



Scale: 5" / 100'  
Measured Depth Log

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

**Location** Sec. 9 T2N R66W

**State** Colorado

**County** Weld

**Country** USA

**Rig Number** Ensign 153

**API Number** 05123467460000

**AFE #** 16191027

**Geographic Region** Rockies

**Field** Wattenberg

**Spud Date** 8/8/2018

**Drilling Completed** 8/11/2018

**Surface Coordinates** Lat/Long: 40.154464/-104.777875

SHL: Sec: 9 Twp: 2N 66W  
Footage: 1952 FSL 1418 FEL

**Bottom Hole Coordinates** Proposed BHL:  
Sec: 4 Twp: 2N 66W  
Footages: 460 FNL 1837 FWL

**Ground Elevation** 4,917'

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

**Logged Interval** 6,500' MD      **To** 14,714' MD

**Total Depth** 14,714' MD

**Formation** Niobrara C Chalk

**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:** Heather Davis / Mark Gross

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

**Equipment:** ML-526

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

**Job #:** 1458RK1808

**Start Date** 8/8/2018

**Release Date:** 8/12/2018

## 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

### F FOSSIL

GASTROPOD
OOLITE
OSTRACOD
PELECYPOD
PELLET
PISOLITE
PLANT REMAINS
PLANT SPORES
SCAPHOPOD
STROMATOPOROID

### Minerals

ARGILLACEOUS
ARGILLITE GRAIN
BENTONITE
BITUMENOUS SUBSTANCE
BRECCIA FRAGMENTS
CALCAREOUS
CARBONACEOUS FLAKES
CHTDK
CHTLT
COAL - THIN BEDS
DOLOMITIC
FELDSPAR
FERRUGINOUS PELLET
SILICEOUS
SILTY

GLAUCONITE
GYPSIFEROUS
HEAVY MINERAL
KAOLIN
MARLSTONE
MINERAL CRYSTALS
NODULES
PHOSPHATE PELLETS
PYRITE
SALT CAST
SANDY
SILICEOUS
SILTY

### 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

FORMATION

FORAMINIFERA

ANHYDRITIC

FERRUGINOUS FEELE

FERRUGINOUS

GIETT

TUFFACEOUS

SLISTONE STRINGER

## Other Symbols

### Oil Show

DEAD

EVEN

QUESTIONABLE

SPOTTED STAINING

### Porosity

E EARTHY

F FENESTRAL

F FRACTURE

X INTERCRYSTALLINE

Q INTEROOLITIC

M MOLDIC

O ORGANIC

P PINPOINT

V VUGGY

### Engineering

BIT

CASING

CONNECTION (LEFT)

CONNECTION (RIGHT)

CONNECTION GAS

CORE - LOST

CORE - RECOVERED

DST INTERVAL

FAULT

FORMATION TOP

GAS SHOW

MNDEPTH 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

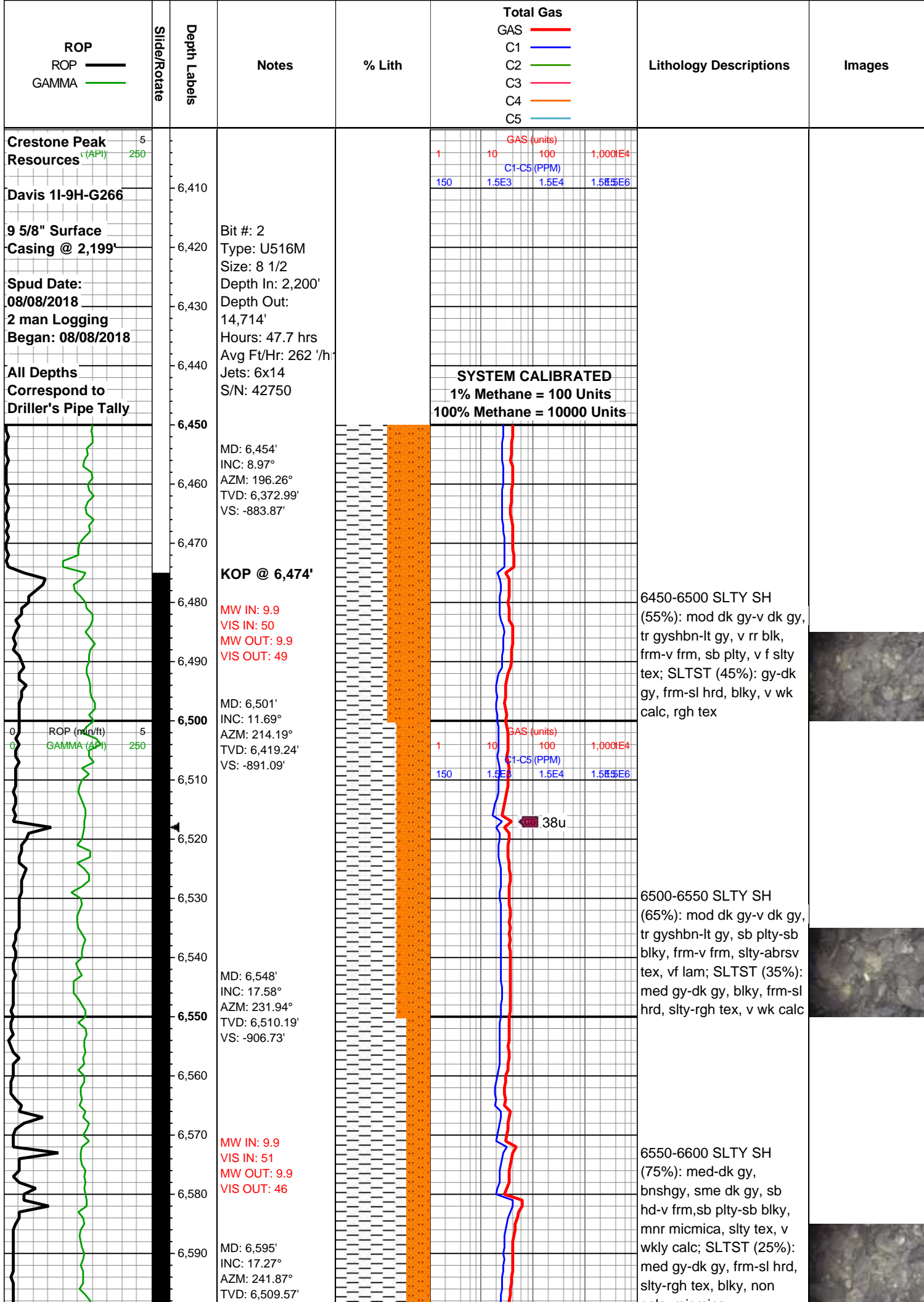
WS WACKESTONE

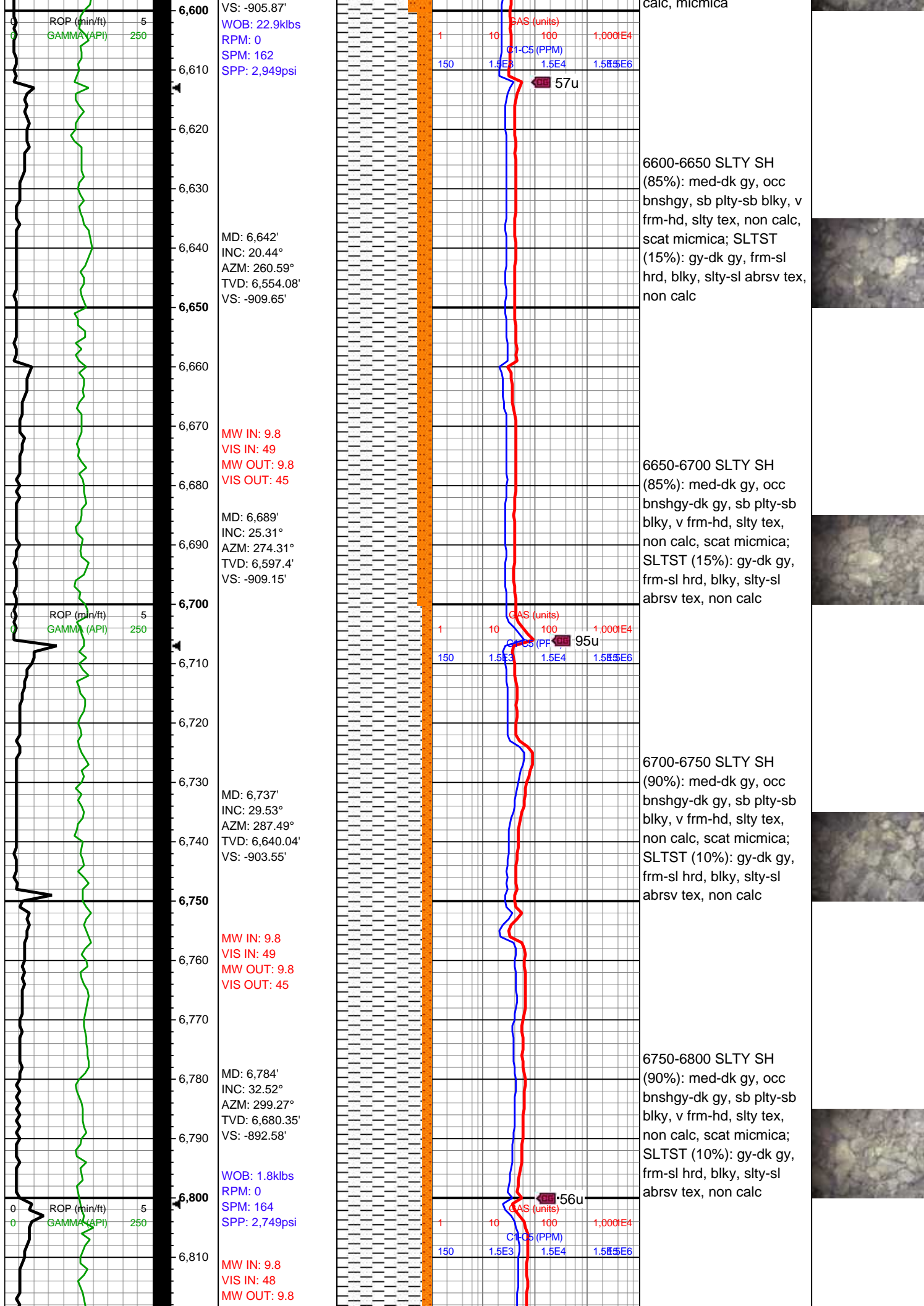
### Sorting

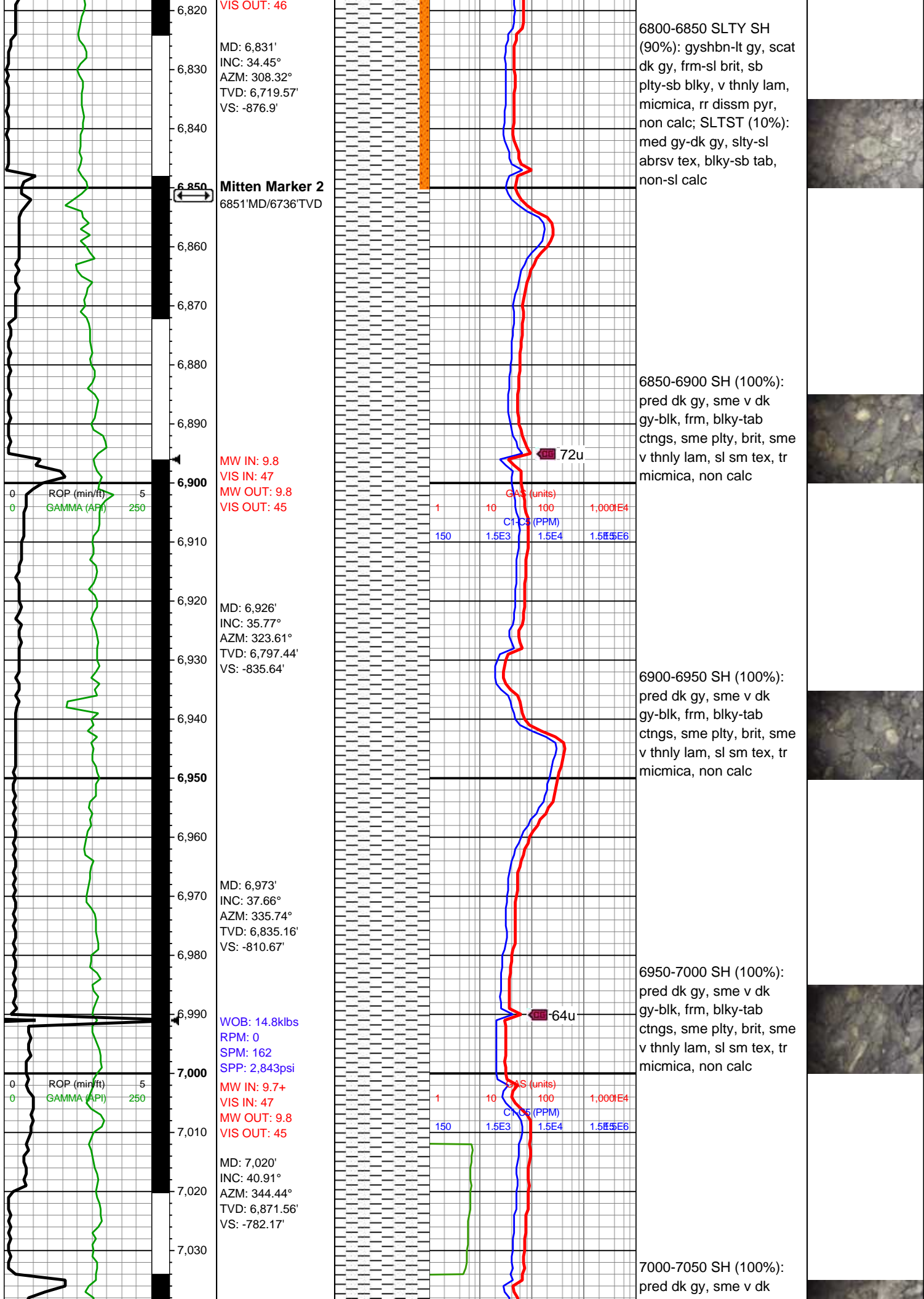
M MODERATE

P POOR

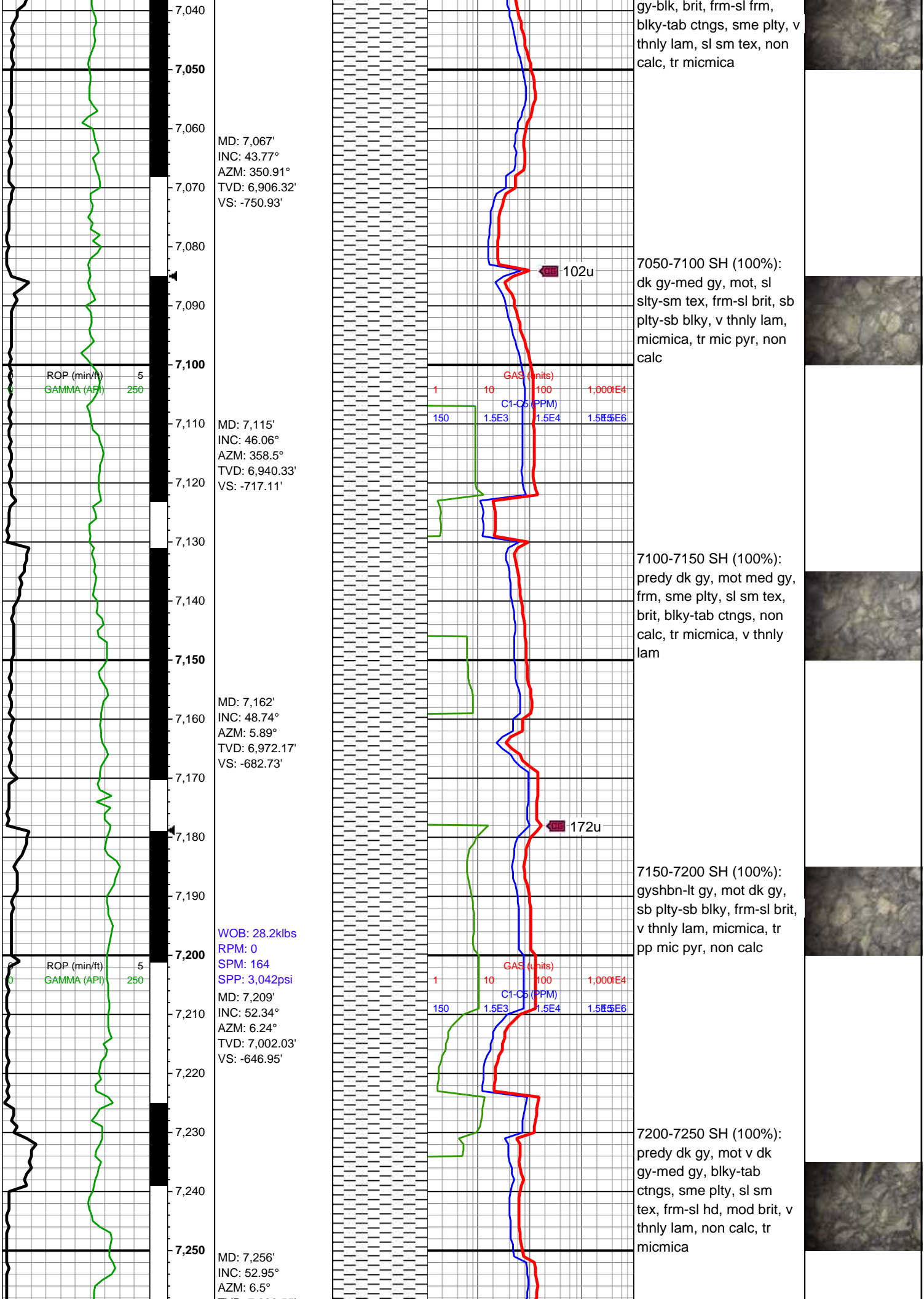
W WELL

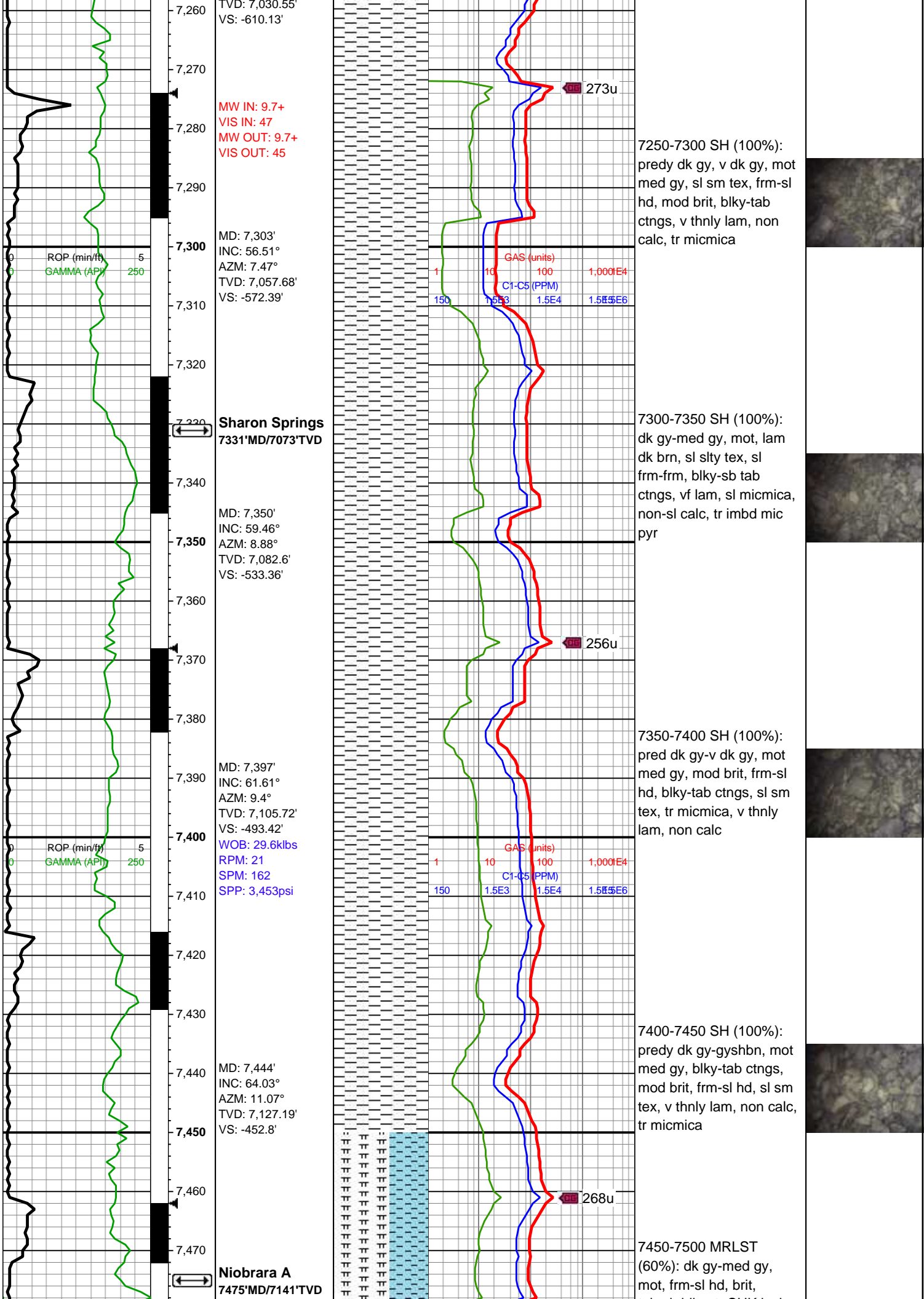




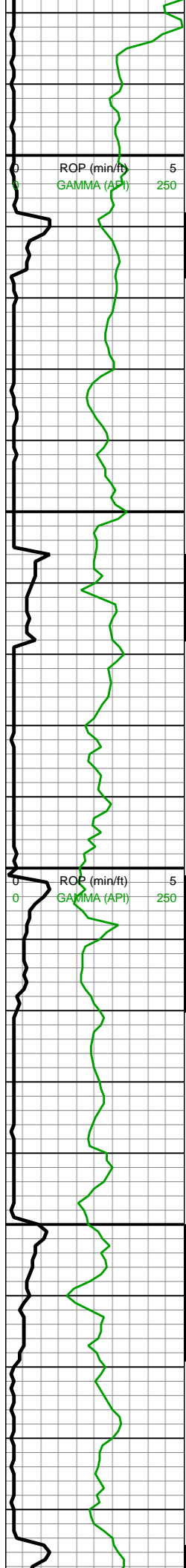












MD: 7,492'  
INC: 65.57°  
AZM: 10.99°  
TVD: 7,147.62'  
VS: -410.74'

MW IN: 9.8  
VIS IN: 47  
MW OUT: 9.7+  
VIS OUT: 45

MD: 7,539'  
INC: 66.58°  
AZM: 10.9°  
TVD: 7,166.68'  
VS: -369.12'

MD: 7,586'  
INC: 68.07°  
AZM: 10.9°  
TVD: 7,184.8'  
VS: -327.1'

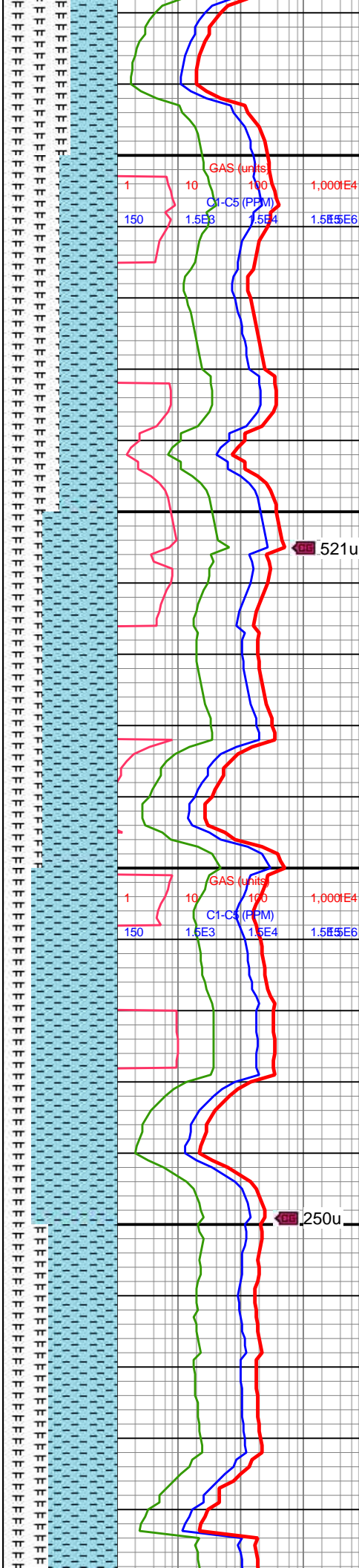
**Niobrara B**  
7591' MD/7187' TVD

WOB: 34.4klbs  
RPM: 20  
SPM: 163  
SPP: 3,596psi

MW IN: 9.7+  
VIS IN: 47  
MW OUT: 9.8  
VIS OUT: 45

MD: 7,633'  
INC: 69.35°  
AZM: 9.23°  
TVD: 7,201.87'  
VS: -284.51'

MD: 7,680'  
INC: 71.41°  
AZM: 7.12°  
TVD: 7,217.65'  
VS: -241.15'



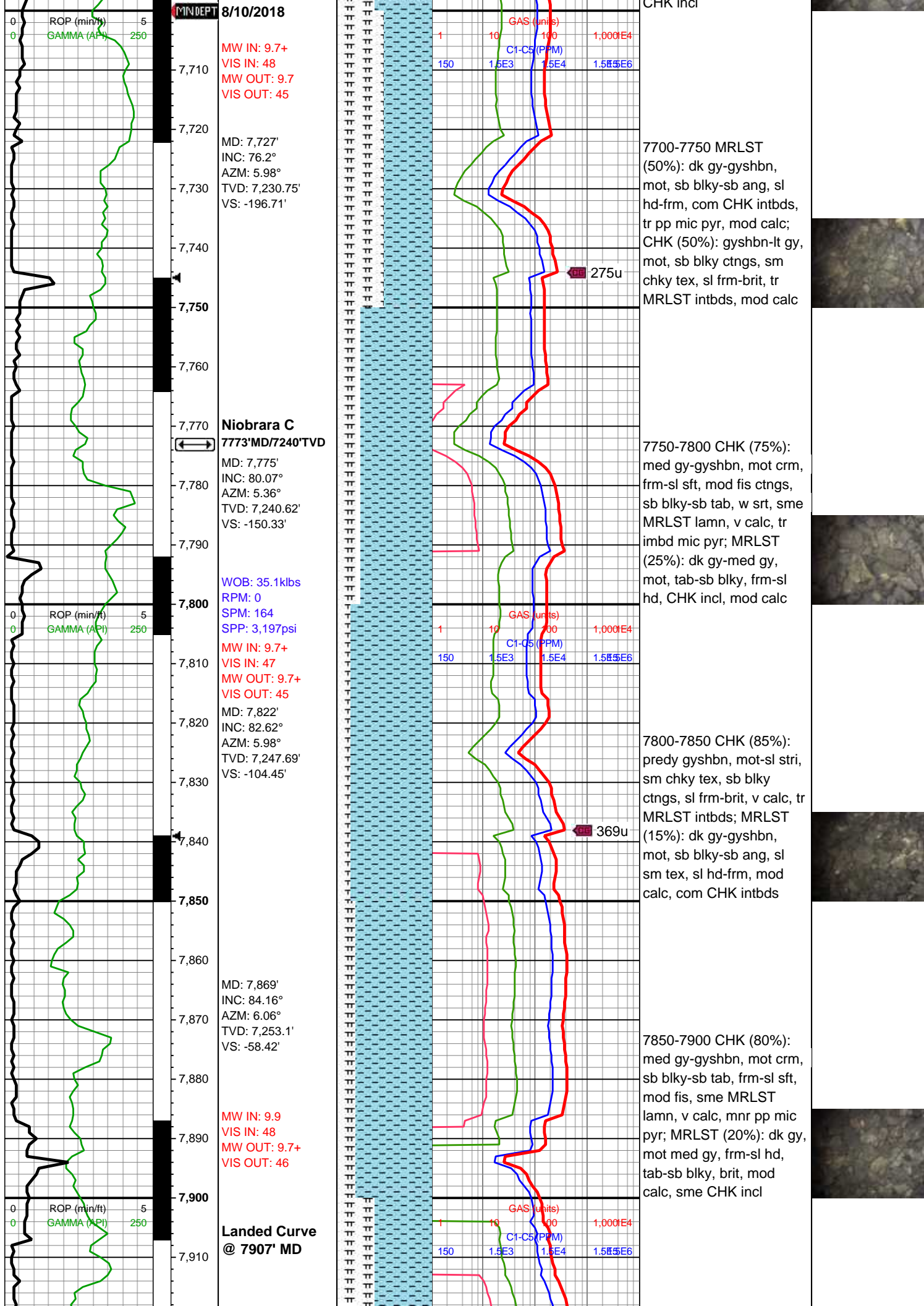
tab-sb blkly, tr CHK incl,  
mod calc; CHK (40%):  
gyshbn-med gy, offwht,  
mot crm, sb blkly-sb tab,  
frm-sl sft, sme MRLST  
lamn, tr diss mic pyr, hi  
calc

7500-7550 MRLST  
(50%): dk gy-dk gyshbn,  
mot, sb blkly-sb ang  
ctngs, sl hd-frm, tr intbd  
CHK, mod calc; CHK  
(50%): predy gyshbn,  
mot-sl stri, sl frm-brit, sb  
blkly ctngs, sm chky tex, v  
calc, tr MRLST incl

7550-7600 CHK (65%):  
med gy-gyshbn, mot crm,  
sb blkly-sb tab, frm-sl sft,  
mod fis ctngs, v calc,  
sme MRLST lamn;  
MRLST (35%): dk gy, mot  
med gy, tab-sb blkly,  
frm-sl hd, brit, tr CHK incl,  
mod calc

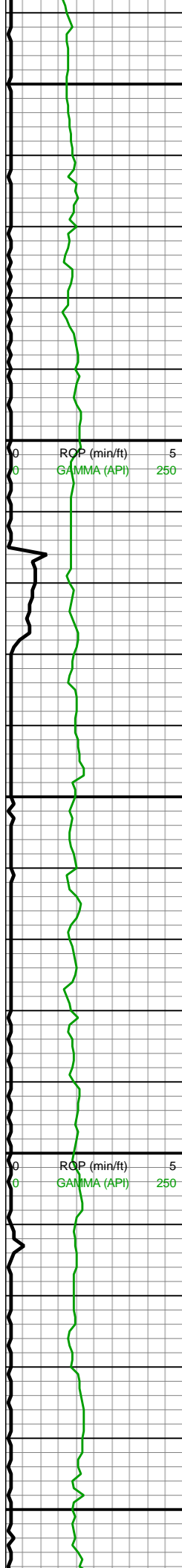
7600-7650 CHK (75%):  
predy gyshbn-lt gy, mot-sl  
stri, sl frm-brit, sm chky  
tex, sb blkly ctngs, tr  
MRLST intbds, v calc;  
MRLST (25%): dk gy-med  
gy, mot, sb blkly-sb ang  
ctngs, sl hd-frm, tr intbd  
CHK, mod calc

7650-7700 CHK (60%):  
gyshbn-lt gy, mot crm, sb  
blkly-sb tab, frm-sl sft,  
mod fis ctngs, sme  
MRLST lamn, v calc;  
MRLST (40%): dk gy-med  
gy, mot, frm-sl hd, tab-sb  
blkly, brit, mod calc, tr  
CHK incl









8,140  
8,150  
8,160  
8,170  
8,180  
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

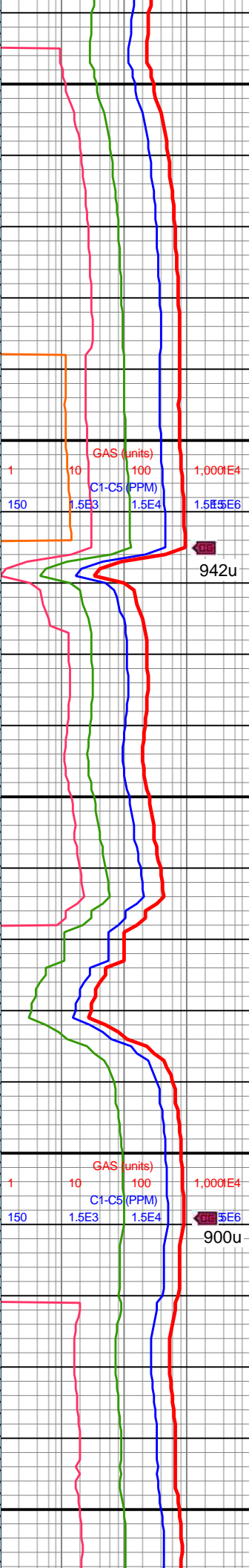
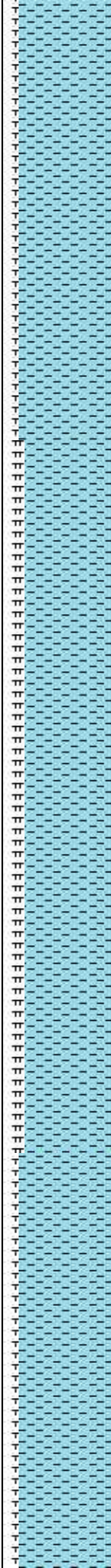
MD: 8,152'  
INC: 88.59°  
AZM: 6.06°  
TVD: 7,270.32'  
VS: 219.62'

WOB: 36.4klbs  
RPM: 70  
SPM: 216  
SPP: 5,443psi

MD: 8,246'  
INC: 90.66°  
AZM: 6.5°  
TVD: 7,270.94'  
VS: 312.27'

MW IN: 9.8+  
VIS IN: 50  
MW OUT: 9.7+  
VIS OUT: 45

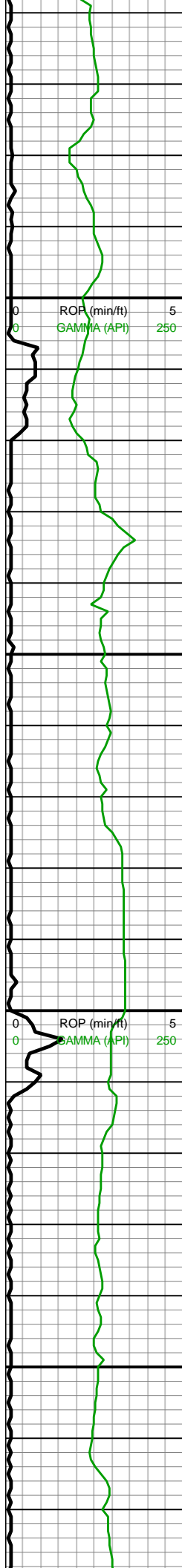
MD: 8,341'  
INC: 90.26°  
AZM: 6.77°  
TVD: 7,270.18'  
VS: 405.82'



8100-8200 CHK (85%):  
med gy-gyshbn, mot crm,  
mod fis, sb blk-y-sb tab,  
frm-sl sft, mnr free CHK,  
sme MRLST lamn, v calc;  
MRLST (15%): dk gy-med  
gy, mot, tab-sb blk-y,  
frm-sl hd, sme CHK  
incl/intbd lamn, mod-hi  
calc

8200-8300 CHK (80%):  
med gy-gyshbn, mot crm,  
mod fis, sb blk-y-sb tab,  
frm-sl sft, mnr free CHK,  
sme MRLST lamn, v calc;  
MRLST (20%): dk gy-med  
gy, mot, tab-sb blk-y,  
frm-sl hd, sme CHK  
incl/intbd lamn, mod-hi  
calc



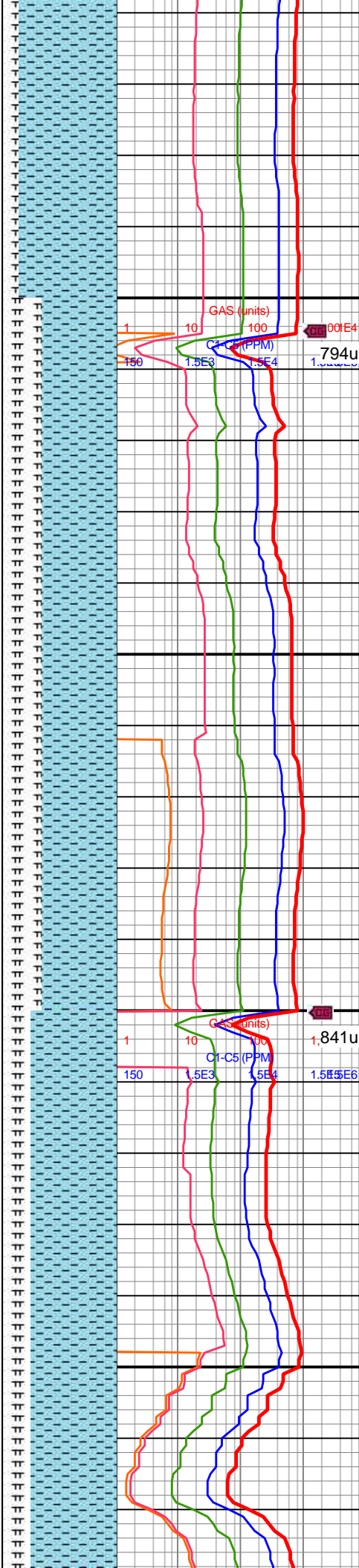


WOB: 36klbs  
RPM: 70  
SPM: 217  
SPP: 5,528psi

MD: 8,435'  
INC: 89.25°  
AZM: 4.57°  
TVD: 7,270.58'  
VS: 498.63'

MW IN: 9.9  
VIS IN: 52  
MW OUT: 9.9  
VIS OUT: 48

MD: 8,530'  
INC: 90°  
AZM: 3.07°  
TVD: 7,271.2'  
VS: 592.87'

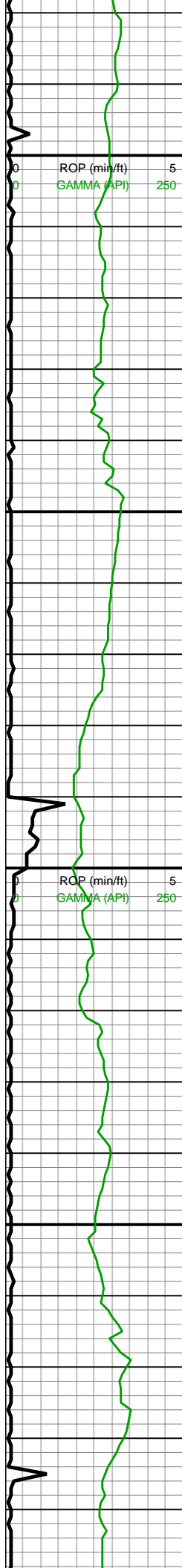


8300-8400 CHK (85%):  
med gy-gyshbn, mot crm,  
mod fis, sb blk-y-sb tab,  
frm-sl sft, mnr free CHK,  
sme MRLST lamn, v calc;  
MRLST (15%): dk gy-med  
gy, mot, tab-sb blk-y,  
frm-sl hd, sme CHK  
incl/intbd lamn, mod-hi  
calc

8400-8500 CHK (65%):  
med gy-gyshbn, mot crm,  
mod fis, sb blk-y-sb tab,  
frm-sl sft, tr free CHK,  
sme MRLST lamn, v calc;  
MRLST (35%): dk gy-med  
gy, mot, tab-sb blk-y,  
frm-sl hd, sme CHK  
incl/intbd lamn, mod-hi  
calc, tr imbd pyr, tr pyr  
nod

8500-8600 CHK (75%):  
med gy-gyshbn, mot crm,  
mod fis, sb blk-y-sb tab,  
frm-sl sft, tr free CHK,  
sme MRLST lamn, v calc;  
MRLST (25%): dk gy-med  
gy, mot, tab-sb blk-y,  
frm-sl hd, sme CHK  
incl/intbd lamn, mod-hi  
calc





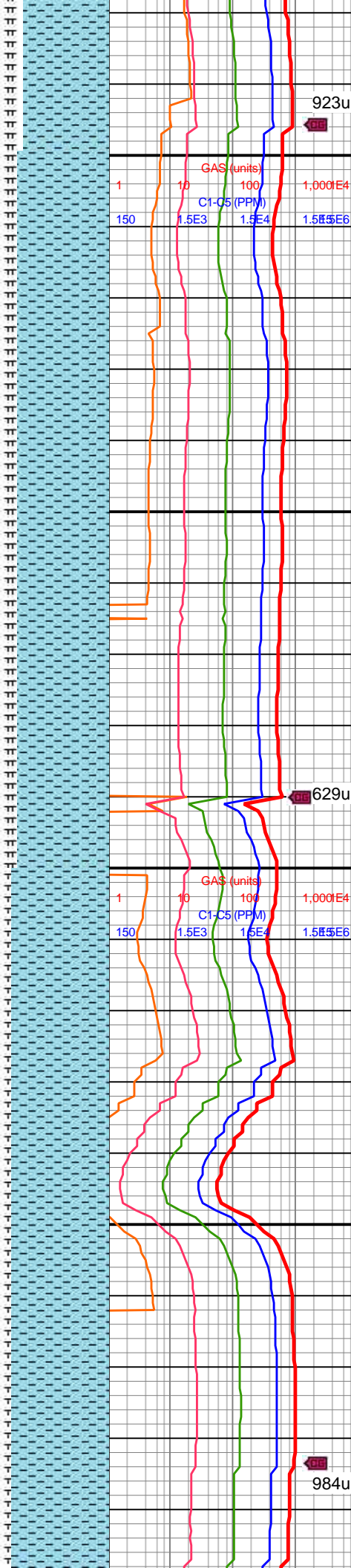
WOB: 37.6klbs  
RPM: 70  
SPM: 214  
SPP: 5,471psi

MD: 8,625'  
INC: 90°  
AZM: 2.81°  
TVD: 7,271.2'  
VS: 687.29'

MW IN: 9.9  
VIS IN: 51  
MW OUT: 9.9  
VIS OUT: 48

MD: 8,719'  
INC: 90.04°  
AZM: 0.7°  
TVD: 7,271.17'  
VS: 780.9'

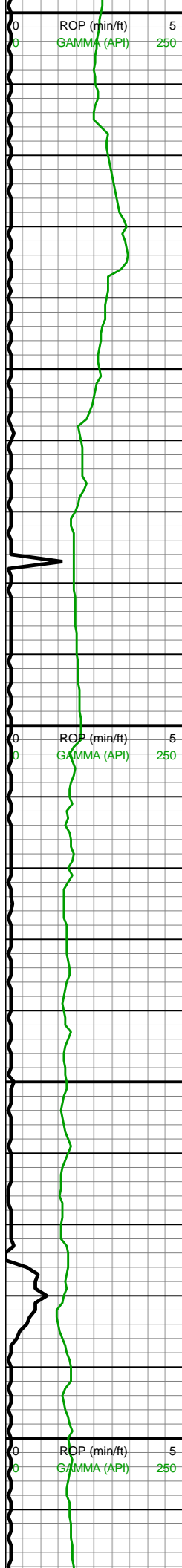
WOB: 35.7klbs



sme MRLST lamn, v calc;  
MRLST (25%): dk gy-med  
gy, mot, tab-sb blkly,  
frm-sl hd, sme CHK  
incl/intbd lamn, mod-hi  
calc, tr imbd pyr, tr pyr  
nod

8600-8700 CHK (80%):  
med gy-gyshbn, mot crm,  
mod fis, sb blkly-sb tab,  
frm-sl sft, tr free CHK, v  
calc; MRLST (20%): dk  
gy-med gy, mot, tab-sb  
blkly, frm-sl hd, tr CHK  
incl/intbd lamn, mod-hi  
calc, tr imbd pyr, rr pyr  
nod

8700-8800 CHK (85%):  
predy gyshbn, mot-sl stri,  
sm chky tex, sb blkly  
ctngs, sl frm-brit, v calc, tr  
MRLST intbds; MRLST  
(15%): dk gy-gyshbn,  
mot, sb blkly-sb ang, sl  
sm tex, sl hd-frm, mod  
calc, com CHK intbds



8,800  
8,810  
8,820  
8,830  
8,840  
8,850  
8,860  
8,870  
8,880  
8,890  
8,900  
8,910  
8,920  
8,930  
8,940  
8,950  
8,960  
8,970  
8,980  
8,990  
9,000  
9,010

RPM: 70  
SPM: 214  
SPP: 5,518psi

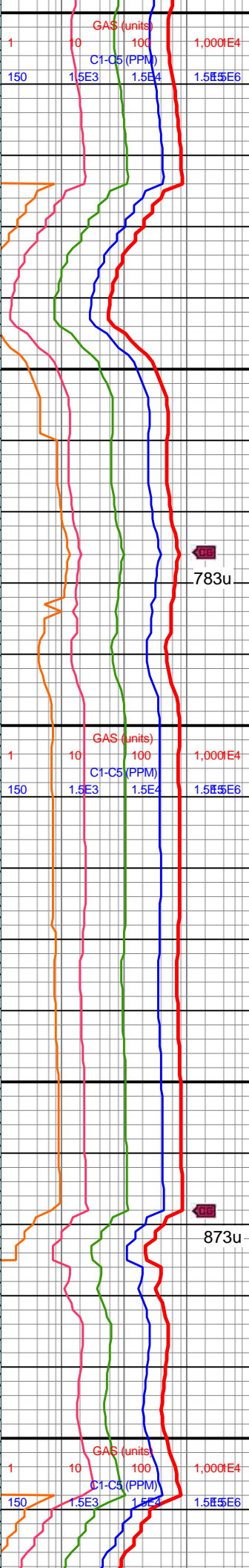
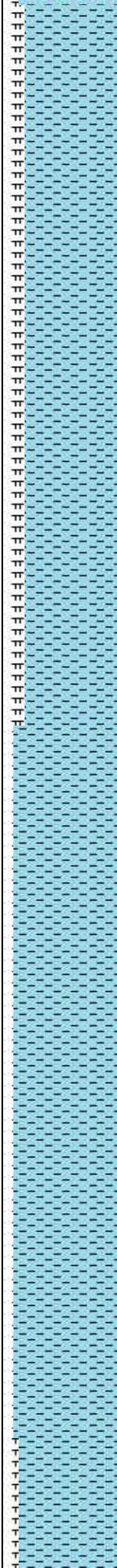
MD: 8,813'  
INC: 89.69°  
AZM: 0.88°  
TVD: 7,271.39'  
VS: 874.65'

MD: 8,907'  
INC: 89.52°  
AZM: 0.88°  
TVD: 7,272.04'  
VS: 968.38'

MW IN: 9.9  
VIS IN: 50  
MW OUT: 9.9  
VIS OUT: 47

WOB: 36.2klbs  
RPM: 69  
SPM: 214  
SPP: 5,615psi

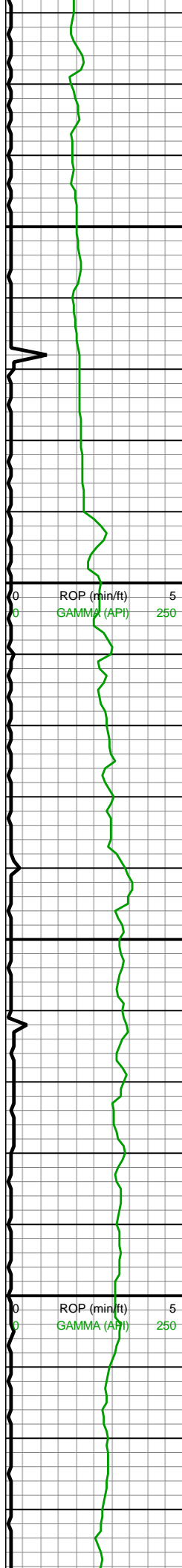
MD: 9,002'  
INC: 90.88°  
AZM: 359.74°  
TVD: 7,271.7'  
VS: 1,063.18'



8800-8900 CHK (80%):  
med gy-gyshbn, mot crm,  
sb blkly-sb tab, frm-sl sft,  
mod fis, sme MRLST  
lamn, v calc, mnr pp mic  
pyr; MRLST (20%): dk gy,  
mot med gy, frm-sl hd,  
tab-sb blkly, brit, mod  
calc, sme CHK incl

8900-9000 CHK (90%):  
med gy-gyshbn, mot crm,  
sb blkly-sb tab, frm-sl sft,  
mod fis, sme MRLST  
lamn, v calc, mnr pp mic  
pyr; MRLST (10%): dk gy,  
mot med gy, frm-sl hd,  
tab-sb blkly, brit, mod  
calc, sme CHK incl



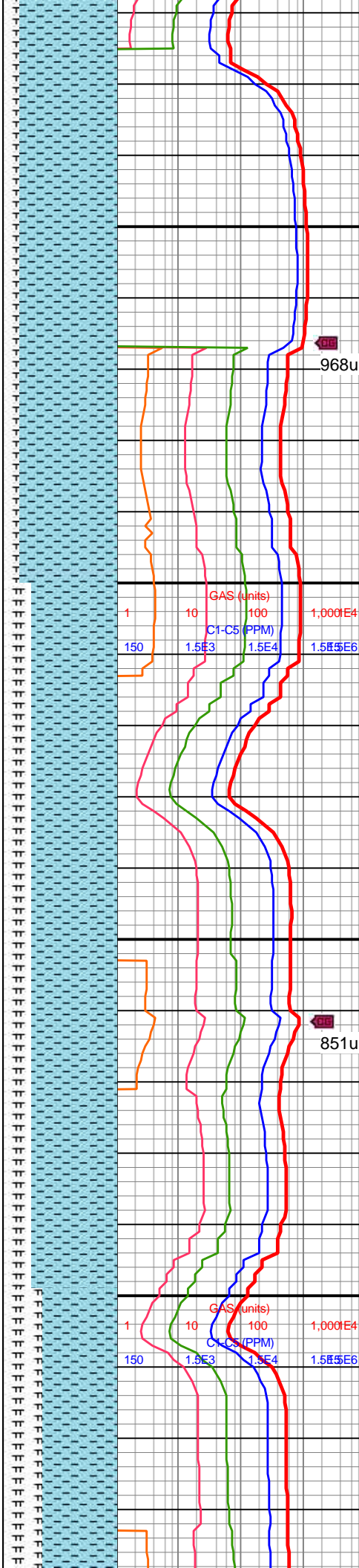


9,020  
9,030  
9,040  
9,050  
9,060  
9,070  
9,080  
9,090  
9,100  
9,110  
9,120  
9,130  
9,140  
9,150  
9,160  
9,170  
9,180  
9,190  
9,200  
9,210  
9,220  
9,230

MD: 9,097'  
INC: 90.88°  
AZM: 359.47°  
TVD: 7,270.25'  
VS: 1,158.03'

MD: 9,191'  
INC: 90.79°  
AZM: 359.38°  
TVD: 7,268.88'  
VS: 1,251.91'

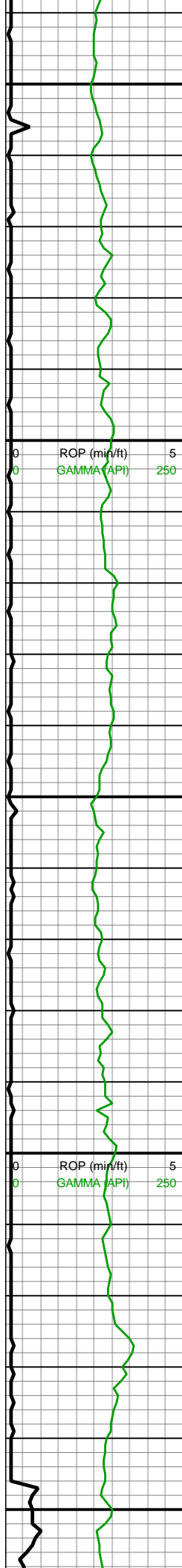
WOB: 36.3klbs  
RPM: 70  
SPM: 210  
SPP: 5,455psi



9000-9100 CHK (85%):  
med gy-gyshbn, mot crm,  
sb blk-y-sb tab, frm-sl sft,  
mod fis, sme MRLST  
lamn, v calc, mn pp mic  
pyr; MRLST (15%): dk gy,  
mot med gy, frm-sl hd,  
tab-sb blk-y, brit, mod  
calc, sme CHK incl

9100-9200CHK (75%):  
med gy-gyshbn, mot crm,  
mod fis, sb blk-y-sb tab,  
frm-sl sft, tr free CHK,  
sme MRLST lamn, v calc;  
MRLST (25%): dk gy-med  
gy, mot, tab-sb blk-y,  
frm-sl hd, sme CHK  
incl/intbd lamn, mod-hi  
calc, tr imbd pyr, tr pyr  
nod





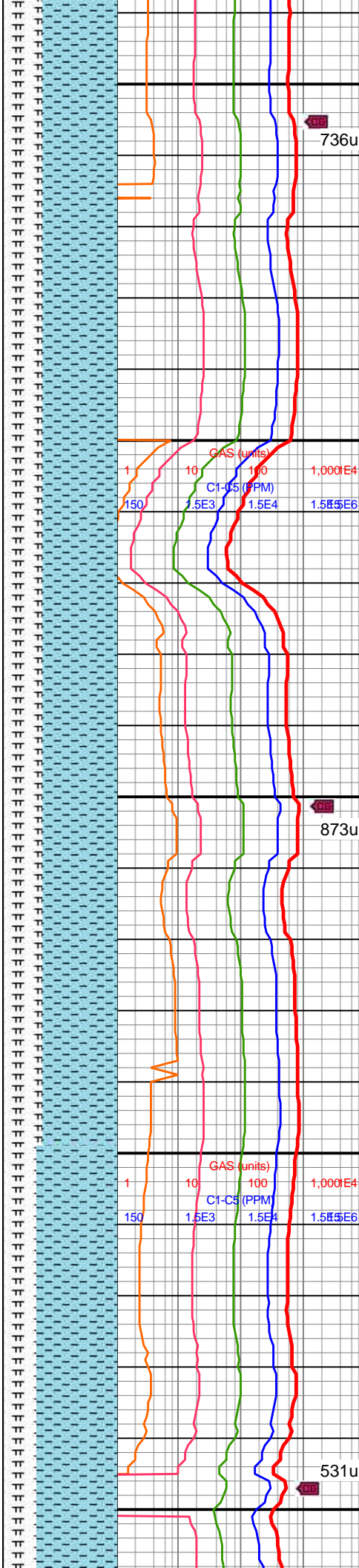
9,240  
9,250  
9,260  
9,270  
9,280  
9,290  
9,300  
9,310  
9,320  
9,330  
9,340  
9,350  
9,360  
9,370  
9,380  
9,390  
9,400  
9,410  
9,420  
9,430  
9,440  
9,450

MD: 9,286'  
INC: 90.62°  
AZM: 359.03°  
TVD: 7,267.71'  
VS: 1,346.8'

MW IN: 9.8+  
VIS IN: 49  
MW OUT: 9.9  
VIS OUT: 46

MD: 9,380'  
INC: 90.79°  
AZM: 358.5°  
TVD: 7,266.55'  
VS: 1,440.73'

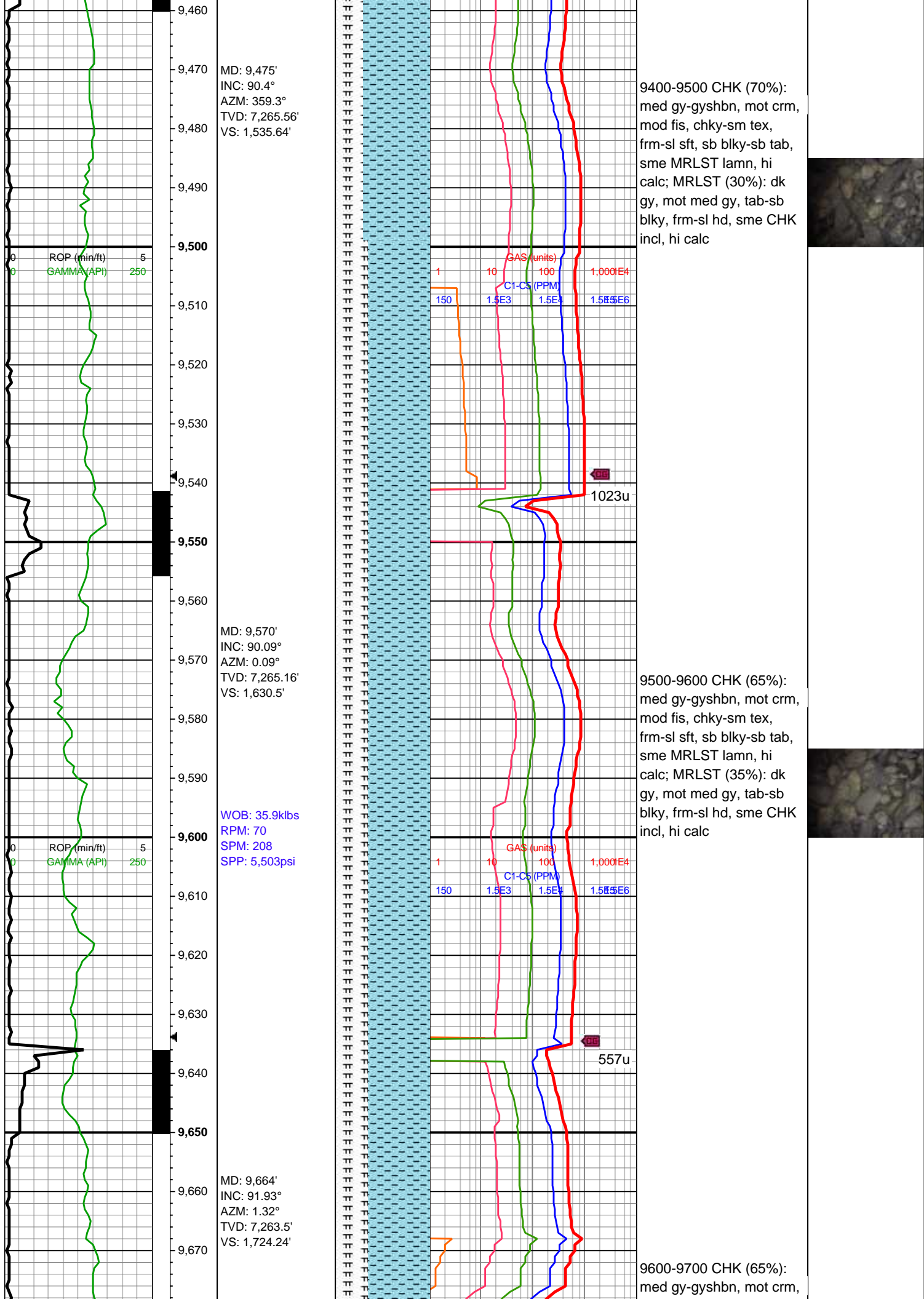
WOB: 35.9klbs  
RPM: 69  
SPM: 208  
SPP: 5,383psi



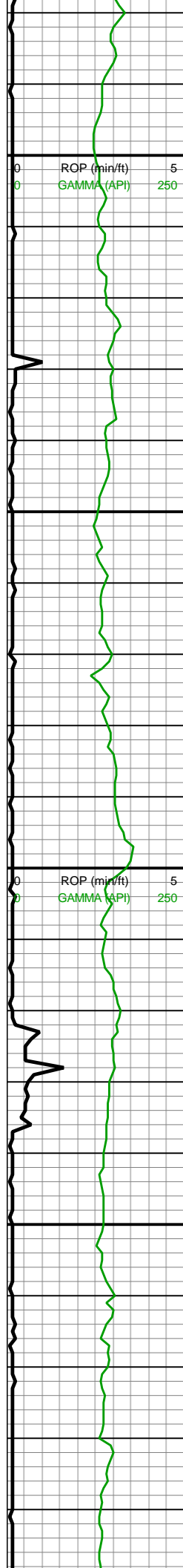
9200-9300 CHK (65%):  
med gy-gyshbn, mot crm,  
mod fis, sb blk-y-sb tab,  
frm-sl sft, tr free CHK,  
sme MRLST lamn, v calc;  
MRLST (35%): dk gy-med  
gy, mot, tab-sb blk-y,  
frm-sl hd, sme CHK  
incl/intbd lamn, mod-hi  
calc, tr imbd pyr, tr pyr  
nod

9300-9400 CHK (65%):  
med gy-gyshbn, mot crm,  
mod fis, sb blk-y-sb tab,  
frm-sl sft, rr free CHK, v  
calc; MRLST (35%): dk  
gy-med gy, mot, tab-sb  
blk-y, frm-sl hd, tr CHK  
incl/intbd lamn, mod-hi  
calc, tr imbd pyr







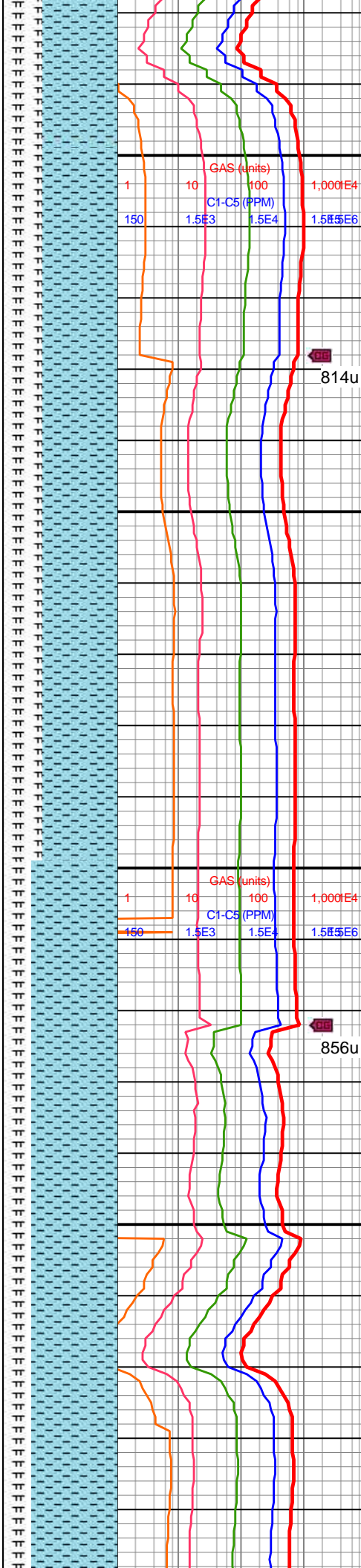


MD: 9,758'  
INC: 92.11°  
AZM: 1.32°  
TVD: 7,260.19'  
VS: 1,817.86'

WOB: 39.7klbs  
RPM: 69  
SPM: 208  
SPP: 5,552psi

MW IN: 9.9  
VIS IN: 49  
MW OUT: 9.9  
VIS OUT: 44

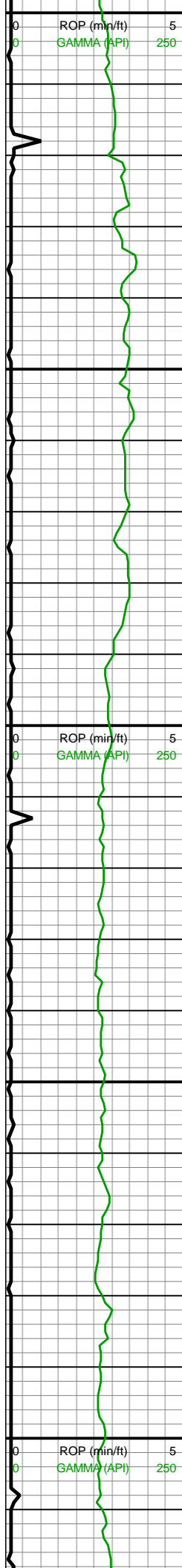
MD: 9,853'  
INC: 90.18°  
AZM: 1.14°  
TVD: 7,258.29'  
VS: 1,912.53'



mod fis, chky-sm tex,  
frm-sl sft, sb blkly-sb tab,  
sme MRLST lamn, hi  
calc; MRLST (35%): dk  
gy, mot med gy, tab-sb  
blkly, frm-sl hd, sme CHK  
incl, hi calc

9700-9800 CHK (65%):  
med gy-gyshbn, mot crm,  
mod fis, sb blk-y-sb tab,  
frm-sl sft, scatt free CHK,  
v calc; MRLST (35%): dk  
gy-med gy, mot, tab-sb  
blk-y, frm-sl hd, tr CHK  
incl/intbd lamn, mod-hi  
calc, tr imbd pyr

9800-9900 CHK (75%):  
med gy-gyshbn, mot crm,  
mod fis, sb blk-y-sb tab,  
frm-sl sft, scatt free CHK,  
v calc; MRLST (25%): dk  
gy-med gy, mot, tab-sb  
blk-y, frm-sl hd, tr CHK  
incl/intbnd lamrn, mod-hi  
calc, tr imbnd pyr



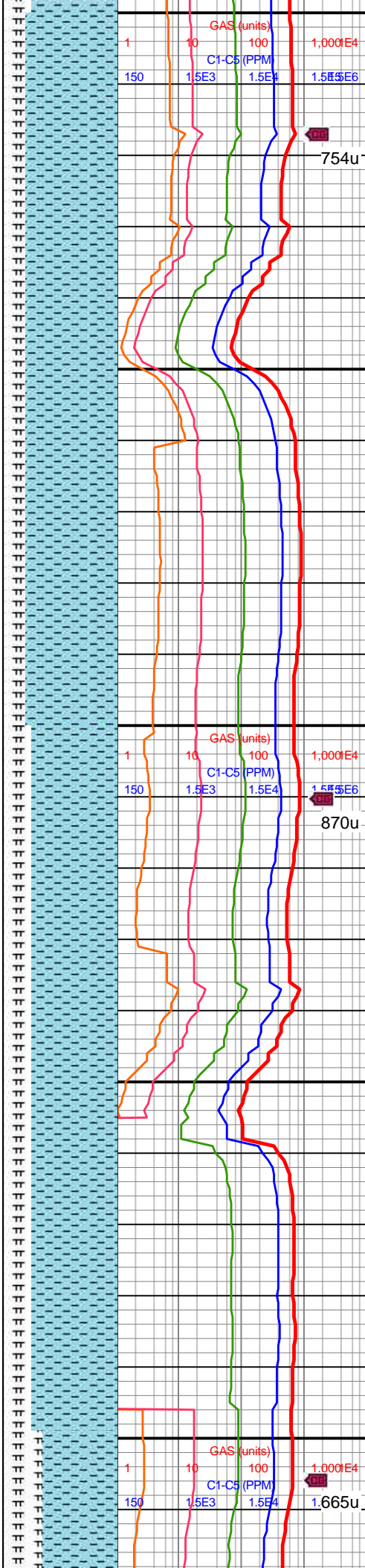
9,900  
9,910  
9,920  
9,930  
9,940  
9,950  
9,960  
9,970  
9,980  
9,990  
10,000  
10,010  
10,020  
10,030  
10,040  
10,050  
10,060  
10,070  
10,080  
10,090  
10,100  
10,110

MD: 9,947'  
INC: 90.18°  
AZM: 1.76°  
TVD: 7,257.99'  
VS: 2,006.19'

WOB: 35.2klbs  
RPM: 70  
SPM: 209  
SPP: 5,576psi

MD: 10,041'  
INC: 89.69°  
AZM: 1.14°  
TVD: 7,258.1'  
VS: 2,099.85'

MW IN: 9.9  
VIS IN: 49  
MW OUT: 9.9  
VIS OUT: 45



754u

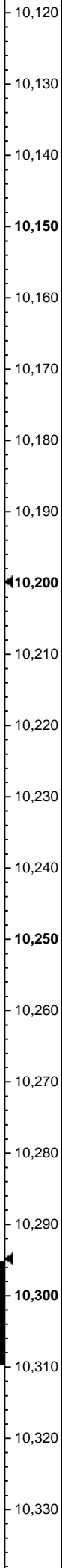
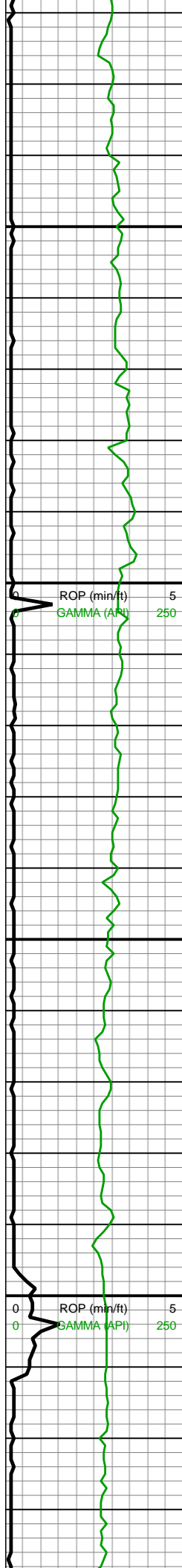
870u

1.665u

9900-10000 CHK (80%):  
med gy-gyshbn, mot crm,  
mod fis, sb blk-y-sb tab,  
frm-sl sft, scatt free CHK,  
v calc; MRLST (20%): dk  
gy-med gy, mot, tab-sb  
blk-y, frm-sl hd, occ CHK  
incl/intbd lamn, mod-hi  
calc, tr imbd pyr

10000-10100 CHK  
(75%): med gy-gyshbn,  
mot crm, mod fis, sb  
blk-y-sb tab, frm-sl sft,  
scatt free CHK, v calc;  
MRLST (25%): dk gy-med  
gy, mot, tab-sb blk-y,  
frm-sl hd, tr CHK  
incl/intbd lamn, mod-hi  
calc, tr imbd pyr





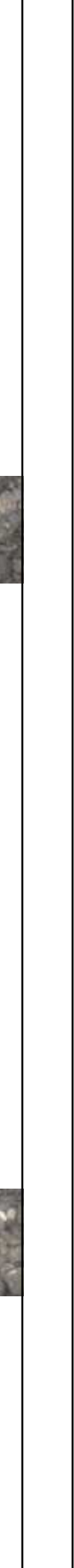
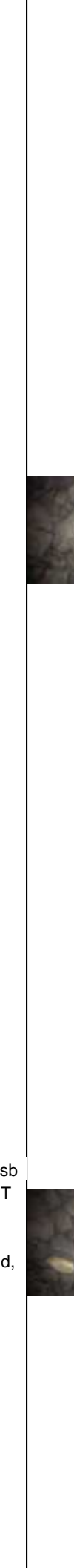
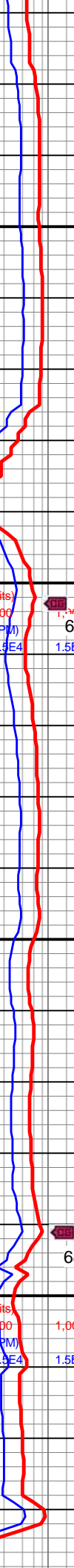
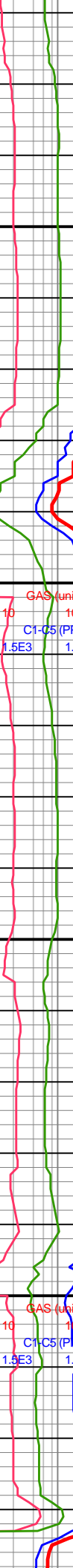
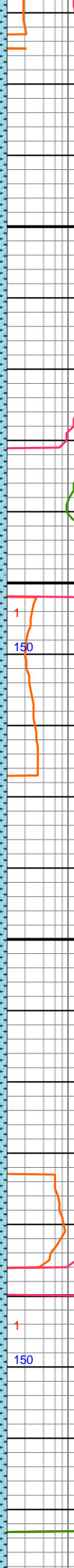
MD: 10,135'  
INC: 89.6°  
AZM: 0.26°  
TVD: 7,258.68'  
VS: 2,193.6'

WOB: 6.4klbs  
RPM: 69  
SPM: 204  
SPP: 4,807psi

MD: 10,230'  
INC: 88.77°  
AZM: 359.74°  
TVD: 7,260.03'  
VS: 2,288.42'

MW IN: 9.9  
VIS IN: 49  
MW OUT: 9.9  
VIS OUT: 45

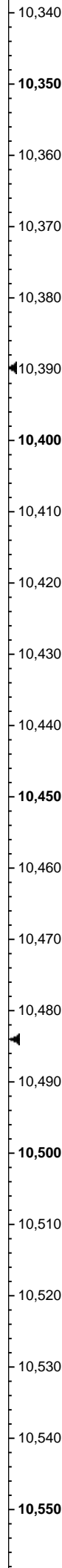
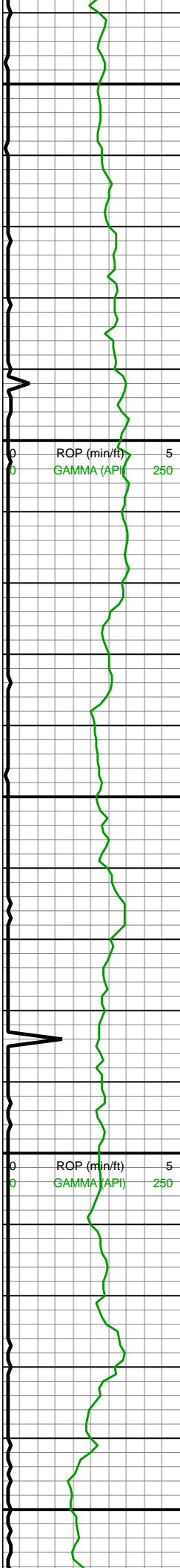
MD: 10,325'  
INC: 90.04°  
AZM: 0.97°  
TVD: 7,261.02'  
VS: 2,383.21'



10100-10200 CHK  
(65%): med gy-gyshbn,  
mot crm, mod fis, sb  
blky-sb tab, frm-sl sft, tr  
free CHK, sme MRLST  
lamn, v calc; MRLST  
(35%): dk gy-med gy,  
mot, tab-sb blky, frm-sl  
hd, sme CHK incl/intbd  
lamn, mod-hi calc, tr  
imbd pyr, tr pyr nod

10200-10300 CHK  
(70%): med gy-gyshbn,  
mot crm, mod fis,  
chky-sm tex, frm-sl sft, sb  
blky-sb tab, sme MRLST  
lamn, hi calc; MRLST  
(30%): dk gy, mot med  
gy, tab-sb blky, frm-sl hd,  
sme CHK incl, hi calc



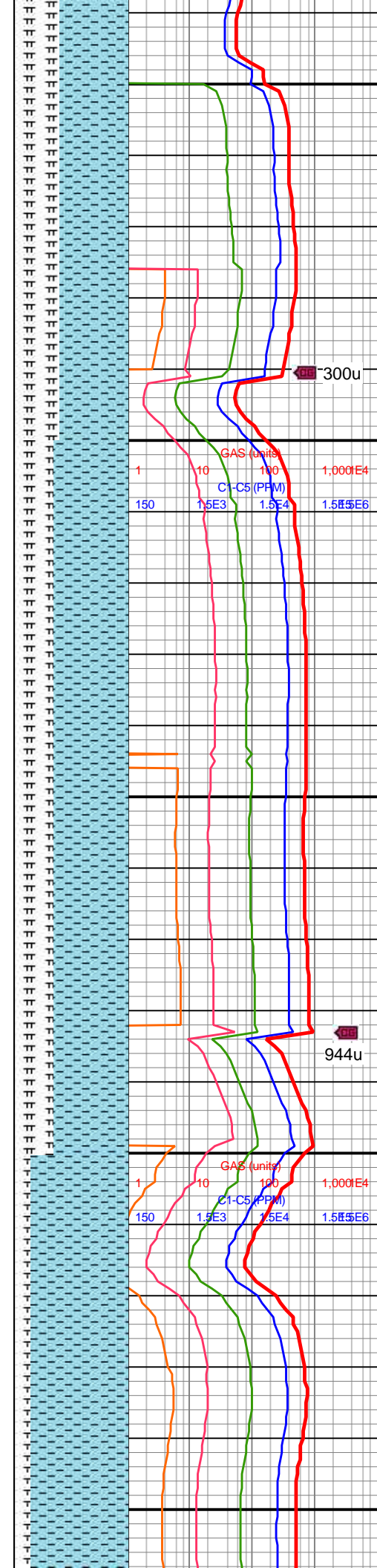


WOB: 37.7klbs  
RPM: 69  
SPM: 202  
SPP: 5,296psi

MD: 10,419'  
INC: 90°  
AZM: 0.53°  
TVD: 7,260.99'  
VS: 2,476.96'

MW IN: 9.9  
VIS IN: 50  
MW OUT: 9.9  
VIS OUT: 47

MD: 10,514'  
INC: 90.26°  
AZM: 1.23°  
TVD: 7,260.77'  
VS: 2,571.7'

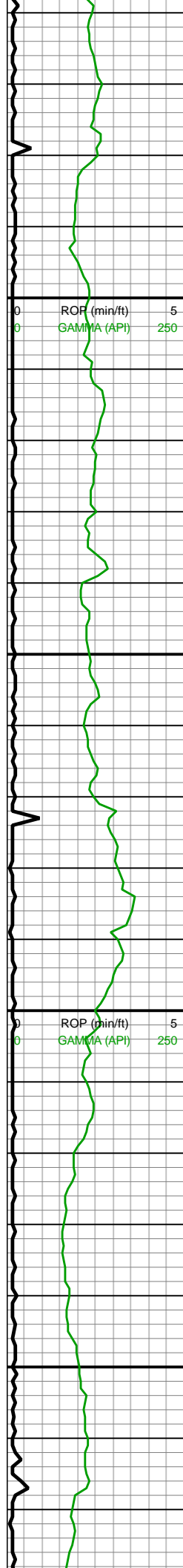


10300-10400 CHK  
(60%): med gy-gyshbn,  
mot crm, mod fis,  
chky-sm tex, frm-sl sft, sb  
blky-sb tab, sme MRLST  
lamn, hi calc; MRLST  
(40%): dk gy, mot med  
gy, tab-sb blky, frm-sl hd,  
sme CHK incl, hi calc



10400-10500 CHK  
(65%): med gy-gyshbn,  
mot crm, mod fis,  
chky-sm tex, frm-sl sft, sb  
blky-sb tab, sme MRLST  
lamn, hi calc; MRLST  
(35%): dk gy, mot med  
gy, tab-sb blky, frm-sl hd,  
sme CHK incl, hi calc



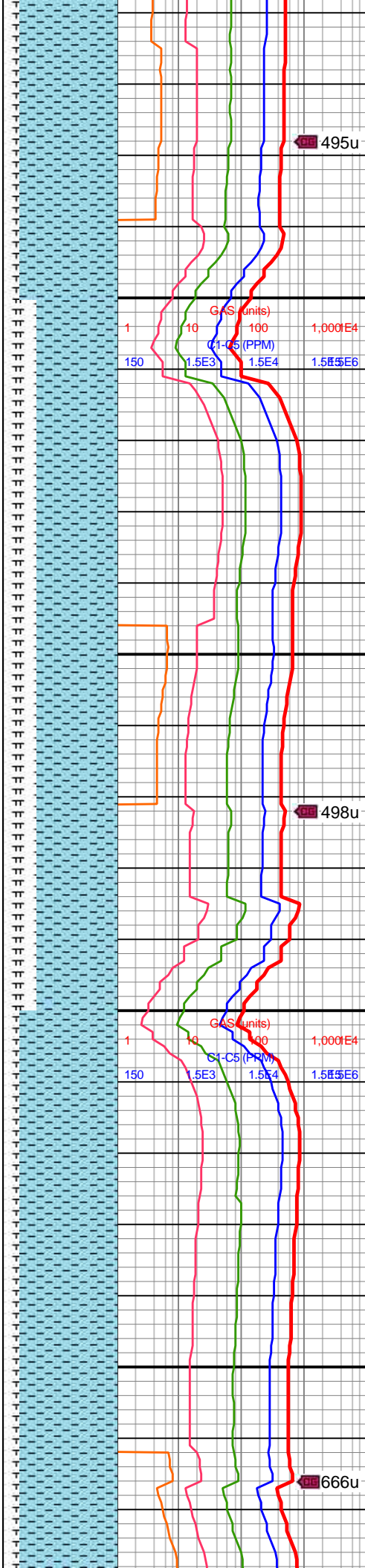


WOB: 36.8klbs  
RPM: 70  
SPM: 202  
SPP: 5,298psi

MD: 10,608'  
INC: 90.57°  
AZM: 0.61°  
TVD: 7,260.09'  
VS: 2.665.42'

MW IN: 9.9+  
VIS IN: 48  
MW OUT: 9.9  
VIS OUT: 45

MD: 10,702'  
INC: 91.1°  
AZM: 0.35°  
TVD: 7,258.72'  
VS: 2,759.2'

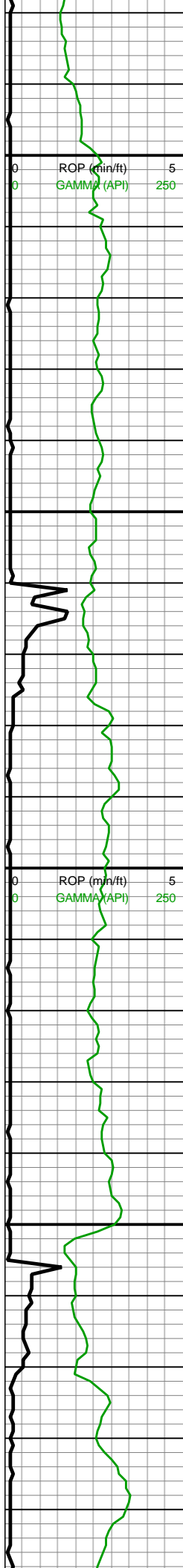


10500-10600 CHK  
(85%): med gy-gyshbn,  
mot crm, mod fis, sb  
blky-sb tab, frm, rr free  
CHK, tr MRLST lamn, v  
calc; MRLST (15%): dk  
gy-med gy, mot, tab-sb  
blky, frm-sl hd, sme CHK  
incl/intbd lamn, mod-hi  
calc

10600-10700 CHK  
(70%): med gy-gyshbn,  
mot crm, mod fis, sb  
blky-sb tab, frm-sl sft,  
mnr free CHK, sme  
MRLST lamn, v calc;  
MRLST (30%): dk gy-med  
gy, mot, tab-sb blky,  
frm-sl hd, sme CHK  
incl/intbd lamn, mod-hi  
calc

10700-10800 CHK  
(85%): med gy-gyshbn,  
mot crm, mod fis, sb  
blky-sb tab, frm-fri, mnr





10,780  
10,790  
10,800  
10,810  
10,820  
10,830  
10,840  
10,850  
10,860  
10,870  
10,880  
10,890  
10,900  
10,910  
10,920  
10,930  
10,940  
10,950  
10,960  
10,970  
10,980  
10,990

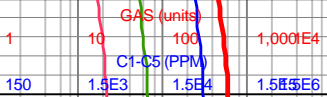
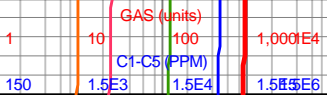
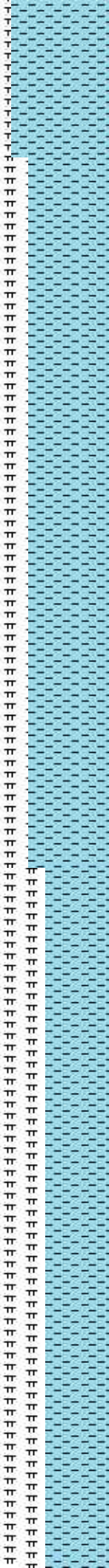
MD: 10,797'  
INC: 91.45°  
AZM: 359.65°  
TVD: 7,256.61'  
VS: 2,854.01'  
WOB: 33.3klbs  
RPM: 69  
SPM: 204  
SPP: 5,564psi

MW IN: 9.9  
VIS IN: 47  
MW OUT: 9.9  
VIS OUT: 45

MD: 10,891'  
INC: 91.85°  
AZM: 1.05°  
TVD: 7,253.9'  
VS: 2,947.76'

MD: 10,986'  
INC: 90.35°  
AZM: 2.99°  
TVD: 7,252.08'  
VS: 3,042.31'

WOB: 37.1klbs

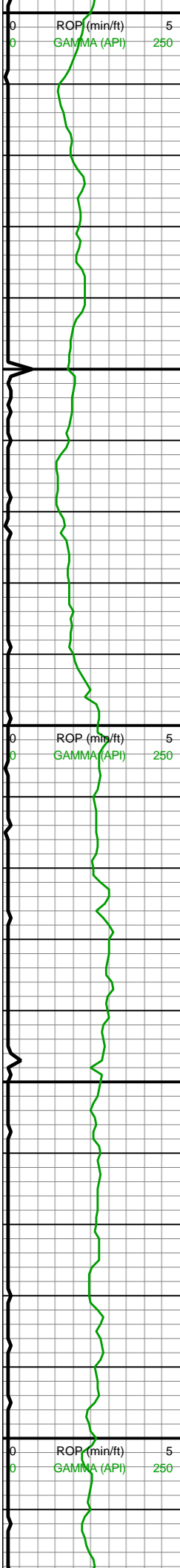


free CHK, tr MRLST  
lamn, v calc; MRLST  
(15%): dk gy-med gy,  
mot, tab-sb blk, frm-sl  
hd, sme CHK incl/intbd  
lamn, mod-hi calc, tr pyr  
nod

10800-10900 CHK  
(70%): med gy-gyshbn,  
mot crm, mod fis, sb  
blk-sb tab, frm, tr free  
CHK, sme MRLST lamn,  
v calc; MRLST (30%): dk  
gy-med gy, mot, tab-sb  
blk, frm-sl hd, sme CHK  
incl/intbd lamn, mod-hi  
calc

10900-11000 CHK  
(55%): gyshbn-lt gy, mot  
crm, sb blk-sb tab,  
frm-sl sft, mod fis, sme  
MRLST lamn, v calc;  
MRLST (45%): dk gy, mot  
med gy, sl slty tex, frm-sl  
hd, tab-sb blk, brit, tr  
CHK incl, mod calc, mnr





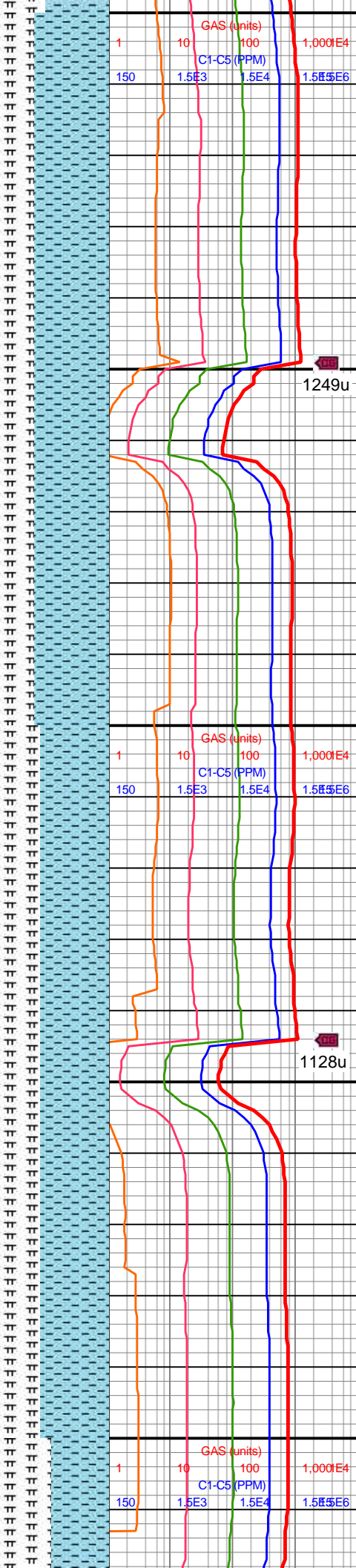
RPM: 69  
SPM: 201  
SPP: 5,418psi

MD: 11,080'  
INC: 90.79°  
AZM: 2.2°  
TVD: 7,251.14'  
VS: 3,135.79'

MW IN: 9.9  
VIS IN: 47  
MW OUT: 9.9  
VIS OUT: 45

MD: 11,175'  
INC: 90.57°  
AZM: 1.84°  
TVD: 7,250.01'  
VS: 3,230.36'

WOB: 35.9klbs  
RPM: 70  
SPM: 202  
SPP: 5,534psi

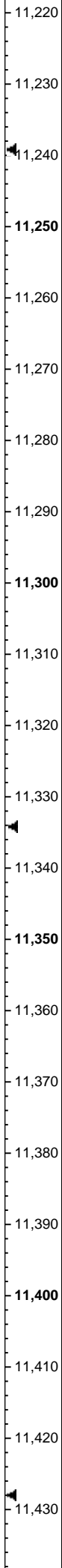


cal frac fl

11000-11100 CHK  
(65%): predy gyshbn-lt  
gy, mot crm, frm, sb  
blky-sb tab, mod fis  
ctngs, chky tex, sme  
MRLST lamn, v calc;  
MRLST (35%): dk gy, mot  
med gy, tab-sb blky,  
frm-sl hd, mod calc, intbd  
brit CHK, tr mic pyr, tr cal  
frac fl

11100-11200 CHK  
(60%): predy lt  
gy-gyshbn, mot crm, mod  
fis, frm, sb blky-sb tab,  
chky tex, sme MRLST  
lamn, hi calc; MRLST  
(40%): dk gy, mot med  
gy, frm-sl hd, tab-sb blky,  
mod calc, sme CHK incl,  
tr mic pyr

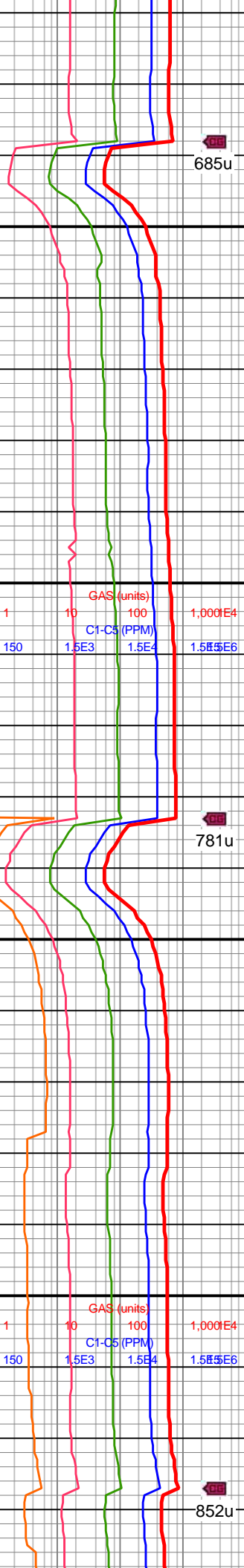
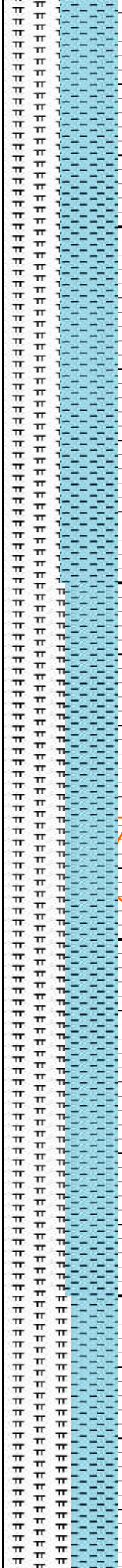




MD: 11,269'  
INC: 90.7°  
AZM: 1.41°  
TVD: 7,248.97'  
VS: 3,323.99'  
MW IN: 9.9  
VIS IN: 48  
MW OUT: 9.9  
VIS OUT: 45

MD: 11,364'  
INC: 90.53°  
AZM: 0.7°  
TVD: 7,247.95'  
VS: 3,418.69'

WOB: 31.2klbs  
RPM: 69  
SPM: 199  
SPP: 5,531psi

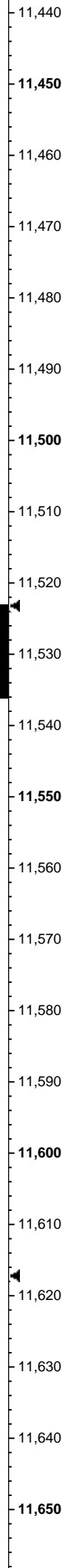
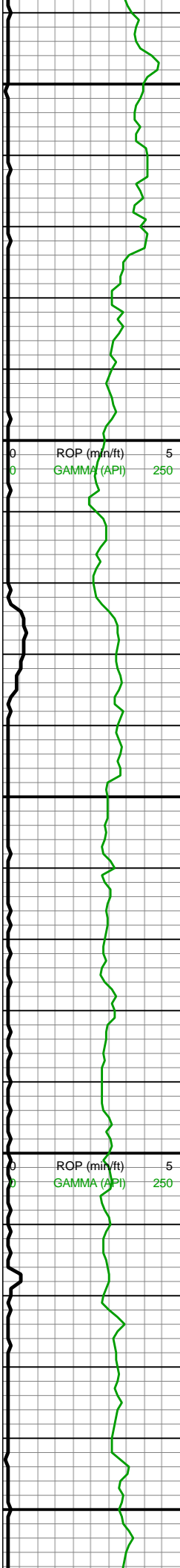


11200-11300 CHK  
(50%): gyshbn-med gy,  
mot crm, frm, sb blkyl-sb  
tab, mod fis, chky tex,  
sme MRLST lamn, v calc,  
tr pp mic pyr; MRLST  
(50%): dk gy, mot med  
gy, tab-sb blkyl, frm-sl hd,  
sl sm tex, decrng intbd  
CHK lam, mod calc

11300-11400 MRLST  
(55%): dk gyshbn-dk gy,  
frm-sl hd, sb blkyl-tab, sl  
sm-rgh tex, mod-hi calc,  
sme intbd CHK; CHK  
(45%): gyshbn-med gy,  
mot, tab-sb blkyl, sm chky  
tex, sl frm, mnr offwht  
CHK frags, v calc, tr intbd  
MRLST







MD: 11,458'  
INC: 90.75°  
AZM: 0.61°  
TVD: 7,246.9'  
VS: 3,512.45'

MW IN: 9.9+  
VIS IN: 48  
MW OUT: 9.9  
VIS OUT: 47

MD: 11,552'  
INC: 88.9°  
AZM: 0.17°  
TVD: 244'  
VS: 7,247.19'

WOB: 36.7klbs  
RPM: 69  
SPM: 198  
SPP: 5,430psi

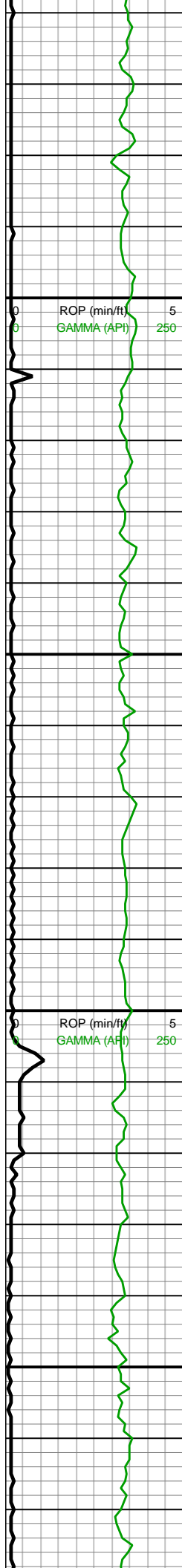
MD: 11,647'  
INC: 88.81°  
AZM: 359.91°  
TVD: 7,249.09'  
VS: 3,701.05'



11400-11500 MRLST  
(60%): dk gyshbn-dk gy,  
frm-sl hd, brit, tab-sb  
blky, tr CHK incl, tr imbd  
mic pyr, mod calc; CHK  
(40%): gyshbn, mot med  
gy, crm, frm-sl sft, sl sm  
tex, sb blky-sb plty, mnr  
MRLST lamn, hi calc

11500-11600 CHK  
(55%): med gy-gyshbn,  
crm, mot, chky-sl sm tex,  
frm-sl sft, sb blky-sb plty,  
tr pp mic pyr, hi calc, mnr  
MRLST lamn; MRLST  
(45%): dk gyshbn-dk gy,  
frm-sl hd, brit, tab-sb  
blky, mod calc, tr CHK  
incl





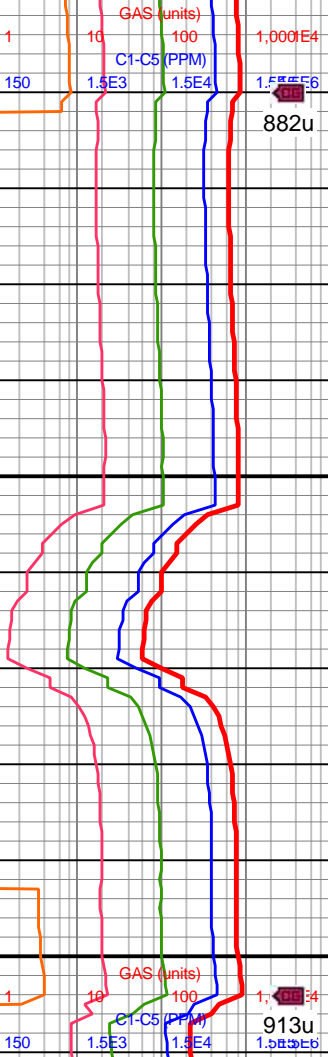
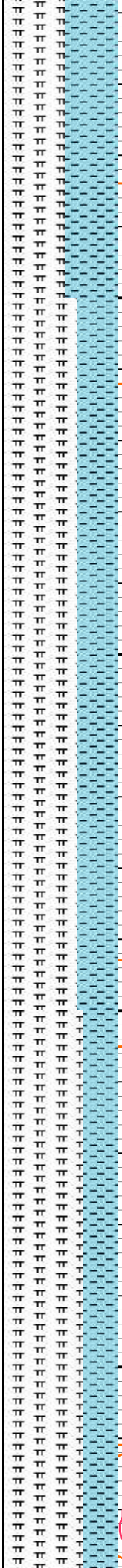
11,660  
11,670  
11,680  
11,690  
11,700  
11,710  
11,720  
11,730  
11,740  
11,750  
11,760  
11,770  
11,780  
11,790  
11,800  
11,810  
11,820  
11,830  
11,840  
11,850  
11,860  
11,870

MD: 11,741'  
INC: 88.11°  
AZM: 359.12°  
TVD: 7,251.61'  
VS: 3,794.89'

WOB: 35.2klbs  
RPM: 70  
SPM: 198  
SPP: 5,490psi

MW IN: 9.9+  
VIS IN: 51  
MW OUT: 9.9+  
VIS OUT: 41

MD: 11,835'  
INC: 89.25°  
AZM: 358.77°  
TVD: 7,253.78'  
VS: 3,888.78'



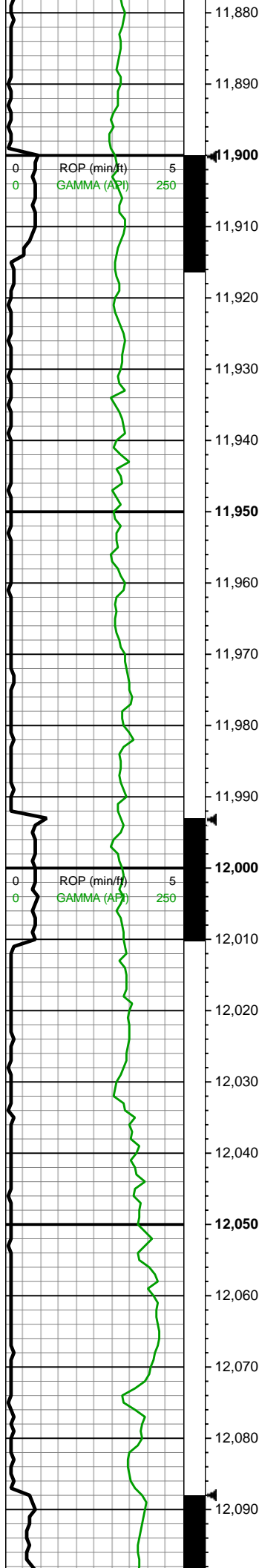
11600-11700 MRLST  
(55%): dk gy-med gy,  
mot, sl slty tex, sl hd-frm,  
sb blk-y-sb ang, mod calc,  
sme CHK intbds/incl;  
CHK (45%): gyshbn,  
mot-sl stri, sl frm-brit, sb  
blk-y, sm chky tex, tr free  
CHK, v calc

11700-11800 MRLST  
(65%): dk gy-med gy, mot  
gyshbn, sl hd-frm, sb  
blk-y-sb ang, mod calc, tr  
CHK intbds; CHK (35%):  
med gy, gyshbn, mot, sl  
frm-brit, sm chky tex, sb  
blk-y ctngs, v calc, tr  
MRLST intbds

11800-11900 MRLST  
(70%): dk gyshbn-dk gy,  
sl sm tex, sb blk-y-ang







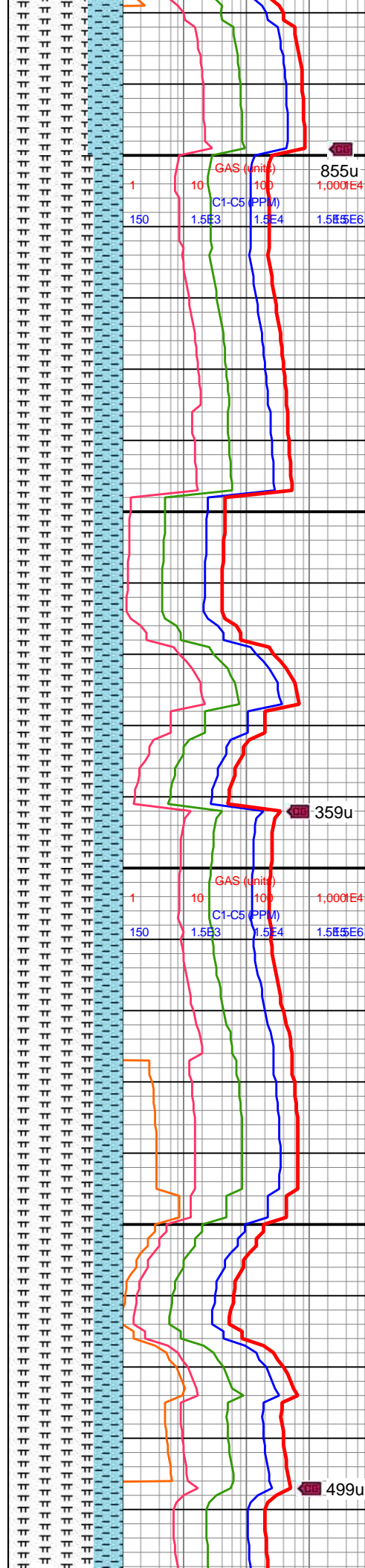
MW IN: 9.9+  
VIS IN: 50  
MW OUT: 9.9+  
VIS OUT: 47

MD: 11,929'  
INC: 89.82°  
AZM: 357.8°  
TVD: 7,254.54'  
VS: 3,982.74'

WOB: 40.6klbs  
RPM: 0  
SPM: 196  
SPP: 5,053psi

MD: 12,023'  
INC: 89.74°  
AZM: 359.12°  
TVD: 7,254.9'  
VS: 4,076.69'

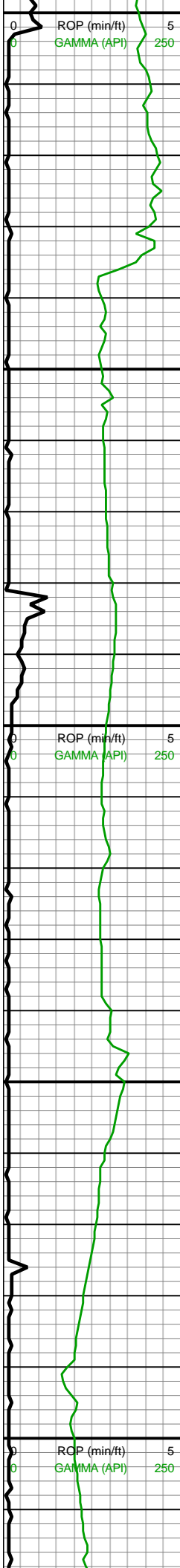
MW IN: 9.9  
VIS IN: 50  
MW OUT: 9.9+  
VIS OUT: 46



ctngs, frm-sl hd, mn  
intbd CHK/CHK incl, mod  
calc; CHK (30%):  
gyshbn-med gy, mot lt gy,  
fri-frm, sb ang-sb blk  
sm chky tex, tr free crm  
CHK, v calc

11900-12000 MRLST  
(75%): dk gy-med gy, sb  
blk-ang ctngs, frm-sl hd,  
sl sm tex, mn intbd CHK,  
mod-hi calc, tr pp mic pyr;  
CHK (25%): gyshbn-med  
gy, tab-sb blk ctngs,  
fri-frm, sm chky tex, mn  
crm CHK frags, v calc

12000-12100 MRLST  
(70%): dk gy-med gy,  
blk-tab ctngs, frm-sl hd,  
sl sm tex, mn intbd CHK,  
mod calc; CHK (30%):  
gyshbn-med gy, mot, sb  
ang-sb blk, fri-frm, sm  
chky tex, hi calc, tr free  
crm CHK



12,100  
12,110  
12,120  
12,130  
12,140  
12,150  
12,160  
12,170  
12,180  
12,190  
12,210  
12,220  
12,230  
12,240  
12,250  
12,260  
12,270  
12,280  
12,290  
12,300  
12,310

MD: 12,118'  
INC: 90.75°  
AZM: 0.35°  
TVD: 7,254.5'  
VS: 4,171.54'

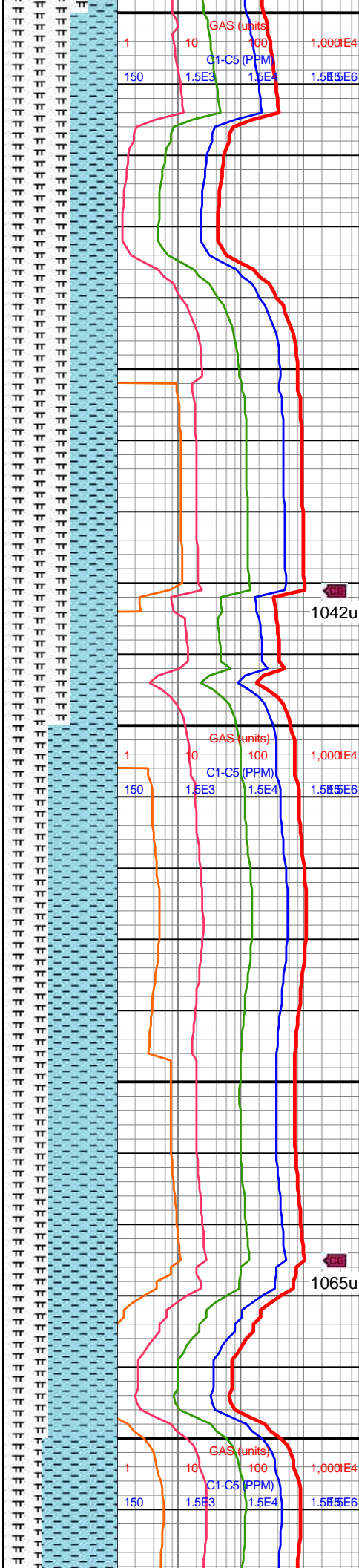
MW IN: 9.9  
VIS IN: 50  
MW OUT: 9.9  
VIS OUT: 47

WOB: 22.2klbs  
RPM: 70  
SPM: 196  
SPP: 5,304psi

8/11/2018

MD: 12,212'  
INC: 89.56°  
AZM: 1.84°  
TVD: 7,254.24'  
VS: 4,265.24'

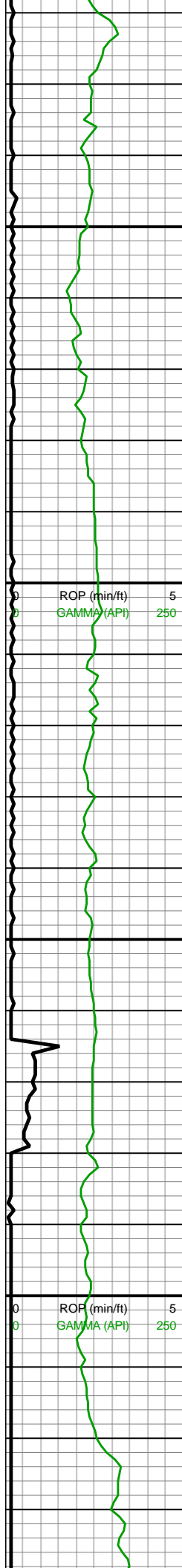
MD: 12,306'  
INC: 89.52°  
AZM: 1.32°  
TVD: 7,255'  
VS: 4,358.88'



crm CHK

12100-12200 MRLST  
(60%): dk gy-med gy,  
mot, frm-sl hd, sb  
blky-tab, sl sm tex, mn  
intbd CHK, mod calc, tr  
mic pyr; CHK (40%):  
gyshbn-med gy, mot, sm  
chky tex, tab-sb blky,  
fri-frm, tr intbd MRLST,  
mn crm CHK frags, hi  
calc, mn cal frac fl

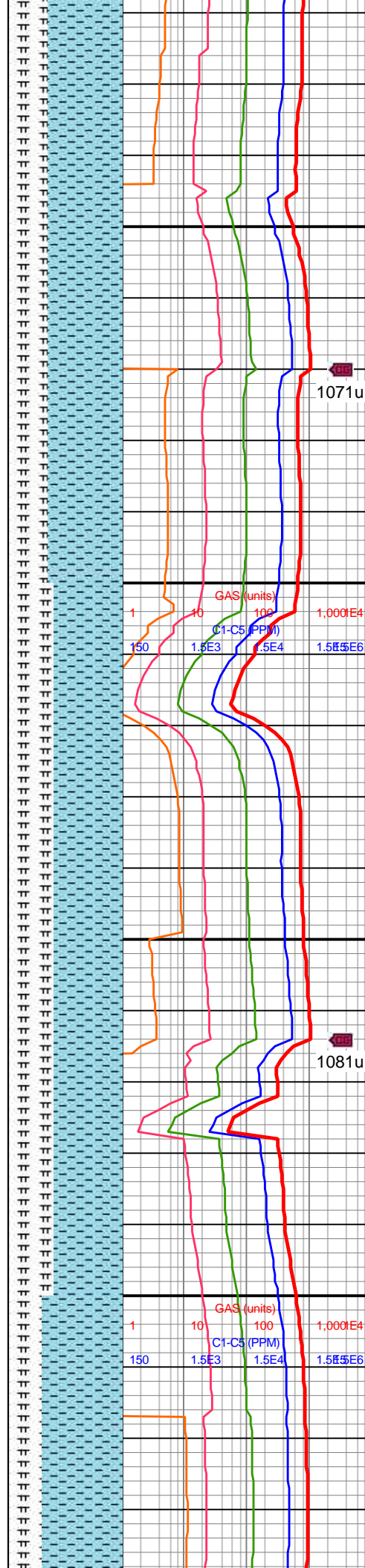
12200-12300 CHK  
(60%): predy med gy,  
sme dk gyshbn, mot, sb  
blky, sm chky tex, brit, sl  
frm, hi calc, mn free  
CHK frags; MRLST  
(40%): dk gy-v dk gy, mot  
med gy, sl hd-frm, sb  
blky-sb tab, tr intbd CHK,  
occ pyr nod, mod calc,  
mn cal frac fl



12,320  
12,330  
12,340  
12,350  
12,360  
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

WOB: 36.8klbs  
RPM: 70  
SPM: 196  
SPP: 5,601psi  
MD: 12,400'  
INC: 89.69°  
AZM: 0.61°  
TVD: 7,255.65'  
VS: 4,452.61'  
MW IN: 9.9  
VIS IN: 50  
MW OUT: 9.9  
VIS OUT: 47

MD: 12,494'  
INC: 90.75°  
AZM: 2.99°  
TVD: 7,255.28'  
VS: 4,546.21'

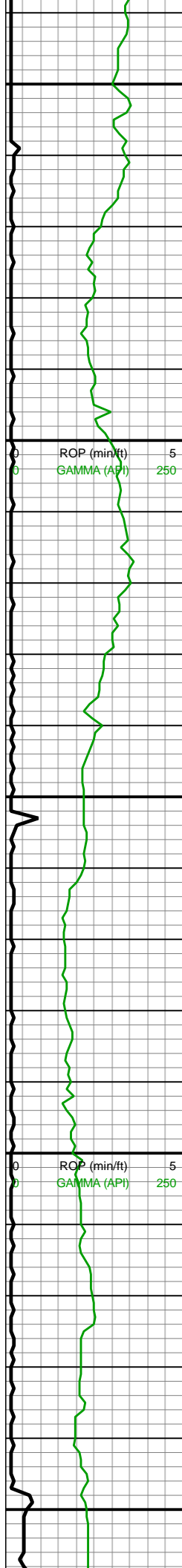


1071u  
12300-12400 CHK  
(65%): gyshbn-med gy,  
mot, tab-sb blk, fri-fr, sm chky tex, mn intbd MRLST, mn free CHK frags, hi calc; MRLST (35%): dk gy-med gy, sb blk-ang, sl sm tex, frm-sl hd, com intbd CHK, mod-hi calc

1081u  
12400-12500 CHK  
(60%): gyshbn-med gy, mot, sm chky tex, fri-fr, tab-sb blk, sme crm CHK frags/incl, tr intbd MRLST, hi calc; MRLST (40%): dk gy-med gy, mot, sb blk-tab, sl sm tex, frm-sl hd, tr mic pyr, mn intbd CHK, mod calc





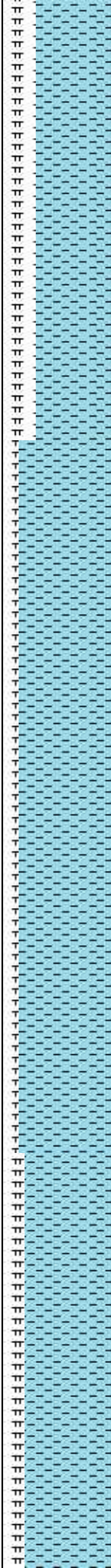


12,540  
12,550  
12,560  
12,570  
12,580  
12,590  
12,600  
12,610  
12,620  
12,630  
12,640  
12,650  
12,660  
12,670  
12,680  
12,690  
12,700  
12,710  
12,720  
12,730  
12,740  
12,750

MD: 12,589'  
INC: 90.79°  
AZM: 3.25°  
TVD: 7,254.01'  
VS: 4,640.58'  
WOB: 32.5kls  
RPM: 70  
SPM: 194  
SPP: 5,558psi

MW IN: 9.9+  
VIS IN: 50  
MW OUT: 9.9+  
VIS OUT: 47

MD: 12,683'  
INC: 90.75°  
AZM: 3.34°  
TVD: 7,252.75'  
VS: 4,733.93'

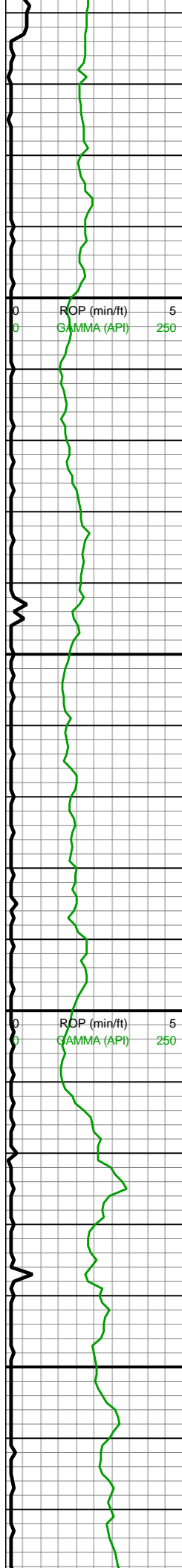


12500-12600 CHK  
(70%): gyshbn-med gy,  
mot, fri frm, tab-sb blk,  
sm chky tex, tr intbd  
MRLST, mn crm CHK  
frags, hi calc; MRLST  
(30%): dk gy-med gy,  
mot, sl sm tex, frm-sl hd,  
sb blk-tab, tr mic pyr,  
mod calc, mn intbd CHK

12600-12700 CHK  
(85%): gyshbn-med gy,  
mot, sl frm, sm chky tex,  
tab-sb blk, crm CHK  
lamn/incl, tr intbd MRLST,  
hi calc; MRLST (15%): dk  
gy-med gy, mot, frm-sl  
hd, sl sm tex, sb blk-tab,  
mn mic pyr/pyrc nod,  
mod calc, mn intbd CHK







12,760  
12,770  
12,780  
12,790  
12,800  
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

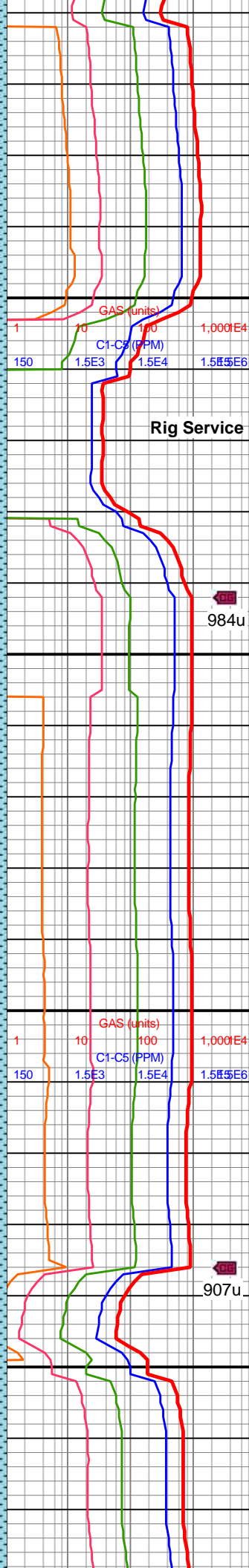
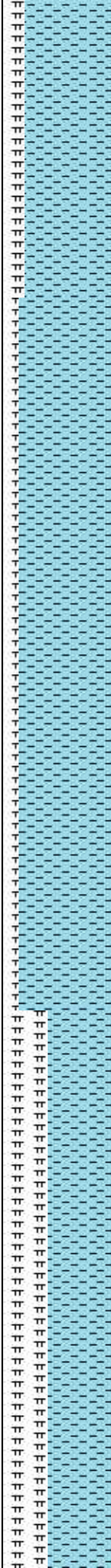
MD: 12,778'  
INC: 91.19°  
AZM: 0.97°  
TVD: 7,251.14'  
VS: 4,828.47'

WOB: 35klbs  
RPM: 69  
SPM: 192  
SPP: 5,550psi

MW IN: 9.9+  
VIS IN: 50  
MW OUT: 9.9+  
VIS OUT: 46

MD: 12,873'  
INC: 91.45°  
AZM: 0.88°  
TVD: 7,248.95'  
VS: 4,923.17'

MD: 12,967'  
INC: 91.19°  
AZM: 0.53°  
TVD: 7,246.78'  
VS: 5,016.9'

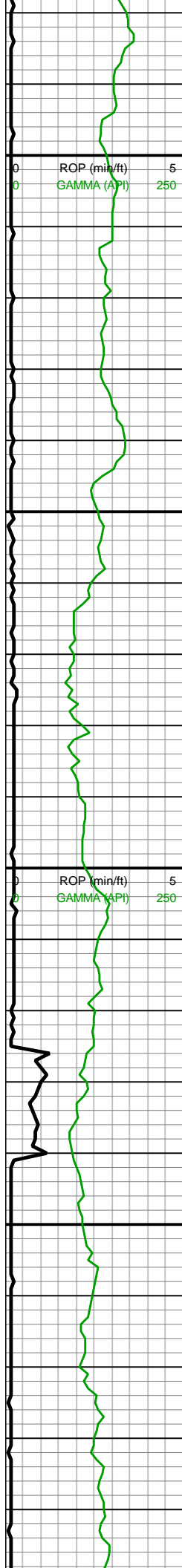


12700-12800 CHK  
(80%): gyshbn-med gy,  
mot, sm chky tex, fri-frm,  
tab-sb blk, scat crm  
CHK frags, tr intbd  
MRLST, v calc; MRLST  
(20%): dk gy-med gy,  
mot, sb blk-tab, sl sm  
tex, frm-sl hd, mnr mic  
pyr/pyrc nod, tr intbd  
CHK, mod calc

12800-12900 CHK  
(85%): gyshbn-med gy,  
mot, sm chky tex, sl frm,  
tab-sb blk, crm CHK  
frags, tr intbd MRLST, hi  
calc; MRLST (15%): dk  
gy-med gy, mot, frm-sl  
hd, sb blk-tab, sl sm tex,  
mnr mic pyr/pyrc nod,  
mod calc, tr intbd CHK

12900-13000 CHK  
(60%): gyshbn-med gy,  
mot, fri-frm, sb blk-tab,  
sm chky tex, tr intbd





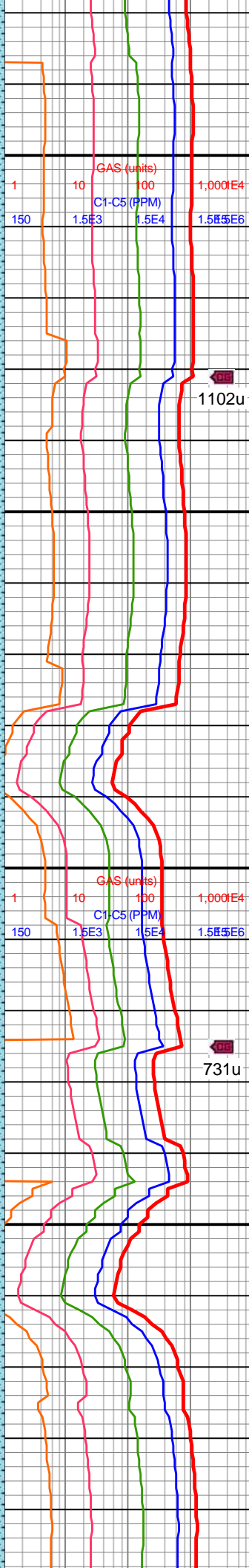
12,980  
12,990  
13,000  
13,010  
13,020  
13,030  
13,040  
13,050  
13,060  
13,070  
13,080  
13,090  
13,100  
13,110  
13,120  
13,130  
13,140  
13,150  
13,160  
13,170  
13,180  
13,190

WOB: 30.2klbs  
RPM: 70  
SPM: 191  
SPP: 5,483psi

MD: 13,061'  
INC: 91.1°  
AZM: 0.09°  
TVD: 7,244.9'  
VS: 5,110.68'

MD: 13,156'  
INC: 90.48°  
AZM: 359.74°  
TVD: 7,243.59'  
VS: 5,205.51'

WOB: 35.3klbs

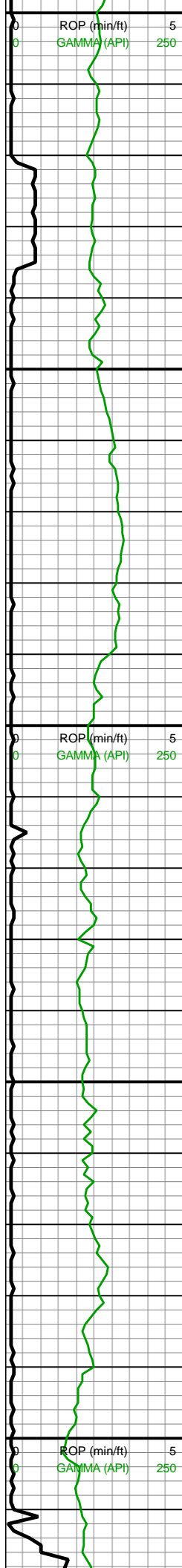


MRLST, v calc; MRLST (40%): dk gy-med gy, mot, sl sm-rgh tex, sb blk-y-tab, frm-sl hd, sme intbd CHK, mod calc, mn-r imbd mic pyr/pyrc nod

13000-13100 CHK (65%): gyshbn-med gy, mot, fri-frm, sb blk-y-tab, sm chky tex, tr intbd MRLST, v calc; MRLST (35%): dk gy-med gy, mot, sl sm-rgh tex, sb blk-y-tab, frm-sl hd, sme intbd CHK, mod calc, mn-r imbd mic pyr/pyrc nod

13100-13200 CHK (70%): gyshbn-med gy, mot, fri-frm, sb blk-y-tab, sm chky tex, occ intbd MRLST, v calc; MRLST (30%): dk gy-med gy, mot, sl sm-rgh tex, sb blk-y-tab, frm-sl hd, com intbd CHK, mod calc, scatt imbd mic pyr/pyrc





RPM: 70  
SPM: 192  
SPP: 5,624psi

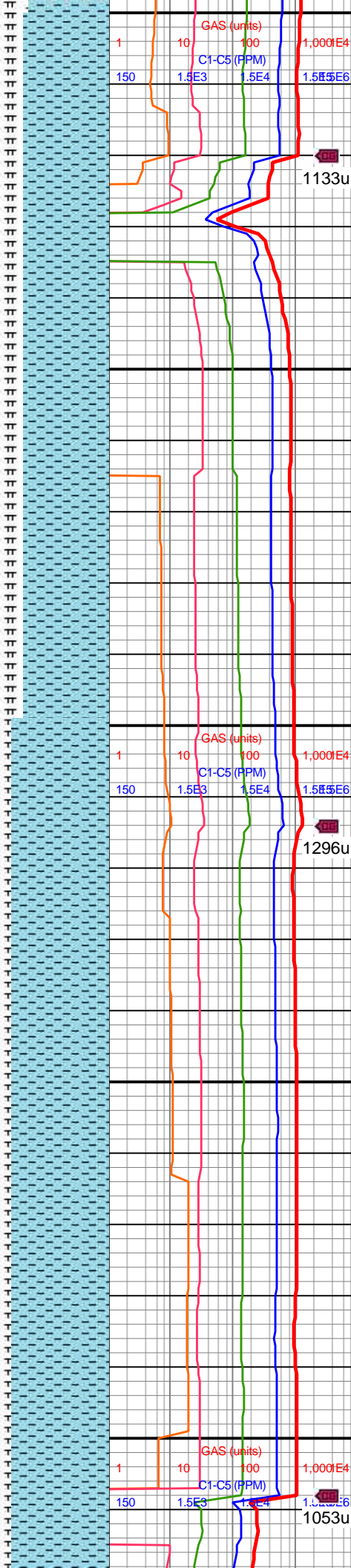
MW IN: 10  
VIS IN: 51  
MW OUT: 10.0  
VIS OUT: 47

MD: 13,250'  
INC: 89.3°  
AZM: 357.54°  
TVD: 7,243.77'  
VS: 5,299.45'

MD: 13,345'  
INC: 88.9°  
AZM: 358.07°  
TVD: 7,245.27'  
VS: 5,394.41'

MW IN: 10  
VIS IN: 55  
MW OUT: 10  
VIS OUT: 48

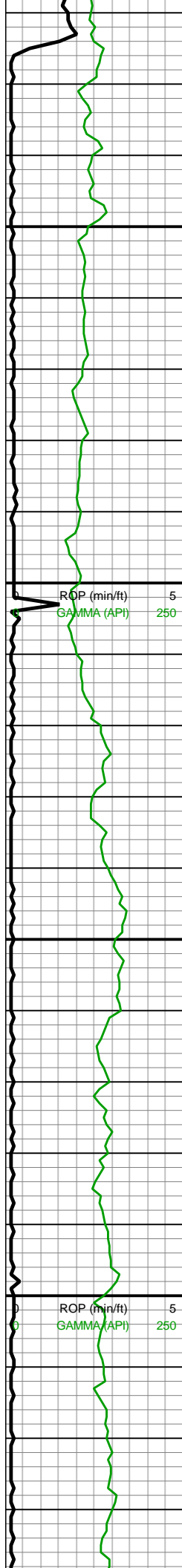
WOB: 36.1klbs  
RPM: 70  
SPM: 191  
SPP: 5,606psi



13200-13300 CHK  
(75%): gyshbn-med gy,  
mot, fri-frm, sb blkly-tab,  
sm chky tex, tr intbd  
MRLST, v calc; MRLST  
(25%): dk gy-med gy,  
mot, sl sm-rgh tex, sb  
blkly-tab, frm-sl hd, tr  
intbd CHK, mod calc,  
com imbd mic pyr/pyrc  
nod

13300-13400 CHK  
(85%): gyshbn-med gy,  
mot, fri-frm, sb blkly-tab,  
sm chky tex, tr intbd  
MRLST, v calc; MRLST  
(15%): dk gy-med gy,  
mot, sl sm-abrsv tex, sb  
blkly-tab, frm-hd, sme  
intbd CHK, mod calc,  
mnr imbd mic pyr/pyrc  
nod





13,420  
13,430  
13,440  
13,450  
13,460  
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

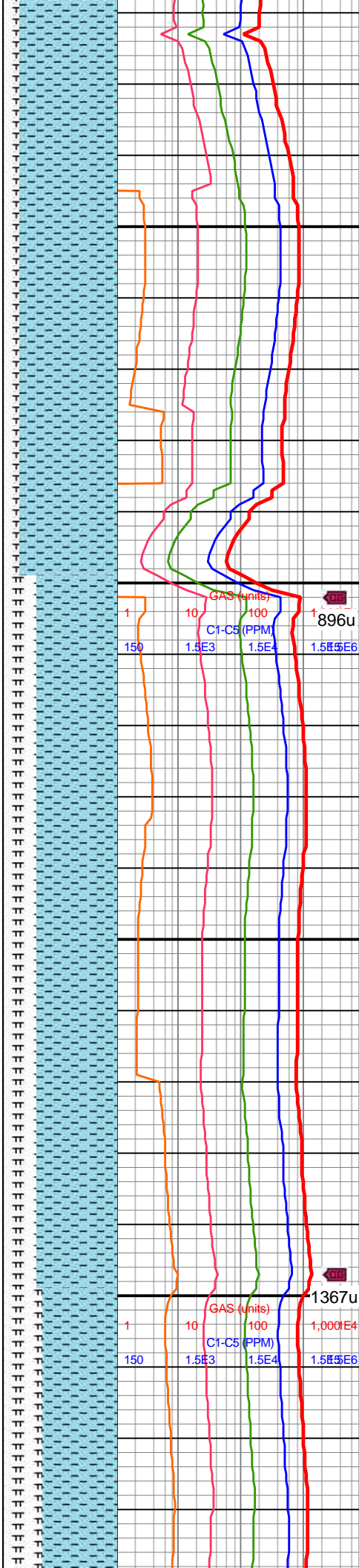
MD: 13,439'  
INC: 89.21°  
AZM: 356.22°  
TVD: 7,246.82'  
VS: 5,488.39'

MW IN: 10  
VIS IN: 54  
MW OUT: 10  
VIS OUT: 48

MD: 13,533'  
INC: 88.99°  
AZM: 356.22°  
TVD: 7,248.29'  
VS: 5,582.38'

WOB: 25.4klbs  
RPM: 70  
SPM: 190  
SPP: 5,243psi

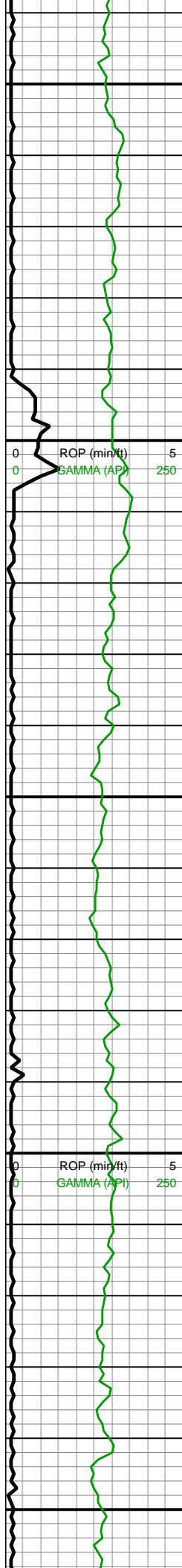
MD: 13,628'  
INC: 88.68°  
AZM: 356.13°  
TVD: 7,250.23'  
VS: 5,677.36'



13400-13500 CHK  
(85%): gyshbn-med gy,  
mot, fri-frm, sb blk-y-tab,  
sm chky tex, tr intbd  
MRLST, v calc; MRLST  
(15%): dk gy-med gy,  
mot, sl sm-rgh tex, sb  
blk-y-tab, frm-sl hd, com  
intbd CHK, mod calc,  
com imbd mic pyr/pyrc  
nod

13500-13600 CHK  
(70%): gyshbn-med gy,  
mot, fri-frm, sb blk-y-tab,  
sl sm, com intbd MRLST,  
v calc; MRLST (30%): dk  
gy-med gy, mot, abrsv  
tex, sb blk-y-tab, frm-hd,  
com intbd CHK, mod  
calc, com pyr nod





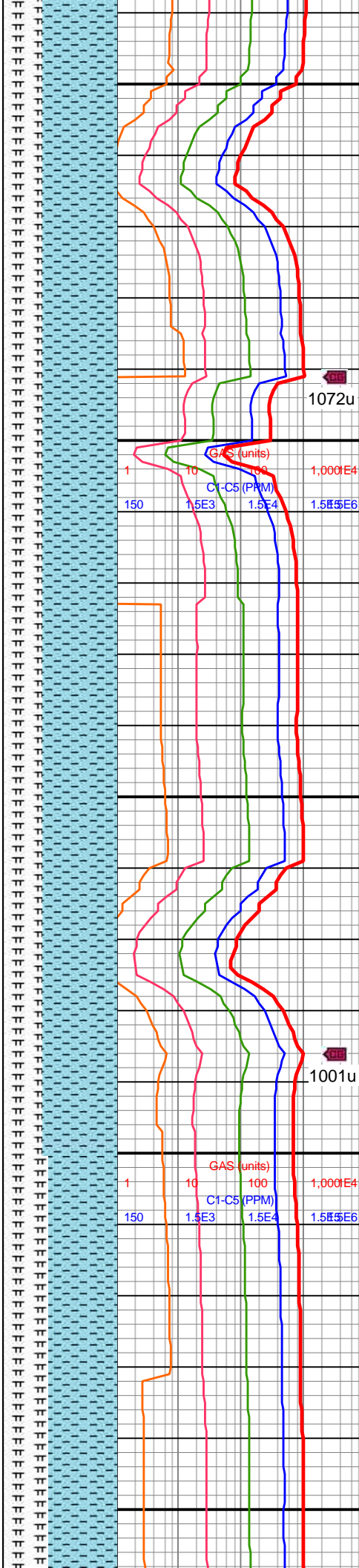
13,640  
13,650  
13,660  
13,670  
13,680  
13,690  
13,700  
13,710  
13,720  
13,730  
13,740  
13,750  
13,760  
13,770  
13,780  
13,790  
13,800  
13,810  
13,820  
13,830  
13,840  
13,850

MD: 13,722'  
INC: 89.74°  
AZM: 356.75°  
TVD: 7,251.52'  
VS: 5,771.34'

MW IN: 10  
VIS IN: 53  
MW OUT: 10  
VIS OUT: 47

WOB: 33.4klbs  
RPM: 69  
SPM: 190  
SPP: 5,545psi

MD: 13,817'  
INC: 89.34°  
AZM: 356.48°  
TVD: 7,252.28'  
VS: 5,866.34'

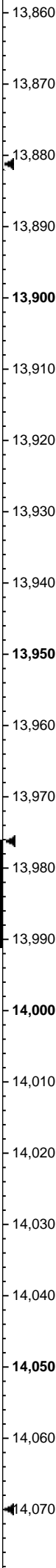
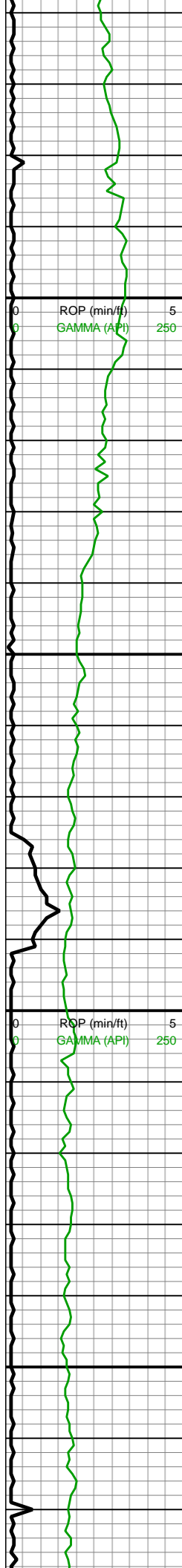


13600-13700 CHK  
(65%): gyshbn-med gy,  
mot, fri-frm, sb blk-ty-tab,  
sm chky tex, com intbd  
MRLST, v calc; MRLST  
(35%): dk gy-med gy,  
mot, sl sm-abrsv tex, sb  
blk-ty-tab, frm-hd, com  
intbd CHK, mod calc, occ  
pyr nod

1072u

13700-13800 CHK  
(65%): gyshbn-med gy,  
mot, fri-frm, sb blk-ty-tab,  
sm chky tex, com intbd  
MRLST, v calc; MRLST  
(35%): dk gy-med gy,  
mot, sl sm-abrsv tex, sb  
blk-ty-tab, frm-hd, com  
intbd CHK, mod calc, occ  
pyr nod

1001u



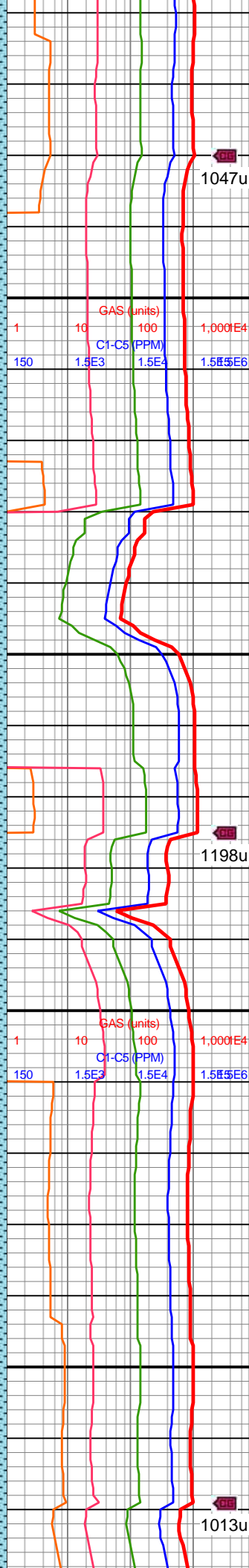
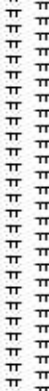
MW IN: 10  
VIS IN: 50  
MW OUT: 10  
VIS OUT: 45

MD: 13,911'  
INC: 88.81°  
AZM: 356.13°  
TVD: 7,253.8'  
VS: 5,960.33'

WOB: 33.9klbs  
RPM: 70  
SPM: 190  
SPP: 5,594psi

MD: 14,006'  
INC: 89.96°  
AZM: 357.01°  
TVD: 7,254.82'  
VS: 6,055.32'

MW IN: 10  
VIS IN: 47  
MW OUT: 10  
VIS OUT: 45



13800-13900 CHK  
(60%): gyshbn-med gy,  
mot, fri-frm, sb blkyl-tab,  
sm chky tex, tr intbd  
MRLST, v calc; MRLST  
(40%): dk gy-med gy,  
mot, sl sm-rgh tex, sb  
blkyl-tab, frm-sl hd, com  
intbd CHK, mod calc,  
com imbd mic pyr/pyrc  
nod

1047u

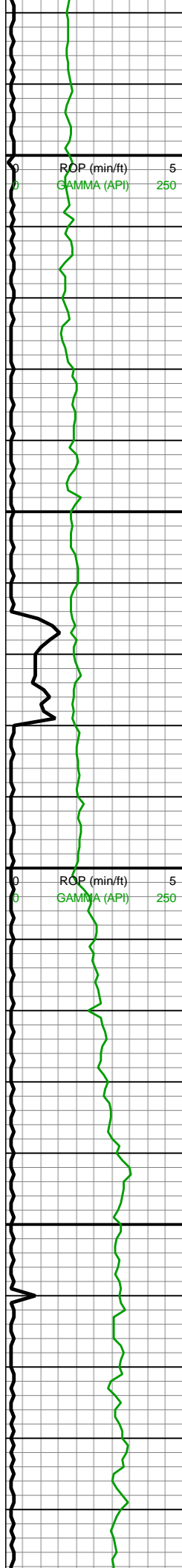
13900-14000 CHK  
(90%): med gy-gyshbn,  
mot crm, sb blkyl-sb tab,  
frm-sl sft, mod fis, sme  
MRLST lamn, v calc, mnrl  
pp mic pyr; MRLST  
(10%): dk gy, mot med  
gy, frm-sl hd, tab-sb blkyl,  
brit, mod calc, sme CHK  
incl

1198u

14100-14200 CHK  
(90%): med gy-gyshbn,  
mot crm, sb blkyl-sb tab,

1013u





14,080  
14,090  
14,100  
14,110  
14,120  
14,130  
14,140  
14,150  
14,160  
14,170  
14,180  
14,190  
14,200  
14,210  
14,220  
14,230  
14,240  
14,250  
14,260  
14,270  
14,280  
14,290

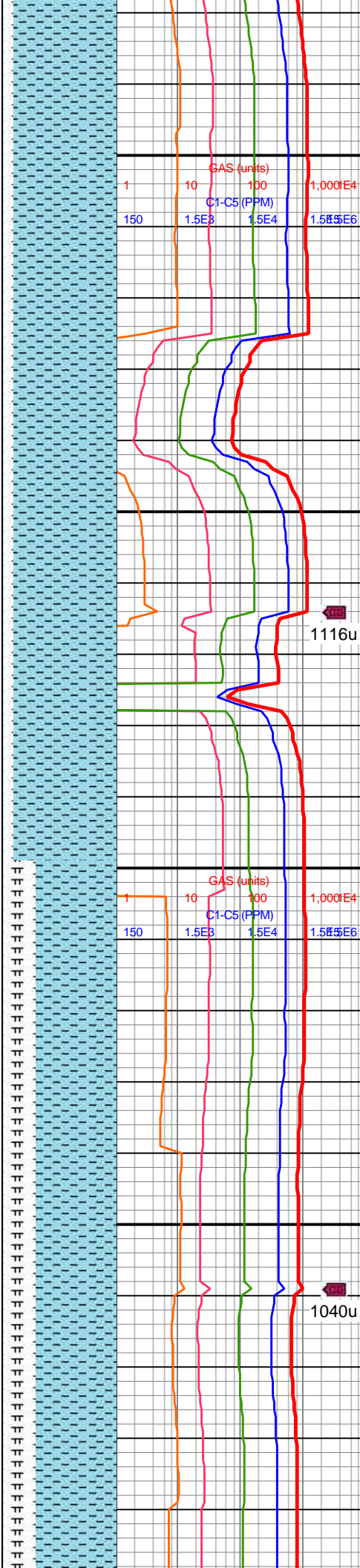
MD: 14,100'  
INC: 90.57°  
AZM: 356.31°  
TVD: 7,254.39'  
VS: 6,149.32'

MD: 14,195'  
INC: 90.62°  
AZM: 357.8°  
TVD: 7,253.4'  
VS: 6,244.31'

WOB: 30.4klbs  
RPM: 70  
SPM: 190  
SPP: 5,553psi

MW IN: 10  
VIS IN: 49  
MW OUT: 10  
VIS OUT: 47

MD: 14,290'  
INC: 90.66°  
AZM: 357.45°  
TVD: 7,252.34'  
VS: 6,339.28'



frm-sl sft, mod fis, sme  
MRLST lamn, v calc, mnr  
pp mic pyr; MRLST  
(10%): dk gy, mot med  
gy, frm-sl hd, tab-sb blk,  
brit, mod calc, sme CHK  
incl

14100-14200 CHK  
(90%): med gy-gyshbn,  
mot crm, sb blk-sb tab,  
frm-sl sft, mod fis, sme  
MRLST lamn, v calc, mnr  
pp mic pyr; MRLST  
(10%): dk gy, mot med  
gy, frm-sl hd, tab-sb blk,  
brit, mod calc, sme CHK  
incl

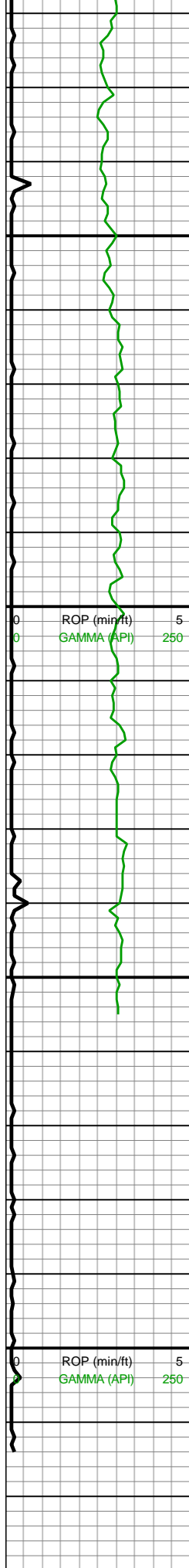
14200-14300 CHK  
(70%): med gy-gyshbn,  
mot crm, sb blk-sb tab,  
frm-sl sft, mod fis, sme  
MRLST lamn, v calc, mnr  
pp mic pyr; MRLST  
(30%): dk gy, mot med  
gy, frm-sl hd, tab-sb blk,  
brit, mod calc, sme CHK











14,520  
14,530  
14,540  
14,550  
14,560  
14,570  
14,580  
14,590  
14,600  
14,610  
14,620  
14,630  
14,640  
14,650  
14,660  
14,670  
14,680  
14,690  
14,700  
14,710  
14,720  
14,730

MD: 14,573'  
INC: 89.56°  
AZM: 356.66°  
TVD: 7,248.34'  
VS: 6,622.16'

WOB: 32klbs  
RPM: 70  
SPM: 188  
SPP: 5,490psi

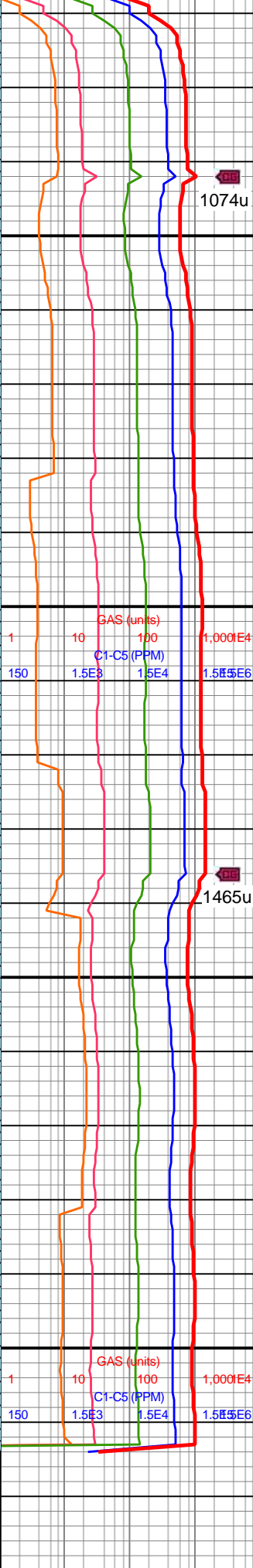
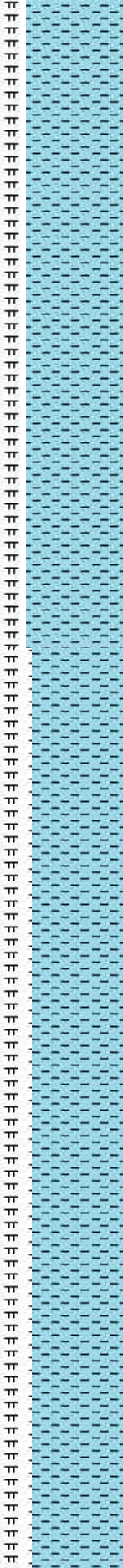
MW IN: 10  
VIS IN: 48  
MW OUT: 10  
VIS OUT: 46

MD: 14,650'  
INC: 89.34°  
AZM: 355.6°  
TVD: 7,249.08'  
VS: 6,699.15'

**Projection to Bit:**

MD: 14,714'  
INC: 89.34°  
AZM: 355.6°  
TVD: 7,249.81'  
VS: 6,763.14'

**Total Depth of  
14,714' MD was  
Reached on  
08/11/2018 @  
14:38 MST**



14500-14600 CHK  
(75%): med gy-gyshbn,  
mot crm, sb blk-y-sb tab,  
frm-sl sft, mod fis, sme  
MRLST lamn, v calc, scatt  
pp mic pyr; MRLST  
(25%): dk gy, mot med  
gy, frm-hd, tab-sb blk-y,  
brit, mod calc, tr CHK incl

14600-14714 CHK  
(70%): med gy-gyshbn,  
mot crm, sb blk-y-sb tab,  
frm-sl sft, mod fis, sme  
MRLST lamn, v calc, scatt  
pp mic pyr; MRLST  
(30%): dk gy, mot med  
gy, frm-hd, tab-sb blk-y,  
brit, mod calc, tr CHK incl

