



Scale: 5" / 100'
Measured Depth Log

Well Name Melbon Ranch 4I-17H-M265

Location Sec. 17 T2N R65W

State Colorado

County Weld

Country USA

Rig Number Ensign 153

API Number 05-123-47750

AFE # 16191474

Geographic Region Rockies

Field Wattenberg

Spud Date 11/2/2018

Drilling Completed 11/4/2018

Surface Coordinates Lat/Long: 40.1348423/-104.6961138

SHL: Sec: 17 Twp: 2N 65W
Footage: 2400 FSL 460 FWL

Bottom Hole Coordinates Proposed BHL: Sec: 17 Twp: 2N 65W
Footages: 2400 FSL 460 FEL

Ground Elevation 4,956'

K.B. Elevation 4,979'

Logged Interval 6,500' **To** 12,038'

Total Depth 12,038'

Formation Codell

Type of Drilling Fluid Synthetic Oil Based Mud

Operator

Company Crestone Peak Resources

Address 1801 California Street
Suite 2500
Denver, CO 80202



CRESTONE PEAK
RESOURCES

Geologist

Name John Ready

Company Crestone Peak Resources

Address 1801 California Street
Suite 2500
Denver, CO 80202



Zone Color Coding



Oil



Condensate



Gas



Note



Core



Pressure



Error



Water



Seal

Other

Loggers: Shana Swirin / Matthew Cox

Services Provided: 2-Man Mudlogging / Geosteering

Equipment: ML-567

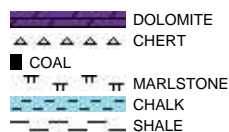
Contractor: Reservoir Group
6360 West Sam Houston Pkwy N
Houston, Texas, 77041

Start Date 11/02/2018

Release Date: 11/5/2018

Job #: 1698RK1810

Rock Types



Accessories

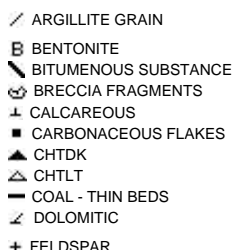
Fossils



F FOSSIL



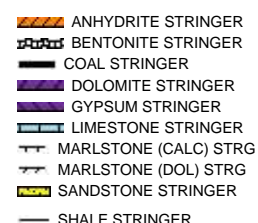
ARGILLACEOUS



GLAUCONITE



Stringer



F FERRUGINOUS

F FISH

F FORAMINIFERA

Minerals

ANHYDRITIC

F FERRUGINOUS

F FERRUGINOUS PELLET

F FERRUGINOUS

F FERRUGINOUS

F SILTY

F TUFFACEOUS

F FINELY CRINOID

SILTSTONE STRINGER

Oil Show

D DEAD

E EVEN

Q QUESTIONABLE

S SPOTTED STAINING

Porosity

E EARTHY

F FENESTRAL

F FRACTURE

X INTERCRYSTALLINE

I INTEROOLITIC

M MOLDIC

O ORGANIC

P PINPOINT

V VUGGY

Engineering

BIT

CASING

C CONNECTION (LEFT)

C CONNECTION (RIGHT)

C CONNECTION GAS

C CORE - LOST

C CORE - RECOVERED

DST INTERVAL

F FAULT

Other Symbols

FORMATION TOP

GAS SHOW

MN DEPTH MN DEPTH

NORMAL FAULT

OIL SHOW

OVERTURNED STRATA

REVERSE FAULT

SIDEWALL CORE (LEFT)

SIDEWALL CORE (RIGHT)

SLIDE

SURVEY

TRIP GAS

WIRELINE TESTED - LEFT

WIRELINE TESTED - RT

Rounding

A ANGULAR

R ROUNDED

S SUBANG

S SUBRND

Textures

B BOUNDSTONE

C CHALKY

C CRYPTOXLN

E EARTHY

F FINELYXLN

G GRAINSTONE

L LITHOGRAPHIC

M MICROXLN

M MUDSTONE

P PACKSTONE

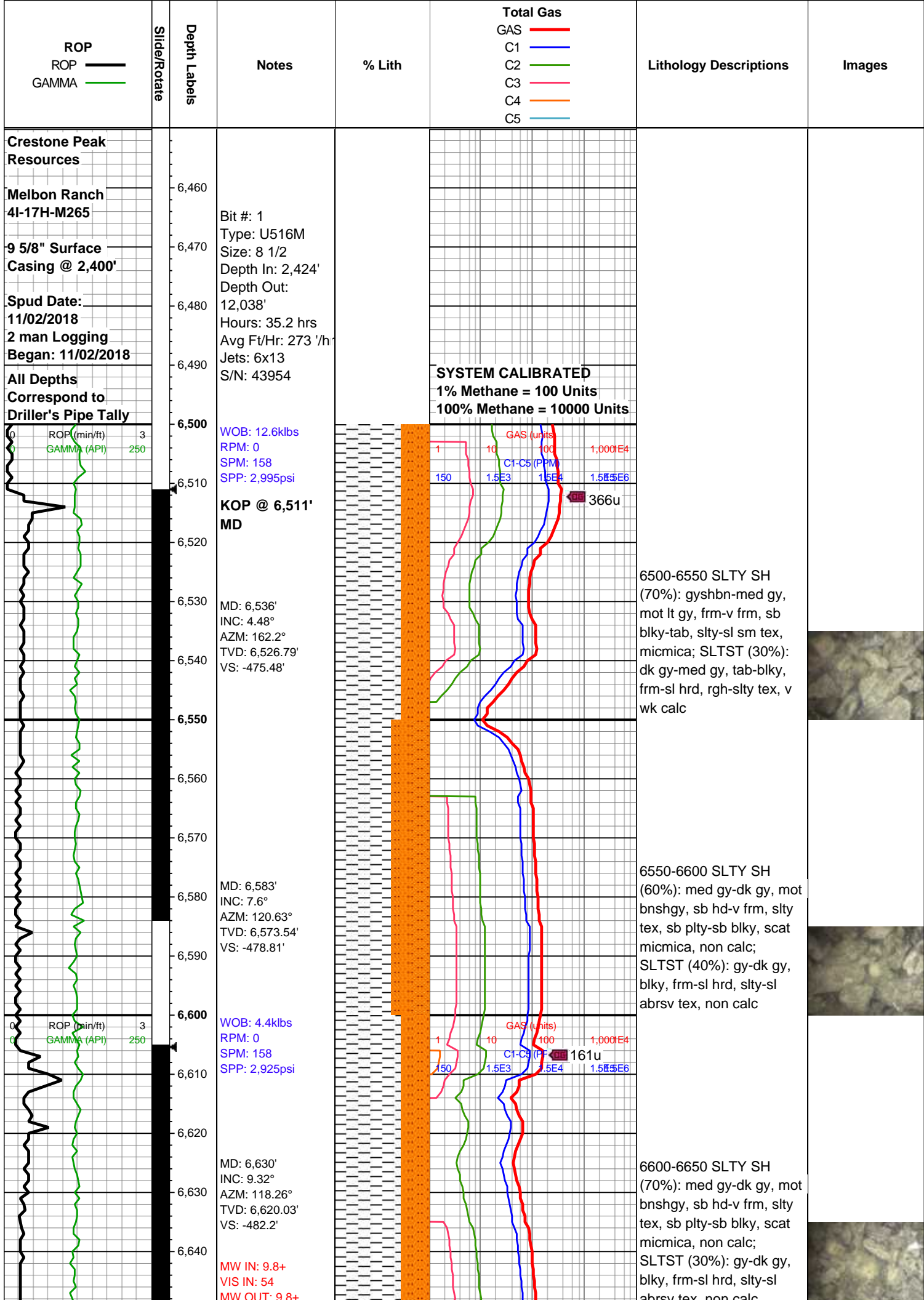
W WACKESTONE

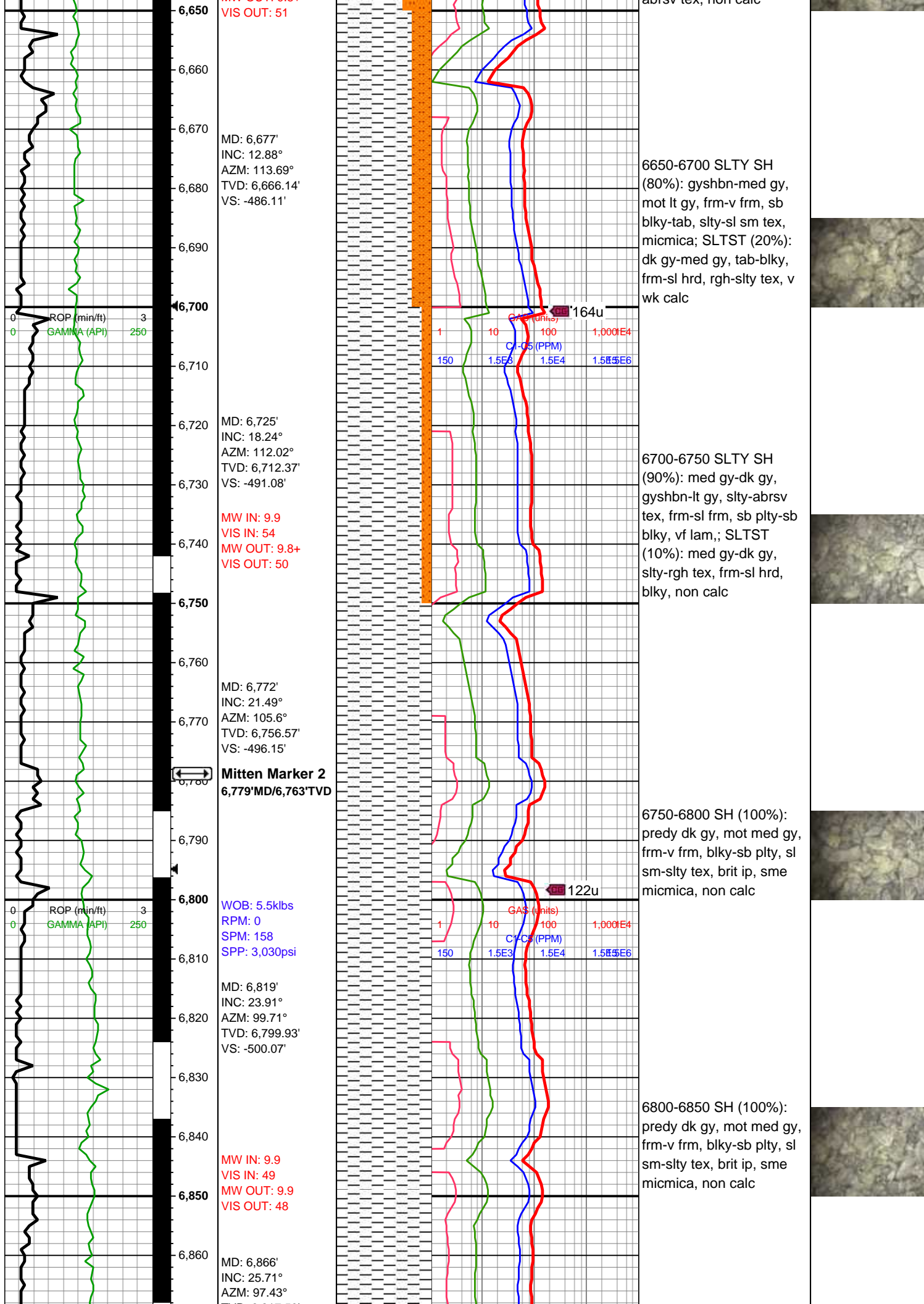
Sorting

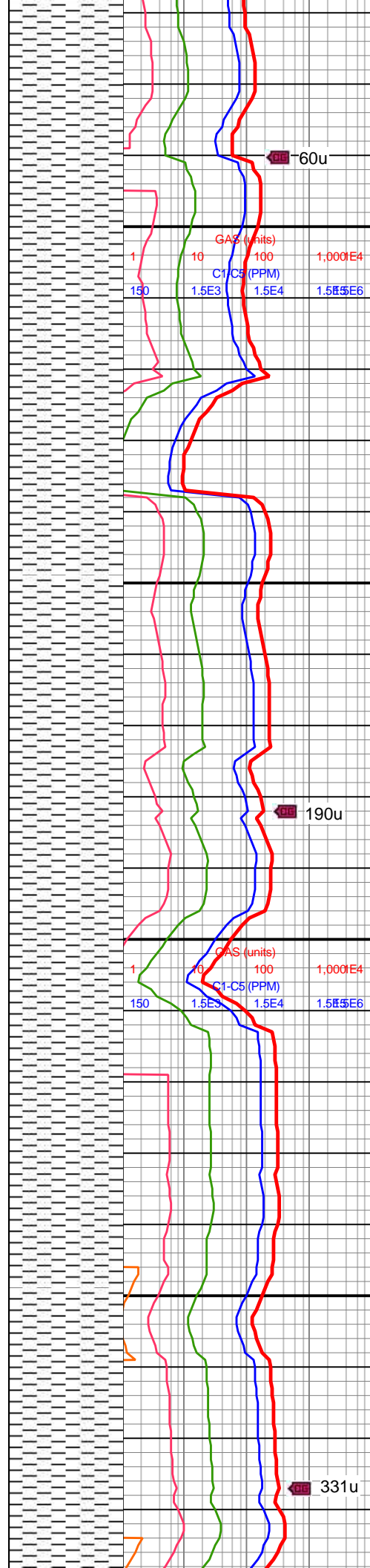
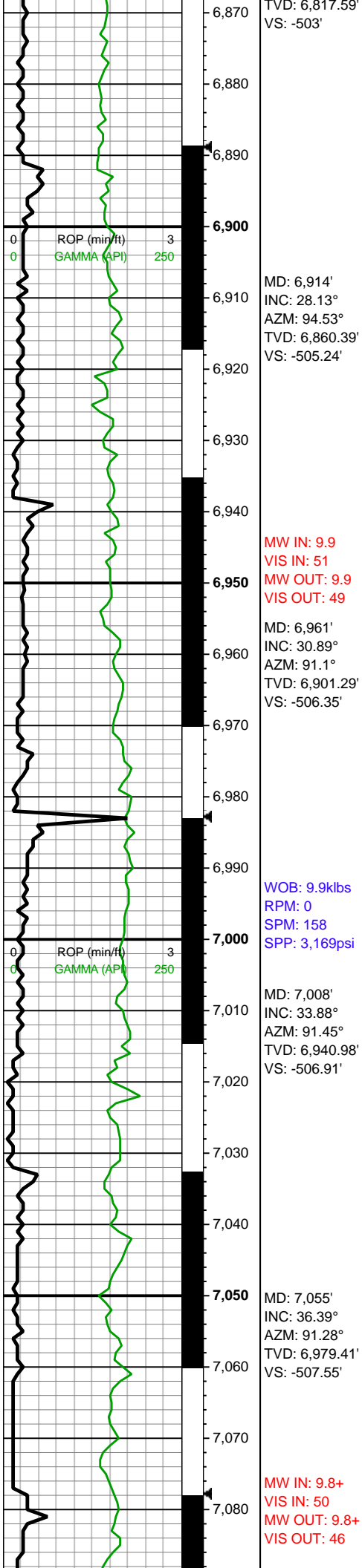
M MODERATE

P POOR

W WELL







6850-6900 SH (100%):
predy dk gy, mot med gy,
frm-v frm, blk-y-sb plty, sl
sm-sltly tex, brit ip, sme
micmica, non calc

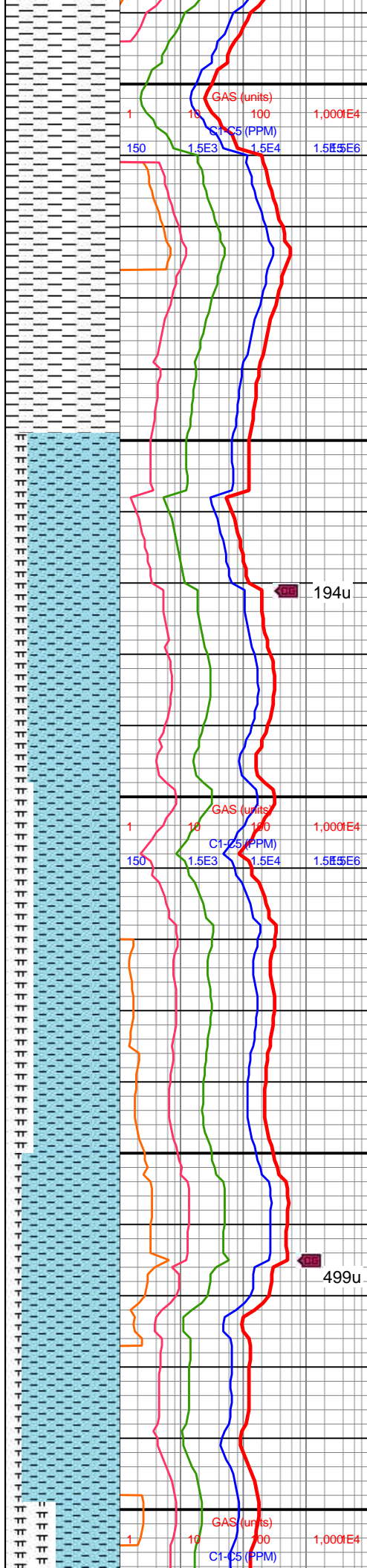
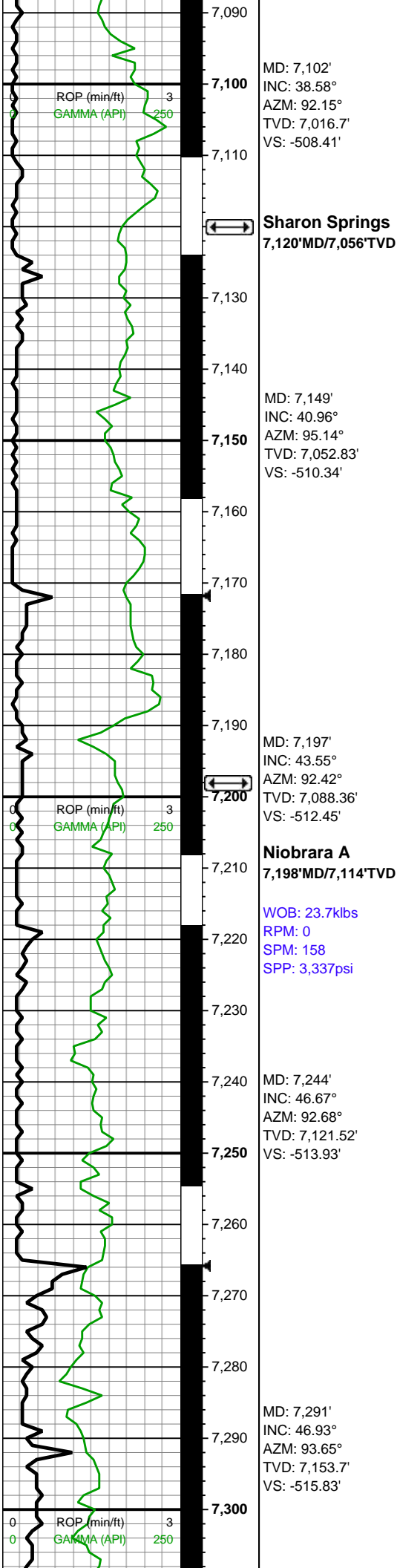
6900-6950 SH (100%):
predy dk gy, mot med gy,
frm-v frm, blk-y-sb plty,
sm-sl slty tex, brit ip, non
calc

6950-7000 SH (100%):
predy dk gy, mot med gy,
frm-v frm, blk-y-sb plty,
sm-sl slty tex, brit ip, non
calc

7000-7050 SH (100%):
predy dk gy, mot med gy,
frm-v frm, blk-y-sb plty,
sm-sl slty tex, brit ip, non
calc

7050-7100 SH (100%):
predy dk gy, mot med gy,





predy dk gy, mot med gy,
frm-v frm, blkly-sb plty,
sm-sl slty tex, brit ip, tr
bent, non calc

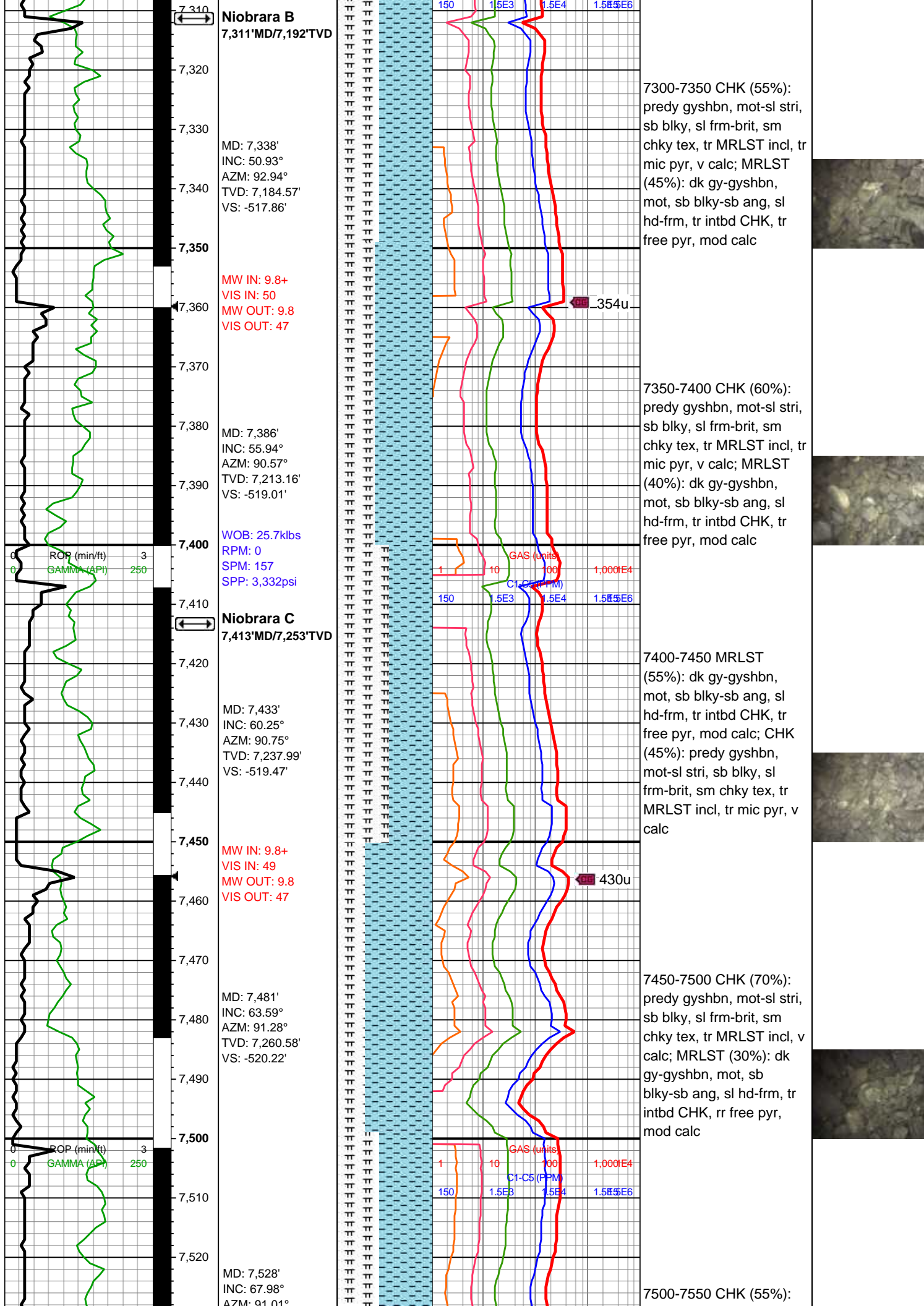
7100-7150 SH (100%):
predy dk gy, mot med gy,
frm-v frm, blkly-sb plty,
sm-sl slty tex, brit ip, tr
bent, non calc

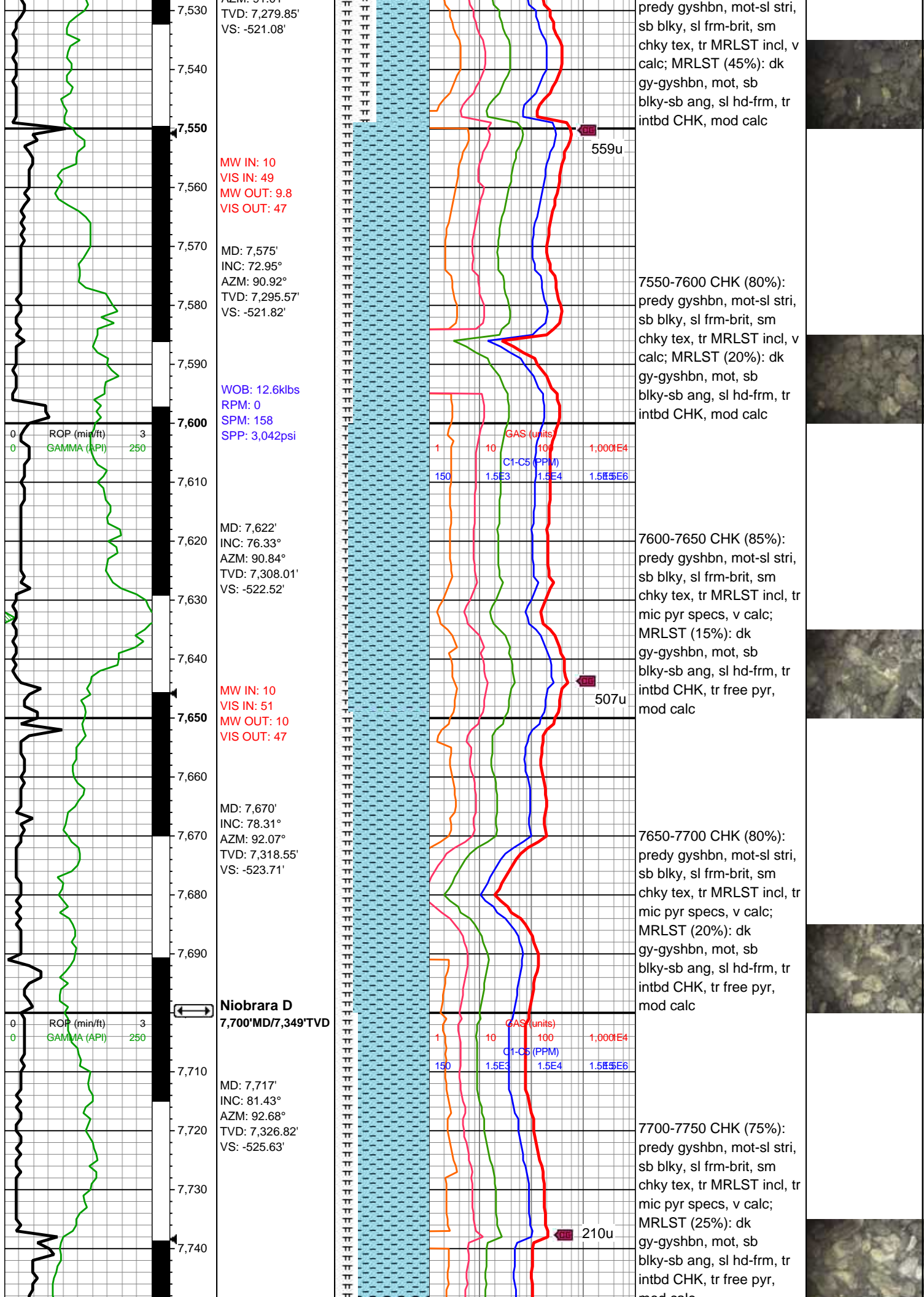
7150-7200 CHK (80%):
predy gyshbn, mot-sl stri,
sb blkly, sl frm-brit, sm
chky tex, tr MRLST incl, tr
mic pyr, v calc; MRLST
(20%): dk gy-gyshbn,
mot, sb blkly-sb ang, sl
hd-frm, tr intbd CHK, tr
free pyr, mod calc

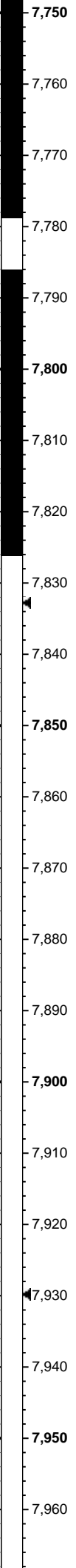
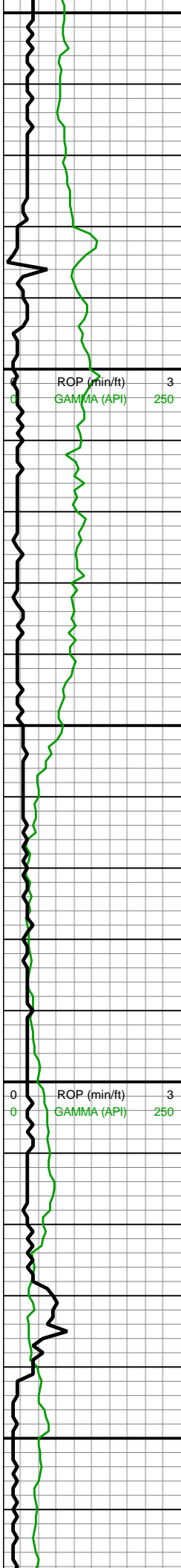
7200-7250 CHK (75%):
predy gyshbn, mot-sl stri,
sb blkly, sl frm-brit, sm
chky tex, tr MRLST incl, tr
mic pyr, v calc; MRLST
(25%): dk gy-gyshbn,
mot, sb blkly-sb ang, sl
hd-frm, tr intbd CHK, tr
free pyr, mod calc

7250-7300 CHK (85%):
predy gyshbn, mot-sl stri,
sb blkly, sl frm-brit, sm
chky tex, tr MRLST incl, tr
mic pyr, v calc; MRLST
(15%): dk gy-gyshbn,
mot, sb blkly-sb ang, sl
hd-frm, tr intbd CHK, tr
free pyr, mod calc









MD: 7,764'
INC: 85.61°
AZM: 91.71°
TVD: 7,332.12'
VS: -527.42'

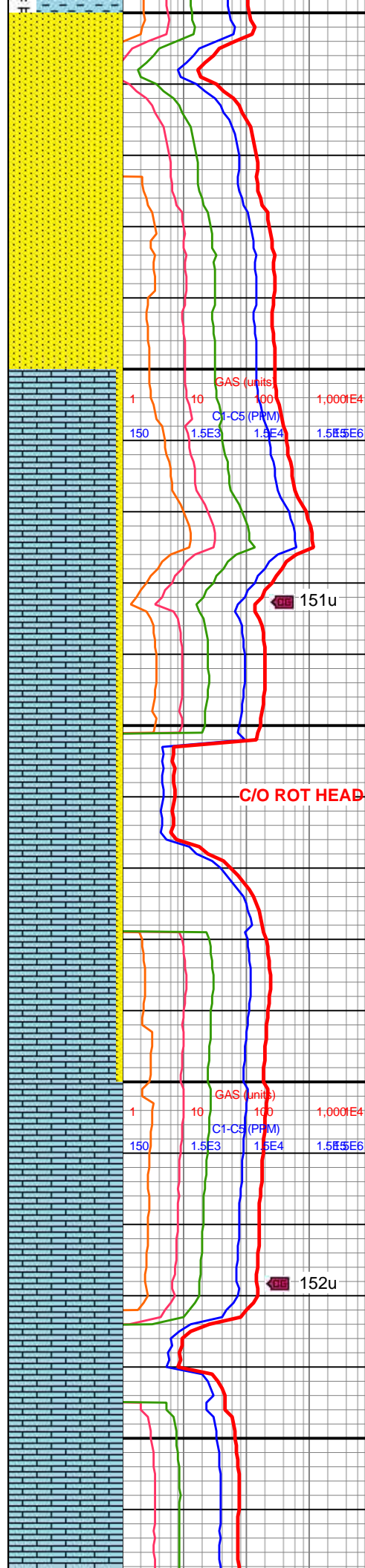
WOB: 28.7klbs
RPM: 0
SPM: 158
SPP: 3,383psi

Land Curve @
7826' MD

MD: 7,859'
INC: 90.88°
AZM: 91.89°
TVD: 7,335.03'
VS: -530.4'

MW IN: 10.2
VIS IN: 50
MW OUT: 10
VIS OUT: 46

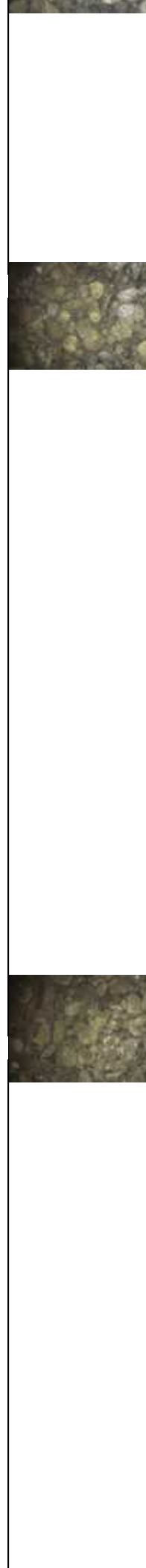
MD: 7,953'
INC: 90.35°
AZM: 89.61°
TVD: 7,334.02'
VS: -531.63'

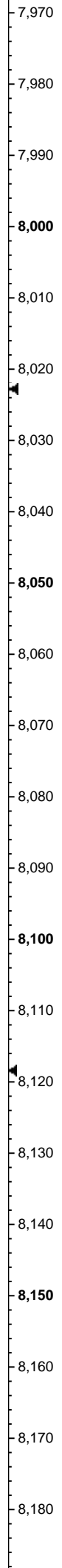
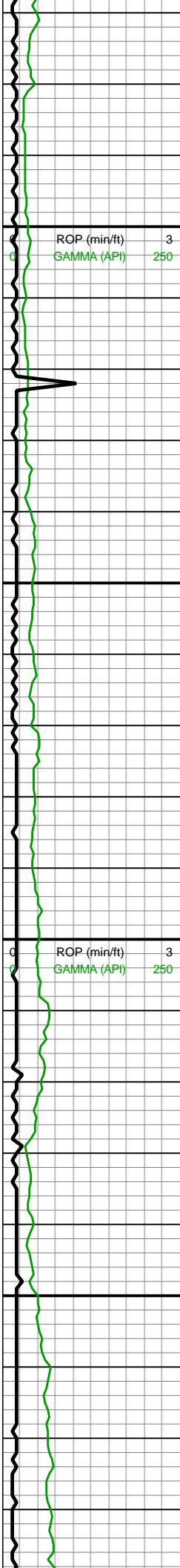


mod calc

7750-7800 SS (100%): lt
brn-bnshgy, med brn, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt, scat sh
frags, tr free pyr, scat mic
pyr

7800-7900 LS (95%):
gyshbn-crm, mot wht, sb
tab-sb blk, pkst, vf
xln-micxln, frm-sl frm, hi
calc; SS (5%): lt
brn-bnshgy, med brn, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt, tr mic pyr



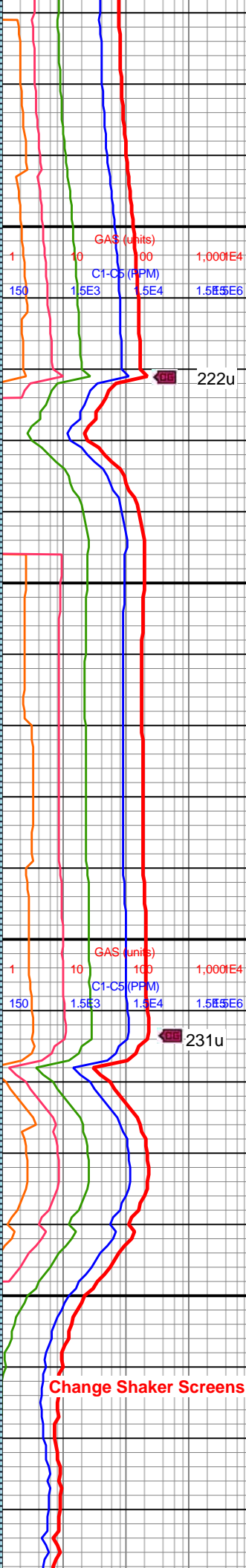


WOB: 35.8klbs
RPM: 61
SPM: 184
SPP: 4,736psi

MD: 8,048'
INC: 90.97°
AZM: 89.52°
TVD: 7,332.92'
VS: -530.91'

MW IN: 10.2
VIS IN: 45
MW OUT: 10.2
VIS OUT: 46

MD: 8,142'
INC: 91.45°
AZM: 89.52°
TVD: 7,330.94'
VS: -530.12'

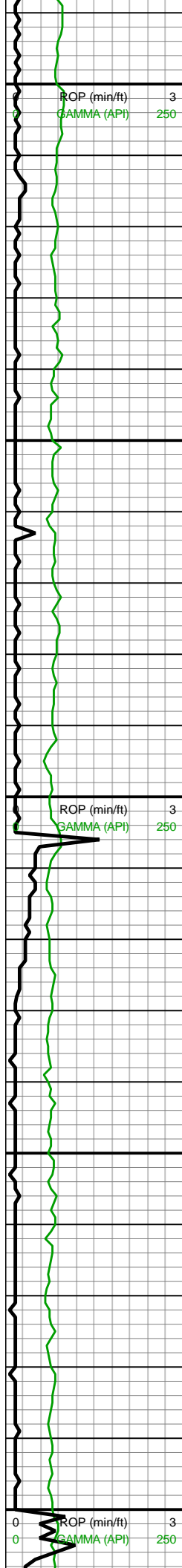


7900-8000 LS (100%):
gyshbn-crm, mot wht, sb
tab-sb blk, pkst, vf
xln-micxln, frm-sl frm, hi
calc, tr SS

8000-8100 LS (100%):
gyshbn-crm, mot wht, sb
tab-sb blk, pkst, vf
xln-micxln, frm-sl frm, hi
calc, tr SS

8100-8200 LS (100%):





8,190
8,200
8,210
8,220
8,230
8,240
8,250
8,260
8,270
8,280
8,290
8,300
8,310
8,320
8,330
8,340
8,350
8,360
8,370
8,380
8,390
8,400

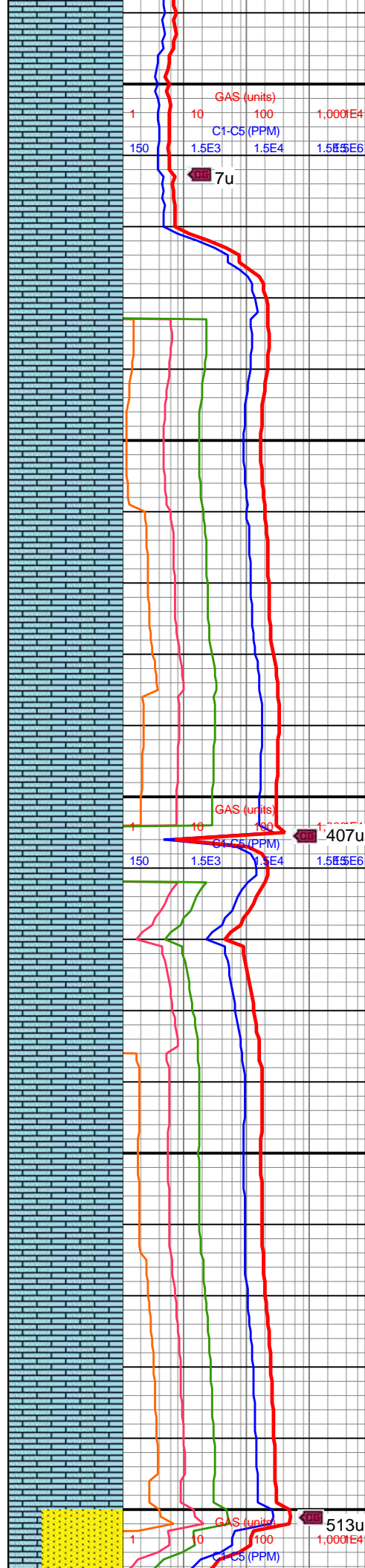
WOB: 36.3klbs
RPM: 61
SPM: 184
SPP: 4,865psi

MD: 8,237'
INC: 91.41°
AZM: 87.67°
TVD: 7,353.57'
VS: -527.94'

MW IN: 10.2+
VIS IN: 46
MW OUT: 10.2
VIS OUT: 47

MD: 8,332'
INC: 90.84°
AZM: 85.3°
TVD: 7,351.7'
VS: -522.12'

WOB: 36.3klbs
RPM: 61
SPM: 186



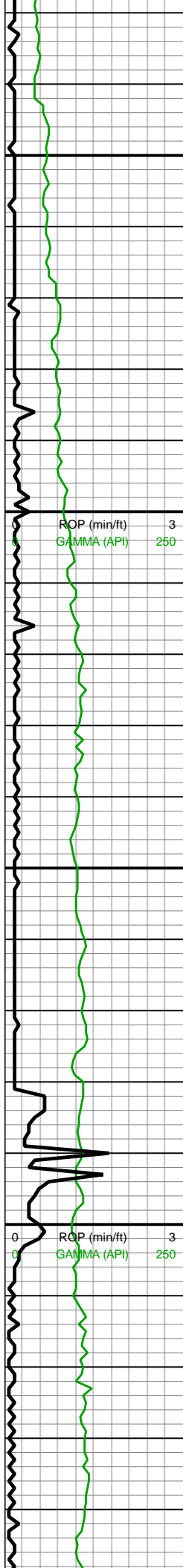
gyshbn-crm, mot wht, sb
tab-sb blk, pkst, vf
xln-micxln, frm-sl frm, hi
calc, tr SS

8200-8300 LS (100%):
gyshbn-crm, mot wht, sb
tab-sb blk, pkst, vf
xln-micxln, frm-sl frm, hi
calc, tr SS

8300-8400 LS (100%):
gyshbn-crm, mot wht, sb
tab-sb blk, pkst, vf
xln-micxln, frm-sl frm, hi
calc, tr SS



8400-8500 SS (80%): lt
brn-bnshgy, med brn, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt; LS
(20%):gyshbn-crm, mot
wht, sb tab-sb blk, pkst,
vf xln-micxln, frm-sl frm,
hi calc



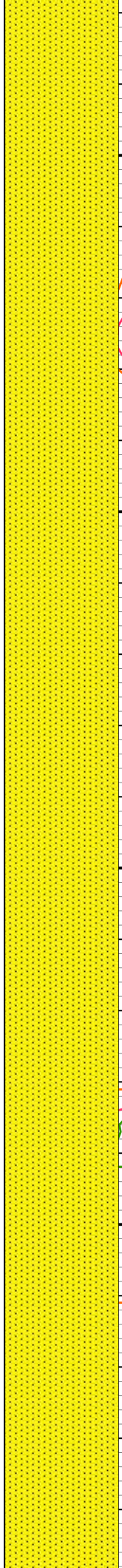
8,630
8,640
8,650
8,660
8,670
8,680
8,690
8,700
8,710
8,720
8,730
8,740
8,750
8,760
8,770
8,780
8,790
8,800
8,810
8,820
8,830
8,840

MD: 8,709'
INC: 88.59°
AZM: 90.48°
TVD: 7,355.07'
VS: -510.52'

MW IN: 10.2+
VIS IN: 49
MW OUT: 10.2+
VIS OUT: 45

MD: 8,803'
INC: 87.41°
AZM: 91.19°
TVD: 7,358.35'
VS: -511.89'

WOB: 28.2klbs
RPM: 0
SPM: 186
SPP: 4,520psi

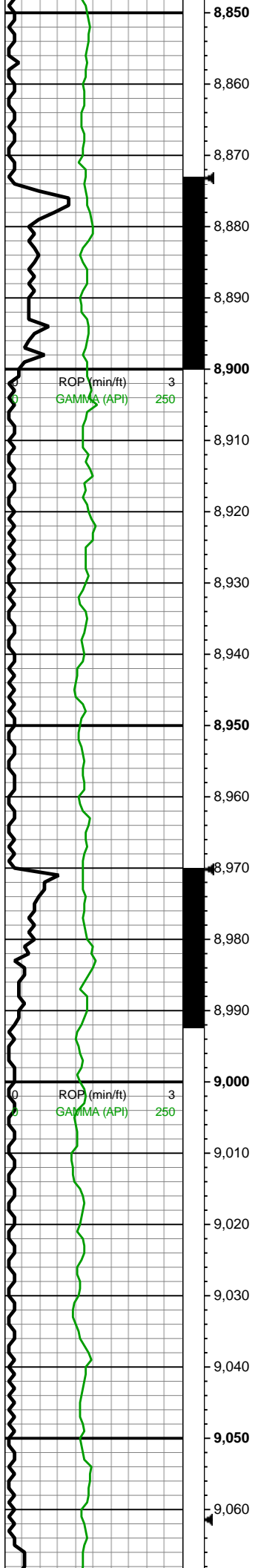


8600-8700 SS (100%): lt
brn-bnshgy, med brn, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt



8700-8800 SS (100%): lt
brn-bnshgy, med brn, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt



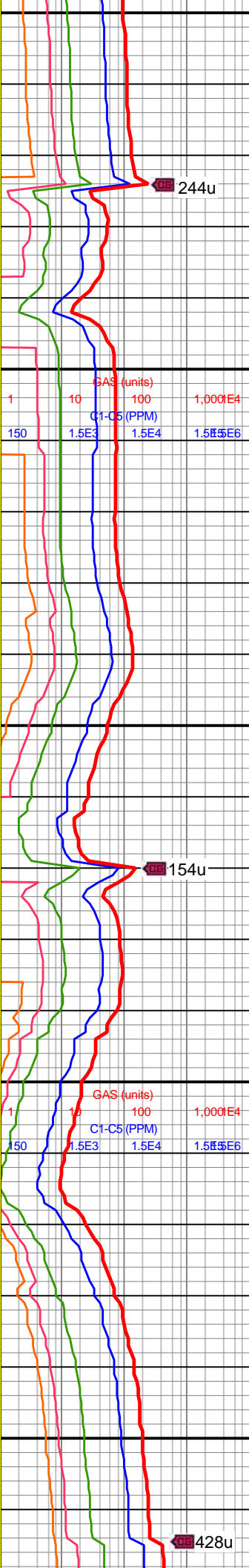
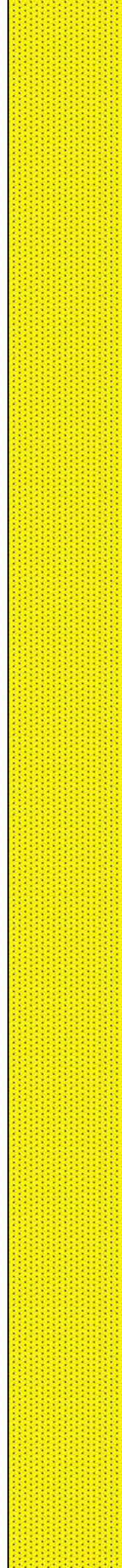


MW IN: 10.2+
VIS IN: 49
MW OUT: 10.2+
VIS OUT: 47

MD: 8,898'
INC: 89.78°
AZM: 90.92°
TVD: 7,360.68'
VS: -513.64'

MD: 8,992'
INC: 91.58°
AZM: 90.92°
TVD: 7,359.57'
VS: -515.14'

WOB: 30.2klbs
RPM: 61
SPM: 184
SPP: 5,050psi



8800-8900 SS (100%): lt
brn-bnshgy, med brn, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt

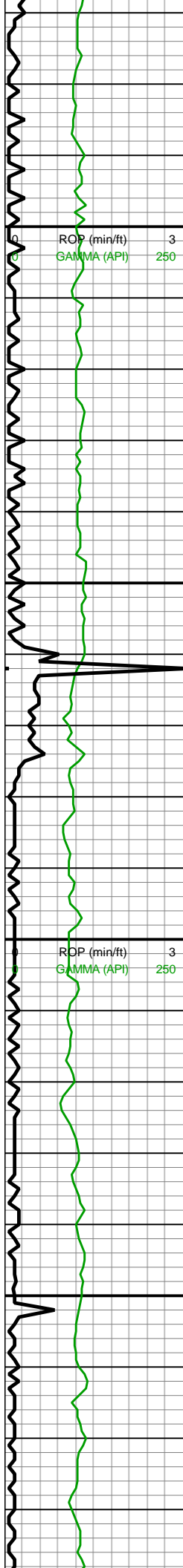
8900-9000 SS (100%): lt
brn-bnshgy, med brn, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt



244u

154u

428u



9,070
9,080
9,090
9,100
9,110
9,120
9,130
9,140
9,150
9,160
9,170
9,180
9,190
9,200
9,210
9,220
9,230
9,240
9,250
9,260
9,270
9,280

MW IN: 10.2+
VIS IN: 49
MW OUT: 10.2+
VIS OUT: 45

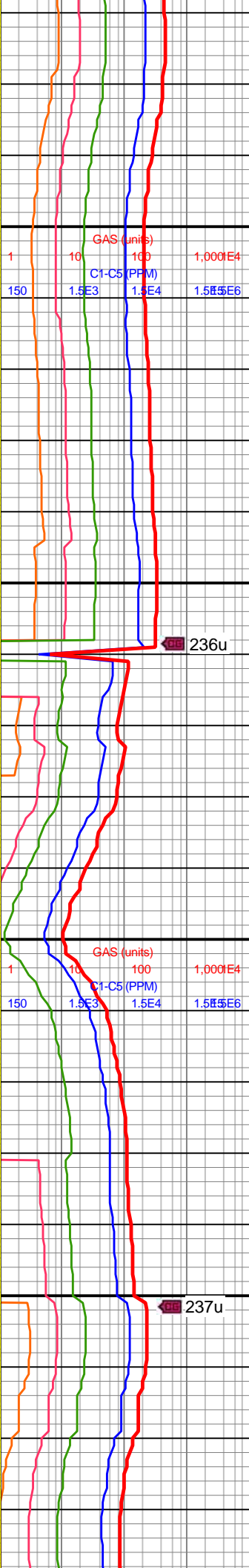
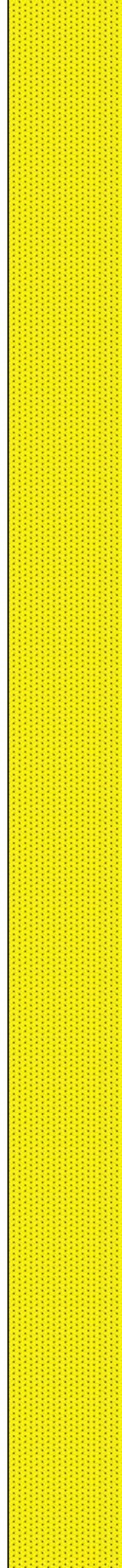
MD: 9,087'
INC: 92.11°
AZM: 90.84°
TVD: 7,356.51'
VS: -516.6'

ROP (min/ft) 3
GAMMA (API) 250

ROP (min/ft) 3
GAMMA (API) 250

MW IN: 10.2+
VIS IN: 49
MW OUT: 10.2+
VIS OUT: 44

MD: 9,276'
INC: 88.33°
AZM: 87.23°
TVD: 7,355.55'
VS: -513.36'



9000-9100 SS (100%): lt
brn-bnshgy, med brn, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt

GAS (units) 1 10 100 1,000E4
C1-C5 (PPM) 150 1.5E3 1.5E4 1.5E6

236u

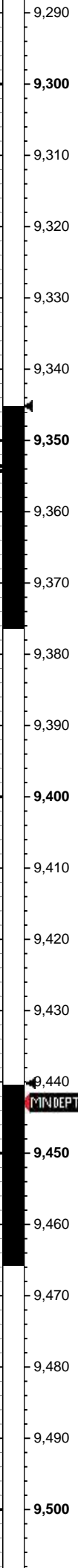
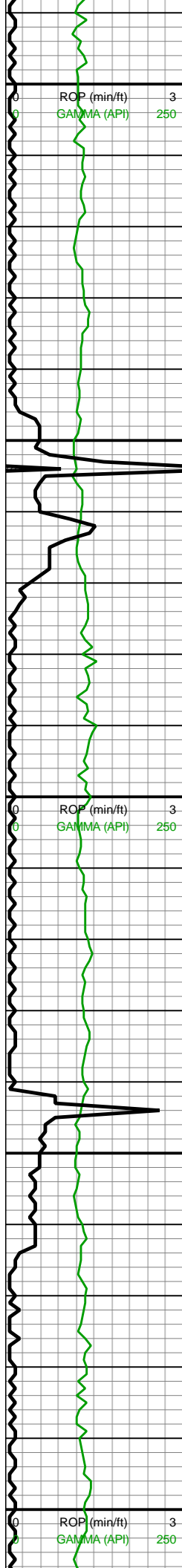
9100-9200 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-sltly gr, mtx-gr sup
cluss, cons wi silc/arg
cmt, tr diss/PP mic pyr,
mod-hi calc

GAS (units) 1 10 100 1,000E4
C1-C5 (PPM) 150 1.5E3 1.5E4 1.5E6

237u

9200-9300 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf slty gr, mtx gr sup





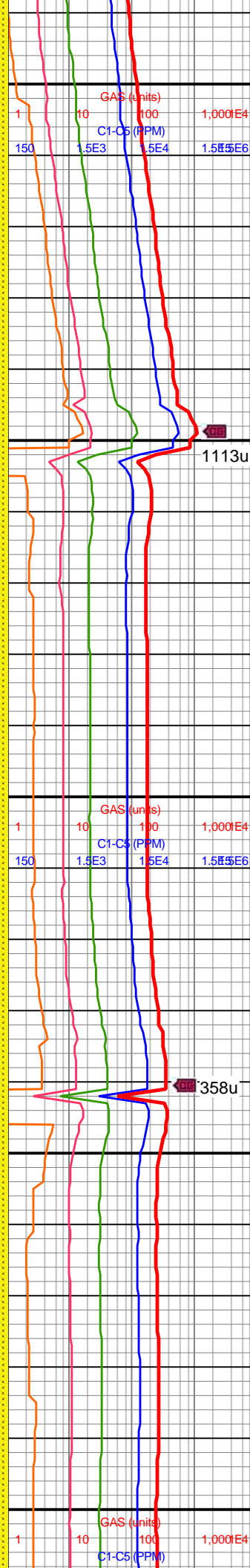
MD: 9,371'
INC: 87.98°
AZM: 87.06°
TVD: 7,358.61'
VS: -508.63'

WOB: 32.4klbs
RPM: 61
SPM: 6
SPP: 5,175psi

11/04/2018

MW IN: 10.2+
VIS IN: 50
MW OUT: 10.2+
VIS OUT: 47

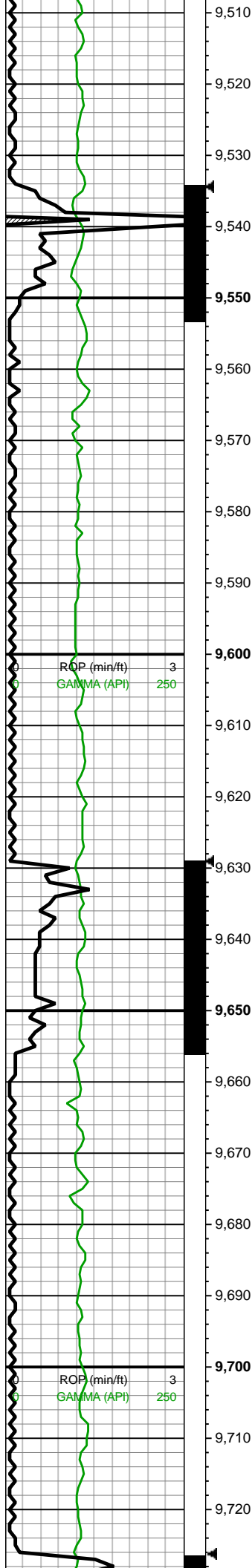
MD: 9,465'
INC: 91.45°
AZM: 87.06°
TVD: 7,359.08'
VS: -503.81'



vi-sity gr, mtz-gr sup
cluss, cons wi silc/arg
cmt, tr diss/PP mic pyr,
mod-hi calc

9300-9400 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-sltly gr, mtz-gr sup
cluss, cons wi silc/arg
cmt, tr diss/PP mic pyr,
mod calc

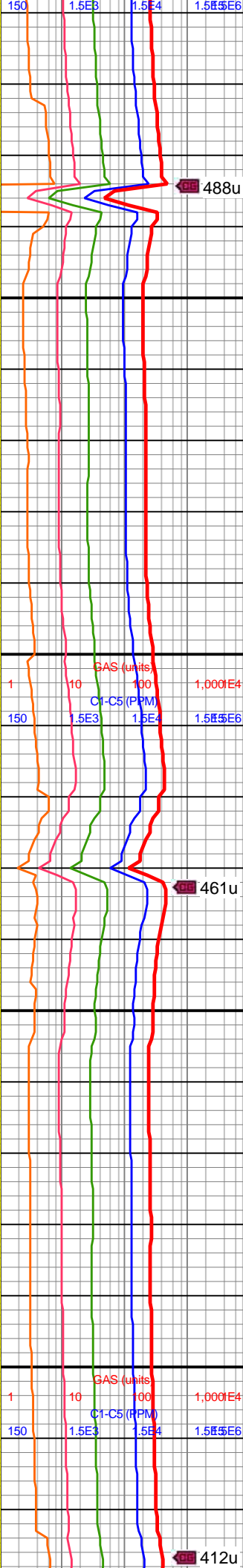
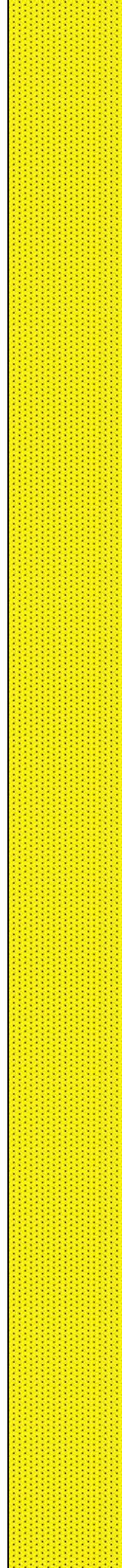
9400-9500 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-sltly gr, mtz-gr sup
cluss, cons wi silc/arg
cmt, tr pyr, mod calc



MD: 9,560'
INC: 91.85°
AZM: 87.14°
TVD: 7,356.34'
VS: -499.01'

WOB: 27.7klbs
RPM: 61
SPM: 186
SPP: 5,160psi

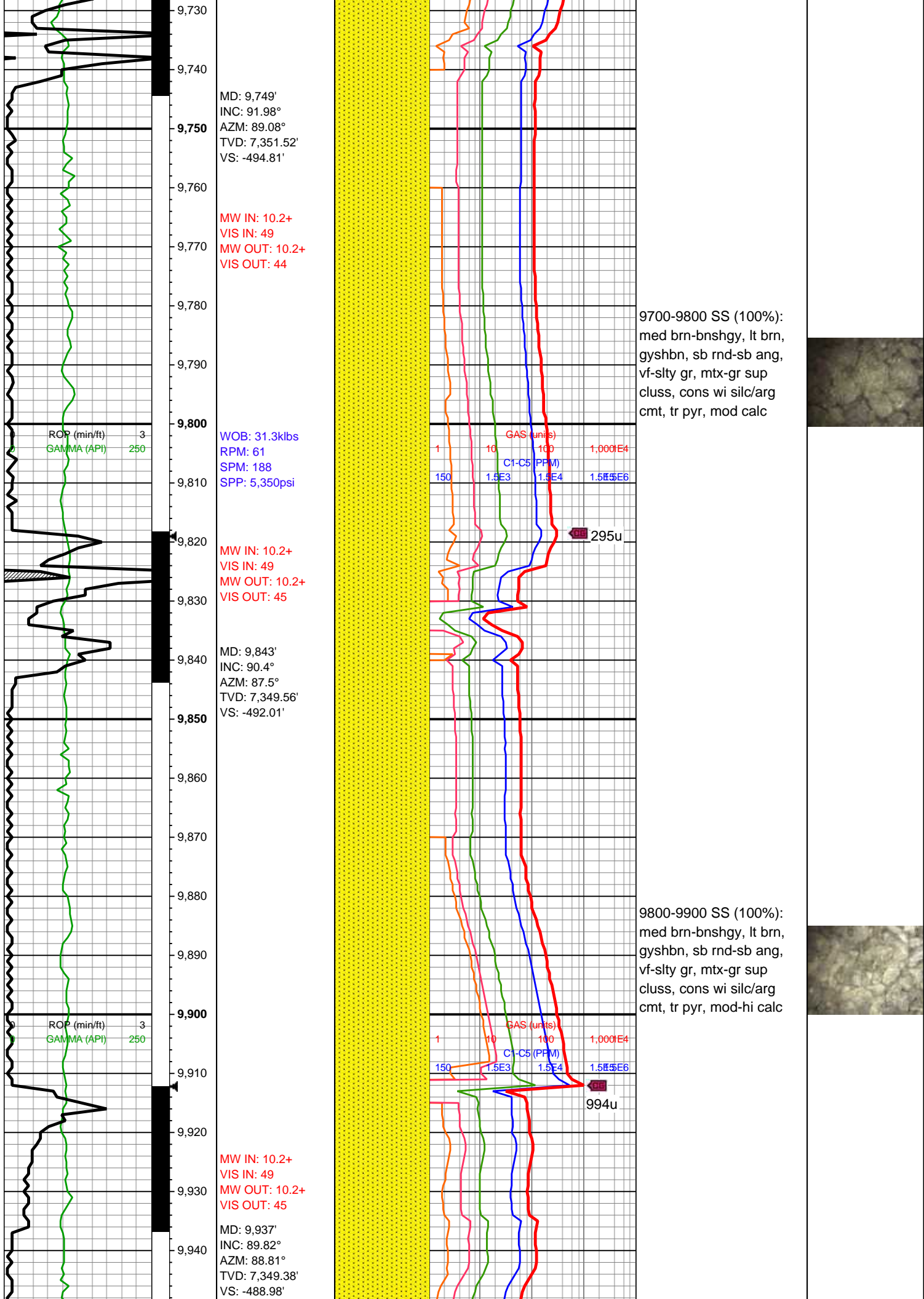
MD: 9,654'
INC: 91.01°
AZM: 89.34°
TVD: 7,353.99'
VS: -496.12'

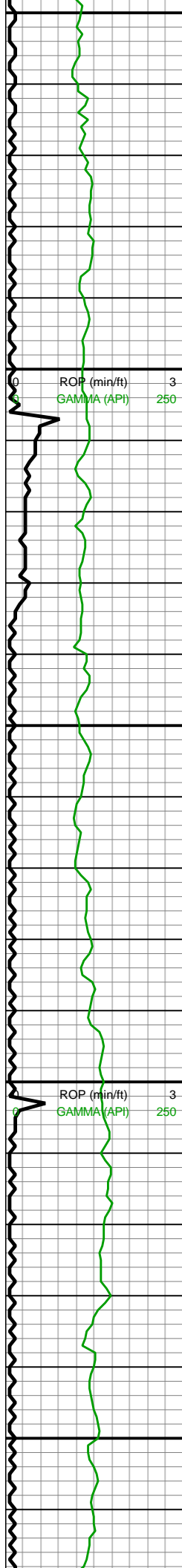


9500-9600 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-slty gr, mtx-gr sup
cluss, cons wi silc/arg
cmt, tr pyr, mod calc

9600-9700 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-slty gr, mtx-gr sup
cluss, cons wi silc/arg
cmt, tr pyr, mod calc





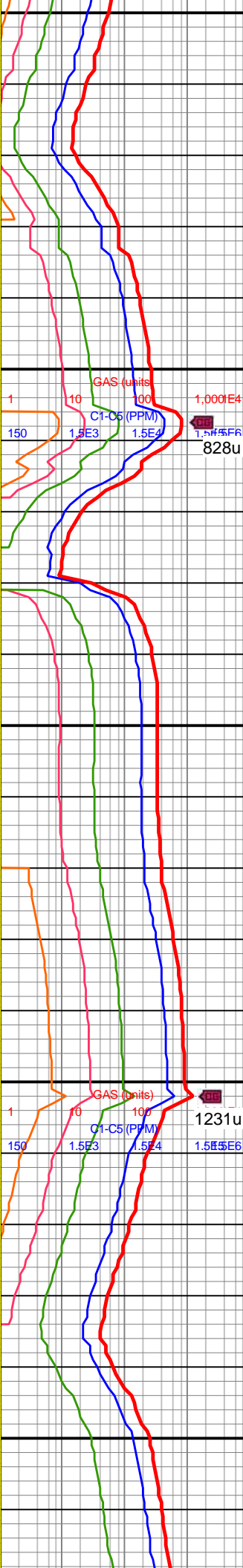
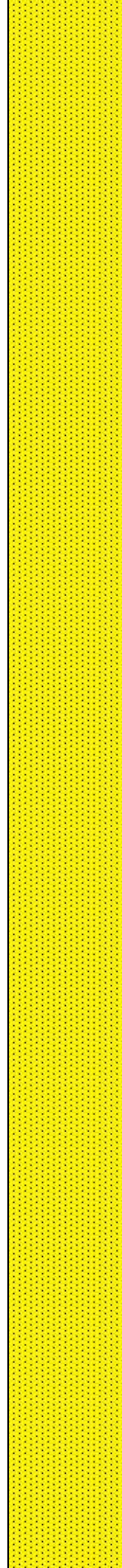


9,950
9,960
9,970
9,980
9,990
10,000
10,010
10,020
10,030
10,040
10,050
10,060
10,070
10,080
10,090
10,100
10,110
10,120
10,130
10,140
10,150
10,160

WOB: 30.8klbs
RPM: 61
SPM: 186
SPP: 5,245psi

MD: 10,032'
INC: 89.78°
AZM: 91.89°
TVD: 7,349.72'
VS: -489.56'

MD: 10,126'
INC: 90.13°
AZM: 91.89°
TVD: 7,349.79'
VS: -492.66'

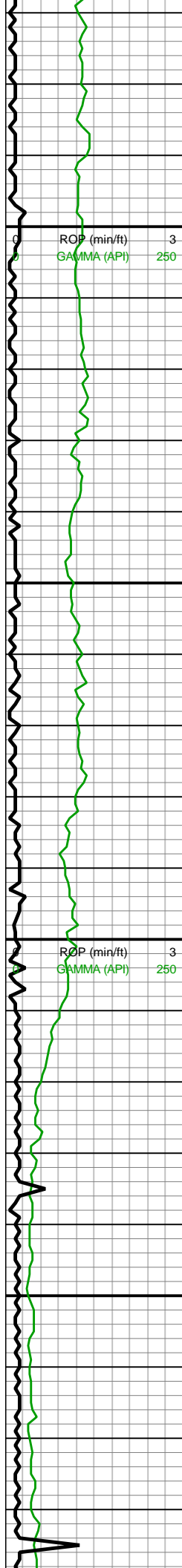


9900-10000 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-slty gr, mtx-gr sup
cluss, cons wi silc/arg
cmt, tr pyr, mod calc



10000-10100 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-slty gr, mtx-gr sup
cluss, cons wi silc/arg
cmt, tr pyr, mod calc





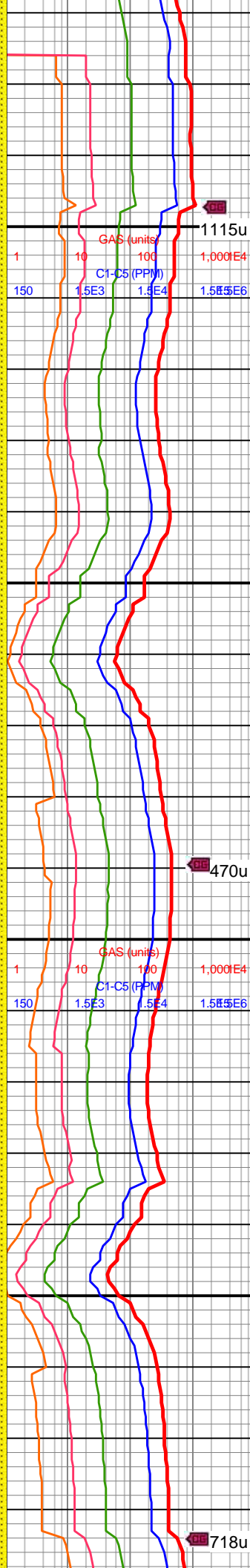
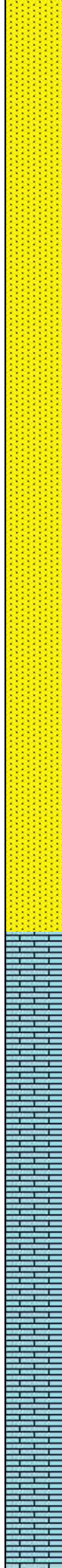
MW IN: 10.2+
VIS IN: 47
MW OUT: 10.2+
VIS OUT: 45

WOB: 31.4klbs
RPM: 61
SPM: 186
SPP: 5,250psi

MD: 10,220'
INC: 90.66°
AZM: 91.89°
TVD: 7,349.14'
VS: -495.76'

MD: 10,314'
INC: 90.18°
AZM: 90.22°
TVD: 7,323.45'
VS: -497.34'

MW IN: 10.2+
VIS IN: 48

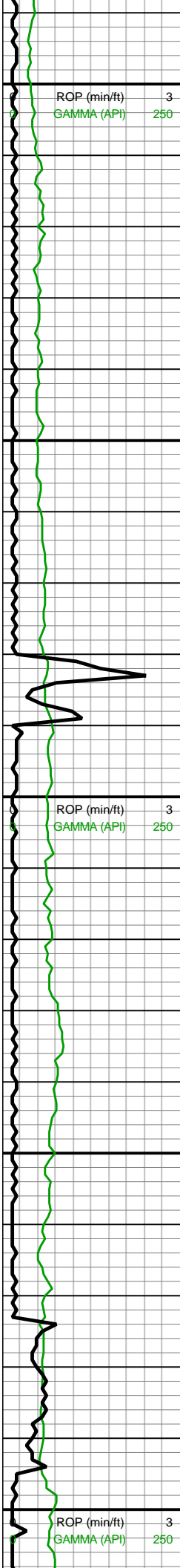


10100-10200 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-slty gr, mtx-gr sup
cluss, cons wi silc/arg
cmt, tr diss/PP mic pyr,
mod calc

10100-10200 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-slty gr, mtx-gr sup
cluss, cons wi silc/arg
cmt, tr diss/PP mic pyr,
mod calc

10300-10400 LS (50%):
brn-crm, sb tab-sb blk,
pkst, vf xln-micxln, frm-sl
frm, hi calc; SS (50%):
brn-crm, sb tab-sb blk,

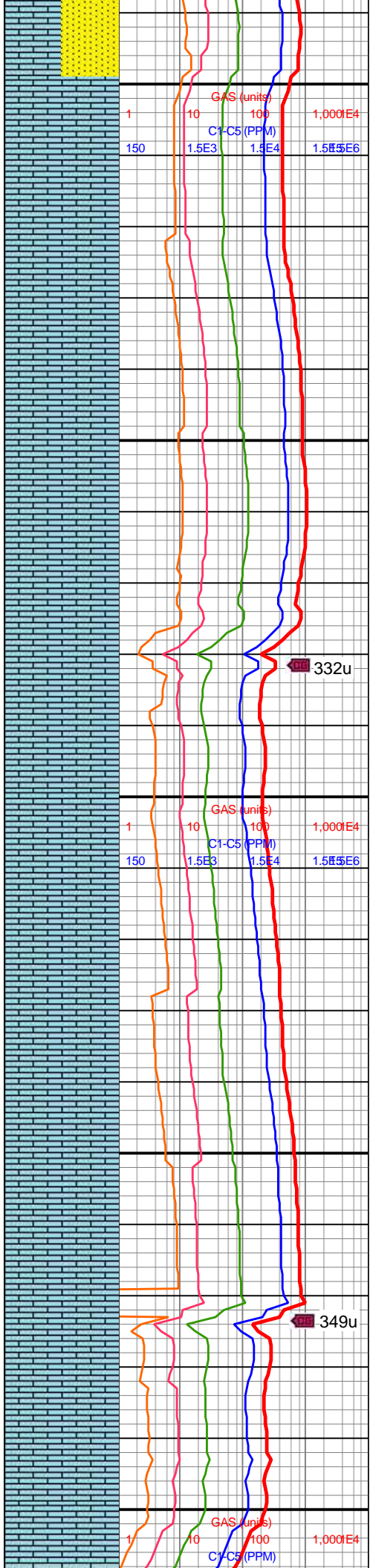




ROP (min/ft) 3
GAMMA (API) 250

ROP (min/ft) 3
GAMMA (API) 250

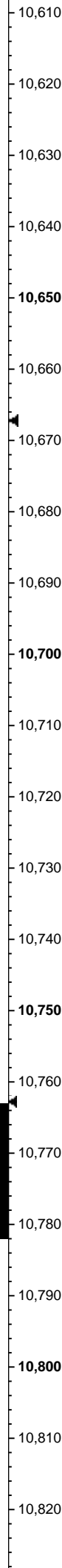
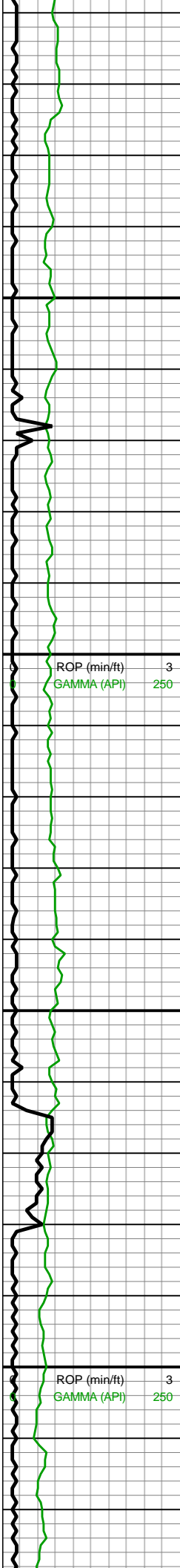
ROP (min/ft) 3
GAMMA (API) 250



10400-10500 LS (100%):
brn-crm, sme dk gy, sb
tab-sb blk, pkst, vf
xln-micxln, frm-sl frm, hi
calc, rr SS

10500-10600 LS (100%):
brn-crm, sme dk gy, sb
tab-sb blk, pkst, vf
xln-micxln, frm-sl frm, hi
calc, rr SS



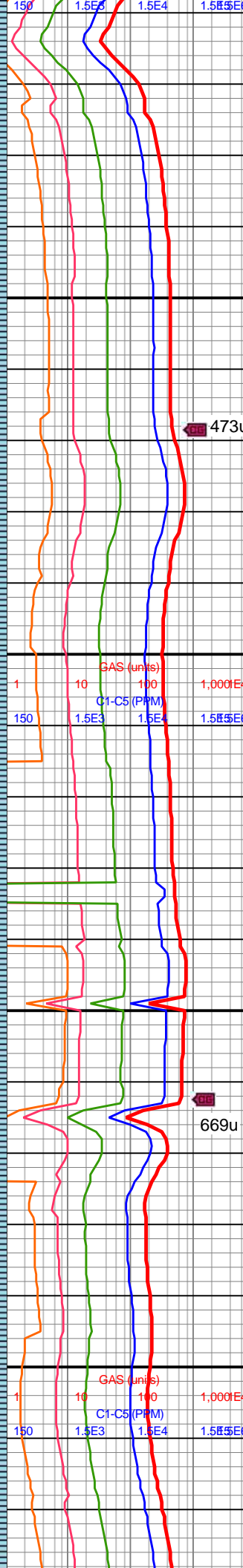
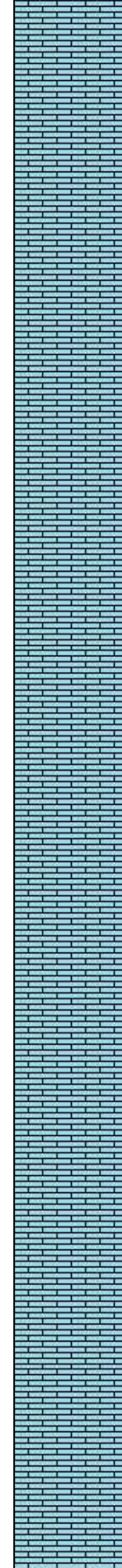


MW IN: 10.2
VIS IN: 49
MW OUT: 10.2
VIS OUT: 45

MD: 10,692'
INC: 91.1°
AZM: 92.33°
TVD: 7,317.68'
VS: -501.82'

MD: 10,787'
INC: 88.9°
AZM: 90.57°
TVD: 7,317.68'
VS: -504.22'

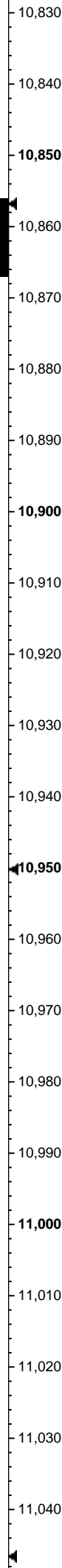
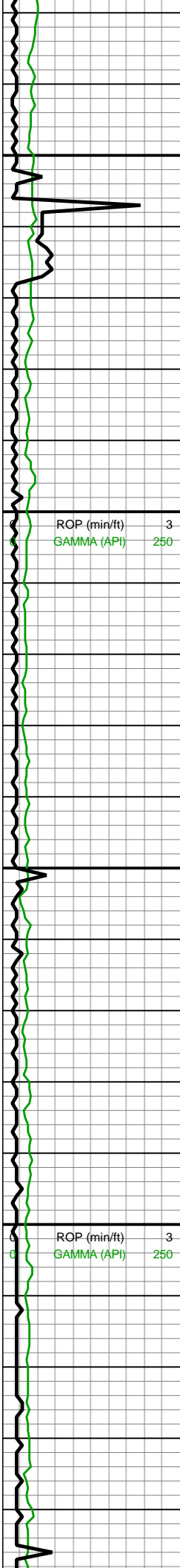
WOB: 35.6klbs
RPM: 61
SPM: 185
SPP: 5,234psi



10600-10700 LS (100%):
lt brn-crm, sme dk gy, sb
tab-sb blk, pkst, vf
xln-micxln, frm-sl frm, hi
calc, rr SS

10700-10800 LS (100%):
lt brn-crm, sme dk gy, sb
tab-sb blk, pkst, vf
xln-micxln, frm-sl frm, hi
calc



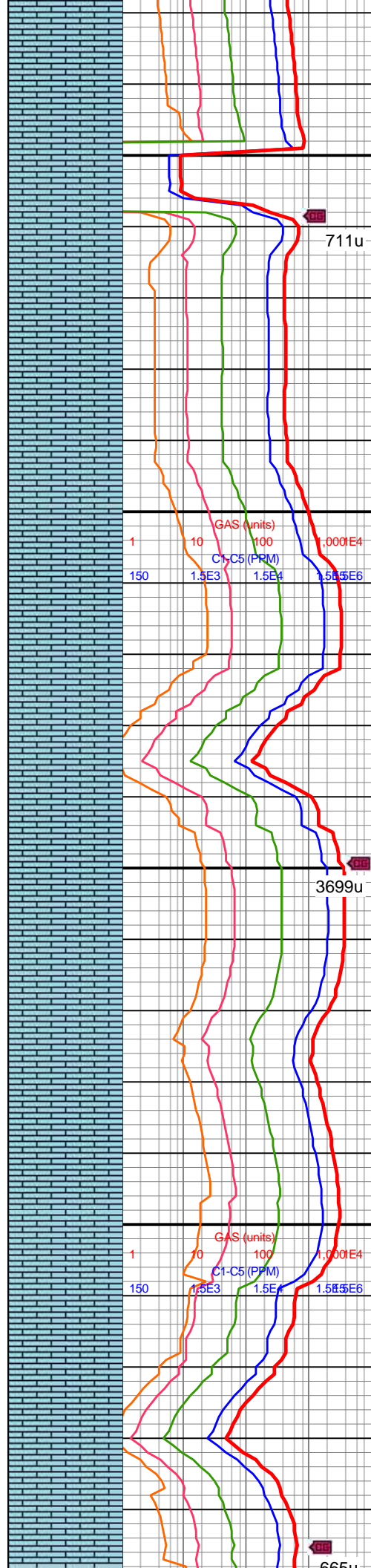


MW IN: 10.4
VIS IN: 48
MW OUT: 10.1+
VIS OUT: 46

MD: 10,881'
INC: 89.56°
AZM: 91.54°
TVD: 7,318.94'
VS: -505.95'

MW IN: 10.4
VIS IN: 48
MW OUT: 10.2
VIS OUT: 46

WOB: 36.2klbs
RPM: 61
SPM: 186
SPP: 5,475psi



711u

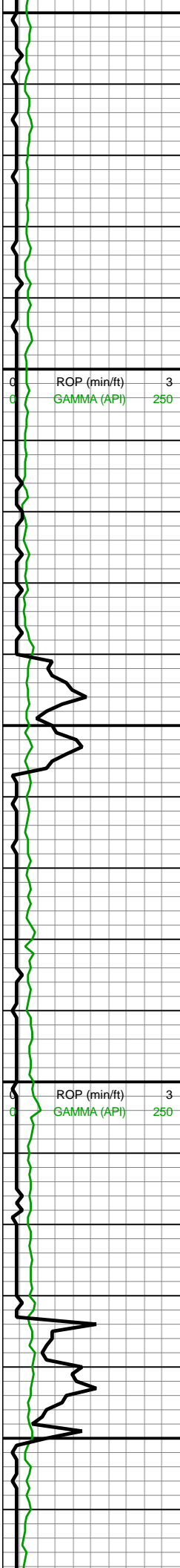
3699u

665u

10800-10900 LS (100%):
lt brn-crm, sme dk gy, sb
tab-sb blk, pkst, vf
xln-micxln, frm-sl frm, hi
calc

10900-11000 LS (100%):
lt brn-crm, sb tab-sb blk,
pkst, vf xln-micxln, frm-sl
frm, hi calc





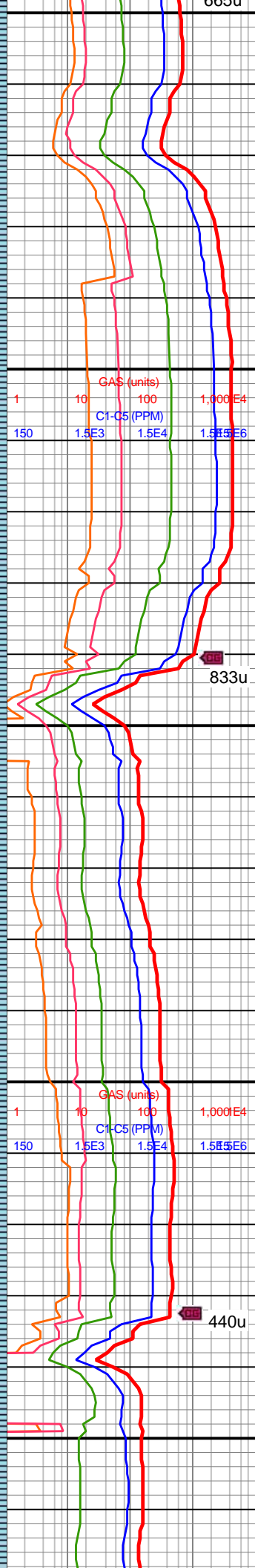
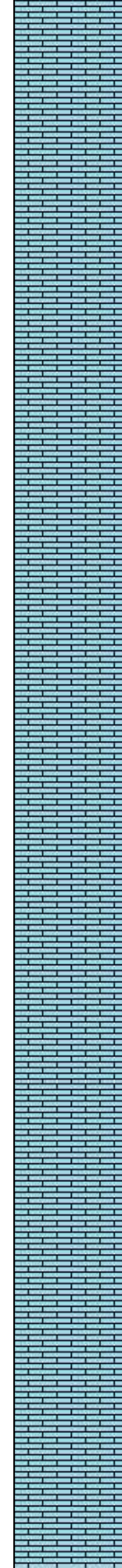
11,050
11,060
11,070
11,080
11,090
11,100
11,110
11,120
11,130
11,140
11,150
11,160
11,170
11,180
11,190
11,200
11,210
11,220
11,230
11,240
11,250
11,260

MD: 11,070'
INC: 91.63°
AZM: 91.8°
TVD: 7,317.31'
VS: -511.39'

MD: 11,165'
INC: 91.41°
AZM: 91.98°
TVD: 7,314.79'
VS: -514.53'

WOB: 35.3klbs
RPM: 61
SPM: 185
SPP: 5,320psi

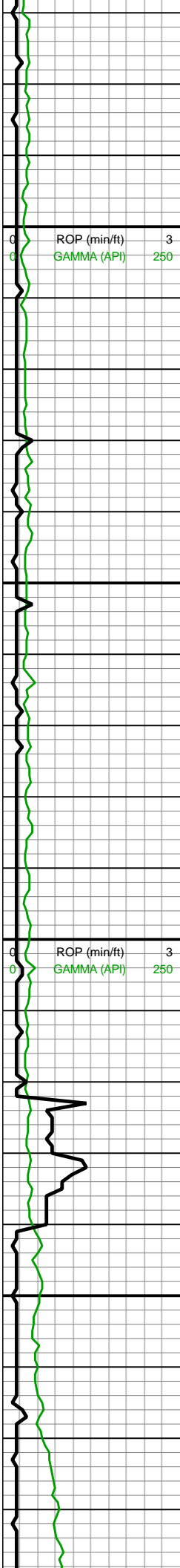
MD: 11,260'
INC: 89.69°
AZM: 91.71°
TVD: 7,313.87'
VS: -517.58'



11000-11100 LS (100%):
lt brn-crm, sb tab-sb blk, pkst, vf xln-micxln, frm-sl frm, hi calc

11100-11200 LS (100%):
lt brn-crm, sb tab-sb blk, pkst, vf xln-micxln, frm-sl frm, hi calc





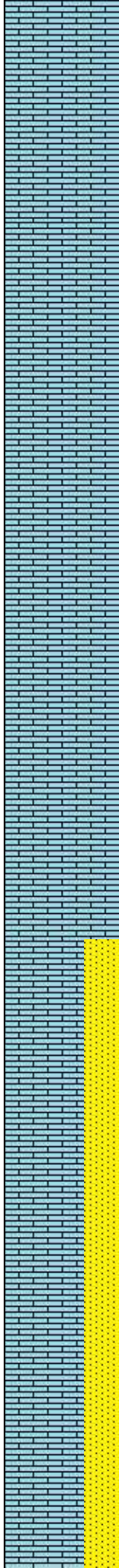
11,270
11,280
11,290
11,300
11,310
11,320
11,330
11,340
11,350
11,360
11,370
11,380
11,390
11,400
11,410
11,420
11,430
11,440
11,450
11,460
11,470
11,480

MD: 11,354'
INC: 90.4°
AZM: 91.98°
TVD: 7,313.8'
VS: -520.61'

WOB: 35.9klbs
RPM: 61
SPM: 187
SPP: 5,423psi

MW IN: 10.4
VIS IN: 47
MW OUT: 10.4+
VIS OUT: 45

MD: 11,448'
INC: 89.52°
AZM: 92.07°
TVD: 7,313.87'
VS: -523.93'

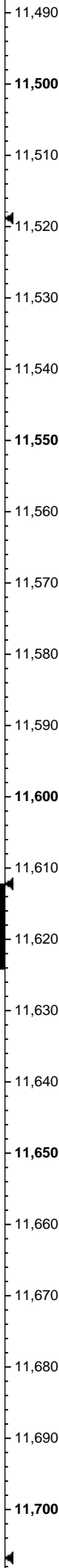
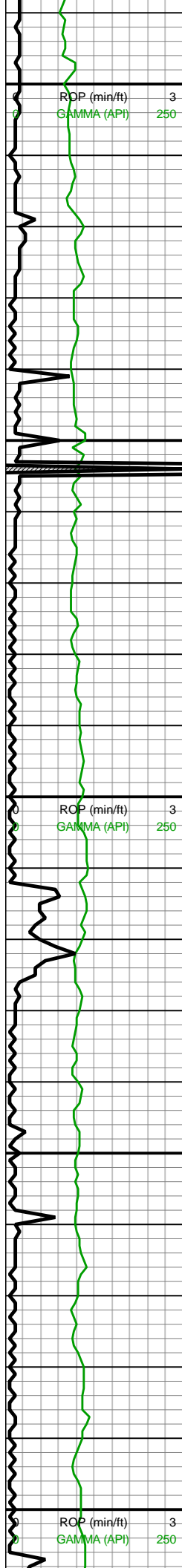


11200-11300 LS (100%):
lt brn-crm, sb tab-sb blk, pkst, vf xln-micxln, frm-sl frm, hi calc

11300-11400 LS (100%):
lt brn-crm, sb tab-sb blk, pkst, vf xln-micxln, frm-sl frm, hi calc

11400-11500 LS (70%):
brn-crm, sb tab-sb blk, pkst, vf xln-micxln, frm-sl frm, hi calc; SS (30%):

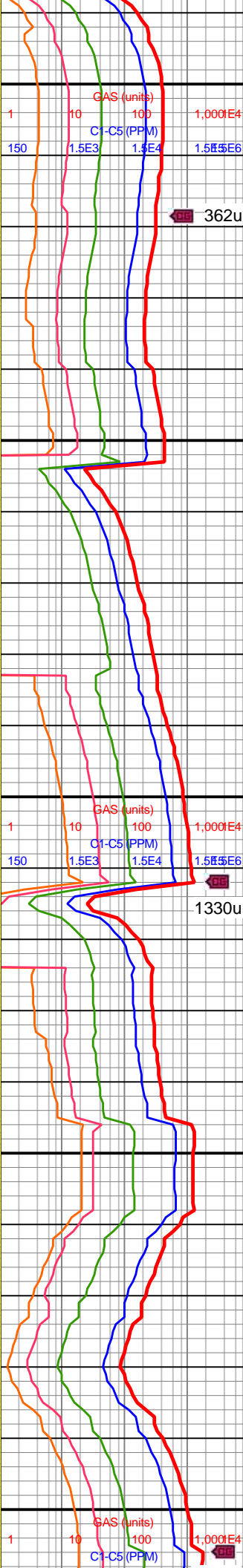




MD: 11,543'
INC: 88.42°
AZM: 90.57°
TVD: 7,315.57'
VS: -526.12'

MW IN: 10.4
VIS IN: 47
MW OUT: 10.4
VIS OUT: 45

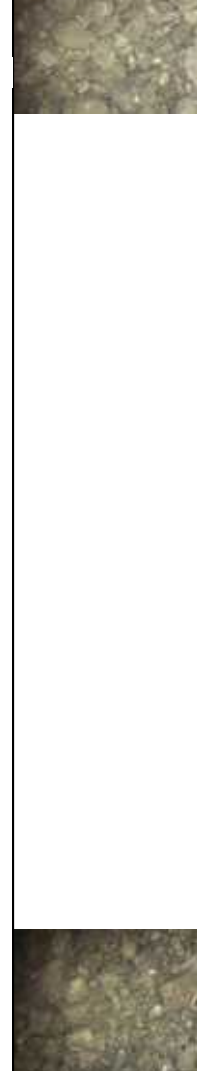
MD: 11,637'
INC: 89.34°
AZM: 90.92°
TVD: 7,317.41'
VS: -527.34'

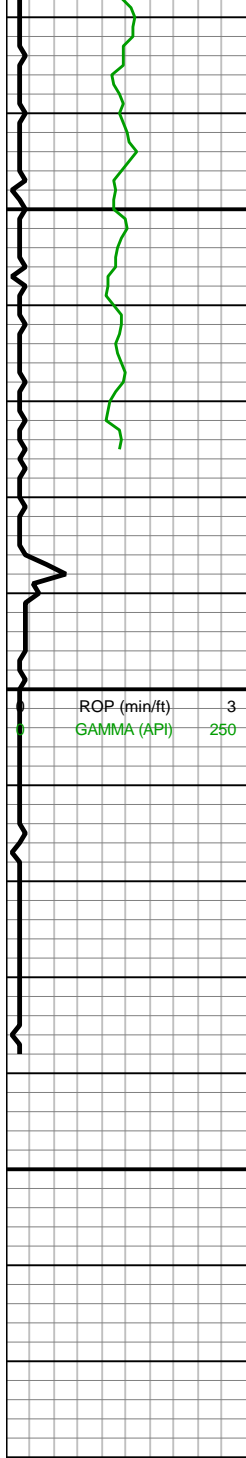


bnshgy, sme wh-crm, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt

11500-11600 SS (50%):
bnshgy, sme wh-crm, sb
rnd-sb ang, vf-f gr, slt ip,
sme lse grs, mtx-gr sup
cluss, cons wi silc/arg
cmt; LS (50%): brn-crm,
sb tab-sb blkly, pkst, vf
xln-micxln, frm-sl frm, hi
calc

11600-11700 SS (100%):
bnshgy, sme wh-crm, sb
rnd-sb ang, vf-f gr, cons
wi silc/arg cmt, tr sh frags





11,930
11,940
11,950
11,960
11,970
11,980
11,990
12,000
12,010
12,020
12,030
12,040
12,050
12,060
12,070

MD: 11,969'
INC: 91.19°
AZM: 89.25°
TVD: 7,315.85'
VS: -530.73'

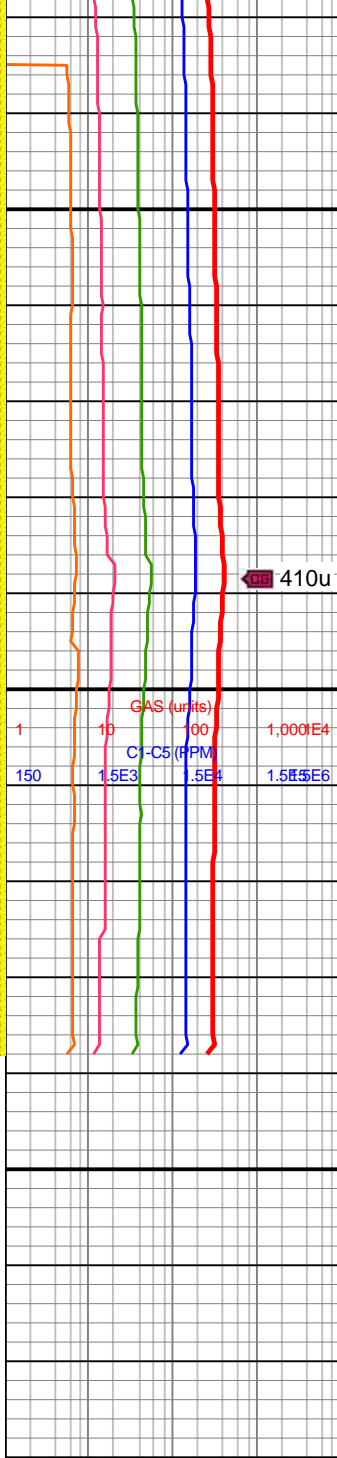
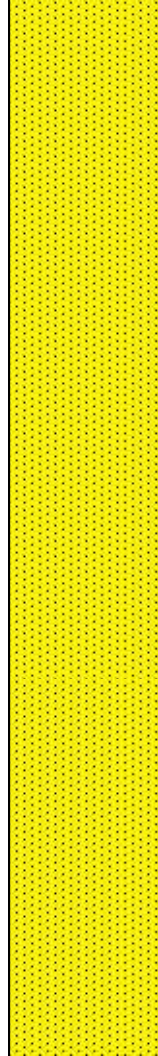
WOB: 21.7klbs
RPM: 61
SPM: 184
SPP: 5,218psi

MW IN: 10.4
VIS IN: 46
MW OUT: 10.4+
VIS OUT: 44

Projection to Bit

MD: 12,038'
INC: 91.19°
AZM: 89.25°
TVD: 7,314.42'
VS: -529.83'

**Total Depth of
12,038' MD
Reached on
11/4/2018 @
15:10MST**



410u

11900-12000 SS (100%):
bnshgy, sb rnd-sb ang,
vf-f gr, cons wi silc/arg
cmt



12000-12038 SS (100%):
bnshgy, sb rnd-sb ang,
vf-f gr, cons wi silc/arg
cmt

