



Scale: 5" / 100'  
Measured Depth Log

**Well Name** Davis 1S-9H-G266

**Location** Sec. 4 T2N R66W

**State** Colorado

**County** Weld

**Country** USA

**Rig Number** Ensign 153

**API Number** 05123465130000

**AFE #** 16191037

**Geographic Region** Rockies

**Field** Wattenberg

**Spud Date** 6/10/2018

**Drilling Completed** 6/15/2018

**Surface Coordinates** Lat/Long: 40.154225/-104.778053

SHL: Sec: 4 Twp: 2N 66W  
Footage: 2039 FSL 1468 FEL

**Bottom Hole Coordinates** Proposed BHL: Sec: 4 Twp: 2N 66W  
Footages: 460 FNL 2078 FWL

**Ground Elevation** 4,917'

**K.B. Elevation** 4,940'

**Logged Interval** 6,500' **To** 14,904'

**Total Depth** 14,904'

**Formation** NIO B Chalk

**Type of Drilling Fluid** Synthetic Oil Based Mud

## Operator

**Company** Crestone Peak Resources

**Address** 370 17th Street #2170  
Denver, CO 80202



**CRESTONE PEAK**  
RESOURCES

Geologist

Zone Color Coding

## Geologist

**Name** John Ready

**Company** Crestone Peak Resources

**Address** 370 17th Street #2170  
Denver, CO 80202



**CRESTONE PEAK**  
RESOURCES

## Zone Color Coding



Oil



Condensate



Gas



Note



Core



Pressure



Error



Water



Seal

## Other

**Loggers:** Mark Gross / Heather Davis

**Services Provided:** 2-Man Mudlogging / Geosteering

**Equipment:** ML-526

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

**Job #:** 1324RK1806

**Start Date** 6/11/2018

**Release Date:** 6/16/2018

## Rock Types

? UNKNOWN

ANHYDRITE

GYPSUM

SALT

SIDERITE or LIMONITE

LIMESTONE

DOLOMITE

CHERT

COAL

MARLSTONE

CHALK

SHALE

SHALE GRAY

SHALE COLORED

SILTSTONE

SANDSTONE

CONGLOMERATE

BRECCIA

TILL

BENTONITE

TUFF

IGNEOUS

METAMORPHIC

CEMENT

## Accessories

### Fossils

ALGAE  
AMPHIPORA  
BELEMNITE  
BIOCLASTIC  
BRACHIOPOD  
BRYOZOA  
CEPHALOPOD  
CORAL  
CRINOID  
ECHINOID

FISH  
FORAMINIFERA

F FOSSIL

GASTROPOD

OOLITE

OSTRACOD

PELECYPOD

PELLET

PISOLITE

PLANT REMAINS

PLANT SPORES

SCAPHOPOD

STROMATOPOROID

### Minerals

ANHYDRITIC

ARGILLACEOUS

ARGILLITE GRAIN

BENTONITE

BITUMENOUS SUBSTANCE

BRECCIA FRAGMENTS

CALCAREOUS

CARBONACEOUS FLAKES

CHTDK

CHTLT

COAL - THIN BEDS

DOLOMITIC

FELDSPAR

FERRUGINOUS PELLET

FERRUGINOUS

GLAUCONITE

GYPSIFEROUS

HEAVY MINERAL

KAOLIN

MARLSTONE

MINERAL CRYSTALS

NODULES

PHOSPHATE PELLETS

PYRITE

SALT CAST

SANDY

SILICEOUS

SILTY

TUFFACEOUS

### Stringer

ANHYDRITE STRINGER

BENTONITE STRINGER

COAL STRINGER

DOLOMITE STRINGER

GYPSUM STRINGER

LIMESTONE STRINGER

MARLSTONE (CALC) STRG

MARLSTONE (DOL) STRG

SANDSTONE STRINGER

SHALE STRINGER

SILTSTONE STRINGER

# Other Symbols

## Oil Show

- DEAD
- EVEN
- QUESTIONABLE
- SPOTTED STAINING

## Porosity

- E EARTHY
- F FENESTRAL
- F FRACTURE
- X INTERCRYSTALLINE
- Φ INTEROOLITIC
- MOLDIC

- ORGANIC
- PINPOINT
- VUGGY

## Engineering

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

- FORMATION TOP
- GAS SHOW
- 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

- ANGULAR
- ROUNDED
- SUBANG
- SUBRND

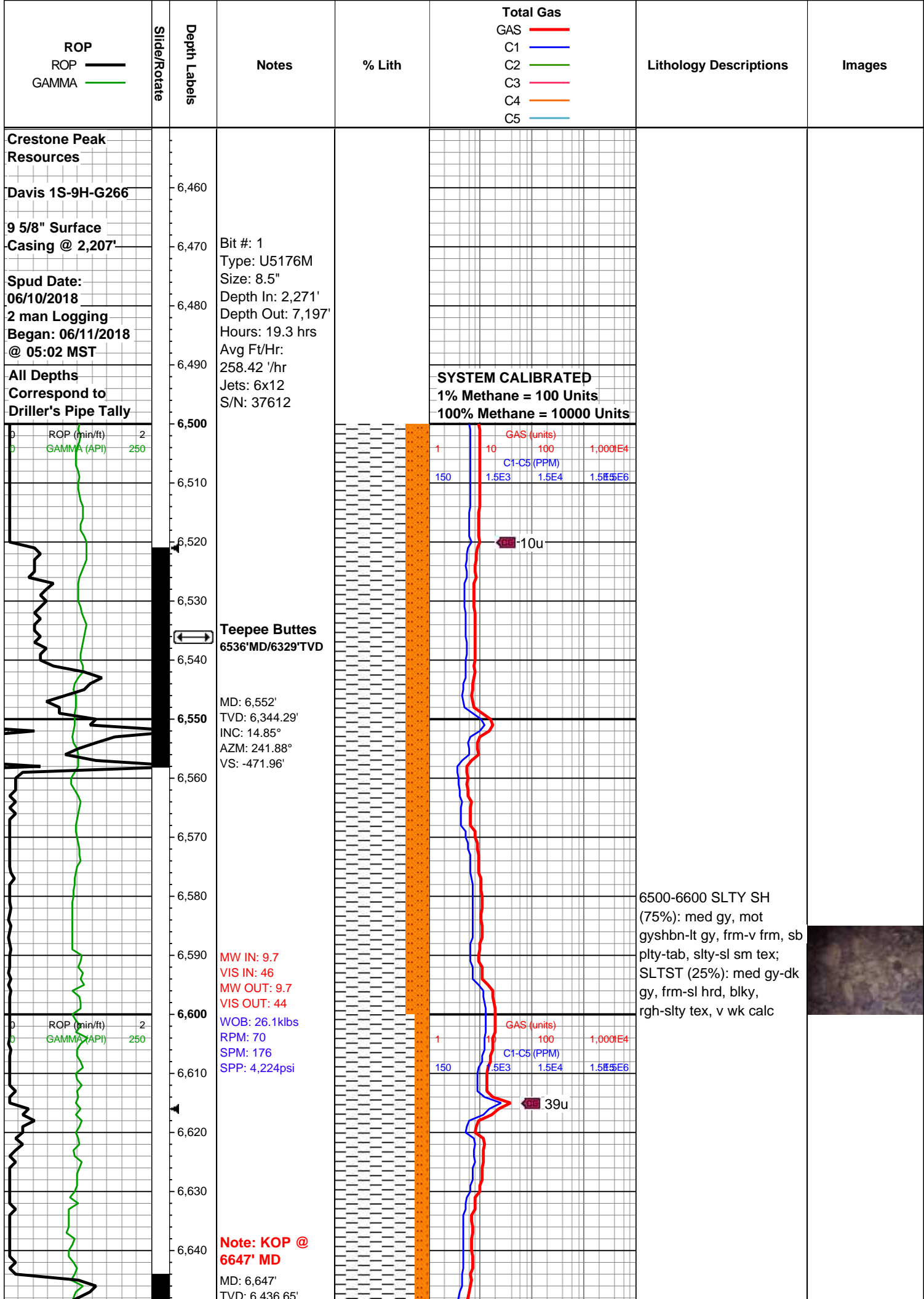
## Textures

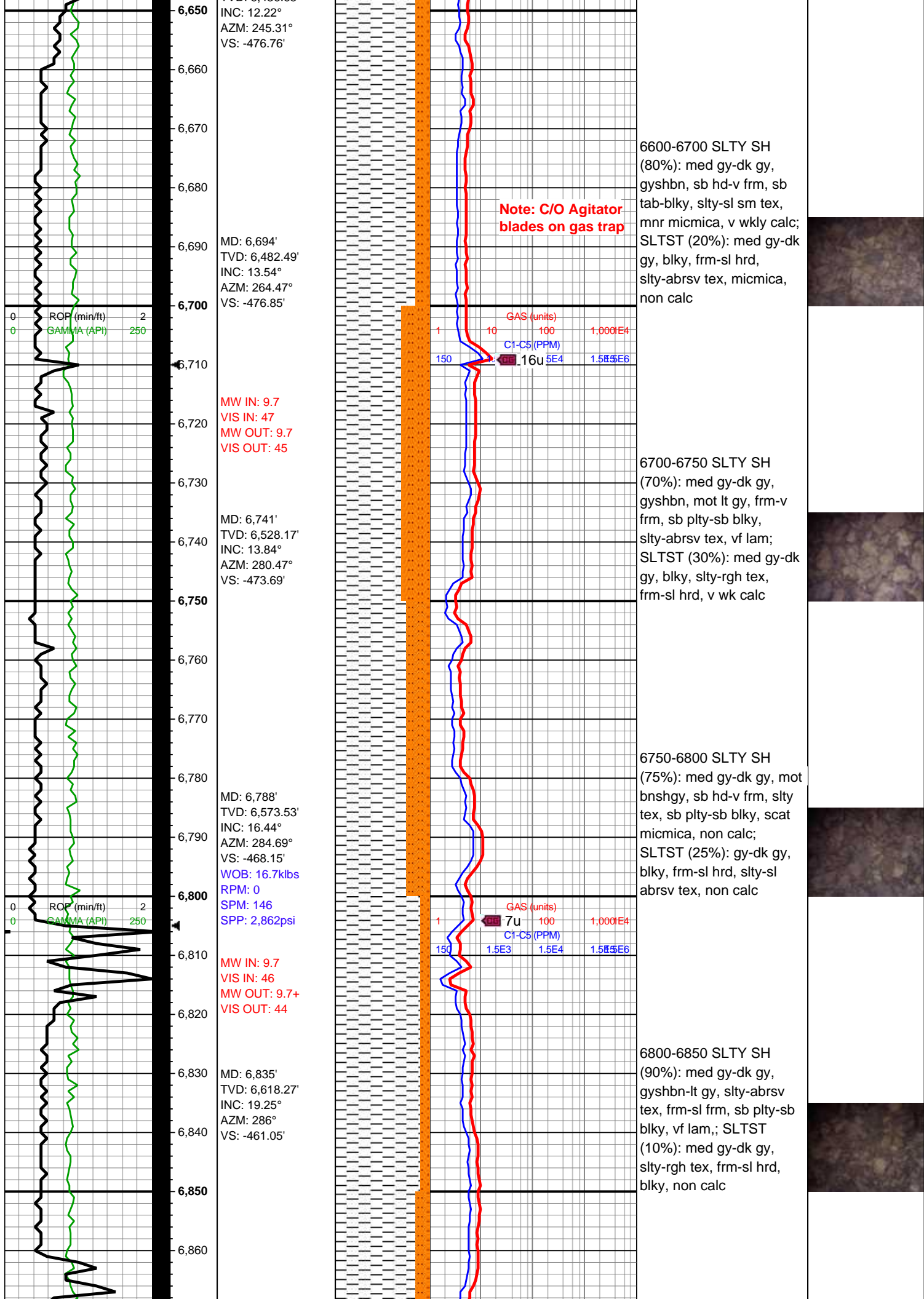
- BOUNDSTONE
- CHALKY
- CRYPTOXLN
- E EARTHY
- F FINELYXLN
- GRAINSTONE

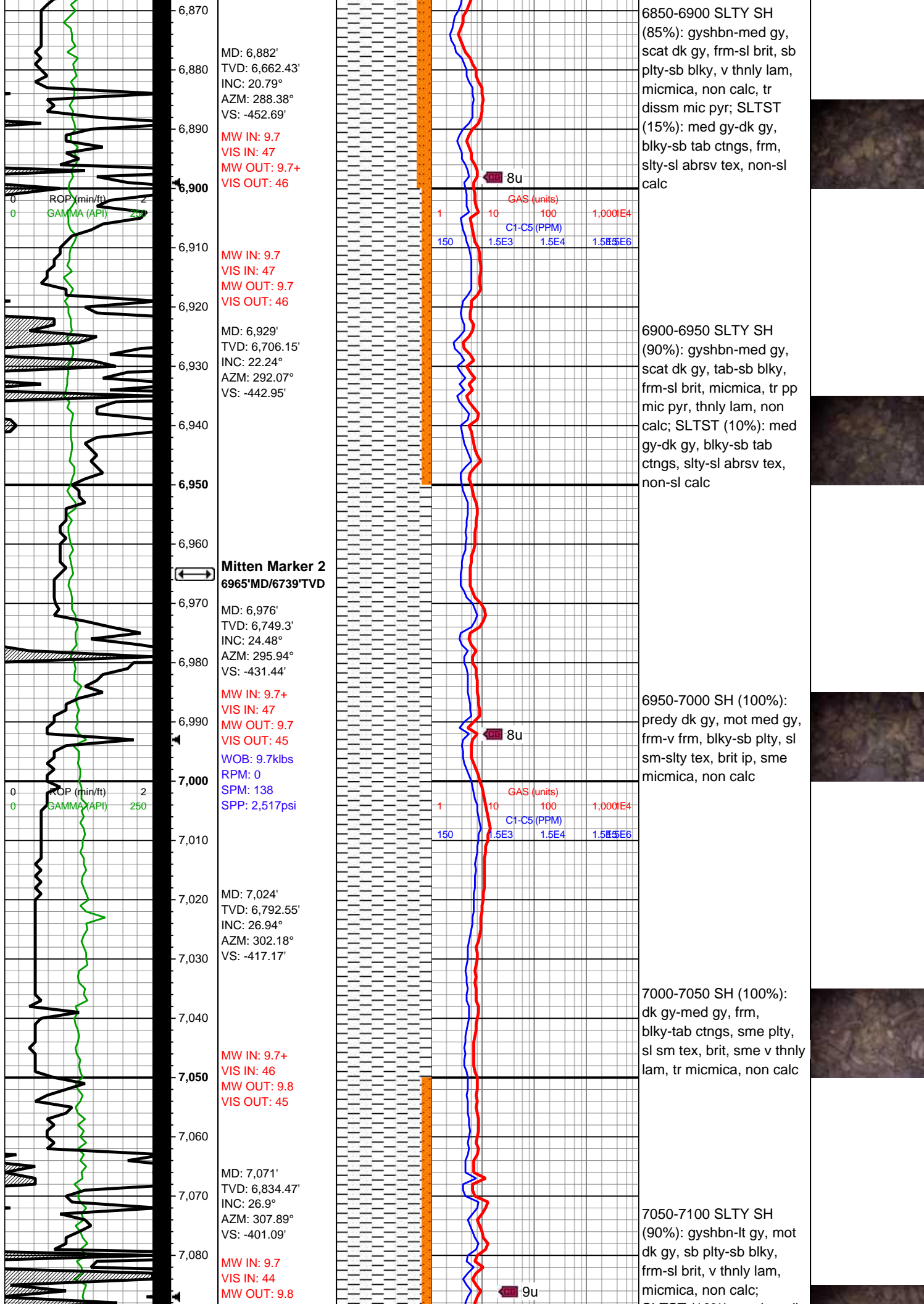
- L LITHOGRAPHIC
- MX MICROXLN
- MS MUDSTONE
- PS PACKSTONE
- WS WACKESTONE

## Sorting

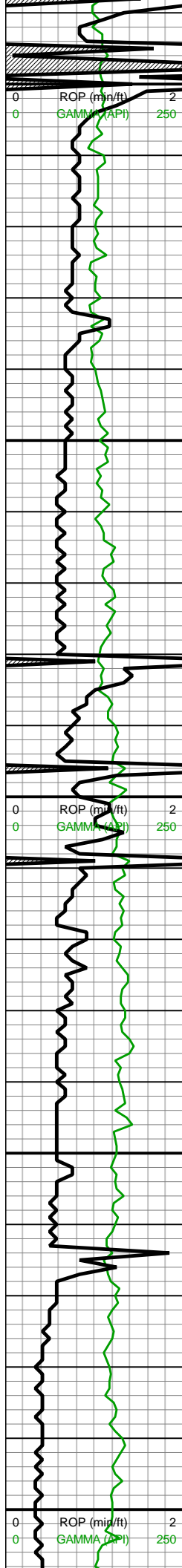
- M MODERATE
- P POOR
- W WELL











VIS OUT: 43

MD: 7,118'  
TVD: 6,876.33'  
INC: 27.25°  
AZM: 314.31°  
VS: -383.55'

MD: 7,159'  
TVD: 6,912.45'  
INC: 29.27°  
AZM: 321.34°  
VS: -366.43'

MW IN: 9.7  
VIS IN: 45  
MW OUT: 9.7  
VIS OUT: 44

**TOOH for Poor  
Build Rates @  
7197' on  
6/11/2018**

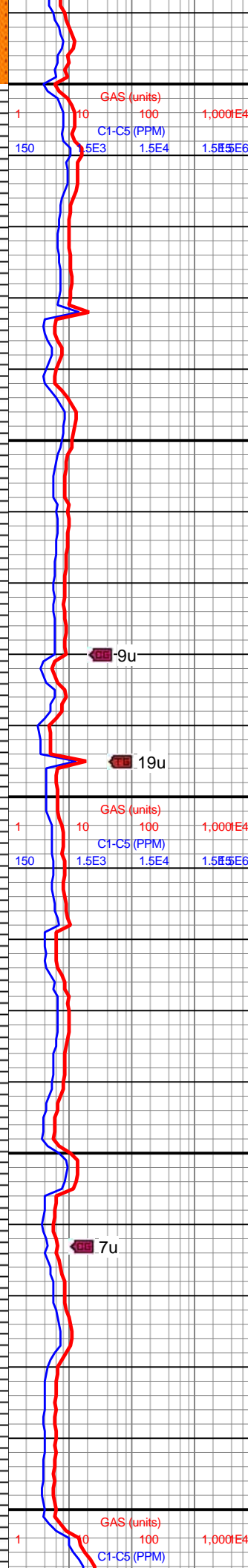
**MINDEPTH 06/12/2018**

MD: 7,206'  
TVD: 6,952.97'  
INC: 31.64°  
AZM: 328.72°  
VS: -344.19'

Bit #: 2  
Type: U516M  
Size: 8.5"  
Depth In: 7,197'  
Depth Out:  
14,904'  
Hours: 28.6 hrs  
Avg Ft/Hr:  
269.48 '/hr  
Jets: 6x12  
S/N: 37078

MD: 7,253'  
TVD: 6,992.45'  
INC: 34.19°  
AZM: 337.07°  
VS: -319.34'

MD: 7,300'  
TVD: 7,030.59'  
INC: 37.4°  
AZM: 345.16°  
VS: -292'



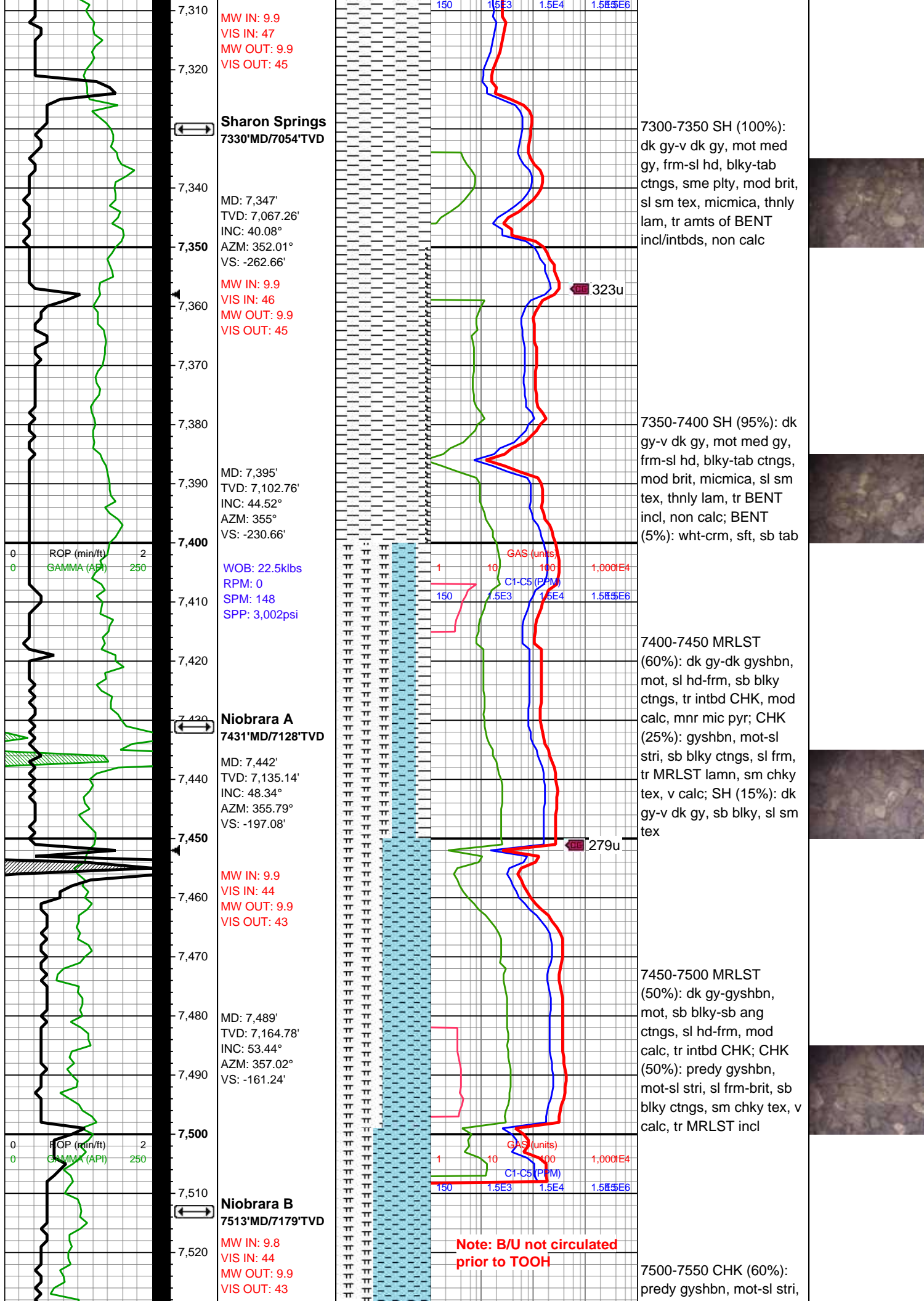
SLTST (10%): med gy-dk  
gy, slty-sl abrsv tex, frm,  
blky-sb tab ctngs, non-sl  
calc

7100-7150 SH (100%):  
dk gy-med gy, gyshbn,  
frm-sl hd, sl sm tex, mod  
brit, blky-tab ctngs, sme  
plty, tr micmica, thnly lam,  
non calc

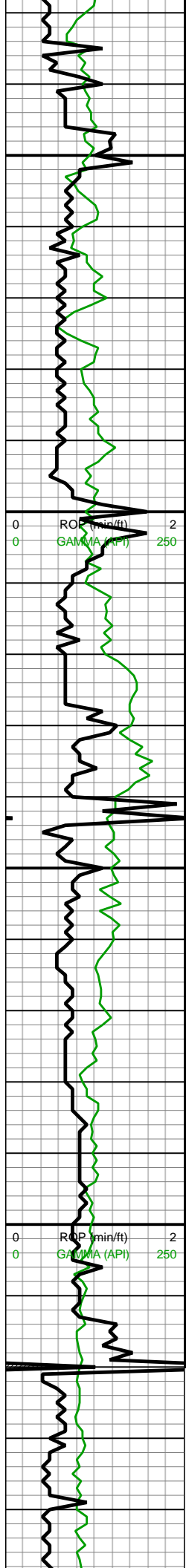
7150-7200 SH (100%):  
dk gy-med gy, gyshbn,  
frm-sl hd, sl sm tex, mod  
brit, blky-tab ctngs, sme  
plty, tr micmica, thnly lam,  
non calc

7200-7250 SH (100%):  
dk gy-med gy, mot  
gyshbn, sl slty -sm tex,  
blky-sb plty, frm-v frm, brit  
ip, sme micmica, mnr pp  
mic pyr, non calc

7250-7300 SH (100%):  
pred dk gy, v dk gy-med  
gy, mot, blky-tab ctngs,  
sme plty, frm-sl hd, mod  
brit, sl sm tex, micmica,  
sme v thnly lam, non calc







MD: 7,536'  
TVD: 7,190.75'  
INC: 59.46°  
AZM: 357.55°  
VS: -122.86'

**TOOH @ 7548'**  
**on 6/12/2018 for**  
**Poor Build Rates**

MW IN: 10  
VIS IN: 45  
MW OUT: 10  
VIS OUT: 46

MD: 7,583'  
TVD: 7,211.76'  
INC: 67.37°  
AZM: 356.67°  
VS: -81.67'

WOB: 22.33klbs  
RPM: 0  
SPM: 130  
SPP: 2,294psi

MD: 7,630'  
TVD: 7,227.04'  
INC: 74.66°  
AZM: 357.2°  
VS: -38.08'

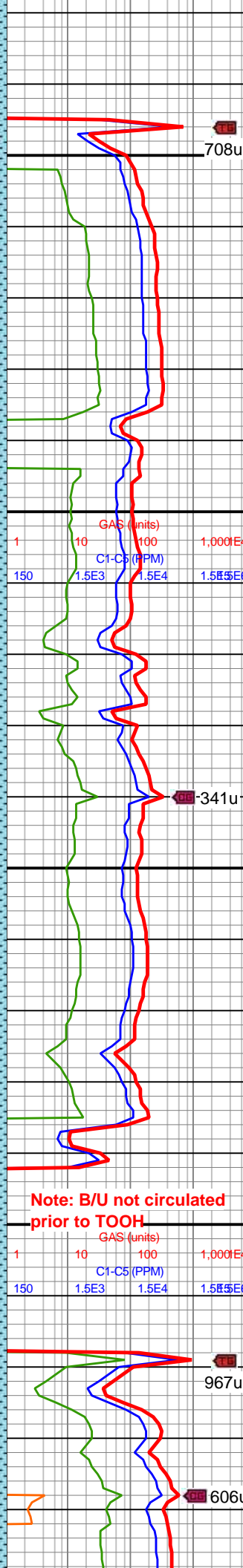
MD: 7,683'  
TVD: 7,236.83'  
INC: 84.16°  
AZM: 356.49°  
VS: 12.98'

**Curve landed @**  
**7720'MD on**  
**6/12/18**

**MIN DEPT 06/13/2018**

MD: 7,720'  
TVD: 7,238.75'  
INC: 89.87°  
AZM: 354.74°  
VS: 49.38'

MW IN: 10.1+  
VIS IN: 44  
MW OUT: 10.2



sl frm-brit, sb blkly ctngs,  
sm chky tex, v calc, tr  
MRLST incl; MRLST  
(40%): dk gy-gyshbn,  
mot, sb blkly-sb ang  
ctngs, sl hd frm, mod  
calc, tr intbd CHK

7550-7600 MRLST  
(70%): dk gy-gyshbn,  
mot, sb blkly-sb ang  
ctngs, sl hd frm, mod  
calc, tr intbd CHK; CHK  
(30%): predy gyshbn,  
mot-sl stri, sl frm-brit, sb  
blkly ctngs, sm chky tex, v  
calc, tr MRLST incl

7600-7650 MRLST  
(80%): dk gy-gyshbn,  
mot, sb blkly-sb ang  
ctngs, sl hd frm, mod  
calc, tr intbd CHK; CHK  
(20%): predy gyshbn,  
mot-sl stri, sl frm-brit, sb  
blkly ctngs, sm chky tex, v  
calc, tr MRLST incl

7650-7700 MRLST  
(85%): dk gy-gyshbn,  
mot, sb blkly-sb ang  
ctngs, sl hd frm, mod  
calc, tr intbd CHK; CHK  
(15%): predy gyshbn,  
mot-sl stri, sl frm-brit, sb  
blkly ctngs, sm chky tex, v  
calc, tr MRLST incl

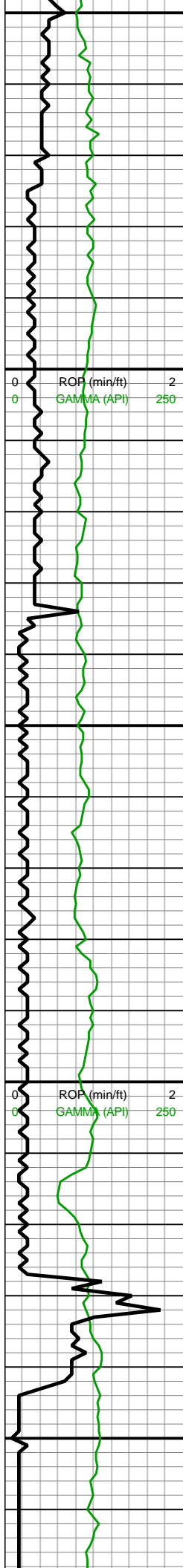
**Note: B/U not circulated**  
**prior to TOOH**

708u

341u

967u

606u



7,750  
7,760  
7,770  
7,780  
7,790  
7,800  
7,810  
7,820  
7,830  
7,840  
7,850  
7,860  
7,870  
7,880  
7,890  
7,900  
7,910  
7,920  
7,930  
7,940  
7,950  
7,960

VIS OUT: 50

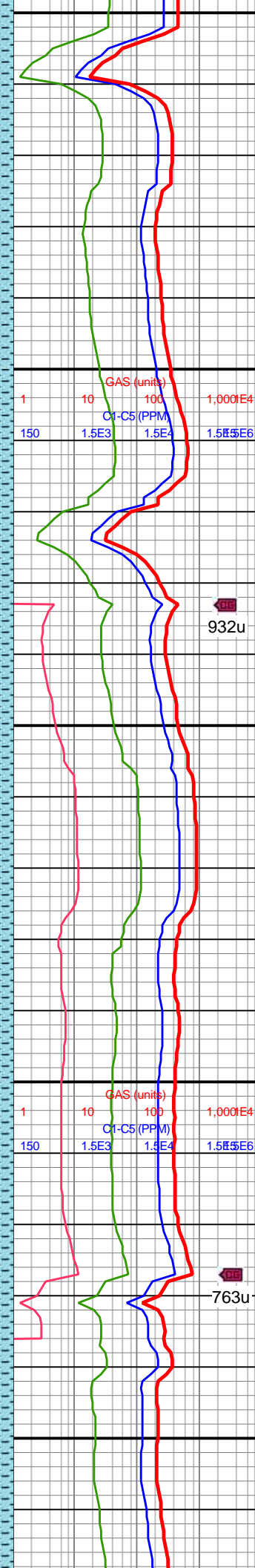
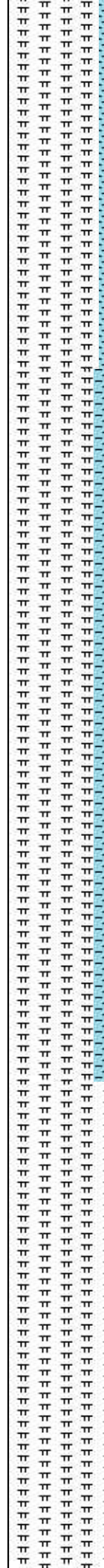
MD: 7,777'  
TVD: 7,238.27'  
INC: 91.1°  
AZM: 353.86°  
VS: 105.76'

WOB: 23.6klbs  
RPM: 50  
SPM: 162  
SPP: 3,686psi

MW IN: 10.1  
VIS IN: 46  
MW OUT: 10.1+  
VIS OUT: 45

MD: 7,872'  
TVD: 7,236.7'  
INC: 90.79°  
AZM: 353.24°  
VS: 199.9'

MD: 7,966'  
TVD: 7,234.47'  
INC: 91.93°

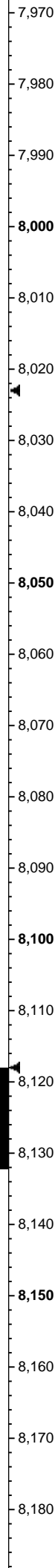
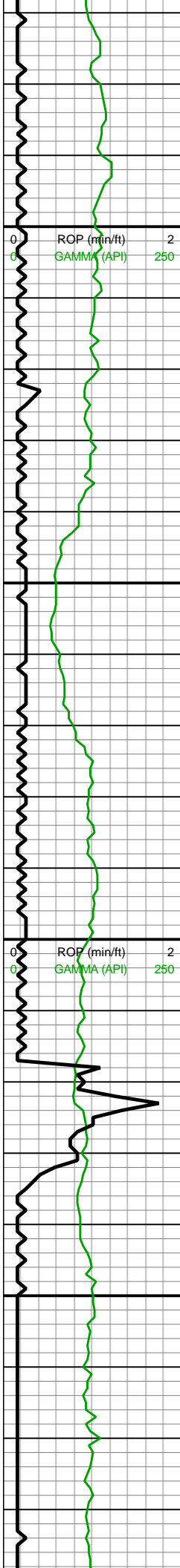


7700-7800 MRLST  
(80%): dk gy-dk gyshbn,  
mot, sl hd-frm, mod brit,  
blky-sb ang ctngs, tr intbd  
CHK, mod calc, tr diss  
pyrc nod; CHK (20%):  
predy gyshbn, mot-sl stri,  
sb blky ctngs, sl frm-brit,  
sm chky tex, tr MRLST  
incl, v calc

7800-7900 MRLST  
(75%): dk gyshbn-dk gy,  
sl sm-rgh tex, frm-sl hd,  
sb blky-ang ctngs, mnr  
intbd CHK, mod calc,  
scat pyrc nod; CHK  
(25%): gyshbn-med gy,  
mot, fri-frm, blky-sb tab  
ctngs, mnr free CHK, sm  
chky tex, v calc

932u

763u



AZM: 352.63°  
VS: 293.17'

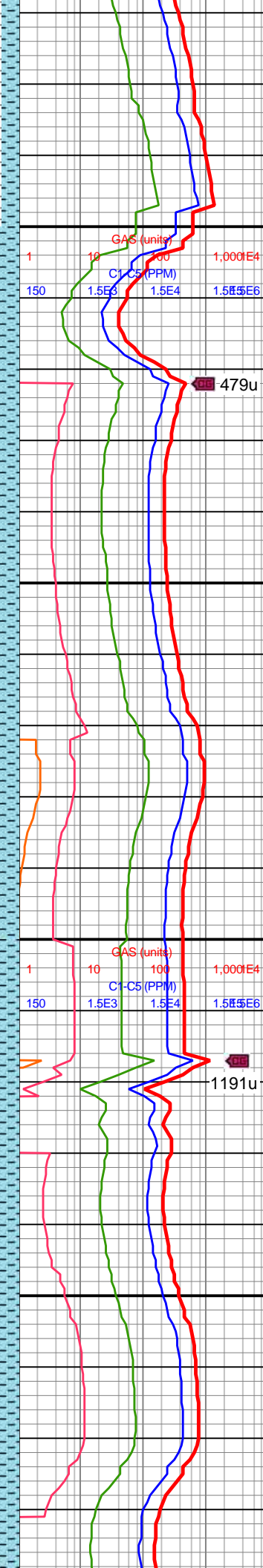
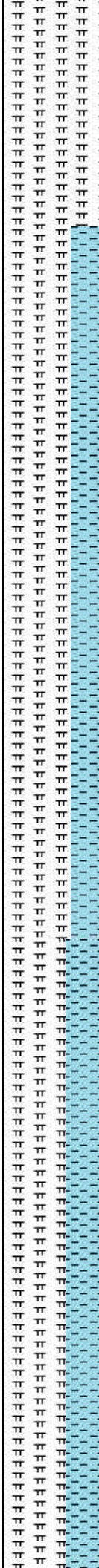
WOB: 33.8klbs  
RPM: 70  
SPM: 178  
SPP: 4,304psi

MW IN: 10.1  
VIS IN: 45  
MW OUT: 10.1+  
VIS OUT: 44

MD: 8,061'  
TVD: 7,231.93'  
INC: 91.14°  
AZM: 352.98°  
VS: 387.44'

MD: 8,156'  
TVD: 7,228.29'  
INC: 93.25°  
AZM: 354.12°  
VS: 481.52'

MW IN: 10.1  
VIS IN: 42  
MW OUT: 10.1



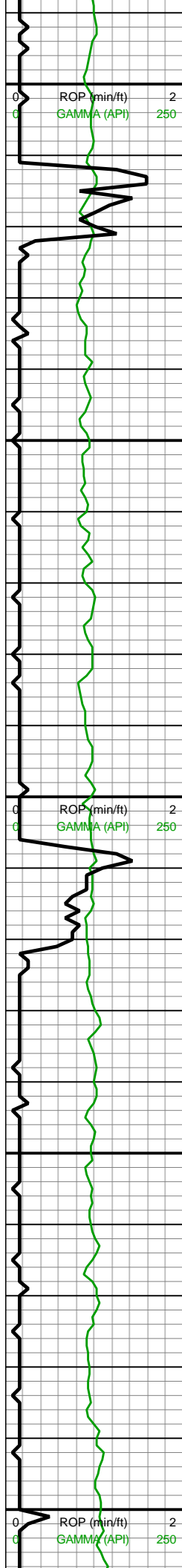
7900-8000 MRLST  
(85%): dk gy, mot med  
gy, sl hd-frm, sb blk-y-sb  
ang ctngs, tr imbd mic  
pyr, com CHK intbds,  
mod calc; CHK (15%):  
crm, gyshbn, mot, sb blk-y  
ctngs, sm chky tex, sl  
frm-brit, tr MRLST intbds,  
v calc, tr cal frac fl

8000-8100 MRLST  
(60%): dk gy-med gy,  
mot, sl slty tex, sl hd-frm,  
sb blk-y-tab ctngs, mn  
CHK intbds, tr pp mic pyr,  
mod calc; CHK (40%):  
gyshbn, mot, sm chky tex,  
sb blk-y ctngs, sl frm-brit,  
mnr CHK frags, v calc, tr  
cal frac fl

8100-8200 MRLST  
(55%): dk gyshbn-dk gy,  
frm-sl hd, sb blk-y-ang  
ctngs, sl sm-rgh tex, mn  
intbd CHK, scat frac fl cal,  
tr mic pyr, calc; CHK







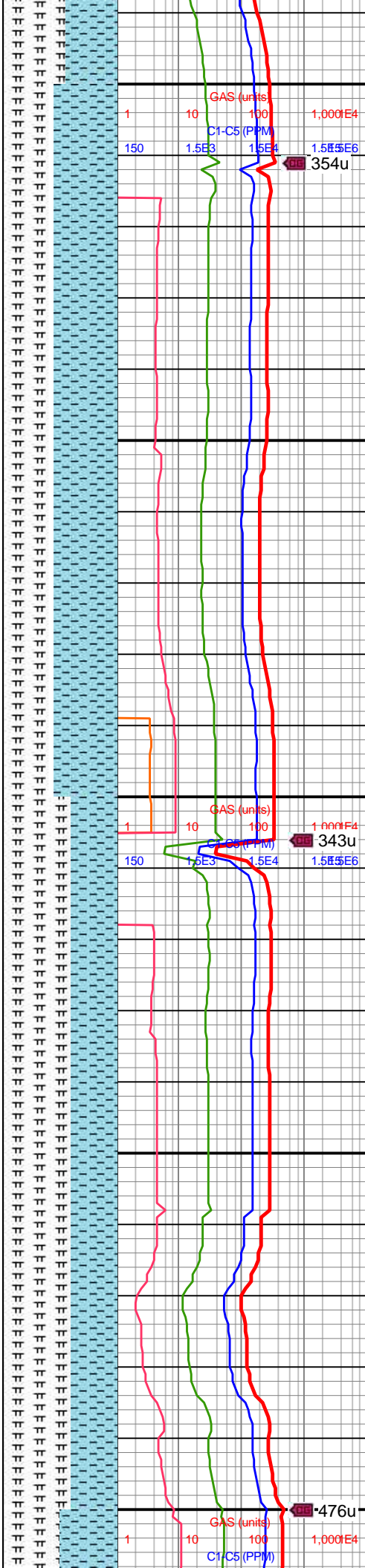
VIS OUT: 41  
WOB: 32.8klbs  
RPM: 69  
SPM: 180  
SPP: 4,453psi

MD: 8,250'  
TVD: 7,222.6'  
INC: 93.69°  
AZM: 356.14°  
VS: 574.12'

MD: 8,345'  
TVD: 7,218.16'  
INC: 91.67°  
AZM: 357.81°  
VS: 667.24'

MW IN: 10.1  
VIS IN: 42  
MW OUT: 10.1  
VIS OUT: 41

WOB: 31.3klbs  
RPM: 69  
SPM: 177  
SPP: 4,488psi



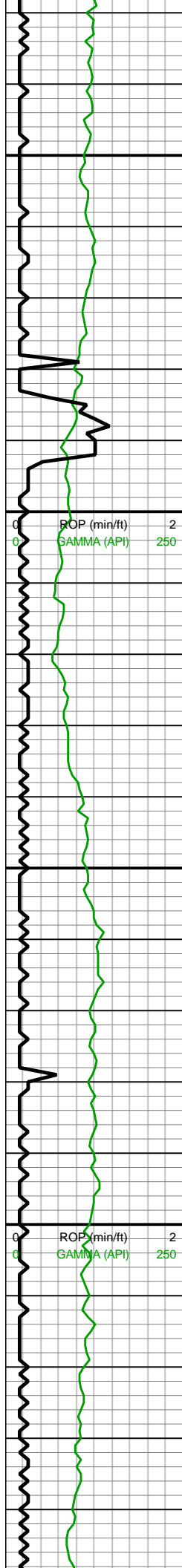
(45%): gyshbn-med gy,  
mot, fri-frm, sb tab-sb  
ang ctngs, tr intbd  
MRLST, sm chky tex, calc

8200-8300 CHK (55%):  
gyshbn-med gy, mot,  
sme lt gy, fri-frm, sb  
blky-sb ang ctngs, sm  
chky tex, tr intbd MRLST, v  
calc; MRLST (45%): dk  
gyshbn-dk gy, frm-sl hd,  
sl sm-rgh tex, blky-tab  
ctngs, scat pyrc nod, hi  
calc, mnrc cal frac fl

8300-8400 MRLST  
(60%): dk gy-med gy,  
mot, sl slty tex, sl hd-frm,  
sb blky-sb ang ctngs,  
mod calc, sme CHK  
intbds; CHK (40%): predy  
gyshbn, mot-sl stri, sb  
blky ctngs, sm chky tex, sl  
frm-brit, tr free CHK, v  
calc







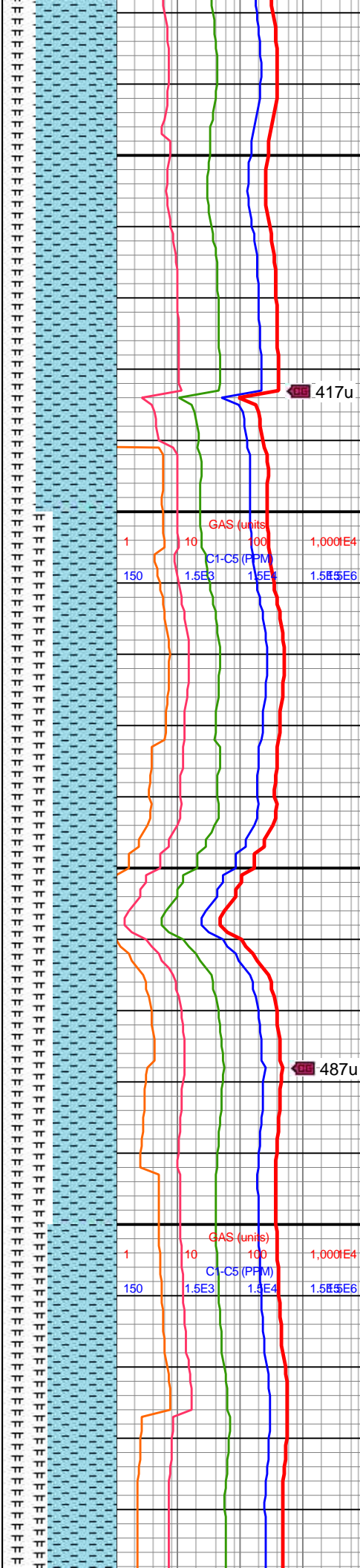
AZM: 355.88°  
VS: 943.31'

MW IN: 10.1  
VIS IN: 41  
MW OUT: 10.1  
VIS OUT: 40

MD: 8,722'  
TVD: 7,209.02'  
INC: 92.24°  
AZM: 354.47°  
VS: 1,037.02'

WOB: 30.8klbs  
RPM: 70  
SPM: 176  
SPP: 4,377psi

MD: 8,817'  
TVD: 7,205.23'  
INC: 92.33°  
AZM: 354.03°  
VS: 1,130.94'

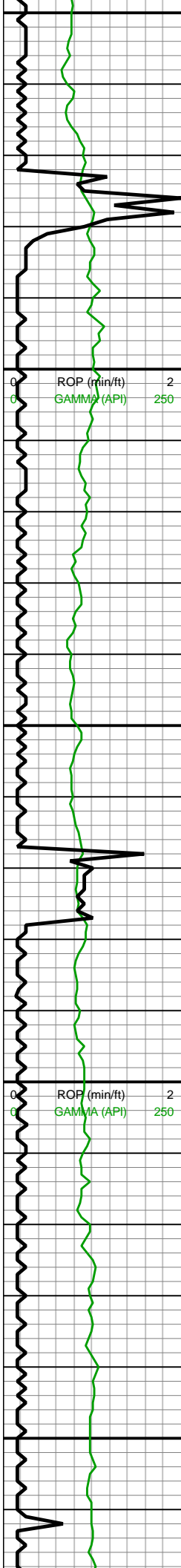


8600-8700 CHK (70%):  
gyshbn-med gy, mot lt gy,  
sl sm-chky tex, sl frm, sb  
blky-blky ctngs, sme free  
CHK, hi calc, tr imbd mic  
pyr; MRLST (30%): med  
gy-dk gy, frm-sl hd, mod  
brit, sb blky-tab ctngs,  
mod fis, mnf f chky incl, vf  
lamn, mod calc,

417u

8700-8800 CHK (55%):  
gyshbn-med gy, mot lt gy,  
tab-sb blky ctngs, fri-frm,  
sm chky tex, tr offwht  
CHK frags, tr intbd  
MRLST, v calc; MRLST  
(45%): dk gyshbn-dk gy,  
sb blky-tab, frm-sl hd, sl  
sm-rgh tex, mod-hi calc,  
sme intbd CHK

487u



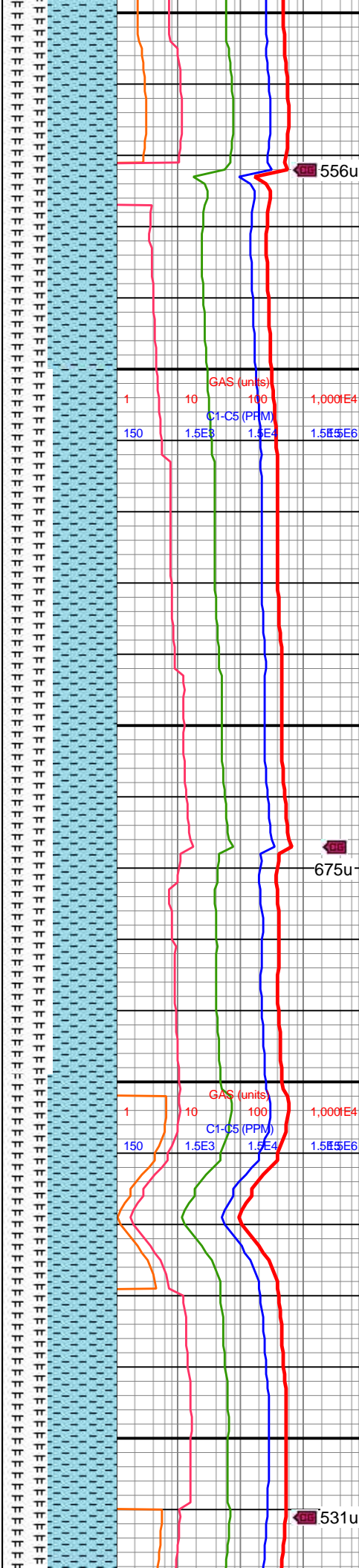
MW IN: 10.1  
VIS IN: 41  
MW OUT: 10.1  
VIS OUT: 40

MD: 8,912'  
TVD: 7,201.73'  
INC: 91.89°  
AZM: 353.94°  
VS: 1,224.93'

MW IN: 10.1  
VIS IN: 41  
MW OUT: 10.0+  
VIS OUT: 40

WOB: 30klbs  
RPM: 70  
SPM: 178  
SPP: 4,357psi

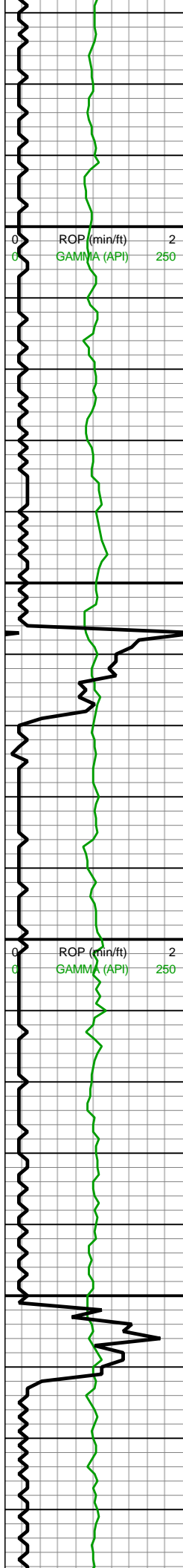
MD: 9,006'  
TVD: 7,199.71'  
INC: 90.57°  
AZM: 354.21°  
VS: 1,317.94'



8800-8900 CHK (60%):  
gyshbn-med gy, blkysb  
tab ctngs, frm-sl hd,  
sm-sl rgh tex, vf lam, mnr  
free CHK, tr-mnr mic pyr;  
MRLST (40%) med gy-dk  
gy, sl slty-sm tex, blkysb  
plty, frm-sl brit, tr pp mic  
pyr, mnr CHK incl/lamn

8900-9000 CHK (55%):  
med gy-gyshbn, frm, sb  
blkysb plty, med fis  
ctngs, mnr MRLST lamn,  
tr imbd/dissm mic pyr, hi  
calc; MRLST (45%): dk  
gyshbn-dk gy, tab-sb  
blkysb brit, frm-sl hd, tr  
CHK incl, mod calc





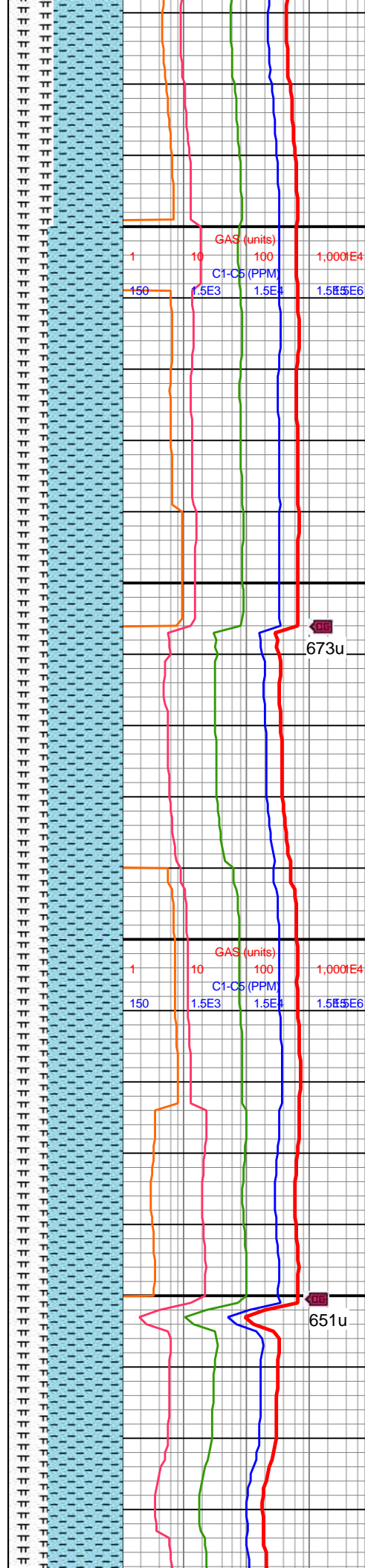
MD: 9,101'  
TVD: 7,198.33'  
INC: 91.1°  
AZM: 353.86°  
VS: 1,411.98'

MW IN: 10.1  
VIS IN: 40  
MW OUT: 10.1+  
VIS OUT: 39

MD: 9,195'  
TVD: 7,197.32'  
INC: 90.13°  
AZM: 355.09°  
VS: 1,504.91'

WOB: 31.5klbs  
RPM: 69  
SPM: 176  
SPP: 4,360psi

MD: 9,290'  
TVD: 7,197.76'



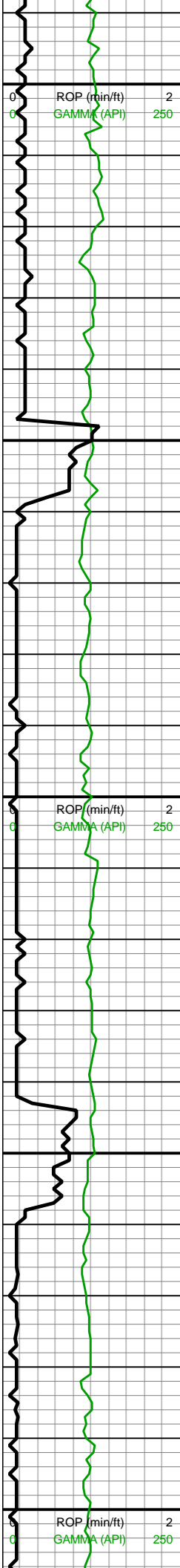
9000-9100 CHK (60%):  
med gy-gyshbn, frm, sb  
blky-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr imbd/dissm mic pyr, hi  
calc; MRLST (40%): dk  
gyshbn-dk gy, tab-sb  
blky, brit, frm-sl hd, tr  
CHK incl, mod calc

9100-9200 CHK (65%):  
med gy-gyshbn, sme  
wht-crm, frm-sft, sb  
blky-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr imbd/dissm mic pyr, hi  
calc; MRLST (35%): dk  
gyshbn-dk gy, tab-sb  
blky, brit, frm-sl hd, tr  
CHK incl, mod calc

9200-9300 CHK (65%):  
med gy-gyshbn, sme  
wht-crm, frm-sft, sb  
blky-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr imbd/dissm mic pyr, hi







INC: 89.34°  
AZM: 356.14°  
VS: 1,598.55'

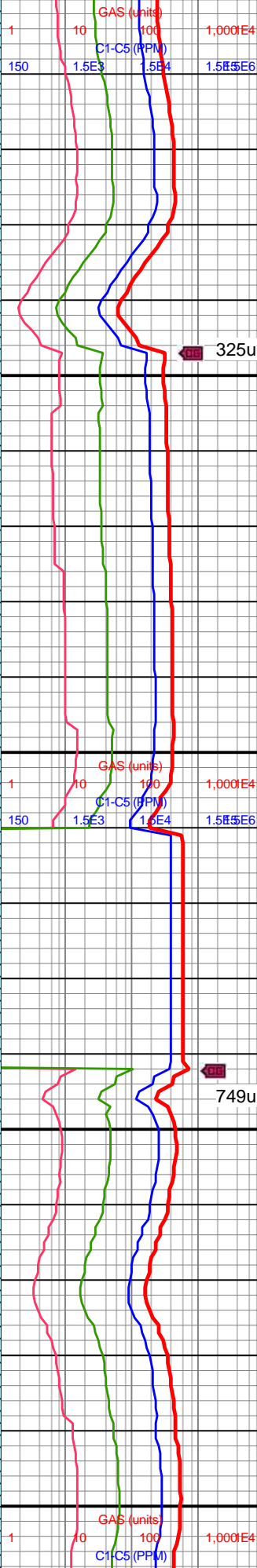
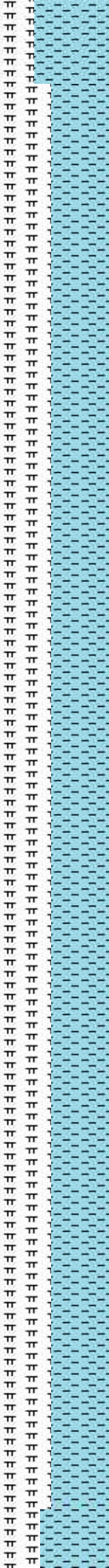
MD: 9,384'  
TVD: 7,199.16'  
INC: 88.95°  
AZM: 357.37°  
VS: 1,690.85'

WOB: 33.3klbs  
RPM: 69  
SPM: 178  
SPP: 4,637psi

MW IN: 10.1  
VIS IN: 40  
MW OUT: 10.1  
VIS OUT: 41

**Note: Pason  
Wits Error due  
to Power  
Outage**

MD: 9,478'  
TVD: 7,200.38'  
INC: 89.56°  
AZM: 359.57°  
VS: 1,782.58'

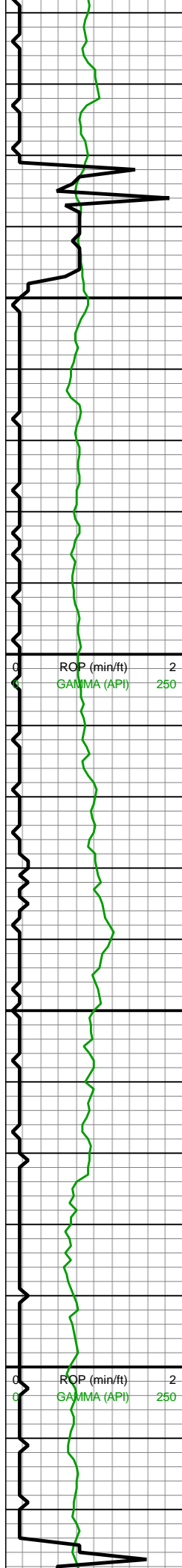


calc; MRLST (35%): dk  
gyshbn-dk gy, tab-sb  
blky, brit, frm-sl hd, tr  
CHK incl, mod calc

9300-9400 CHK (50%):  
med gy-gyshbn, sme  
wht-crm, frm-sft, sb  
blky-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr imbd/dissm mic pyr, hi  
calc; MRLST (50%): dk  
gyshbn-dk gy, tab-sb  
blky, brit, frm-sl hd, tr  
CHK incl, mod calc

9400-9500 CHK (50%):  
med gy-gyshbn, sme  
wht-crm, frm-sft, sb  
blky-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr imbd/dissm mic pyr, hi  
calc; MRLST (35%): dk  
gyshbn-dk gy, tab-sb  
blky, brit, frm-sl hd, tr  
CHK incl, mod calc





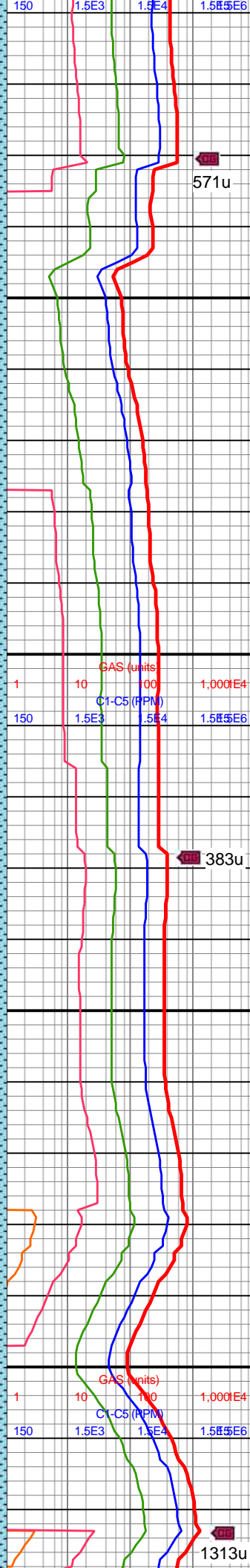
9,510  
9,520  
9,530  
9,540  
9,550  
9,560  
9,570  
9,580  
9,590  
9,600  
9,610  
9,620  
9,630  
9,640  
9,650  
9,660  
9,670  
9,680  
9,690  
9,700  
9,710  
9,720

MW IN: 10.1  
VIS IN: 41  
MW OUT: 10.2  
VIS OUT: 41

MD: 9,572'  
TVD: 7,201.97'  
INC: 88.51°  
AZM: 359.66°  
VS: 1,873.88'

WOB: 30.2klbs  
RPM: 70  
SPM: 178  
SPP: 4,706psi

MD: 9,666'  
TVD: 7,204.31'  
INC: 88.64°  
AZM: 359.57°  
VS: 1,965.17'



571u

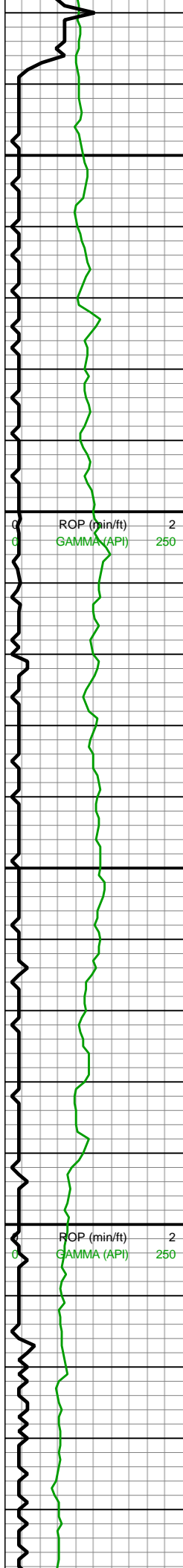
383u

1313u

9500-9600 CHK (60%):  
med gy-gyshbn, sme  
wht-crm, frm-sft, sb  
blky-sb plty, med fis  
ctngs, mnrl MRLST lamn,  
tr imbd/dissm mic pyr, hi  
calc; MRLST (40%): dk  
gyshbn-dk gy, tab-sb  
blky, brit, frm-sl hd, tr  
CHK incl, mod calc

9600-9700 MRLST  
(60%): dk gyshbn-dk gy,  
tab-sb blky, brit, frm-sl  
hd, tr CHK incl, mod calc;  
CHK (40%): med  
gy-gyshbn, frm-fri, sb  
blky-sb plty, med fis  
ctngs, mnrl MRLST lamn,  
tr dissd mic pyr/ pyr nod,  
hi calc





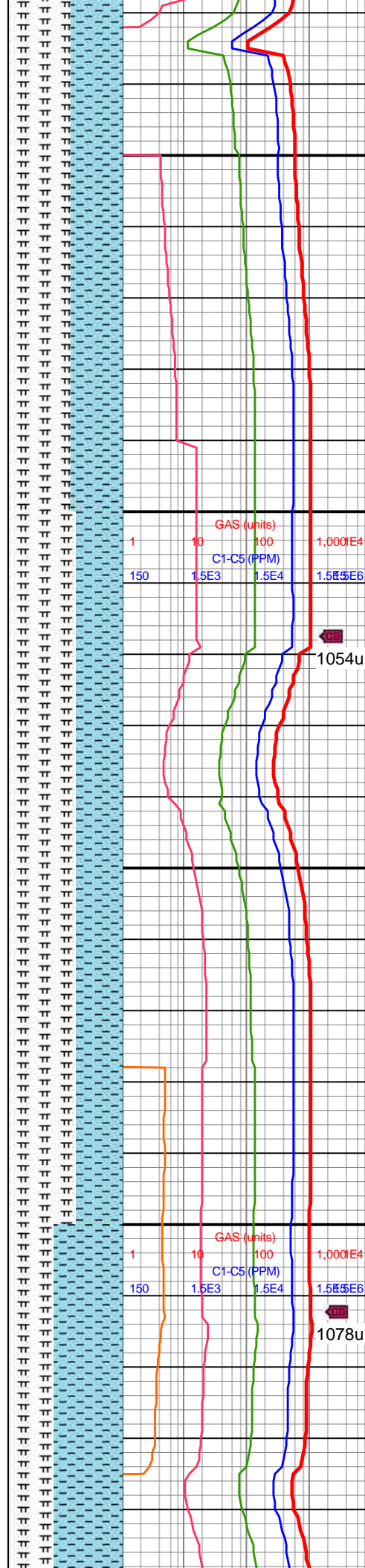
MD: 9,761'  
TVD: 7,205.83'  
INC: 89.52°  
AZM: 0.62°  
VS: 2,057.25'

WOB: 32.5klbs  
RPM: 70  
SPM: 178  
SPP: 4,772psi

MD: 9,856'  
TVD: 7,206.78'  
INC: 89.34°  
AZM: 359.92°  
VS: 2,149.27'

MW IN: 10.1  
VIS IN: 41  
MW OUT: 10.2  
VIS OUT: 41

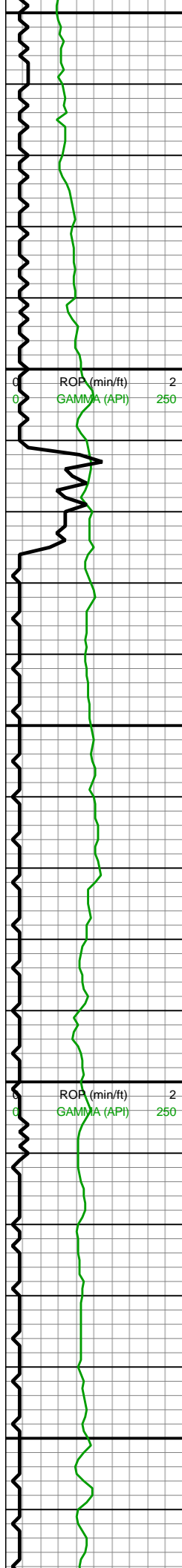
MD: 9,951'  
TVD: 7,207.43'



9700-9800 MRLST  
(55%): dk gyshbn-dk gy,  
tab-sb blkly, brit, frm-sl  
hd, tr CHK incl, mod calc;  
CHK (45%): med  
gy-gyshbn, frm-fri, sb  
blkly-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr diss mic pyr/ pyr nod,  
hi calc

9800-9900 MRLST  
(60%): dk gyshbn-dk gy,  
tab-sb blkly, brit, frm-sl  
hd, tr CHK incl, mod calc;  
CHK (40%): med  
gy-gyshbn, frm-fri, sb  
blkly-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr diss mic pyr/ pyr nod,  
hi calc





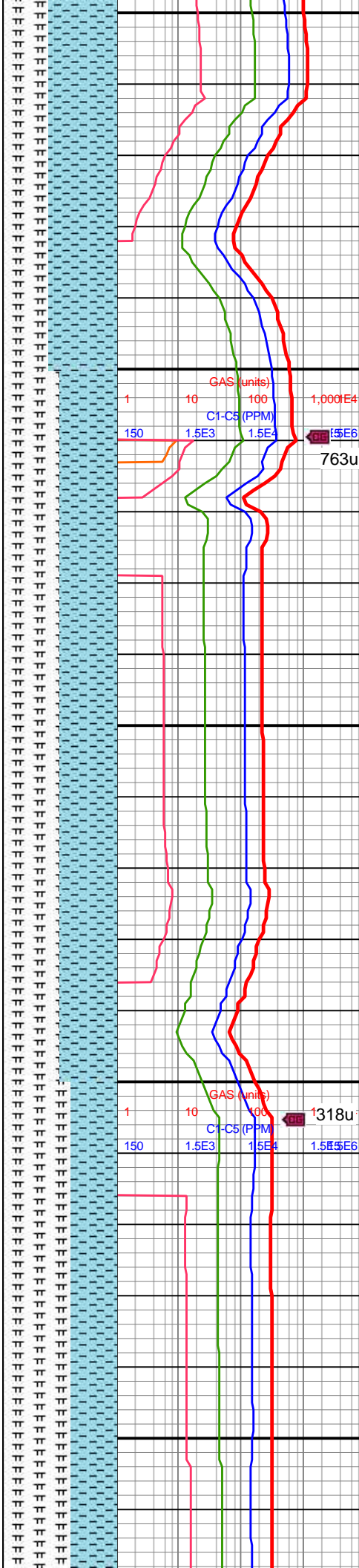
INC: 89.87°  
AZM: 359.57°  
VS: 2,241.5'

WOB: 34klbs  
RPM: 70  
SPM: 178  
SPP: 4,726psi

MD: 10,045'  
TVD: 7,207.64'  
INC: 89.87°  
AZM: 0.62°  
VS: 2,332.63'

MW IN: 10.1  
VIS IN: 43  
MW OUT: 10.1  
VIS OUT: 43

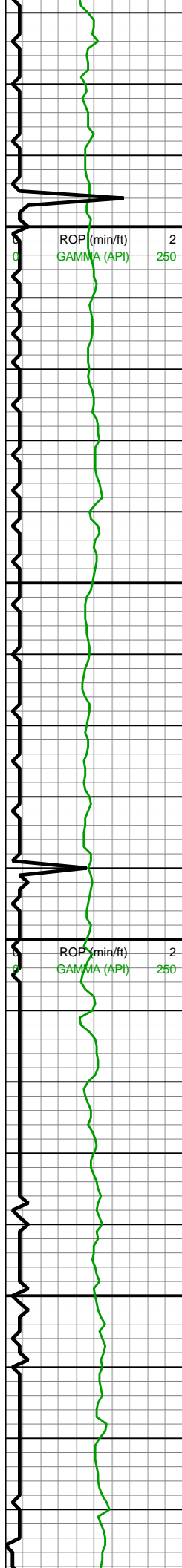
MD: 10,140'  
TVD: 7,207.35'  
INC: 90.48°  
AZM: 0.89°  
VS: 2,424.44'



9900-10000 CHK (60%):  
med gy-gyshbn, sme  
wht-crm, frm-sft, sb  
blky-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr imbd/dissm mic pyr, hi  
calc; MRLST (40%): dk  
gyshbn-dk gy, tab-sb  
blky, brit, frm-sl hd, tr  
CHK incl, mod calc

10000-10100 CHK  
(50%): gyshbn-med gy, tr  
crm, mot, fri-frm, tab-sb  
blky, sm chky tex, tr intbd  
MRLST, calc; MRLST  
(50%): dk gyshbn-dk gy,  
frm-sl hd, sb blky-tab, sl  
sm-rgh tex, com intbd  
CHK, mnr imbd mic pyr,  
tr cal frac fl, v hi calc



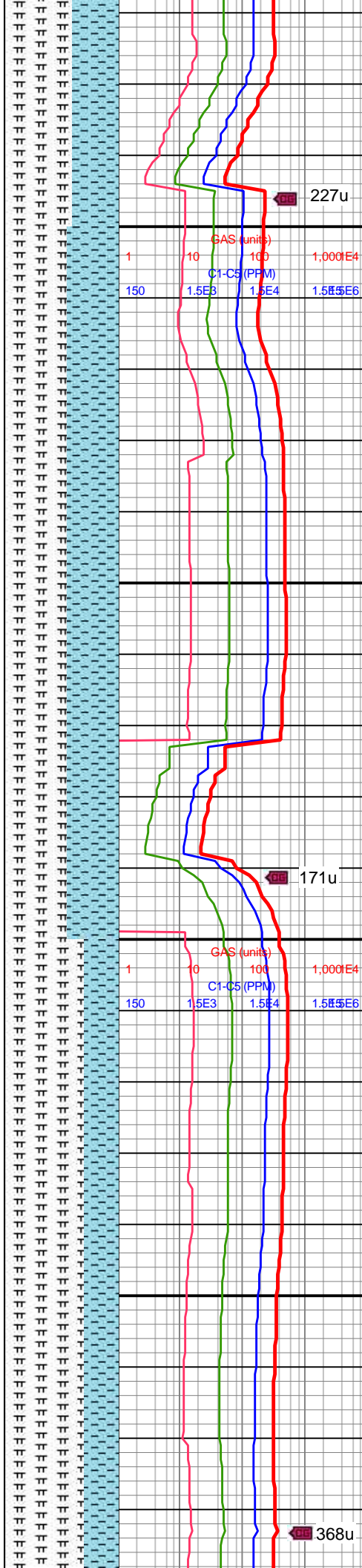


WOB: 16.1klbs  
RPM: 70  
SPM: 178  
SPP: 4,498psi

MD: 10,234'  
TVD: 7,206.78'  
INC: 90.22°  
AZM: 0.1°  
VS: 2,515.4'

MD: 10,328'  
TVD: 7,206.45'  
INC: 90.18°  
AZM: 0.1°  
VS: 2,606.53'

MW IN: 10.1  
VIS IN: 43  
MW OUT: 10.1  
VIS OUT: 43

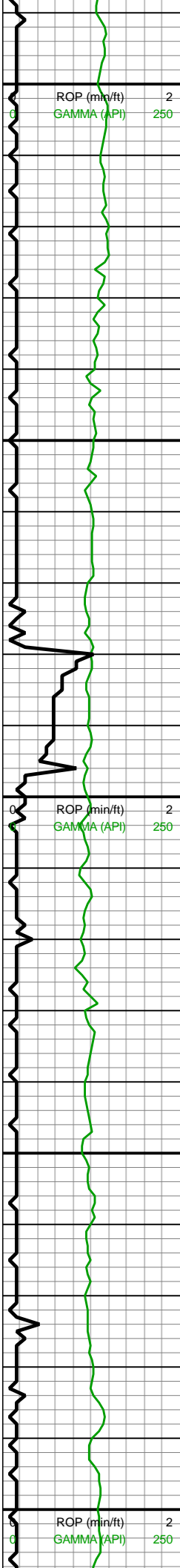


10100-10200 MRLST  
(60%): dk gy-med gy,  
mot, sl slty tex, sl hd frm,  
sb blk-y-sb ang ctngs,  
mod calc, sme CHK  
intbds; CHK (40%): predy  
gyshbn, mot-sl stri, sb  
blk-y ctngs, sm chky tex, sl  
frm-brit, tr free CHK, v  
calc

10200-10300 MRLST  
(55%): dk gy-med gy,  
mot, sl slty tex, sl hd frm,  
sb blk-y-sb ang ctngs,  
mod calc, sme CHK  
intbds; CHK (45%): predy  
gyshbn, mot-sl stri, sb  
blk-y ctngs, sm chky tex, sl  
frm-brit, tr free CHK, v  
calc

10300-10400 MRLST  
(70%): dk gy-med gy,  
mot, sl slty tex, sl hd-frm,  
sb blkly-sb ang ctngs,  
mod calc, sme CHK  
intbds; CHK (30%): predy





10,390  
10,400  
10,410  
10,420  
10,430  
10,440  
10,450  
10,460  
10,470  
10,480  
10,490  
10,500  
10,510  
10,520  
10,530  
10,540  
10,550  
10,560  
10,570  
10,580  
10,590  
10,600

WOB: 35.2klbs  
RPM: 69  
SPM: 178  
SPP: 4,866psi

MD: 10,422'  
TVD: 2,348.78'  
INC: 89.56°  
AZM: 359.22°  
VS: 0'

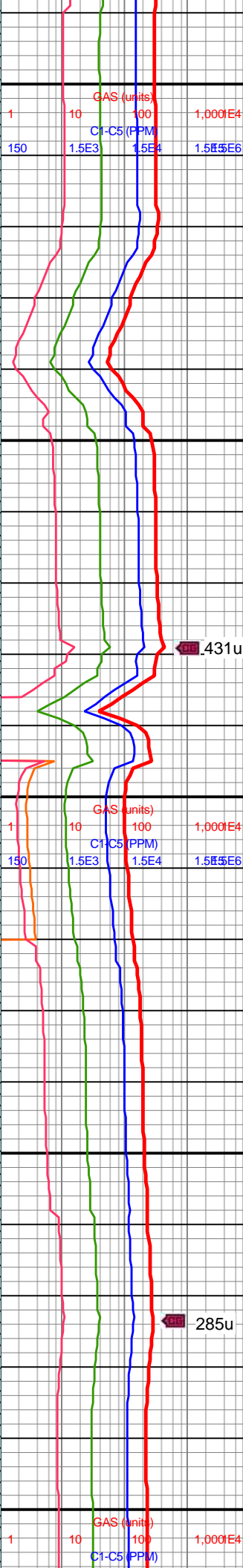
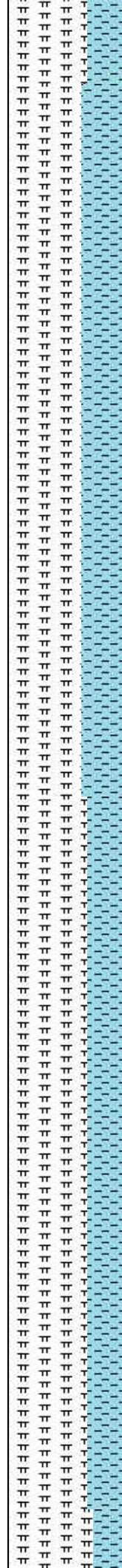
MD: 10,517'  
TVD: 7,206.23'  
INC: 90.97°  
AZM: 1.94°  
VS: 2,789.71'

MW IN: 10.1  
VIS IN: 43  
MW OUT: 10.2  
VIS OUT: 43

MIN DEPT 06/14/2018

WOB: 32.2klbs  
RPM: 70  
SPM: 177  
SPP: 4,858psi

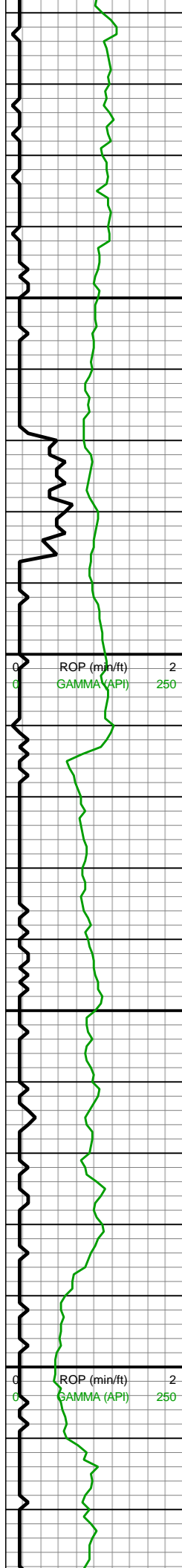
MD: 10,611'



gyshbn, mot-sl stri, sb  
blky ctngs, sm chky tex, sl  
frm-brit, tr free CHK, v  
calc

10400-10500 MRLST  
(65%): dk gy-med gy,  
mot, sl slty tex, sl hd-frm,  
sb blky-sb ang ctngs,  
mod calc, sme CHK  
intbds; CHK (35%): predy  
gyshbn, mot-sl stri, sb  
blky ctngs, sm chky tex, sl  
frm-brit, tr free CHK, v  
calc

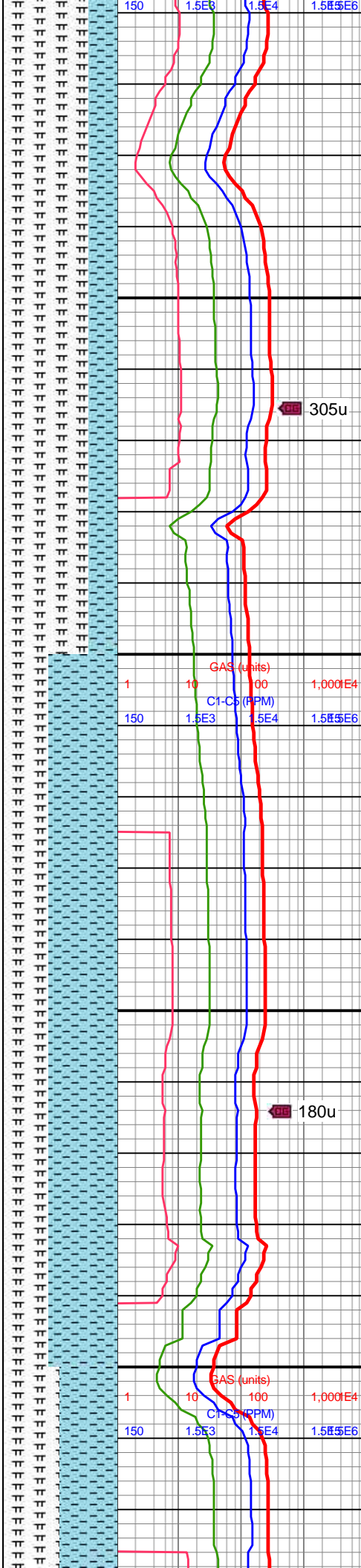
10500-10600 MRLST  
(70%): dk gy-med gy,  
mot, sl slty tex, sl hd-frm,  
sb blky-sb ang ctngs,  
mod calc, sme CHK  
intbds; CHK (30%): predy  
gyshbn, mot-sl stri, sb  
blky ctngs, sm chky tex, sl  
frm-brit, tr free CHK, v  
calc



MD: 10,611'  
TVD: 7,204.09'  
INC: 91.63°  
AZM: 3.08°  
VS: 2,879.76'

MD: 10,706'  
TVD: 7,202.71'  
INC: 90.04°  
AZM: 0.89°  
VS: 2,971.01'

MD: 10,800'  
TVD: 7,203.07'  
INC: 89.52°  
AZM: 0.8°  
VS: 3,061.83'  
WOB: 32.3klbs  
RPM: 70  
SPM: 177  
SPP: 4,905psi



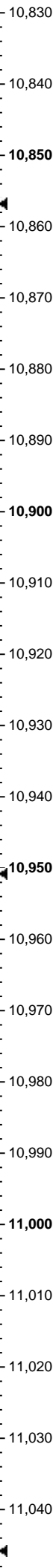
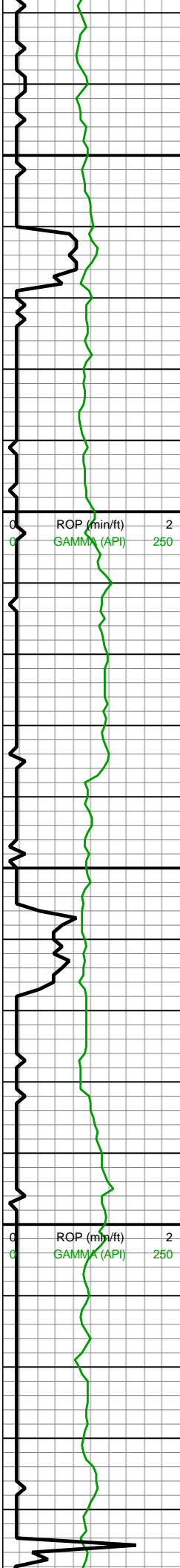
305u

10600-10700 MRLST  
(75%): dk gy-med gy,  
mot, sl slty tex, sl hd-frm,  
sb blk-y-sb ang ctngs,  
mod calc, sme CHK  
intbds; CHK (25%): predy  
gyshbn, mot-sl stri, sb  
blk-y ctngs, sm chky tex, sl  
frm-brit, occ free CHK, v  
calc

180u

10700-10800 CHK  
(60%): med gy-gyshbn,  
sme wht-crm, frm-sft, sb  
blk-y-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr imbd/dissm mic pyr, hi  
calc; MRLST (40%): dk  
gyshbn-dk gy, tab-sb  
blk-y, brit, frm-sl hd, tr  
CHK incl, mod calc





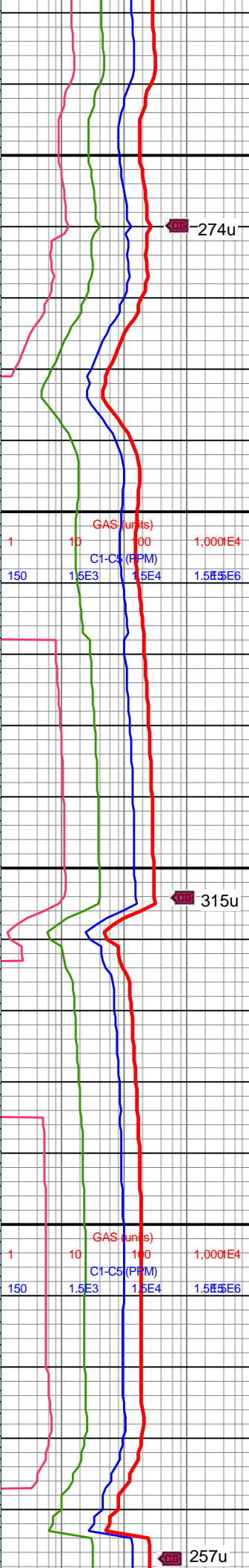
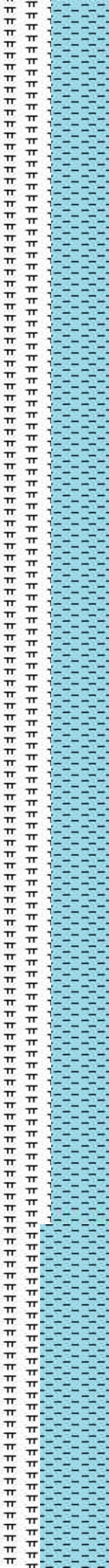
MW IN: 10.1  
VIS IN: 43  
MW OUT: 10.2  
VIS OUT: 42

MD: 10,895'  
TVD: 7,203.57'  
INC: 89.87°  
AZM: 359.83°  
VS: 3,153.83'

MW IN: 10.1  
VIS IN: 42  
MW OUT: 10.2  
VIS OUT: 42

MD: 10,989'  
TVD: 7,202.96'  
INC: 90.88°  
AZM: 0.71°  
VS: 3,244.88'

WOB: 18.8klbs  
RPM: 69  
SPM: 178  
SPP: 4,948psi



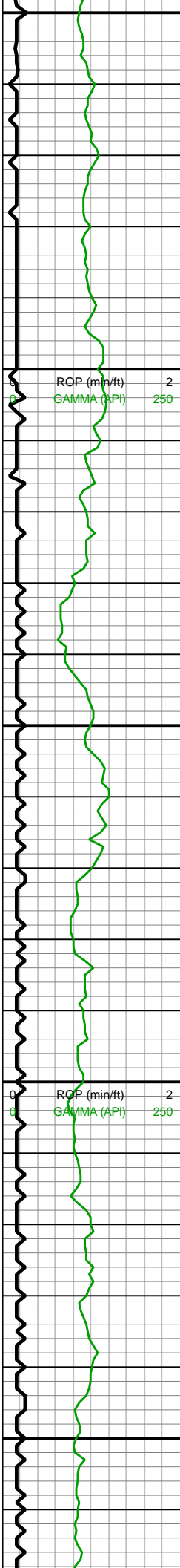
274u

315u

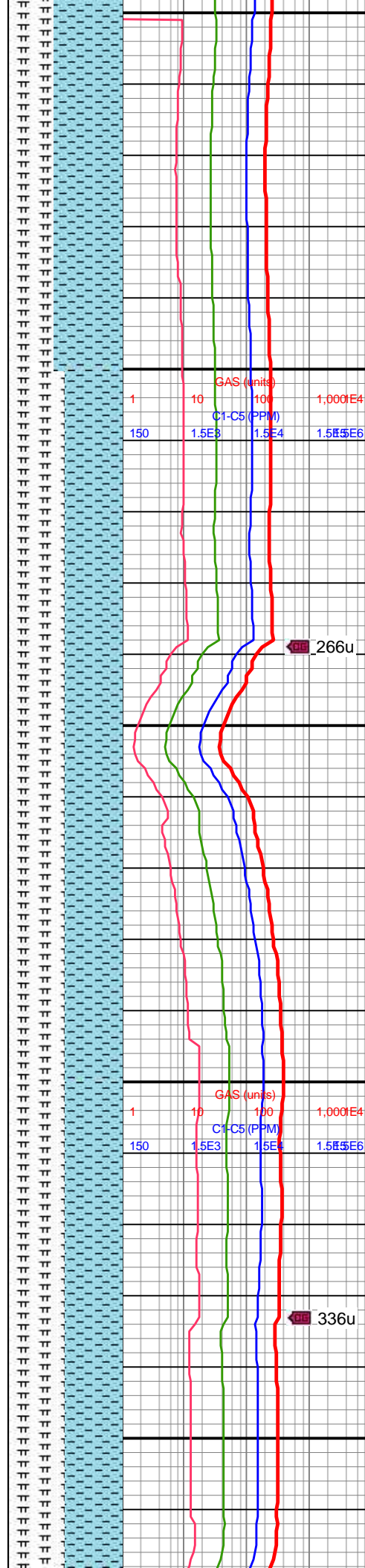
257u

10800-10900 CHK  
(50%): med gy-gyshbn,  
sme wht-crm, frm-sft, sb  
blky-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr imbd/dissm mic pyr, hi  
calc; MRLST (50%): dk  
gyshbn-dk gy, tab-sb  
blky, brit, frm-sl hd, tr  
CHK incl, mod calc

10900-11000 MRLST  
(50%): dk gy-med gy,  
mot, sl slty tex, sl hd-frm,  
sb blky-sb ang ctngs,  
mod calc, sme CHK  
intbds; CHK (50%): predy  
gyshbn, mot-sl stri, sb  
blky ctngs, sm chky tex, sl  
frm-brit, tr free CHK, v  
calc

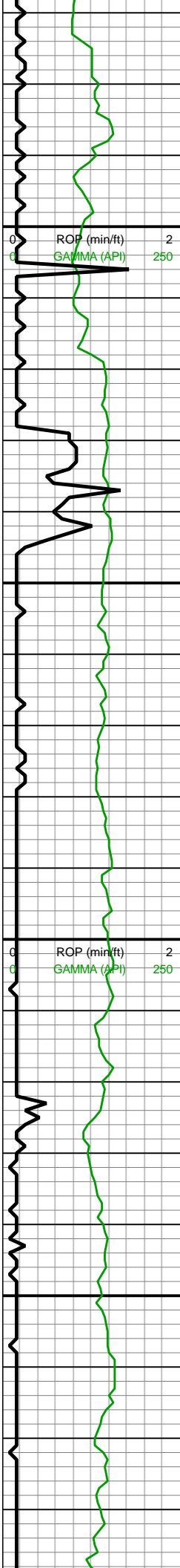


11,050  
11,060  
11,070  
11,080 MD: 11,084'  
TVD: 7,201.87'  
INC: 90.44°  
AZM: 0.62°  
VS: 3,336.73'  
11,090  
11,100  
11,110  
11,120  
11,130  
11,140  
11,150  
11,160  
11,170 MD: 11,178'  
TVD: 7,200.93'  
INC: 90.7°  
AZM: 0.36°  
VS: 3,427.69'  
11,180  
11,190  
11,200 WOB: 31.6klbs  
RPM: 70  
SPM: 177  
SPP: 4,956psi  
11,210  
11,220  
11,230 MW IN: 10.1  
VIS IN: 42  
MW OUT: 10.2  
VIS OUT: 44  
11,240  
11,250  
11,260 MD: 11,272'



11000-11100 CHK  
(60%): med gy-gyshbn,  
sme wht-crm, frm-sft, sb  
blky-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr imbd/dissm mic pyr, hi  
calc; MRLST (40%): dk  
gyshbn-dk gy, tab-sb  
blky, brit, frm-sl hd, tr  
CHK incl, mod calc

11100-11200 CHK  
(50%): med gy-gyshbn,  
sme wht-crm, frm-sft, sb  
blky-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr imbd/dissm mic pyr, hi  
calc; MRLST (50%): dk  
gyshbn-dk gy, tab-sb  
blky, brit, frm-sl hd, tr  
CHK incl, mod calc

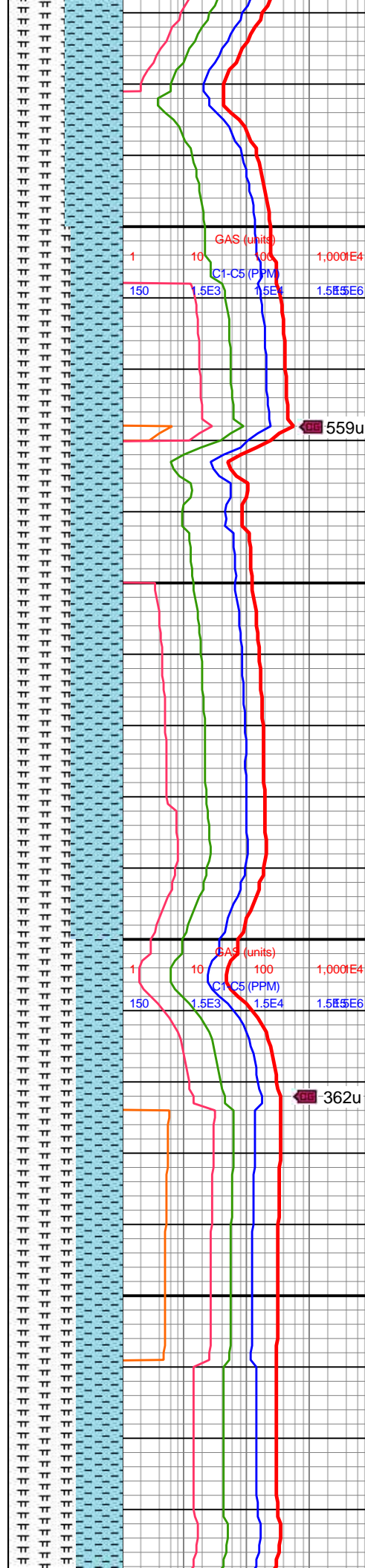


TVD: 7,198.66'  
INC: 92.07°  
AZM: 0.18°  
VS: 3,518.72'

MD: 11,366'  
TVD: 7,196.06'  
INC: 91.1°  
AZM: 1.24°  
VS: 3,609.56'

MD: 11,461'  
TVD: 3,387.41'  
INC: 90.44°  
AZM: 1.42°  
VS: 0'

MW IN: 10.1  
VIS IN: 43  
MW OUT: 10.2  
VIS OUT: 44



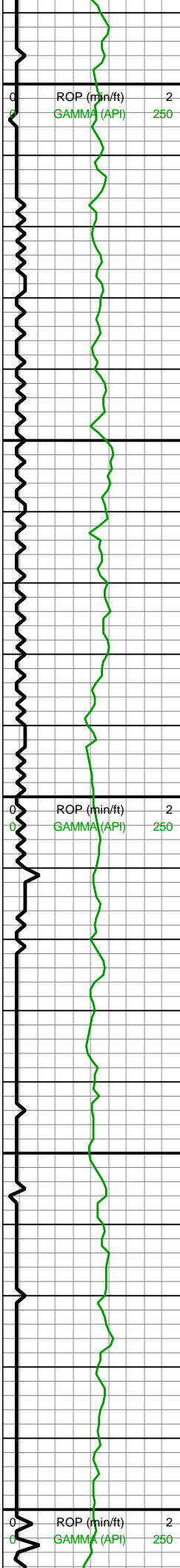
11200-11300 CHK  
(50%): med gy-gyshbn, sme wht-crm, frm-sft, sb blky-sb plty, med fis ctngs, mnr MRLST lamn, tr imbd/dissm mic pyr, hi calc; MRLST (50%): dk gyshbn-dk gy, tab-sb blky, brit, frm-sl hd, tr CHK incl, mod calc

11300-11400 MRLST  
(55%): dk gyshbn-dk gy, tab-sb blky, brit, frm-sl hd, tr CHK incl, mod calc; CHK (45%): med gy-gyshbn, sme wht-crm, frm-sft, sb blky-sb plty, med fis ctngs, mnr MRLST lamn, tr imbd/dissm mic pyr, hi calc

11400-11500 MRLST  
(60%): dk gyshbn-dk gy, tab-sb blky, brit, frm-sl hd, tr CHK incl, mod calc; CHK (40%): med gy-gyshbn, sme wht-crm, frm-sft, sb blky-sb plty,







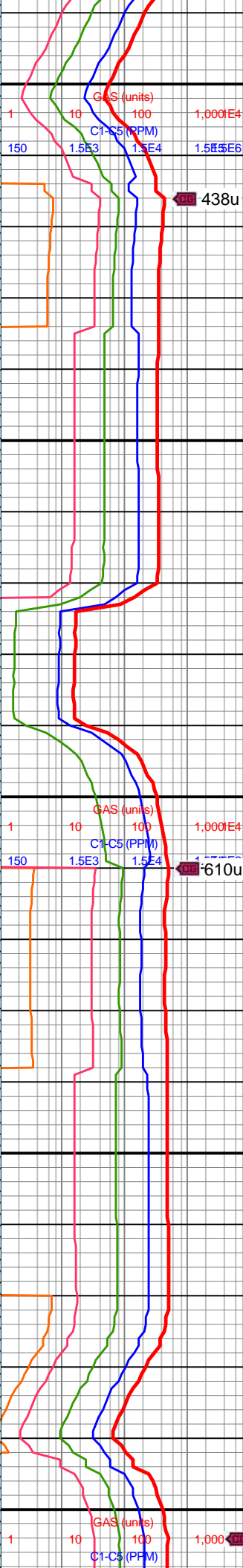
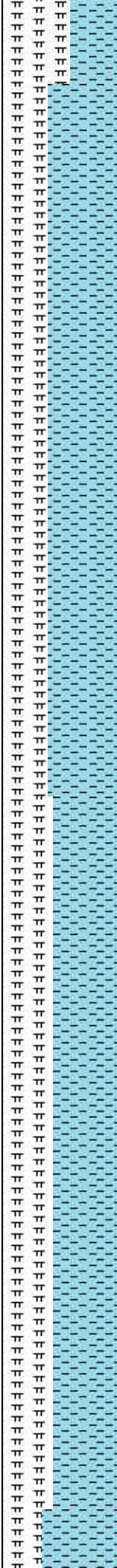
11,490  
11,500  
11,510  
11,520  
11,530  
11,540  
11,550  
11,560  
11,570  
11,580  
11,590  
11,600  
11,610  
11,620  
11,630  
11,640  
11,650  
11,660  
11,670  
11,680  
11,690  
11,700

MD: 11,555'  
TVD: 7,194.06'  
INC: 90.44°  
AZM: 1.59°  
VS: 3,791.65'

WOB: 35.4klbs  
RPM: 70  
SPM: 177  
SPP: 4,978psi

MD: 11,649'  
TVD: 7,193.23'  
INC: 90.57°  
AZM: 1.59°  
VS: 3,882.14'

MW IN: 10.1  
VIS IN: 43  
MW OUT: 10.2  
VIS OUT: 45



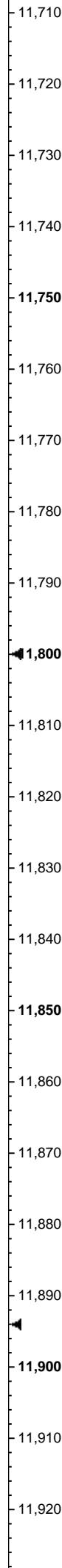
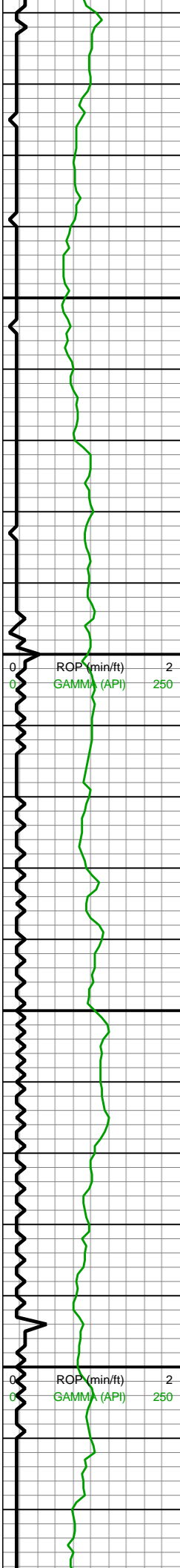
med fis ctngs, mnr  
MRLST lamn, tr  
imbd/dissm mic pyr, hi  
calc

438u

11500-11600 CHK  
(60%): med gy-gyshbn,  
mot wht-crm, frm-sft, sb  
blky-sb plty, med fis  
ctngs, mnr MRLST lamn,  
tr dissm mic pyr, hi calc;  
MRLST (40%): dk  
gyshbn-dk gy, tab-sb  
blky, brit, frm-sl hd, tr  
CHK incl, mod calc

610u

11600-11700 CHK  
(55%): gyshbn, med gy,  
mot-sl stri, sl frm, brit, sm  
chky tex, sb blky ctngs,  
mnr dissm pyr cls, hi  
calc; MRLST (45%): dk  
gy-gyshbn, mot, sl  
hd-frm, sb blky-sb ang  
ctngs, tr intbd CHK, mod  
calc



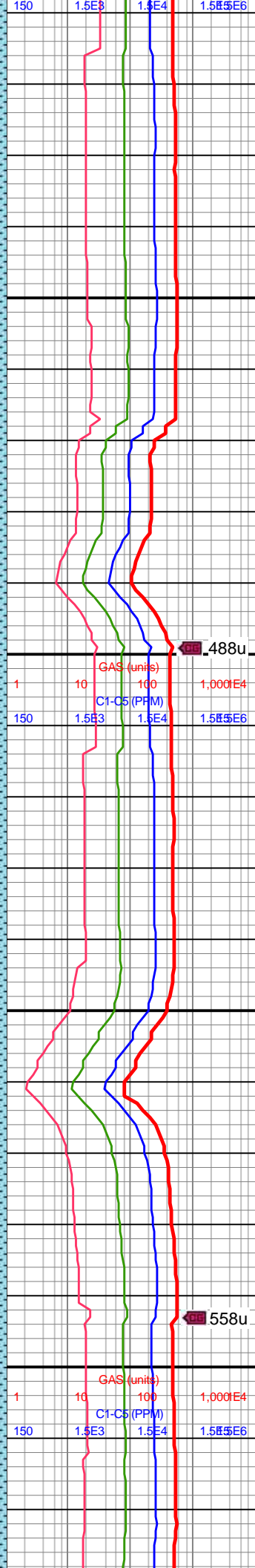
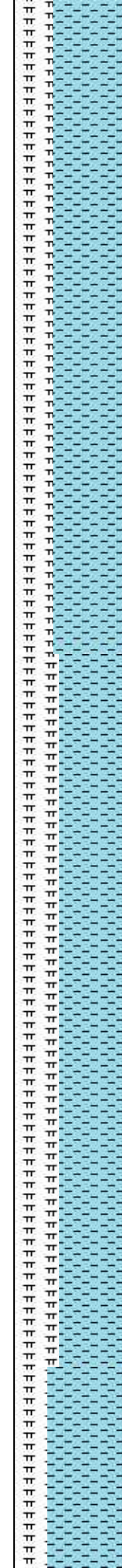
MD: 11,743'  
TVD: 7,192.3'  
INC: 90.57°  
AZM: 0.89°  
VS: 3,972.78'

WOB: 11.1klbs  
RPM: 69  
SPM: 179  
SPP: 4,478psi

MD: 11,837'  
TVD: 7,191.86'  
INC: 89.96°  
AZM: 0.8°  
VS: 4,063.59'

MW IN: 10.1  
VIS IN: 44  
MW OUT: 10.2  
VIS OUT: 42

MD: 11,931'  
TVD: 7,192.3'

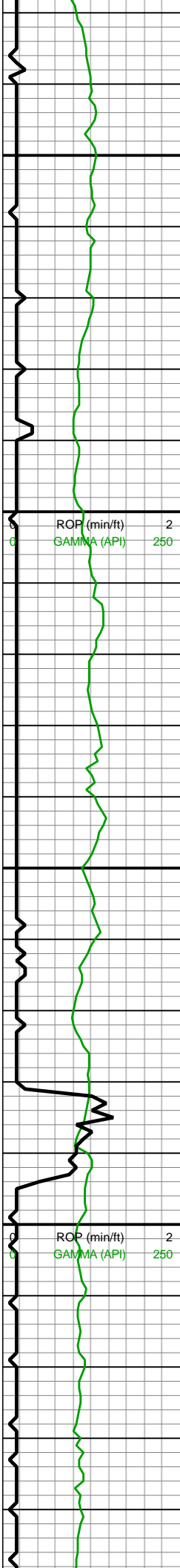


11700-11800 CHK  
(65%): gyshbn-med gy, lt  
gy mot, sm chky tex, sb  
tab-sb blkly ctngs, fri-frm,  
mnr scat crm CHK, mnr  
intbd MRLST, hi calc;  
MRLST (35%): dk gy-dk  
gyshbn, frm-sl hd, sb  
blkly-tab, sl sm tex, scat  
dissm/imbd mic pyr cls,  
mod-hi calc

11800-11900 CHK  
(60%): gyshbn-med gy,  
mot lt gy, sb ang-sb blkly  
ctngs, fri-frm, sm chky  
tex, mnr free crm CHK,  
mnr intbd MRLST, mod  
calc; MRLST (40%): dk  
gyshbn-dk gy, frm-sl hd,  
tab-sb ang ctngs, sl sm  
tex, v hi calc, tr pp mic  
dissm pyr







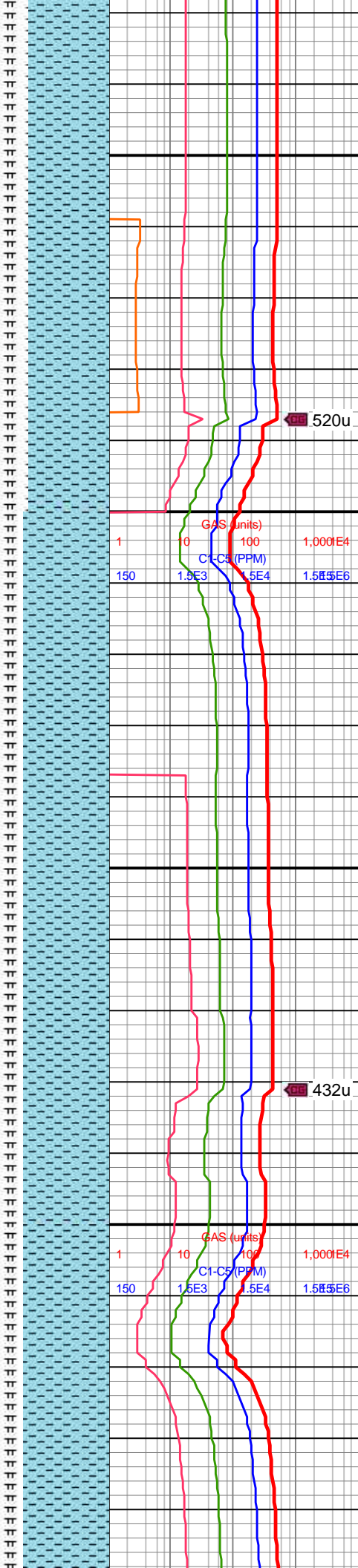
VD: 7,192.07'  
INC: 89.78°  
AZM: 0.54°  
VS: 4,154.48'

WOB: 34.6klbs  
RPM: 70  
SPM: 175  
SPP: 5,064psi

MD: 12,026'  
TVD: 7,192.99'  
INC: 89.12°  
AZM: 0.1°  
VS: 4,246.48'

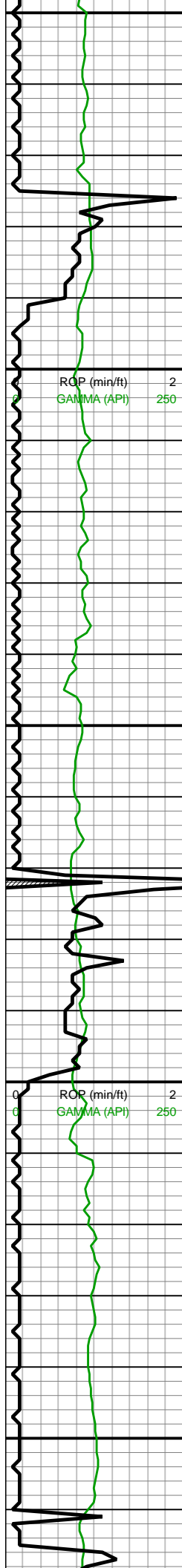
MD: 12,120'  
TVD: 7,193.86'  
INC: 89.82°  
AZM: 359.39°  
VS: 4,337.74'

MW IN: 10.1  
VIS IN: 43  
MW OUT: 10.2  
VIS OUT: 42



11900-12000 CHK  
(70%): gyshbn-med gy,  
mot wht-crm, frm-sl sft,  
sb blkyl-sb tab, mod fis  
ctngs, sme MRLST lamn,  
hi calc, tr diss mic pyr;  
MRLST (30%): dk gy, mot  
med gy, frm-sl hd, brit,  
tab-sb blkyl, tr CHK incl,  
mod calc

12000-12100 CHK  
(75%): gyshbn, mot med  
gy, sb tab-sb plty, frm-sl  
frm, mod fis, tr mic pyr,  
sme MRLST lamn, hi  
calc; MRLST (25%): dk  
gyshbn-dk gy, sl slty-sm  
tex, frm-sl hd, mod brit, tr  
CHK incl, mod calc



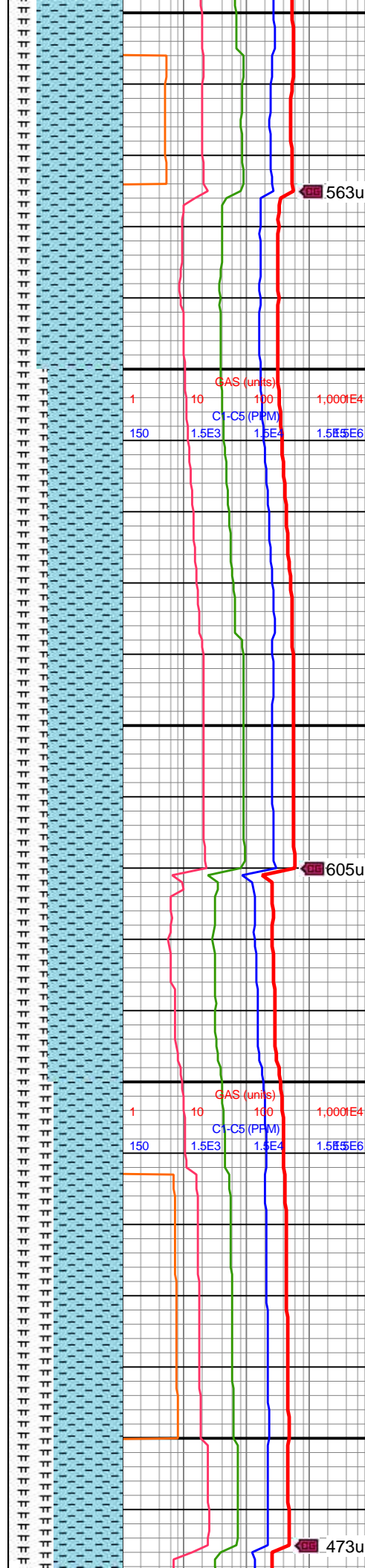
12,150  
12,160  
12,170  
12,180  
12,190  
12,200  
12,210  
12,220  
12,230  
12,240  
12,250  
12,260  
12,270  
12,280  
12,290  
12,300  
12,310  
12,320  
12,330  
12,340  
12,350  
12,360

WOB: 21.5klbs  
RPM: 70  
SPM: 176  
SPP: 4,969psi

MD: 12,214'  
TVD: 7,194.54'  
INC: 89.34°  
AZM: 358.25°  
VS: 4,429.35'

MD: 12,309'  
TVD: 7,193.74'  
INC: 91.63°  
AZM: 0.36°  
VS: 4,521.75'

MW IN: 10.1+  
VIS IN: 42  
MW OUT: 10.2  
VIS OUT: 41



12100-12200 CHK  
(75%): gyshbn, mot med  
gy, mod fis, sb tab-sb  
plty, frm-sl frm, sme  
MRLST lamn, hi calc, tr  
mic pyr; MRLST (25%):  
dk gyshbn-dk gy, sl  
slty-sm tex, mod brit,  
frm-sl hd, mod calc, tr  
CHK incl

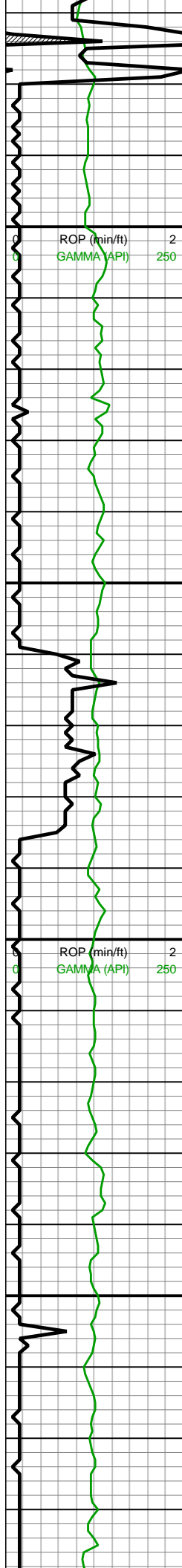
12200-12300 CHK  
(65%): gyshbn-med gy,  
mot lt gy, sb blkly-tab  
ctngs, sl sm-chky tex, sl  
frm, sme free CHK, tr  
dissm mic pyr cls, hi  
calc; MRLST (35%): med  
gy-dk gy, frm-sl hd, mod  
fis, mod brit, sb blkly-tab,  
vf lamn, mod calc, mnr f  
chky incl



563u

605u

473u



12,370  
12,380  
12,390  
12,400  
12,410  
12,420  
12,430  
12,440  
12,450  
12,460  
12,470  
12,480  
12,490  
12,500  
12,510  
12,520  
12,530  
12,540  
12,550  
12,560  
12,570  
12,580

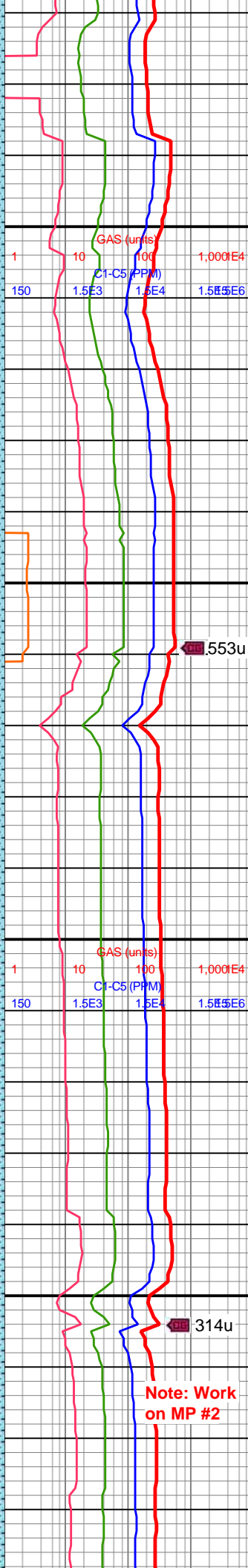
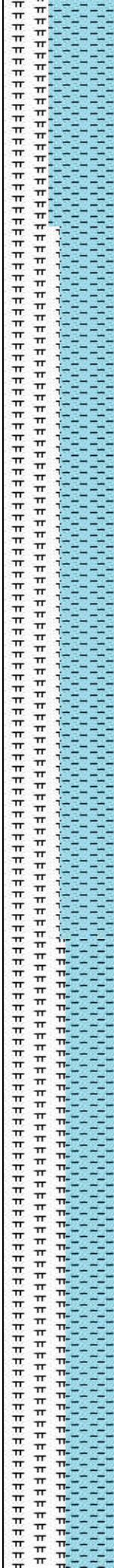
WOB: 30.3klbs  
RPM: 69  
SPM: 177  
SPP: 5,161psi

MD: 12,403'  
TVD: 7,191.76'  
INC: 90.79°  
AZM: 359.04°  
VS: 4,613.01'

MW IN: 10.1+  
VIS IN: 42  
MW OUT: 10.2  
VIS OUT: 41

MD: 12,498'  
TVD: 7,191.28'  
INC: 89.78°  
AZM: 1.68°  
VS: 4,704.98'

MD: 12,592'



12300-12400 CHK  
(60%): med gy-gyshbn, sb blkly-sb plty, frm, med fis ctngs, mnr diss mic pyr cls, mnr MRLST lamn, v calc; MRLST (40%): dk gyshbn-dk gy, brit, frm-sl hd, tab-sb blkly, tr CHK incl, mod calc

12400-12500 CHK  
(50%): med gy-gyshbn, mot crm, sb blkly-sb plty, frm-sft, mod fis, tr imbd/dissm mic pyr, mnr MRLST lamn, hi calc; MRLST (50%): dk gyshbn-dk gy, brit, tab-sb blkly, frm-sl hd, tr CHK incl, mod calc

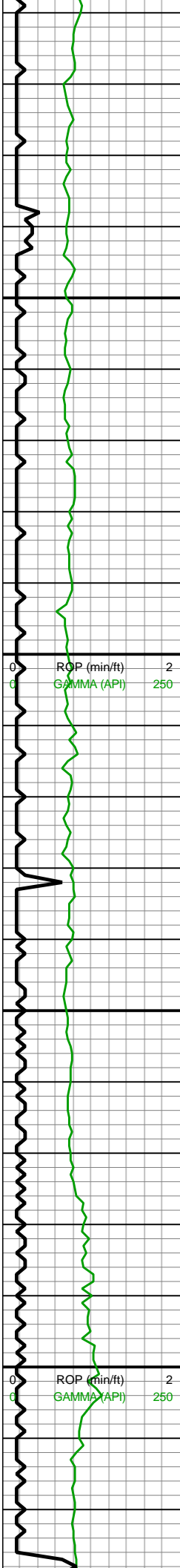
12500-12600 MRLST  
(55%): dk gy-med gy, mot, sl slty tex, sl hd-frm, sb blkly-sb tab ctngs, mod calc, sme CHK intbds; CHK (45%): predy

Note: Work on MP #2







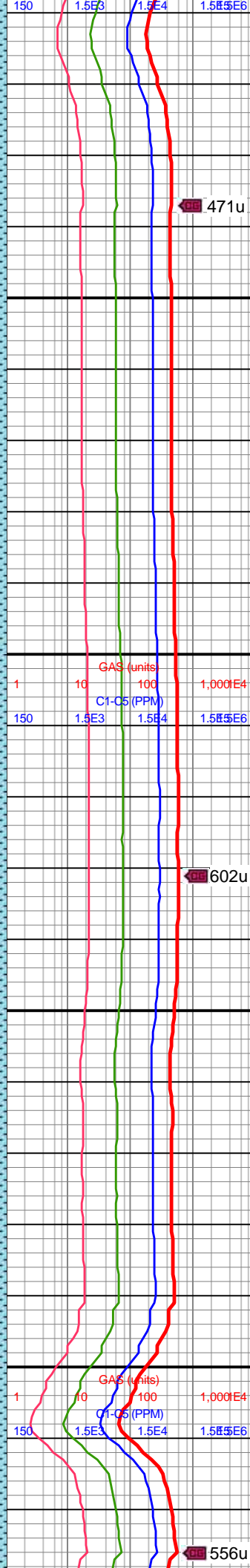


12,810  
12,820  
12,830  
12,840  
12,850  
12,860  
12,870  
12,880  
12,890  
12,900  
12,910  
12,920  
12,930  
12,940  
12,950  
12,960  
12,970  
12,980  
12,990  
13,000  
13,010  
13,020

MD: 12,876'  
TVD: 7,191.86'  
INC: 90.22°  
AZM: 1.68°  
VS: 5,068.35'

MD: 12,970'  
TVD: 7,191.14'  
INC: 90.66°  
AZM: 0.8°  
VS: 5,159'

WOB: 24.8klbs  
RPM: 70  
SPM: 177  
SPP: 5,144psi



471u

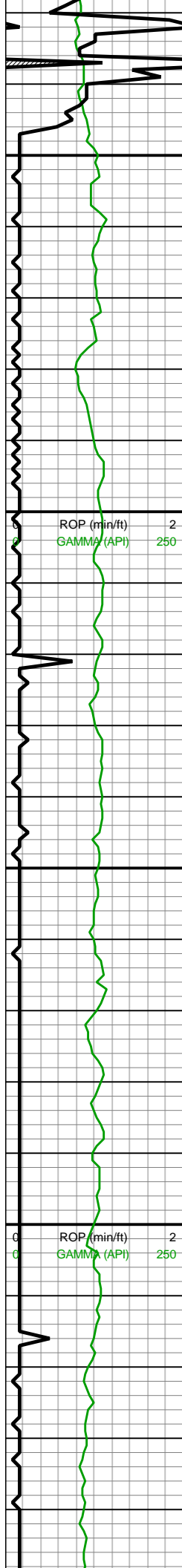
602u

556u

12800-12900 CHK  
(75%): gyshbn, med gy,  
sb blkyl-sb plty, frm-sl frm,  
sme free crm CHK frags,  
mnr MRLST lamn, tr  
dissm/imbd mic pyr cls,  
hi calc; MRLST (25%): dk  
gy-dk gyshbn, sl slty-sm  
tex, frm-sl hd, mod brit, tr  
CHK incl, mod calc

12900-13000 CHK  
(85%): gyshbn-med gy,  
mot lt gy, sb blkyl-tab,  
chky-sm tex, sl frm, sme  
free CHK, mnr mic pyr  
cls, mnr cal frac fl, hi calc;  
MRLST (15%): med gy-dk  
gy, sb blkyl-tab, vf lamn,  
frm-sl hd, mod fis, mod  
brit, mnr CHK incl, mod  
calc



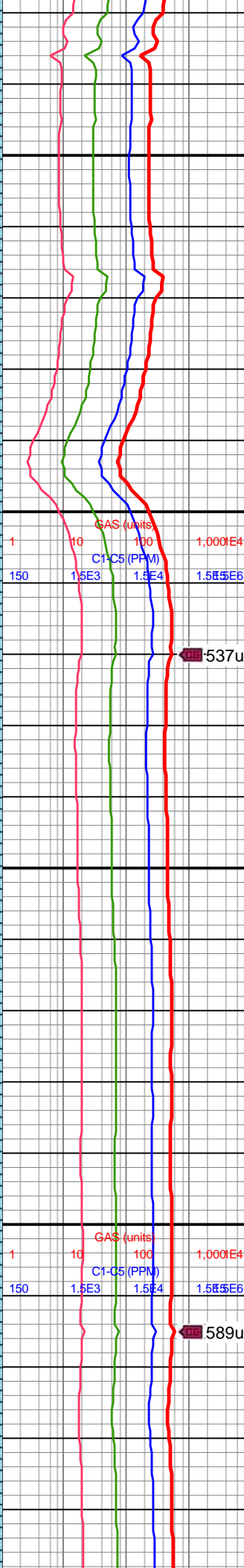
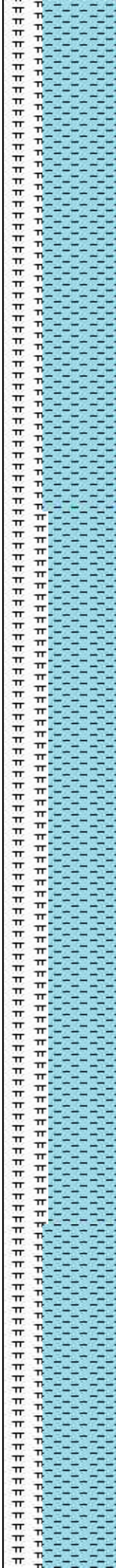


13,030  
13,040  
13,050  
13,060  
13,070  
13,080  
13,090  
13,100  
13,110  
13,120  
13,130  
13,140  
13,150  
13,160  
13,170  
13,180  
13,190  
13,200  
13,210  
13,220  
13,230  
13,240

MD: 13,065'  
TVD: 7,189.97'  
INC: 90.75°  
AZM: 2.12°  
VS: 5,250.5'

MD: 13,159'  
TVD: 7,188.63'  
INC: 90.88°  
AZM: 1.15°  
VS: 5,340.96'

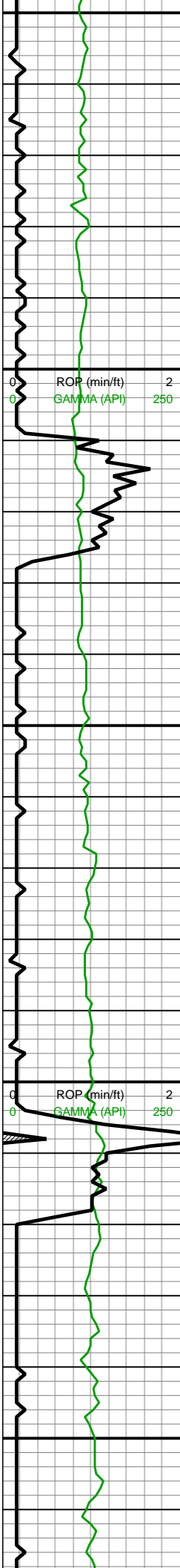
WOB: 28.9klbs  
RPM: 70  
SPM: 176  
SPP: 5,250psi



13000-13100 CHK  
(65%): gyshbn, mot med  
gy, sb tab-sb plty, mod  
fis, frm-sl frm, sme  
MRLST lamn, tr diss  
pyrc cls, hi calc; MRLST  
(35%): dk gy, dk gyshbn,  
mod brit, frm-sl hd, sl  
silty-sm tex, tr CHK incl,  
mod calc

13100-13200 CHK  
(60%): gyshbn-med gy,  
mot crm, sm chky tex,  
frm-sft, sb blkyl-sb plty,  
mod fis, tr imbd/dissm  
mic pyr, hi calc, mnr  
MRLST lamn; MRLST  
(40%): dk gyshbn-dk gy,  
brit, tab-sb blkyl, frm-sl  
hd, mod calc, tr CHK incl





MD: 13,254'  
TVD: 7,186.99'  
INC: 91.1°  
AZM: 0.8°  
VS: 5,432.68'

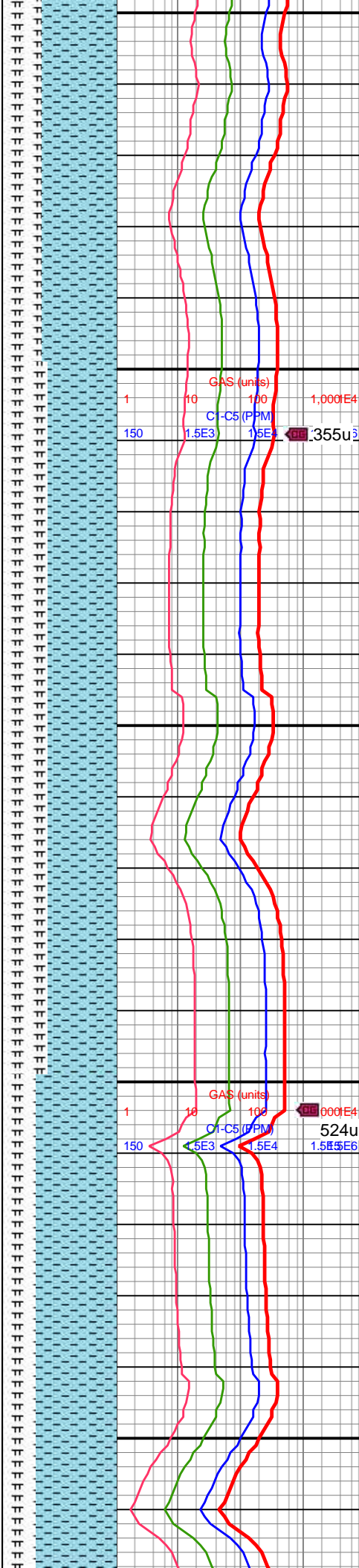
MW IN: 10.1+  
VIS IN: 42  
MW OUT: 10.2  
VIS OUT: 41

MD: 13,348'  
TVD: 7,185.34'  
INC: 90.92°  
AZM: 3°  
VS: 5,523.01'

WOB: 28.7klbs  
RPM: 70  
SPM: 176  
SPP: 5,245psi

MW IN: 10.1+  
VIS IN: 43  
MW OUT: 10.1+  
VIS OUT: 41

MD: 13,443'  
TVD: 7,185.92'  
INC: 88.37°  
AZM: 1.77°  
VS: 5,614.09'



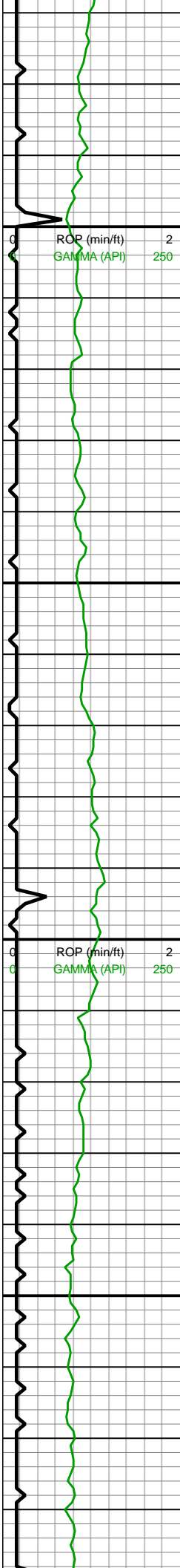
13200-13300 CHK  
(65%): gyshbn, med gy,  
mot crm, chky tex, sb  
blky-sb plty, frm-sft, sme  
free CHK cls, mntr  
MRLST lamn, tr diss  
mic pyr, hi calc; MRLST  
(35%): dk gyshbn-dk gy,  
brit, frm-sl hd, tab-sb  
blky, tr CHK incl, mod  
calc

13300-13400 CHK  
(60%): gyshbn, med gy,  
mot crm, chky tex, sb  
blky-sb plty, frm-sft, sme  
free CHK cls, mntr  
MRLST lamn, tr diss  
mic pyr, hi calc; MRLST  
(40%): dk gyshbn-dk gy,  
brit, frm-sl hd, tab-sb  
blky, tr CHK incl, mod  
calc

13400-13500 CHK







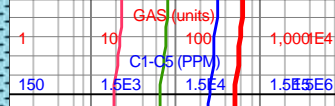
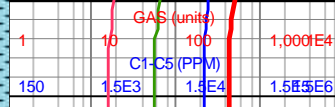
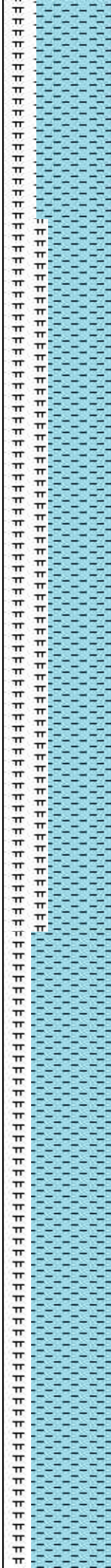
13,470  
13,480  
13,490  
13,500  
13,510  
13,520  
13,530  
13,540  
13,550  
13,560  
13,570  
13,580  
13,590  
13,600  
13,610  
13,620  
13,630  
13,640  
13,650  
13,660  
13,670  
13,680

MD: 13,537'  
TVD: 7,188.42'  
INC: 88.59°  
AZM: 1.42°  
VS: 5,704.55'

MW IN: 10.1+  
VIS IN: 43  
MW OUT: 10.1+  
VIS OUT: 41

WOB: 27.7klbs  
RPM: 70  
SPM: 176  
SPP: 5,271psi

MD: 13,631'  
TVD: 7,190.51'  
INC: 88.86°  
AZM: 0.89°  
VS: 5,795.21'



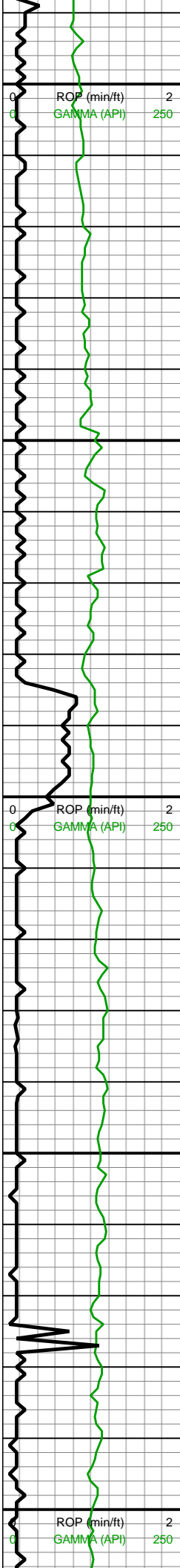
(70%): gyshbn, med gy,  
chky tex, sb blkly-sb plty,  
frm-sft, tr free CHK cls,  
mnr MRLST lamn, tr  
dissm mic pyr, hi calc;  
MRLST (30%): dk  
gyshbn-dk gy, brit, frm-sl  
hd, tab-sb blkly, tr CHK  
incl, mod calc

13500-13600 CHK  
(60%): gyshbn, med-dk  
gy, chky tex, sb blkly-sb  
plty, frm-sft, sme free  
CHK cls, mnr MRLST  
lamn, tr dissm mic pyr, hi  
calc; MRLST (40%): dk  
gyshbn-dk gy, brit, frm-sl  
hd, tab-sb blkly, tr CHK  
incl, mod calc

13600-13700 CHK  
(75%): gyshbn, med-dk  
gy, chky tex, sb blkly-sb  
plty, frm-sft, tr free CHK  
cls, mnr MRLST lamn, tr  
dissm mic pyr, tr pyr nod,







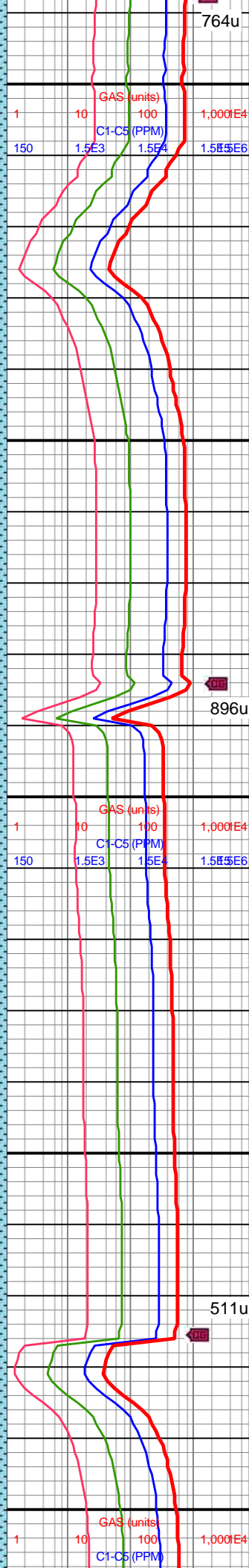
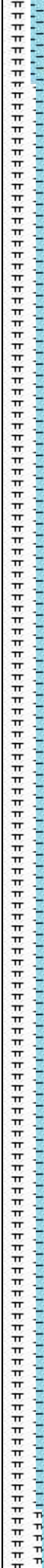
13,690  
13,700  
13,710  
13,720  
13,730  
13,740  
13,750  
13,760  
13,770  
13,780  
13,790  
13,800  
13,810  
13,820  
13,830  
13,840  
13,850  
13,860  
13,870  
13,880  
13,890  
13,900

MD: 13,726'  
TVD: 7,192.32'  
INC: 88.95°  
AZM: 359.66°  
VS: 5,887.21'

WOB: 58.5klbs  
RPM: 27  
SPM: 176  
SPP: 4,894psi

MD: 13,821'  
TVD: 7,193.41'  
INC: 89.74°  
AZM: 1.42°  
VS: 5,979.11'

MW IN: 10.1  
VIS IN: 43  
MW OUT: 10.1  
VIS OUT: 41

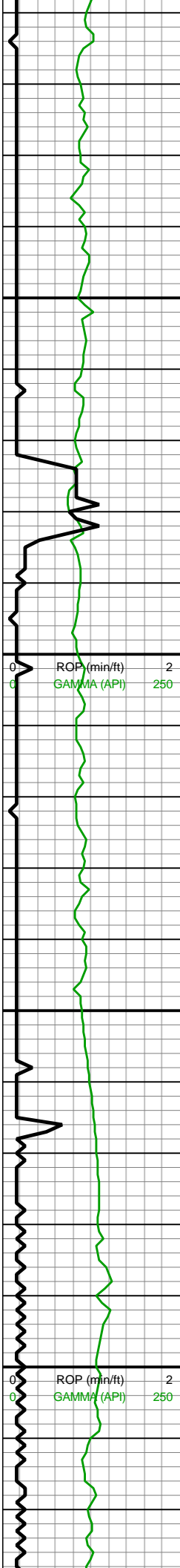


hi calc; MRLST (25%): dk  
gyshbn-dk gy, brit, frm-sl  
hd, tab-sb blkly, tr CHK  
incl, mod calc

13700-13800 CHK  
(70%): gyshbn, med gy,  
chky tex, sb blkly-sb plty,  
frm-sft, sme free CHK  
cls, mnrl MRLST lamn, tr  
dissm mic pyr, hi calc;  
MRLST (30%): dk  
gyshbn-dk gy, brit, frm-sl  
hd, tab-sb blkly, tr CHK  
incl, mod calc

13800-13900 CHK  
(70%): gyshbn, med gy,  
chky tex, sb blkly-sb plty,  
frm-sft, sme free CHK  
cls, mnrl MRLST lamn, tr  
dissm mic pyr, hi calc;  
MRLST (30%): dk  
gyshbn-dk gy, brit, frm-sl  
hd, tab-sb blkly, tr CHK  
incl, mod calc





MD: 13,916'  
TVD: 7,193.99'  
INC: 89.56°  
AZM: 0.89°  
VS: 6,070.76'

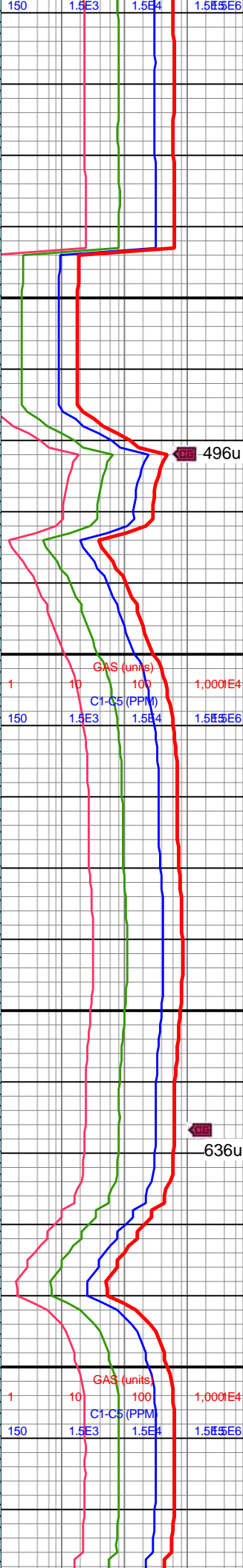
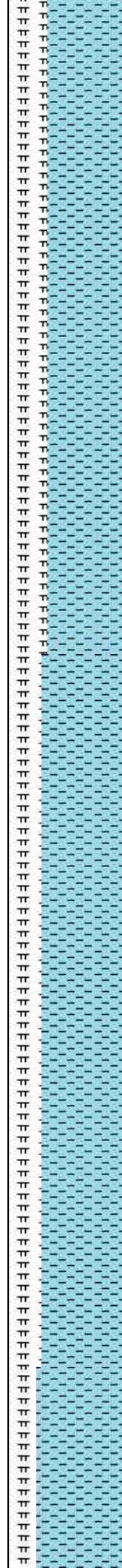
WOB: 23.2klbs  
RPM: 69  
SPM: 176  
SPP: 5,377psi

MD: 14,010'  
TVD: 7,193.99'  
INC: 90.44°  
AZM: 2.38°  
VS: 6,161.23'

MW IN: 10.1  
VIS IN: 44  
MW OUT: 10.1  
VIS OUT: 43

MD: 14,073'  
TVD: 7,193.32'  
INC: 90.79°  
AZM: 2.29°  
VS: 6,221.65'

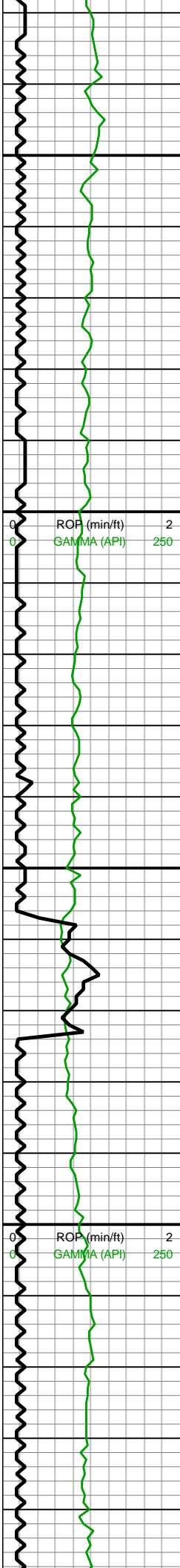
MD: 14,135'



13900-14000 CHK  
(65%): gyshbn, med gy,  
chky tex, sb blkly-sb plty,  
frm-sft, sme free CHK  
cls, mnR MRLST lamn, tr  
dissm mic pyr, hi calc;  
MRLST (35%): dk  
gyshbn-dk gy, brit, frm-sl  
hd, tab-sb blkly, tr CHK  
incl, mod calc

14000-14100 CHK  
(70%): gyshbn, med gy,  
mot crm, chky tex, sb  
blkly-sb plty, frm-sft, sme  
free CHK cls, mnR  
MRLST lamn, tr diss  
mic pyr, hi calc; MRLST  
(30%): dk gyshbn-dk gy,  
brit, frm-sl hd, tab-sb  
blkly, tr CHK incl, mod  
calc



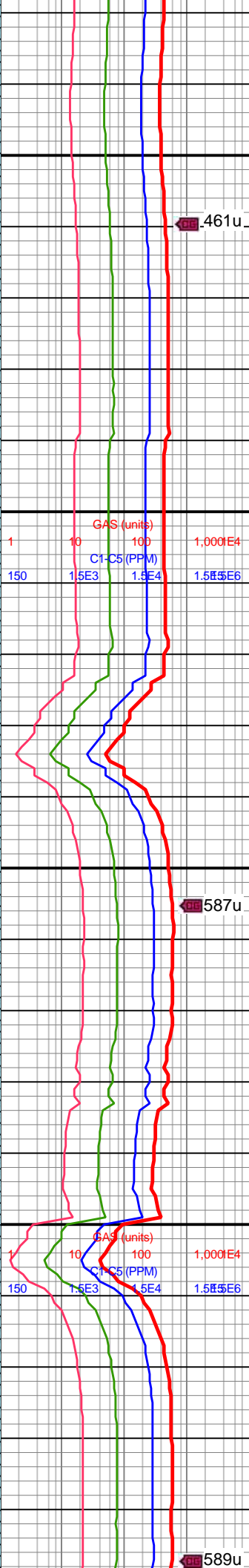


MD: 14,133'  
TVD: 7,192.31'  
INC: 91.06°  
AZM: 1.77°  
VS: 6,281.2'

WOB: 30klbs  
RPM: 70  
SPM: 177  
SPP: 5,237psi

MD: 14,230'  
TVD: 7,190.49'  
INC: 91.14°  
AZM: 1.24°  
VS: 6,372.67'

MD: 14,324'  
TVD: 7,188.83'  
INC: 90.88°  
AZM: 0.01°  
VS: 6,463.57'



1461u

1587u

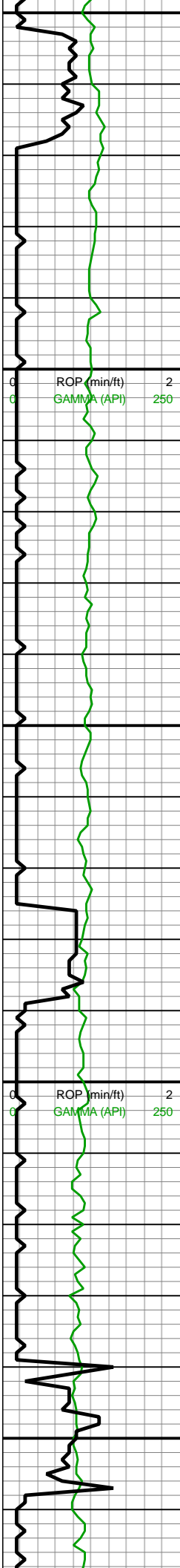
1589u

14100-14200 CHK  
(75%): gyshbn, med gy,  
mot crm, chky tex, sb  
blky-sb plty, frm-sft, sme  
free CHK cls, mn  
MRLST lamn, tr diss  
mic pyr, hi calc; MRLST  
(25%): dk gyshbn-dk gy,  
brit, frm-sl hd, tab-sb  
blky, com CHK incl, mod  
calc

14200-14300 CHK  
(70%): gyshbn, med gy,  
mot crm, chky tex, sb  
blky-sb plty, frm-sft, sme  
free CHK cls, mn  
MRLST lamn, tr diss  
mic pyr, hi calc; MRLST  
(30%): dk gyshbn-dk gy,  
brit, frm-sl hd, tab-sb  
blky, tr CHK incl, mod  
calc







14,350  
14,360  
14,370  
14,380  
14,390  
14,400  
14,410  
14,420  
14,430  
14,440  
14,450  
14,460  
14,470  
14,480  
14,490  
14,500  
14,510  
14,520  
14,530  
14,540  
14,550  
14,560

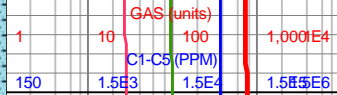
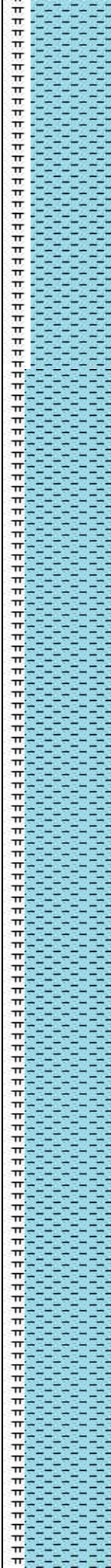
WOB: 11.7klbs  
RPM: 70  
SPM: 176  
SPP: 5,321psi

MD: 14,419'  
TVD: 7,187.59'  
INC: 90.62°  
AZM: 357.55°  
VS: 6,556.16'

MW IN: 10.2  
VIS IN: 44  
MW OUT: 10.1  
VIS OUT: 43

MD: 14,513'  
TVD: 7,186.1'  
INC: 91.19°  
AZM: 355.35°  
VS: 6,648.55'

MW IN: 10.1



14300-14400 CHK  
(75%): gyshbn, med gy,  
mot crm, chky tex, sb  
blky-sb plty, frm-sft, sme  
free CHK cls, mn  
MRLST lamn, tr pyr nod,  
hi calc; MRLST (25%): dk  
gyshbn-dk gy, brit, frm-sl  
hd, tab-sb blky, tr CHK  
incl, mod calc

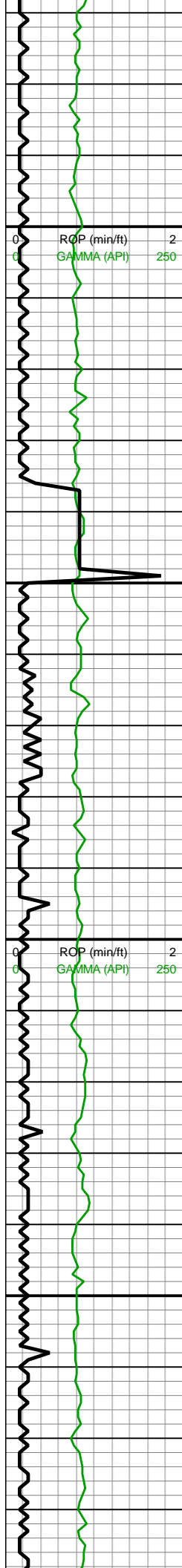
760u

14400-14500 CHK  
(80%): gyshbn, med gy,  
mot crm, chky tex, sb  
blky-sb plty, frm-sft, sme  
free CHK cls, mn  
MRLST lamn, tr pyr nod,  
hi calc; MRLST (20%): dk  
gyshbn-dk gy, brit, frm-sl  
hd, tab-sb blky, tr CHK  
incl, mod calc

681u







VIS IN: 44  
MW OUT: 10.1  
VIS OUT: 44

WOB: 26.3klbs  
RPM: 69  
SPM: 177  
SPP: 5,531psi

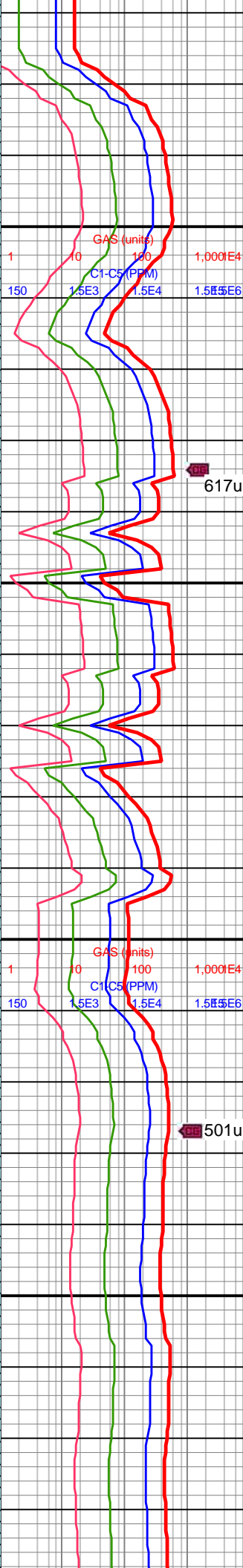
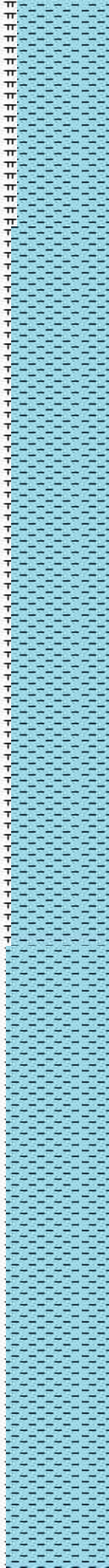
MD: 14,608'  
TVD: 7,184.86'  
INC: 90.31°  
AZM: 353.5°  
VS: 6,742.48'

MINDEPTH 06/15/2018

MW IN: 10.1  
VIS IN: 45  
MW OUT: 10.2  
VIS OUT: 44

MD: 14,702'  
TVD: 7,184.68'  
INC: 89.91°  
AZM: 350.87°  
VS: 6,835.91'

MD: 14,797'  
TVD: 7,184.1'

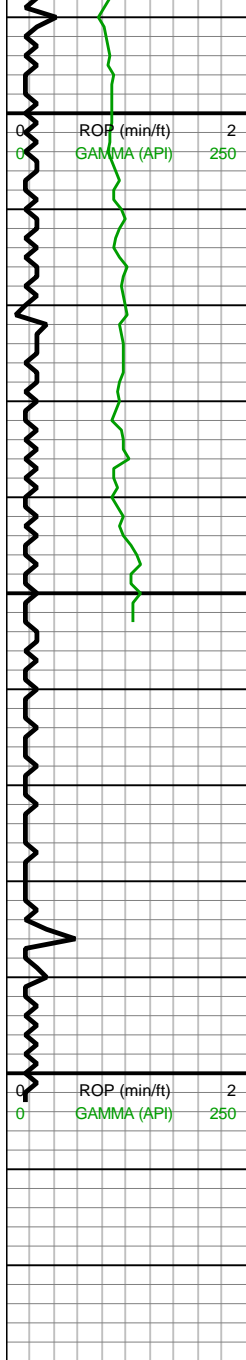


14500-14600 CHK  
(80%): gyshbn, med gy, mot crm, chky tex, sb blkly-sb plty, frm-sft, sme free CHK cls, mnrl MRLST lamn, tr pyr nod, hi calc; MRLST (20%): dk gyshbn-dk gy, brit, frm-sl hd, tab-sb blkly, tr CHK incl, mod calc

14600-14700 CHK  
(85%): gyshbn, med gy, tr mot crm, chky tex, sb blkly-sb plty, frm-sft, occ free CHK cls, mnrl MRLST lamn, tr pp pyr, hi calc; MRLST (15%): dk gyshbn-dk gy, brit, frm-sl hd, tab-sb blkly, tr CHK incl, mod calc

14700-14800 CHK  
(90%): gyshbn, med gy, tr mot crm, chky tex, sb blkly-sb plty, frm-sft, sme free CHK cls, mnrl MRLST lamn, tr pyr nod/ pyr nod, hi calc; MRLST





14,790  
INC: 90.79°  
AZM: 351.57°  
VS: 6,930.49'

14,800  
WOB: 30.4klbs  
RPM: 69  
SPM: 177  
SPP: 5,570psi

14,810

14,820  
MW IN: 10.2  
VIS IN: 43  
MW OUT: 10.2  
VIS OUT: 44

14,830

14,840  
MD: 14,848'  
TVD: 7,183.18'  
INC: 91.27°  
AZM: 351.66°  
VS: 6,981.23'

14,850

14,860

14,870

14,880

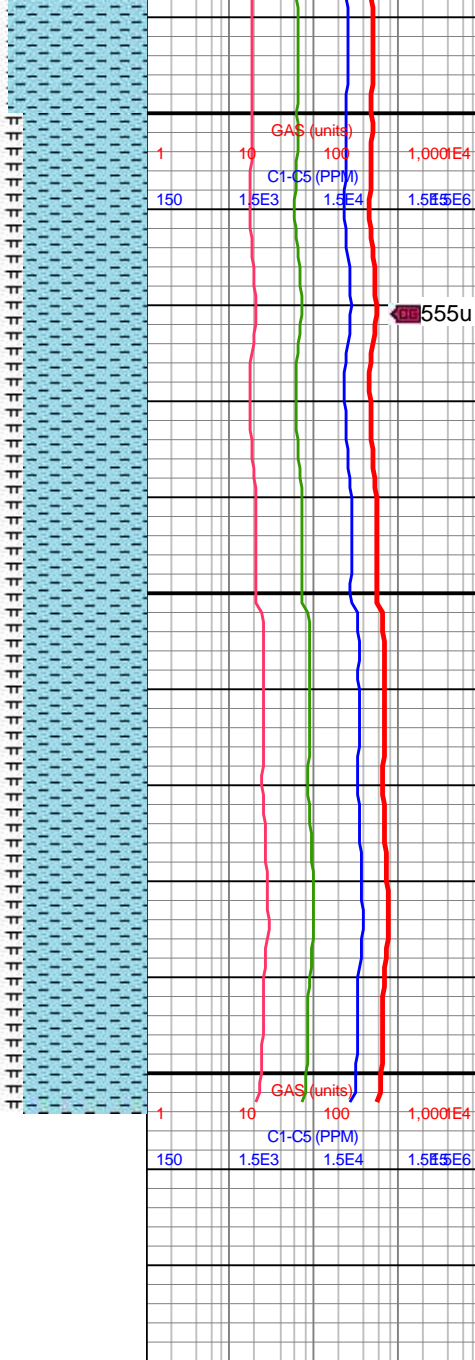
14,890  
**Projection to Bit:**  
MD: 14,904'  
TVD: 7,181.94'  
INC: 91.27°  
AZM: 351.66°  
VS: 7,036.93'

14,900

14,910  
**Total Depth of 14,904' MD reached on 06/15/2018 @ 01:36 MST**

14,920

14,930



(10%): dk gyshbn-dk gy, brit, frm-sl hd, tab-sb blk, tr CHK incl, mod calc

14800-14900 CHK (80%): gyshbn, med gy, mot crm, chky tex, sb blk, sb plty, frm-sft, sme free CHK cls, mnrl MRLST lamn, tr pyr nod, hi calc; MRLST (20%): dk gyshbn-dk gy, brit, frm-sl hd, tab-sb blk, tr CHK incl, mod calc

