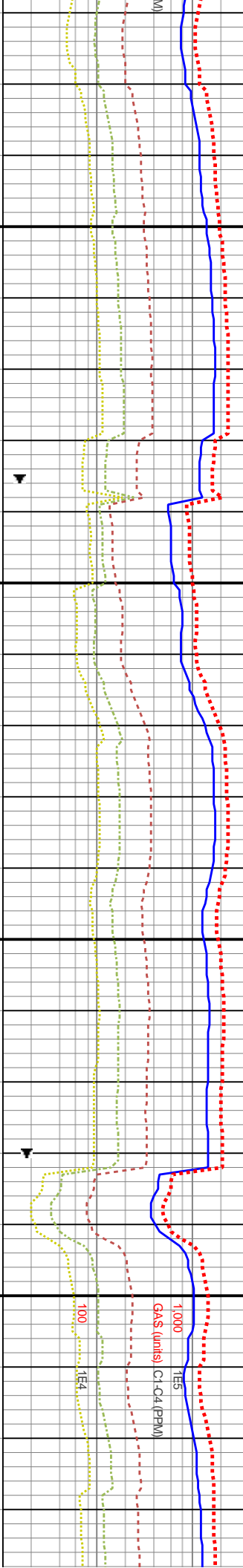




AVG BGG: 1830u

AVG BGG: 1920

AVG



MD: 10,494'  
TVD: 7,331.16'  
Inclination: 89.34 °  
Azimuth: 90.12 °  
VS: 3,894.51'

MD: 10,589'  
TVD: 7,332.18'  
Inclination: 89.43 °  
Azimuth: 90.23 °  
VS: 3,985.93'

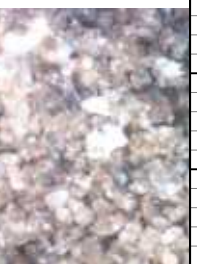
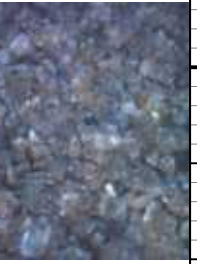
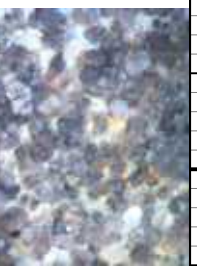
MOB: 23.9K  
ROT: 60  
STKS: 71SPM  
Pump Rate: 299 GPM

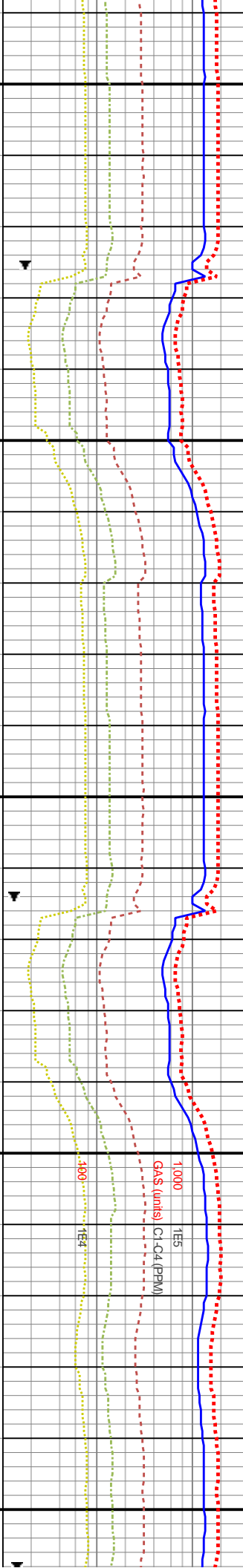
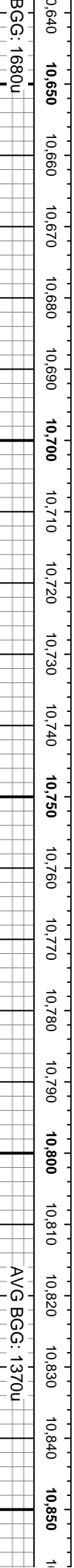
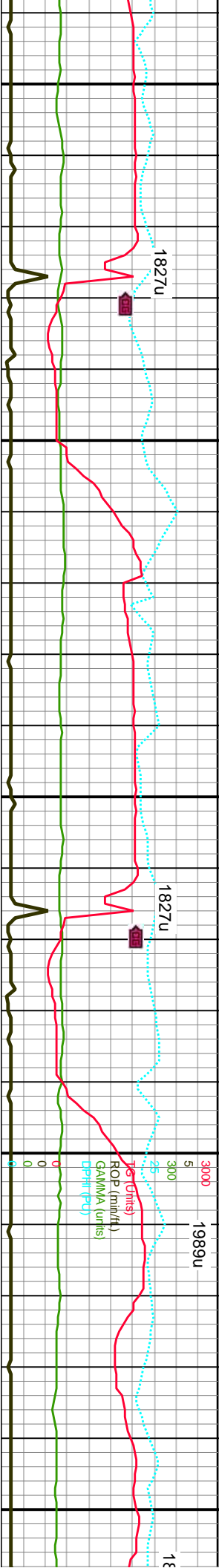
66 SS: lt gy brn- lt brn- amb, pred  
u f grnd, fri- frm, sb rnd- sb ang grs,  
od strd, pred clus, calc cntd, sily-  
pred trnsi qtz grs, tr intgr por, tr cal, tr  
min flr, p- g lt gn cut, resdl ring

10460-10520 SS: lt gy brn- lt brn- amb, pred  
trnsi, pred u f grnd, fri- frm, sb rnd- sb ang grs,  
mod- w- mod strd, pred clus, calc cntd, sily-  
arg, sme med trnsi qtz grs, tr intgr por, tr cal, tr  
pyr, sme min flr, p- g lt gn cut, resdl ring

10520-10580 SS: lt gy brn- lt brn- amb,  
pred trnsi, pred u f grnd, fri- frm, sb rnd-  
sb ang grs, mod- w- mod strd, pred clus,  
calc cntd, sily- arg, sme med trnsi qtz  
grs, tr intgr por, tr cal, tr pyr, sme min flr,  
p- g lt gn cut, resdl ring

10580-10640 SS: lt gy brn- lt brn- amb, pred  
trnsi, pred u f grnd, fri- frm, sb rnd- sb ang grs,  
mod- w- mod strd, pred clus, calc cntd, sily- arg,  
sme med trnsi qtz grs, tr intgr por, tr cal, tr pyr,  
sme min flr, p- g lt gn cut, resdl ring





MD: 10,683'  
TVD: 7,333.04'  
Inclination: 89.52 °  
Azimuth: 90.41 °  
VS: 4.076.45'

MD: 10,778'  
TVD: 7,333.33'  
Inclination: 90.13 °  
Azimuth: 90.61 °

WOB: 16.2K  
ROT: 58  
STKS: 72SPM  
Pump Rate: 304 GPM

10640-10700 SS: med brn- lt brn- amb,  
pred trns- sl trns, pred u f grnd, fri- frm,  
sb md- sb ang grs, mod- w- mod strd,  
pred clus, calc cntd, sily- arg, sme med  
trns qtz grs, tr intgr por, tr cal, tr pyr,  
sme min flor, p- g lt gn cut, resd ring

10700-10760 SS: med brn- lt brn- amb,  
pred trns- sl trns, pred u f grnd, fri- frm, sb  
md- sb ang grs, mod- w- mod strd, pred  
clus, calc cntd, sily- arg, sme med trns qtz  
grs, tr intgr por, tr cal, tr pyr, sme min flor, p-  
g lt gn cut, resd ring

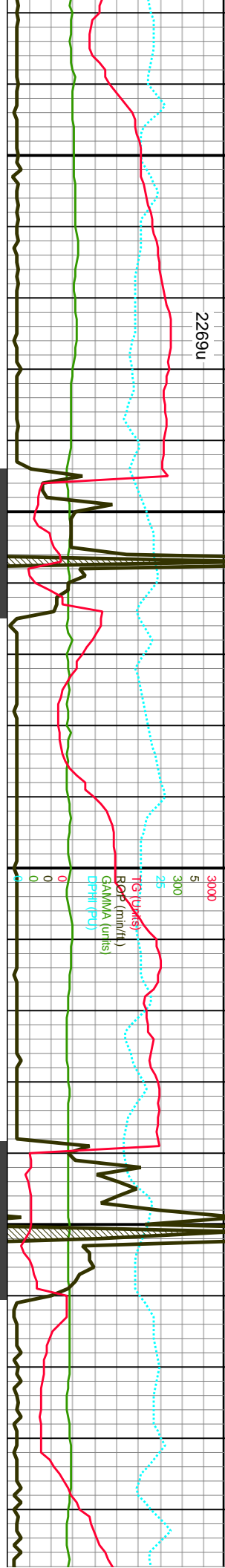
10760-10820 SS: med brn- lt brn- amb,  
pred trns- sl trns, pred u f grnd, fri- frm, sb  
md- sb ang grs, mod- w- mod strd, pred  
clus, calc cntd, sily- arg, sme med trns qtz  
grs, tr intgr por, tr cal, sme min flor, p- g lt gn  
cut, resd ring

10820-10880 SS: med b  
pred trns- sl trns, pred u  
md- sb ang grs, mod- w-  
calc cntd, sily- arg, sme  
intgr por, tr cal, sme min  
resd ring



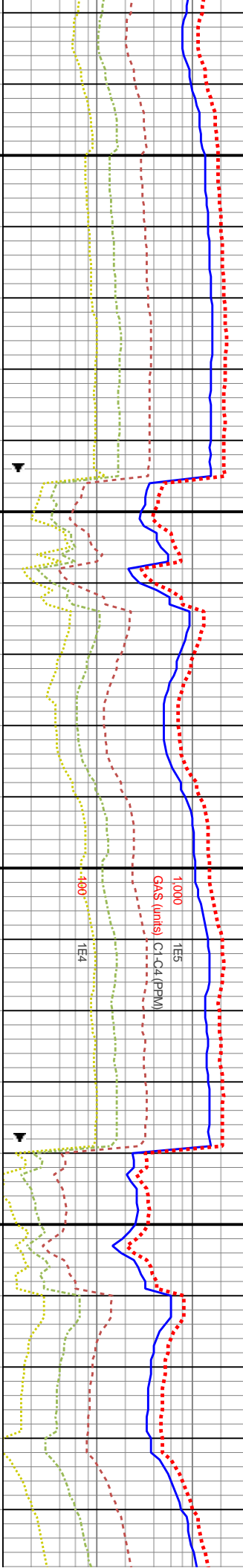






AVG BGC: 1710u

AVG BGC: 11



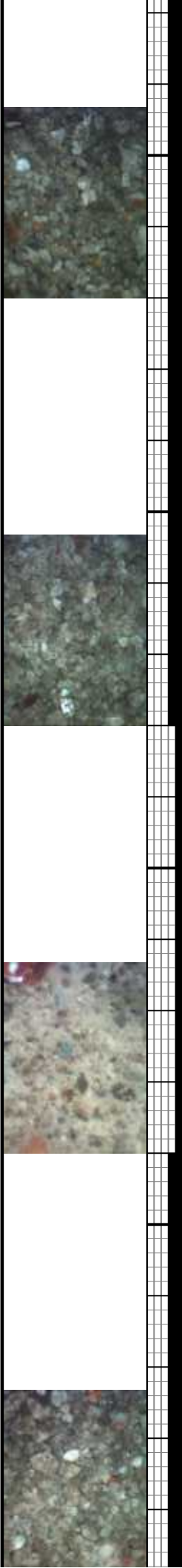
WOB: 16.8K  
ROT: 59  
STKS: 74SPM  
Pump Rate: 309 GPM

MD: 11,154'  
TVD: 7,332.33'  
Inclination: 90.13 °  
Azimuth: 89.77°

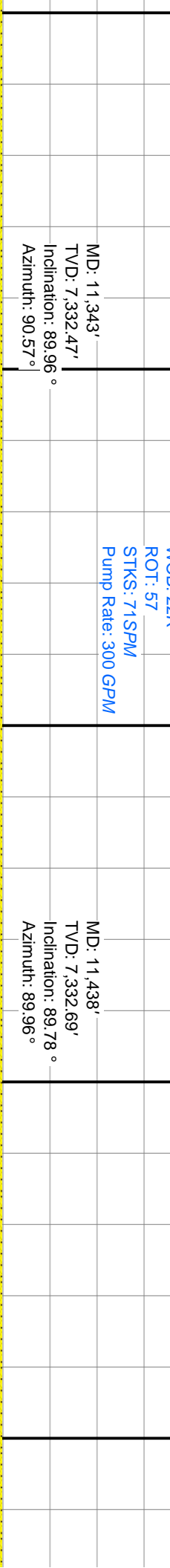
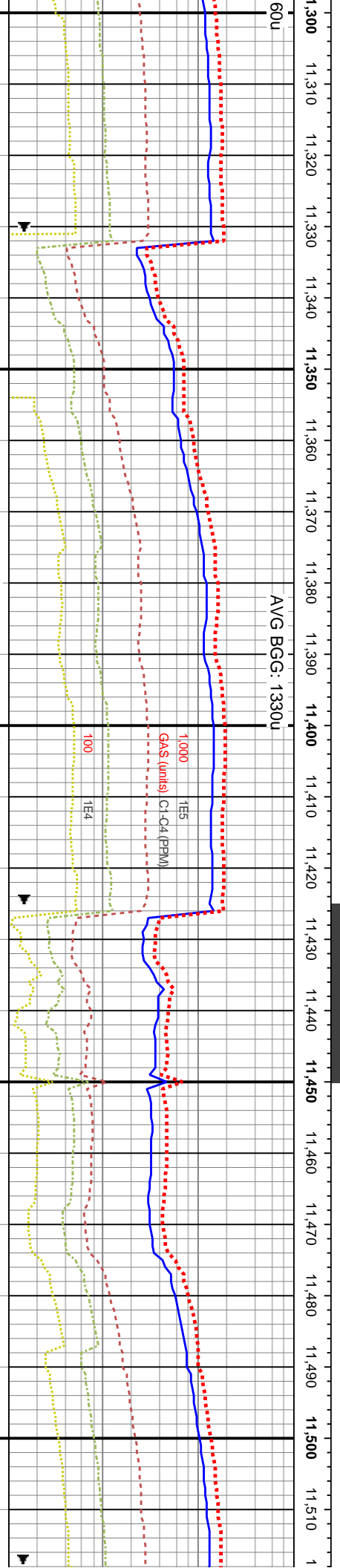
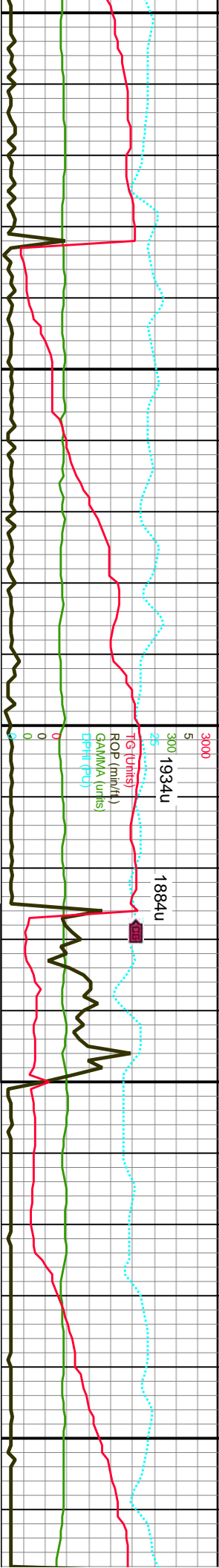
MD: 11,248'  
TVD: 7,332.33'  
Inclination: 89.87 °  
Azimuth: 90.87°

TVD (ft)

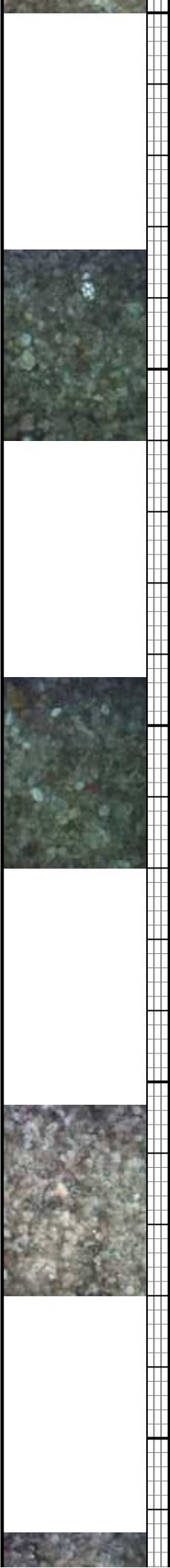
Interval	Description
11120-11180 SS	med brn- lt brn- amb, pred trns- sl trns, pred u f grnd, fri- frm, sb
11180-11240 SS	med brn- lt brn- amb, pred trns- sl trns, pred u f grnd, fri- frm, sb
11240-11300 SS	med brn- lt brn- amb, pred trns- sl trns, pred u f grnd, fri- frm, sb

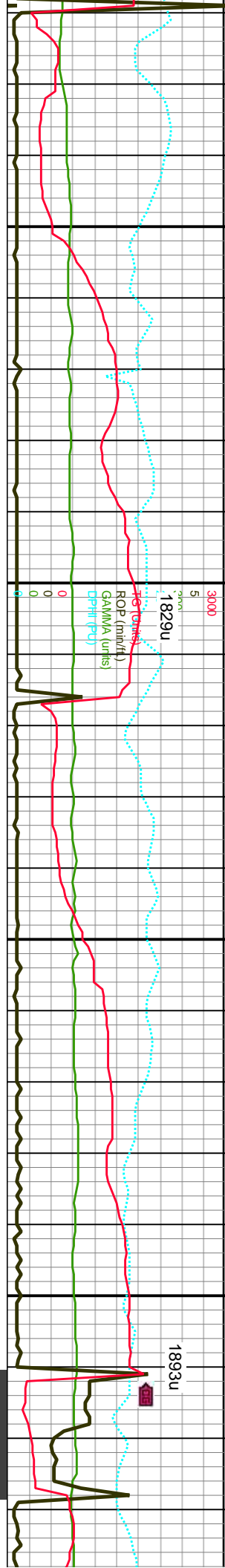






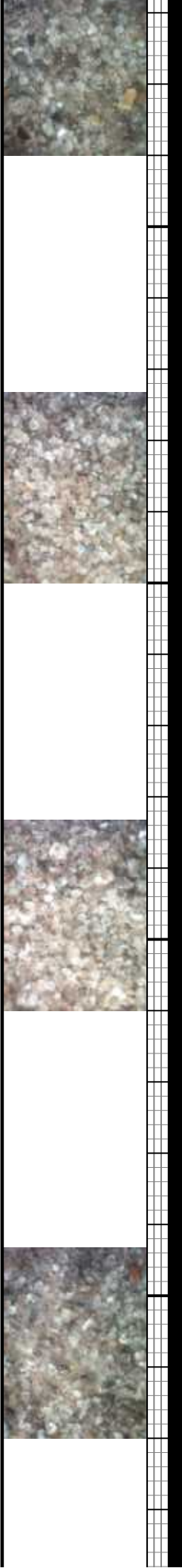
MD: 11,343' TVD: 7,332.47' Inclination: 89.96 ° Azimuth: 90.57 °		WOB: 22K ROT: 57 STKS: 71SPM Pump Rate: 300 GPM		MD: 11,438' TVD: 7,332.69' Inclination: 89.78 ° Azimuth: 89.96 °	
11300-11360 SS: med brn- lt brn- amb, ip tnsl- sl tnsl, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w- mod srtd, ip clus, calc cmtd, sily- arg, sme med tnsl qtz grs, tr intgr por, tr cal, sme min flor, p- g lt gn cut, resd ring		11360-11420 SS: med brn- lt brn- amb, pred tnsl- sl tnsl, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w- mod srtd, ip clus, calc cmtd, sily- arg, sme med tnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, g lt gn cut, resd ring		11420-11480 SS: med brn- lt brn- amb, pred tnsl- sl tnsl, pred u f grnd, fri- frm, sb rnd- sb ang grs, mod- w srtd, sme clus, calc cmtd, sily- arg, sme med tnsl qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, g lt gn cut, resd ring	
11480-11540 SS: med t pred tnsl- sl tnsl, pred u rnd- sb ang grs, mod- w calc cmtd, sily- arg, sme intgr por, tr cal, sme min resd ring					

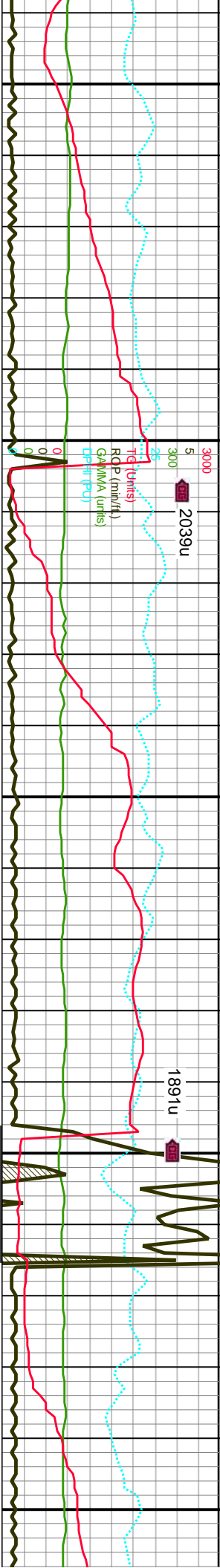




MD: 11,532' TVD: 7,333.92' Inclination: 88.72 ° Azimuth: 89.08 °	WOB: 20.9K ROT: 57 STKS: 72SPM Pump Rate: 301 GPM	6900	MD: 11,626' TVD: 7,335.3' Inclination: 89.6 ° Azimuth: 88.5 °	MD: 11,721' TVD: 7,335.45' Inclination: 90.22 ° Azimuth: 90.09 °
AVG BGC: 1150u				
AVG BGC: 1150u				

11540-11600 SS: med brn- lt brn- amb, pred trns- sl trns, pred u f grnd, fri- frm, sb mnd- sb ang grs, mod- w srt, sme clus, calc cmtd, silty- arg, sme med trns qtz grs, tr intgr por, tr cal, sme min flr, g lt gn cut, resd ring	7900	11600-11660 SS: med brn- lt brn- amb, pred trns- sl trns, pred u f grnd, fri- frm, sb mnd- sb ang grs, mod- w srt, sme clus, calc cmtd, silty- arg, sme med trns qtz grs, tr intgr por, tr cal, tr pyr, sme min flr, g lt gn cut, resd ring	11660-11720 SS: med brn- lt brn- amb, pred trns- sl trns, pred u f grnd, fri- frm, sb mnd- sb ang grs, mod- w srt, sme clus, calc cmtd, silty- arg, sme med trns qtz grs, tr intgr por, tr cal, tr pyr, sme min flr, g lt gn cut, g resd ring	11720-11730 SS: med brn- lt brn- amb, pred trns- sl trns, pred u f grnd, fri- frm, sb mnd- sb ang grs, mod- w srt, sme clus, calc cmtd, silty- arg, sme med trns qtz grs, tr intgr por, tr cal, tr pyr, sme min flr, g lt gn cut, resd ring
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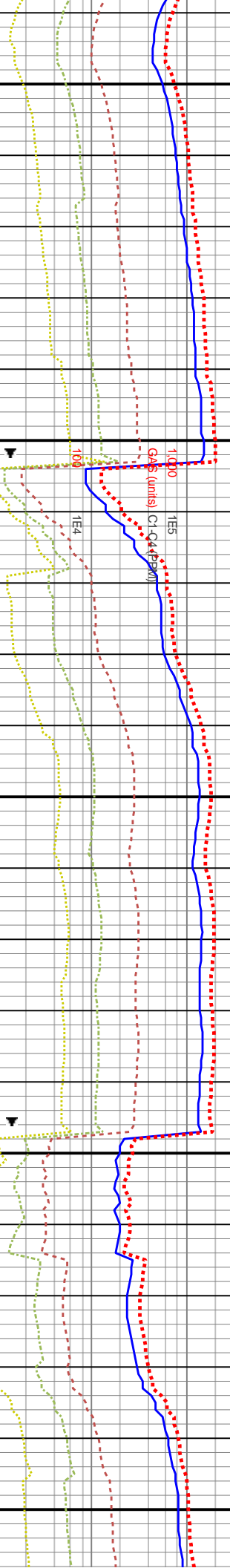


11,740 11,750 11,760 11,770 11,780 11,790 11,800 11,810 11,820 11,830 11,840 11,850 11,860 11,870 11,880 11,890 11,900 11,910 11,920 11,930 11,940 11,950 1

AVG BGG: 1190u

AVG BGG: 1600u

AVG BGG: 980u



WOB: 20.6K

ROT: 64

STKS: 72SPM

Pump Rate: 302 GPM

6900

MD: 11,815'

TVD: 7,334.58'

Inclination: 90.84 °

Azimuth: 90.6 °

VS: 5,164'

MD: 11,909'

TVD: 7,333.2'

Inclination: 90.84 °

Azimuth: 90.61 °

VS: 5,254.64'

TVD (ft)

11780 SS: med brn- lt brn- amb, pred  
tnsl, pred u f grnd, fri- frm, sb md- sb  
mod- w strd, sme clus, calc cmtd,  
sme med tnsi qtz grs, tr intgr por, tr  
pyr, sme min flor, g lt gn cut, g resd ring

11780-11840 SS: med brn- lt brn- amb, pred  
tnsl- sl tnsi, pred u f grnd, fri- frm, sb md- sb  
ang grs, mod- w strd, sme clus, calc cmtd, silty-  
arg, sme med tnsi qtz grs, tr intgr por, tr cal, tr  
pyr, sme min flor, g lt gn cut, g resd ring

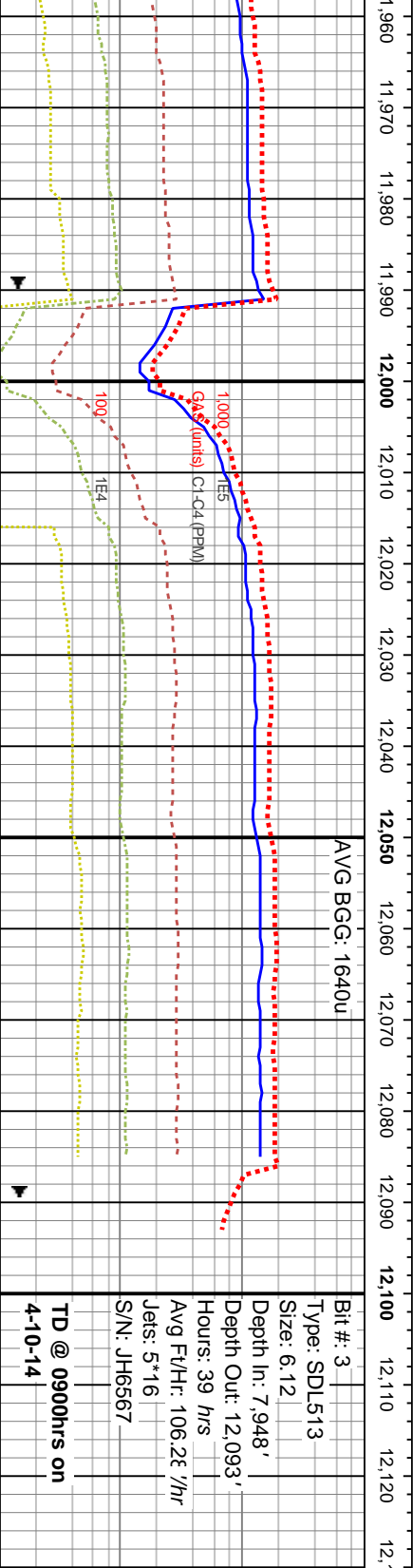
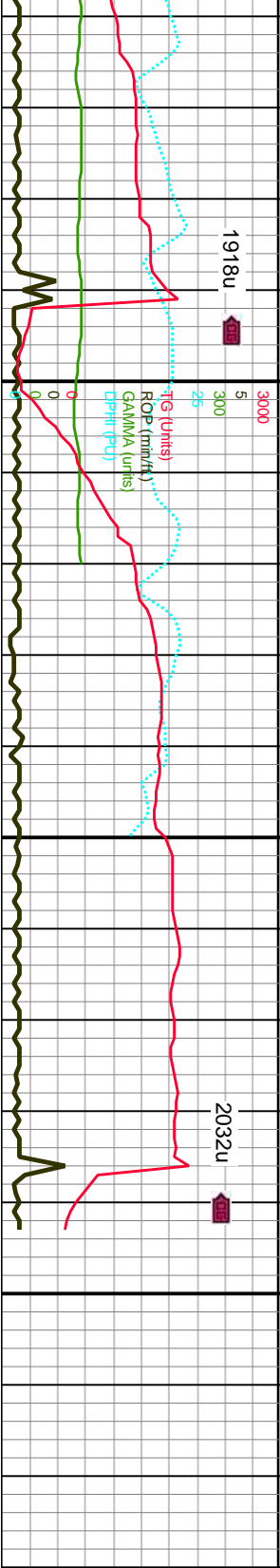
11840-11900 SS: med brn- lt brn- amb, ip offwht,  
pred tnsi- sl tnsi, pred u f grnd, fri- frm, sb md-  
sb ang grs, mod- w strd, pred uncons, sme clus,  
calc cmtd, silty- arg, sme med tnsi qtz grs, tr intgr  
por, tr cal, tr pyr, sme min flor, g lt gn cut, g resd  
ring

11900-11960 SS: med brn- lt brn- amb, ip  
offwht, pred tnsi- sl tnsi, pred u f grnd, fri-  
frm, sb md- sb ang grs, mod- w strd, pred  
uncons, sme clus, calc cmtd, silty- arg, sme  
med tnsi qtz grs, tr intgr por, tr cal, tr pyr,  
sme min flor, g lt gn cut, g resd ring

DP @ 11,902'







MD: 12,003'		MD: 12,093'	
TVD: 7,332.04'		TVD: 7,331.15'	
Inclination: 90.57°		Inclination: 90.57°	
Azimuth: 90.18°		Azimuth: 90.18°	
VS: 5,345.19'		VS: 8,421.97'	
11960-12020 SS: med brn- lt brn- amb, ip		12020-12093 SS: med brn- lt brn- amb, ip	
offwht, pred trns- sl trns, pred u f grnd, fri- frm,		offwht, pred trns- sl trns, pred u f grnd, fri- frm,	
sb rnd- sb ang grs, mod- w strd, pred unconcs,		sb rnd- sb ang grs, mod- w strd, pred unconcs-	
sme clus, calc cmtd, silty- arg, sme med trns		cl- clus, calc cmtd, silty- arg, sme med trns	
qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, g lt		qtz grs, tr intgr por, tr cal, tr pyr, sme min flor, g lt	
gn cut, g resdl ring		gn cut, g resdl ring	
7900		7900	
AVG BGC: 1640u		AVG BGC: 1640u	
Bit #: 3		Bit #: 3	
Type: SDL513		Type: SDL513	
Size: 6.12		Size: 6.12	
Depth In: 7,948'		Depth In: 7,948'	
Depth Out: 12,093'		Depth Out: 12,093'	
Hours: 39 hrs		Hours: 39 hrs	
Avg Ft/Hr: 106.28 /hr		Avg Ft/Hr: 106.28 /hr	
Jets: 5*16		Jets: 5*16	
S/N: JH6567		S/N: JH6567	
TD @ 0900hrs on		TD @ 0900hrs on	
4-10-14		4-10-14	