



Scale: 5" / 100'
Measured Depth Log

Well Name Creston Peak Davis 1T-9H-G266

Location Sec. 4 T2N R66W

State Colorado

County Weld

Country USA

Rig Number Ensign 153

API Number 05123465160000

AFE # 16191038

Geographic Region Rockies

Field Wattenberg

Spud Date 6/2/2018

Drilling Completed 6/8/2018

Surface Coordinates Lat/Long: 40.154783/-104.779502

SHL: Sec: 4 Twp: 2N 66W
Footage: 2048 FSL 1473 FEL

Bottom Hole Coordinates Proposed BHL: Sec: 4 Twp: 2N 66W
Footages: 460 FNL 2352 FWL

Ground Elevation 4,917'

K.B. Elevation 4,940'

Logged Interval 6,500' **To** 14,750'

Total Depth 14,750'

Formation NIO C 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: Empirica, Reservoir Group
6360 West Sam Houston Pkwy N
Houston, Texas, 77041

Job #: 1310RK1806

Start Date 6/5/2018

Release Date: 6/9/2018

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

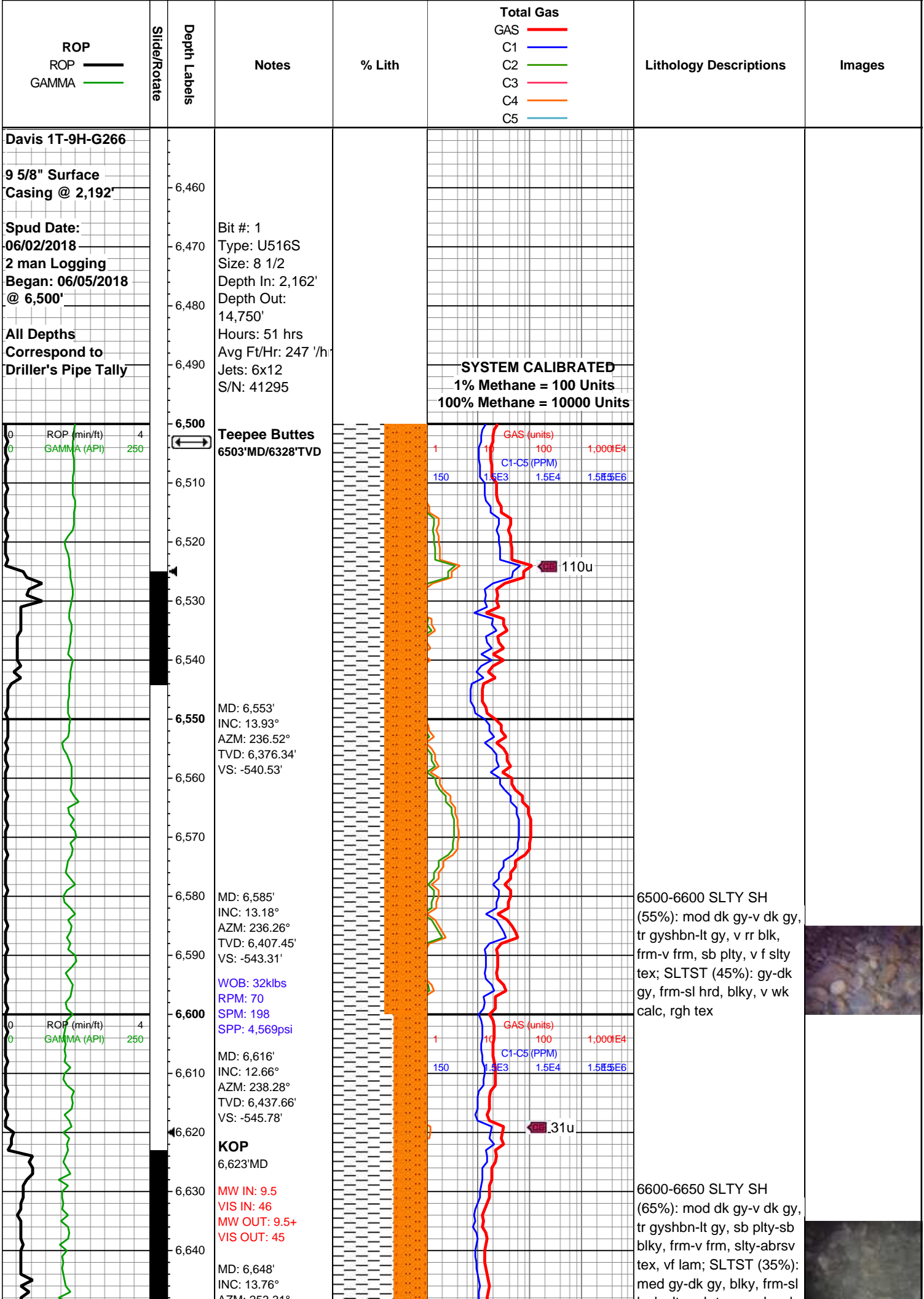
Textures

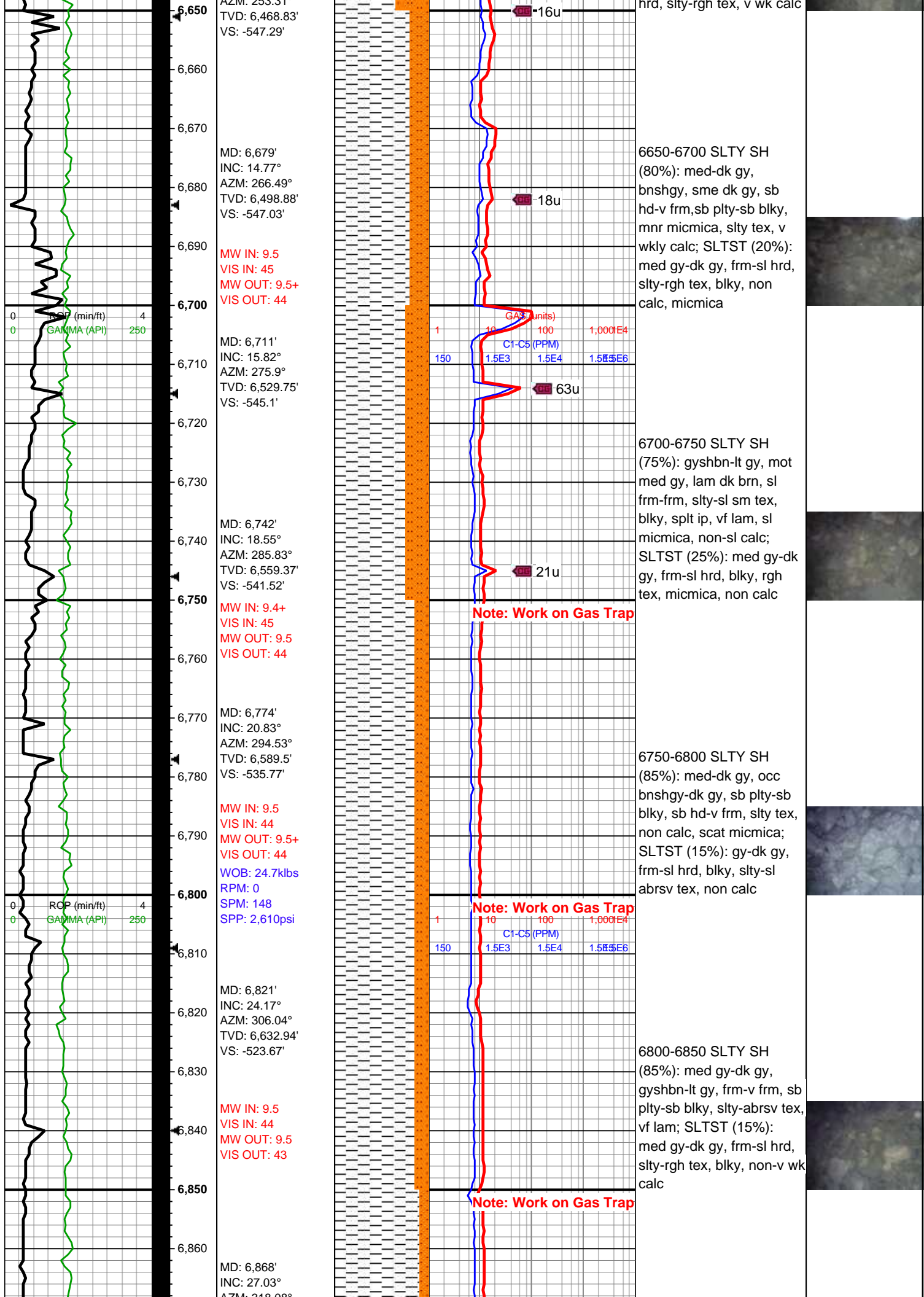
- BOUNDSTONE
- CHALKY
- CRYPTOXLN
- E EARTHY
- F FINELYXLN
- GRAINSTONE

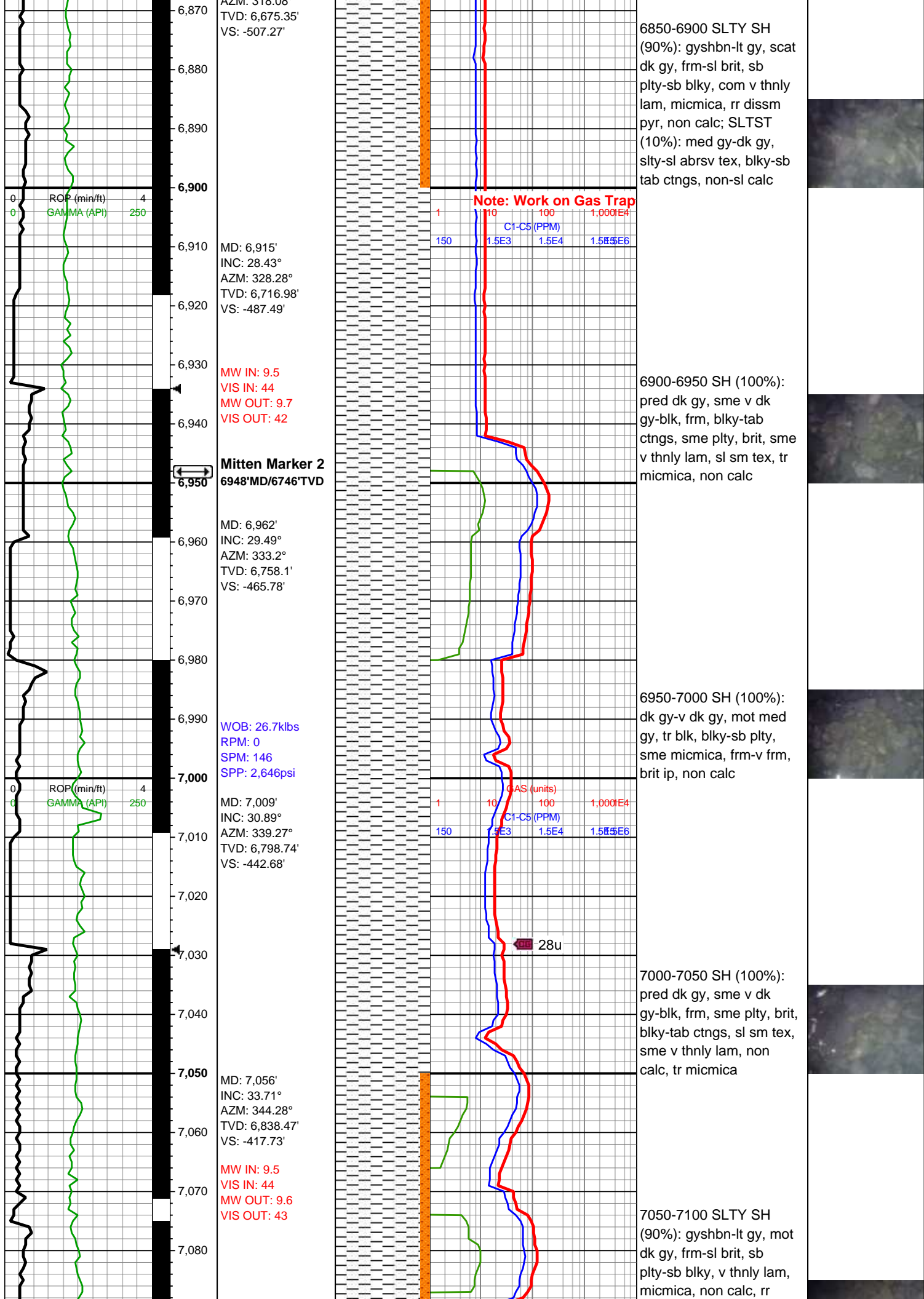
- L LITHOGRAPHIC
- MX MICROXLN
- MS MUDSTONE
- PS PACKSTONE
- WS WACKESTONE

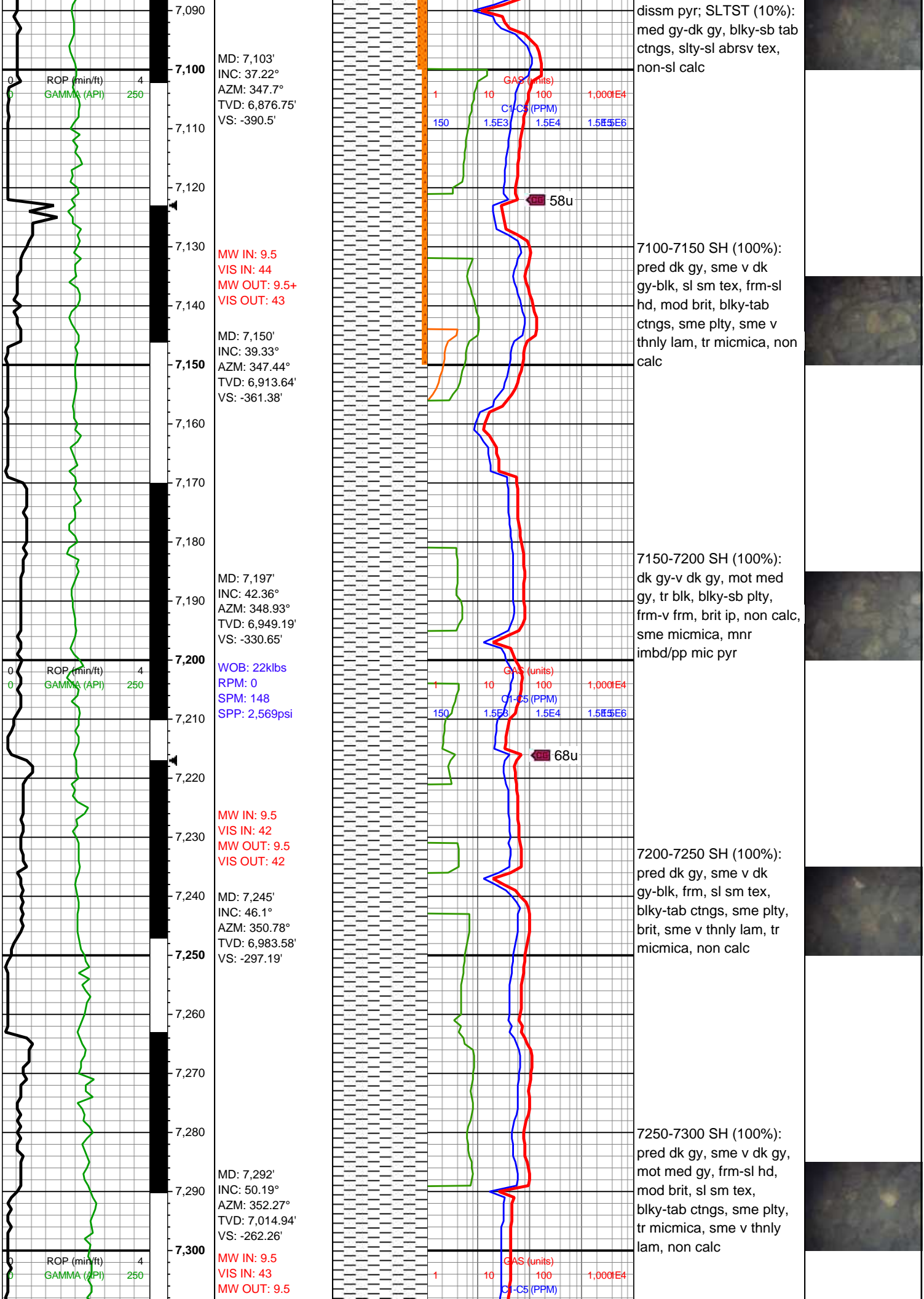
Sorting

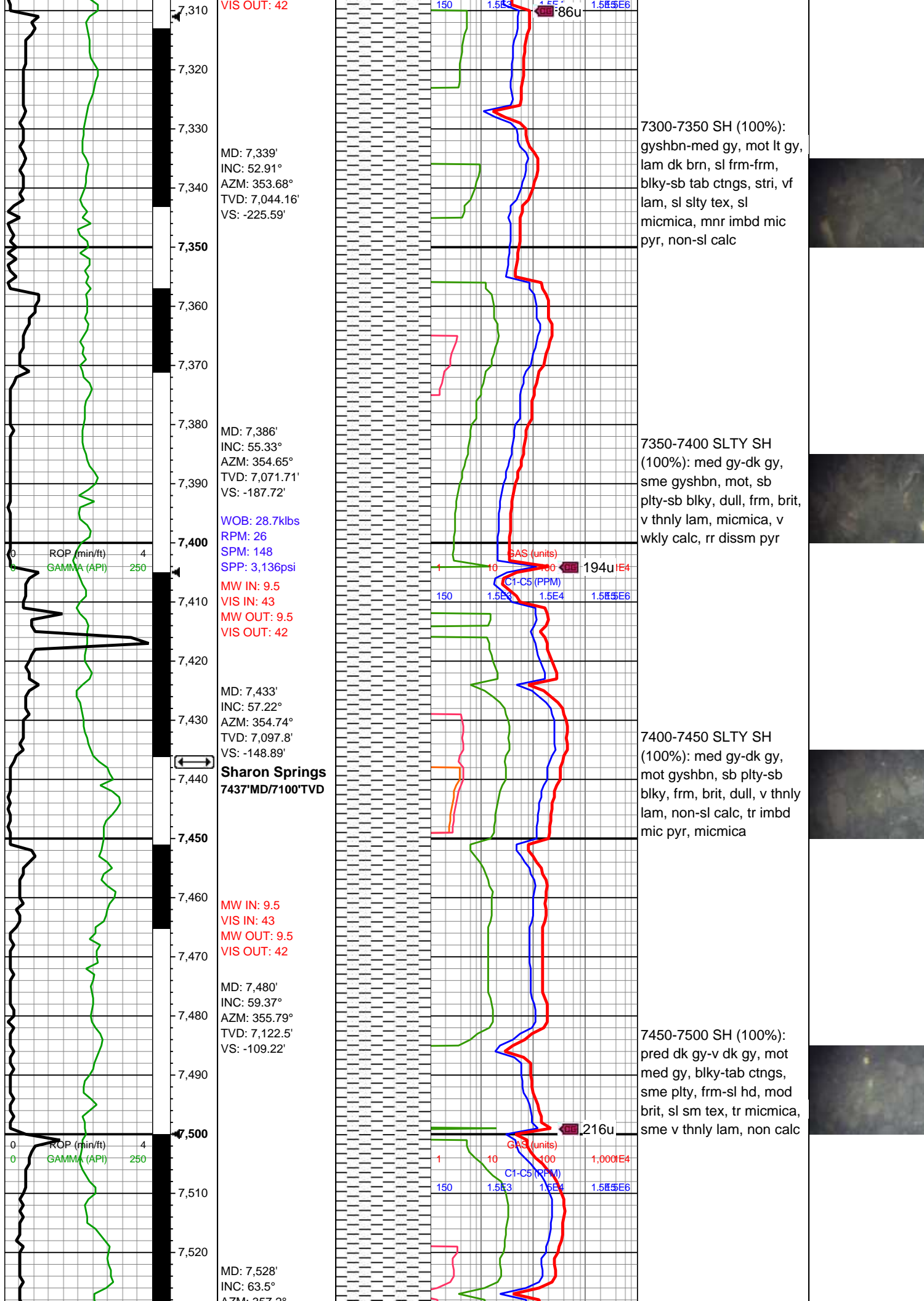
- M MODERATE
- P POOR
- W WELL

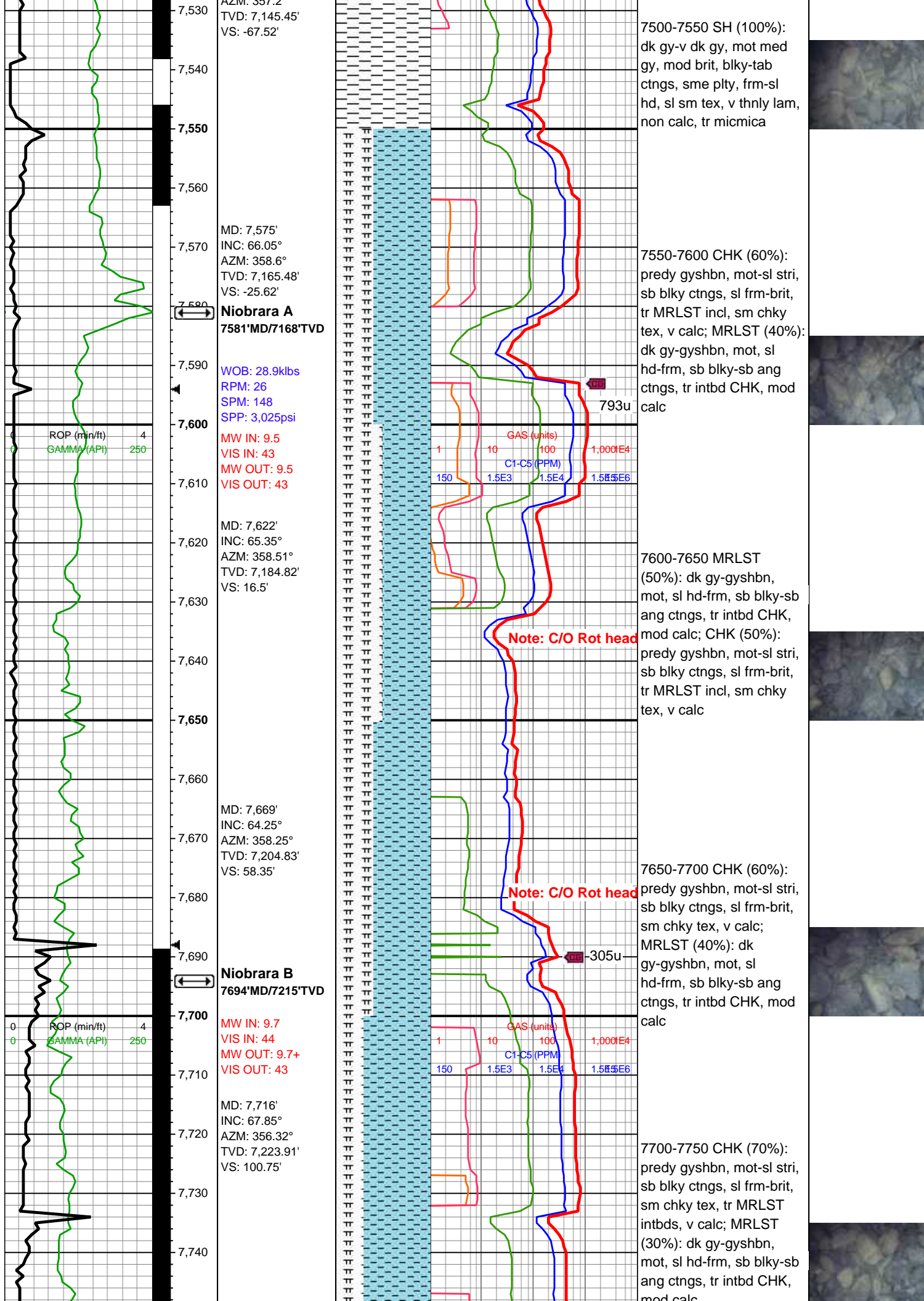


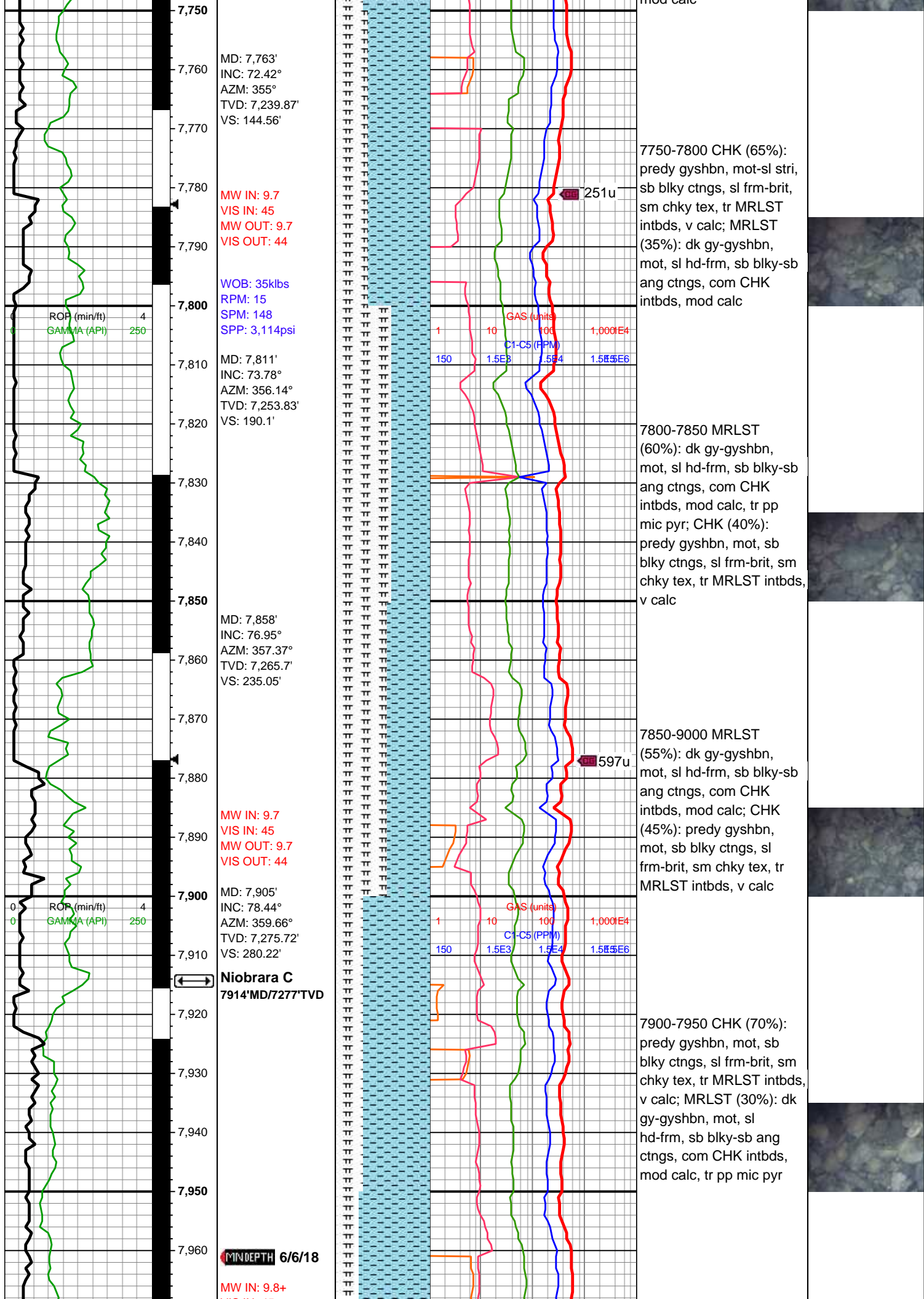


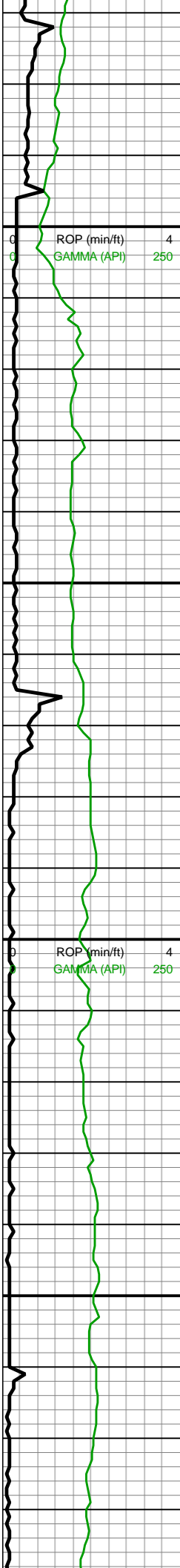












VIS IN: 45
MW OUT: 9.7+
VIS OUT: 44

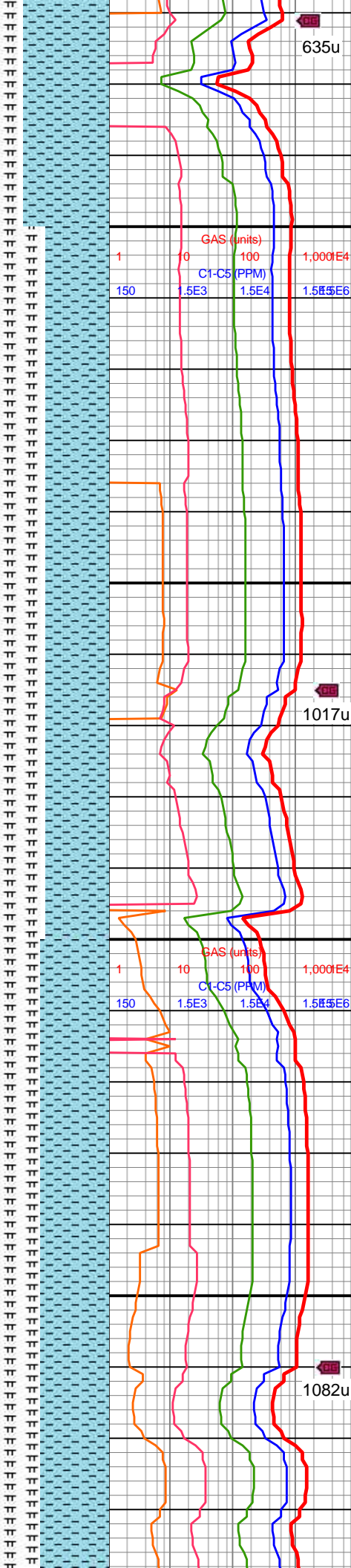
WOB: 33klbs
RPM: 15
SPM: 146
SPP: 3,153psi

Land Curve
7,996'MD
MD: 8,000'
INC: 87.63°
AZM: 359.04°
TVD: 7,287.23'
VS: 372.61'

MD: 8,094'
INC: 88.99°
AZM: 358.34°
TVD: 7,290'
VS: 464.98'

MW IN: 9.8
VIS IN: 45
MW OUT: 9.8+
VIS OUT: 44

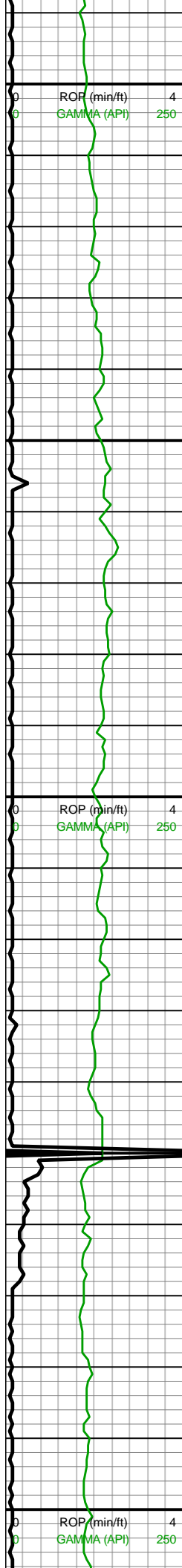
MD: 8,189'
INC: 88.95°
AZM: 358.16°
TVD: 7,291.71'



7950-8000 CHK (75%):
predy gyshbn, mot, sb
blky ctngs, sl frm-brit, sm
chky tex, tr MRLST intbds,
v calc; MRLST (25%): dk
gy-gyshbn, mot, sl
hd-frm, sb blky-sb ang
ctngs, com CHK intbds,
mod calc

8000-8100 CHK (55%):
predy gyshbn-med gy,
mot, sme lt gy, sb blky-sb
ang ctngs, fri-frm, tr intbd
MRLST, sm chky tex, com
inoc fos frags, calc;
MRLST (45%): dk
gyshbn-dk gy, frm-sl hd,
sb blky-ang ctngs, sl
sm-rgh tex, com intbd
CHK, scat pyrc nod, scat
frac fl cal, calc

8100-8200 CHK (60%):
gyshbn-med gy, mot,
sme lt gy, sb blky-sb ang
ctngs, fri-frm, tr intbd
MRLST, sm chky tex, com
inoc fos frags, calc;
MRLST (40%): dk
gyshbn-dk gy, frm-sl hd



VS: 558.49'

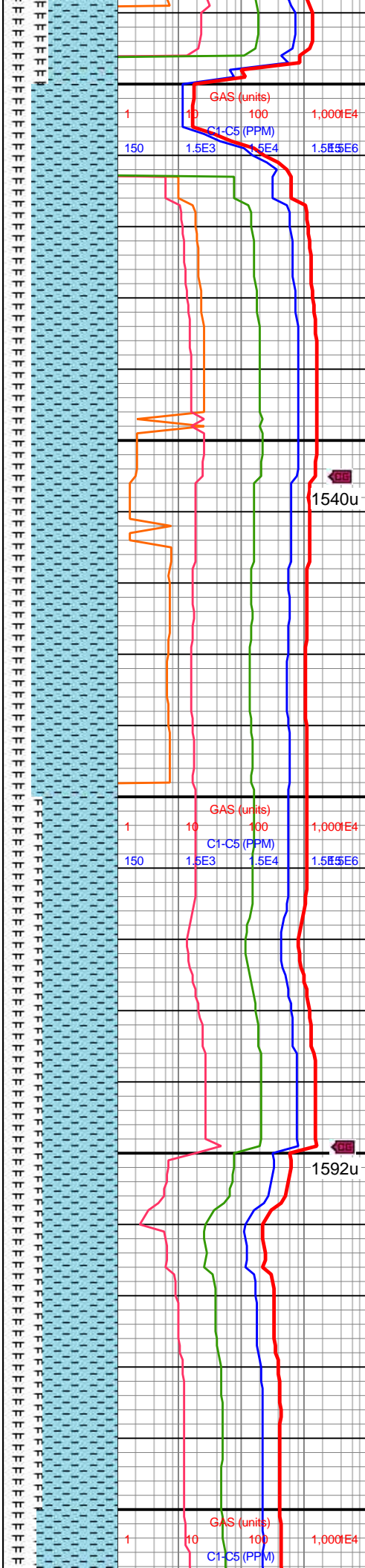
WOB: 34klbs
RPM: 70
SPM: 198
SPP: 4,869psi

MD: 8,284'
INC: 88.77°
AZM: 358.51°
TVD: 7,293.6'
VS: 651.96'

MW IN: 9.8
VIS IN: 45
MW OUT: 9.8+
VIS OUT: 44

MD: 8,378'
INC: 90°
AZM: 359.48°
TVD: 7,294.6'
VS: 744.27'

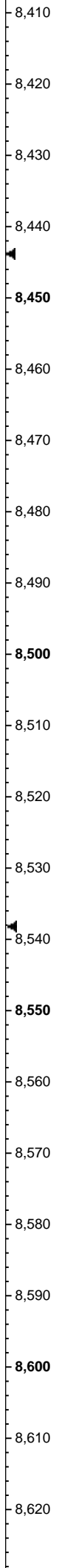
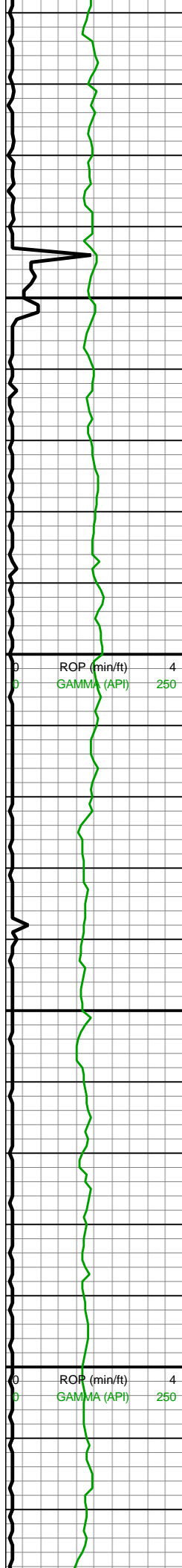
WOB: 35klbs
RPM: 70
SPM: 198
SPP: 4,964psi



gyshbn-dk gy, tr intbd
sb blk-ang ctngs, sl
sm-rgh tex, com intbd
CHK, scat pyrc nod, scat
frac fl cal, calc

8200-8300 CHK (75%):
predy gyshbn-med gy, tr
offwht, fab mot, sme lt gy,
sb blk-sb ang ctngs,
fri-frm, tr intbd MRLST,
sm chky tex, com inoc fos
frags, calc; MRLST
(25%): dk gyshbn-dk gy,
frm-sl hd, sb blk-ang
ctngs, sl sm-rgh tex, com
intbd CHK, scat pyrc nod,
scat frac fl cal, hi calc

8300-8400 CHK (65%):
predy gyshbn-med gy, tr
offwht, mot, sme lt gy, sb
ang-sb blk ctngs, fri-frm,
tr intbd MRLST, sm chky
tex, calc; MRLST (35%):
dk gyshbn-dk gy, frm-sl
hd, sb blk-ang ctngs, sl
sm-rgh tex, com intbd
CHK, scat pyrc nod, scat
frac fl cal, v hi calc

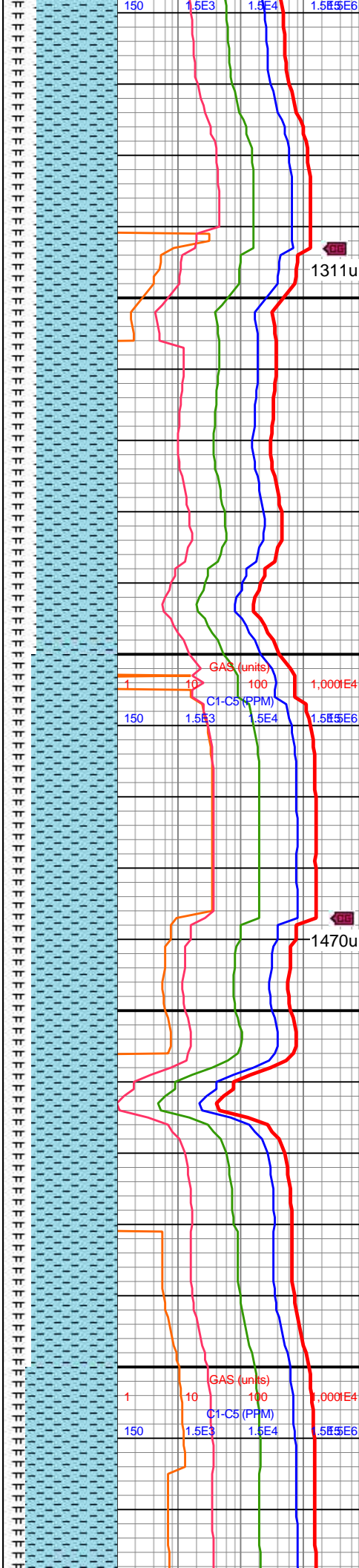


MW IN: 9.9
VIS IN: 45
MW OUT: 9.9
VIS OUT: 44

MD: 8,472'
INC: 91.54°
AZM: 359.48°
TVD: 7,293.34'
VS: 836.42'

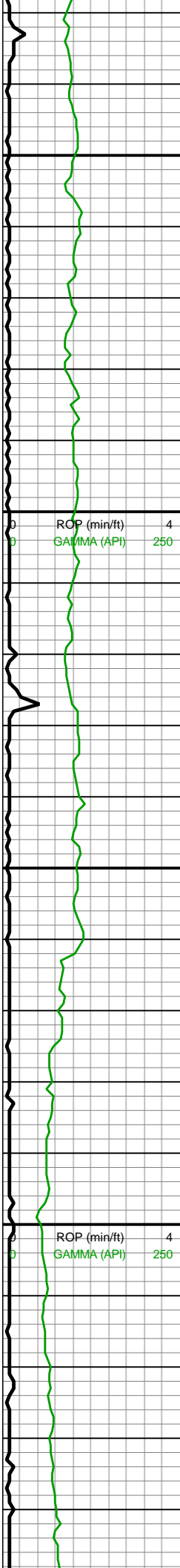
MD: 8,566'
INC: 91.76°
AZM: 359.57°
TVD: 7,290.63'
VS: 928.53'

WOB: 35klbs
RPM: 70
SPM: 196
SPP: 4,913psi



8400-8500 CHK (70%):
predy gyshbn-med gy, tr
offwht frags, mot, sme lt
gy, sb ang-sb blk cytns,
fri-frm, tr intbd MRLST,
sm chky tex, calc; MRLST
(30%): dk gyshbn-dk gy,
frm-sl hd, sb blk-ang
ctngs, sl sm-rgh tex, com
intbd CHK, scat frac fl cal,
hi calc

8500-8600 CHK (75%):
med gy-gyshbn, frm, sb
blk-sb plty, med fis
ctngs, tr imbd/dissm mic
pyr, mn MRLST lamn, hi
calc; MRLST (25%): dk
gyshbn-dk gy, frm-sl
hd-brit, tr CHK incl, mod
calc

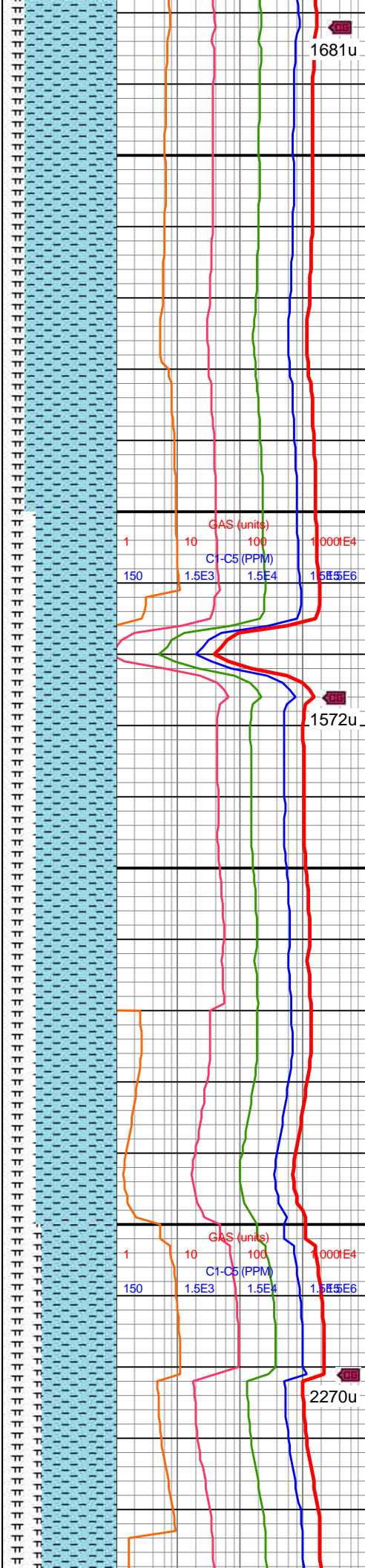


MD: 8,661'
INC: 91.54°
AZM: 359.48°
TVD: 7,287.9'
VS: 1,021.62'

MD: 8,755'
INC: 91.67°
AZM: 359.22°
TVD: 7,285.27'
VS: 1,113.79'

WOB: 35klbs
RPM: 70
SPM: 198
SPP: 4,955psi

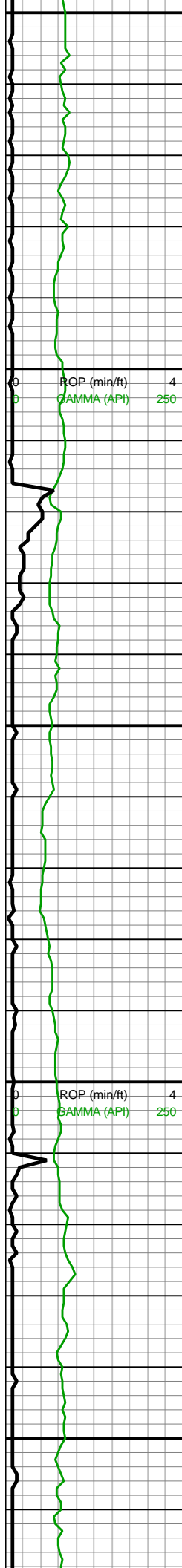
MD: 8,850'
INC: 92.15°



8600-8700 CHK (80%):
gyshbn-med gy, mot lt gy,
silty-rgh tex, sl frm, l-mod
fis, sb blkyl-blky ctngs, tr
pp mic pyr, mod-hi calc;
MRLST (20%): med gy-dk
gy, dk gyshbn, frm-sl
hd-brit, mod fis, sb
blkyl-tab ctngs, rr f chky
incl ip, mod calc

8700-8800 CHK (70%):
gyshbn-med gy, blkyl-sb
tab ctngs, frm-sl hd,
sm-sl rgh tex, tr-mnr mic
pyr,; MRLST (30%) med
gy-gyshbn, dk gy, blkyl-sb
plty, frm-sl brit, tr-rr vf-f
pyr, mnr CHK incl/lamn





AZM: 359.22°
TVD: 7,282.1'
VS: 1,206.96'

MW IN: 9.9
VIS IN: 45
MW OUT: 9.9+
VIS OUT: 44

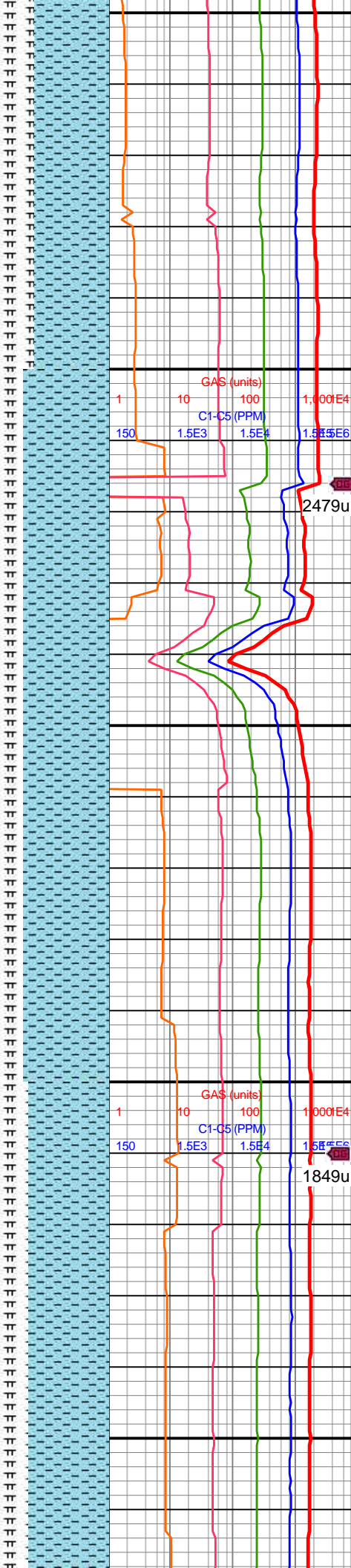
MW IN: 10
VIS IN: 45
MW OUT: 10.0
VIS OUT: 44

MD: 8,945'
INC: 90.97°
AZM: 0.18°
TVD: 7,279.51'
VS: 1,299.99'

WOB: 33.7klbs
RPM: 70
SPM: 196
SPP: 4,878psi

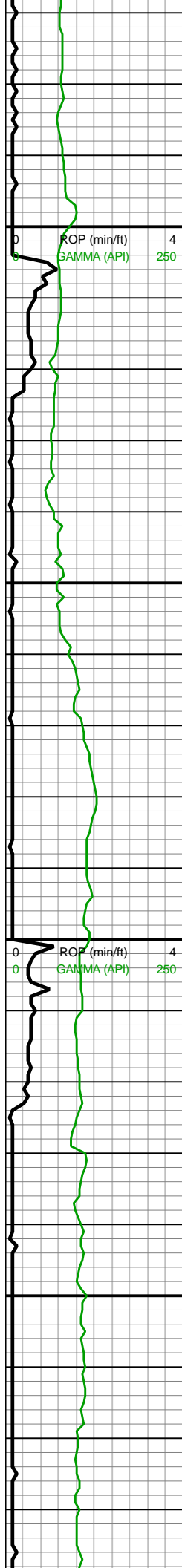
MD: 9,039'
INC: 91.71°
AZM: 0.27°
TVD: 7,277.32'
VS: 1,391.88'

MW IN: 10
VIS IN: 46
MW OUT: 10.0
VIS OUT: 44



8800-8900 CHK (65%):
gyshbn-med gy, mot, lt
gy, sb ang-sb blk cytns,
fri-frm, tr intbd MRLST,
sm chky tex, tr offwht
CHK frags, calc; MRLST
(35%): dk gyshbn-dk gy,
sb blk cytns, frm-sl
hd, sl sm-rgh tex, com
intbd CHK, mod-hi calc

8900-9000 CHK (75%):
med gy-gyshbn, sb
blk cytns, frm, med fis
cytns, mnrl MRLST lamn,
hi calc, tr imbd/dissm
mic pyr; MRLST (25%):
dk gyshbn-dk gy, tab-sb
blk cytns, frm-sl hd, brit, mod
calc, tr CHK incl



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

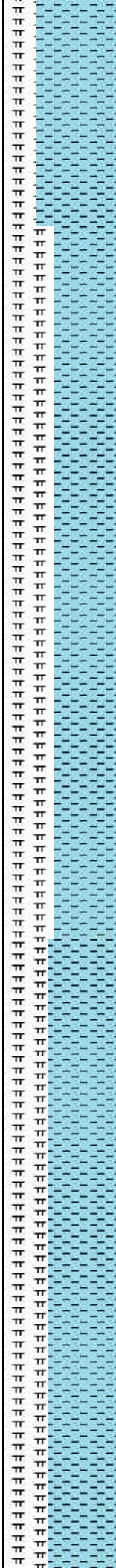
MD: 9,134'
INC: 92.33°
AZM: 0.27°
TVD: 7,273.97'
VS: 1,484.7'

MW IN: 10
VIS IN: 46
MW OUT: 10.1
VIS OUT: 44

WOB: 34.4klbs
RPM: 70
SPM: 204
SPP: 5,215psi

MD: 9,228'
INC: 90.22°
AZM: 0.36°
TVD: 7,271.88'
VS: 1,576.55'

MW IN: 10.0+
VIS IN: 46
MW OUT: 10.1
VIS OUT: 43



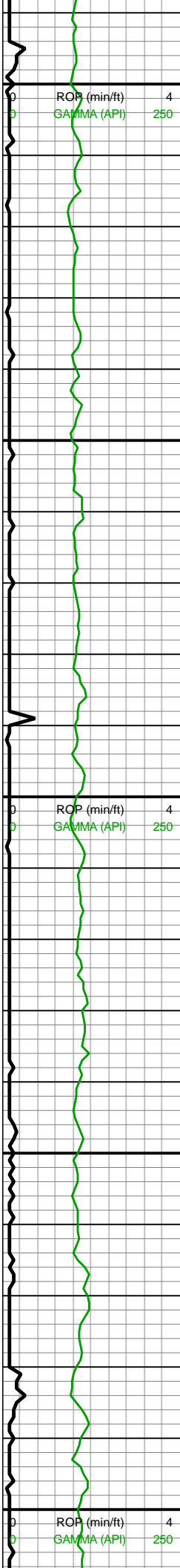
GAS (units)
C1-C5 (PPM)
1 10 100 1000
150 1.5E3 1.5E4 1.5E5

GAS (units)
C1-C5 (PPM)
1 10 100 1000
150 1.5E3 1.5E4 1.5E5

9000-9100 CHK (70%):
gyshbn-med gy, sm-sl
rgh tex, blkyl-sb tab ctngs,
frm-sl hd, tr-mnr mic pyr,
mnr free CHK; MRLST
(30%) med gy-gyshbn, dk
gy, frm-sl brit, blkyl-sb plty,
mnr CHK incl/lamn, tr-rr
vf-f pyr, mod calc

9100-9200 CHK (55%):
gyshbn-med gy, mot lt gy,
sb blkyl-sb ang ctngs, sl
frm, tr intbd MRLST, sm
chky tex, hi calc; MRLST
(45%): dk gyshbn-dk gy,
sl sm-rgh tex, frm-sl hd,
sb blkyl-ang ctngs, com
intbd CHK, scat pyrc nod,
mod calc

9200-9300 CHK (60%):
predy gyshbn-med gy, sl
frm-brit, mot-sl stri, sb
blkyl ctngs, tr MRLST
lamn, sm chky tex, v calc;
MRLST (40%): dk



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
9,460
9,470
9,480
9,490
9,500

MD: 9,323'
INC: 90.35°
AZM: 359.92°
TVD: 7,271.4'
VS: 1,669.47'

MW IN: 10.0+
VIS IN: 44
MW OUT: 10.1
VIS OUT: 43

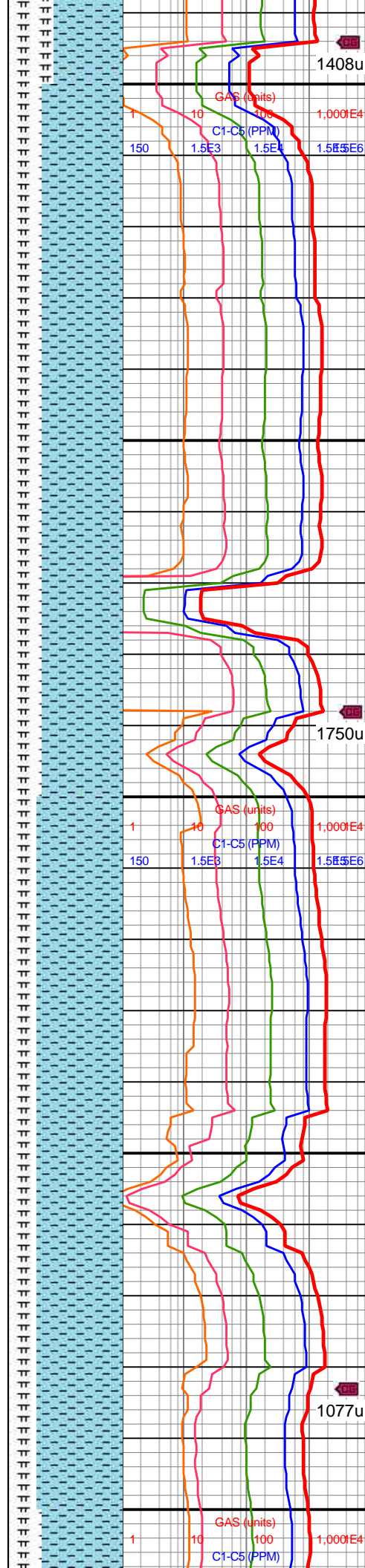
WOB: 35.6klbs
RPM: 70
SPM: 203
SPP: 5,248psi

MD: 9,417'
INC: 90.4°
AZM: 359.39°
TVD: 7,270.79'
VS: 1,761.57'

MW IN: 10.0+
VIS IN: 44
MW OUT: 10.1+
VIS OUT: 43

MW IN: 10.0+
VIS IN: 44
MW OUT: 10.1+
VIS OUT: 43

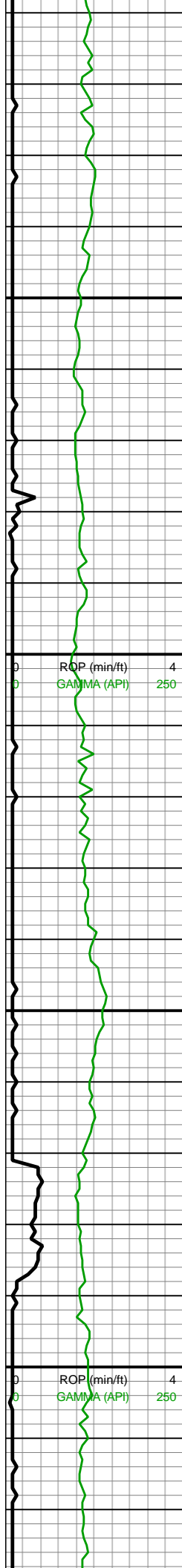
MD: 9,512'



gy-gyshbn, mot, sb
blky-sb tab ctngs, sl
hd frm, mod calc, tr intbd
CHK

9300-9400 CHK (70%):
gyshbn-med gy, blky-sb
tab ctngs, frm-sl hd,
sm-sl rgh tex, mnr free
CHK, tr-mnr mic pyr;
MRLST (30%) med
gy-gyshbn, dk gy, frm-sl
brit, mnr CHK incl/lamn,
blky-sb plty, mod calc,
tr-rr vf-f pyr

9400-9500 CHK (75%):
med gy-gyshbn, sb
blky-sb plty, frm-sl frm,
med fis ctngs, mnr
MRLST lamn, mnr free
CHK, tr diss/pp mic pyr,
hi calc; MRLST (25%): dk
gyshbn-dk gy, sl sm tex,
frm-sl hd-brit, mod calc, tr
CHK incl



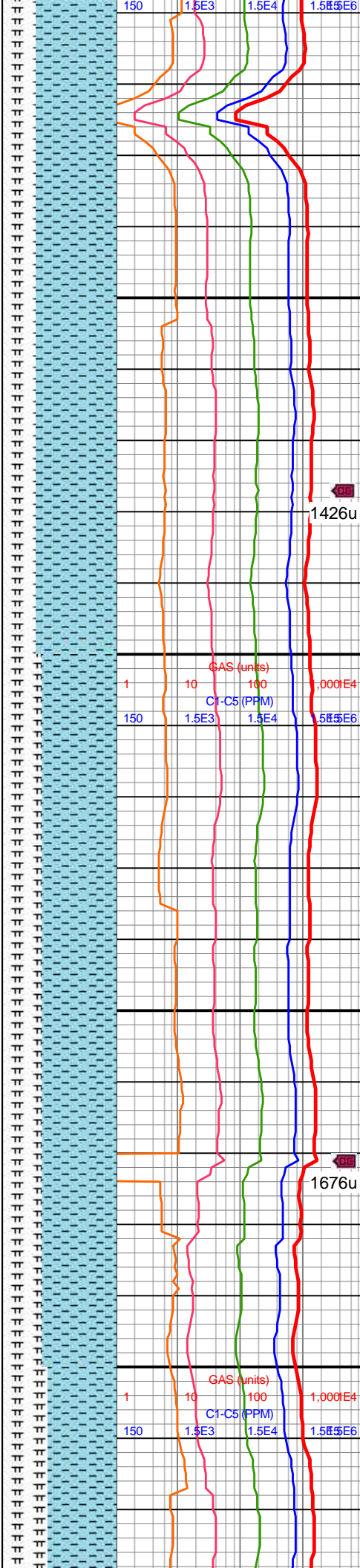
INC: 91.19°
AZM: 358.95°
TVD: 7,269.47'
VS: 1,854.8'

WOB: 34klbs
RPM: 70
SPM: 202
SPP: 5,267psi

MD: 9,605'
INC: 91.67°
AZM: 358.95°
TVD: 7,267.15'
VS: 1,946.12'

MW IN: 10
VIS IN: 46
MW OUT: 10.1
VIS OUT: 44

MD: 9,700'
INC: 90.88°
AZM: 359.83°
TVD: 7,265.04'
VS: 2,039.27'

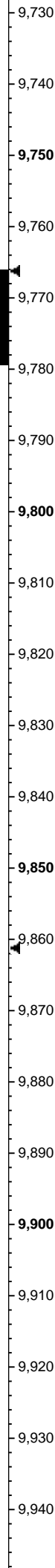
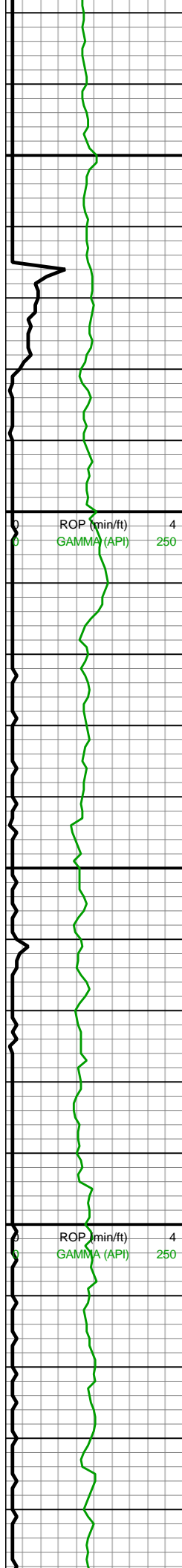


9500-9600 CHK (70%):
predy gyshbn-med gy, sb
blky ctngs, mot-sl stri, sm
chky tex, sl frm-brit, tr
MRLST intbds, v calc;
MRLST (30%): dk gy-dk
gyshbn, mot, sb blky-sb
ang ctngs, sl hd-frm,
mod calc, tr intbd CHK

1426u

9600-9700 CHK (65%):
gyshbn-med gy, mot lt gy,
fri-frm, tr intbd MRLST, sb
ang-sb blky ctngs, sm
chky tex, hi calc, tr offwht
CHK frags; MRLST
(35%): dk gyshbn-dk gy,
sl sm tex, sb blky-ang
ctngs, frm-sl hd, mod-hi
calc, com intbd CHK

1676u



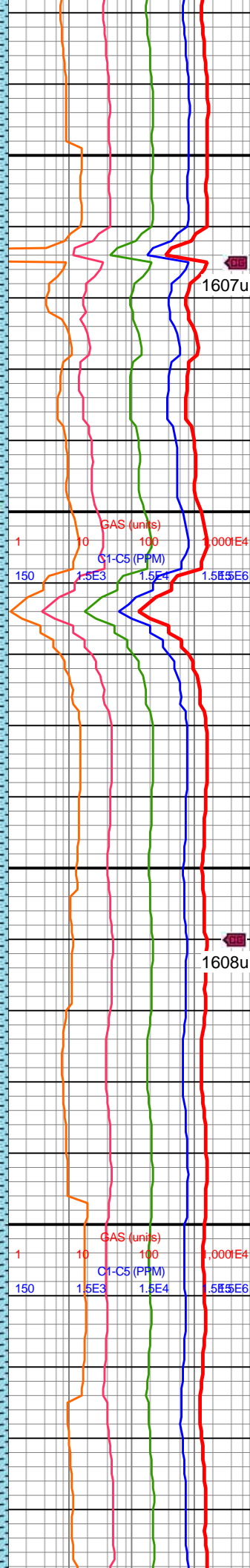
MW IN: 10
VIS IN: 44
MW OUT: 10.1
VIS OUT: 45

MD: 9,794'
INC: 89.43°
AZM: 1.42°
TVD: 7,264.78'
VS: 2,131.04'

WOB: 32.7klbs
RPM: 69
SPM: 202
SPP: 5,248psi

MD: 9,889'
INC: 89.74°
AZM: 1.59°
TVD: 7,265.47'
VS: 2,223.46'

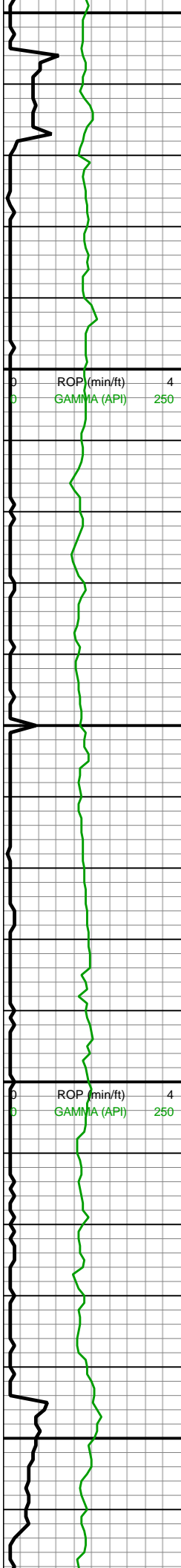
MW IN: 10
VIS IN: 45
MW OUT: 10.1
VIS OUT: 44



9700-9800 CHK (60%):
gyshbn-med gy, sm chky
tex, sl frm, brit, mot-sl stri,
sb blk cyctngs, tr MRLST
lamn, hi calc; MRLST
(40%): dk gy-gyshbn,
mot, sl hd-frm, sb blk cy-sb
tab ctngs, tr intbd CHK,
mod calc

9800-9900 CHK (70%):
gyshbn-med gy, mot lt gy,
fri-frm, mnr intbd MRLST,
tab-sb blk cyctngs, sm
chky tex, hi calc, mnr crm
CHK frags; MRLST
(30%): dk gyshbn-dk gy,
sl sm tex, frm-sl hd, sb
blk cy-ang ctngs, com intbd
CHK, mod-hi calc





MD: 9,984'
INC: 90.7°
AZM: 0.1°
TVD: 7,265.1'
VS: 2,316.12'

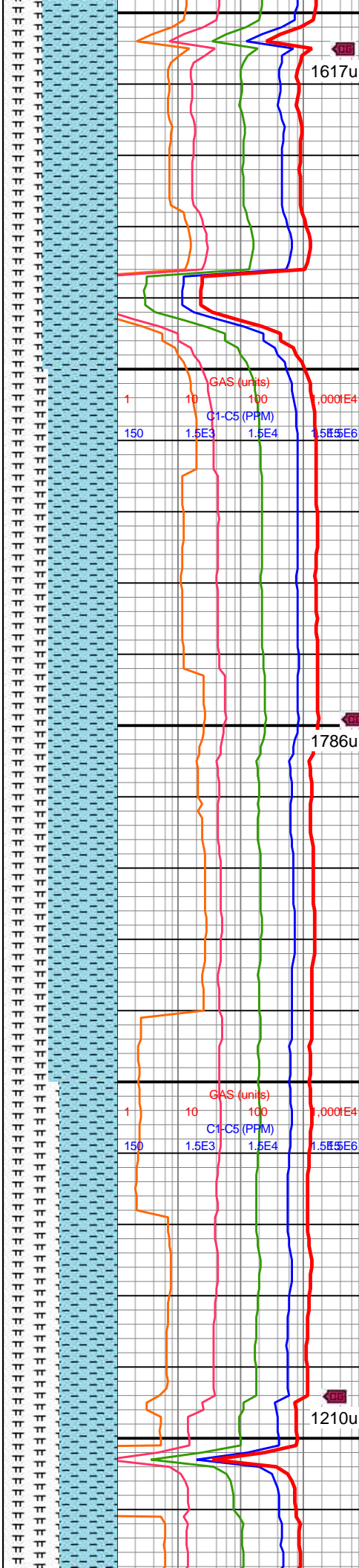
WOB: 32.8klbs
RPM: 70
SPM: 204
SPP: 5,224psi

MW IN: 10.0+
VIS IN: 44
MW OUT: 10.1
VIS OUT: 43

MD: 10,078'
INC: 91.45°
AZM: 0.18°
TVD: 7,263.34'
VS: 2,408.05'

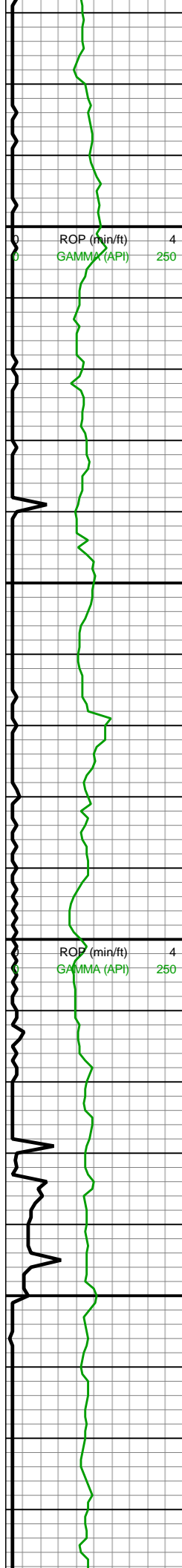
MW IN: 10.0+
VIS IN: 44
MW OUT: 10.1
VIS OUT: 43

MD: 10,172'



9900-10000 CHK (65%):
gyshbn-med gy, mot lt gy,
fri frm, sb ang-sb blk
ctngs, sm chky tex, tr
intbd MRLST, tr crm CHK,
calc; MRLST (35%): dk
gyshbn-dk gy, frm-sl hd,
sl sm tex, sb blk-ang
ctngs, mod-hi calc, com
intbd CHK

10000-10100 CHK
(60%): gyshbn-med gy,
mot lt gy, sm chky tex,
fri frm, sb blk-sb ang
ctngs, tr intbd MRLST,
calc; MRLST (40%): dk
gyshbn-dk gy, frm-sl hd,
sl sm-rg tex, com intbd
CHK, sb blk-ang ctngs,
mnr imbd/pp mic pyr,
calc



MD: 10,175'
INC: 90.35°
AZM: 359.39°
TVD: 7,261.85'
VS: 2,501.08'

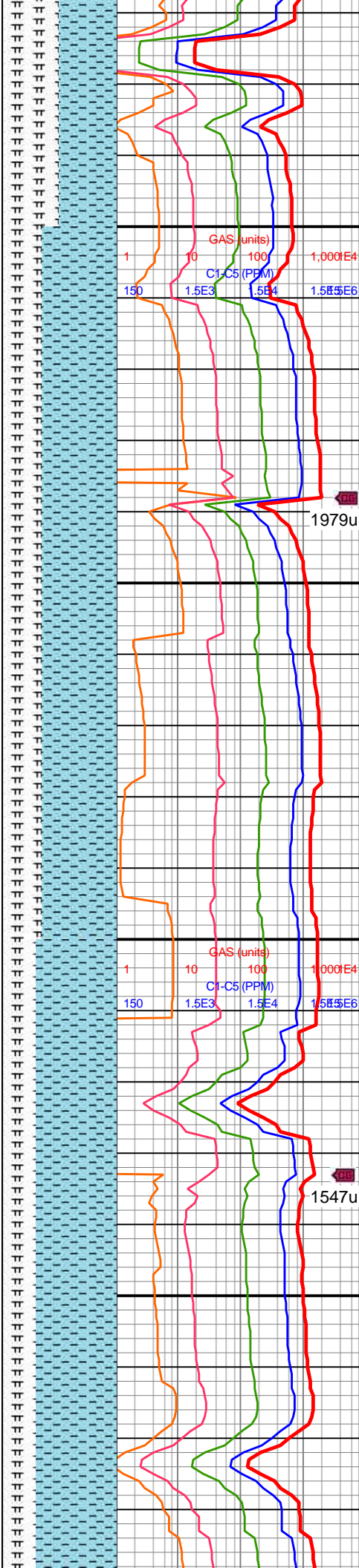
WOB: 33.4klbs
RPM: 70
SPM: 202
SPP: 5,244psi

MW IN: 10.0+
VIS IN: 44
MW OUT: 10.1
VIS OUT: 42

MD: 10,267'
INC: 90.4°
AZM: 359.92°
TVD: 7,261.23'
VS: 2,593.18'

MW IN: 10
VIS IN: 44
MW OUT: 10.1
VIS OUT: 42

MD: 10,361'
INC: 90.26°
AZM: 358.69°
TVD: 7,260.69'
VS: 2,685.39'

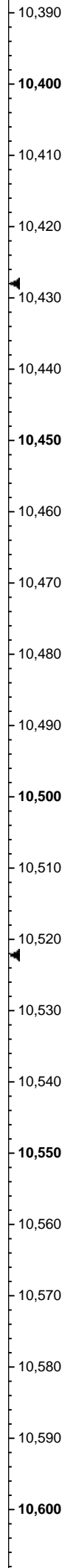
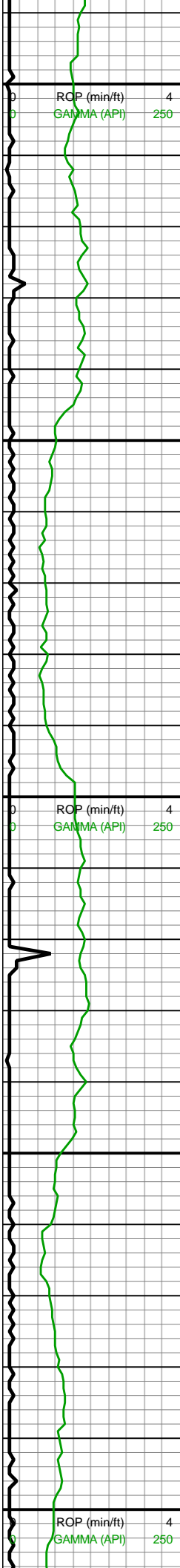


10100-10200 CHK
(50%): gyshbn, med gy,
mot-sl stri, sm chky tex,
sb blk cytns, sl frm, brit,
tr MRLST lamn, hi calc;
MRLST (50%): dk
gy-gyshbn, mot, sb
blk cy-sb ang cytns, sl
hd-frm, mod calc, tr intbd
CHK

10200-10300 CHK
(65%): med gy-gyshbn,
sb blk cy-sb plty cytns,
frm-sl frm, med fis, mnr
free CHK, mnr MRLST
lamn, tr pp mic pyr, hi
calc; MRLST (35%): dk
gyshbn-dk gy, frm-sl hd,
brit, sl sm tex, tr CHK incl,
mod calc

10300-10400 CHK
(70%): gyshbn-med gy,
mot lt gy, fri-frm, tab-sb
blk cytns, sm chky tex,
mnr intbd MRLST, mnr
crm CHK frags, hi calc;
MRLST (30%): dk





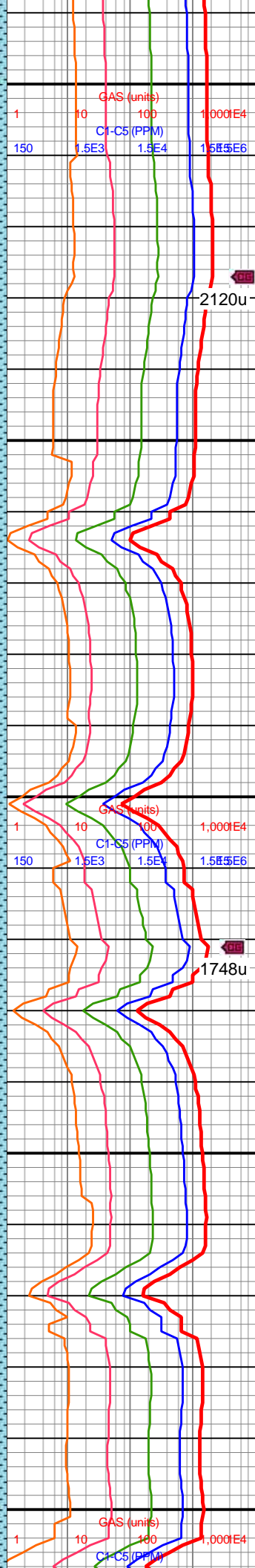
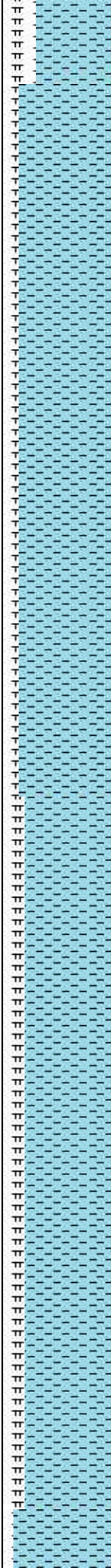
WOB: 31.1klbs
RPM: 70
SPM: 202
SPP: 5,294psi

MW IN: 10.0+
VIS IN: 44
MW OUT: 10.1
VIS OUT: 42

MD: 10,456'
INC: 90.26°
AZM: 359.04°
TVD: 7,260.26'
VS: 2,778.73'

MD: 10,550'
INC: 90.97°
AZM: 359.04°
TVD: 7,259.25'
VS: 2,871.02'

WOB: 30.1klbs
RPM: 70
SPM: 200
SPP: 5,317psi

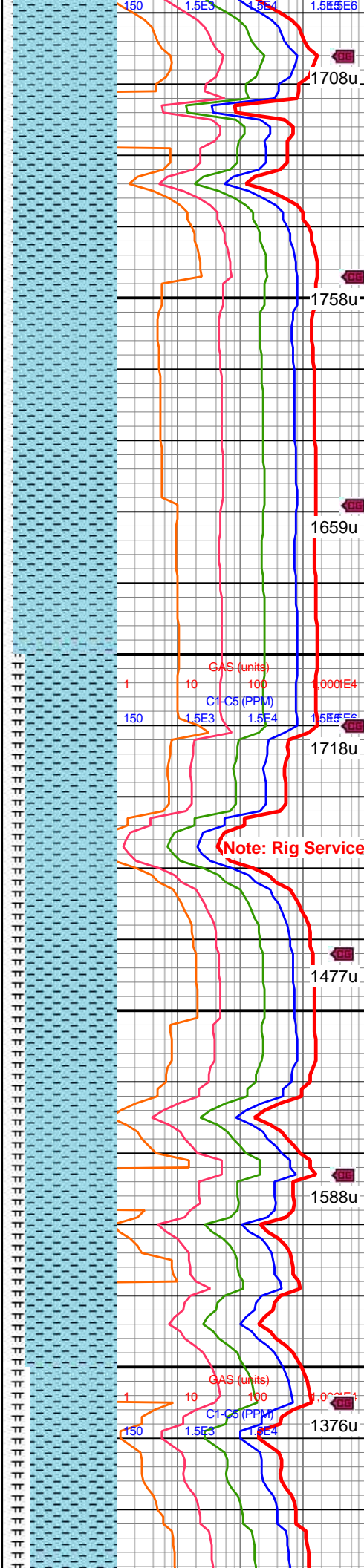
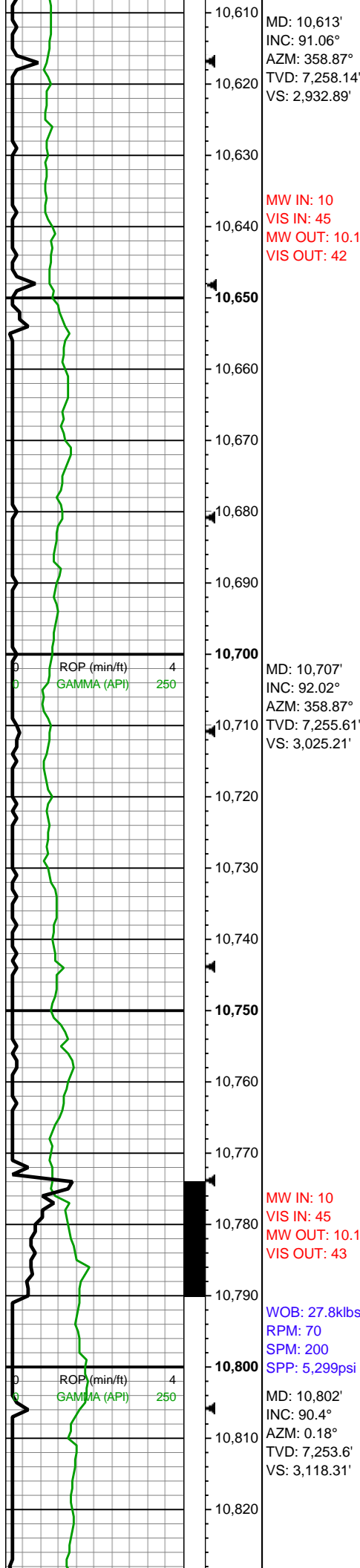


gyshbn-dk gy, frm-sl hd,
sl sm tex, sb blk-ang
ctngs, mod-hi calc, com
intbd CHK

10400-10500 CHK
(80%): gyshbn-med gy,
mot lt gy, sl frm, mod fis,
sb blk-ang blk-ctngs, chky
tex, hi calc, tr pp mic pyr;
MRLST (20%): med gy-dk
gy, dk gyshbn, frm-sl hd,
mod fis, brit, sb blk-tab
ctngs, tr chky incl, mod
calc

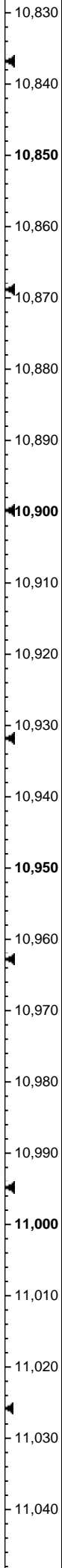
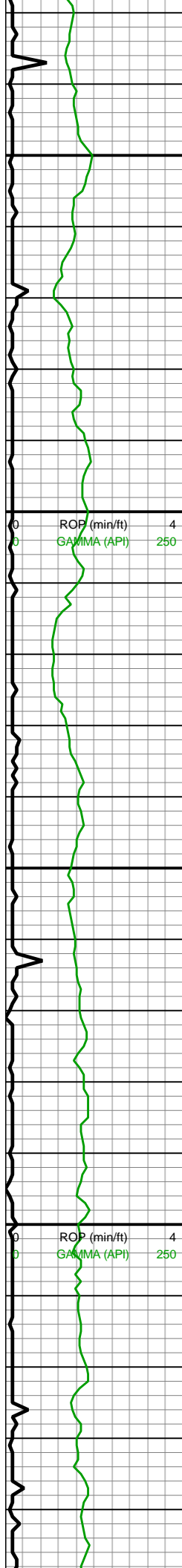
10500-10600 CHK
(80%): gyshbn-med gy,
mot lt gy, tab-sb blk-
ctngs, fri-frm, sm chky
tex, mnr crm CHK, hi
calc, mnr intbd MRLST;
MRLST (20%): dk
gyshbn-dk gy, frm-sl hd,
sl sm tex, sb blk-ang
ctngs, mod-hi calc, com
intbd CHK





10600-10700 CHK
(90%): gyshbn-med gy,
mot, sm chky tex, tab-sb
blky ctngs, fri-frm, mnr
crm CHK, mnr intbd
MRLST, hi calc; MRLST
(10%): dk gyshbn-dk gy,
sb blky-ang ctngs, frm-sl
hd, sl sm tex, com intbd
CHK, mod-hi calc

10700-10800 CHK
(80%): predy
gyshbn-med gy, lt gy mot,
sb tab-sb blky ctngs,
fri-frm, sm chky tex, mnr
scat crm CHK, hi calc,
mnr intbd MRLST;
MRLST (20%): dk
gyshbn-dk gy, frm-sl hd,
sl sm tex, sb blky-ang
ctngs, mod-hi calc, com
intbd CHK



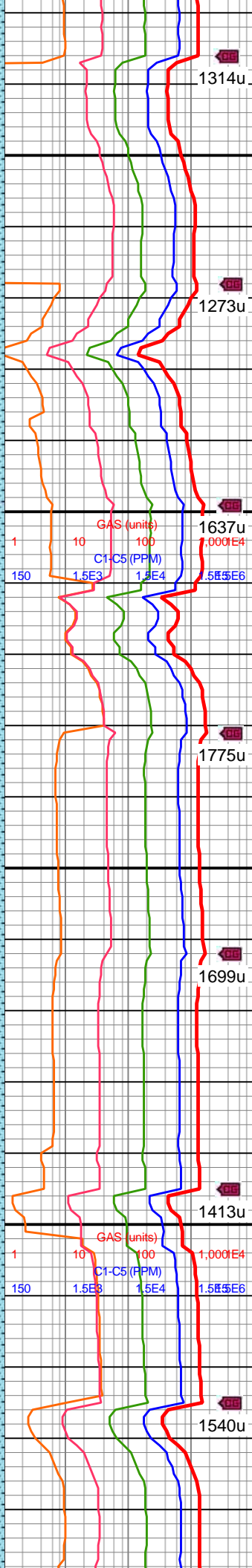
MW IN: 10
VIS IN: 44
MW OUT: 10.1
VIS OUT: 42

MD: 10,897'
INC: 90.13°
AZM: 0.54°
TVD: 7,253.16'
VS: 3,211.16'

MW IN: 10
VIS IN: 44
MW OUT: 10
VIS OUT: 43

MD: 10,991'
INC: 89.87°
AZM: 0.36°
TVD: 7,253.16'
VS: 3,302.99'

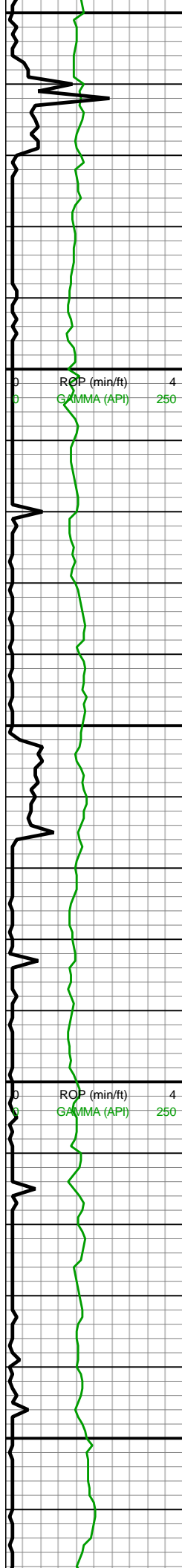
WOB: 30klbs
RPM: 0
SPM: 202
SPP: 5,342psi



10800-10900 CHK
(75%): predy
gyshbn-med gy, lt gy mot,
sb tab-sb blk cy ctngs,
fri-frm, sm chky tex, mnr
scat crm CHK, mnr intbd
MRLST, calc; MRLST
(15%): dk gyshbn-dk gy,
frm-sl hd, sl sm tex, sb
blk cy-ang ctngs, com intbd
CHK, mod-hi calc

10900-11000 CHK
(80%): gyshbn-med gy, lt
gy mot, sb tab-sb blk cy
ctngs, fri-frm, sm chky
tex, mnr scat crm CHK,
mnr intbd MRLST, calc;
MRLST (20%): dk
gyshbn-dk gy, frm-sl hd,
sl sm tex, sb blk cy-ang
ctngs, com intbd CHK,
mod-hi calc, tr scat pyr
nod



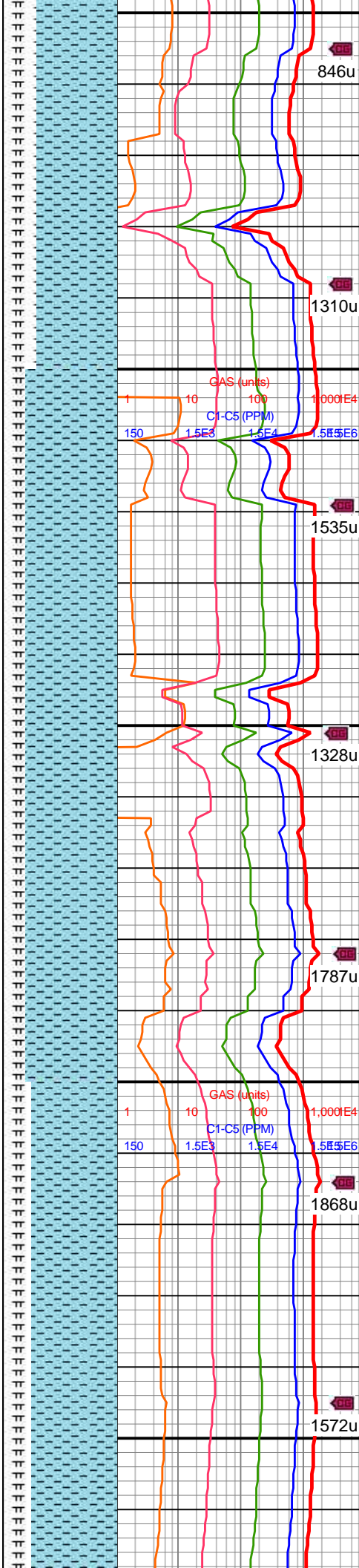


11,050
11,060
11,070
11,080
11,090
11,100
11,110
11,120
11,130
11,140
11,150
11,160
11,170
11,180
11,190
11,200
11,210
11,220
11,230
11,240
11,250
11,260

MD: 11,085'
INC: 90.31°
AZM: 0.18°
TVD: 7,253.02'
VS: 3,394.89'

MD: 11,180'
INC: 89.74°
AZM: 359.22°
TVD: 7,252.98'
VS: 3,487.96'
MW IN: 10
VIS IN: 45
MW OUT: 10
VIS OUT: 44

WOB: 34klbs
RPM: 70
SPM: 200
SPP: 5,443psi

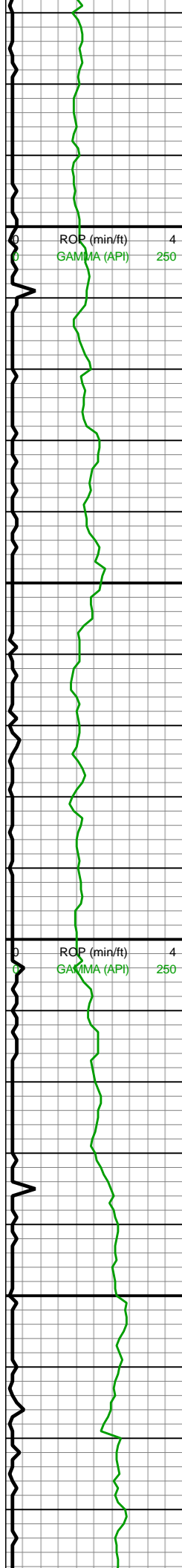


11000-11100 CHK
(70%): med gy-gyshbn, lt
gy mot, sb tab-sb blk
ctngs, fri-firm, sm chky
tex, mntr scat crm CHK,
mntr intbd MRLST, mod
calc; MRLST (30%): dk
gyshbn-dk gy, frm-sl hd,
sl sm tex, sb blk-ang
ctngs, com intbd CHK, hi
calc

11100-11200 CHK
(80%): med gy-gyshbn,
mot, sb tab-sb blk
ctngs, fri-firm, sm chky
tex, occ crm CHK, mntr
intbd MRLST, mod calc;
MRLST (20%): dk
gyshbn-dk gy, frm-sl hd,
sl sm tex, sb blk-ang
ctngs, com intbd CHK,
calc



11000-11000 CHK



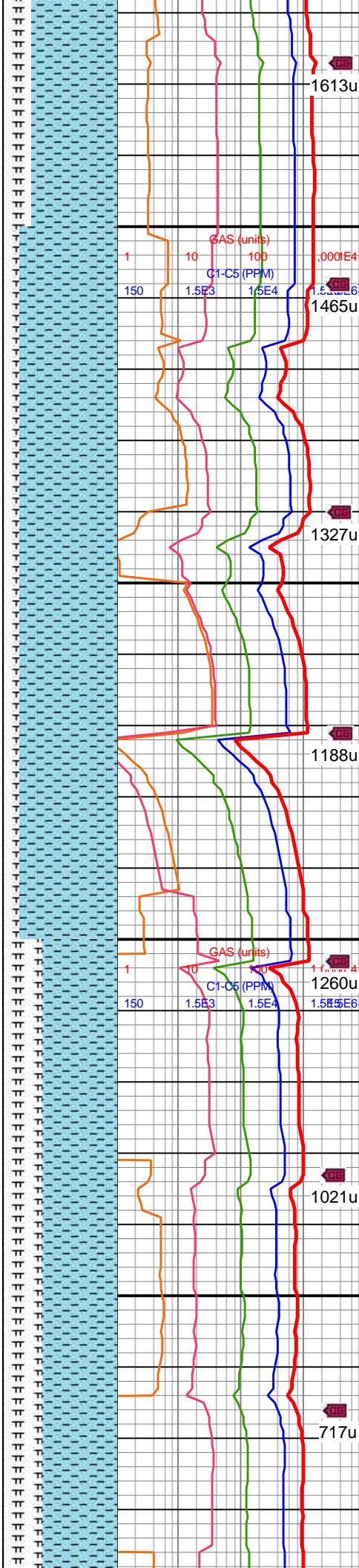
MD: 11,274'
INC: 89.69°
AZM: 358.95°
TVD: 7,253.44'
VS: 3,580.24'

MW IN: 10
VIS IN: 45
MW OUT: 10
VIS OUT: 44

MD: 11,368'
INC: 89.47°
AZM: 359.31°
TVD: 7,254.13'
VS: 3,672.51'

WOB: 31klbs
RPM: 70
SPM: 198
SPP: 5,448psi

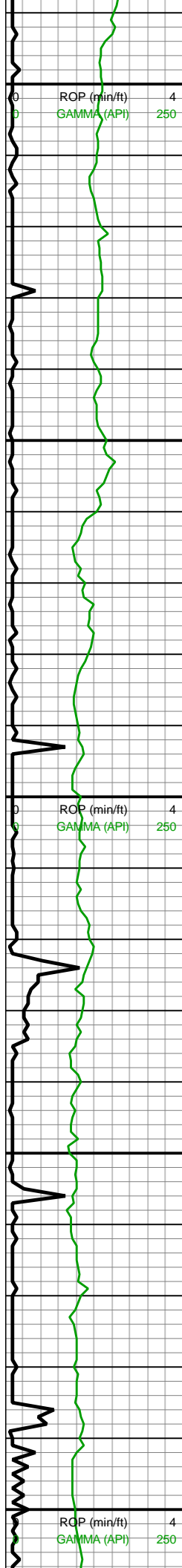
MD: 11,463'
INC: 89.34°
AZM: 359.83°
TVD: 7,255.12'
VS: 3,765.62'



11200-11300 CHK
(75%): med gy-gyshbn, mot lt gy, sb tab-sb blk cy ctngs, fri frm, sm chky tex, occ crm CHK, mnr intbd MRLST, mod calc; MRLST (25%): dk gyshbn-dk gy, frm-sl hd, sb blk cy-ang ctngs, sl sm tex, com intbd CHK, calc

11300-11400 CHK
(85%): gyshbn-med gy, mot lt gy, sb tab-sb blk cy ctngs, fri frm, sm chky tex, occ crm CHK, mnr intbd MRLST, mod-hi calc; MRLST (15%): dk gyshbn-dk gy, frm-sl hd, sb blk cy-ang ctngs, sl sm tex, intbd CHK, hi calc

11400-11500 CHK
(65%): gyshbn-med gy, sb tab-sb blk cy ctngs, fri frm, sm chky tex, occ crm CHK, mnr intbd MRLST, mod-hi calc; MRLST (35%): dk



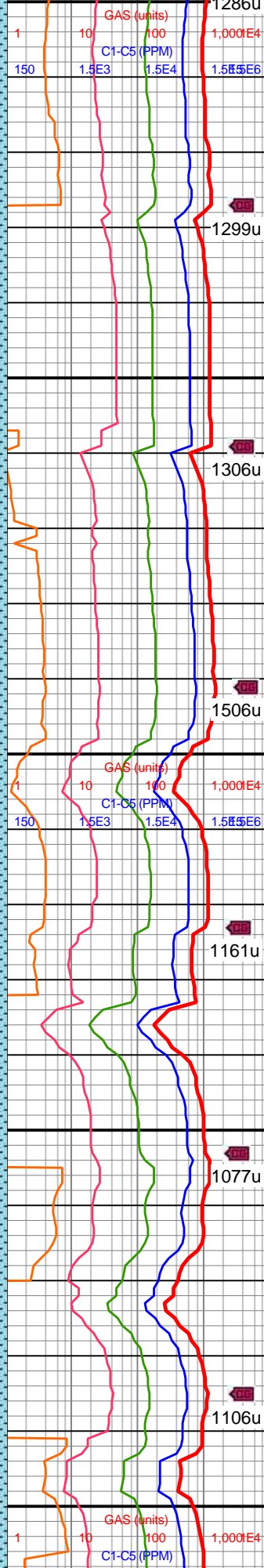
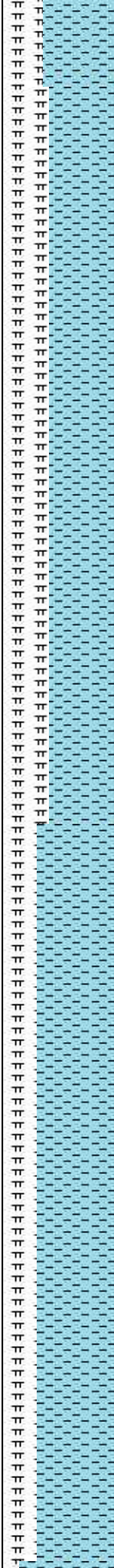
11,490
11,500
11,510
11,520
11,530
11,540
11,550
11,560
11,570
11,580
11,590
11,600
11,610
11,620
11,630
11,640
11,650
11,660
11,670
11,680
11,690
11,700

MW IN: 10
VIS IN: 45
MW OUT: 10
VIS OUT: 44

MD: 11,557'
INC: 89.17°
AZM: 359.66°
TVD: 7,256.34'
VS: 3,857.69'

WOB: 32klbs
RPM: 70
SPM: 202
SPP: 5,406psi

MD: 11,651'
INC: 89.69°
AZM: 0.1°
TVD: 7,257.28'
VS: 3,949.71'

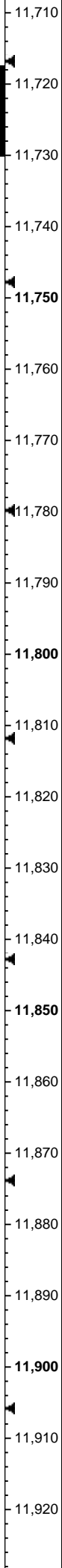
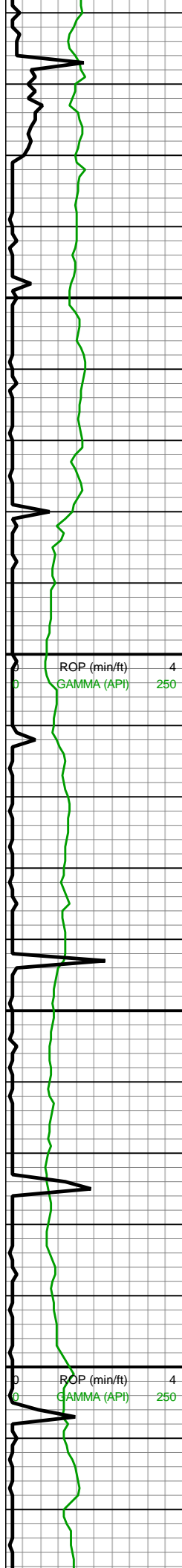


gyshbn-dk gy, frm-sl hd,
sb blk-ang ctngs, sl sm
tex, intbd CHK, mod-hi
calc

11500-11600 CHK
(60%): gyshbn-med gy,
sb tab-sb blk-ang ctngs,
fri-frn, sm chky tex, occ
crm CHK, mn intbd
MRLST, calc; MRLST
(40%): dk gyshbn-dk gy,
frm-sl hd, sb blk-ang
ctngs, sl sm tex, intbd
CHK, mod calc

11600-11700 CHK
(70%): gyshbn-med gy,
sb tab-sb blk-ang ctngs,
fri-frn, occ scat crm CHK,
sm chky tex, mn intbd
MRLST, calc; MRLST
(30%): dk gyshbn-dk gy,
frm-sl hd, sb blk-ang
ctngs, sl sm tex, com
intbd CHK, hi calc, tr pp
mic pyr





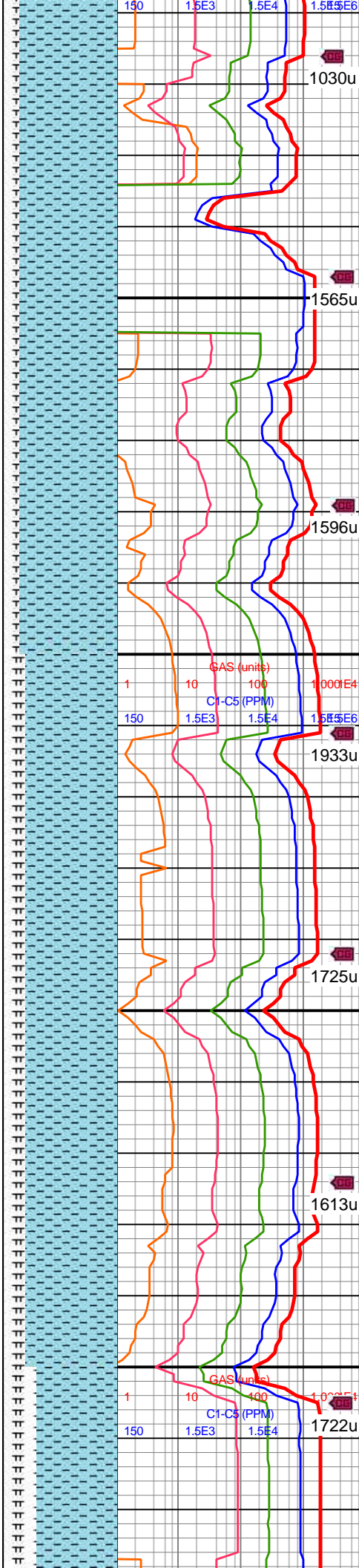
MD: 11,745'
INC: 89.69°
AZM: 358.69°
TVD: 7,257.78'
VS: 4,041.9'

MW IN: 10
VIS IN: 45
MW OUT: 10
VIS OUT: 44

MINDEPTH 6/7/18

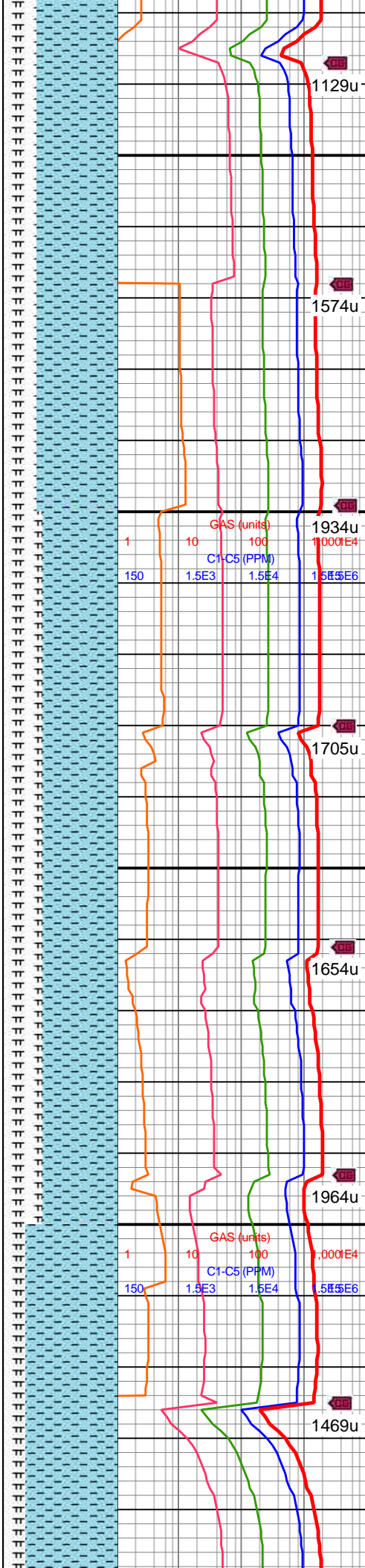
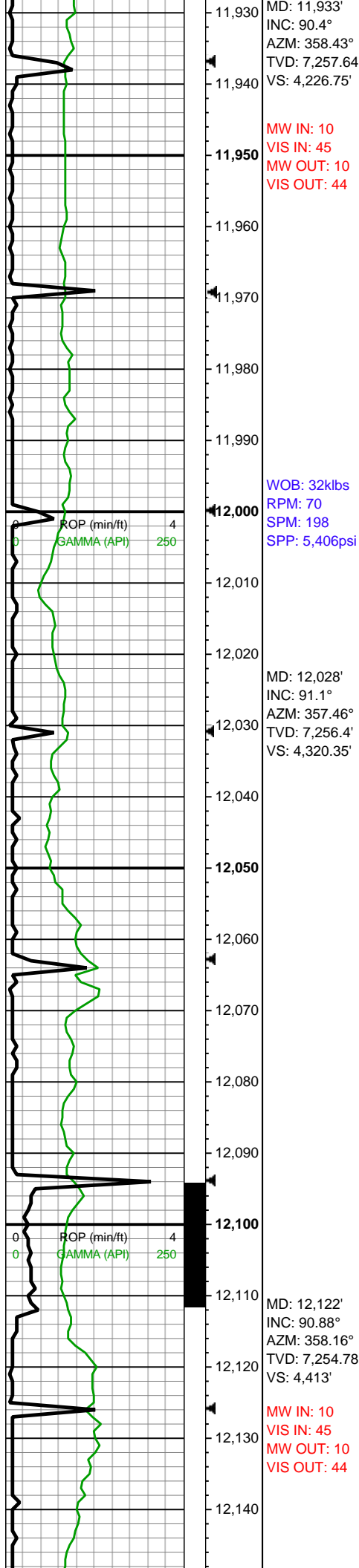
WOB: 25klbs
RPM: 71
SPM: 200
SPP: 5,528psi

MD: 11,839'
INC: 90.04°
AZM: 358.69°
TVD: 7,258.01'
VS: 4,134.31'



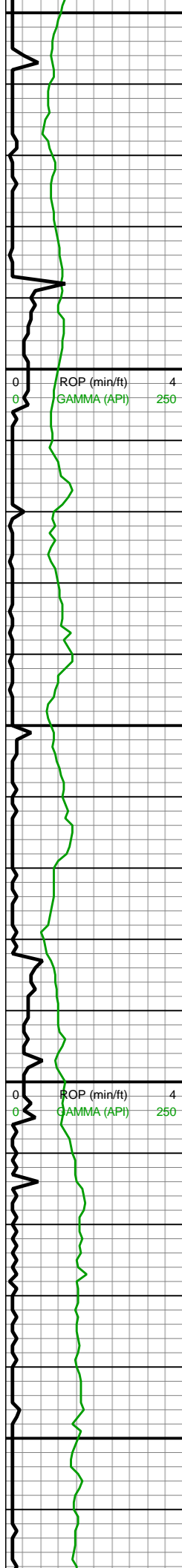
11700-11800 CHK
(85%): gyshbn-med gy,
mot lt gy, sb ang-sb blk
ctngs, fri frm, crm CHK,
sm chky tex, mnr intbd
MRLST, calc; MRLST
(15%): dk gyshbn-dk gy,
frm-sl hd, sb blk-ang
ctngs, sl sm tex, com
intbd CHK, hi calc, tr pp
mic diss pyr

11800-11900 CHK
(80%): gyshbn-med gy,
mot lt gy, sb ang-sb blk
ctngs, fri frm, crm CHK,
sm chky tex, mnr intbd
MRLST, mod calc;
MRLST (20%): dk
gyshbn-dk gy, frm-sl hd,
sb blk-ang ctngs, sl sm
tex, com intbd CHK, v hi
calc, tr pp mic diss pyr



11900-12000 CHK
(70%): gyshbn-med gy,
mot lt gy, crm free CHK,
sb ang-sb blkly ctngs,
fri frm, sm chky tex, mn
intbd MRLST, mod calc;
MRLST (30%): dk
gyshbn-dk gy, frm-sl hd,
sb blkly-ang ctngs, sl sm
tex, com intbd CHK,
mod-hi calc

12000-12100 CHK
(65%): gyshbn-med gy,
mot lt gy, crm indv CHK
frags, sb ang-sb blkly
ctngs, fri frm, sm chky
tex, mn intbd MRLST,
mod calc; MRLST (35%):
dk gyshbn-dk gy, frm-sl
hd, sb blkly-ang ctngs, sl
sm tex, incrg intbd CHK,
hi calc



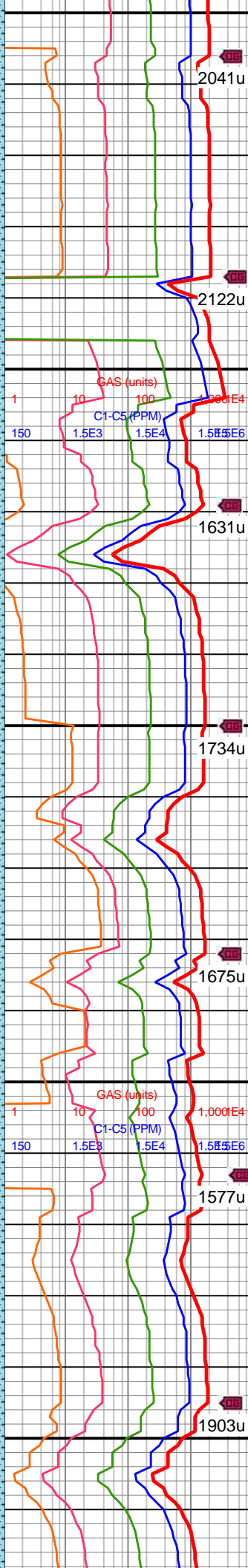
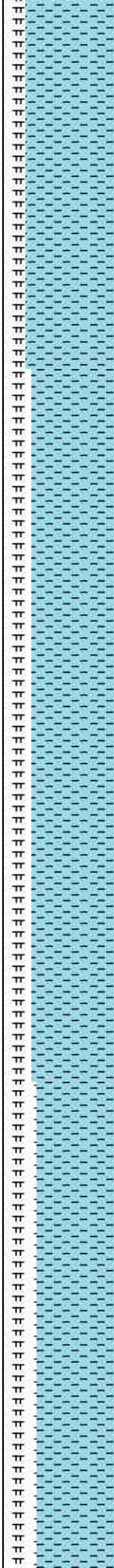
12,150
12,160
12,170
12,180
12,190
12,200
12,210
12,220
12,230
12,240
12,250
12,260
12,270
12,280
12,290
12,300
12,310
12,320
12,330
12,340
12,350
12,360

WOB: 54klbs
RPM: 22
SPM: 195
SPP: 5,090psi

MD: 12,216'
INC: 90.53°
AZM: 358.78°
TVD: 7,253.62'
VS: 4,505.47'

MW IN: 10
VIS IN: 45
MW OUT: 10
VIS OUT: 44

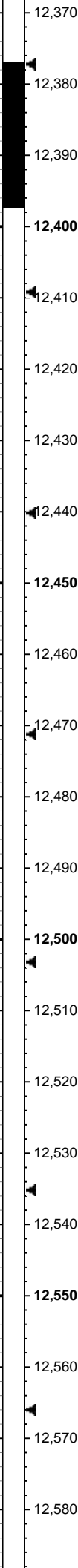
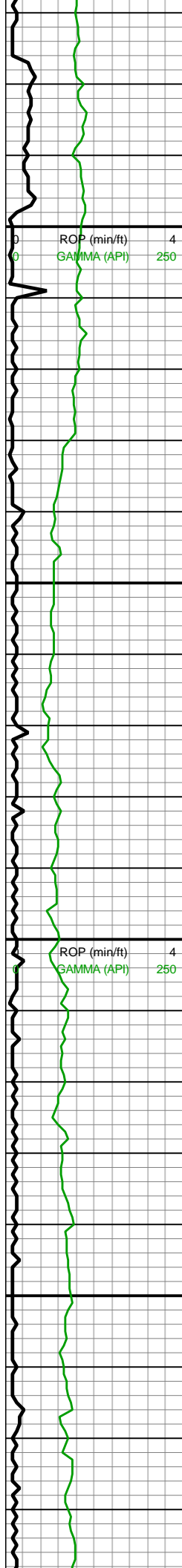
MD: 12,311'
INC: 89.21°
AZM: 358.87°
TVD: 7,253.84'
VS: 4,598.81'



12100-12200 CHK
(80%): gyshbn-med gy,
mot lt gy, crm indv CHK
frags, sb ang-sb blk
ctngs, fri-frm, sm chky
tex, mn intbd MRLST,
mod calc; MRLST (20%):
dk gyshbn-dk gy, frm-sl
hd, sb blk-ang ctngs, sl
sm tex, hi calc, intbd CHK

12200-12300 CHK
(75%): gyshbn-med gy,
mot lt gy, crm indv CHK
frags, sb ang-sb blk
ctngs, fri-frm, sm chky
tex, mn intbd MRLST,
mod calc; MRLST (25%):
dk gyshbn-dk gy, frm-sl
hd, sb blk-ang ctngs, sl
sm tex, hi calc, com intbd
CHK

12300-12400 CHK



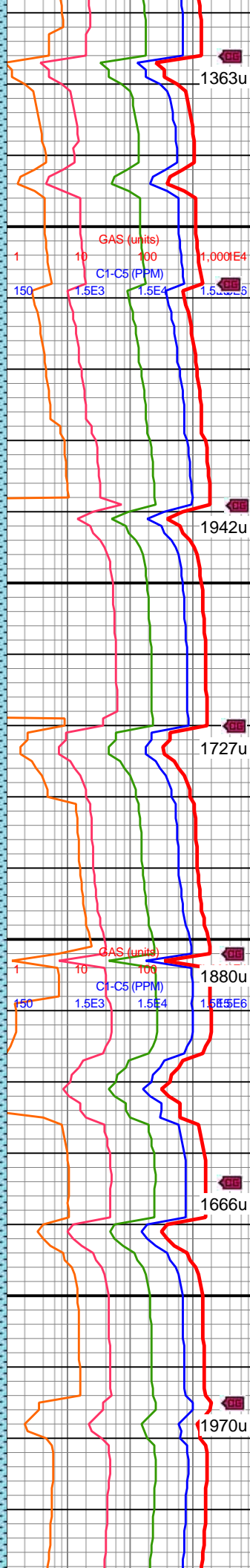
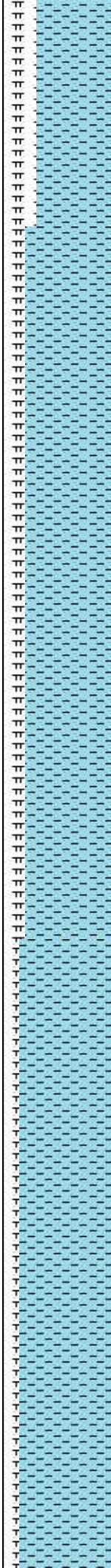
WOB: 31.2klbs
RPM: 70
SPM: 193
SPP: 5,231psi

MD: 12,405'
INC: 88.73°
AZM: 0.54°
TVD: 7,255.53'
VS: 4,690.88'

MD: 12,500'
INC: 89.17°
AZM: 0.45°
TVD: 7,257.27'
VS: 4,783.66'

MW IN: 9.9+
VIS IN: 46
MW OUT: 9.9
VIS OUT: 44

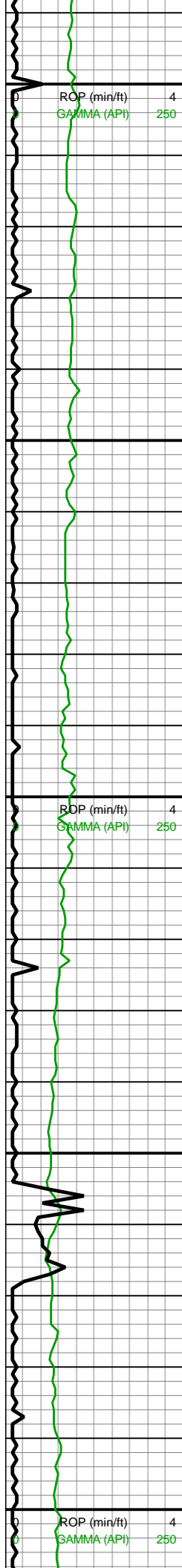
MD: 12,594'



(70%): gyshbn-med gy,
mot lt brn, fri-frn, sm
chky tex, tab-sb blk
ctngs, mntr intbd MRLST,
vf lamn, mntr crm CHK, hi
calc; MRLST (30%): dk
gyshbn-dk gy, frm-sl hd,
sb blk-ang ctngs, sl sm
tex, mod-hi calc, com
intbd CHK

12400-12500 CHK
(80%): med gy-gyshbn,
mot lt brn, sb blk-sb plty,
frm, med fis ctngs, mntr
MRLST lamn, mntr free
CHK, tr imbd/pp mic pyr,
hi calc; MRLST (20%): dk
gyshbn-dk gy, tab-sb
blk, brit, frm-sl hd, tr
CHK incl, mod calc

12500-12600 CHK
(85%): gyshbn-med gy,
mot lt gy, fri-frn, sb
ang-sb blk ctngs, sm
chky tex, sme free crm
CHK, mntr intbd MRLST,
hi calc; MRLST (15%): dk

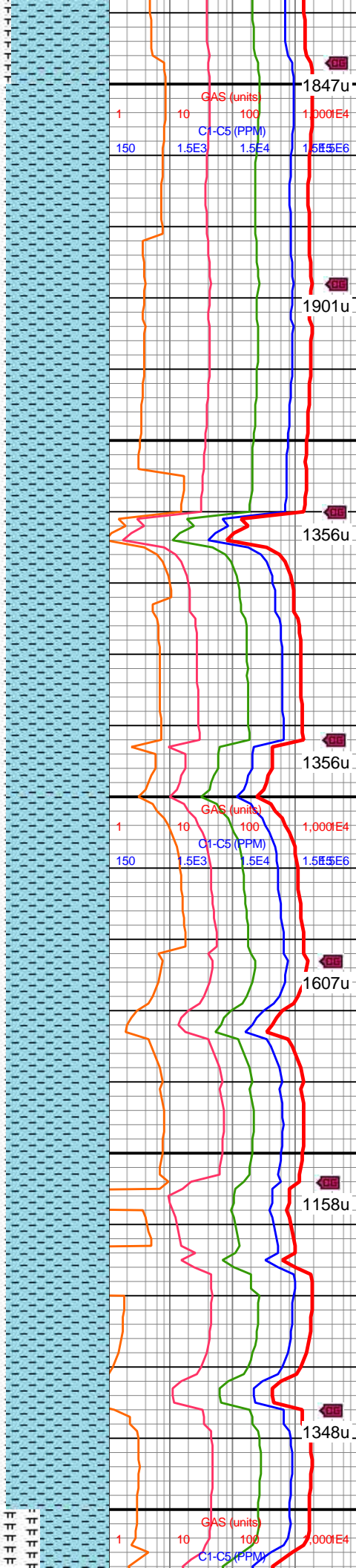


MD: 12,594'
INC: 89.69°
AZM: 0.27°
TVD: 7,258.2'
VS: 4,875.52'
WOB: 24.5klbs
RPM: 70
SPM: 195
SPP: 4,886psi

MD: 12,689'
INC: 90.62°
AZM: 0.27°
TVD: 7,257.94'
VS: 4,968.4'

MW IN: 10
VIS IN: 46
MW OUT: 10.0+
VIS OUT: 45

MD: 12,783'
INC: 89.47°
AZM: 0.71°
TVD: 7,257.87'
VS: 5,060.22'
WOB: 36.8klbs
RPM: 70
SPM: 194
SPP: 5,428psi



gyshbn-dk gy, frm-sl hd,
sl sm tex, sb blk-ang
ctngs, com intbd CHK, tr
dissm mic pyr, hi calc

1847u

1901u

1356u

12600-12700 CHK
(90%): gyshbn-lt gy, mot,
fri-frm, sm chky tex,
tab-sb blk-ang ctngs, mnr
intbd MRLST, sme free
crm CHK, hi calc; MRLST
(10%): dk gyshbn-dk gy,
sl sm tex, sb blk-ang
ctngs, frm-sl hd, com
intbd CHK, tr mic pyr, hi
calc

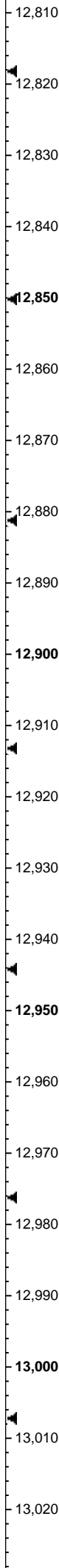
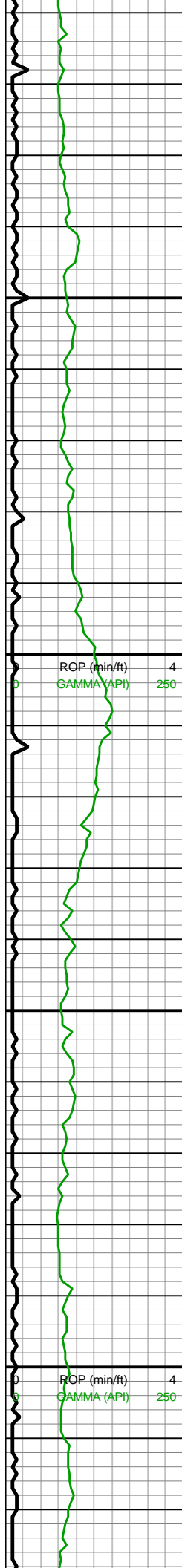
1356u

1607u

1158u

12700-12800 CHK
(90%): gyshbn-lt gy, mot,
sm chky tex, fri-frm,
tab-sb blk-ang ctngs, mnr
intbd MRLST, hi calc,
sme free crm CHK;
MRLST (10%): dk
gyshbn-dk gy, sb
blk-ang ctngs, sl sm tex,
frm-sl hd, com intbd
CHK, hi calc, tr mic pyr

1348u



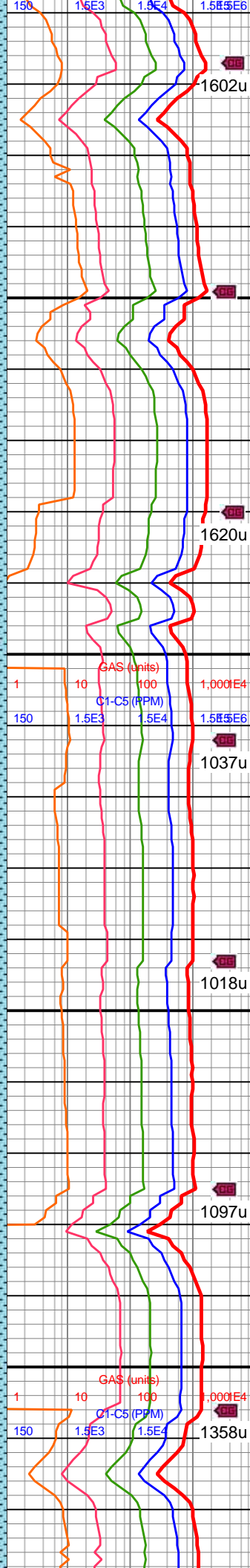
MW IN: 10
VIS IN: 48
MW OUT: 10.1
VIS OUT: 45

MD: 12,878'
INC: 89.43°
AZM: 359.83°
TVD: 7,258.78'
VS: 5,153.09'

MD: 12,972'
INC: 89.78°
AZM: 359.75°
TVD: 7,259.43'
VS: 5,245.15'

WOB: 35.9klbs
RPM: 70
SPM: 195
SPP: 5,437psi

MW IN: 10
VIS IN: 48
MW OUT: 10.1
VIS OUT: 45



1602u

1620u

1037u

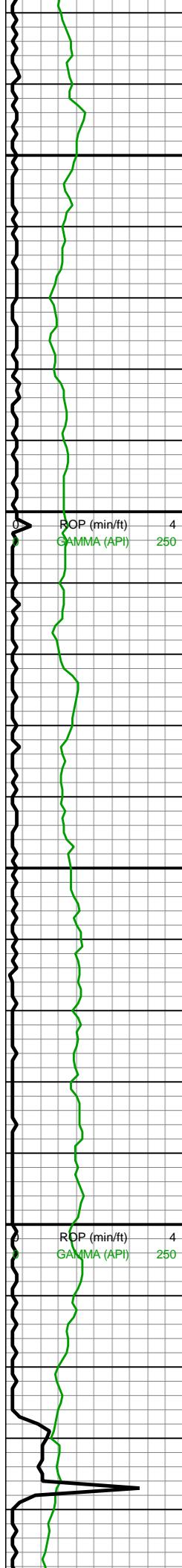
1018u

1097u

1358u

12800-12900 CHK
(60%): gyshbn-med gy,
sb tab-sb blk cytns, sm
chky tex, fri frm, mnr intbd
MRLST, sme crm CHK,
hi calc; MRLST (40%): dk
gyshbn-dk gy, sl sm tex,
frm-sl hd, sb blk-ang
ctngs, intbd CHK, mod
calc

12900-13000 CHK
(80%): gyshbn-lt brn,
frm-sl frm, sb blk-sb plty,
med fis ctngs, mnr
MRLST lamn, tr imbd/pp
mic pyr, hi calc, mnr free
CHK; MRLST (20%): dk
gy-med gy, brit, frm-sl hd,
tab-sb blk, tr 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

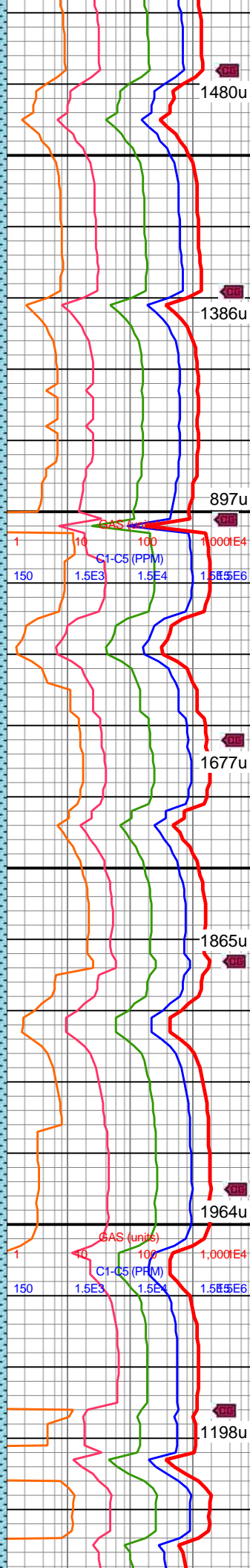
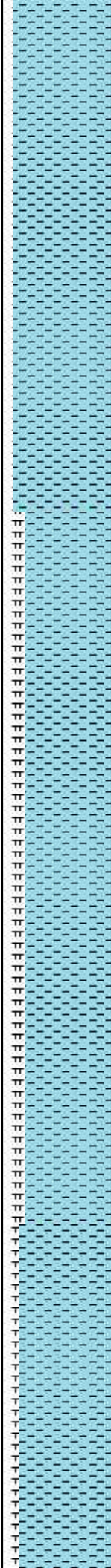
MD: 13,066'
INC: 90.18°
AZM: 359.66°
TVD: 7,259.46'
VS: 5,337.23'

MW IN: 9.9+
VIS IN: 45
MW OUT: 10.1
VIS OUT: 43

MD: 13,161'
INC: 90.26°
AZM: 358.95°
TVD: 7,259.1'
VS: 5,430.43'

WOB: 30.4klbs
RPM: 69
SPM: 195
SPP: 5,320psi

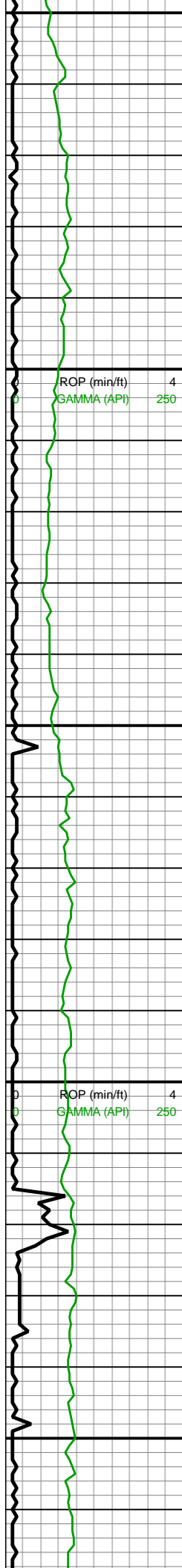
MW IN: 10
VIS IN: 44
MW OUT: 10.1
VIS OUT: 43



1480u
1386u
897u
1677u
1865u
1964u
1198u

13000-13100 CHK
(90%): gyshbn-lt gy, mot,
sm chky tex, fri-frm,
tab-sb blkly ctngs, sme
free crm CHK, hi calc,
mnr intbd MRLST;
MRLST (10%): dk gy-dk
gyshbn, sb blkly-ang
ctngs, sl sm tex, frm-sl
hd, com intbd CHK, hi
calc, tr mic pyr

13100-13200 CHK
(80%): gyshbn-lt gy, mot
med gy, sm chky tex,
tab-sb blkly ctngs, fri-frm,
sme crm free CHK, mnr
intbd MRLST, hi calc;
MRLST (20%): dk gy-dk
gyshbn, frm-sl hd, sb
blkly-ang ctngs, sl sm tex,
com intbd CHK, mod-hi
calc



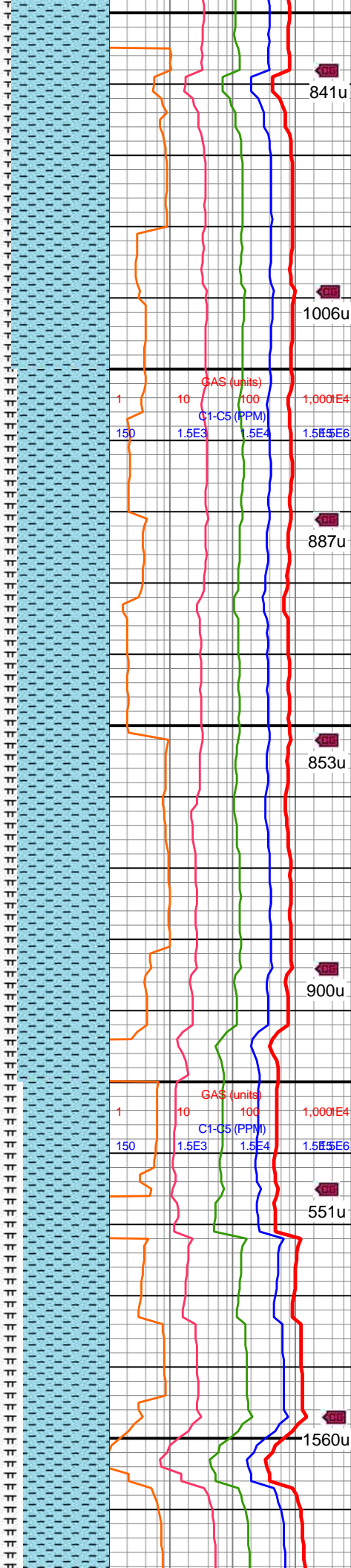
MD: 13,255'
INC: 89.47°
AZM: 359.13°
TVD: 7,259.32'
VS: 5,522.73'

MD: 13,350'
INC: 89.91°
AZM: 358.95°
TVD: 7,259.83'
VS: 5,616.01'

WOB: 31klbs
RPM: 69
SPM: 194
SPP: 5,489psi

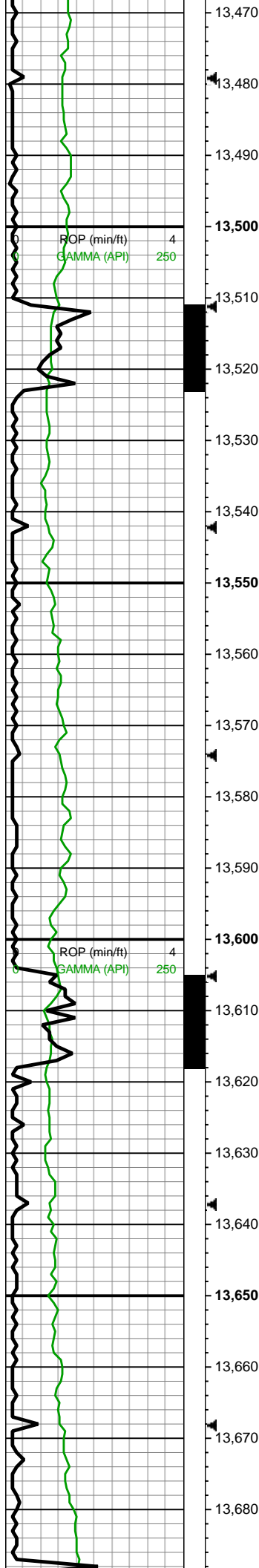
MW IN: 10
VIS IN: 46
MW OUT: 10.1
VIS OUT: 44

MD: 13,444'
INC: 90.4°
AZM: 359.13°
TVD: 7,259.58'
VS: 5,708.31'



13200-13300 CHK
(85%): gyshbn-med gy,
mot, tab-sb blk cy ctngs,
fri frm, sm chky tex, sme
free crm CHK, hi calc,
mnr intbd MRLST, mnr
imbd mic pyr; MRLST
(15%): dk gy, dk gyshbn,
frm-sl hd, sb blk cy-ang
ctngs, sl sm tex, com
intbd CHK, mod-hi calc

13300-13400 CHK
(80%): gyshbn-lt gy, mot,
sb tab-blk cy ctngs, sm
chky tex, fri frm, mnr scat
crm CHK, mnr intbd
MRLST, hi calc; MRLST
(20%): dk gy, dk gyshbn,
sl sm tex, frm-sl hd, sb
blk cy-ang ctngs, com intbd
CHK, mod-hi calc

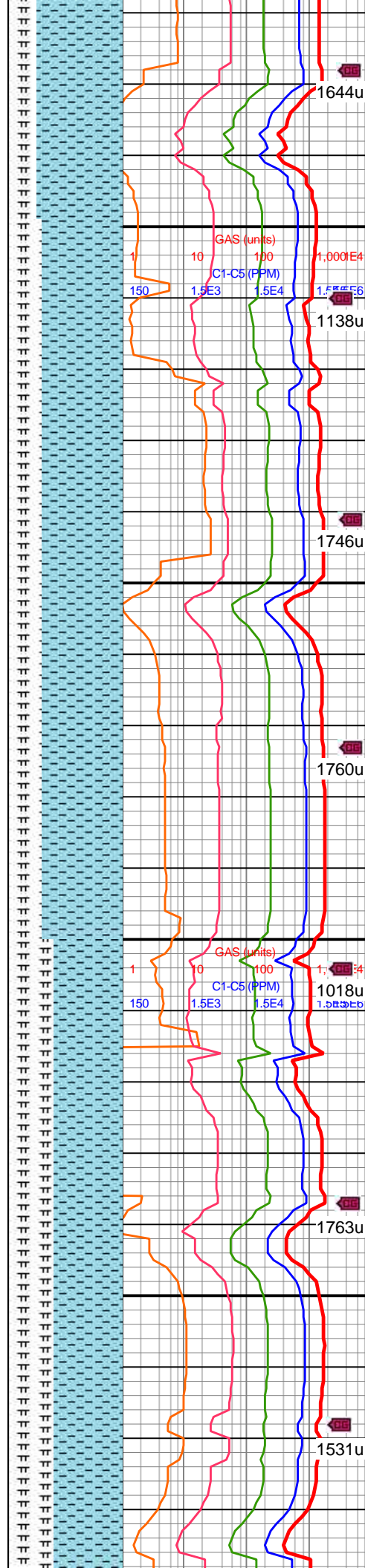


MW IN: 10
VIS IN: 46
MW OUT: 9.9+
VIS OUT: 44

MD: 13,539'
INC: 90.92°
AZM: 0.01°
TVD: 7,258.49'
VS: 5,801.42'

WOB: 30.7klbs
RPM: 70
SPM: 195
SPP: 5,522psi

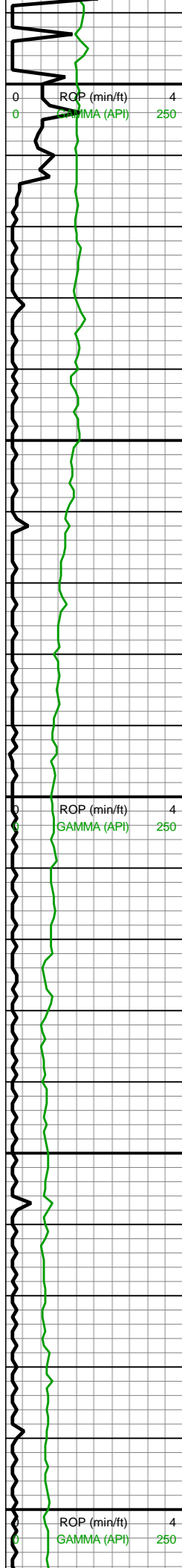
MD: 13,633'
INC: 90.26°
AZM: 359.83°
TVD: 7,257.52'
VS: 5,893.43'



13400-13500 CHK
(75%): gyshbn-med gy,
sb blkly-tab ctngs, frm-sl
frm, med fis, mnr free
CHK, mnr MRLST lamn,
tr dissm/pp mic pyr, hi
calc; MRLST (25%): dk
gyshbn-dk gy, frm-sl
hd-brit, sl sm tex, tr CHK
incl, mod calc

13500-13600 CHK
(70%): gyshbn-med gy,
sb blkly-tab ctngs, frm-sl
frm, med fis, mnr free
CHK, mnr MRLST lamn,
tr dissm/pp mic pyr, hi
calc; MRLST (30%): dk
gyshbn-dk gy, frm-sl
hd-brit, sl sm tex, tr CHK
incl, mod calc

13600-13700 CHK
(60%): gyshbn-med gy,
sb blkly-tab ctngs, frm-sl
frm, med fis, mnr free
CHK, mnr MRLST lamn,
tr dissm/pp mic pyr, hi
calc; MRLST (40%): dk
gyshbn-dk gy, frm-sl
hd-brit, sl sm tex, tr CHK
incl, mod calc



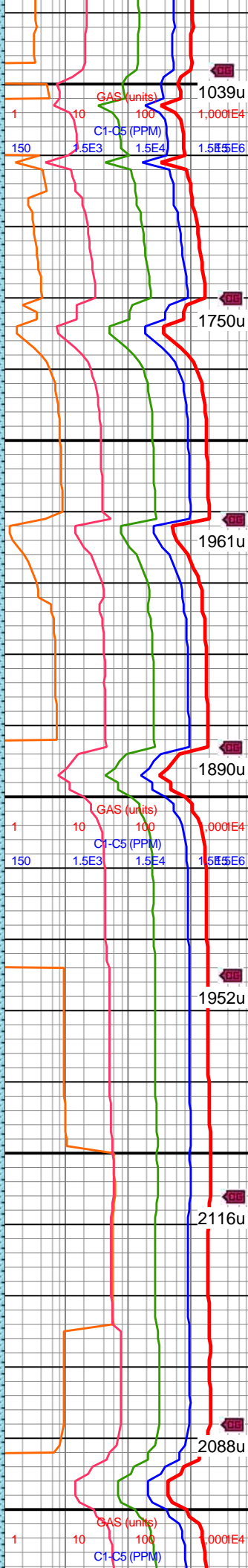
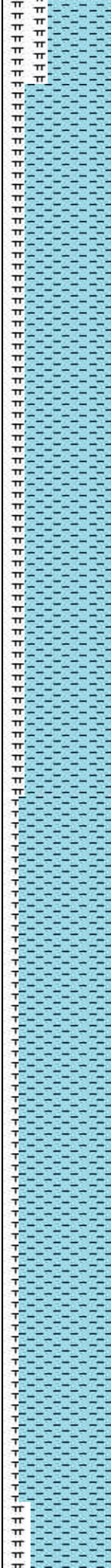
13,690
13,700
13,710
13,720
13,730
13,740
13,750
13,760
13,770
13,780
13,790
13,800
13,810
13,820
13,830
13,840
13,850
13,860
13,870
13,880
13,890
13,900

MD: 13,728'
INC: 89.39°
AZM: 0.98°
TVD: 7,257.81'
VS: 5,986.26'

MW IN: 10
VIS IN: 45
MW OUT: 10.1
VIS OUT: 45

WOB: 29.4klbs
RPM: 70
SPM: 195
SPP: 5,523psi

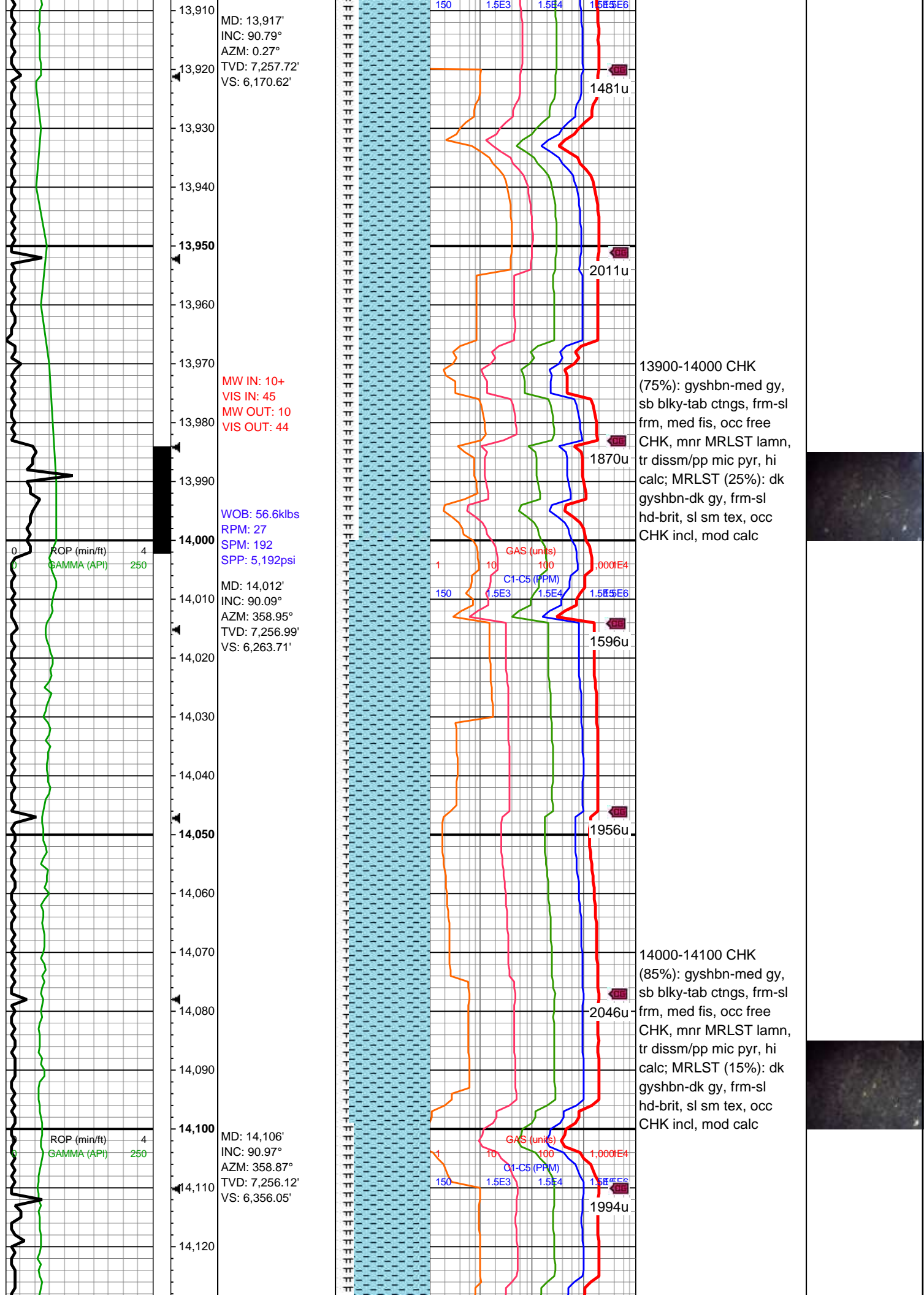
MD: 13,822'
INC: 89.96°
AZM: 1.06°
TVD: 7,258.34'
VS: 6,077.89'

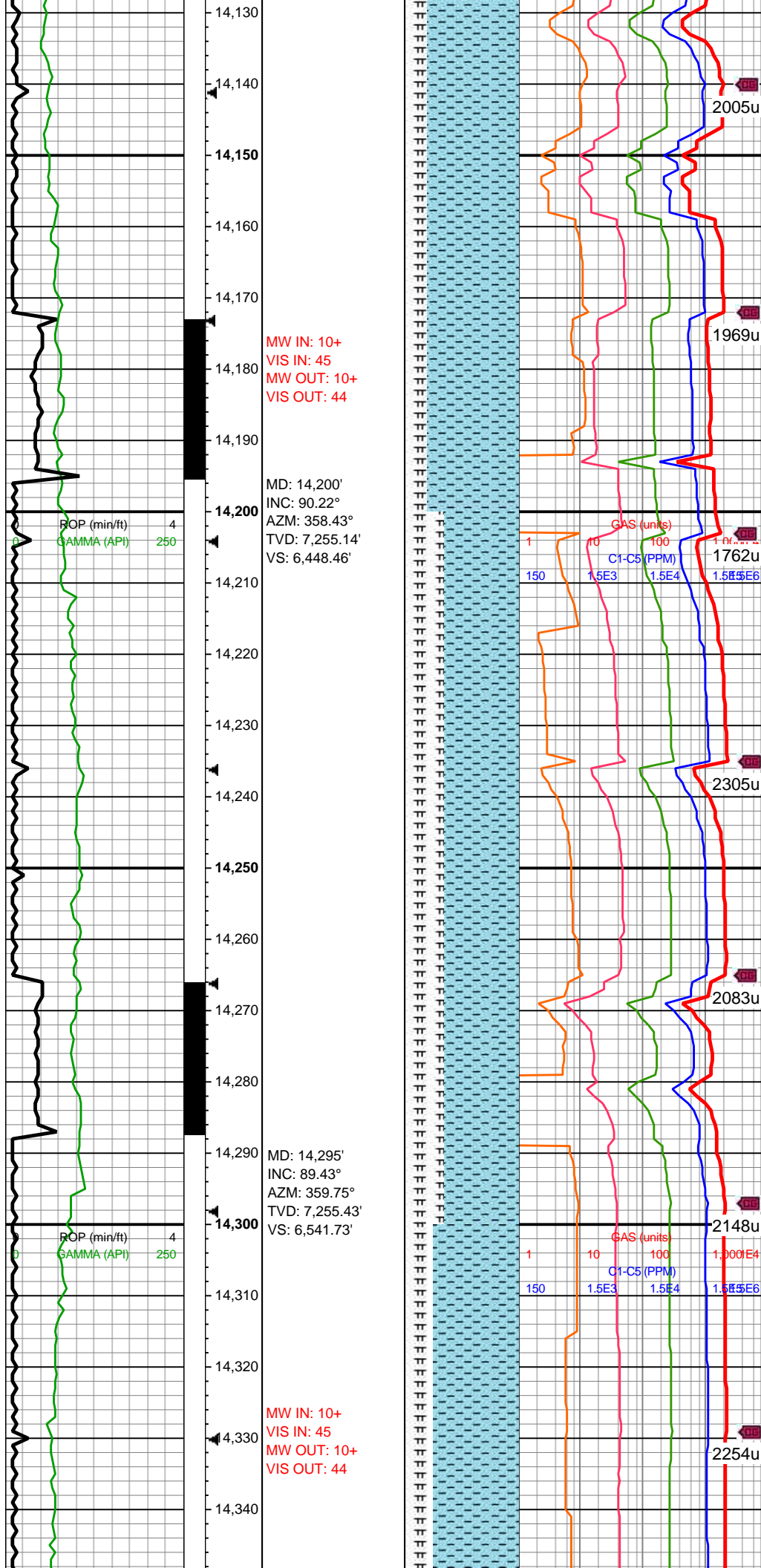


calc; MRLST (40%): dk
gyshbn-dk gy, frm-sl
hd-brit, sl sm tex, tr CHK
incl, mod calc

13700-13800 CHK
(80%): gyshbn-med gy,
sb blkly-tab ctngs, frm-sl
frm, med fis, mn free
CHK, mn MRLST lamn,
tr dissm/pp mic pyr, hi
calc; MRLST (20%): dk
gyshbn-dk gy, frm-sl
hd-brit, sl sm tex, tr CHK
incl, mod calc

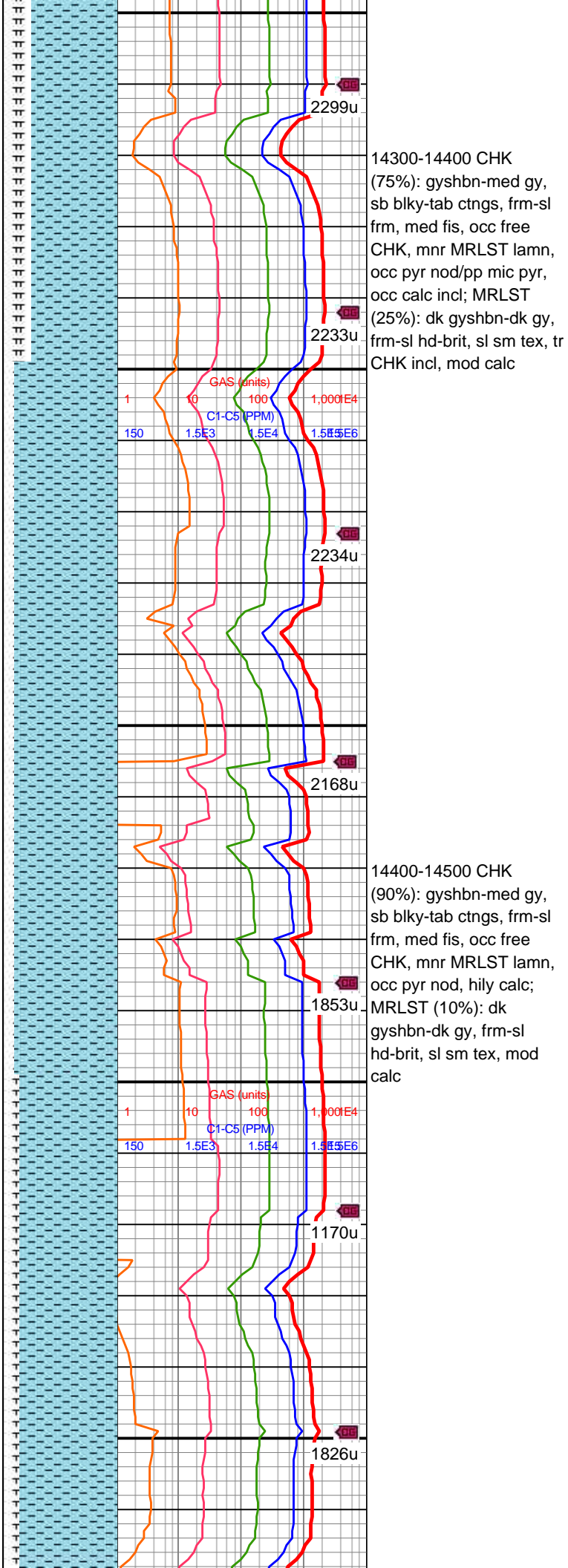
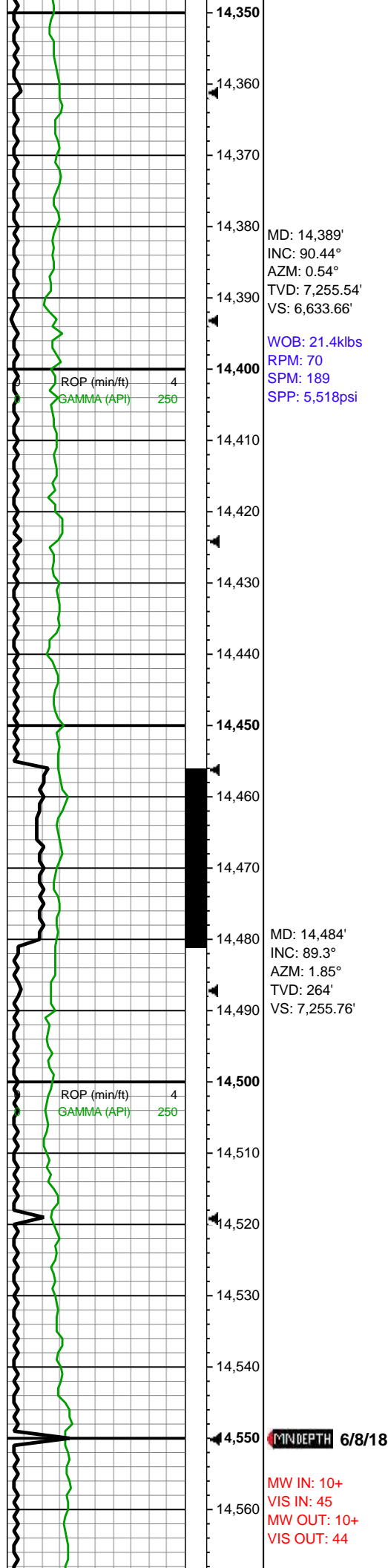
13800-13900 CHK
(85%): gyshbn-med gy,
sb blkly-tab ctngs, frm-sl
frm, med fis, occ free
CHK, mn MRLST lamn,
tr dissm/pp mic pyr, hi
calc; MRLST (15%): dk
gyshbn-dk gy, frm-sl
hd-brit, sl sm tex, occ
CHK incl, mod calc





14100-14200 CHK
(80%): gyshbn-med gy,
sb blkly-tab ctngs, frm-sl
frm, med fis, occ free
CHK, mnr MRLST lamn,
occ pyr nod/pp mic pyr,
occ calc incl; MRLST
(20%): dk gyshbn-dk gy,
frm-sl hd-brit, sl sm tex, tr
CHK incl, mod calc

14200-14300 CHK
(65%): gyshbn-med gy,
sb blkly-tab ctngs, frm-sl
frm, med fis, occ free
CHK, mnr MRLST lamn,
occ pyr nod/pp mic pyr,
occ calc incl; MRLST
(35%): dk gyshbn-dk gy,
frm-sl hd-brit, sl sm tex, tr
CHK incl, mod calc





MD: 14,578'
INC: 89.17°
AZM: 1.15°
TVD: 7,257.01'
VS: 6,817.65'

WOB: 28.6klbs
RPM: 69
SPM: 186
SPP: 5,505psi

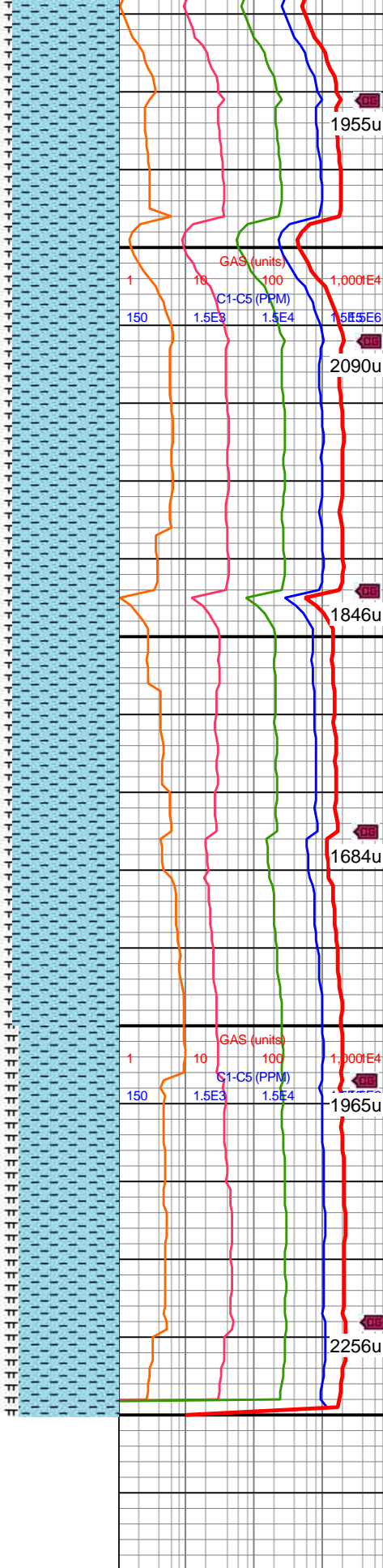
MD: 14,673'
INC: 90.4°
AZM: 1.59°
TVD: 7,257.37'
VS: 6,910.12'

MD: 14,684'
INC: 90.75°
AZM: 1.59°
TVD: 7,257.26'
VS: 6,920.81'

Projection to Bit:

MD: 14,750'
INC: 90.75°
AZM: 1.59°
TVD: 7,256.39'
VS: 6,985'

Total Depth of
14,750 Reached
on 06/08/2018
@ 01:30MST



14500-14600 CHK
(85%): gyshbn-med gy,
sb blkly-tab ctngs, frm-sl
frm, med fis, occ free
CHK, mnR MRLST lamn,
occ pyr nod, hily calc;
MRLST (15%): dk
gyshbn-dk gy, frm-sl
hd-brit, sl sm tex, mod
calc

1955u

2090u

1846u

14600-14700 CHK
(85%): gyshbn-med gy,
sb blkly-tab ctngs, frm-sl
frm, med fis, occ free
CHK, mnR MRLST lamn,
occ pyr nod, hily calc;
MRLST (15%): dk
gyshbn-dk gy, frm-sl
hd-brit, sl sm tex, mod
calc

1684u

1965u

14700-14750 CHK
(80%): gyshbn-med gy,
sb blkly-tab ctngs, frm-sl
frm, med fis, occ free
CHK, mnR MRLST lamn,
occ pyr nod, hily calc;
MRLST (20%): dk
gyshbn-dk gy, frm-sl
hd-brit, sl sm tex, mod
calc

2256u