



Scale: 5" / 100'
Measured Depth Log

Well Name Davis 1F-9H-G266

Location Sec. 9 T2N R66W

State Colorado

County Weld

Country USA

Rig Number Ensign 153

API Number 05123465200000

AFE # 16191024

Geographic Region Rockies

Field Wattenberg

Spud Date 8/24/2018

Drilling Completed 8/27/2018

Surface Coordinates Lat/Long: 40.154535/-104.777822

SHL: Sec: 9 Twp: 2N 66W
Footage: 2180 FNL 664 FEL

Bottom Hole Coordinates Proposed BHL: Sec: 4 Twp: 2N 66W
Footages: 460 FNL 683 FEL

Ground Elevation 4,917'

K.B. Elevation 4,940'

Logged Interval 6,500' **To** 14,715'

Total Depth 14,715'

Formation Niobrara C

Type of Drilling Fluid Synthetic Oil Base 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



Zone Color Coding



Oil



Condensate



Gas



Note



Core



Pressure



Error



Water



Seal

Other

Loggers: Heather Davis, Shana Swirin

Services Provided: 2-Man Mudlogging

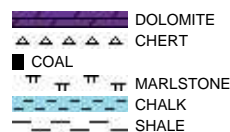
Equipment: ML-526

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

Service Start Date 08/24/2018

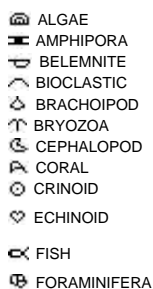
Service End Date TBD

Rock Types



Accessories

Fossils



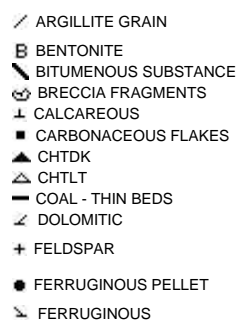
Fossil



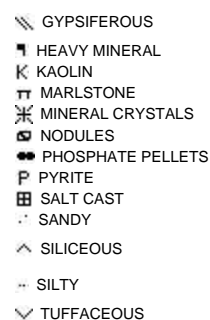
Minerals



ARGILLACEOUS



GLAUCONITE



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

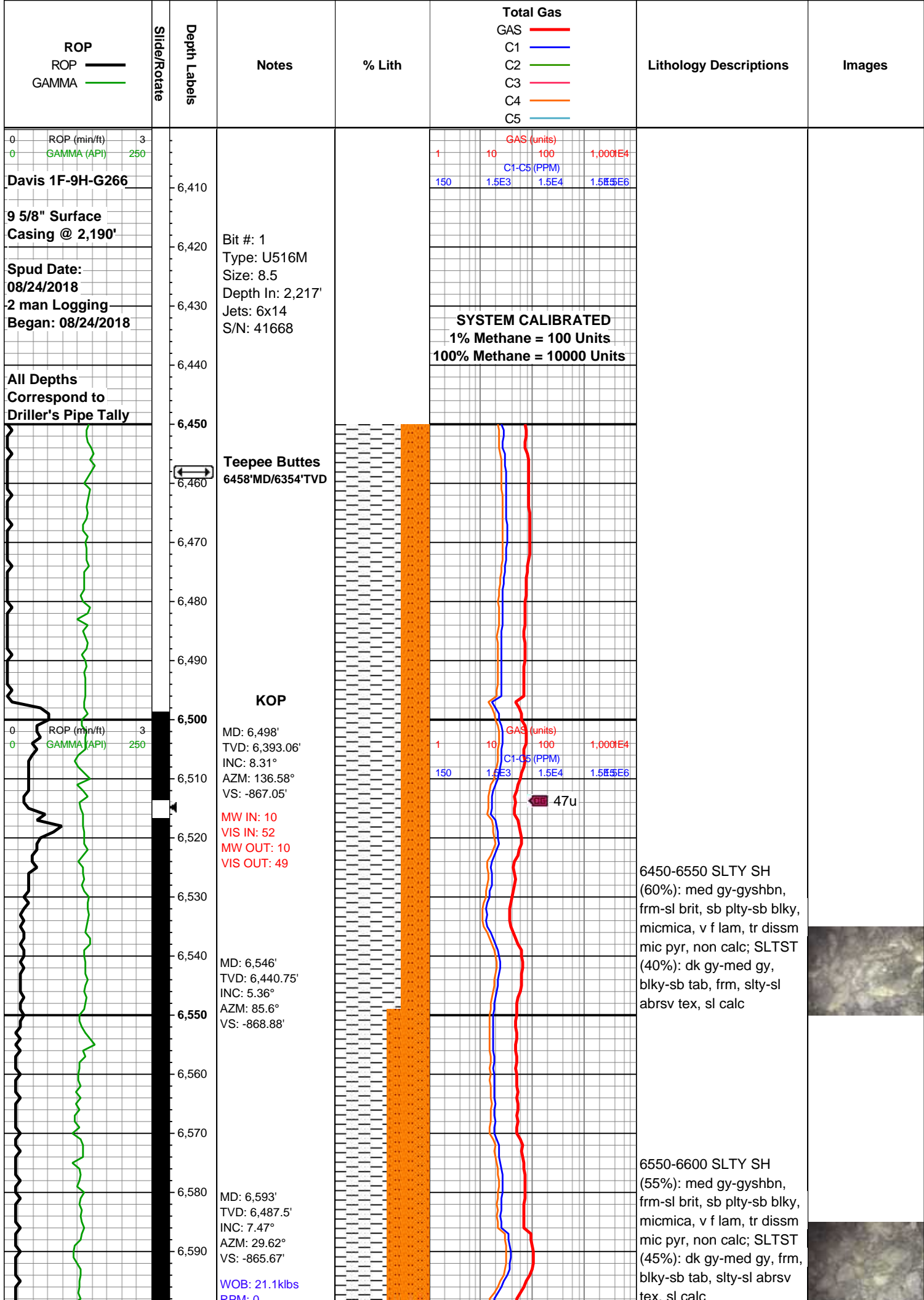
Textures

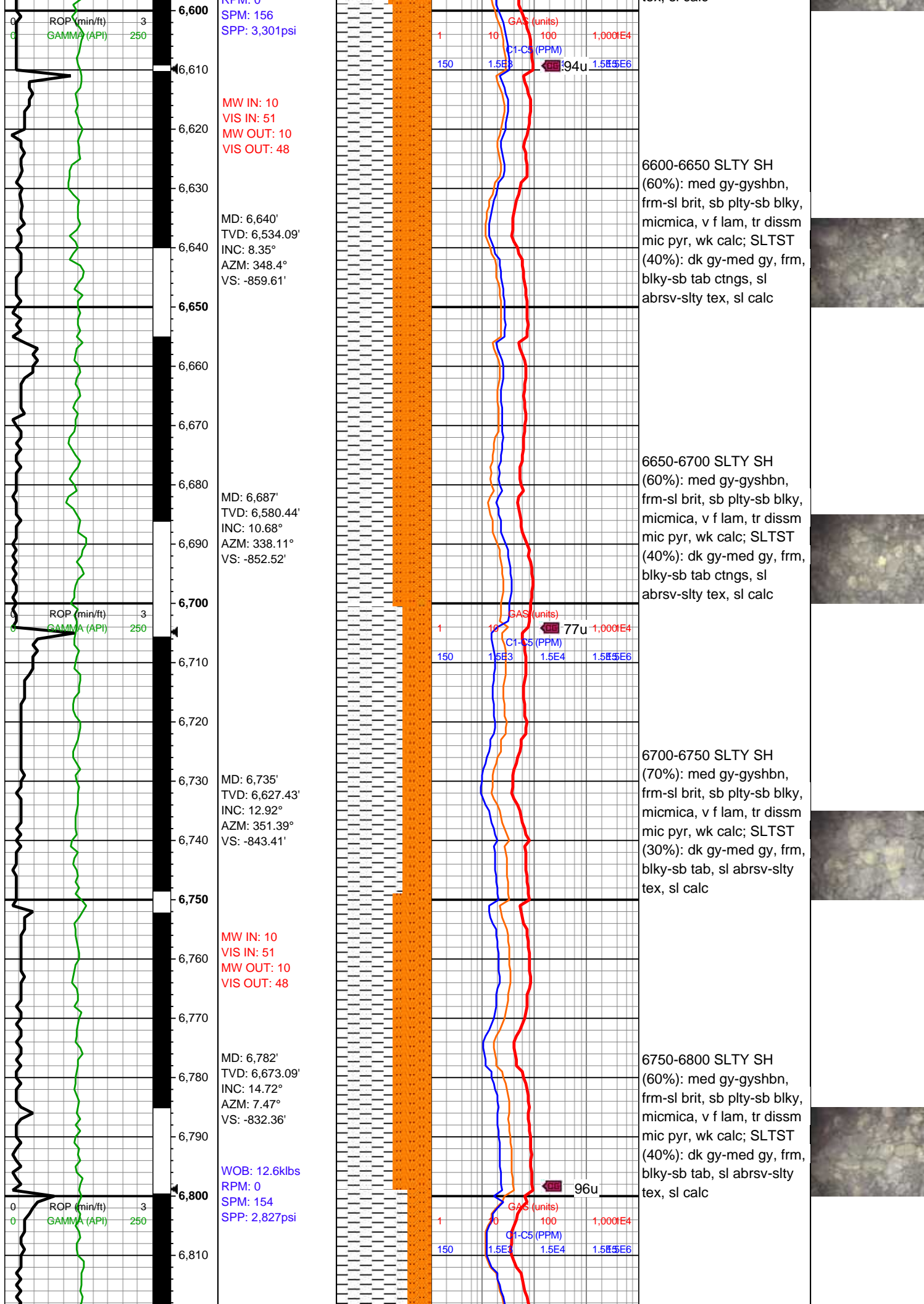
- BOUNDSTONE
- CHALKY
- CRYPTOXLN
- E EARTHY
- F FINELYXLN
- GRAINSTONE

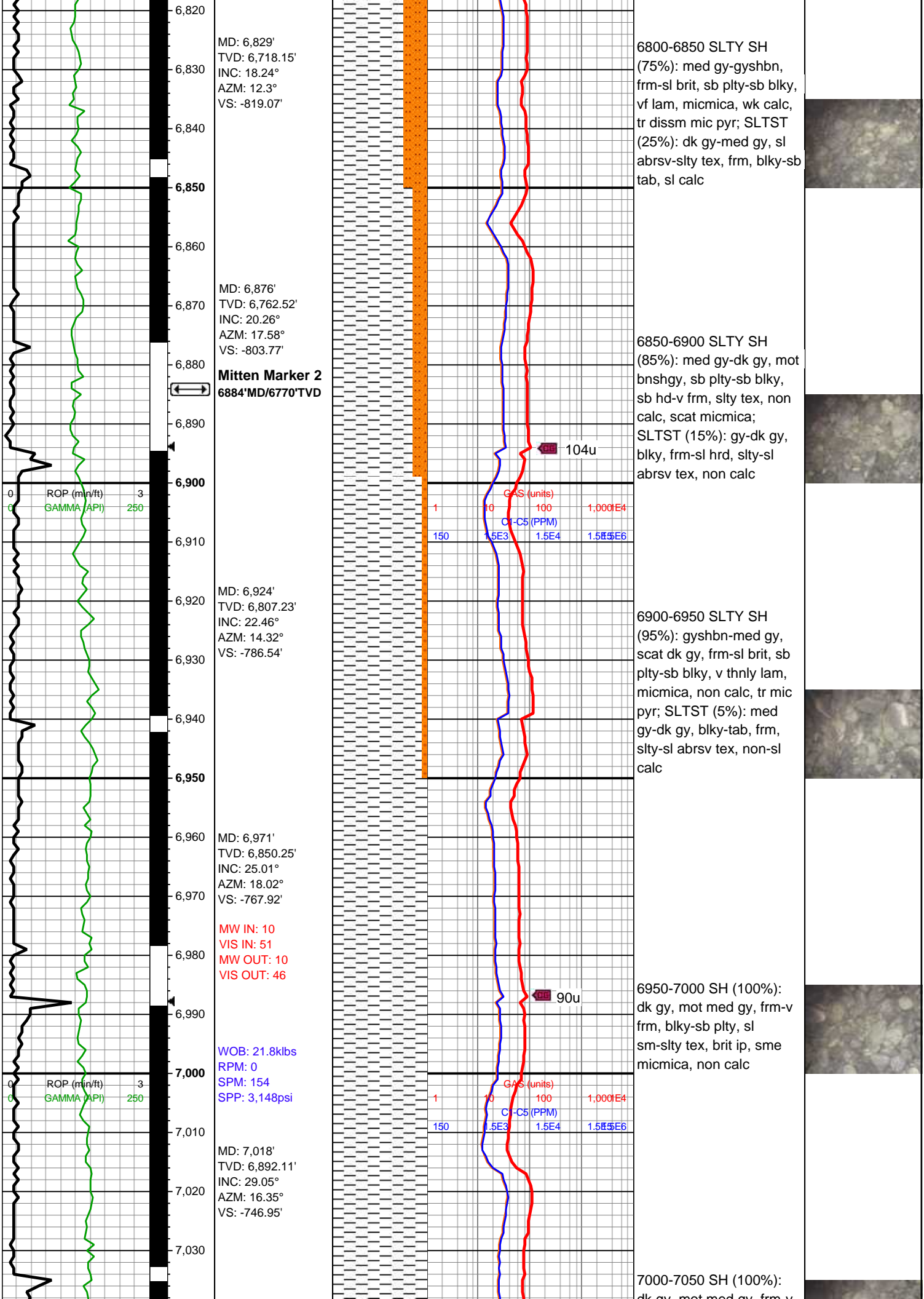
- L LITHOGRAPHIC
- MX MICROXLN
- MS MUDSTONE
- PS PACKSTONE
- WS WACKESTONE

Sorting

- M MODERATE
- P POOR
- W WELL







MD: 6,829'
TVD: 6,718.15'
INC: 18.24°
AZM: 12.3°
VS: -819.07'

6800-6850 SLTY SH
(75%): med gy-gyshbn,
frm-sl brit, sb plty-sb blkly,
vf lam, micmica, wk calc,
tr dissm mic pyr; SLTST
(25%): dk gy-med gy, sl
abrsv-sltly tex, frm, blkly-sb
tab, sl calc

MD: 6,876'
TVD: 6,762.52'
INC: 20.26°
AZM: 17.58°
VS: -803.77'

Mitten Marker 2
6884' MD/6770' TVD

6850-6900 SLTY SH
(85%): med gy-dk gy, mot
bnshgy, sb plty-sb blkly,
sb hd-v frm, slty tex, non
calc, scat micmica;
SLTST (15%): gy-dk gy,
blkly, frm-sl hrd, slty-sl
abrsv tex, non calc

MD: 6,924'
TVD: 6,807.23'
INC: 22.46°
AZM: 14.32°
VS: -786.54'

6900-6950 SLTY SH
(95%): gyshbn-med gy,
scat dk gy, frm-sl brit, sb
plty-sb blkly, v thnly lam,
micmica, non calc, tr mic
pyr; SLTST (5%): med
gy-dk gy, blkly-tab, frm,
slty-sl abrsv tex, non-sl
calc

MD: 6,971'
TVD: 6,850.25'
INC: 25.01°
AZM: 18.02°
VS: -767.92'

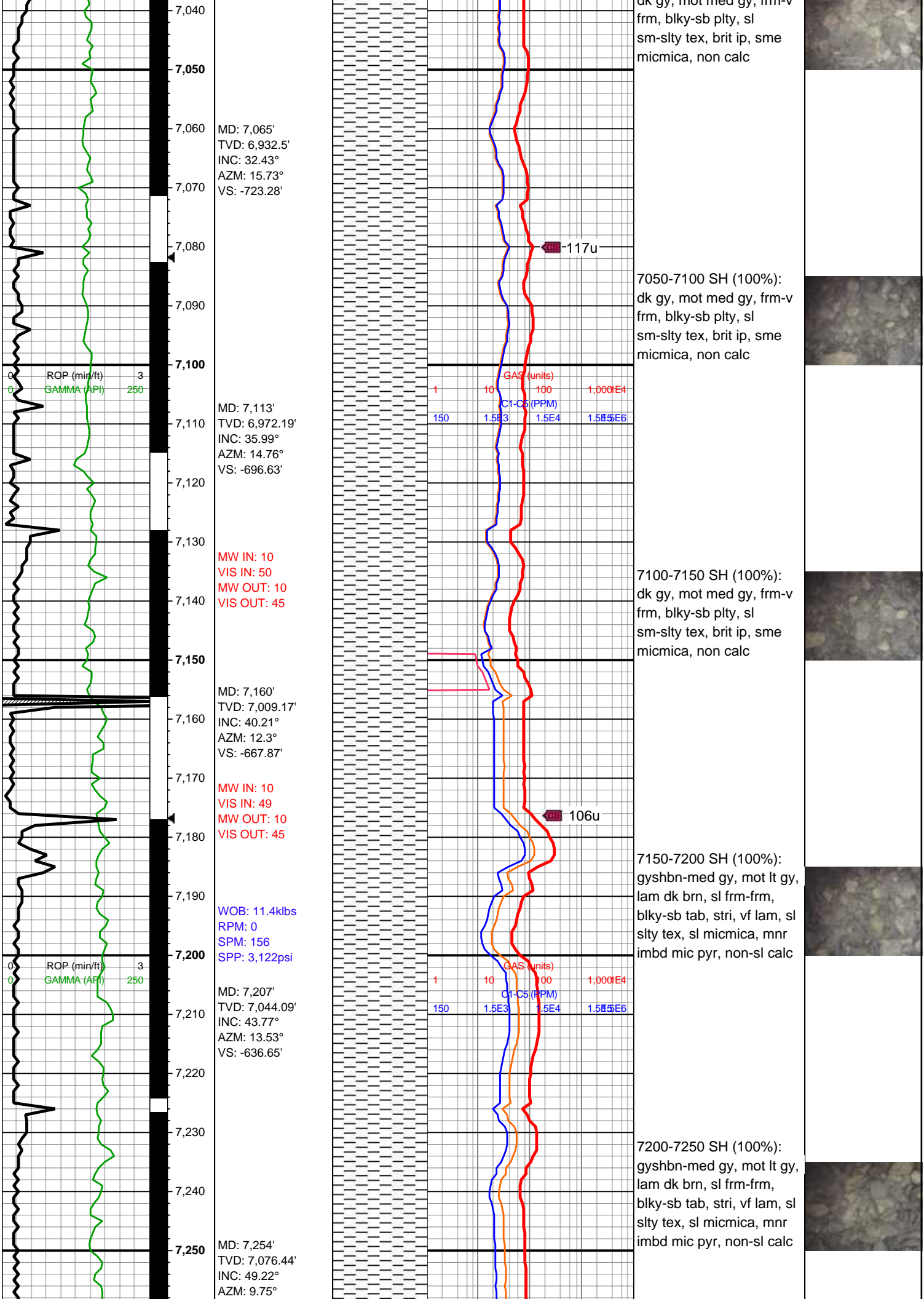
MW IN: 10
VIS IN: 51
MW OUT: 10
VIS OUT: 46

6950-7000 SH (100%):
dk gy, mot med gy, frm-v
frm, blkly-sb plty, sl
sm-sltly tex, brit ip, sme
micmica, non calc

WOB: 21.8kls
RPM: 0
SPM: 154
SPP: 3,148psi

MD: 7,018'
TVD: 6,892.11'
INC: 29.05°
AZM: 16.35°
VS: -746.95'

7000-7050 SH (100%):
dk gy, mot med gy, frm v



MD: 7,065'
TVD: 6,932.5'
INC: 32.43°
AZM: 15.73°
VS: -723.28'

MD: 7,113'
TVD: 6,972.19'
INC: 35.99°
AZM: 14.76°
VS: -696.63'

MD: 7,160'
TVD: 7,009.17'
INC: 40.21°
AZM: 12.3°
VS: -667.87'

MD: 7,207'
TVD: 7,044.09'
INC: 43.77°
AZM: 13.53°
VS: -636.65'

MD: 7,254'
TVD: 7,076.44'
INC: 49.22°
AZM: 9.75°

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

MW IN: 10
VIS IN: 49
MW OUT: 10
VIS OUT: 45

WOB: 11.4klbs
RPM: 0
SPM: 156
SPP: 3,122psi

dk gy, mot med gy, frm-blky-sb plty, sl sm-sltly tex, brit ip, sme micmica, non calc

7050-7100 SH (100%):
dk gy, mot med gy, frm-blky-sb plty, sl sm-sltly tex, brit ip, sme micmica, non calc

7100-7150 SH (100%):
dk gy, mot med gy, frm-blky-sb plty, sl sm-sltly tex, brit ip, sme micmica, non calc

7150-7200 SH (100%):
gyshbn-med gy, mot lt gy, lam dk brn, sl frm-frm, blky-sb tab, stri, vf lam, sl slty tex, sl micmica, mnir imbd mic pyr, non-sl calc

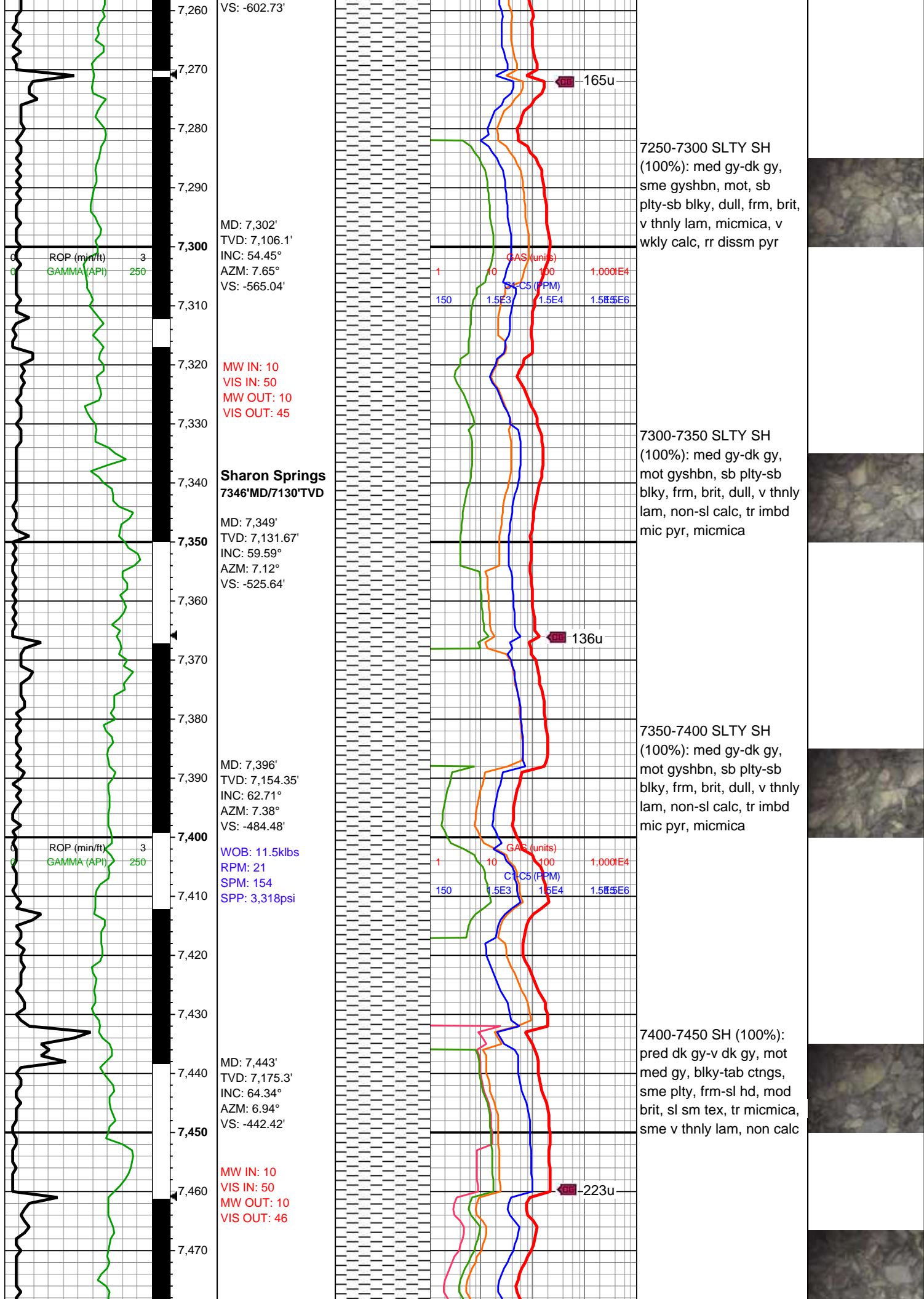
7200-7250 SH (100%):
gyshbn-med gy, mot lt gy, lam dk brn, sl frm-frm, blky-sb tab, stri, vf lam, sl slty tex, sl micmica, mnir imbd mic pyr, non-sl calc

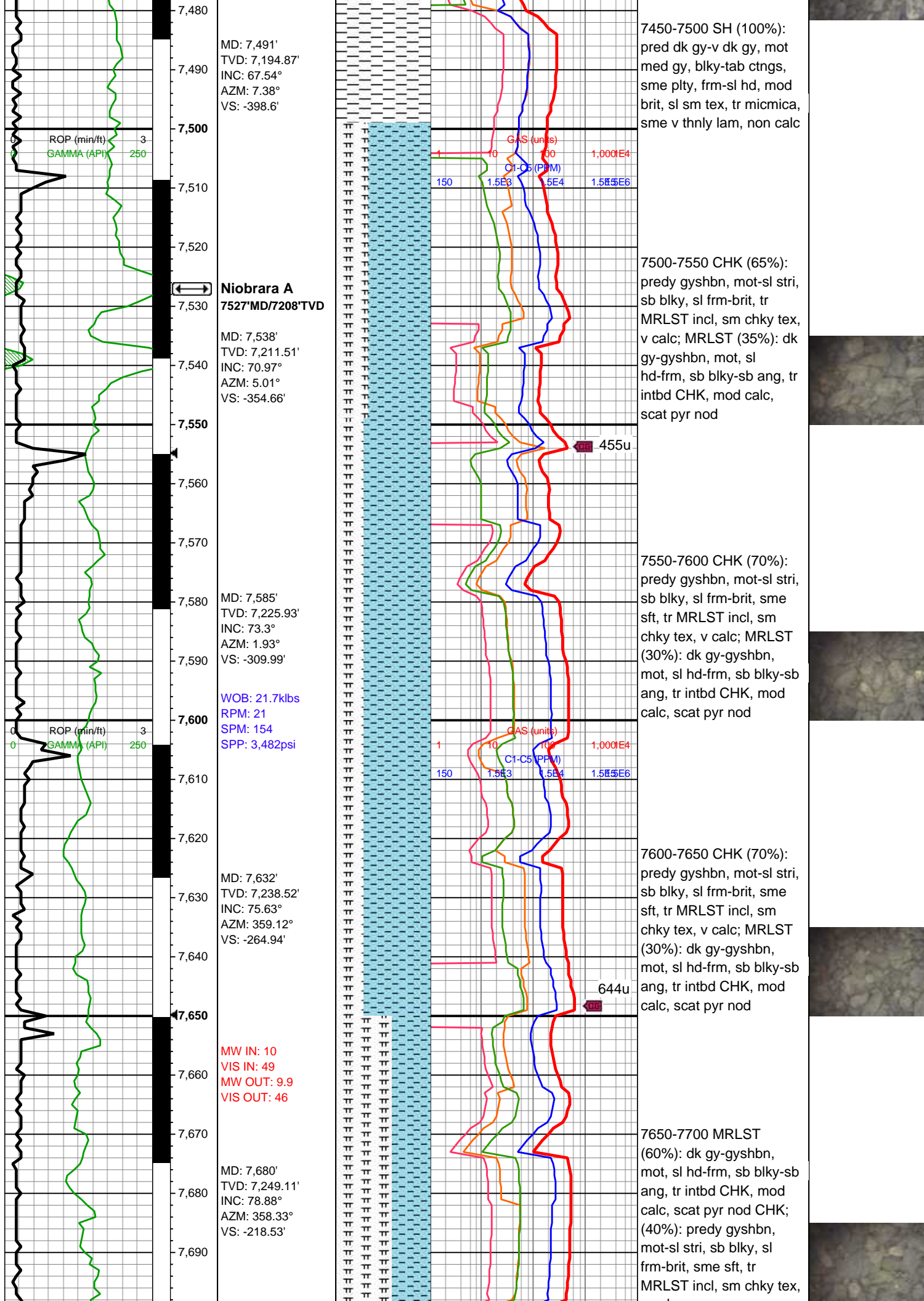
117u

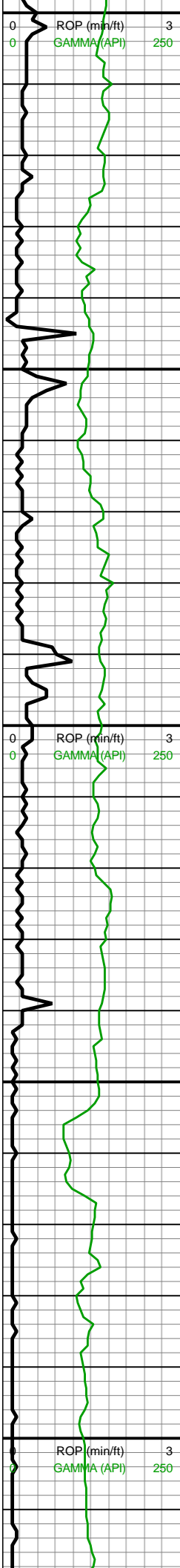
106u

GAS (units)				
1	10	100	1,000	1E4
C1-C5 (PPM)				
150	1.5E3	1.5E4	1.5E5	1.5E6

GAS (units)				
1	10	100	1,000	1E4
C1-C5 (PPM)				
150	1.5E3	1.5E4	1.5E5	1.5E6







MD: 7,727'
TVD: 7,256.76'
INC: 82.4°
AZM: 359.21°
VS: -172.56'

MW IN: 10
VIS IN: 49
MW OUT: 10
VIS OUT: 46

MD: 7,775'
TVD: 7,261.88'
INC: 85.34°
AZM: 0.61°
VS: -125.13'

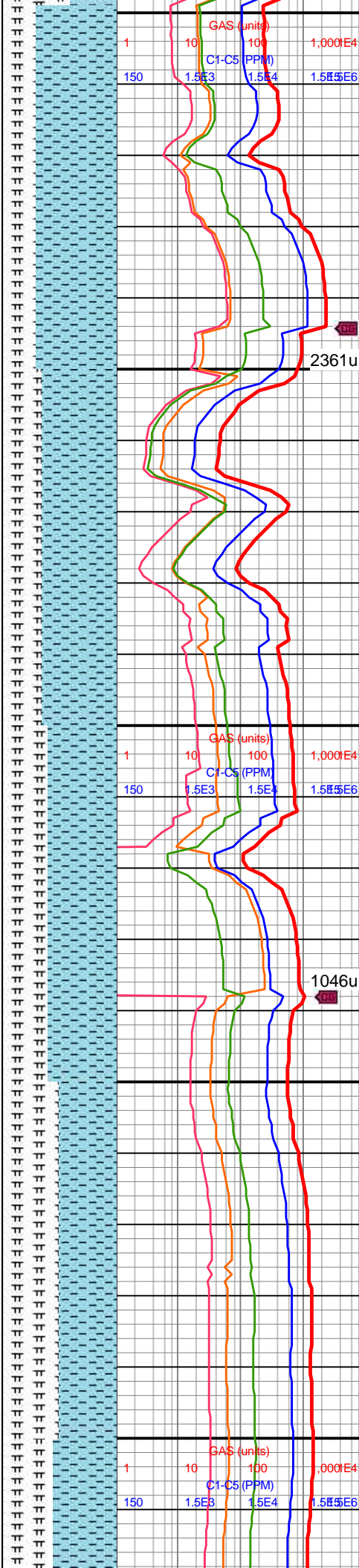
WOB: 22.7klbs
RPM: 0
SPM: 157
SPP: 3,072psi

Niobrara B
7802'MD/7264'TVD

Land Curve
7,947'MD

MD: 7,869'
TVD: 7,267.57'
INC: 87.72°
AZM: 359.74°
VS: -31.83'

MW IN: 10
VIS IN: 51
MW OUT: 10.1
VIS OUT: 49

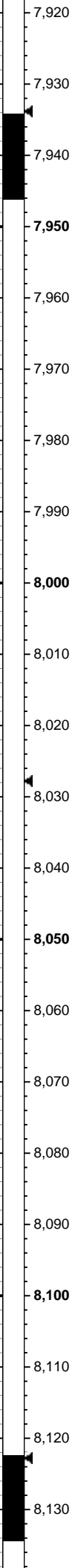
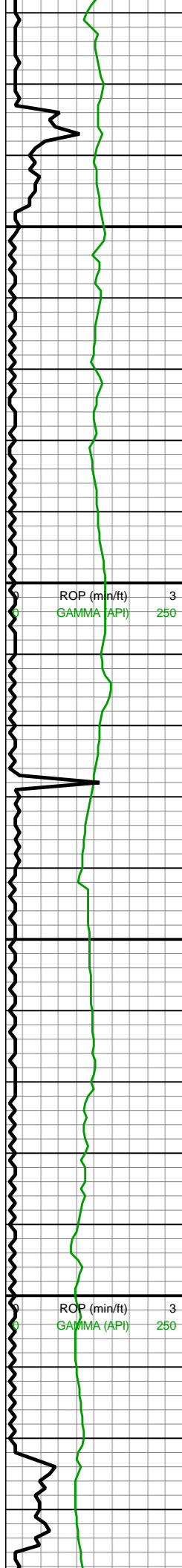


7700-7750 CHK (70%):
predy gyshbn, mot-sl stri,
sb blk, sl frm-brit, sme
sft, tr MRLST incl, sm
chky tex, v calc; MRLST
(30%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, tr intbd CHK, mod
calc, scat pyr nod

7750-7800 CHK (65%):
predy gyshbn, mot-sl stri,
sb blk, sl frm-brit, sme
sft, tr MRLST incl, sm
chky tex, v calc; MRLST
(35%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, tr intbd CHK, mod
calc, scat pyr nod

7800-7850 CHK (60%):
predy gyshbn, mot-sl stri,
sb blk, sl frm-brit, sme
sft, tr MRLST incl, sm
chky tex, v calc; MRLST
(40%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, tr intbd CHK, mod
calc

7850-7900 CHK (50%):
predy gyshbn, mot-sl stri,
sb blk, sl frm-brit, tr
MRLST incl, sm chky tex,
v calc; MRLST (50%): dk
gy-gyshbn, mot, sl
hd-frm, sb blk-sb ang, tr
intbd CHK, mod calc

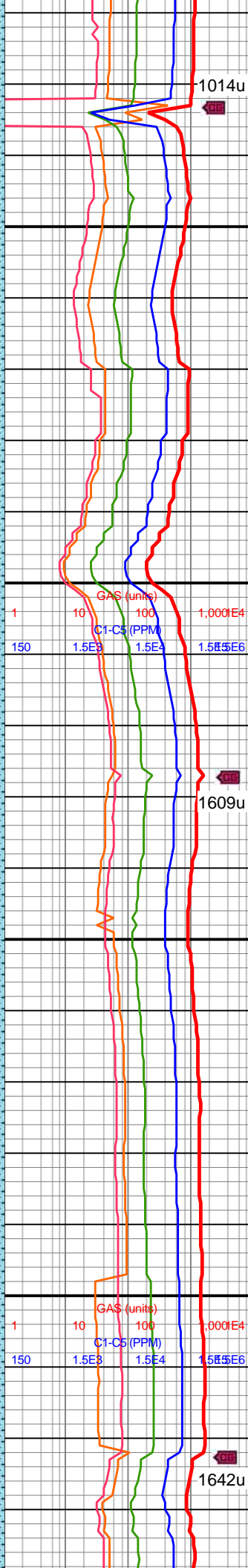
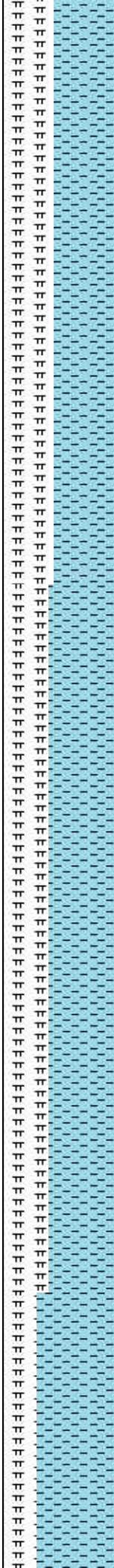


MD: 7,964'
TVD: 7,269.79'
INC: 89.6°
AZM: 359.56°
VS: 62.51'

WOB: 32.5klbs
RPM: 69
SPM: 216
SPP: 5,661psi

Note: On Buster
Note: C/O
Rotating Head

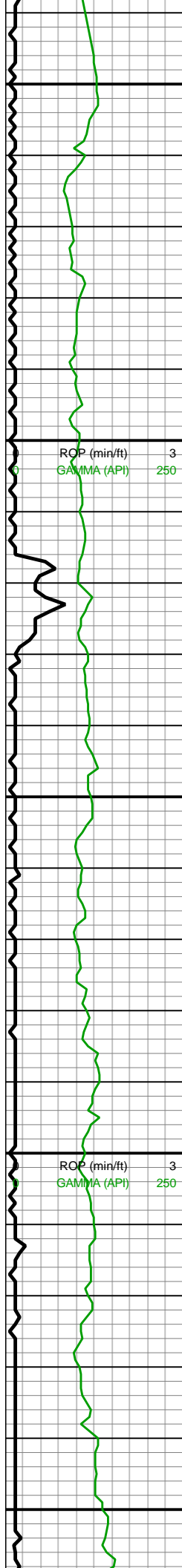
MD: 8,058'
TVD: 7,270.59'
INC: 89.43°
AZM: 0.53°
VS: 155.96'



7900-8000 CHK (55%):
predy gyshbn, mot-sl stri,
sb blk, sl frm-brit, tr
MRLST incl, sm chky tex,
v calc; MRLST (45%): dk
gy-gyshbn, mot, sl
hd-frm, sb blk-sb ang, tr
intbd CHK, mod calc,
sme pyr nod

8000-8100 CHK (60%):
predy gyshbn, mot-sl stri,
sb blk, sl frm-brit, tr
MRLST incl, sm chky tex,
v calc; MRLST (40%): dk
gy-gyshbn, mot, sl
hd-frm, sb blk-sb ang, tr
intbd CHK, mod calc





8,140
8,150
8,160
8,170
8,180
8,190
8,200
8,210
8,220
8,230
8,240
8,250
8,260
8,270
8,280
8,290
8,300
8,310
8,320
8,330
8,340
8,350

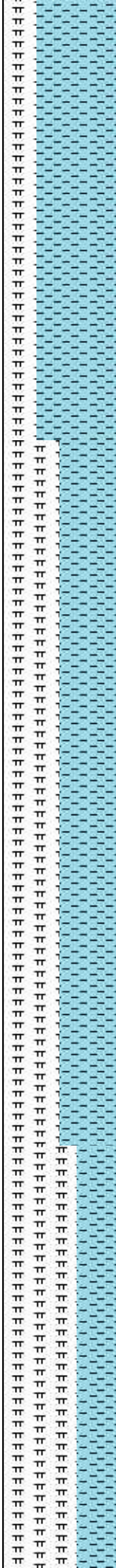
MW IN: 10.0+
VIS IN: 50
MW OUT: 10.1
VIS OUT: 48

MD: 8,152'
TVD: 7,271.16'
INC: 89.87°
AZM: 0.44°
VS: 249.48'

WOB: 35.4klbs
RPM: 69
SPM: 214
SPP: 5,405psi

MD: 8,247'
TVD: 7,271.05'
INC: 90.26°
AZM: 1.23°
VS: 344.06'

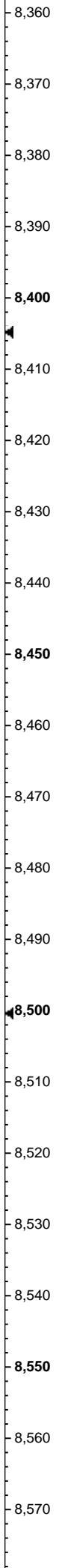
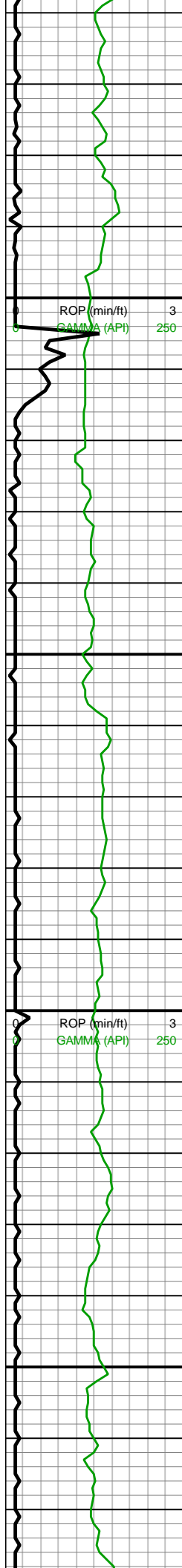
MD: 8,341'
TVD: 7,270.77'
INC: 90.09°
AZM: 359.65°
VS: 437.57'



8100-8200 CHK (70%):
predy gyshbn, mot-sl stri,
sb blk, sl frm-brit, tr
MRLST incl, sm chky tex,
v calc; MRLST (30%): dk
gy-gyshbn, mot, sl
hd-frm, sb blk-sb ang, tr
intbd CHK, mod calc

8200-8300 CHK (50%):
predy gyshbn, mot-sl stri,
sb blk, sl frm-brit, tr
MRLST incl, sm chky tex,
v calc; MRLST (50%): dk
gy-gyshbn, mot, sl
hd-frm, sb blk-sb ang, tr
intbd CHK, mod calc



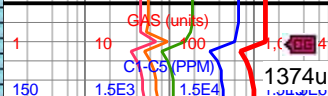
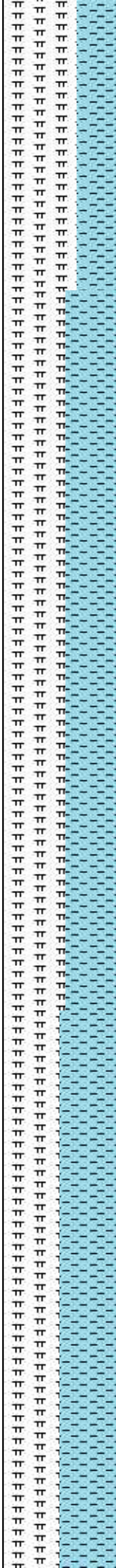


WOB: 35.7klbs
RPM: 70
SPM: 214
SPP: 5,539psi

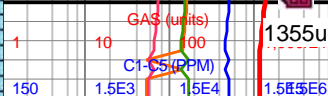
MW IN: 10
VIS IN: 52
MW OUT: 10.1
VIS OUT: 48

MD: 8,435'
TVD: 7,269.58'
INC: 91.36°
AZM: 358.5°
VS: 530.83'

MD: 8,530'
TVD: 7,267.4'
INC: 91.27°
AZM: 359.38°
VS: 625.03'



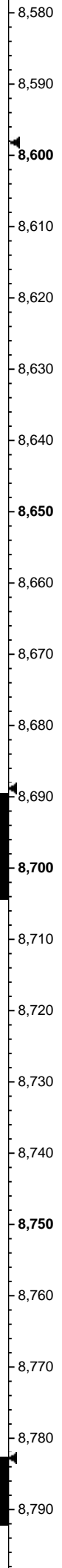
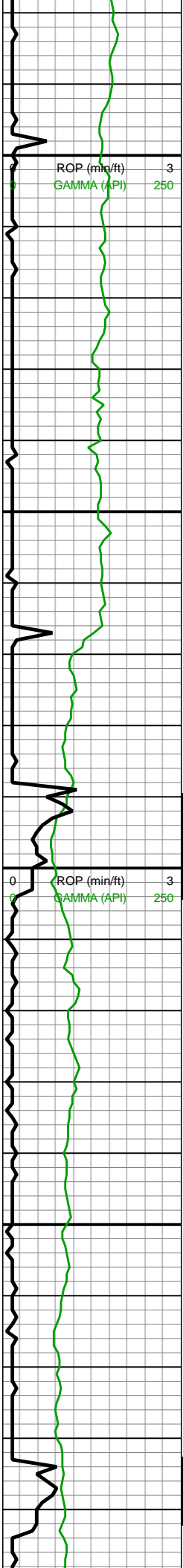
8300-8400 MRLST
(65%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-y-sb
ang, tr intbd CHK, mod
calc; CHK (35%): predy
gyshbn, mot-sl stri, sb
blk-y, sl frm-brit, tr MRLST
incl, sm chky tex, v calc



8400-8500 MRLST
(55%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-y-sb
ang, tr intbd CHK, mod
calc; CHK (45%): predy
gyshbn, mot-sl stri, sb
blk-y, sl frm-brit, tr MRLST
incl, sm chky tex, v calc



8500-8600 MRLST



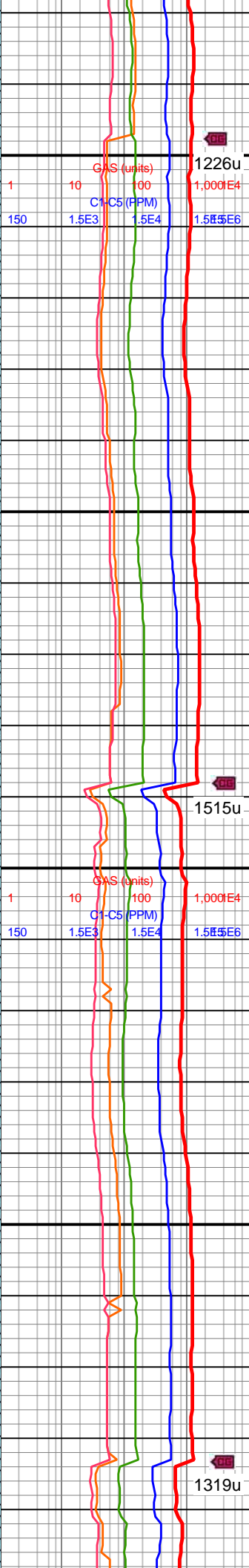
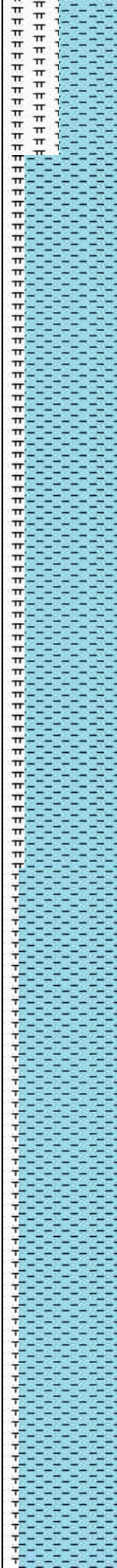
WOB: 34.2klbs
RPM: 69
SPM: 214
SPP: 5,492psi

MD: 8,625'
TVD: 7,265.07'
INC: 91.54°
AZM: 357.36°
VS: 719.1'

MW IN: 10
VIS IN: 54
MW OUT: 10.1
VIS OUT: 50

MD: 8,719'
TVD: 7,262.87'
INC: 91.14°
AZM: 359.65°
VS: 812.22'

MW IN: 10
VIS IN: 51
MW OUT: 10.1
VIS OUT: 50
WOB: 26.6klbs

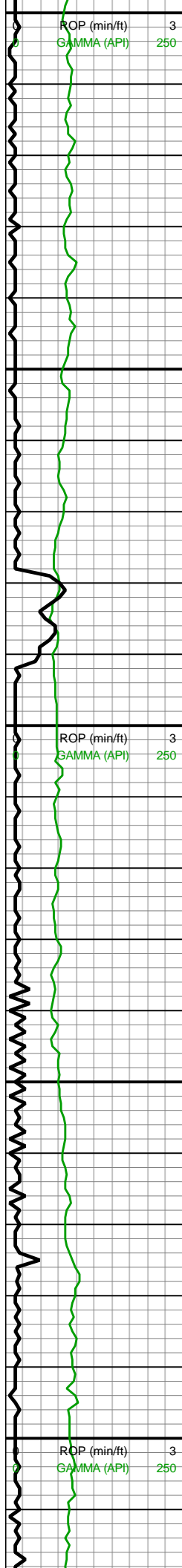


(50%): dk gy-gyshbn, mot, sl hd-frm, sb blk-y-sb ang, tr intbd CHK, mod calc; CHK (50%): predy gyshbn, mot-sl stri, sb blk-y, sl frm-brit, tr MRLST incl, sm chky tex, v calc

8600-8700 CHK (80%): predy gyshbn, mot-sl stri, sb blk-y, sl frm-brit, tr MRLST incl, sm chky tex, v calc; MRLST (20%): dk gy-gyshbn, mot, sl hd-frm, sb blk-y-sb ang, tr intbd CHK, mod calc

8700-8800CHK (85%): predy gyshbn, mot-sl stri, sb blk-y, sl frm-brit, tr MRLST incl, sm chky tex, v calc; MRLST (15%): dk gy-gyshbn, mot, sl hd-frm, sb blk-y-sb ang, tr intbd CHK, mod calc, sme pyr nod





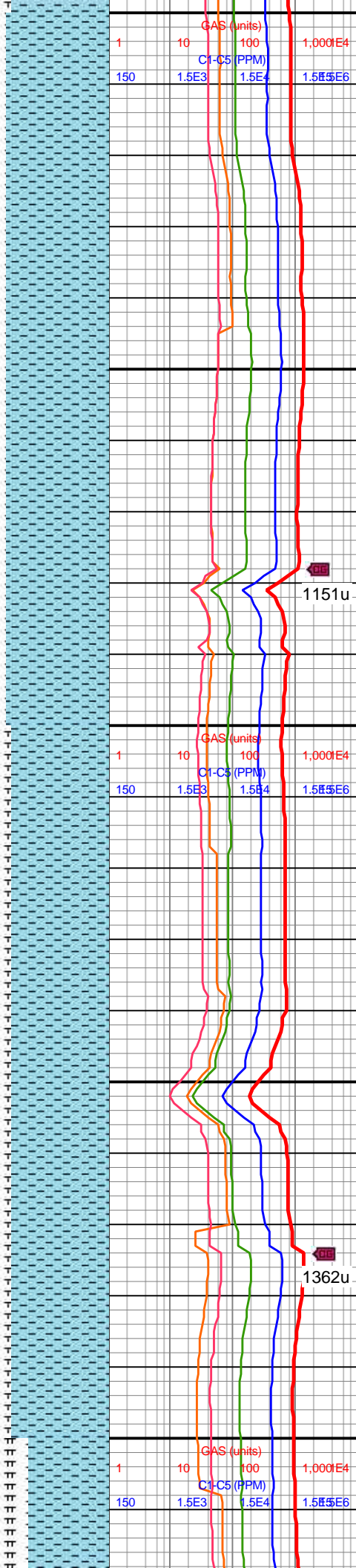
RPM: 70
SPM: 214
SPP: 5,430psi

MD: 8,813'
TVD: 7,261.86'
INC: 90.09°
AZM: 359.74°
VS: 905.6'

MD: 8,908'
TVD: 7,260.62'
INC: 91.41°
AZM: 0.61°
VS: 1,000.05'

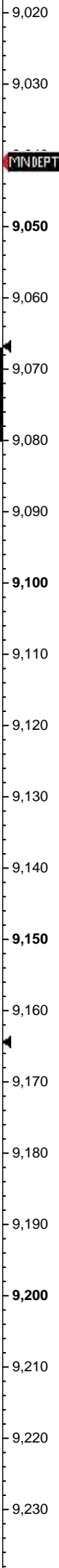
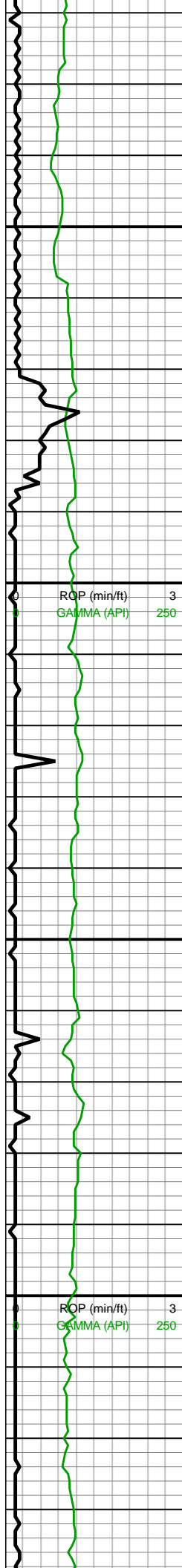
WOB: 30.9klbs
RPM: 69
SPM: 211
SPP: 5,586psi

MD: 9,002'
TVD: 7,258.16'
INC: 91.58°
AZM: 359.38°
VS: 1,093.46'



8800-8900 CHK (90%):
predy gyshbn, mot-sl stri,
sb blky, sl frm-brit, tr
MRLST incl, sm chky tex,
v calc; MRLST (10%): dk
gy-gyshbn, mot, sl
hd-frm, sb blky-sb ang, tr
intbd CHK, mod calc

8900-9000 CHK (85%):
predy gyshbn, mot-sl stri,
sb blky, sl frm-brit, tr
MRLST incl, sm chky tex,
v calc; MRLST (15%): dk
gy-gyshbn, mot, sl
hd-frm, sb blky-sb ang, tr
intbd CHK, mod calc



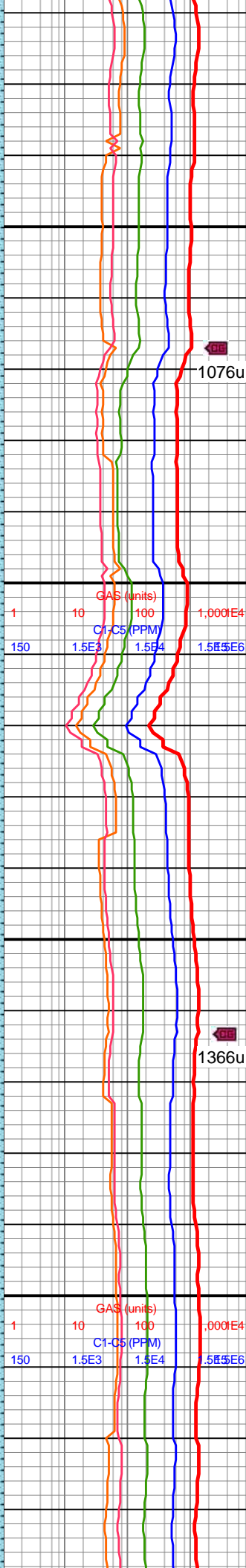
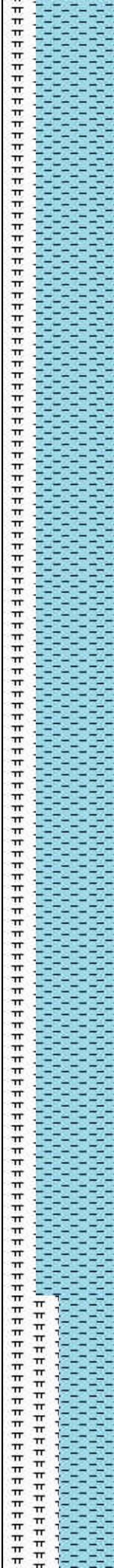
08/26/2018

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

MD: 9,097'
TVD: 217'
INC: 91.85°
AZM: 2.11°
VS: 7,255.32'

MD: 9,191'
TVD: 222'
INC: 91.93°
AZM: 0.44°
VS: 7,252.22'

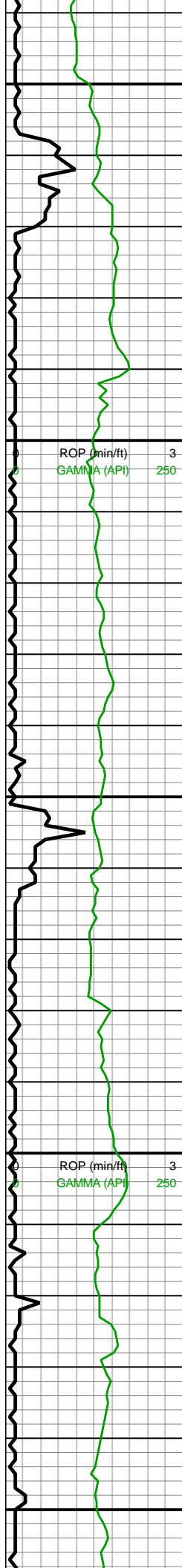
WOB: 29.5klbs
RPM: 70
SPM: 210
SPP: 5,651psi



9000-9100 CHK (70%):
predy gyshbn, mot-sl stri,
sb blk, sl frm-brit, sme
sft, tr MRLST incl, sm
chky tex, v calc; MRLST
(30%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, tr intbd CHK, mod
calc

9100-9200 CHK (70%):
predy gyshbn, mot-sl stri,
sb blk, sl frm-brit, sme
sft, tr MRLST incl, sm
chky tex, v calc; MRLST
(30%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, tr intbd CHK, mod
calc





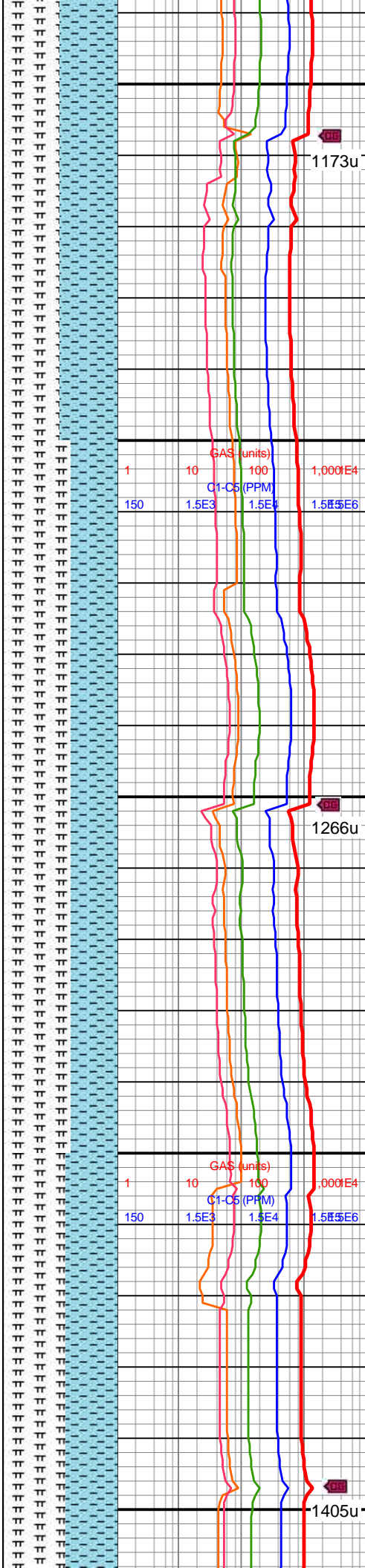
MW IN: 10
VIS IN: 51
MW OUT: 10.0
VIS OUT: 47

MD: 9,286'
TVD: 7,249.2'
INC: 91.71°
AZM: 2.11°
VS: 1,376.16'

MD: 9,381'
TVD: 7,246.84'
INC: 91.14°
AZM: 3.87°
VS: 1,470.97'

WOB: 35.5klbs
RPM: 70
SPM: 210
SPP: 5,544psi

MW IN: 10
VIS IN: 51
MW OUT: 10.0
VIS OUT: 46



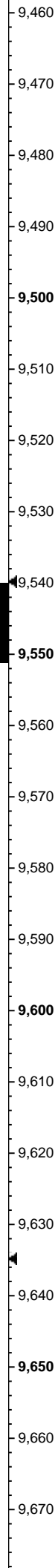
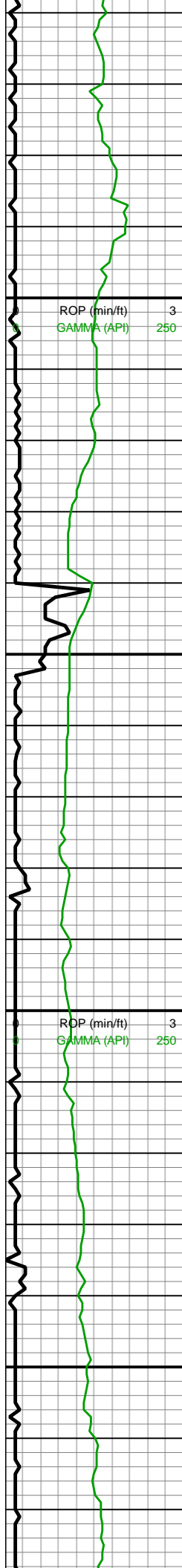
1173u

9200-9300 CHK (50%):
predy gyshbn, mot-sl stri,
sb blk, sl frm-brit, tr
MRLST incl, sm chky tex,
v calc; MRLST (50%): dk
gy-gyshbn, mot, sl
hd-frm, sb blk-sb ang, tr
intbd CHK, mod calc

1266u

9300-9400 MRLST
(60%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, tr intbd CHK, mod
calc; CHK (40%): predy
gyshbn, mot-sl stri, sb
blk, sl frm-brit, tr MRLST
incl, sm chky tex, v calc

1405u



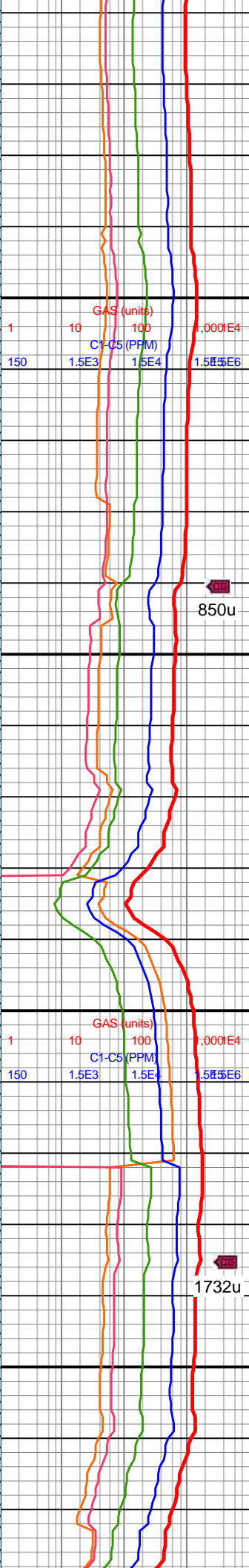
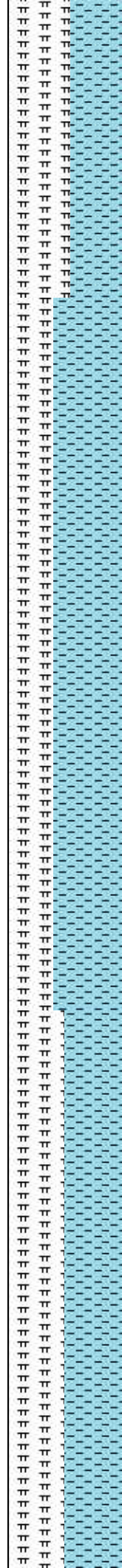
MD: 9,476'
TVD: 7,244.77'
INC: 91.36°
AZM: 1.49°
VS: 1,565.76'

MD: 9,571'
TVD: 7,244.4'
INC: 89.08°
AZM: 1.23°
VS: 1,660.41'

WOB: 34.5klbs
RPM: 70
SPM: 210
SPP: 5,515psi

MD: 9,665'
TVD: 7,245.84'
INC: 89.17°
AZM: 2.11°
VS: 1,754.1'

MW IN: 10
VIS IN: 50
MW OUT: 10.0
VIS OUT: 47

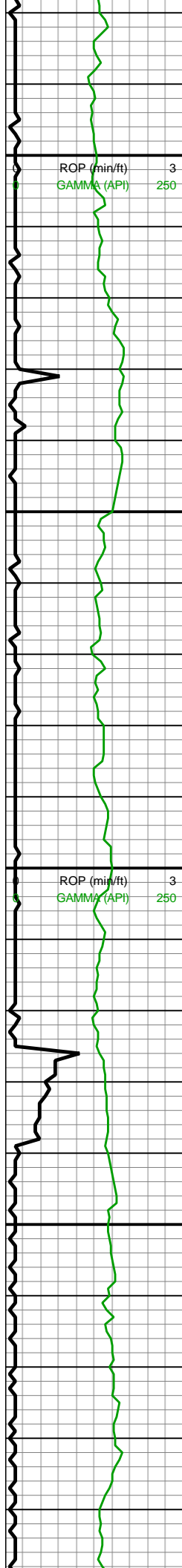


9400-9500 MRLST (55%): dk gy-gyshbn, mot, sl hd-frm, sb blk-y-sb ang, tr intbd CHK, mod calc, tr pyr nod; CHK (45%): predy gyshbn, mot-sl stri, sb blk-y, sl frm-brit, tr MRLST incl, sm chky tex, v calc

9500-9600 CHK (60%): predy gyshbn, mot-sl stri, sb blk-y, sl frm-brit, tr MRLST incl, sm chky tex, v calc; MRLST (40%): dk gy-gyshbn, mot, sl hd-frm, sb blk-y-sb ang, tr intbd CHK, mod calc, tr pyr nod

9600-9700 CHK (50%):



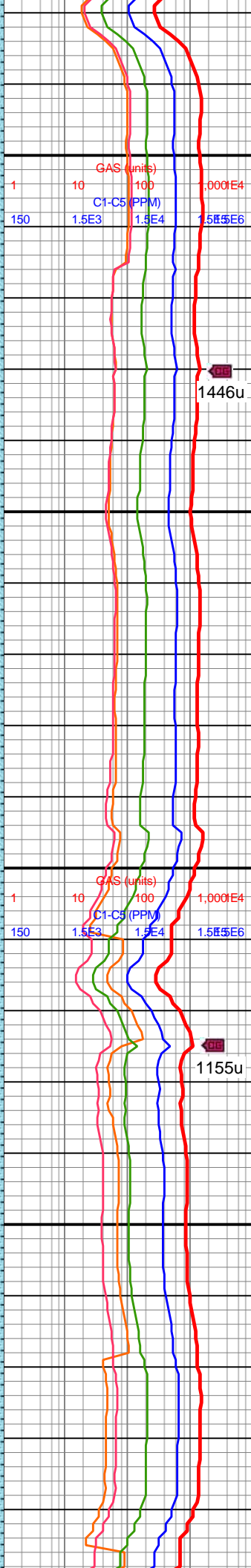
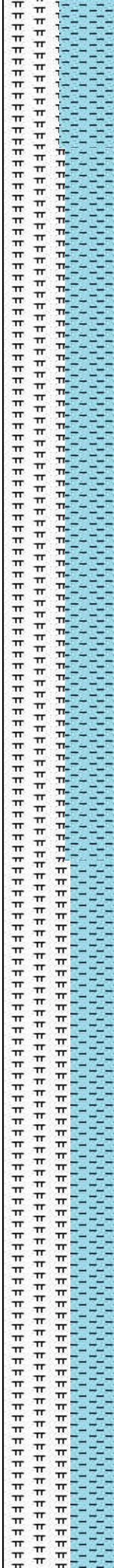


9,680
9,690
9,700
9,710
9,720
9,730
9,740
9,750
9,760
9,770
9,780
9,790
9,800
9,810
9,820
9,830
9,840
9,850
9,860
9,870
9,880
9,890

WOB: 35.1klbs
RPM: 69
SPM: 209
SPP: 5,566psi

MD: 9,854'
TVD: 7,249.1'
INC: 89.52°
AZM: 0.26°
VS: 1,942.03'

MW IN: 10
VIS IN: 52
MW OUT: 10.0
VIS OUT: 47

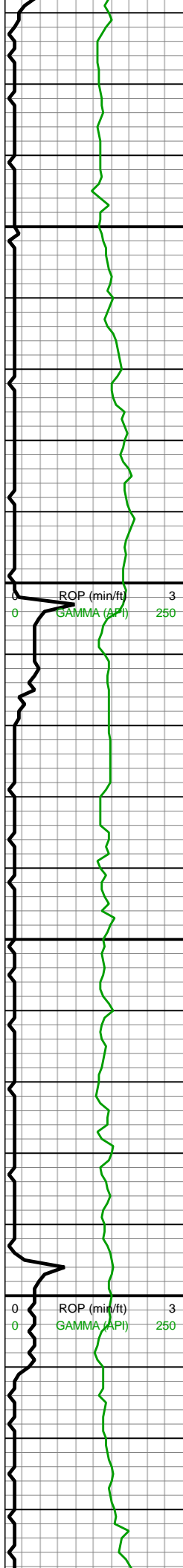


predy gyshbn, mot-sl stri,
sb blkly, sl frm-brit, tr
MRLST incl, sm chky tex,
v calc; MRLST (50%): dk
gy-gyshbn, mot, sl
hd-frm, sb blkly-sb ang, tr
intbd CHK, mod calc

9700-9800 MRLST
(55%): dk gy-gyshbn,
mot, sl hd-frm, sb blkly-sb
ang, tr intbd CHK, mod
calc; CHK (45%): predy
gyshbn, mot-sl stri, sb
blkly, sl frm-brit, tr MRLST
incl, sm chky tex, v calc

9800-9900 MRLST
(60%): dk gy-gyshbn,
mot, sl hd-frm, sb blkly-sb
ang, tr intbd CHK, mod
calc; CHK (40%): predy
gyshbn, mot-sl stri, sb
blkly, sl frm-brit, tr MRLST





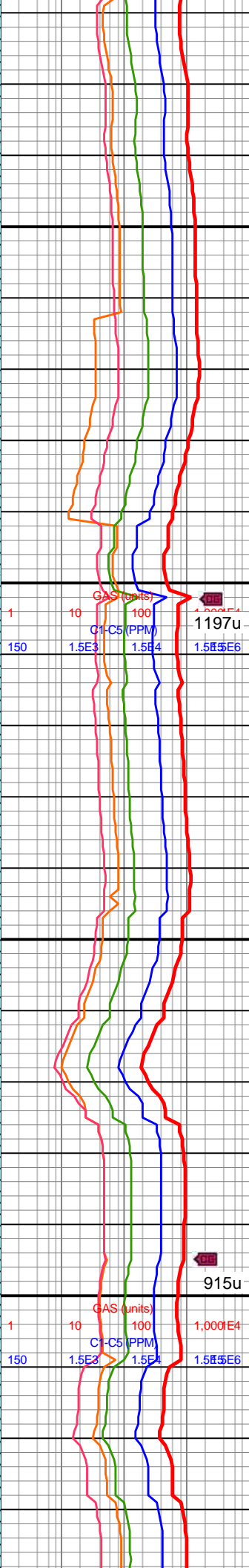
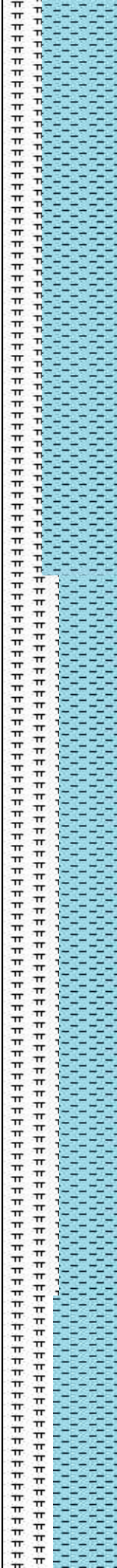
MD: 10,137'
TVD: 7,249.03'
INC: 89.25°
AZM: 2.11°
VS: 2,224'

WOB: 17.4klbs
RPM: 0
SPM: 210
SPP: 5,260psi

MD: 10,231'
TVD: 7,250.62'
INC: 88.81°
AZM: 2.64°
VS: 2,317.77'

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

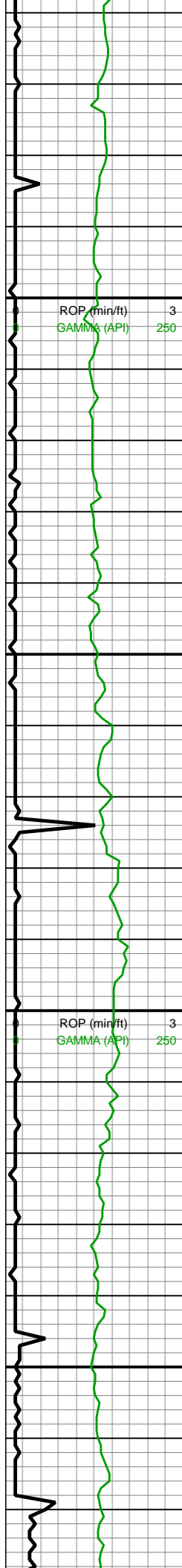
MD: 10,326'
TVD: 7,251.35'
INC: 90.31°
AZM: 4.74°
VS: 2,412.67'



10100-10200 CHK
(65%): predy gyshbn,
mot-sl stri, sb blk, sl
frm-brit, sme hrd, tr
MRLST incl, sm chky tex,
v calc; MRLST (35%): dk
gy-gyshbn, mot, sl
hd-frm, sb blk-sb ang, tr
intbd CHK, mod calc;

10200-10300 MRLST
(50%): dk gy-med gy, sl
sm-rgh tex, frm-sl hd, sb
blk-ang, mntr intbd CHK,
mod calc, tr mic pyrc nod;
CHK (50%): gyshbn-med
gy, mot, sb blk-sb tab, sl
frm, sm chky tex, hi calc,
tr intbd MRLST





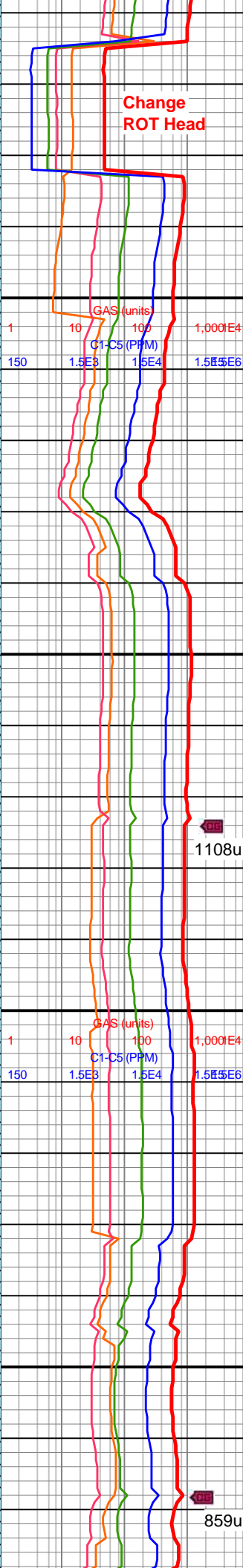
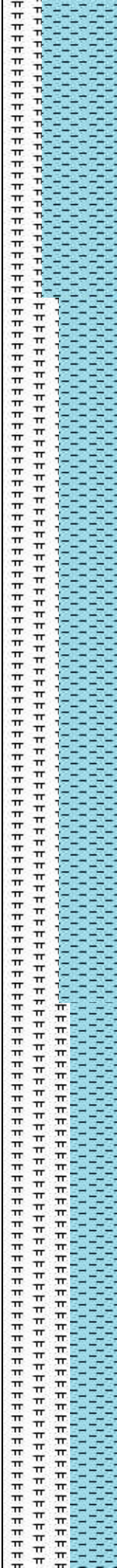
10,560
10,570
10,580
10,590
10,600
10,610
10,620
10,630
10,640
10,650
10,660
10,670
10,680
10,690
10,700
10,710
10,720
10,730
10,740
10,750
10,760
10,770

WOB: 32klbs
RPM: 70
SPM: 206
SPP: 5.663psi

MD: 10,610'
TVD: 7,250.49'
INC: 89.52°
AZM: 3.16°
VS: 2,696.38'

MD: 10,704'
TVD: 7,251.89'
INC: 88.77°
AZM: 3.43°
VS: 2,790.25'

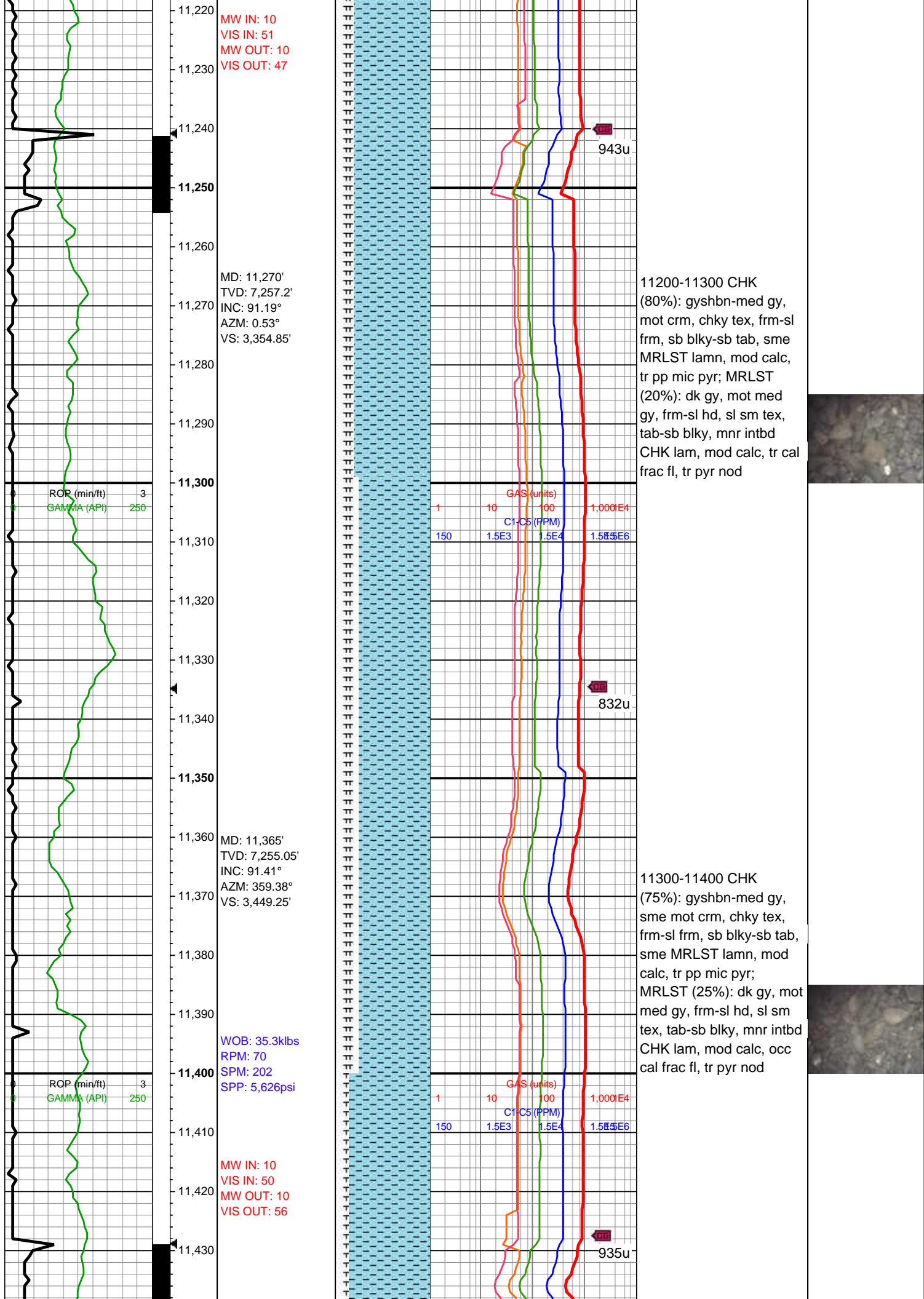
MW IN: 10
VIS IN: 51
MW OUT: 10+
VIS OUT: 47

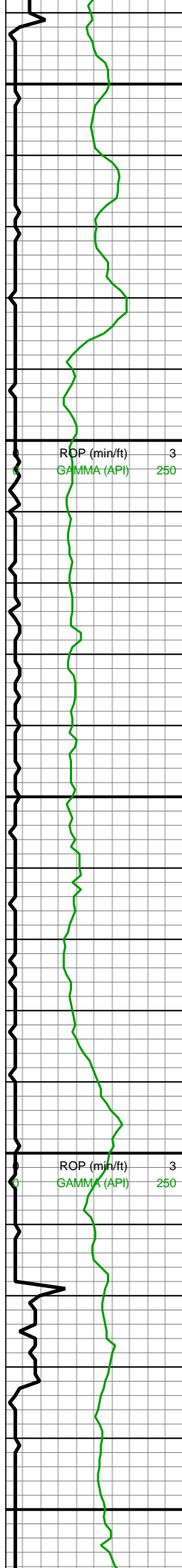


10500-10600 CHK
(65%): gyshbn-med gy, mot, sb blkyl-sb tab, sl frm, sm chky tex, hi calc, tr intbd MRLST; MRLST (35%): dk gy-med gy, sl sm-rgh tex, frm-sl hd, sb blkyl-ang, mnr intbd CHK, mod calc, tr mic pyrc nod;

10600-10700 CHK
(50%): gyshbn-med gy, mot, sb blkyl-sb tab, sl frm, sm chky tex, hi calc, tr intbd MRLST; MRLST (50%): dk gy-med gy, sl sm-rgh tex, frm-sl hd, sb blkyl-ang, mnr intbd CHK, mod calc, tr mic pyrc nod;

10700-10800 MRLST





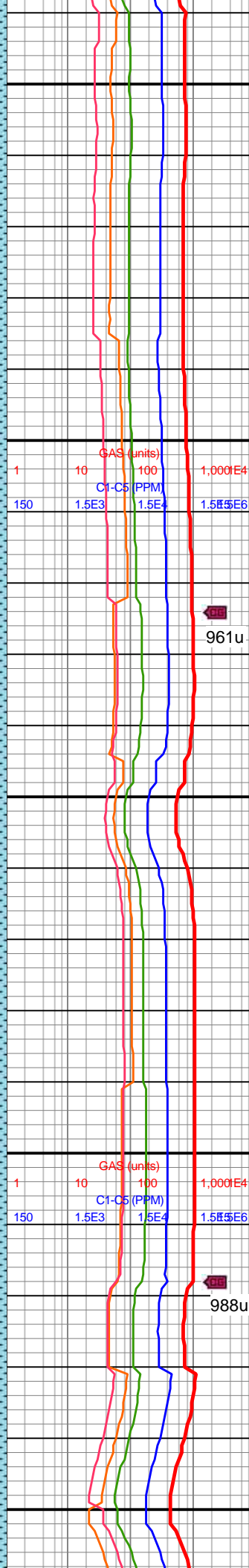
11,440
11,450
11,460
11,470
11,480
11,490
11,500
11,510
11,520
11,530
11,540
11,550
11,560
11,570
11,580
11,590
11,600
11,610
11,620
11,630
11,640
11,650

MD: 11,459'
TVD: 7,252.52'
INC: 91.67°
AZM: 0.79°
VS: 3,542.68'

MD: 11,554'
TVD: 7,249.86'
INC: 91.54°
AZM: 359.56°
VS: 3,637.1'

WOB: 35.8klbs
RPM: 70
SPM: 198
SPP: 5,359psi

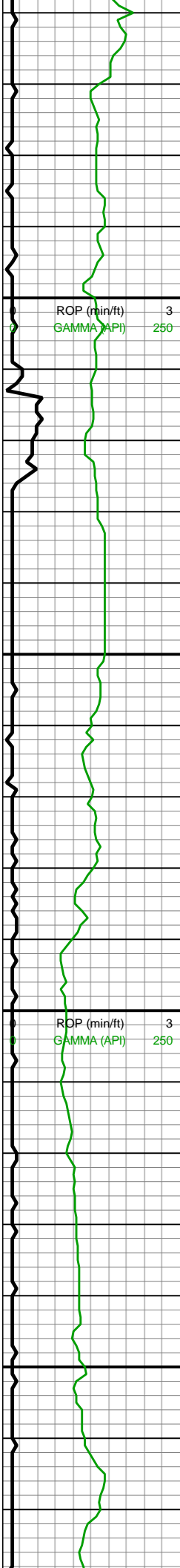
MD: 11,648'
TVD: 7,247.51'
INC: 91.32°
AZM: 1.32°
VS: 3,730.59'



11400-11500 CHK
(85%): gyshbn-med gy,
sme mot crm, chky tex,
frm-sl frm, sb blkyl-sb tab,
sme MRLST lamn, mod
calc, tr pp mic pyr;
MRLST (15%): dk gy, mot
med gy, frm-sl hd, sl sm
tex, tab-sb blkyl, mnrl intbd
CHK lam, mod calc, occ
cal frac fl, tr pyr nod

11500-11600 MRLST
(50%): dk gy-gyshbn,
mot, sl hd-frm, sb blkyl-sb
ang, tr intbd CHK, mod
calc; CHK (50%): predy
gyshbn, mot-sl stri, sb
blkyl, sl frm-brit, tr MRLST
incl, sm chky tex, v calc





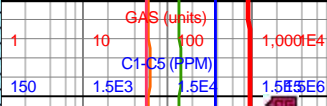
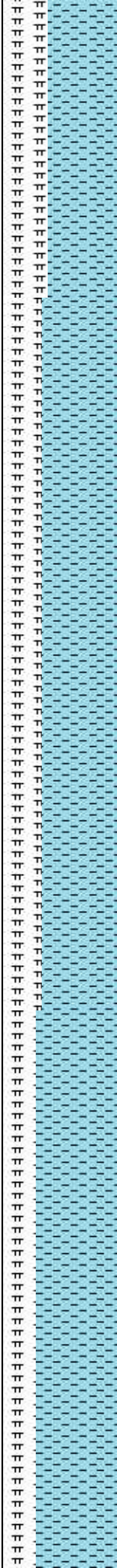
11,660
11,670
11,680
11,690
11,700
11,710
11,720
11,730
11,740
11,750
11,760
11,770
11,780
11,790
11,800
11,810
11,820
11,830
11,840
11,850
11,860
11,870

MW IN: 10
VIS IN: 49
MW OUT: 10
VIS OUT: 46

MD: 11,742'
TVD: 7,245.85'
INC: 90.7°
AZM: 3.78°
VS: 3,824.37'

WOB: 35.5klbs
RPM: 69
SPM: 202
SPP: 5,608psi

MD: 11,836'
TVD: 7,244.74'
INC: 90.66°
AZM: 1.76°
VS: 3,918.19'



11600-11700 CHK
(60%): predy gyshbn,
mot-sl stri, sb blk, sl
frm-brit, tr MRLST incl,
sm chky tex, v calc;
MRLST (40%): dk
gy-gyshbn, mot, sl
hd-frm, sb blk-sb ang, tr
intbd CHK, mod calc, occ
pyr nod

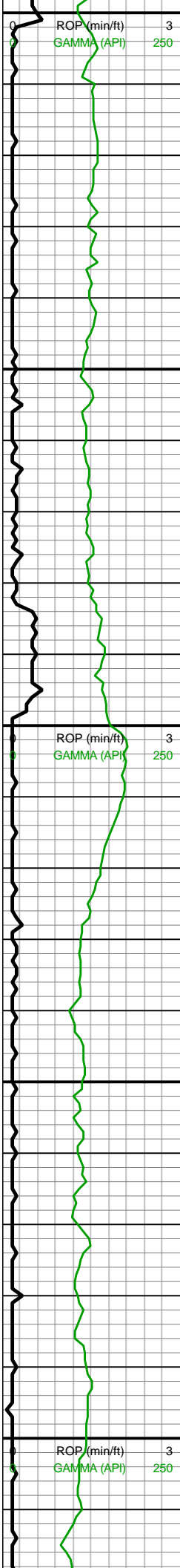
11700-11800 CHK
(65%): predy gyshbn,
mot-sl stri, sb blk, sl
frm-brit, tr MRLST incl,
sm chky tex, v calc;
MRLST (35%): dk
gy-gyshbn, mot, sl
hd-frm, sb blk-sb ang, tr
intbd CHK, mod calc, occ
pyr nod

11800-11900 CHK
(70%): predy gyshbn,
mot-sl stri, sb blk, sl
frm-brit, tr MRLST incl,



937u

991u



12,100
12,110
12,120
12,130
12,140
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

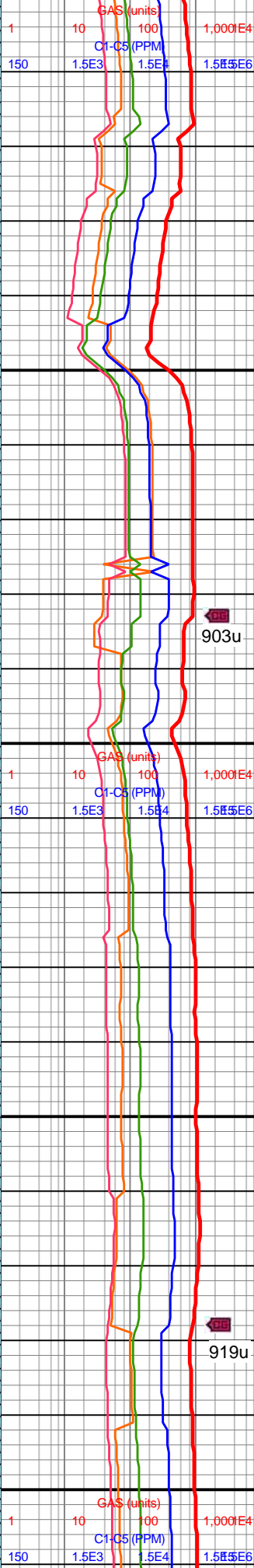
MD: 12,119'
TVD: 7,241.22'
INC: 90.26°
AZM: 2.64°
VS: 4,200.39'

MW IN: 10
VIS IN: 49
MW OUT: 10+
VIS OUT: 46

WOB: 27.2klbs
RPM: 70
SPM: 198
SPP: 5,415psi

MD: 12,213'
TVD: 7,242.48'
INC: 88.2°
AZM: 1.49°
VS: 4,294.13'

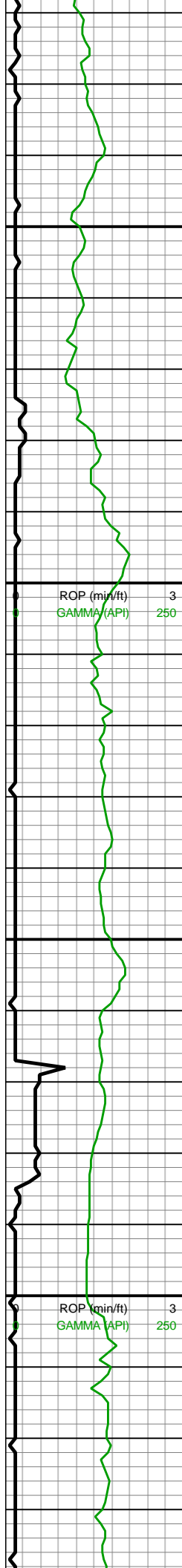
MD: 12,307'
TVD: 7,245.62'
INC: 87.98°
AZM: 2.02°
VS: 4,387.78'



12100-12200 CHK
(75%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(25%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc

12200-12300 CHK
(65%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(35%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc





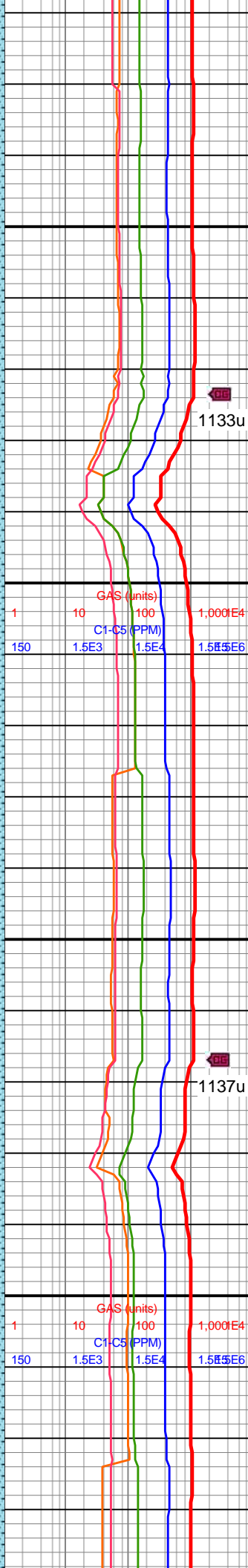
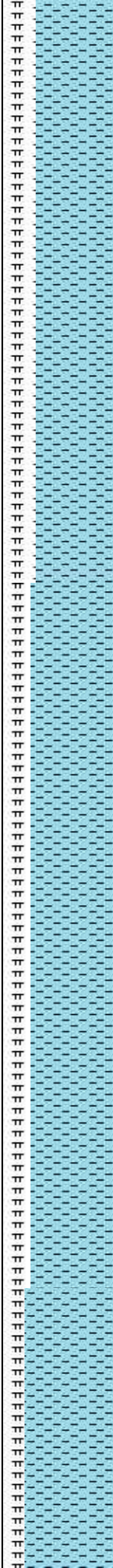
12,320
12,330
12,340
12,350
12,360
12,370
12,380
12,390
12,400
12,410
12,420
12,430
12,440
12,450
12,460
12,470
12,480
12,490
12,500
12,510
12,520
12,530

WOB: 32.2klbs
RPM: 70
SPM: 197
SPP: 5,591psi

MD: 12,401'
TVD: 7,249.22'
INC: 87.63°
AZM: 359.82°
VS: 4,481.31'

MD: 12,496'
TVD: 7,252.46'
INC: 88.46°
AZM: 1.93°
VS: 4,575.83'

MW IN: 10
VIS IN: 49

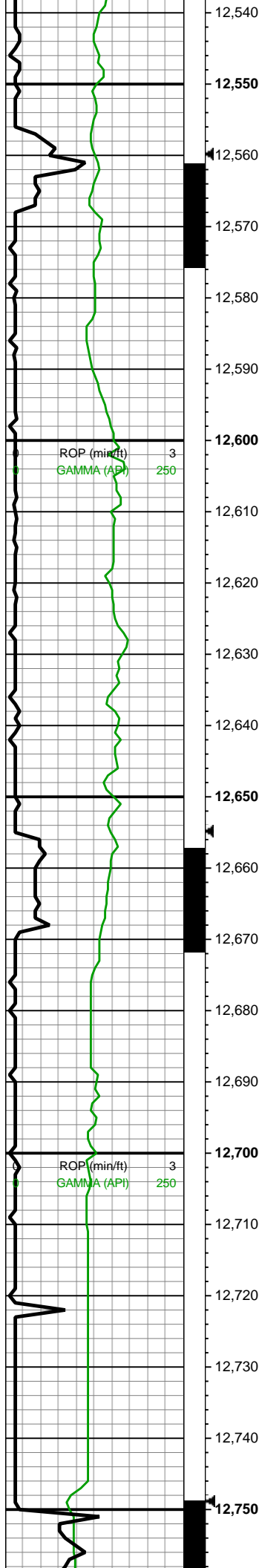


12300-12400 CHK
(70%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(30%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc



12400-12500 CHK
(75%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(25%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc





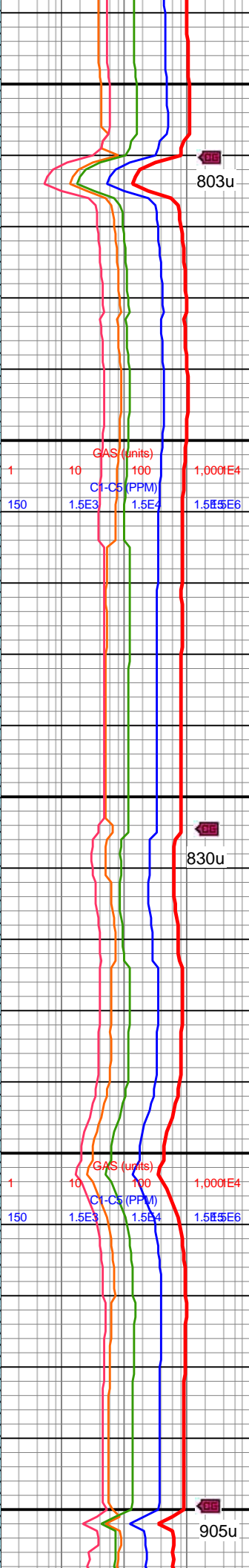
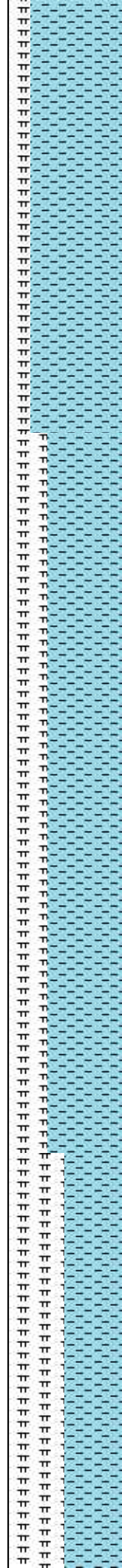
MW OUT: 10+
VIS OUT: 46

MD: 12,590'
TVD: 7,254.26'
INC: 89.34°
AZM: 359.74°
VS: 4,669.39'

WOB: 36.6klbs
RPM: 70
SPM: 195
SPP: 5,623psi

MD: 12,685'
TVD: 7,255.17'
INC: 89.56°
AZM: 1.67°
VS: 4,763.93'

MW IN: 10.0+
VIS IN: 50
MW OUT: 10.1
VIS OUT: 47



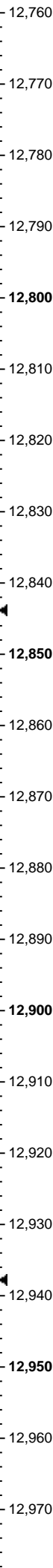
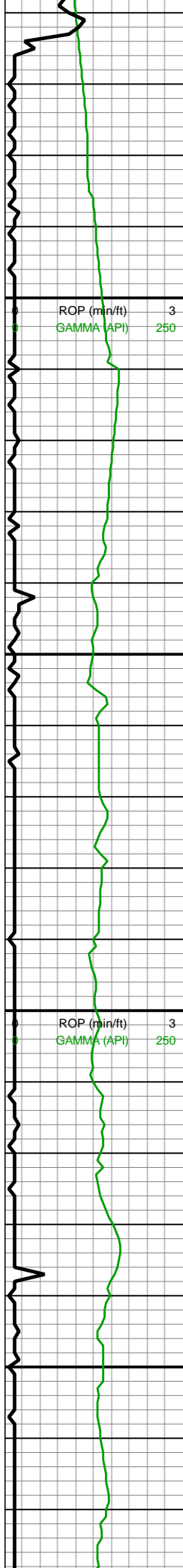
803u

12500-12600 CHK
(80%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(20%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc, tr pyr nod

830u

12600-12700 CHK
(65%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(35%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc

905u



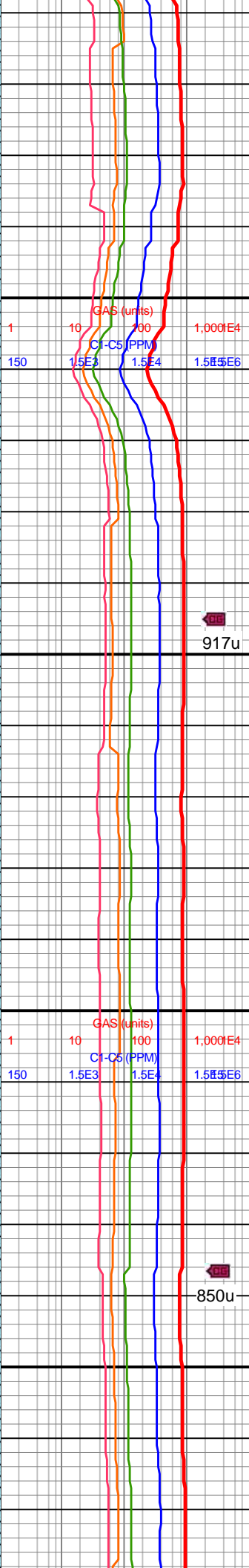
MD: 12,779'
TVD: 7,254.2'
INC: 91.63°
AZM: 1.84°
VS: 4,857.64'

WOB: 33.6klbs
RPM: 70
SPM: 192
SPP: 5,543psi

MD: 12,874'
TVD: 7,251.31'
INC: 91.85°
AZM: 1.49°
VS: 4,952.29'

MW IN: 10.1
VIS IN: 51
MW OUT: 10.1
VIS OUT: 47

MD: 12,969'
TVD: 7,248.06'
INC: 92.07°
AZM: 0.61°
VS: 5,046.84'

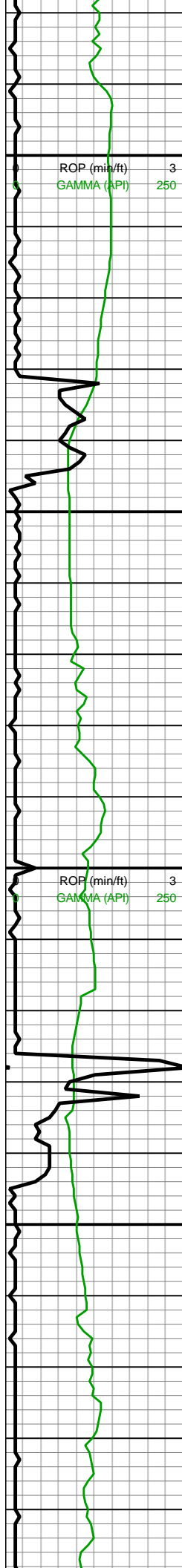


12700-12800 CHK
(50%): predy gyshbn,
mot, sb blky, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(50%): dk gy-gyshbn,
mot, sl hd-frm, sb blky-sb
ang, com CHK intbds,
mod calc

12800-12900 MRLST
(55%): dk gy-gyshbn,
mot, sl hd-frm, sb blky-sb
ang, com CHK intbds,
mod calc; CHK (45%):
predy gyshbn, mot, sb
blky, sl frm-brit, sm chky
tex, tr MRLST intbds, v
calc

12900-13000 MRLST
(50%): dk gy-gyshbn,





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

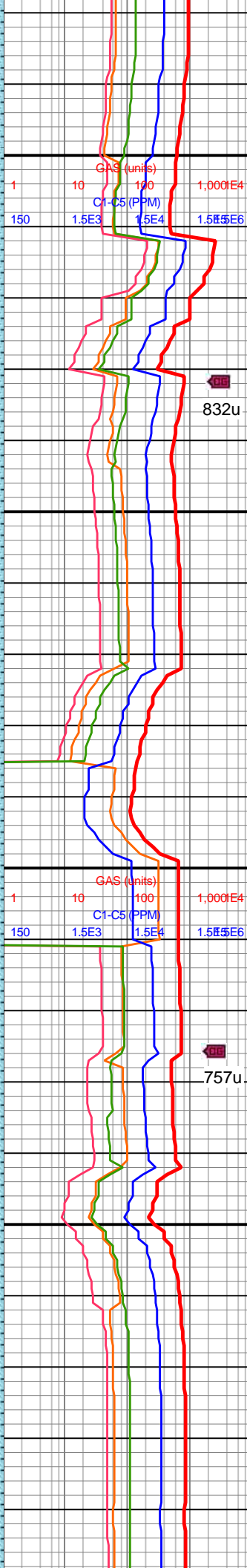
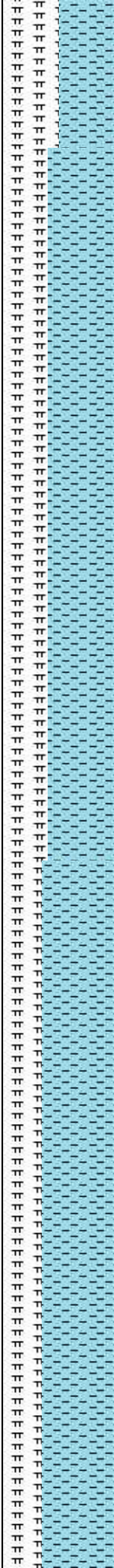
WOB: 34.4klbs
RPM: 70
SPM: 192
SPP: 5,616psi

MD: 13,063'
TVD: 7,245.57'
INC: 90.97°
AZM: 1.84°
VS: 5,140.45'

MW IN: 10.1
VIS IN: 51
MW OUT: 10.2
VIS OUT: 48

MD: 13,157'
TVD: 7,243.33'
INC: 91.76°
AZM: 3.6°
VS: 5,234.24'

WOB: 30klbs

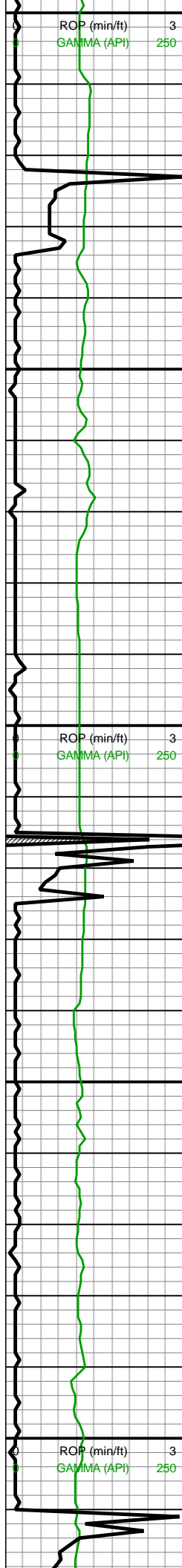


mot, sl hd-frm, sb blkly-sb ang, com CHK intbds, mod calc; CHK (50%): predy gyshbn, mot, sb blkly, sl frm-brit, sm chky tex, tr MRLST intbds, v calc

13000-13100 CHK (60%): predy gyshbn, mot, sb blkly, sl frm-brit, sm chky tex, tr MRLST intbds, v calc; MRLST (40%): dk gy-gyshbn, mot, sl hd-frm, sb blkly-sb ang, com CHK intbds, mod calc

13100-13200 CHK (65%): predy gyshbn, mot, sb blkly, sl frm-brit, sm chky tex, tr MRLST intbds, v calc; MRLST (35%): dk gy-gyshbn, mot, sl hd-frm, sb blkly-sb ang, com CHK intbds,





RPM: 60
SPM: 191
SPP: 5,529psi

MW IN: 10.1
VIS IN: 51
MW OUT: 10.1+
VIS OUT: 47

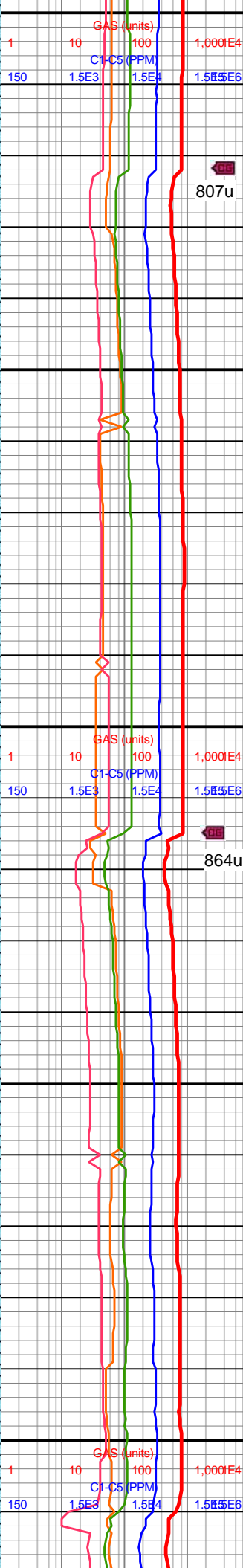
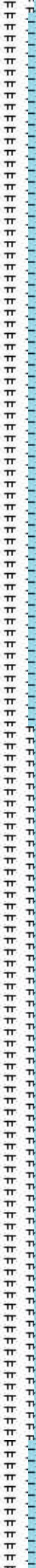
MD: 13,252'
TVD: 7,240.99'
INC: 91.06°
AZM: 1.14°
VS: 5,328.99'

MW IN: 10.1
VIS IN: 51
MW OUT: 10.1+
VIS OUT: 49

MD: 13,346'
TVD: 7,240.16'
INC: 89.96°
AZM: 2.55°
VS: 5,422.7'

WOB: 28.6klbs
RPM: 60
SPM: 191
SPP: 5,262psi

Note: C/O Rot Head
MW IN: 10.1



807u

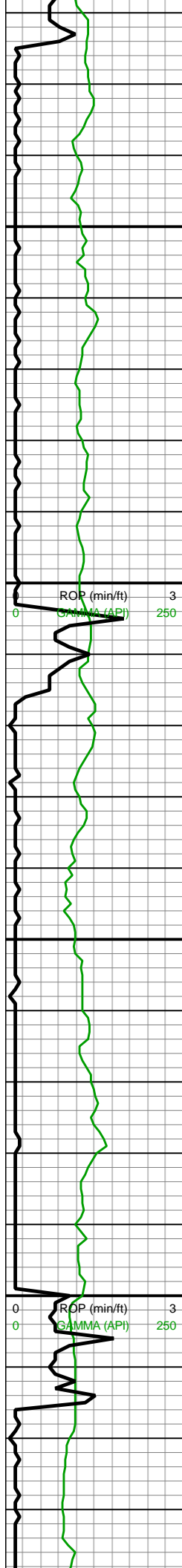
864u

mod calc

13200-13300 CHK
(70%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(30%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc

13300-13400 CHK
(65%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(35%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc





13,420
13,430
13,440
13,450
13,460
13,470
13,480
13,490
13,500
13,520
13,530
13,540
13,550
13,560
13,570
13,580
13,590
13,600
13,610
13,620
13,630

VIS IN: 51
MW OUT: 10.1
VIS OUT: 47

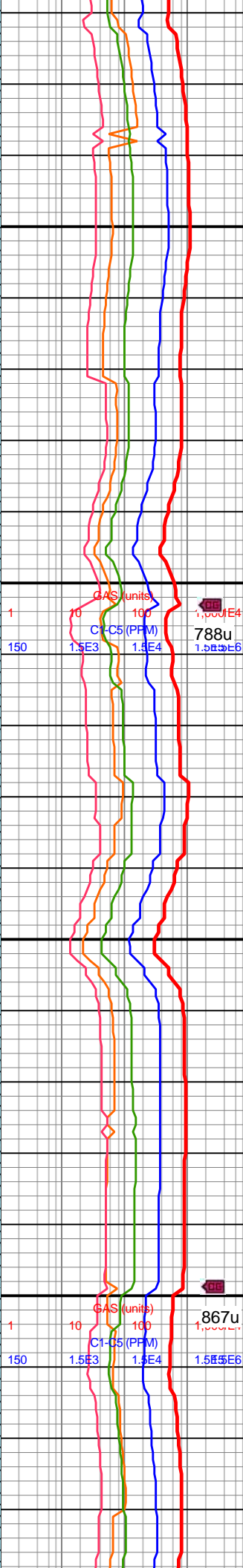
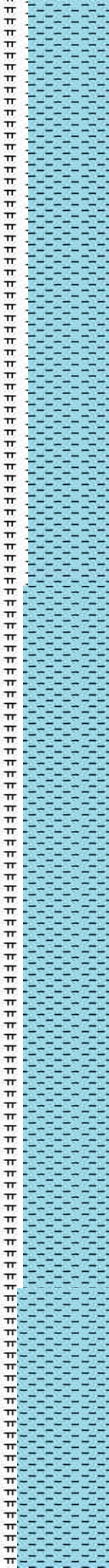
MIN DEPT 08/27/2018

MW IN: 10.1
VIS IN: 52
MW OUT: 10.0+
VIS OUT: 47

MD: 13,535'
TVD: 7,243.71'
INC: 87.94°
AZM: 358.86°
VS: 5,610.77'

WOB: 23.4klbs
RPM: 17
SPM: 186
SPP: 4,732psi

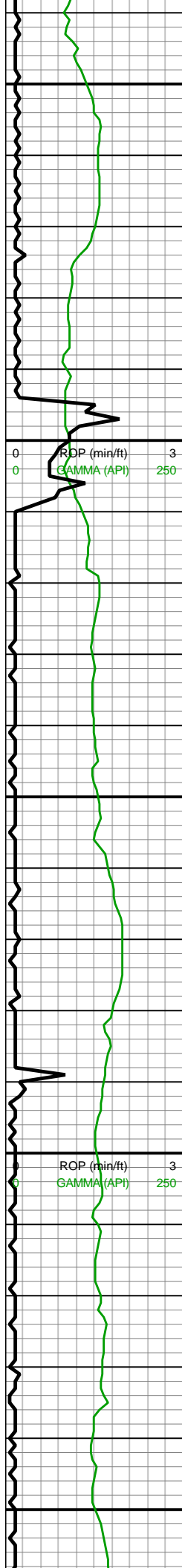
MD: 13,629'
TVD: 7,245.9'
INC: 89.39°
AZM: 358.5°
VS: 5,703.93'



13400-13500 CHK
(70%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(30%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc, tr pyr nod

13500-13600 CHK
(75%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(25%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc





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

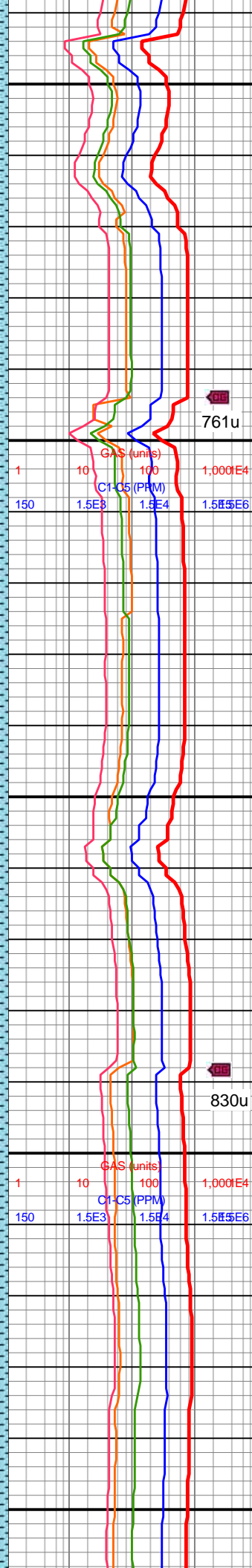
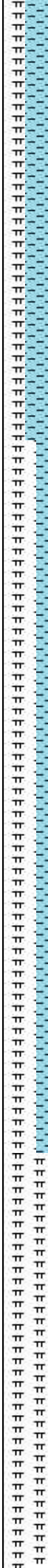
MW IN: 10.1
VIS IN: 52
MW OUT: 10.0+
VIS OUT: 48

MD: 13,724'
TVD: 7,247.28'
INC: 88.95°
AZM: 355.08°
VS: 5,797.61'

WOB: 35.4klbs
RPM: 70
SPM: 186
SPP: 5.451psi

MD: 13,818'
TVD: 7,249.36'
INC: 88.51°
AZM: 355.52°
VS: 5,889.88'

MW IN: 10.1
VIS IN: 51
MW OUT: 10.1
VIS OUT: 47



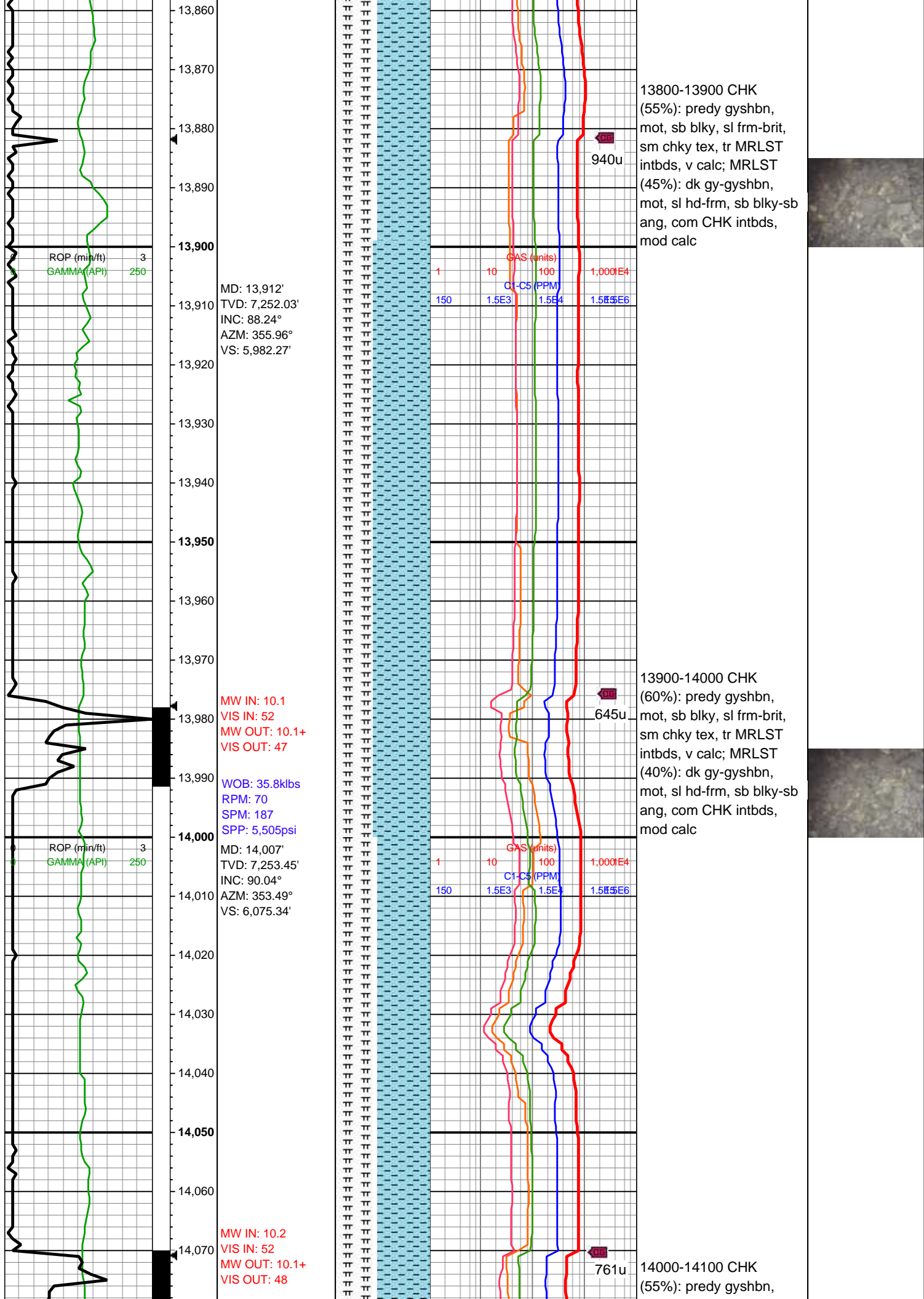
13600-13700 CHK
(80%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(20%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc, tr pyr specs

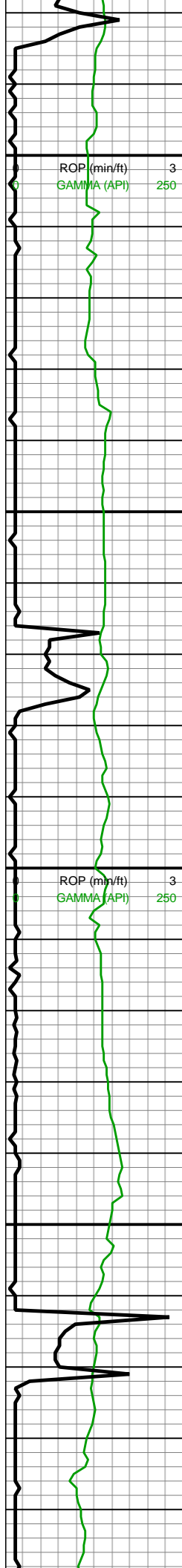
761u

13700-13800 CHK
(70%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(30%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc

830u







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

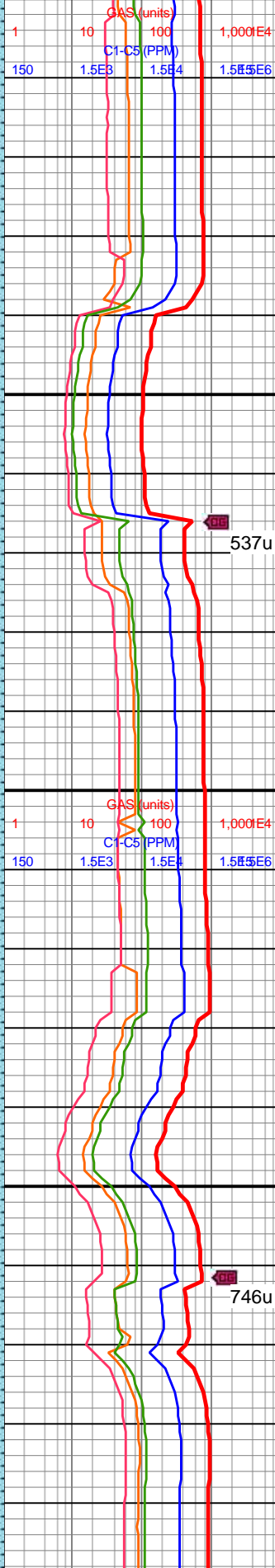
MD: 14,102'
TVD: 7,252.25'
INC: 91.41°
AZM: 355.43°
VS: 6,168.32'

MD: 14,196'
TVD: 7,249.91'
INC: 91.45°
AZM: 356.83°
VS: 6,260.83'

WOB: 35.2klbs
RPM: 70
SPM: 185
SPP: 5,605psi

MW IN: 10.2
VIS IN: 53
MW OUT: 10.1+
VIS OUT: 47

MD: 14,291'
TVD: 7,247.61'
INC: 91.32°
AZM: 355.87°
VS: 6,354.39'

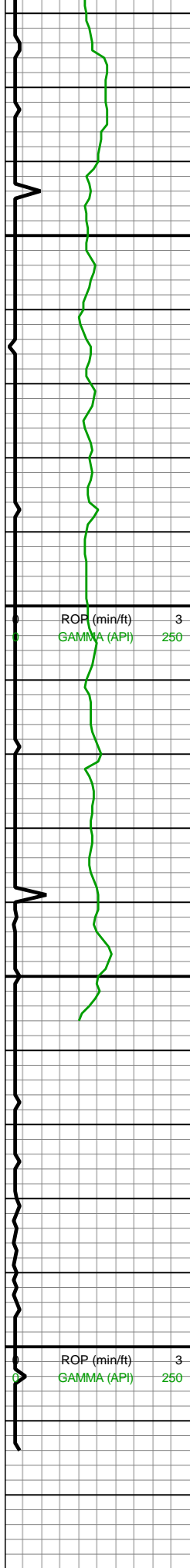


mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(45%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc

14100-14200 CHK
(70%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(30%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc

14200-14300 CHK
(80%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(20%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc, tr pur spec





14,520 MW IN: 10.2
VIS IN: 53
MW OUT: 10.2
VIS OUT: 47

14,530

14,540

14,550

14,560

14,570 MD: 14,574'
TVD: 7,244.91'
INC: 91.27°
AZM: 359.56°
VS: 6,634.17'

14,580

14,590

14,600 WOB: 35.8klbs
RPM: 70
SPM: 184
SPP: 5,663psi

14,610

14,620

14,630

14,640

14,650 MD: 14,651'
TVD: 7,243.64'
INC: 90.62°
AZM: 358.86°
VS: 6,710.58'

14,660

14,670

14,680 MW IN: 10.2
VIS IN: 53
MW OUT: 10.2
VIS OUT: 47

14,690

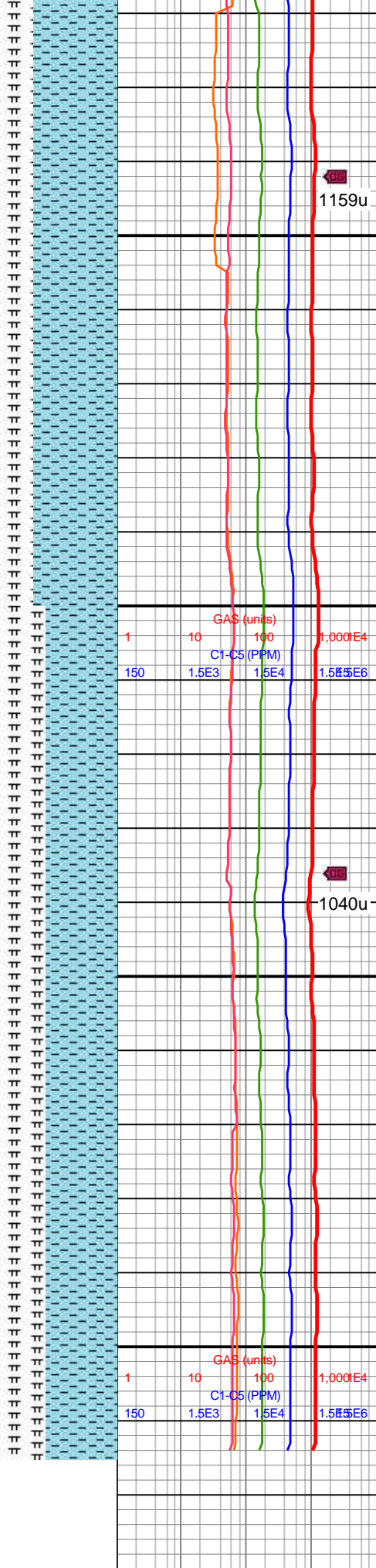
14,700 Projection to Bit:
MD: 14,715'
TVD: 7,242.95'
INC: 90.62°
AZM: 358.86°
VS: 6,774.04'

14,710

14,720

14,730

Total Depth of
14,715 Reached
on 08/27/2018
@ 08:02 MST



14500-14600 CHK
(70%): predy gyshbn,
mot, sb blk, sl frm-brit,
sm chky tex, tr MRLST
intbds, v calc; MRLST
(30%): dk gy-gyshbn,
mot, sl hd-frm, sb blk-sb
ang, com CHK intbds,
mod calc

14600-14715 CHK
(60%): predy gyshbn,
mot-sl stri, sb blk, sl
frm-brit, tr MRLST incl,
sm chky tex, v calc;
MRLST (40%): dk
gy-gyshbn, mot, sl
hd-frm, sb blk-sb ang, tr
intbd CHK, mod calc