



Scale: 5" / 100'
Measured Depth Log

Well Name Davis 1E-9H-G266

Location Sec. 4 T2N R66W

State Colorado

County Weld

Country USA

Rig Number Ensign 153

API Number 0512346510000

AFE # 16191023

Geographic Region Rockies

Field Wattenberg

Spud Date 8/29/2018

Drilling Completed 8/31/2018

Surface Coordinates Lat/Long: 40.154321/-104.777982

SHL: Sec: 9 Twp: 2N 66W
Footage: 2180 FNL 367 FEL

Bottom Hole Coordinates Proposed BHL:
Sec: 4 Twp: 2N 66W
Footage: 460 FNL 384 FWL

Ground Elevation 4,917'

K.B. Elevation 4,940'

Logged Interval 6,500' **To** 14,665'

Total Depth 14,665'

Formation B 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/ Shana Swirin

Services Provided: 2-Man Mudlogging / Geosteering

Equipment: ML-567

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

Start Date 08/29/2018

Release Date: 09/02/2018

Job #: 1542RK1809

Rock Types

UNKNOWN	DOLOMITE	SHALE GRAY	TILL
ANHYDRITE	CHERT	SHALE COLORED	BENTONITE
GYPSUM	COAL	SILTSTONE	TUFF
SALT	MARLSTONE	SANDSTONE	IGNEOUS
SIDERITE or LIMONITE	CHALK	CONGLOMERATE	METAMORPHIC
LIMESTONE	SHALE	BRECCIA	CEMENT

Accessories

Fossils

ALGAE
 AMPHIPORA
 BELEMNITE
 BIOCLASTIC
 BRACHIOPOD
 BRYOZOA
 CEPHALOPOD
 CORAL
 CRINOID

F FOSSIL

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

ARGILLACEOUS

ARGILLITE GRAIN
 BENTONITE
 BITUMENOUS SUBSTANCE
 BRECCIA FRAGMENTS
 CALCAREOUS
 CARBONACEOUS FLAKES
 CHTDK
 CHTLT
 COAL - THIN BEDS
 DOLOMITE

GLAUCONITE

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

Stringer

ANHYDRITE STRINGER
 BENTONITE STRINGER
 COAL STRINGER
 DOLOMITE STRINGER
 GYPSUM STRINGER
 LIMESTONE STRINGER
 MARLSTONE (CALC) STRG
 MARLSTONE (DOL) STRG
 SANDSTONE STRINGER

- CRINOID
- ECHINOID
- FISH
- FORAMINIFERA

- STROMATOPOROID
- Minerals**
- ANHYDRITIC

- DOLOMITIC
- FELDSPAR
- FERRUGINOUS PELLET
- FERRUGINOUS

- SANDY
- SILICEOUS
- SILTY
- TUFFACEOUS

- SANDSTONE STRINGER
- SHALE STRINGER
- SILTSTONE STRINGER

Other Symbols

Oil Show

- DEAD
- EVEN
- QUESTIONABLE
- SPOTTED STAINING

Porosity

- E EARTHY
- F FENESTRAL
- F FRACTURE
- X INTERCRYSTALLINE
- 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

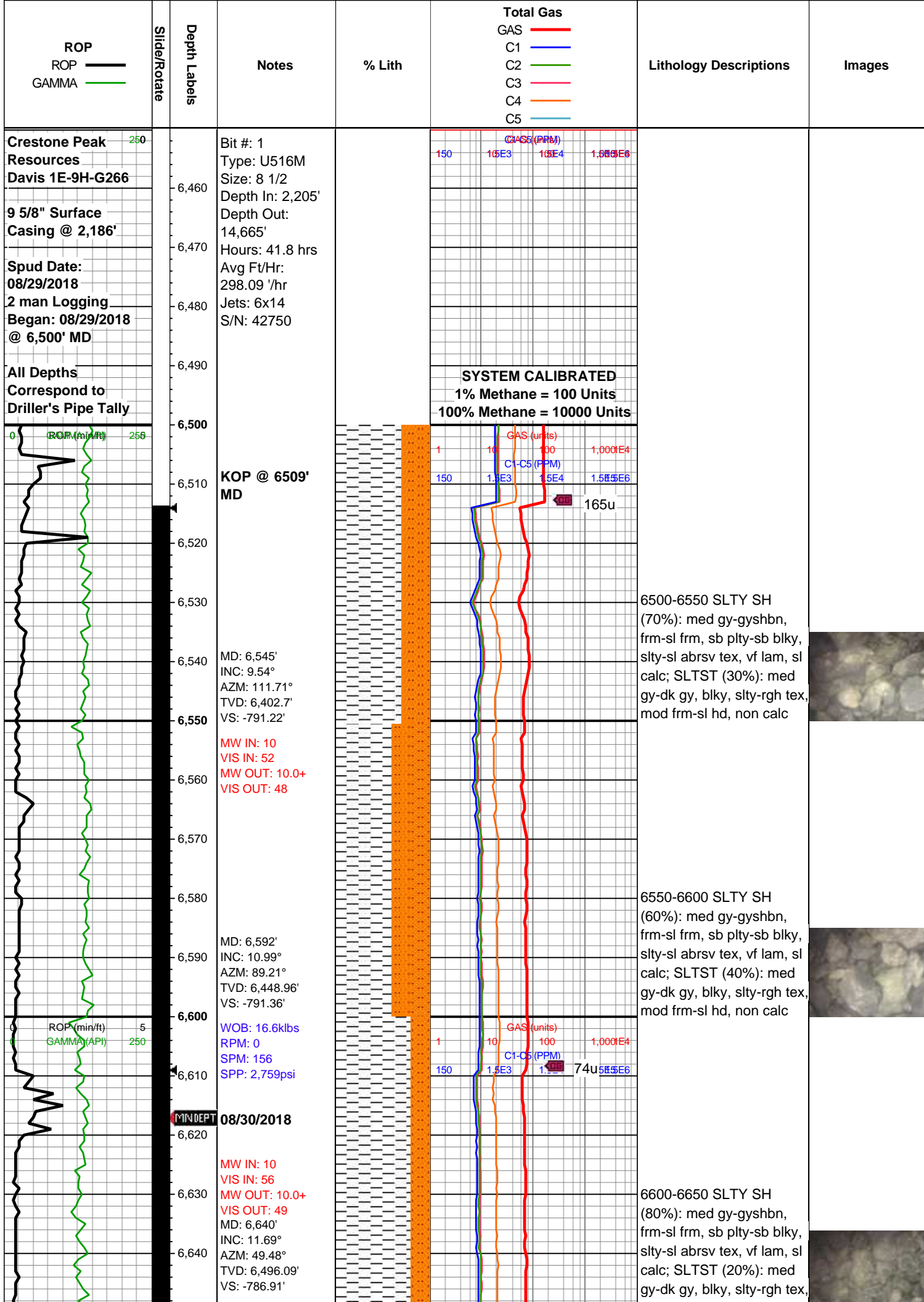
Textures

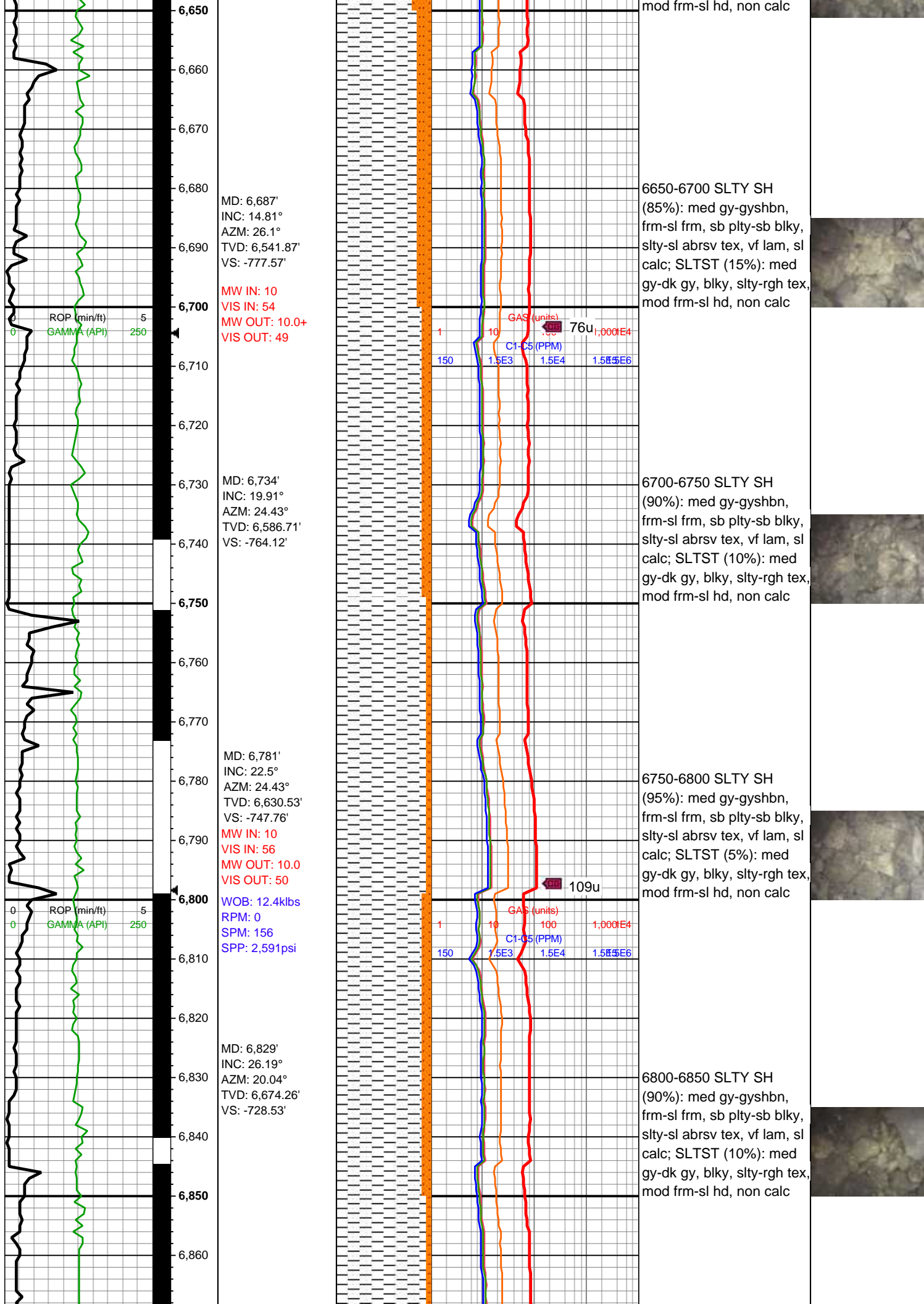
- BOUNDSTONE
- CHALKY
- CRYPTOXLN
- E EARTHY
- FINELYXLN
- GRAINSTONE

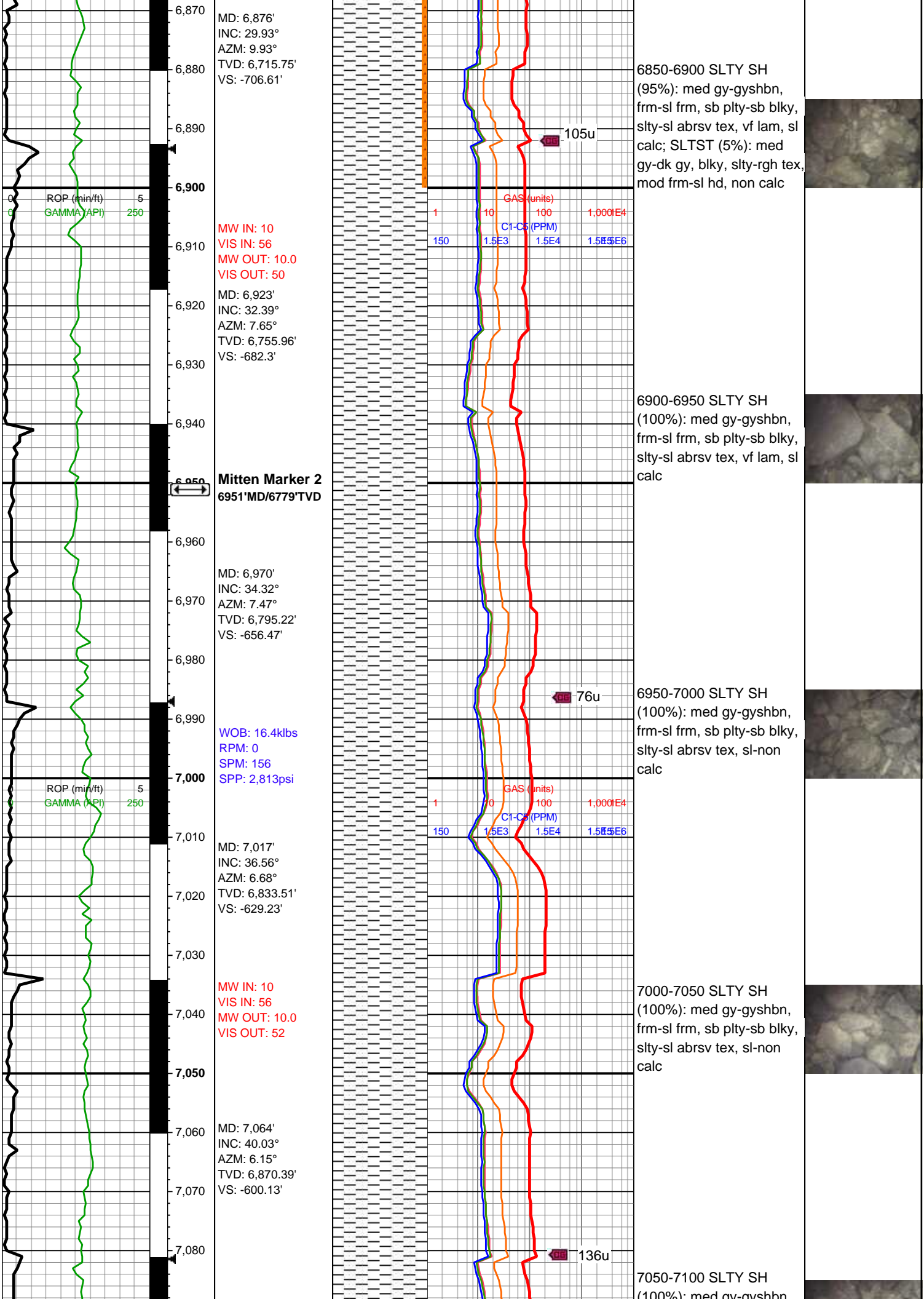
- L LITHOGRAPHIC
- MX MICROXLN
- MS MUDSTONE
- PS PACKSTONE
- WS WACKESTONE

Sorting

- M MODERATE
- P POOR
- W WELL







MD: 6,876'
INC: 29.93°
AZM: 9.93°
TVD: 6,715.75'
VS: -706.61'

MW IN: 10
VIS IN: 56
MW OUT: 10.0
VIS OUT: 50

MD: 6,923'
INC: 32.39°
AZM: 7.65°
TVD: 6,755.96'
VS: -682.3'

Mitten Marker 2
6951'MD/6779'TVD

MD: 6,970'
INC: 34.32°
AZM: 7.47°
TVD: 6,795.22'
VS: -656.47'

WOB: 16.4klbs
RPM: 0
SPM: 156
SPP: 2,813psi

MD: 7,017'
INC: 36.56°
AZM: 6.68°
TVD: 6,833.51'
VS: -629.23'

MW IN: 10
VIS IN: 56
MW OUT: 10.0
VIS OUT: 52

MD: 7,064'
INC: 40.03°
AZM: 6.15°
TVD: 6,870.39'
VS: -600.13'

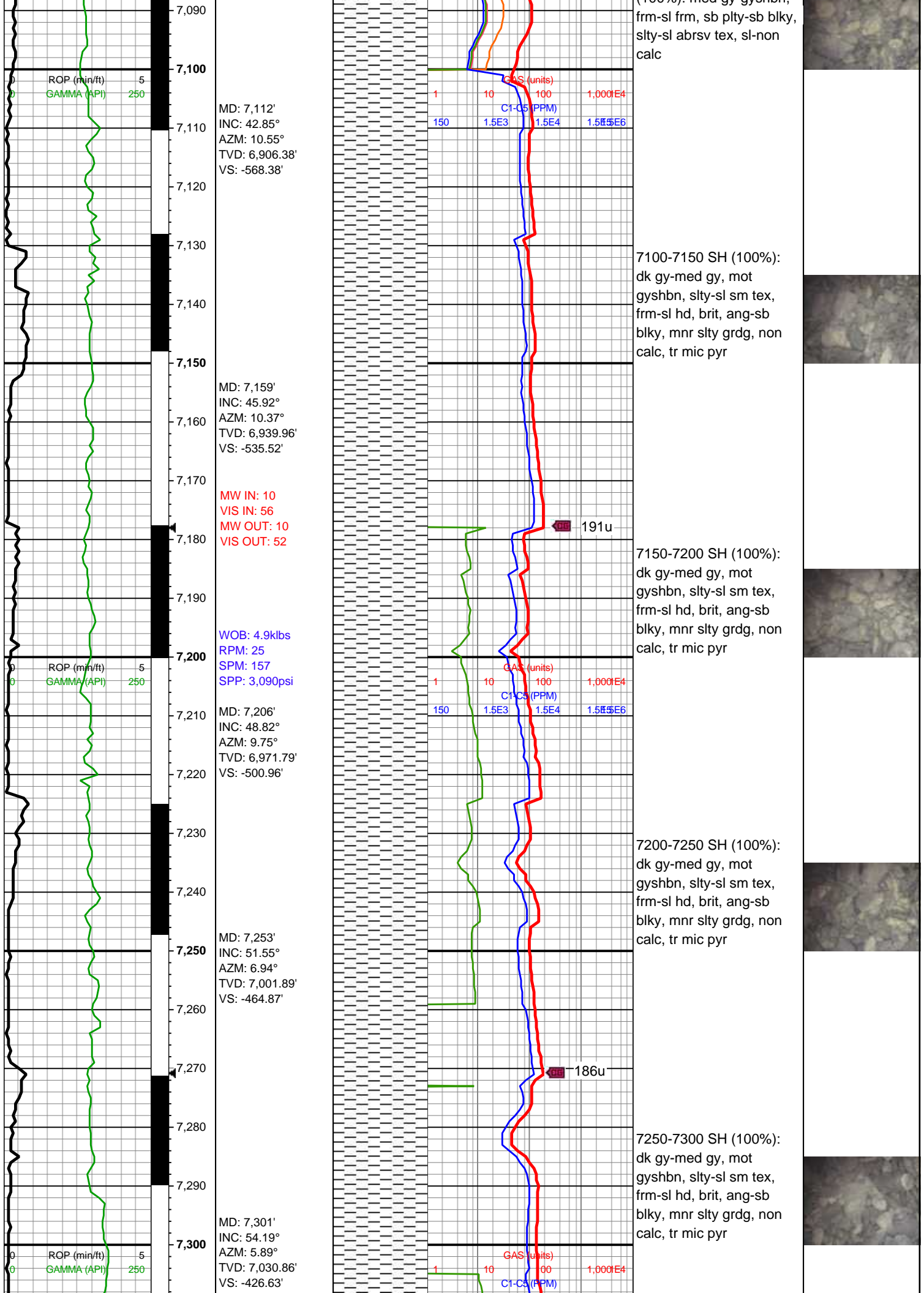
6850-6900 SLTY SH
(95%): med gy-gyshbn,
frm-sl frm, sb plty-sb blk,
sly-sl abrsv tex, vf lam, sl
calc; SLTST (5%): med
gy-dk gy, blk, sly-rgh tex,
mod frm-sl hd, non calc

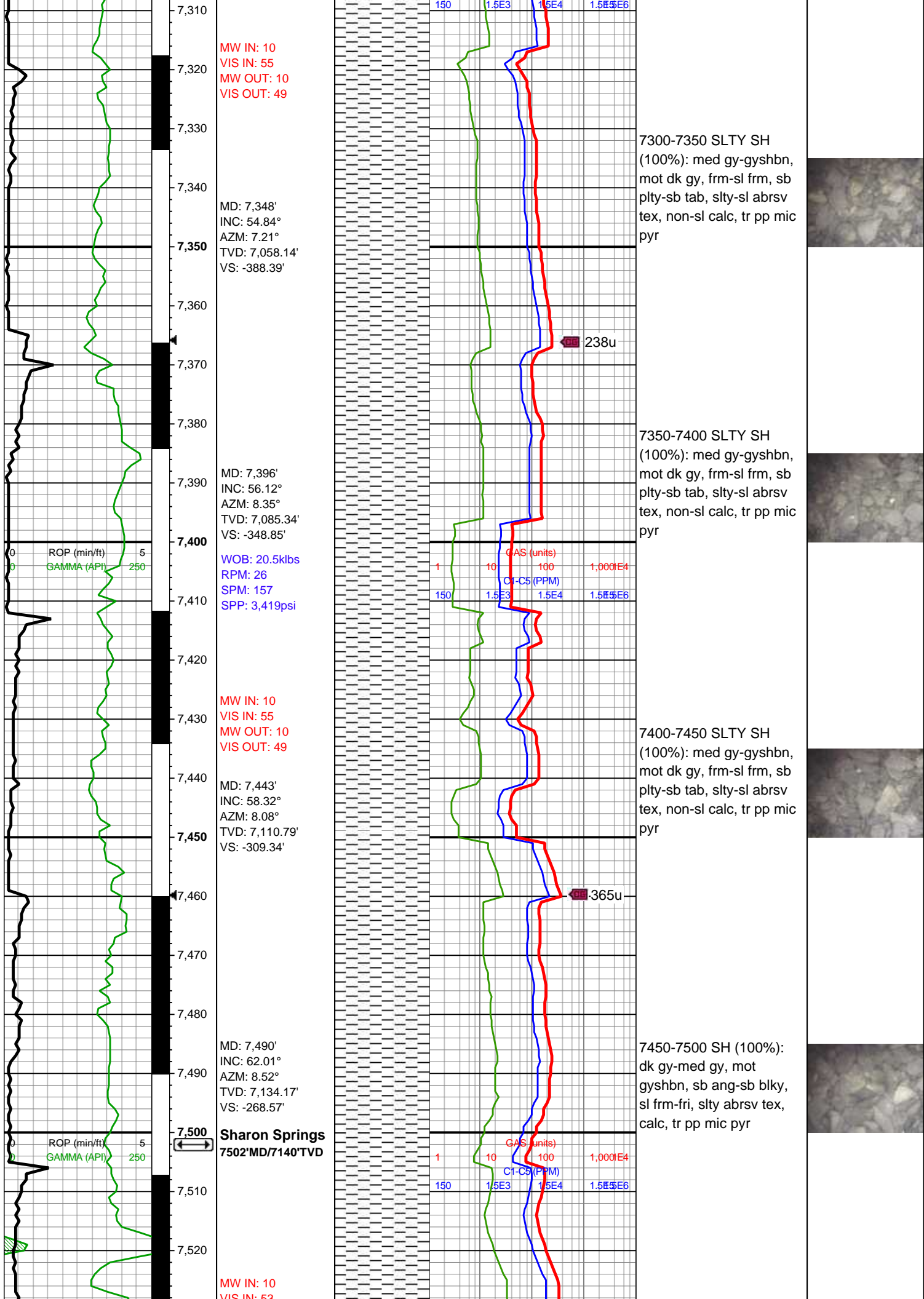
6900-6950 SLTY SH
(100%): med gy-gyshbn,
frm-sl frm, sb plty-sb blk,
sly-sl abrsv tex, vf lam, sl
calc

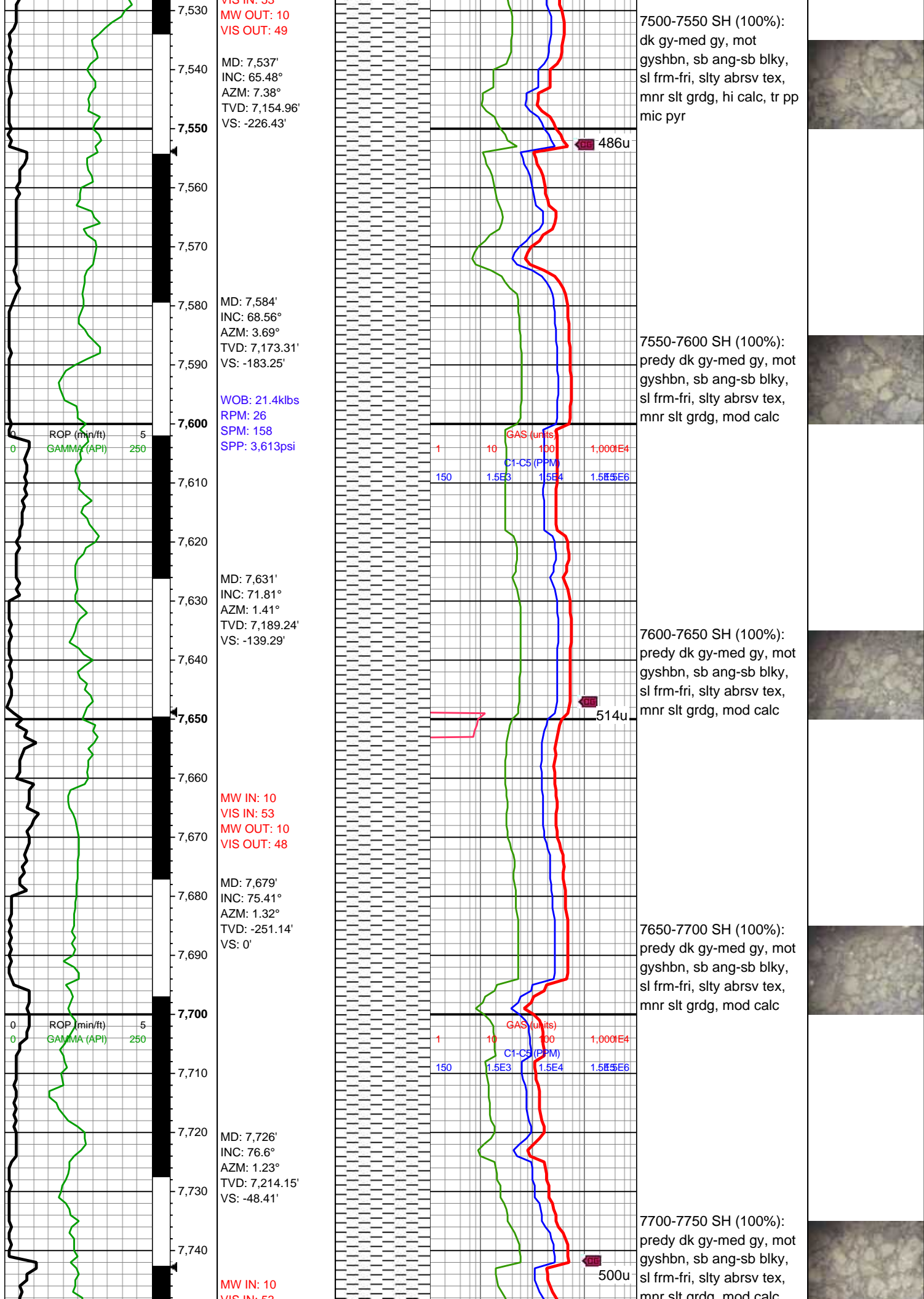
6950-7000 SLTY SH
(100%): med gy-gyshbn,
frm-sl frm, sb plty-sb blk,
sly-sl abrsv tex, sl-non
calc

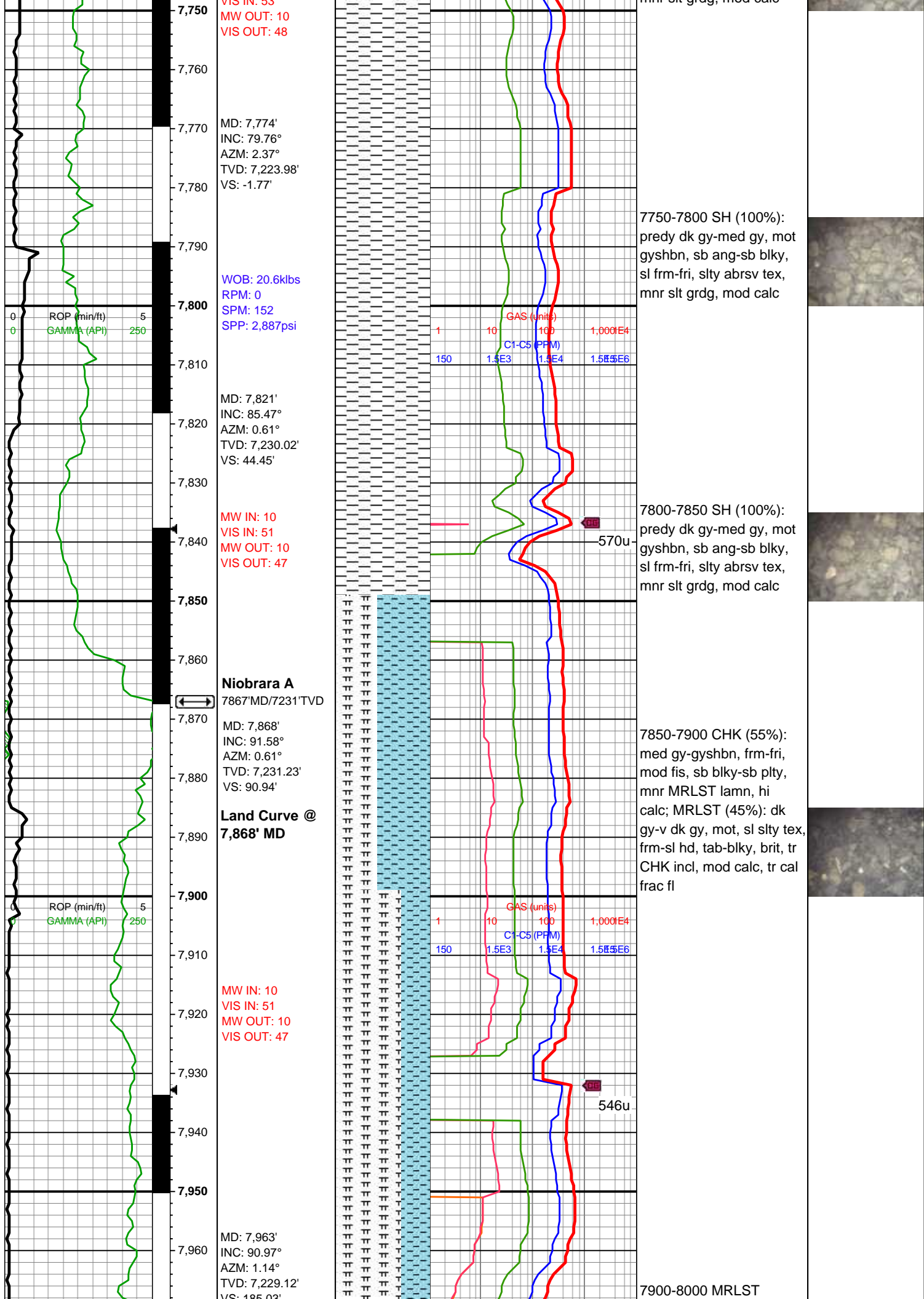
7000-7050 SLTY SH
(100%): med gy-gyshbn,
frm-sl frm, sb plty-sb blk,
sly-sl abrsv tex, sl-non
calc

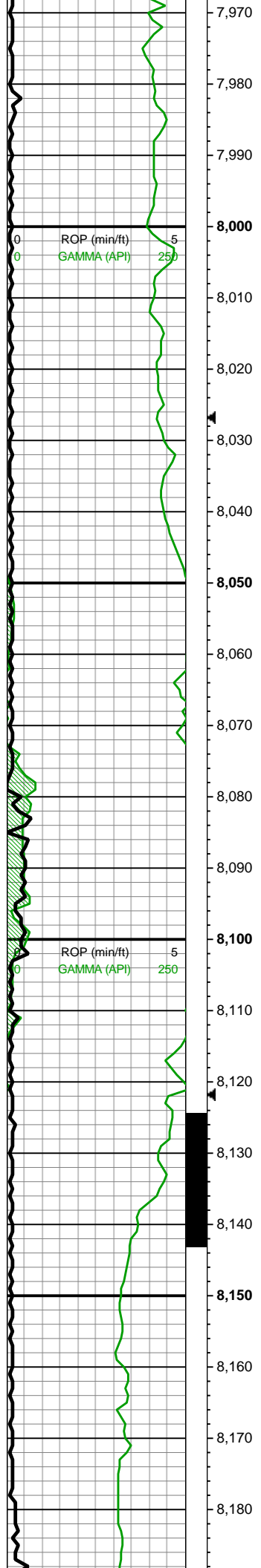
7050-7100 SLTY SH
(100%): med gy-gyshbn









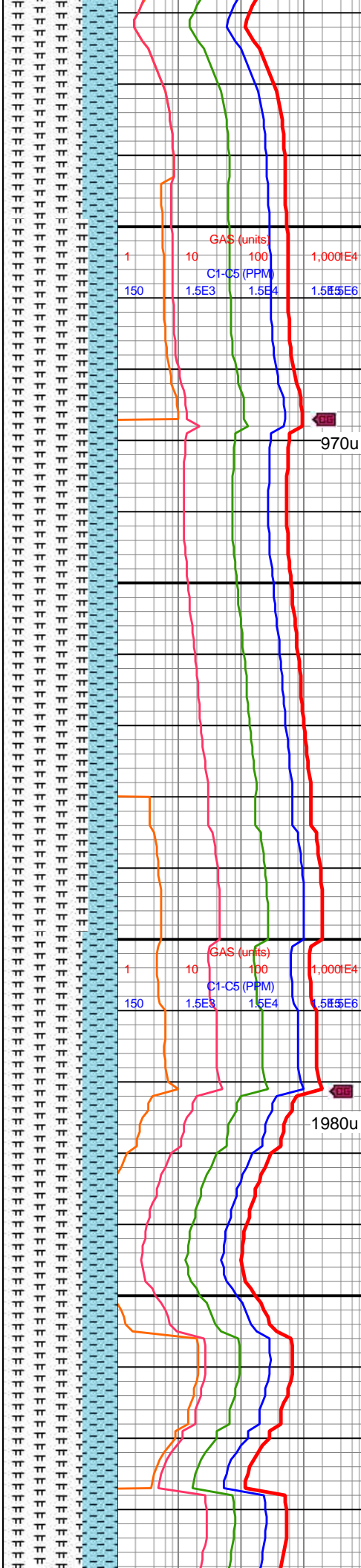


WOB: 28.9klbs
RPM: 50
SPM: 184
SPP: 4,357psi

MD: 8,058'
INC: 91.54°
AZM: 359.47°
TVD: 7,227.03'
VS: 278.99'

MW IN: 10
VIS IN: 50
MW OUT: 10
VIS OUT: 47

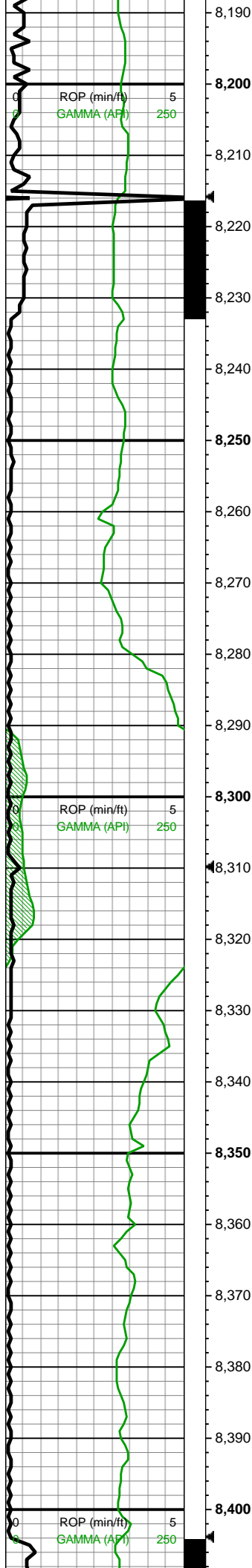
MD: 8,151'
INC: 91.45°
AZM: 1.93°
TVD: 7,224.61'
VS: 371.05'



(70%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pp pyr/ pyr nod; CHK
(30%): med gy-gyshbn,
frm-fri, mod fis, sb
blky-sb plty, tr diss mic
pyr/pyr nod, mnr MRLST
lamn, hi calc

8000-8100 MRLST
(75%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pp pyr/ pyr nod; CHK
(25%): med gy-gyshbn,
frm-fri, mod fis, sb
blky-sb plty, tr diss mic
pyr/pyr nod, mnr MRLST
lamn, hi calc

8100-8200 MRLST
(70%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pp pyr/ pyr nod; CHK
(30%): med gy-gyshbn,



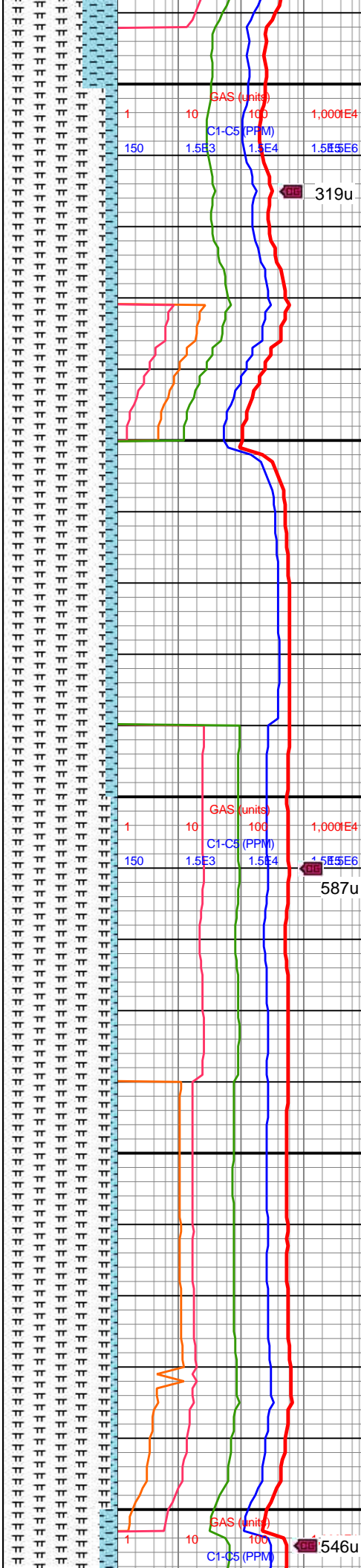
WOB: 34.4klbs
RPM: 70
SPM: 224
SPP: 5,536psi

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

MD: 8,246'
INC: 89.12°
AZM: 2.64°
TVD: 7,224.14'
VS: 465.44'

MD: 8,340'
INC: 88.81°
AZM: 3.6°
TVD: 7,225.83'
VS: 558.98'

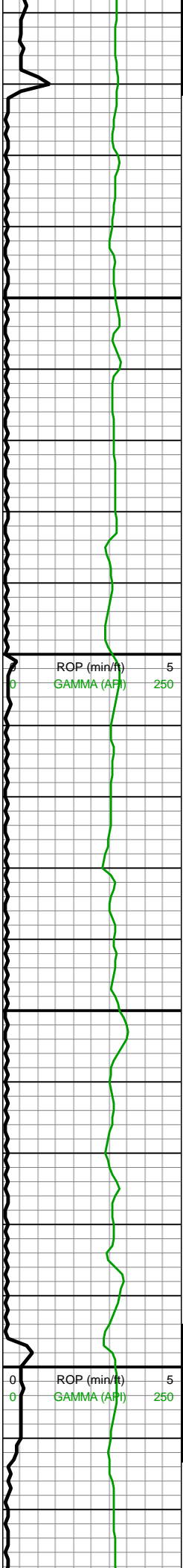
WOB: 35.1klbs
RPM: 70
SPM: 217
SPP: 5,533psi



frm-fri, mod fis, sb
blky-sb plty, tr diss mic
pyr/pyr nod, mnrl MRLST
lamn, hi calc

8200-8300 MRLST
(90%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pp pyr/ pyr nod; CHK
(10%): med gy-gyshbn,
frm-fri, mod fis, sb
blky-sb plty, tr diss mic
pyr/pyr nod, mnrl MRLST
lamn, hi calc

8300-8400 MRLST
(95%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pp pyr/ pyr nod; CHK
(5%): med gy-gyshbn,
frm-fri, mod fis, sb
blky-sb plty, tr diss mic
pyr/pyr nod, mnrl MRLST
lamn, hi calc



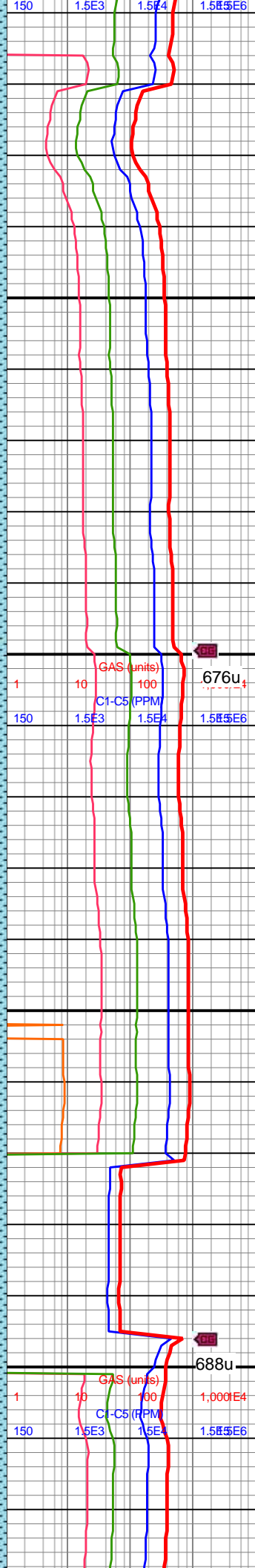
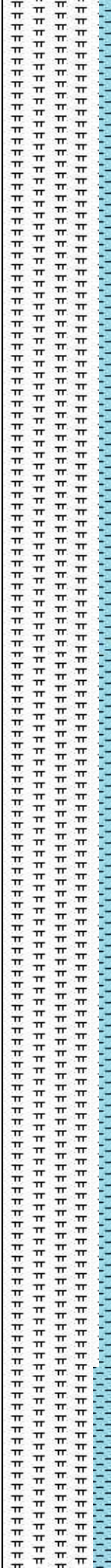
MD: 8,435'
INC: 89.87°
AZM: 2.02°
TVD: 7,226.93'
VS: 653.47'

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

MD: 8,529'
INC: 89.96°
AZM: 2.46°
TVD: 7,227.07'
VS: 746.87'

WOB: 38.1klbs
RPM: 0
SPM: 185
SPP: 3,978psi

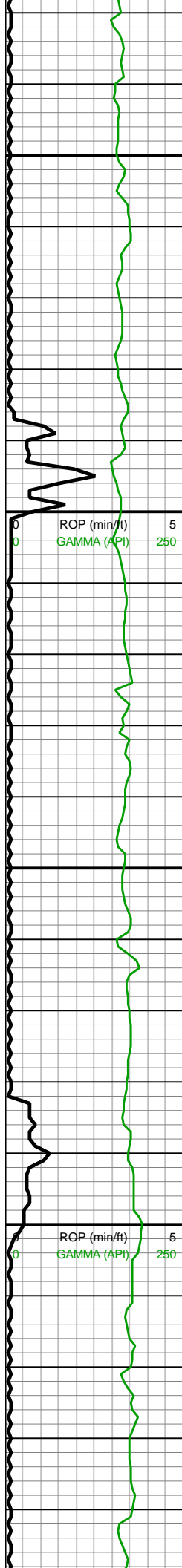
MD: 8,624'
INC: 90.79°
AZM: 1.93°
TVD: 7,226.45'



8400-8500 MRLST
(85%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pp pyr/ pyr nod; CHK
(15%): med gy-gyshbn,
frm-fri, mod fis, sb
blky-sb plty, tr diss mic
pyr/pyr nod, mnr MRLST
lamn, hi calc

8500-8600 MRLST
(85%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pp pyr/ pyr nod; CHK
(15%): med gy-gyshbn,
frm-fri, mod fis, sb
blky-sb plty, tr diss mic
pyr/pyr nod, mnr MRLST
lamn, hi calc





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

VS: 841.26'

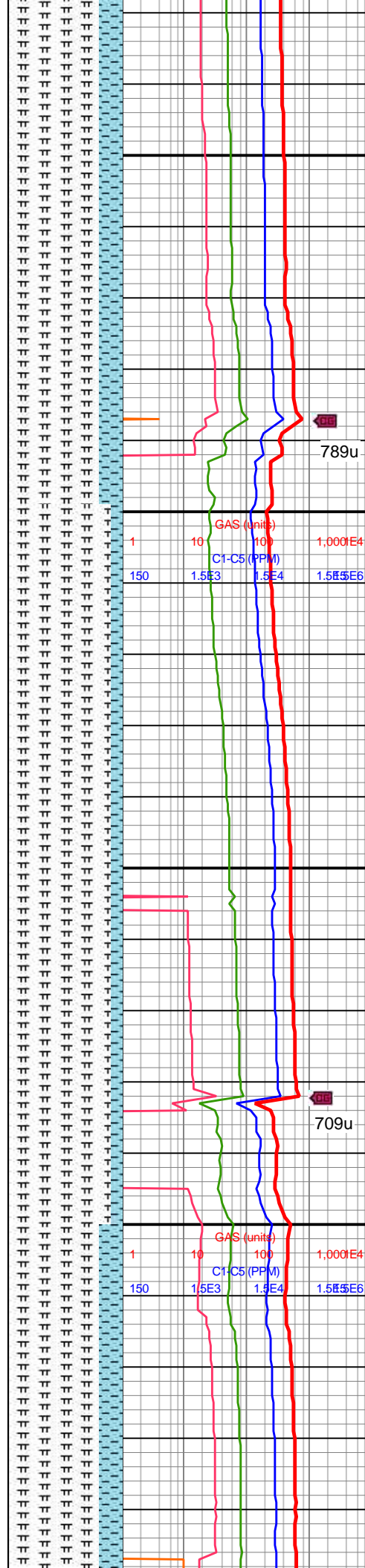
MW IN: 10
VIS IN: 50
MW OUT: 10
VIS OUT: 46

MD: 8,718'
INC: 91.19°
AZM: 3.95°
TVD: 7,224.82'
VS: 934.76'

MW IN: 10
VIS IN: 50
MW OUT: 10
VIS OUT: 47

WOB: 47.6klbs
RPM: 0
SPM: 186
SPP: 4,059psi

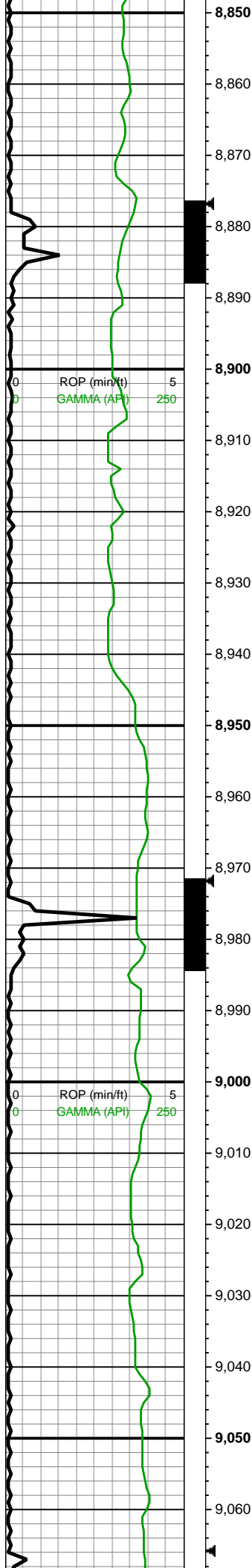
MD: 8,812'
INC: 90.62°
AZM: 0.61°
TVD: 7,223.34'
VS: 1,028.15'



8600-8700 MRLST
(80%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pp pyr/ pyr nod; CHK
(20%): med gy-gyshbn,
frm-fri, mod fis, sb
blky-sb plty, tr diss mic
pyr/pyr nod, mnr MRLST
lamn, hi calc

8700-8800 MRLST
(90%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pyr nod; CHK (10%): med
gy-gyshbn, frm-fri, mod
fis, sb blky-sb plty, mnr
MRLST lamn, hi calc



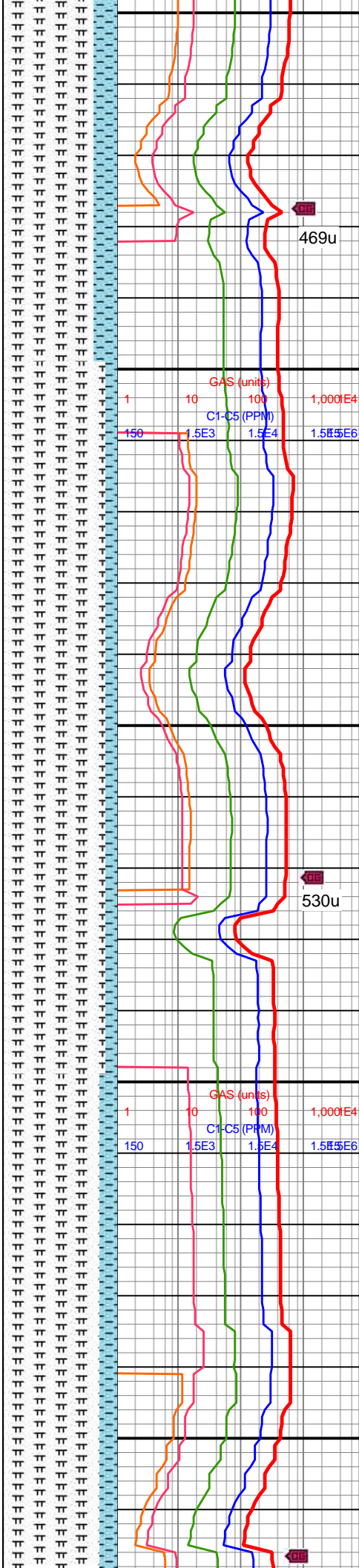


MD: 8,907'
INC: 90.84°
AZM: 0.35°
TVD: 7,222.13'
VS: 1,122.17'

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

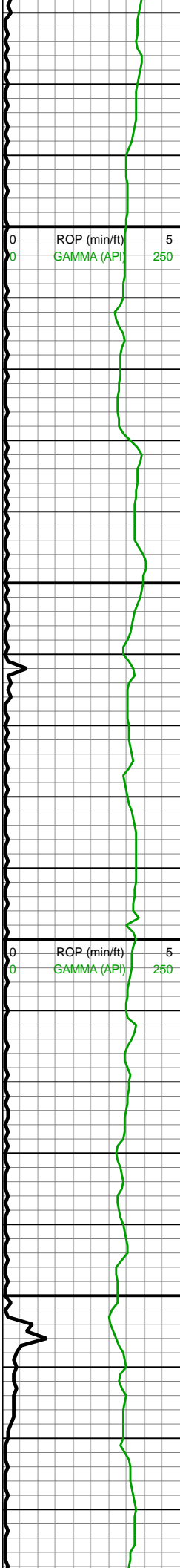
WOB: 31.7klbs
RPM: 70
SPM: 214
SPP: 5,426psi

MD: 9,002'
INC: 91.67°
AZM: 358.5°
TVD: 7,220.05'
VS: 1,215.9'



8800-8900 MRLST
(80%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pyr nod; CHK (20%): med
gy-gyshbn, frm-fri, mod
fis, sb blkly-sb plty, mnr
MRLST lamn, hi calc

8900-9000 MRLST
(90%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pyr nod; CHK (10%): med
gy-gyshbn, frm-fri, mod
fis, sb blkly-sb plty, mnr
MRLST lamn, hi calc



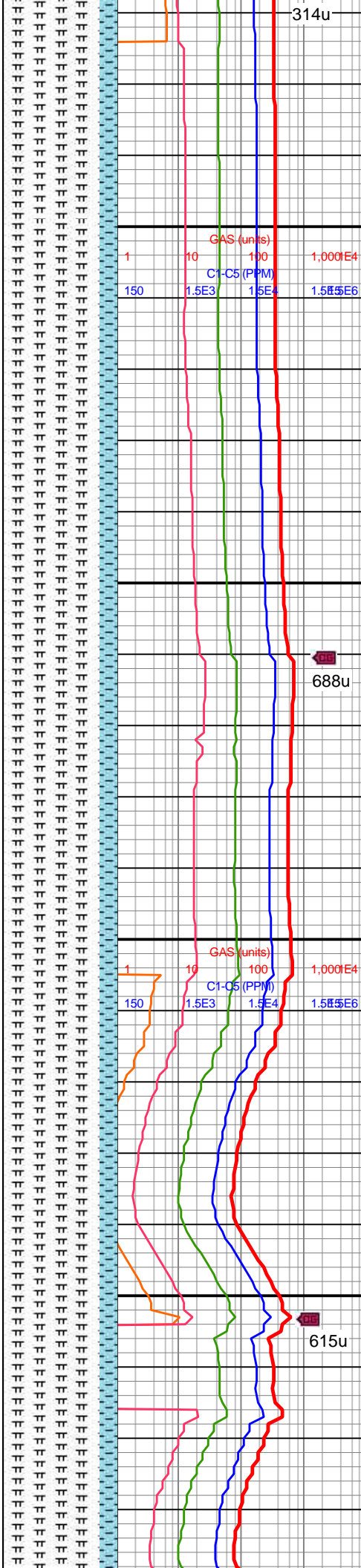
9,070
9,080
9,090
9,100
9,110
9,120
9,130
9,140
9,150
9,160
9,170
9,180
9,190
9,200
9,210
9,220
9,230
9,240
9,250
9,260
9,270
9,280

MD: 9,096'
INC: 91.27°
AZM: 359.12°
TVD: 7,217.63'
VS: 1,308.47'

MD: 9,190'
INC: 91.27°
AZM: 359.3°
TVD: 7,215.55'
VS: 1,401.16'

WOB: 34.1klbs
RPM: 70
SPM: 214
SPP: 5,595psi

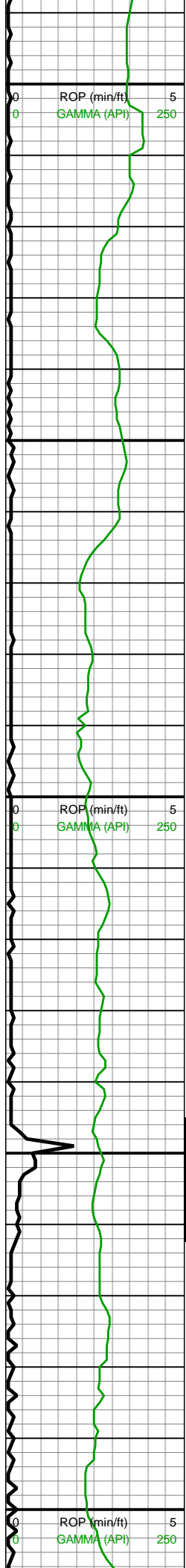
MD: 9,285'
INC: 90.7°
AZM: 356.83°
TVD: 7,212.92'



9000-9100 MRLST
(85%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pyr nod; CHK (15%): med
gy-gyshbn, frm-fri, mod
fis, sb blky-sb plty, mn
MRLST lamn, hi calc

9100-9200 MRLST
(85%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pp pyr/ pyr nod; CHK
(15%): med gy-gyshbn,
frm-fri, mod fis, sb
blky-sb plty, tr diss mic
pyr/pyr nod, mn MRLST
lamn, hi calc

9200-9300 MRLST
(85%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pp pyr/ pyr nod; CHK
(15%): med gy-gyshbn,



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

VS: 1,494.51'

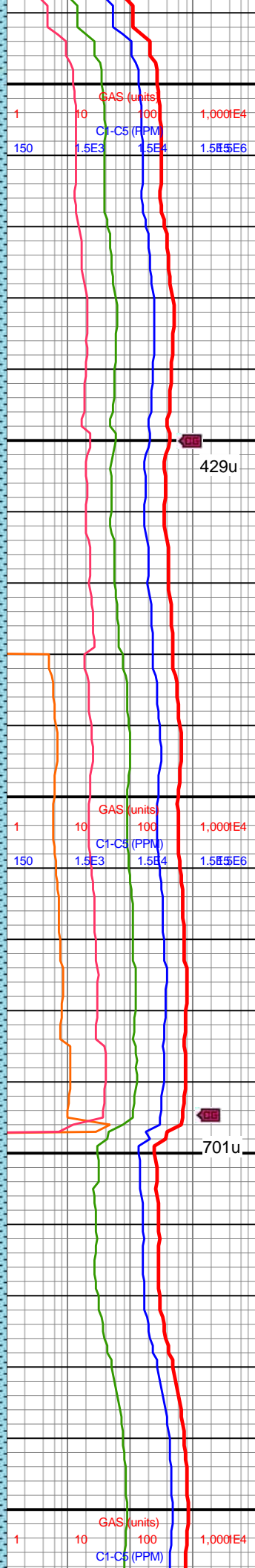
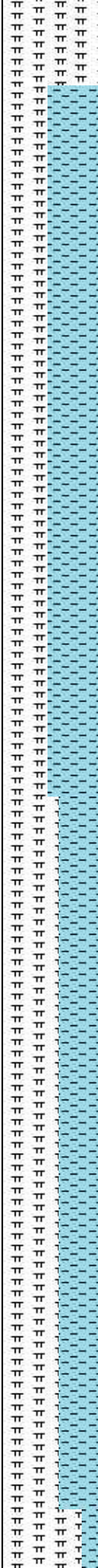
MW IN: 10.0+
VIS IN: 51
MW OUT: 10.1+
VIS OUT: 48

MD: 9,380'
INC: 90.48°
AZM: 356.22°
TVD: 7,212.94'
VS: 1,587.36'

WOB: 32.2klbs
RPM: 70
SPM: 216
SPP: 5,563psi

MD: 9,475'
INC: 91.76°
AZM: 356.66°
TVD: 7,211.08'
VS: 1,680.18'

MW IN: 10
VIS IN: 54
MW OUT: 10.1+
VIS OUT: 48

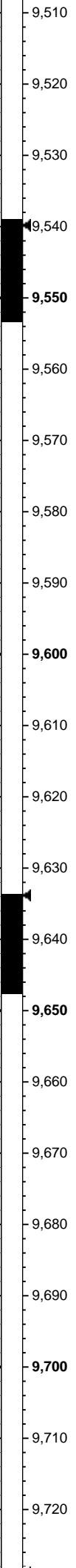
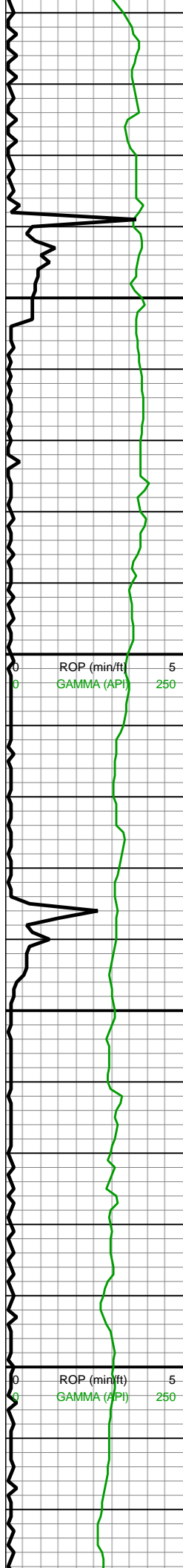


frm-fri, mod fis, sb
blky-sb plty, tr diss mic
pyr/pyr nod, mnr MRLST
lamn, hi calc

9300-9400 CHK (60%):
med gy-gyshbn, frm-fri,
mod fis, sb blky-sb plty, tr
dissm mic pyr/pyr nod,
mnr MRLST lamn, hi
calc; MRLST (40%): dk
gy-v dk gy, mot, sl slty tex,
frm-sl hd, tab-blky, brit, tr
CHK incl, mod calc, tr cal
frac fl, tr pp pyr/ pyr nod

9400-9500 CHK (50%):
med gy-gyshbn, frm-fri,
mod fis, sb blky-sb plty, tr
dissm mic pyr/pyr nod,
mnr MRLST lamn, hi
calc; MRLST (50%): dk
gy-v dk gy, mot, sl slty tex,
frm-sl hd, tab-blky, brit, tr
CHK incl, mod calc, tr cal
frac fl, tr pp pyr/ pyr nod



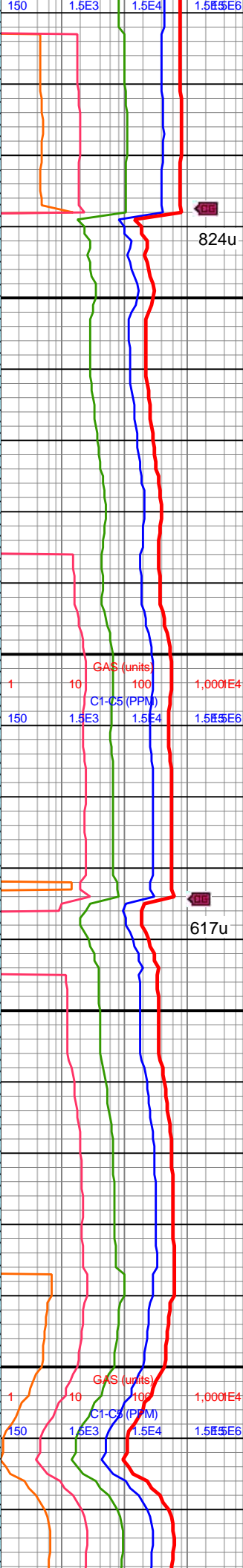
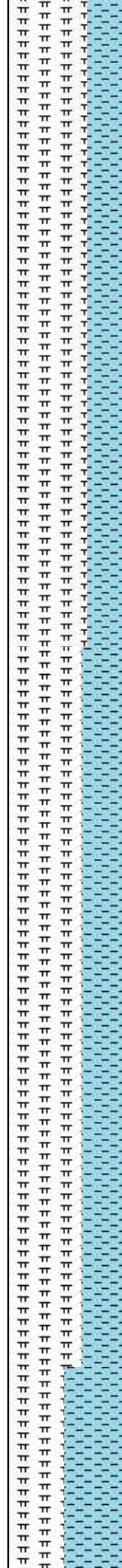


MD: 9,570'
INC: 91.93°
AZM: 0.35°
TVD: 7,208.02'
VS: 1,773.61'

WOB: 34.3klbs
RPM: 70
SPM: 214
SPP: 5,536psi

MW IN: 10
VIS IN: 54
MW OUT: 10.1
VIS OUT: 48

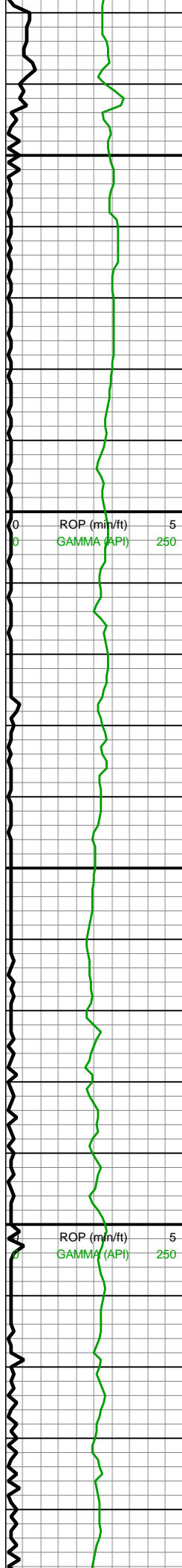
MD: 9,664'
INC: 91.54°
AZM: 0.53°
TVD: 7,205.18'
VS: 1,866.59'



9500-9600 MRLST
(70%): dk gy-v dk gy, mot, sl slty tex, frm-sl hd, tab-blky, brit, tr CHK incl, mod calc, tr cal frac fl, tr pp pyr/ pyr nod; CHK (30%): med gy-gyshbn, frm-fri, mod fis, sb blky-sb plty, tr diss mic pyr/pyr nod, mnr MRLST lamn, hi calc

9600-9700 MRLST
(65%): dk gy-v dk gy, mot, sl slty tex, frm-sl hd, tab-blky, brit, sme CHK incl, mod calc, tr cal frac fl, tr pp pyr/ pyr nod; CHK (35%): med gy-gyshbn, frm-fri, mod fis, sb blky-sb plty, sme diss mic pyr/pyr nod, mnr MRLST lamn, hi calc





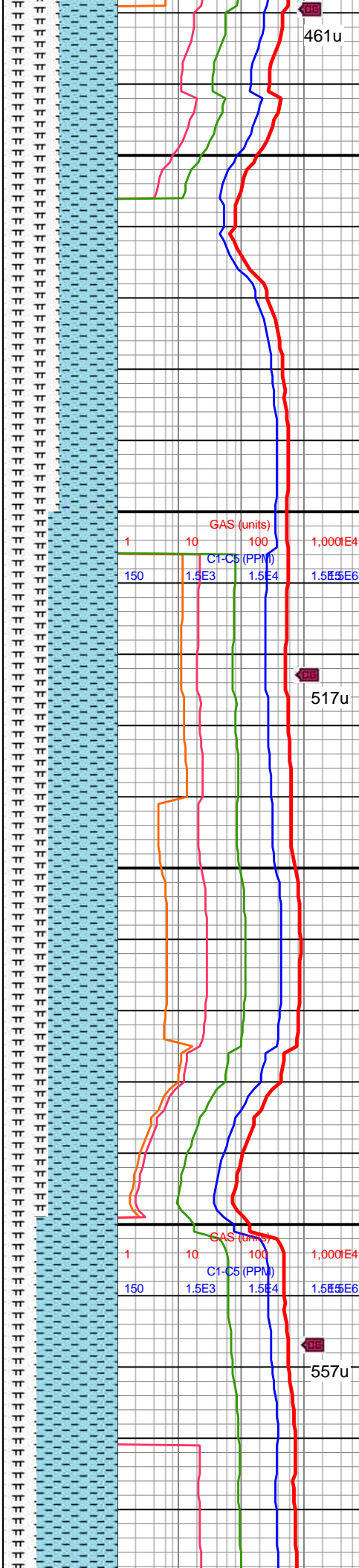
MD: 9,759'
INC: 90.44°
AZM: 359.47°
TVD: 7,203.53'
VS: 1,960.48'

WOB: 29.6klbs
RPM: 70
SPM: 213
SPP: 5,507psi

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

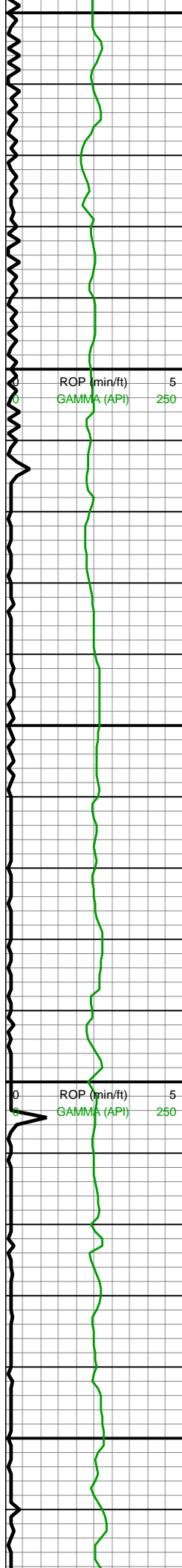
MD: 9,853'
INC: 90.57°
AZM: 0.44°
TVD: 7,202.71'
VS: 2,053.39'

MD: 9,947'
INC: 90.44°
AZM: 0.79°



9700-9800 MRLST
(50%): dk gy-v dk gy, mot,
sl slty tex, frm-sl hd,
tab-blky, brit, tr CHK incl,
mod calc, tr cal frac fl, tr
pp pyr/ pyr nod; CHK
(50%): med gy-gyshbn,
frm-fri, mod fis, sb
blky-sb plty, sme dissm
mic pyr/pyr nod, mnr
MRLST lamn, hi calc

9800-9900 CHK (60%):
predy gyshbn, mot-sl stri,
sl frm-brit, sb blky, sm
chky tex, v calc, tr MRLST
incl; MRLST (40%): dk
gy-gyshbn, mot, sb
blky-sb ang, sl hd-frm,
mod calc, tr intbd CHK, tr
pyr nod



TVD: 7,201.88'
VS: 2,146.45'

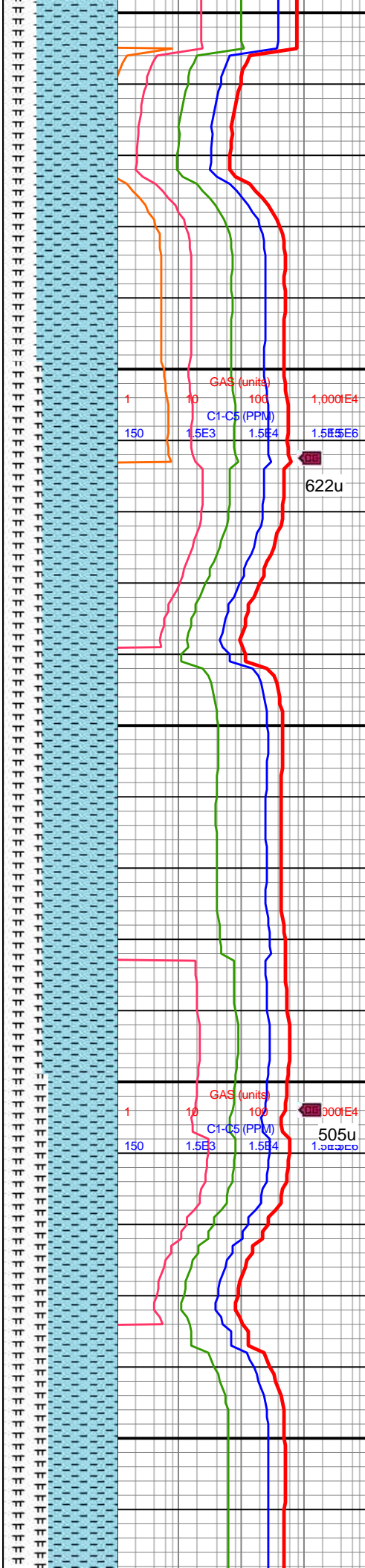
WOB: 26.3klbs
RPM: 70
SPM: 216
SPP: 5,524psi

MW IN: 10
VIS IN: 51
MW OUT: 10.1
VIS OUT: 48

MD: 10,041'
INC: 90.35°
AZM: 1.67°
TVD: 7,201.23'
VS: 2,239.65'

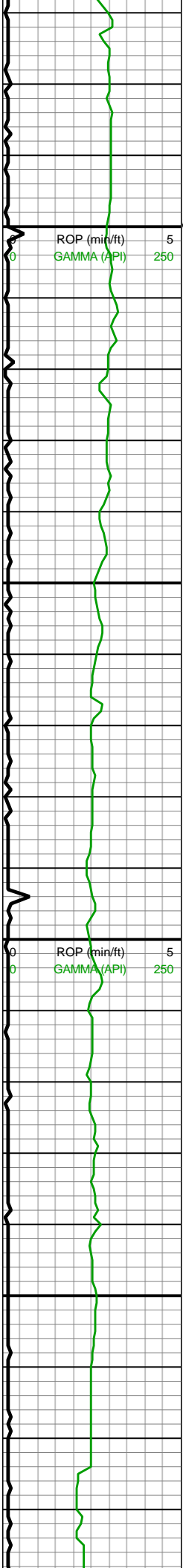
MD: 10,136'
INC: 90.26°
AZM: 1.14°
TVD: 7,200.72'
VS: 2,333.88'

08/31/2018



9900-10000 CHK (70%):
predy gyshbn, mot-sl stri,
sl frm-brit, sb blkly, sm
chky tex, v calc, tr MRLST
incl; MRLST (30%): dk
gy-gyshbn, mot, sb
blkly-sb ang, sl hd-frm,
mod calc, tr intbd CHK, tr
pyr nod

10000-10100 CHK
(65%): predy gyshbn,
mot-sl stri, sl frm-brit, sb
blkly, sm chky tex, v calc, tr
MRLST incl; MRLST
(35%): dk gy-gyshbn,
mot, sb blkly-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr pyr nod



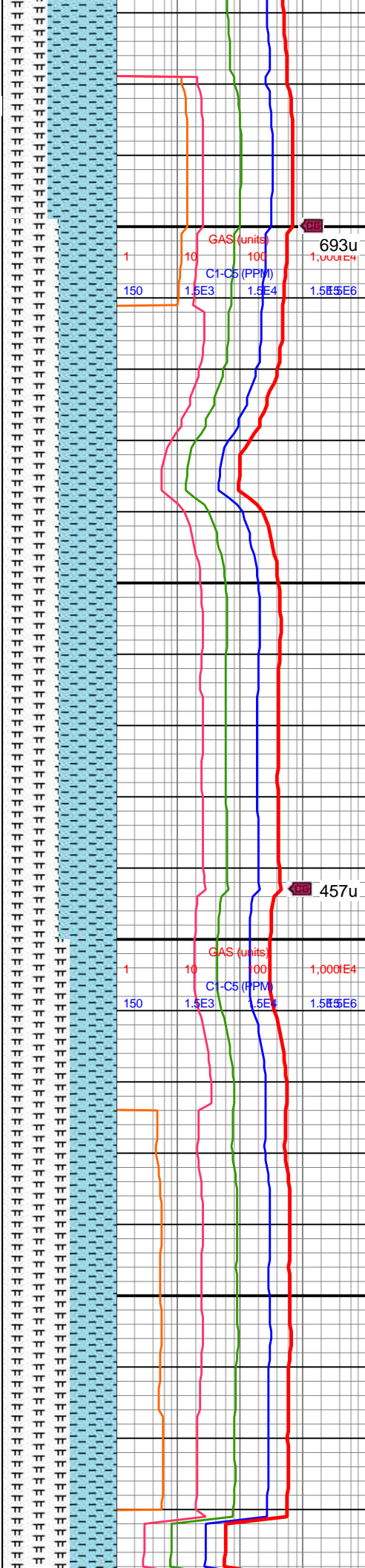
Niobrara B
10,183'MD/7201'TVD

WOB: 28klbs
RPM: 70
SPM: 210
SPP: 5,518psi

MD: 10,230'
INC: 90.13°
AZM: 0.26°
TVD: 7,200.4'
VS: 2,426.96'

MW IN: 10
VIS IN: 52
MW OUT: 10.1
VIS OUT: 47

MD: 10,325'
INC: 90.18°
AZM: 359.65°
TVD: 7,200.15'
VS: 2,520.86'



10100-10200 CHK
(60%): predy gyshbn,
mot-sl stri, sl frm-brit, sb
blky, sm chky tex, v calc, tr
MRLST incl; MRLST
(40%): dk gy-gyshbn,
mot, sb blky-sb ang, sl
hd-frm, mod calc, tr intbd
CHK

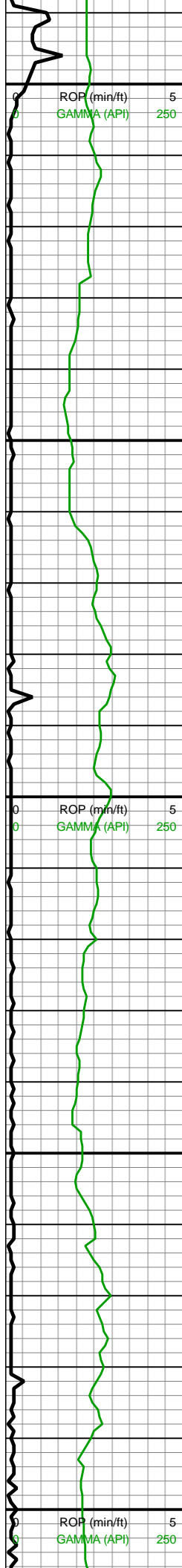
693u
1.000E4
1.5E6

10200-10300 CHK
(50%): predy gyshbn,
mot-sl stri, sl frm-brit, sb
blky, sm chky tex, v calc, tr
MRLST incl; MRLST
(40%): dk gy-gyshbn,
mot, sb blky-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr diss mic pyr/tr
pyr nod

457u
1.000E4
1.5E6

10300-10400 MRLST
(60%): dk gy-gyshbn,
mot, sb blky-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr diss mic pyr/tr
pyr nod; CHK (40%):





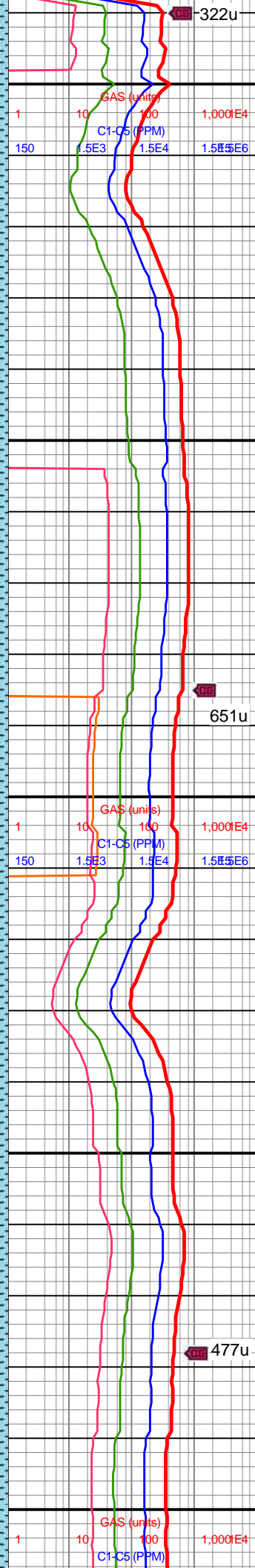
WOB: 54.9klbs
RPM: 15
SPM: 207
SPP: 4,246psi

MD: 10,420'
INC: 91.19°
AZM: 357.89°
TVD: 7,199.01'
VS: 2,614.42'

MW IN: 10
VIS IN: 52
MW OUT: 10.1
VIS OUT: 48

MD: 10,514'
INC: 91.32°
AZM: 359.38°
TVD: 7,196.95'
VS: 2,706.95'

WOB: 29.5klbs
RPM: 70
SPM: 210
SPP: 5,534psi

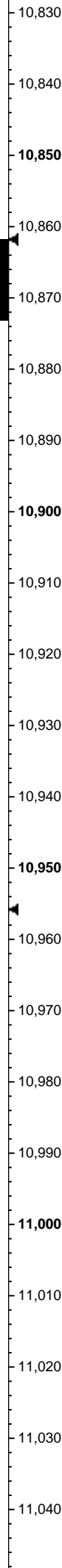
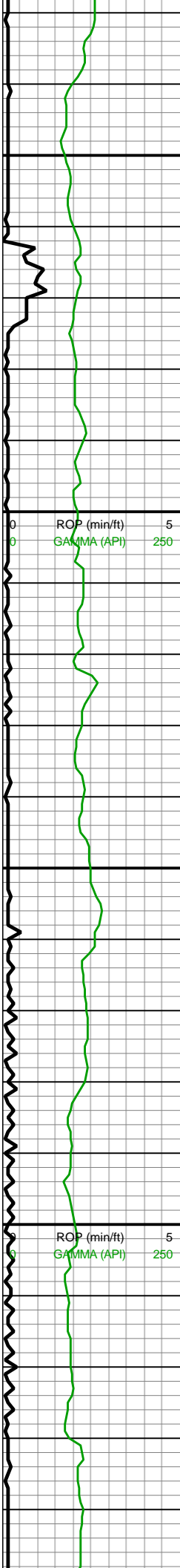


predy gyshbn, mot-sl stri,
sl frm-brit, sb blk, sm
chky tex, v calc, tr MRLST
incl;

10400-10500 CHK
(55%): predy gyshbn,
mot-sl stri, sl frm-brit, sb
blk, sm chky tex, v calc, tr
MRLST incl; MRLST
(45%): dk gy-gyshbn,
mot, sb blk-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr pyr nod

10500-10600 CHK
(65%): predy gyshbn,
mot-sl stri, sl frm-brit, sb
blk, sm chky tex, v calc, tr
MRLST incl; MRLST
(35%): dk gy-gyshbn,
mot, sb blk-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr pyr nod





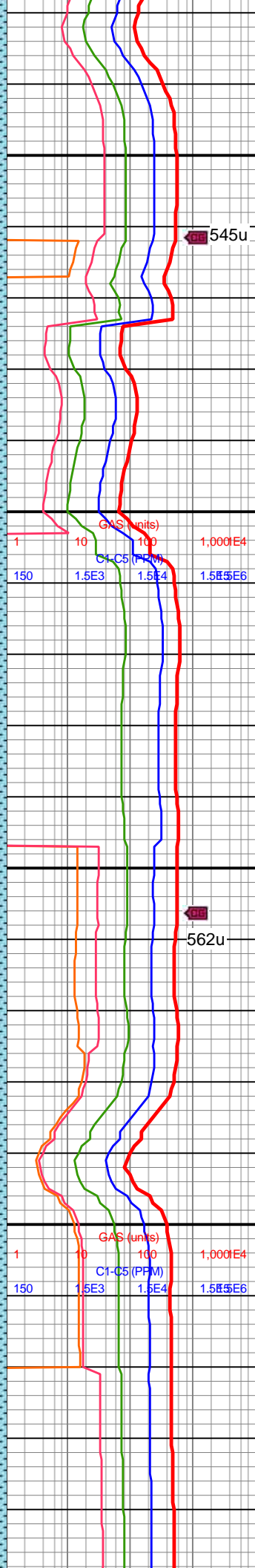
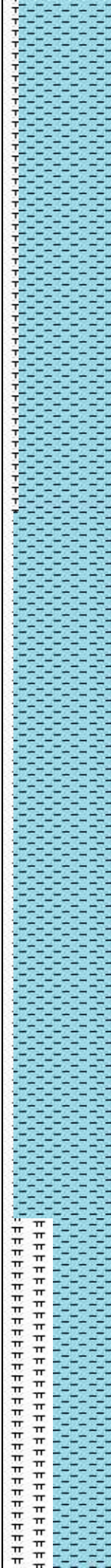
MW IN: 10
VIS IN: 54
MW OUT: 10.1
VIS OUT: 48

MD: 10,892'
INC: 89.69°
AZM: 358.94°
TVD: 7,188.64'
VS: 3,079.64'

MD: 10,986'
INC: 89.96°
AZM: 359.3°
TVD: 7,188.93'
VS: 3,172.33'

WOB: 26.8klbs
RPM: 70
SPM: 211
SPP: 5,599psi

MW IN: 10
VIS IN: 53
MW OUT: 10.1
VIS OUT: 48



10800-10900 CHK
(85%): predy gyshbn,
mot-sl stri, sl frm-brit, sb
blky, sm chky tex, v calc, tr
MRLST incl; MRLST
(15%): dk gy-gyshbn,
mot, sb blky-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr pyr nod

10900-11000 CHK
(90%): predy gyshbn, tr
wht-crm, mot-sl stri, sl
frm-brit, sb blky, sm chky
tex, v calc, tr free chk, tr
MRLST incl; MRLST
(10%): dk gy-gyshbn,
mot, sb blky-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr pyr nod





MW OUT: 10.1
VIS OUT: 48

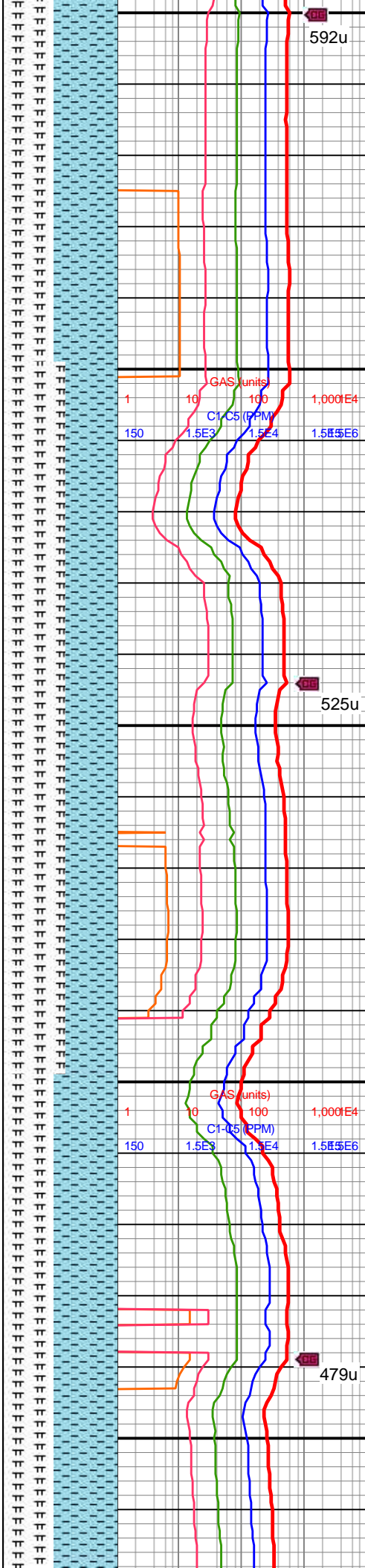
MD: 11,080'
INC: 89.96°
AZM: 357.98°
TVD: 7,188.99'
VS: 3,264.88'

MD: 11,175'
INC: 90.09°
AZM: 359.12°
TVD: 7,188.95'
VS: 3,358.39'

WOB: 29.4klbs
RPM: 70
SPM: 204
SPP: 5,567psi

MW IN: 10
VIS IN: 53
MW OUT: 10
VIS OUT: 48

MD: 11,270'
INC: 89.56°



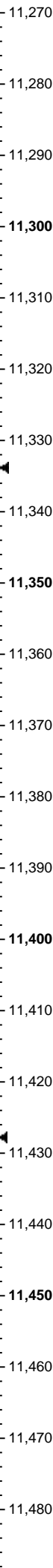
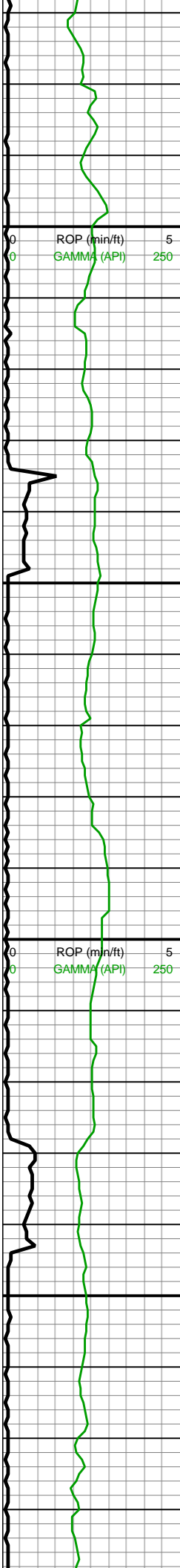
592u

11000-11100 CHK
(55%): predy gyshbn, tr
wht-crm, mot-sl stri, sl
frm-brit, sb blk, sm chky
tex, v calc, tr free chk, tr
MRLST incl; MRLST
(45%): dk gy-gyshbn,
mot, sb blk-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr pyr nod

525u

11100-11200 MRLST
(55%): dk gy-gyshbn,
mot, sb blk-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr pyr nod; CHK
(45%): predy gyshbn, tr
wht-crm, mot-sl stri, sl
frm-brit, sb blk, sm chky
tex, v calc, tr free chk, tr
MRLST incl

479u



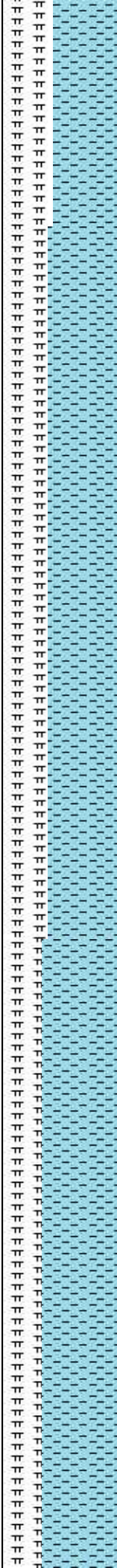
AZM: 0.09°
TVD: 7,189.24'
VS: 3,452.2'

MW IN: 10
VIS IN: 53
MW OUT: 10
VIS OUT: 48

MD: 11,364'
INC: 89.12°
AZM: 0.88°
TVD: 7,190.33'
VS: 3,545.23'

WOB: 32.6klbs
RPM: 70
SPM: 201
SPP: 5,595psi

MD: 11,458'
INC: 90.66°
AZM: 0.88°
TVD: 7,190.51'
VS: 3,638.35'

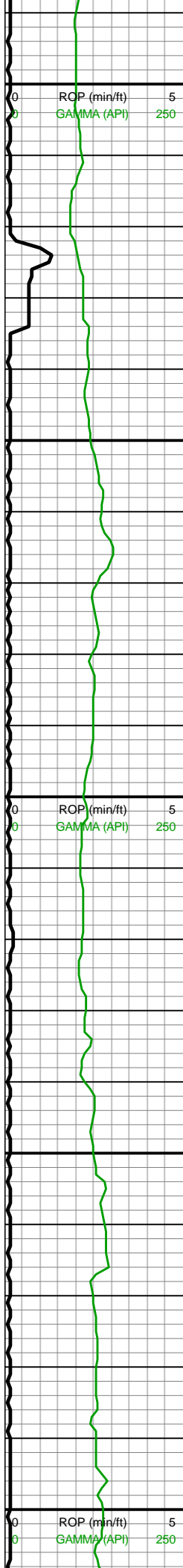


11200-11300 CHK
(55%): predy gyshbn, tr
wht-crm, mot-sl stri, sl
frm-brit, sb blk, sm chky
tex, v calc, tr free chk, tr
MRLST incl; MRLST
(45%): dk gy-gyshbn,
mot, sb blk-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr pyr nod

11300-11400 CHK
(60%): predy gyshbn, tr
wht-crm, mot-sl stri, sl
frm-brit, sb blk, sm chky
tex, v calc, tr free chk, tr
MRLST incl; MRLST
(40%): dk gy-gyshbn,
mot, sb blk-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr pyr nod

11400-11500 CHK
(65%): predy gyshbn, tr
wht-crm, mot-sl stri, sl
frm-brit, sb blk, sm chky
tex, v calc, tr free chk, tr
MRLST incl; MRLST
(25%): dk gy-gyshbn,





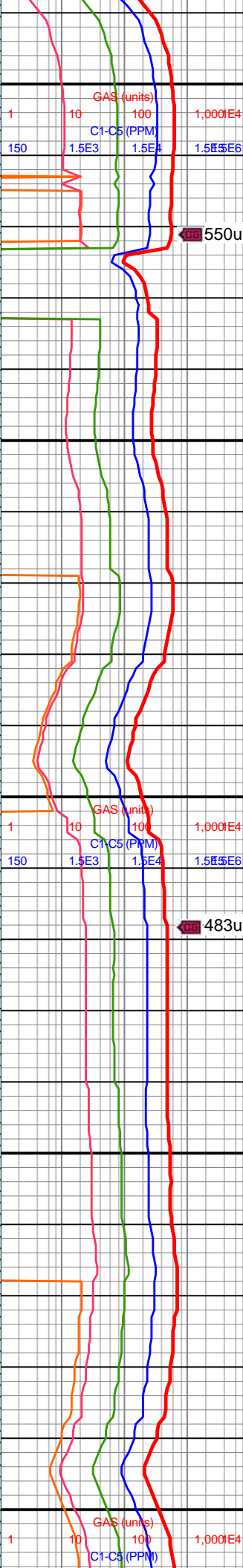
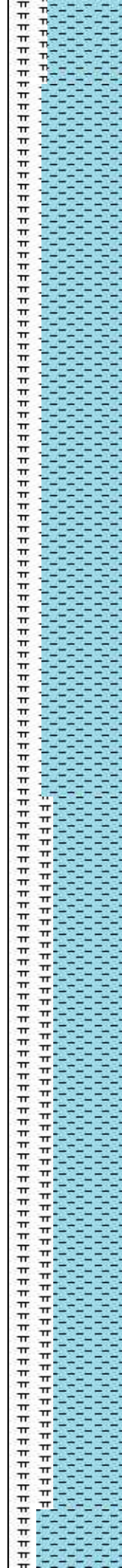
11,490
11,500
11,510
11,520
11,530
11,540
11,550
11,560
11,570
11,580
11,590
11,600
11,610
11,620
11,630
11,640
11,650
11,660
11,670
11,680
11,690
11,700

MD: 11,553'
INC: 92.02°
AZM: 1.49°
TVD: 7,188.28'
VS: 3,732.5'

WOB: 34.1klbs
RPM: 70
SPM: 198
SPP: 5.634psi

MD: 11,647'
INC: 92.07°
AZM: 2.81°
TVD: 7,184.93'
VS: 3,825.83'

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

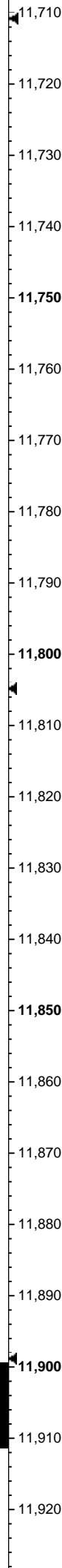
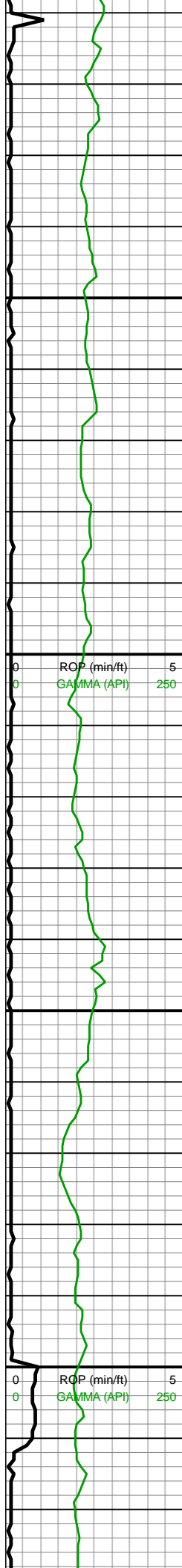


(35%): dk gy-gyshbn,
mot, sb blkly-sb ang, sl
hd frm, mod calc, tr intbd
CHK, tr pyr nod

11500-11600 CHK
(70%): predy gyshbn, tr
wht-crm, mot-sl stri, sl
frm-brit, sb blkly, sm chky
tex, v calc, tr free chk, tr
MRLST incl; MRLST
(30%): dk gy-gyshbn,
mot, sb blkly-sb ang, sl
hd frm, mod calc, tr intbd
CHK, tr pyr nod

11600-11700 CHK
(60%): gyshbn-med gy,
sme mot lt gy, sl sm-chky
tex, sl frm, sb blkly-blky, tr
free CHK, hi calc, tr imbd
mic pyr, occ mrlst intbd;
MRLST (40%): med gy-dk
gy, frm-sl hd, mod brit, sb
blkly-tab, mod fis, occ chk
intbd, mod calc, vf lamn



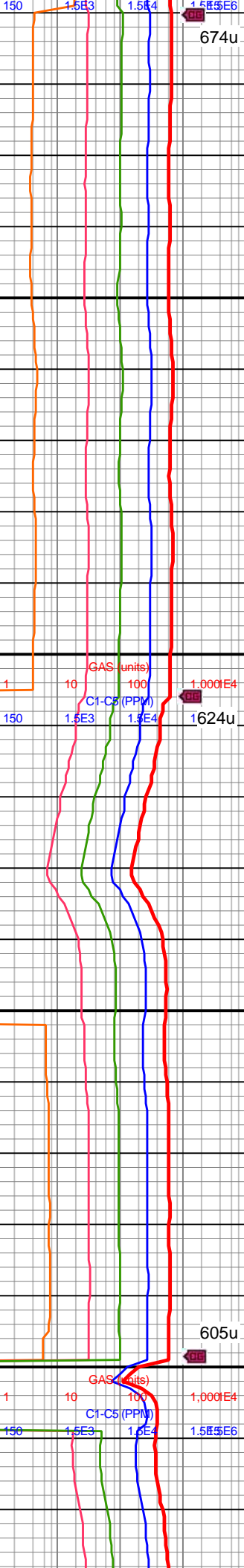
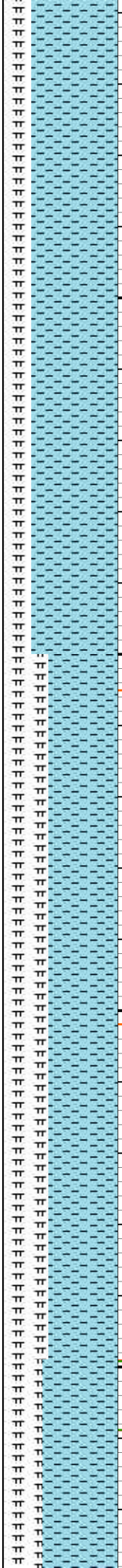


MD: 11,741'
INC: 92.07°
AZM: 1.67°
TVD: 7,181.53'
VS: 3,919.17'

WOB: 35.6klbs
RPM: 70
SPM: 196
SPP: 5,522psi

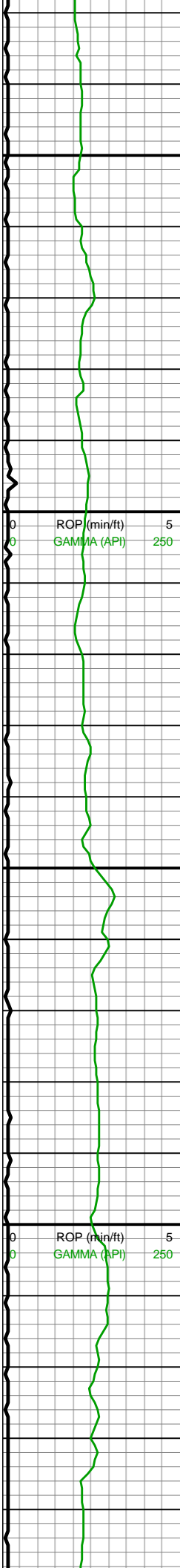
MD: 11,835'
INC: 92.46°
AZM: 1.76°
TVD: 7,177.82'
VS: 4,012.4'

MD: 11,930'
INC: 90.88°



11700-11800 CHK
(75%): gyshbn-med gy,
sme mot lt gy, sl sm-chky
tex, sl frm, sb blkly-blky, tr
free CHK, hi calc, tr imbd
mic pyr, tr mrlst intbd;
MRLST (25%): med gy-dk
gy, frm-sl hd, mod brit, sb
blkly, mod fis, occ chk
intbd, mod calc, tr vf
lamn, scat pyr nod

11800-11900 CHK
(60%): gyshbn-med gy,
sme mot lt gy, sl sm-chky
tex, sl frm, sb blkly-blky, tr
free CHK, hi calc, tr imbd
mic pyr, tr mrlst intbd;
MRLST (40%): med gy-dk
gy, frm-sl hd, mod brit, sb
blkly, mod fis, occ chk
intbd, mod calc, tr vf
lamn, scatt pyr nod



11,930 TVD: 7,175.05'
VS: 4,106.44'

11,940

11,950

11,960

11,970

11,980 MW IN: 10
VIS IN: 53
MW OUT: 10
VIS OUT: 47

11,990

12,000 WOB: 34.4klbs
RPM: 70
SPM: 197
SPP: 5,504psi

12,010

12,020 MD: 12,024'
INC: 90.79°
AZM: 1.14°
TVD: 7,173.68'
VS: 4,199.45'

12,030

12,040

12,050

12,060

12,070

12,080

12,090

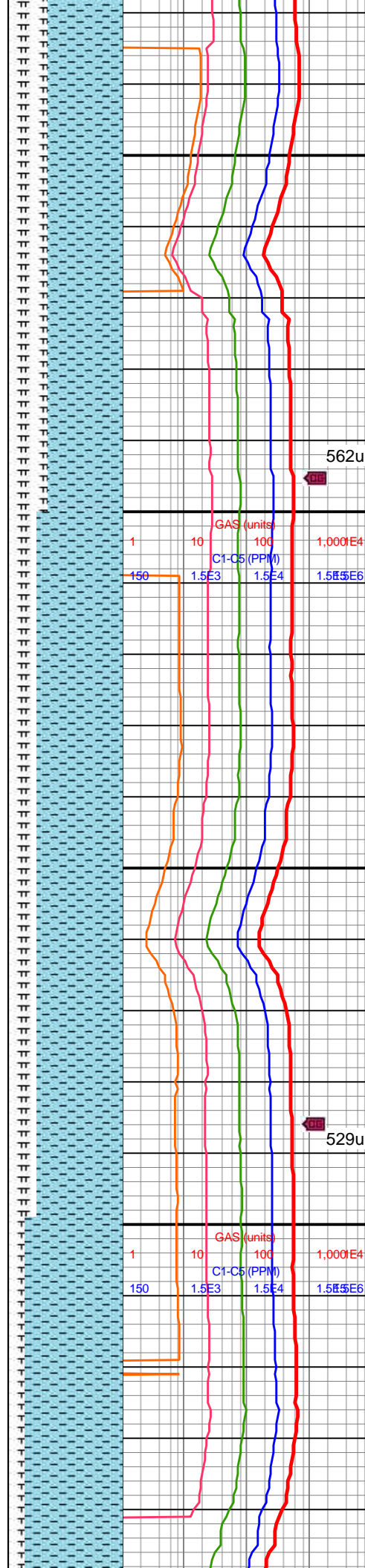
12,100

12,110 MD: 12,118'
INC: 90.84°
AZM: 0.88°
TVD: 7,172.34'
VS: 4,292.6'

12,120

12,130

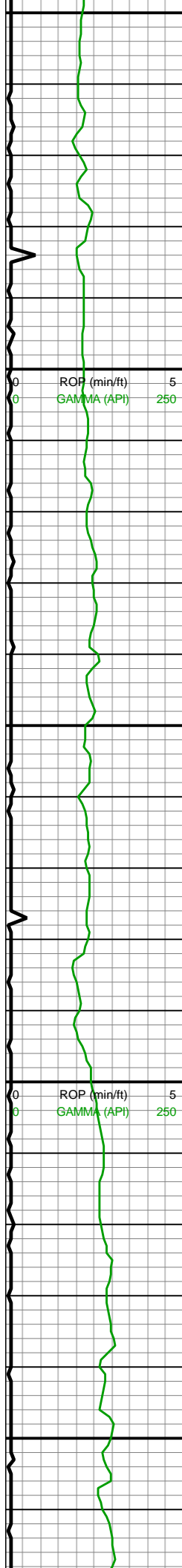
12,140



11900-12000 CHK
(65%): gyshbn-med gy,
sme mot lt gy, sl sm-chky
tex, sl frm, sb blkyl-blky, tr
free CHK, hi calc, tr imbd
mic pyr, tr mrlst intbd;
MRLST (35%): med gy-dk
gy, frm-sl hd, mod brit, sb
blkyl, mod fis, occ chk
intbd, mod calc, tr vf
lamn, occ pp/pyr nod

12000-12100 CHK
(75%): gyshbn-med gy,
sme mot lt gy-crm, sl
sm-chky tex, sl frm, sb
blkyl-blky, tr free CHK, hi
calc, tr imbd mic pyr, tr
mrlst intbd; MRLST
(25%): med gy-dk gy,
frm-sl hd, mod brit, sb
blkyl, mod fis, occ chk
intbd, mod calc, tr vf
lamn, occ pp pyr





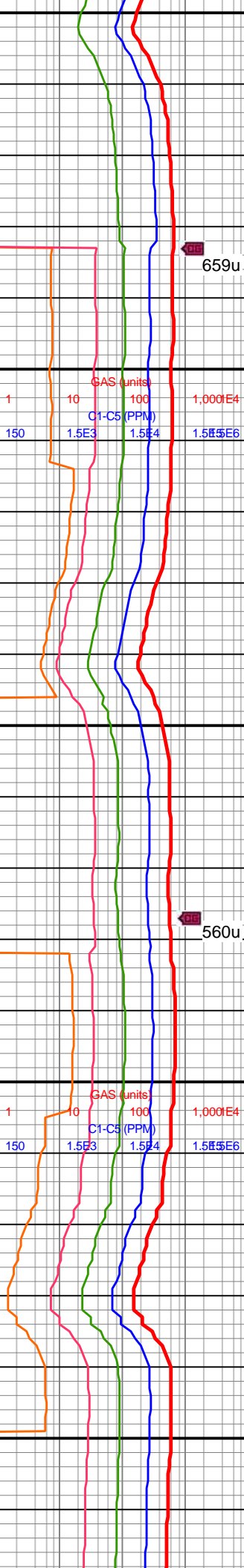
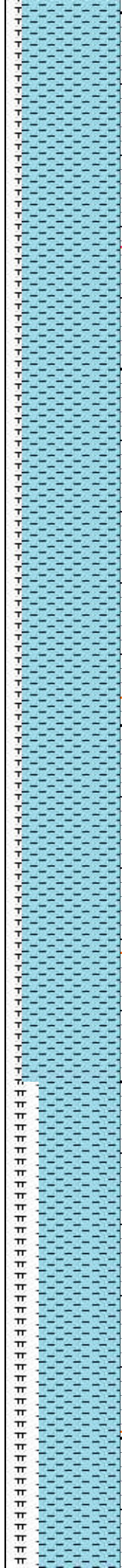
12,150
12,160
12,170
12,180
12,190
12,200
12,210
12,220
12,230
12,240
12,250
12,260
12,270
12,280
12,290
12,300
12,310
12,320
12,330
12,340
12,350
12,360

WOB: 34.8klbs
RPM: 70
SPM: 196
SPP: 5,575psi

MD: 12,212'
INC: 90.7°
AZM: 359.56°
TVD: 7,171.08'
VS: 4,385.56'

MW IN: 10
VIS IN: 52
MW OUT: 10
VIS OUT: 47

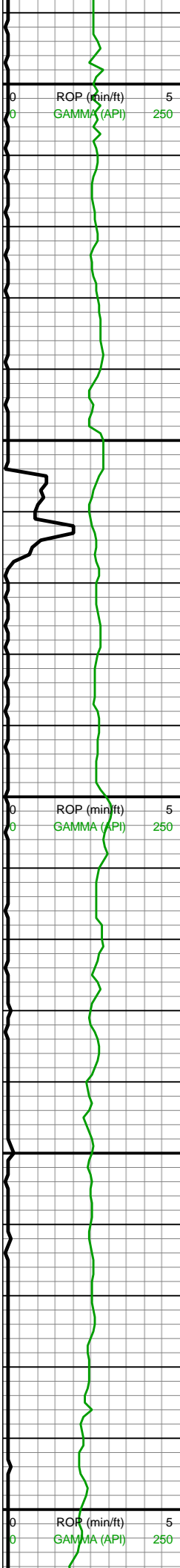
MD: 12,306'
INC: 90.4°
AZM: 1.05°
TVD: 7,170.18'
VS: 4,478.54'



12100-12200 CHK
(85%): gyshbn-med gy,
sme mot lt gy-crm, sl
sm-chky tex, sl frm, sb
blky-blky, tr free CHK, hi
calc, tr imbd mic pyr, tr
mrlst intbd; MRLST
(15%): med gy-dk gy,
frm-sl hd, mod brit, sb
blky, mod fis, occ chk
intbd, mod calc, tr vf
lamn, occ pp pyr

12200-12300 CHK
(85%): predy med gy,
sme mot lt gy-crm, sl
sm-chky tex, sl frm, sb
blky-blky, tr free CHK, hi
calc, occ imbd mic pyr, tr
mrlst intbd; MRLST
(15%): med gy-dk gy,
frm-sl hd, mod brit, sb
blky, mod fis, occ chk
intbd, mod calc, tr vf
lamn, occ pyr nod





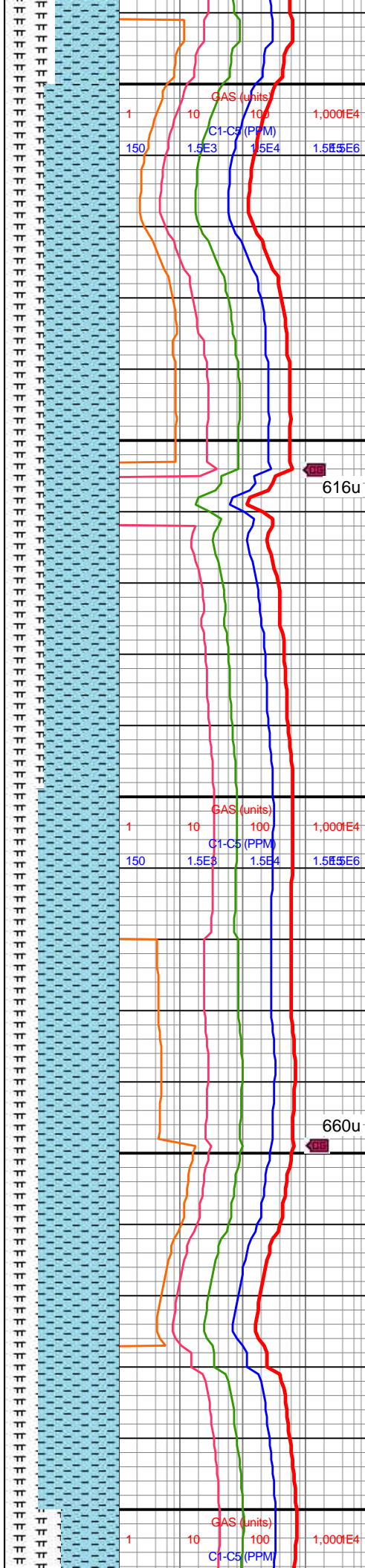
VS: 4,758.26'

WOB: 35.3klbs
RPM: 70
SPM: 196
SPP: 5,634psi

MD: 12,684'
INC: 90.92°
AZM: 1.05°
TVD: 7,169.51'
VS: 4,852.12'

MD: 12,779'
INC: 90.22°
AZM: 0.7°
TVD: 7,168.57'
VS: 4,946.23'

WOB: 33.5klbs
RPM: 70
SPM: 196
SPP: 5,565psi



mot, sl slty-sm tex, sl
hd frm, sb blkyl-sb spl, tr
intbd CHK, mod calc, tr
pyr nod

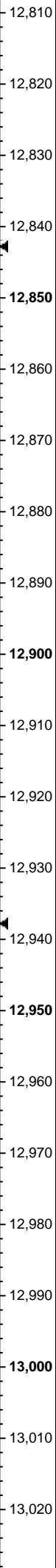
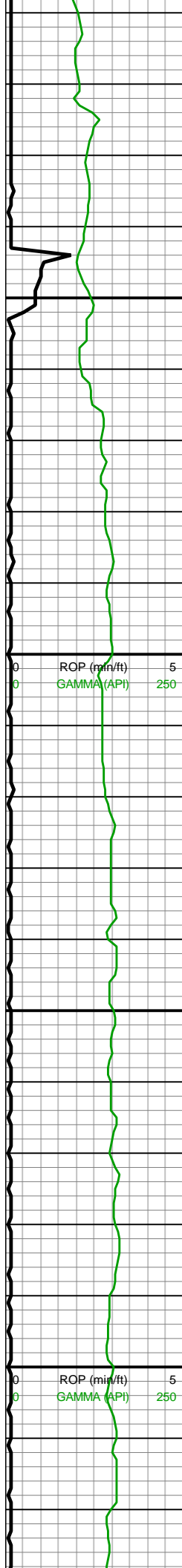
616u

12600-12700 CHK
(65%): gyshbn, med gy,
mot-sl stri, sb blkyl-tab, sl
frm-brit, sm chky tex, mnr
pp pyr, v calc; MRLST
(35%): dk gy-gyshbn,
mot, sl slty-sm tex, sl
hd frm, sb blkyl-sb spl, tr
intbd CHK, mod calc, tr
pyr nod

660u

12700-12800 CHK
(70%): gyshbn, med gy,
mot-sl stri, sb blkyl-tab, sl
frm-brit, sm chky tex, mnr
pp pyr, v calc; MRLST
(30%): dk gy-gyshbn,
mot, sl slty-sm tex, sl
hd frm, sb blkyl-sb spl, tr
intbd CHK, mod calc, tr
pyr nod



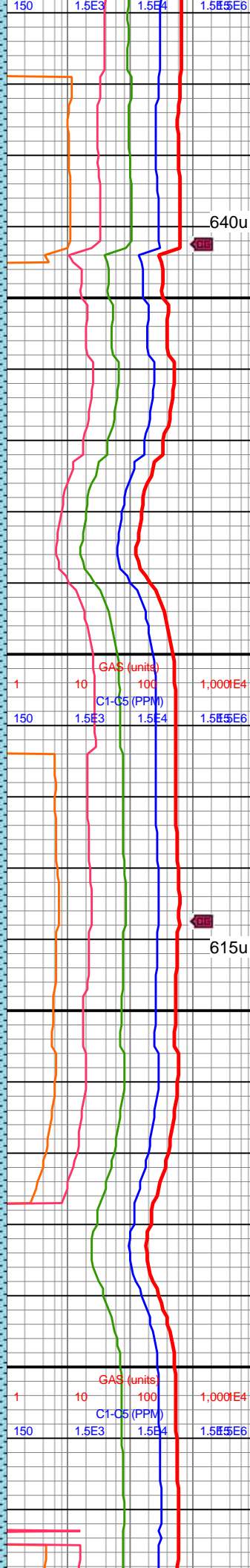
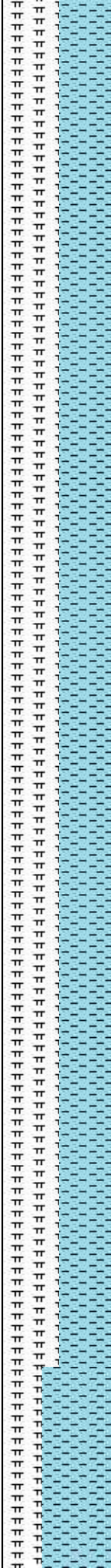


MW IN: 10
VIS IN: 52
MW OUT: 10
VIS OUT: 47

MD: 12,873'
INC: 91.27°
AZM: 358.86°
TVD: 7,167.34'
VS: 5,039.08'

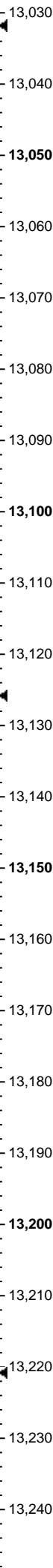
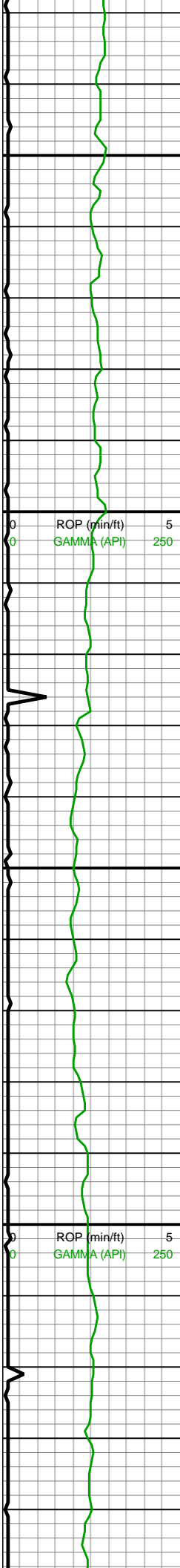
MD: 12,968'
INC: 91.23°
AZM: 359.47°
TVD: 7,165.27'
VS: 5,132.74'

WOB: 31.9klbs
RPM: 70
SPM: 194
SPP: 5,603psi



12800-12900 CHK
(50%): predy gyshbn,
mot-sl stri, sl frm-brit, sb
blky, sm chky tex, v calc, tr
MRLST incl; MRLST
(40%): dk gy-gyshbn,
mot, sb blky-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr diss mic pyr/tr
pyr nod

12900-13000 CHK
(50%): predy gyshbn,
mot-sl stri, sl frm-brit, sb
blky, sm chky tex, v calc, tr
MRLST incl; MRLST
(40%): dk gy-gyshbn,
mot, sb blky-sb ang, sl
hd-frm, mod calc, tr intbd
CHK, tr diss mic pyr/tr
pyr nod



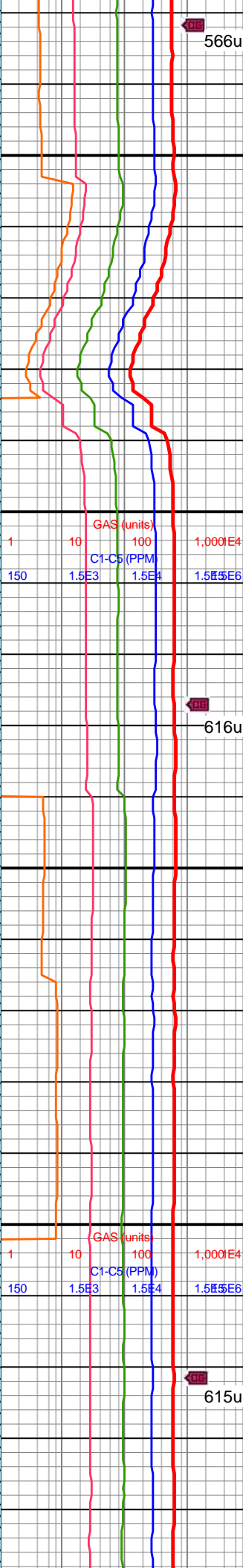
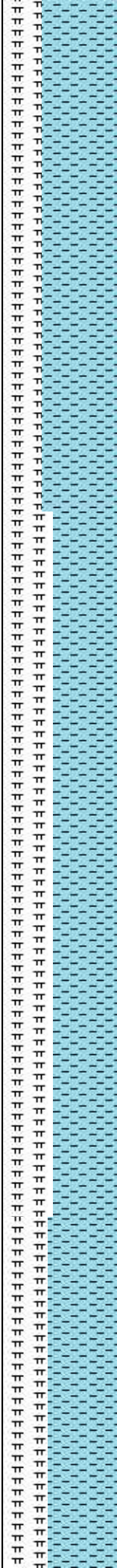
MD: 13,062'
INC: 91.06°
AZM: 359.74°
TVD: 7,163.39'
VS: 5,225.54'

MW IN: 10
VIS IN: 50
MW OUT: 10
VIS OUT: 47

MD: 13,156'
INC: 90.84°
AZM: 359.74°
TVD: 7,161.83'
VS: 5,318.38'

WOB: 35.8klbs
RPM: 70
SPM: 195
SPP: 5,690psi

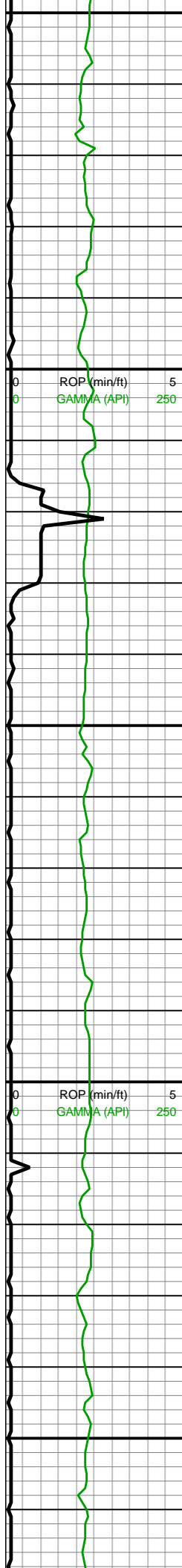
MD: 13,251'
INC: 90.7°



13000-13100 CHK
(65%): gyshbn, med gy,
sb blkyl-sb plty, frm-sl frm,
med fis, mnr MRLST
lamn, hi calc, tr diss
mic pyr; MRLST (35%):
dk gyshbn-dk gy, frm-sl
hd, sl slty-sm tex, mod
brit, mod calc, tr CHK incl

13100-13200 CHK
(55%): gyshbn, med gy,
sb blkyl-sb plty, frm-sl frm,
med fis, mnr MRLST
lamn, hi calc, tr diss
mic pyr; MRLST (45%):
dk gyshbn-dk gy, frm-sl
hd, sl slty-sm tex, mod
brit, mod calc, tr CHK incl





13,250
13,260
13,270
13,280
13,290
13,300
13,310
13,320
13,330
13,340
13,350
13,360
13,370
13,380
13,390
13,400
13,410
13,420
13,430
13,440
13,450
13,460

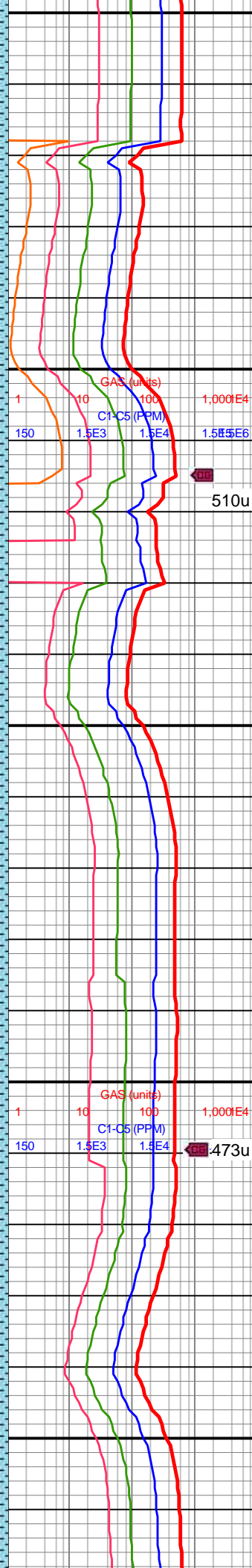
AZM: 0.88°
TVD: 7,160.56'
VS: 5,412.36'

MW IN: 10
VIS IN: 50
MW OUT: 10
VIS OUT: 47

MD: 13,345'
INC: 89.82°
AZM: 358.15°
TVD: 7,160.13'
VS: 5,505.14'

WOB: 34klbs
RPM: 70
SPM: 192
SPP: 5,531psi

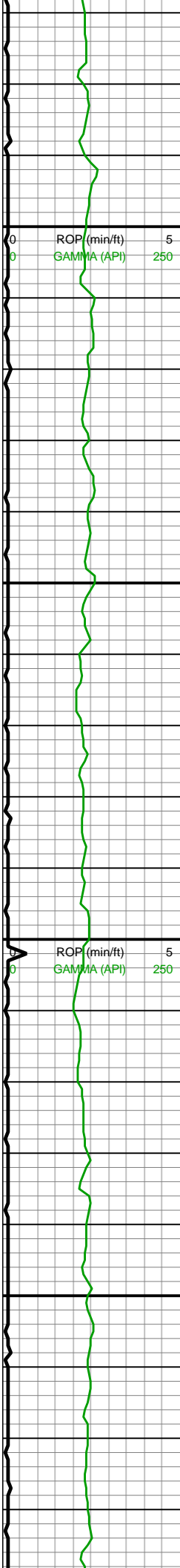
MD: 13,439'
INC: 90.18°
AZM: 359.21°
TVD: 7,160.13'
VS: 5,597.7'



13200-13300 CHK
(60%): gyshbn, med-dk gy, chky tex, sb blkgy-sb plty, frm, tr free CHK, mnr MRLST lamn, tr diss mic pyr, hi calc; MRLST (40%): dk gyshbn-dk gy, brit, frm-sl hd, tab-sb blkgy, tr CHK incl, mod calc

13300-13400 CHK
(70%): gyshbn, med-dk gy, chky tex, sb blkgy-sb plty, frm, tr free CHK, mnr MRLST lamn, tr diss mic pyr, hi calc; MRLST (30%): dk gyshbn-dk gy, brit, frm-sl hd, tab-sb blkgy, tr CHK incl, mod calc





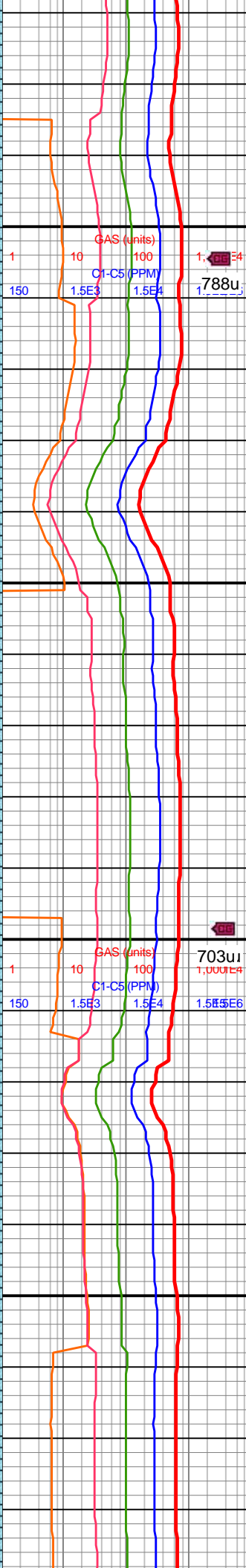
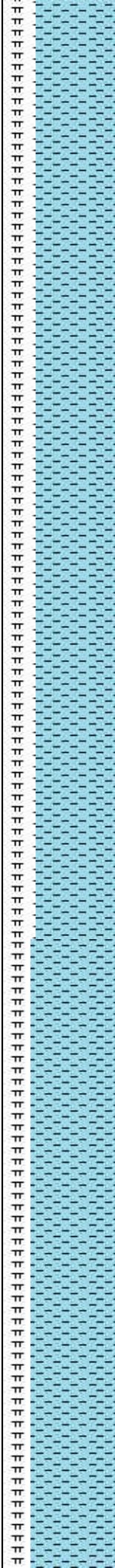
13,470
13,480
13,490
13,500
13,510
13,520
13,530
13,540
13,550
13,560
13,570
13,580
13,590
13,600
13,610
13,620
13,630
13,640
13,650
13,660
13,670
13,680

MW IN: 10
VIS IN: 50
MW OUT: 10
VIS OUT: 47

MD: 13,534'
INC: 90.04°
AZM: 358.42°
TVD: 7,159.95'
VS: 5,691.29'

WOB: 21.4klbs
RPM: 70
SPM: 188
SPP: 5,004psi

MD: 13,628'
INC: 89.91°
AZM: 358.33°
TVD: 7,159.99'
VS: 5,783.77'

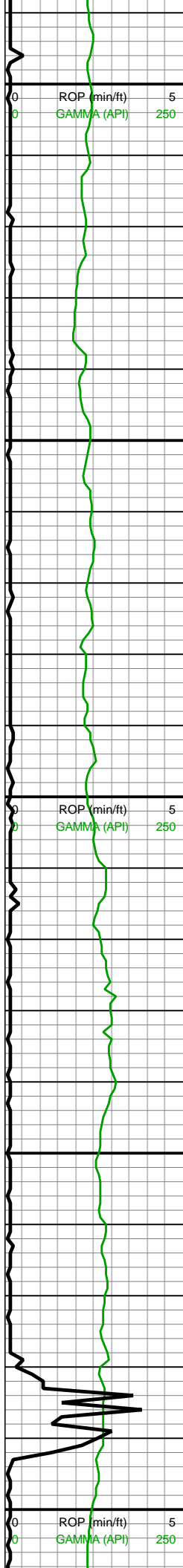


13400-13500 CHK
(70%): gyshbn, med-dk gy, chky tex, sb blkylsb plty, frm, tr free CHK, com MRLST lamn, tr diss mic pyr, hi calc; MRLST (30%): dk gyshbn-dk gy, brit, frm-sl hd, tab-sb blkyl, com CHK incl, mod calc

13500-13600 CHK
(70%): gyshbn, med-dk gy, chky tex, sb blkylsb plty, frm, tr free CHK, com MRLST lamn, tr diss mic pyr, hi calc; MRLST (30%): dk gyshbn-dk gy, brit, frm-sl hd, tab-sb blkyl, com CHK incl, mod calc

13600-13700 CHK
(75%): gyshbn, med-dk gy, chky tex, sb blkylsb plty, frm, tr free CHK, com MRLST lamn, tr diss mic pyr, hi calc; MRLST





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: 13,723'
INC: 89.96°
AZM: 358.42°
TVD: 7,160.1'
VS: 5,877.23'

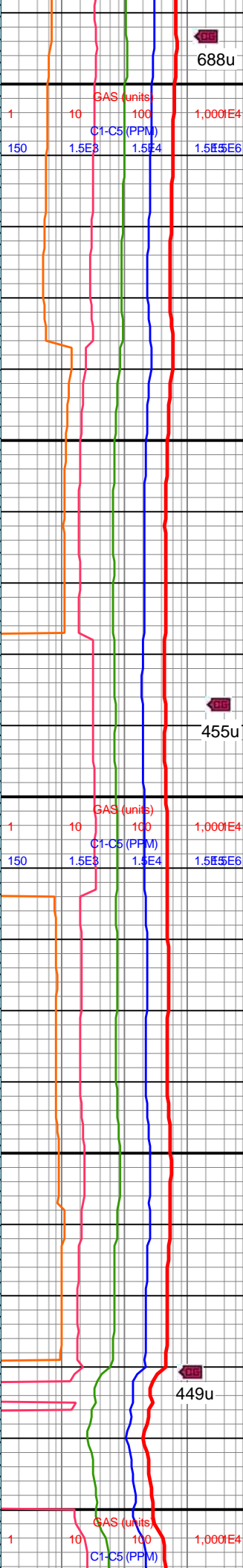
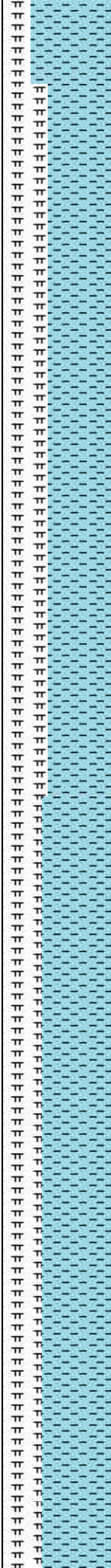
MW IN: 10.1
VIS IN: 50
MW OUT: 10.1
VIS OUT: 47

WOB: 35.1klbs
RPM: 70
SPM: 187
SPP: 5,479psi

MD: 13,817'
INC: 89.69°
AZM: 357.36°
TVD: 7,160.38'
VS: 5,969.56'

MW IN: 10.1
VIS IN: 54
MW OUT: 10.2
VIS OUT: 50

MD: 13,912'

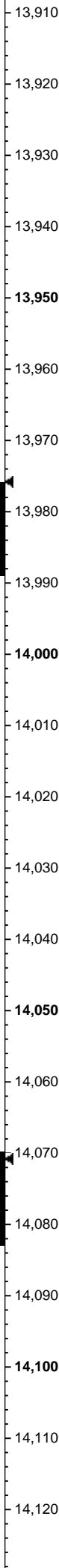
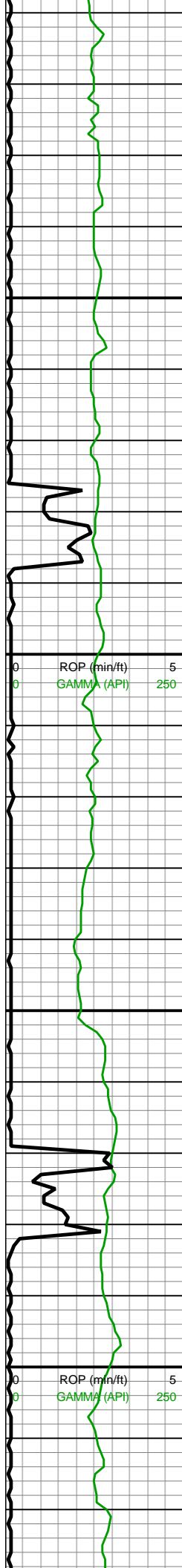


(25%): dk gyshbn-dk gy,
brit, frm-sl hd, tab-sb
blkly, com CHK incl, mod
calc

13700-13800 CHK
(60%): gyshbn, med-dk
gy, chky tex, sb blkly-sb
plty, frm, tr free CHK, com
MRLST lamn, tr diss
mic pyr, hi calc; MRLST
(40%): dk gyshbn-dk gy,
brit, frm-sl hd, tab-sb
blkly, com CHK incl, mod
calc

13800-13900 CHK
(65%): gyshbn, med-dk
gy, chky tex, sb blkly-sb
plty, frm, tr free CHK, com
MRLST lamn, hi calc;
MRLST (35%): dk
gyshbn-dk gy, brit, frm-sl
hd, tab-sb blkly, com CHK
incl, mod calc, tr pyr nod





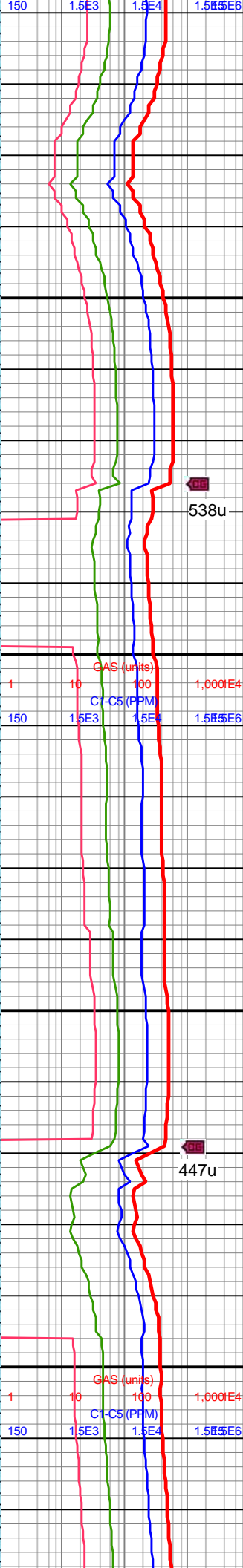
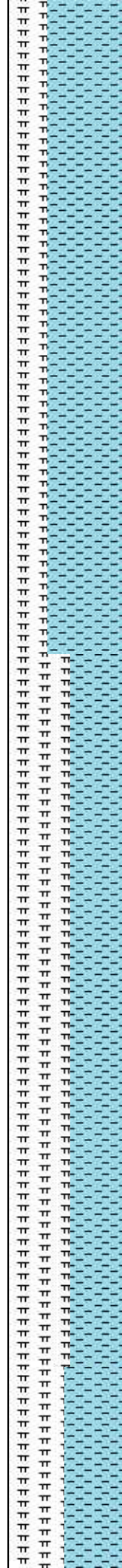
INC: 91.1°
AZM: 358.77°
TVD: 7,159.73'
VS: 6,062.92'

WOB: 32.5klbs
RPM: 70
SPM: 189
SPP: 5.528psi

MD: 14,006'
INC: 90°
AZM: 359.12°
TVD: 7,158.83'
VS: 6,155.56'

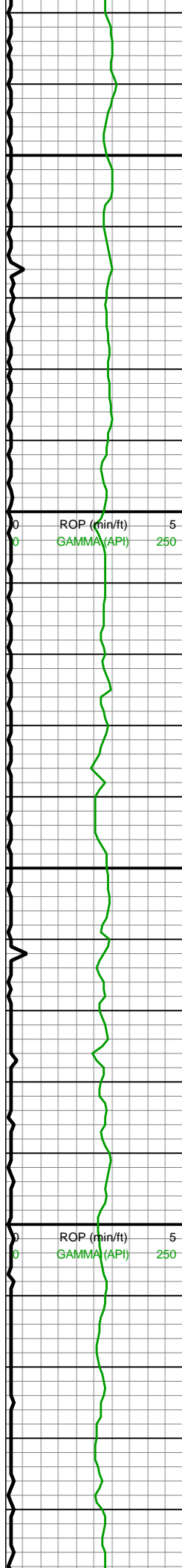
MW IN: 10.1
VIS IN: 54
MW OUT: 10.2
VIS OUT: 49

MD: 14,101'
INC: 89.74°
AZM: 1.58°
TVD: 7,159.04'
VS: 6,249.54'



13900-14000 CHK
(65%): gyshbn, med-dk
gy, chky tex, sb blk-sb
plty, frm, tr free CHK, com
MRLST lamn, hi calc;
MRLST (35%): dk
gyshbn-dk gy, brit, frm-sl
hd, tab-sb blk, com CHK
incl, mod calc, tr pyr nod

14000-14100 MRLST
(55%): dk gyshbn-dk gy,
brit, frm-sl hd, tab-sb
blk, com CHK incl, mod
calc, tr pyr nod; CHK
(45%): gyshbn, med-dk
gy, chky tex, sb blk-sb
plty, frm, tr free CHK, com
MRLST lamn, hi calc

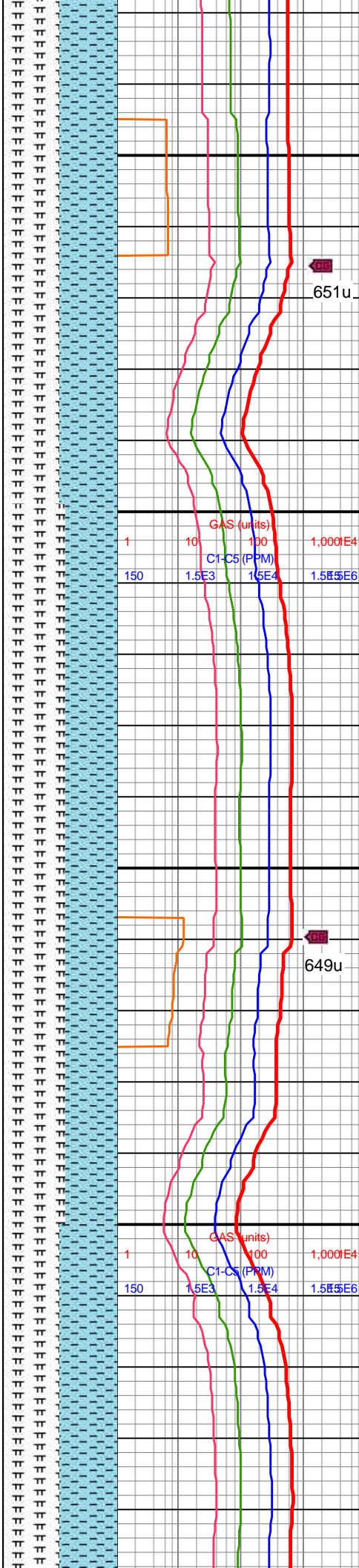


14,130
14,140
14,150
14,160
14,170
14,180
14,190
14,200
14,210
14,220
14,230
14,240
14,250
14,260
14,270
14,280
14,290
14,300
14,310
14,320
14,330
14,340

MD: 14,196'
INC: 89.91°
AZM: 359.65°
TVD: 7,159.33'
VS: 6,343.6'
WOB: 32.2klbs
RPM: 70
SPM: 186
SPP: 5,550psi

MW IN: 10.1
VIS IN: 53
MW OUT: 10.1+
VIS OUT: 49

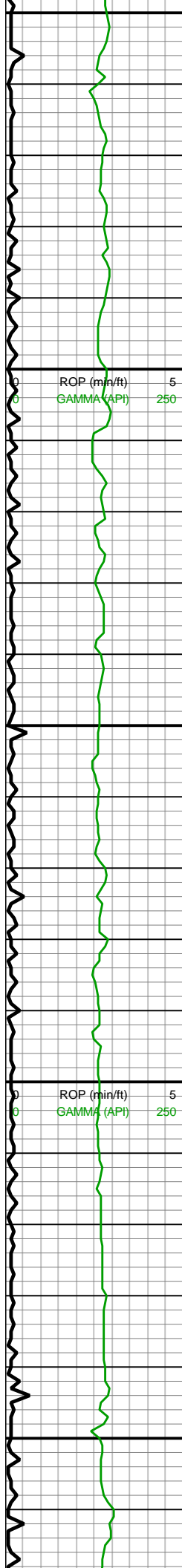
MD: 14,291'
INC: 89.39°
AZM: 1.05°
TVD: 7,159.91'
VS: 6,437.58'



14100-14200 MRLST
(50%): dk gyshbn-dk gy,
brit, frm-sl hd, tab-sb
blky, com CHK incl, mod
calc, tr pyr nod; CHK
(50%): gyshbn, med-dk
gy, chky tex, sb blky-sb
plty, frm, tr free CHK, com
MRLST lamn, hi calc

14200-14300 MRLST
(55%): dk gyshbn-dk gy,
brit, frm-sl hd, tab-sb
blky, com CHK incl, mod
calc, tr pyr nod; CHK
(45%): gyshbn, med-dk
gy, chky tex, sb blky-sb
plty, frm, tr free CHK, com
MRLST lamn, hi calc





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

MD: 14,385'
INC: 89.25°
AZM: 359.56°
TVD: 7,161.03'
VS: 6,530.57'

WOB: 33.4klbs
RPM: 70
SPM: 188
SPP: 5,550psi

MD: 14,479'
INC: 89.08°
AZM: 1.76°
TVD: 7,162.4'
VS: 6,623.63'

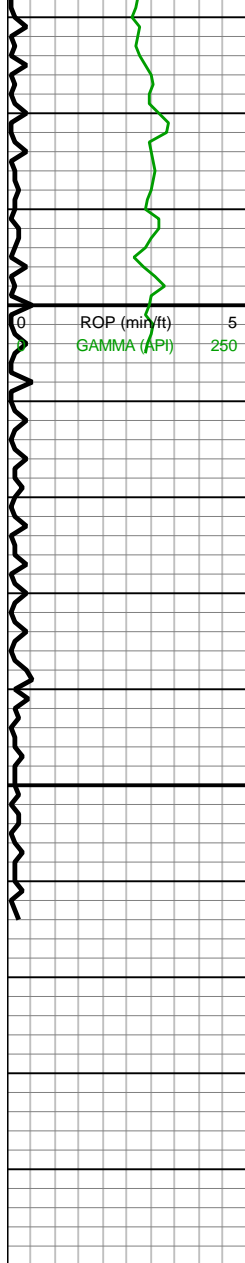
MW IN: 10.1
VIS IN: 55
MW OUT: 10.2
VIS OUT: 51

MD: 14,572'



14300-14400 MRLST
(50%): dk gyshbn-dk gy,
brit, frm-sl hd, tab-sb
blky, com CHK incl, mod
calc, tr pyr nod; CHK
(50%): gyshbn, med-dk
gy, chky tex, sb blky-sb
plty, frm, tr free CHK, com
MRLST lamn, hi calc

14400-14500 CHK
(50%): gyshbn, med-dk
gy, chky tex, sb blky-sb
plty, frm, tr free CHK, com
MRLST lamn, hi calc;
MRLST (45%): dk
gyshbn-dk gy, brit, frm-sl
hd, tab-sb blky, com CHK
incl, mod calc, tr pyr nod



MD: 14,573'
INC: 88.77°
AZM: 359.74°
TVD: 7,164.16'
VS: 6,716.7'

MD: 14,601'
INC: 88.68°
AZM: 1.49°
TVD: 7,164.79'
VS: 6,744.42'

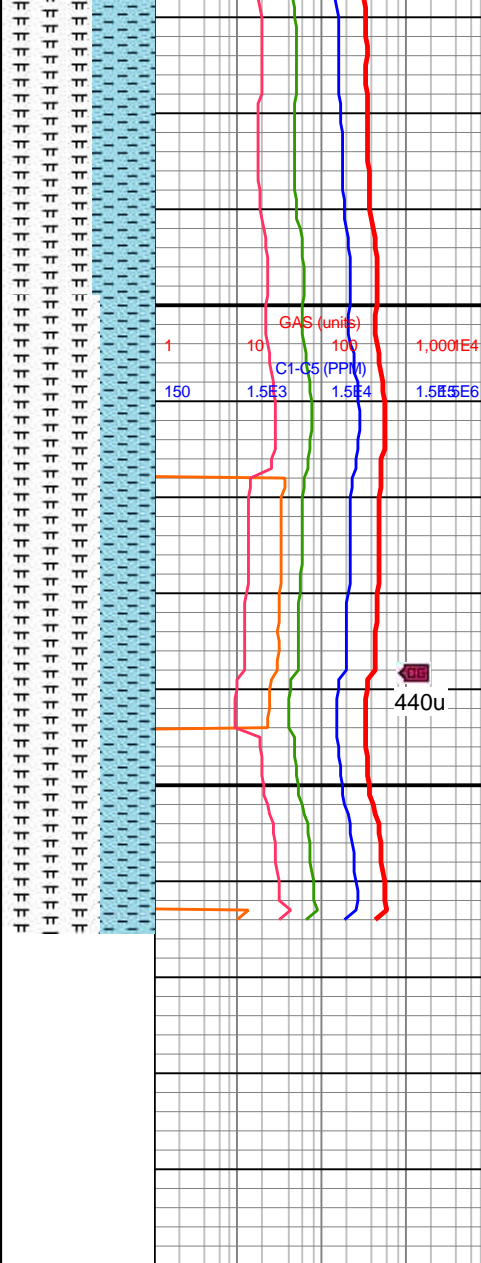
WOB: 22.7klbs
RPM: 70
SPM: 188
SPP: 5,617psi

MW IN: 10.3
VIS IN: 55
MW OUT: 10.2
VIS OUT: 52

Projection to Bit:

MD: 14,665'
INC: 88.68°
AZM: 1.49°
TVD: 7,166.26'
VS: 6,807.89'

**Total Depth of
14,665' MD
reached on
08/31/2018 @
22:40 MST**



14500-14600 MRLST
(60%): dk gyshbn-dk gy,
brit, frm-sl hd, tab-sb
blky, com CHK incl, mod
calc, tr pyr nod; CHK
(40%): gyshbn, med-dk
gy, chky tex, sb blky-sb
plty, frm, tr free CHK, com
MRLST lamn, hi calc

14600-14665 MRLST
(65%): dk gyshbn-dk gy,
brit, frm-sl hd, tab-sb
blky, com CHK incl, mod
calc, tr pyr nod; CHK
(35%): gyshbn, med-dk
gy, chky tex, sb blky-sb
plty, frm, tr free CHK, com
MRLST lamn, hi calc