



Scale: 5" / 100'
Measured Depth Log

Well Name Melbon Ranch 4G-17H-M265

Location Sec. 17 T2N R65W

State Colorado

County Weld

Country USA

Rig Number Ensign 153

API Number 05-123-47751

AFE # 16191472

Geographic Region Rockies

Field Wattenberg

Spud Date 10/22/2018

Drilling Completed 10/24/2018

Surface Coordinates Lat/Long: 40.1348143/-104.6961138

SHL: Sec: 17 Twp: 2N 65W
Footage: 2070 FSL 460 FEL

Bottom Hole Coordinates Proposed BHL: Sec: 17 Twp: 2N 65W
Footages: 2070 FSL 460 FEL

Ground Elevation 4,956'

K.B. Elevation 4,979'

Logged Interval 6,400' **To** 11,935'

Total Depth 11,935'

Formation Niobrara 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: Shana Swirin / Matthew Cox

Services Provided: 2-Man Mudlogging / Geosteering

Equipment: ML-567

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

Start Date 10/22/2018

Release Date: 10/24/2018

Job #: 1682RK1810

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

FOSSIL

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

ARGILLACEOUS

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

GLAUCONITE

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

Stringer

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

F FISH

F FISH

F FORAMINIFERA

Minerals

ANHYDRITIC

F FERRUGINOUS

F FERRUGINOUS PELLET

F FERRUGINOUS

F FERRUGINOUS

F SILTY

F TUFFACEOUS

F SILTSTONE STRINGER

SILTSTONE STRINGER

Oil Show

D DEAD

E EVEN

Q QUESTIONABLE

S SPOTTED STAINING

Porosity

E EARTHY

F FENESTRAL

F FRACTURE

X INTERCRYSTALLINE

I INTEROOLITIC

M MOLDIC

O ORGANIC

P PINPOINT

V VUGGY

Engineering

B BIT

C CASING

C CONNECTION (LEFT)

C CONNECTION (RIGHT)

C CONNECTION GAS

C CORE - LOST

C CORE - RECOVERED

D DST INTERVAL

F FAULT

Other Symbols

FORMATION TOP

GAS SHOW

MN DEPTH 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

A ANGULAR

R ROUNDED

S SUBANG

S SUBRND

Textures

B BOUNDSTONE

C CHALKY

C CRYPTOXLN

E EARTHY

F FINELYXLN

G GRAINSTONE

L LITHOGRAPHIC

M MICROXLN

M MUDSTONE

P PACKSTONE

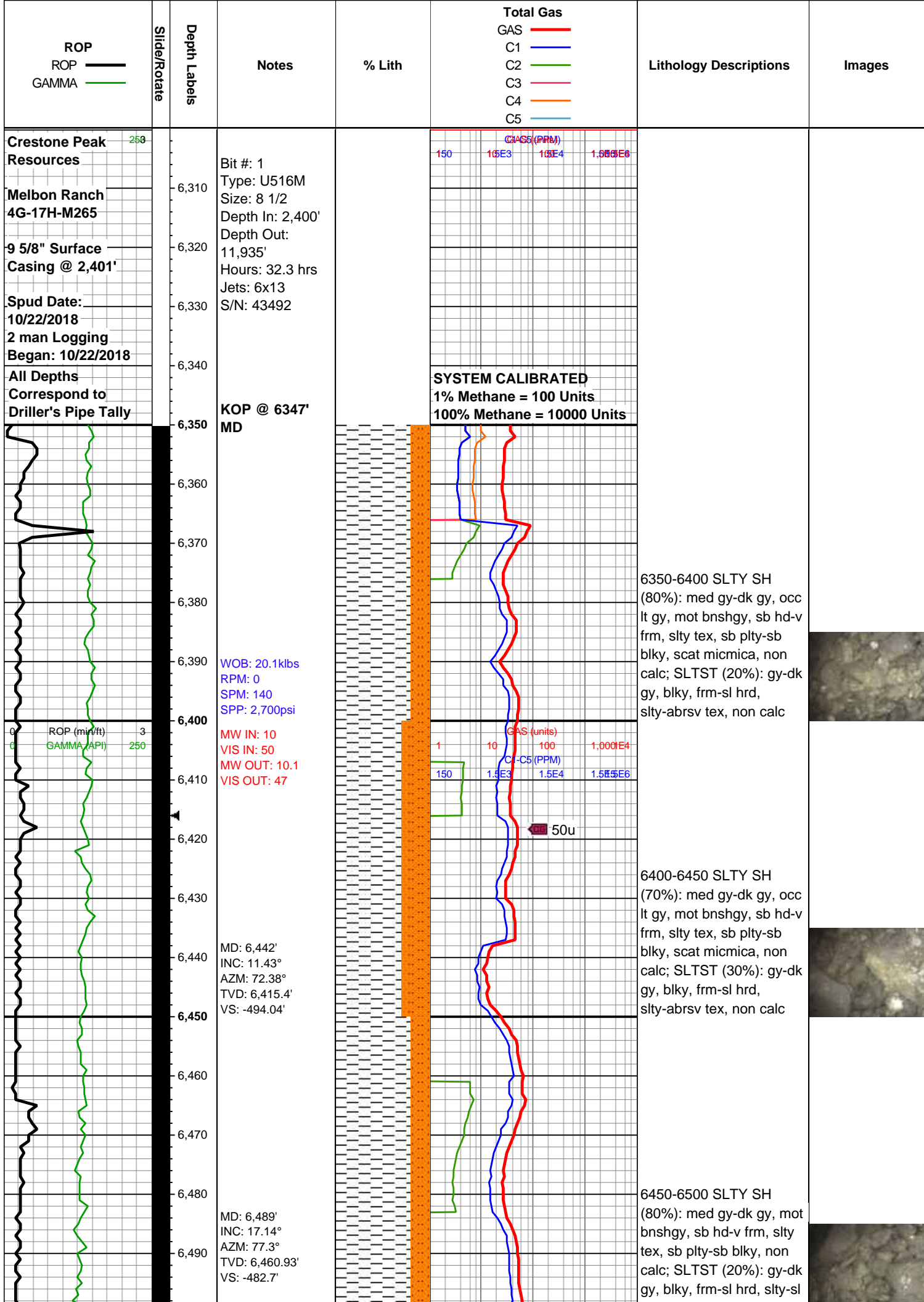
W WACKESTONE

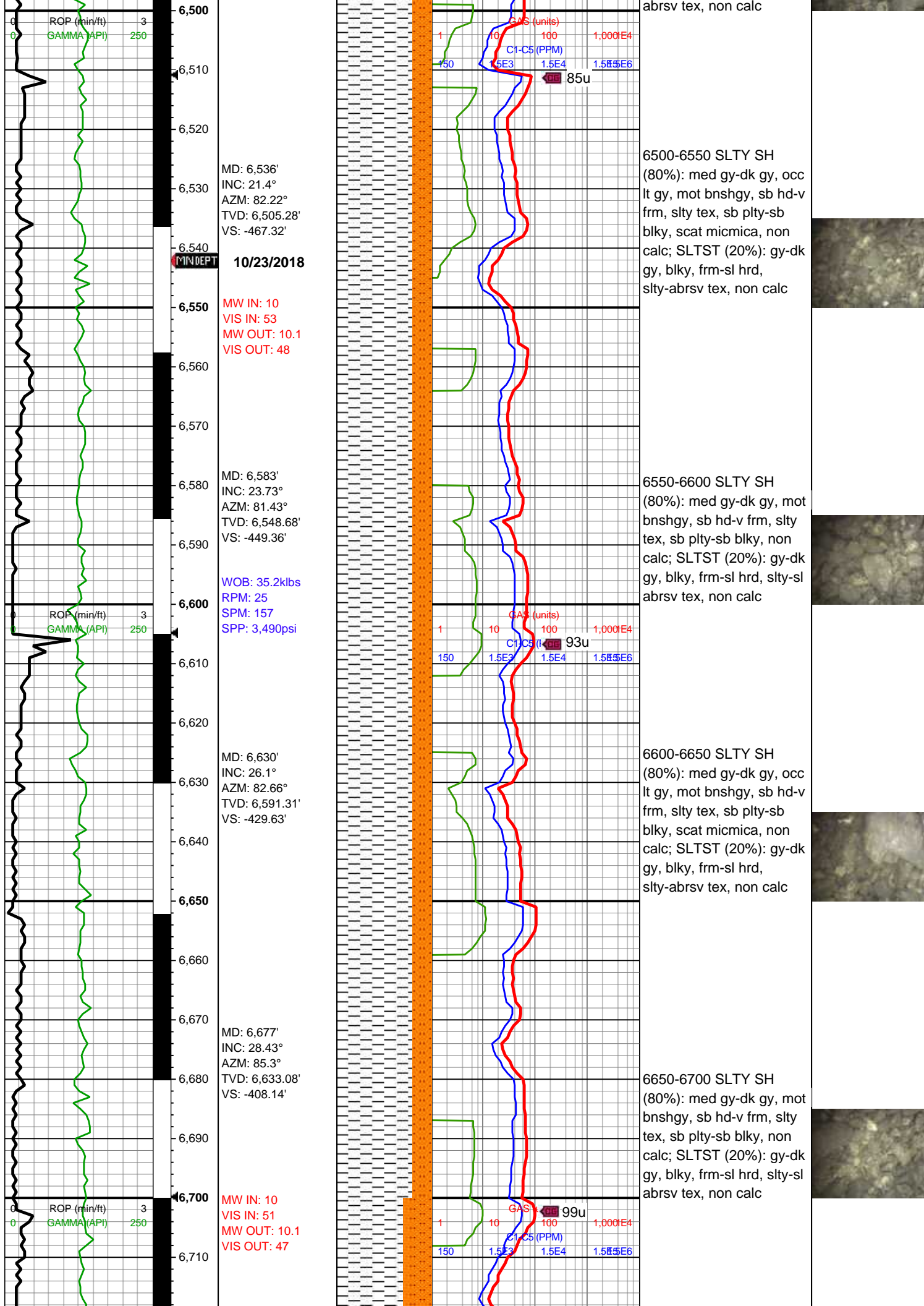
Sorting

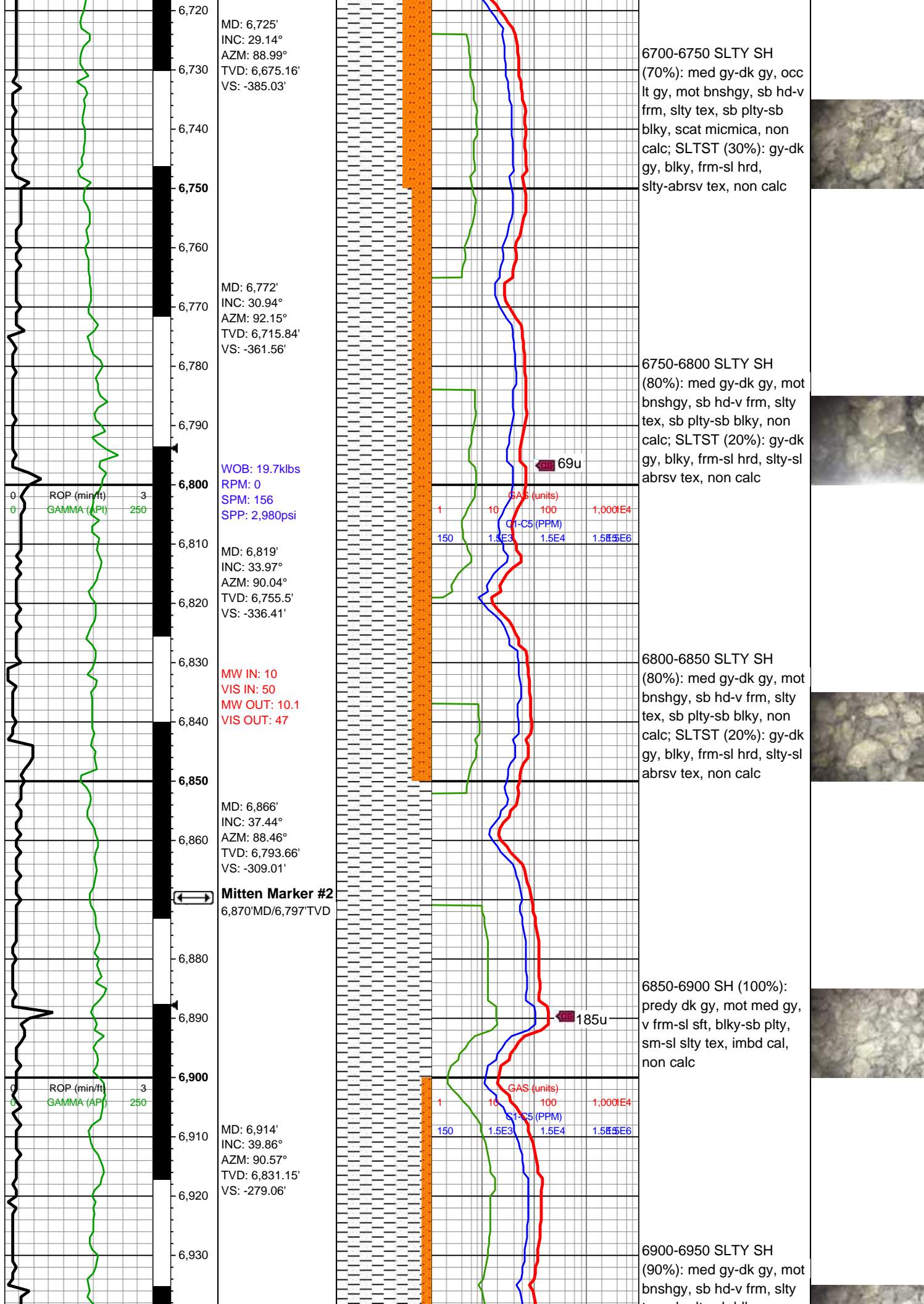
M MODERATE

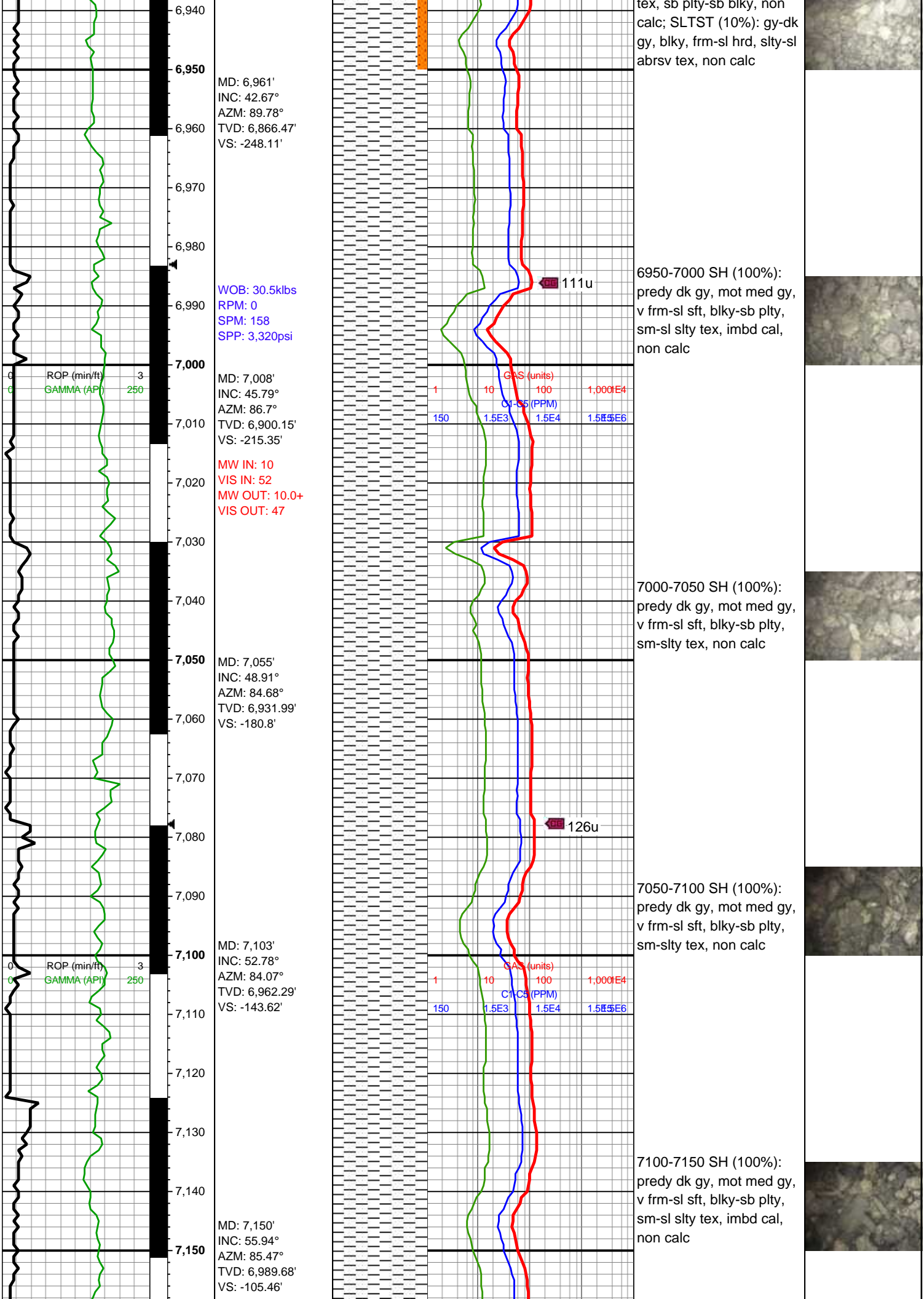
P POOR

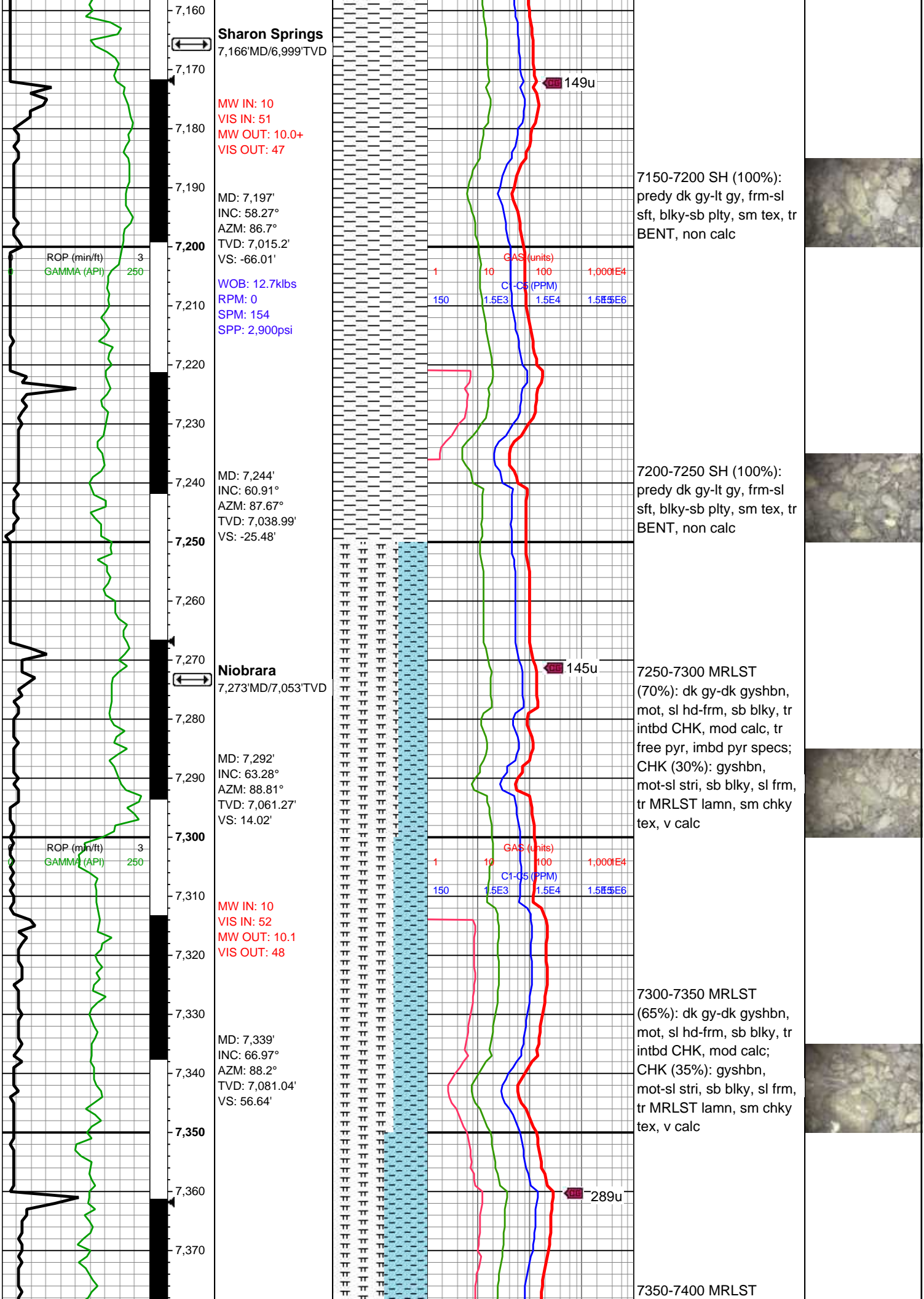
W WELL

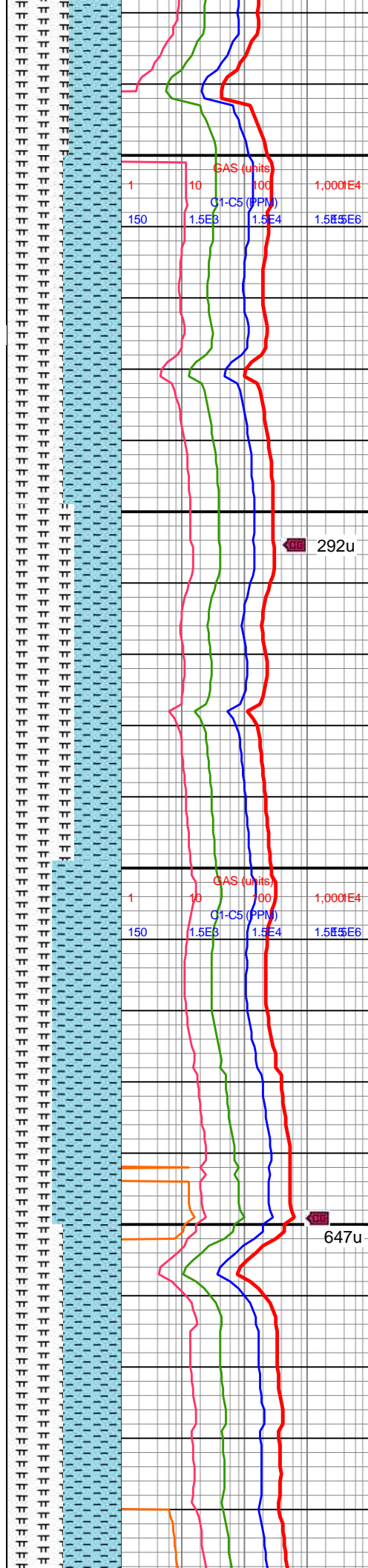
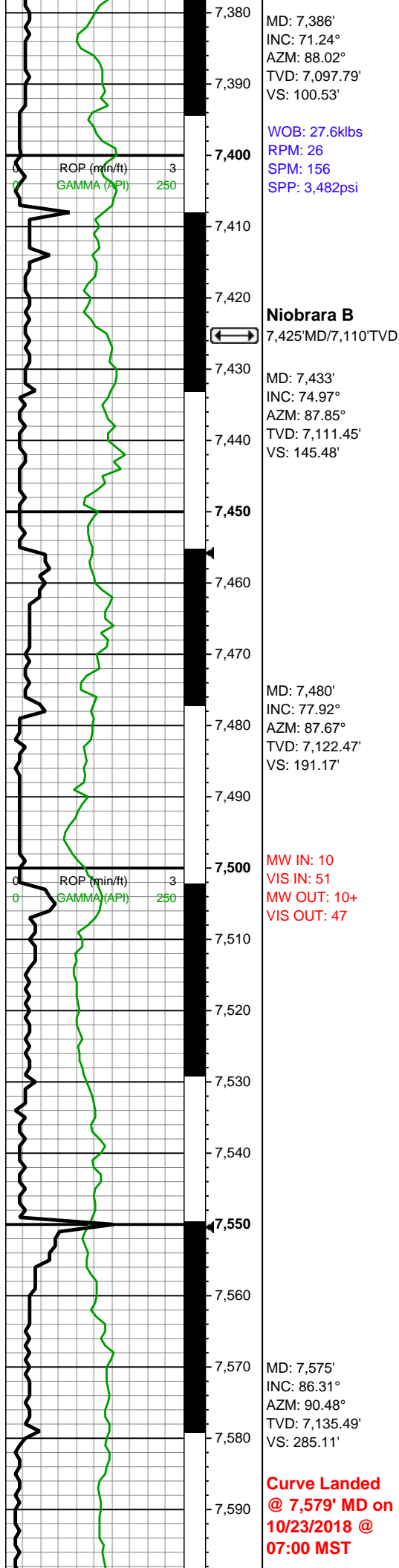












(55%): dk gy-dk gyshbn, mot, sl hd-frm, sb blk, tr intbd CHK, mod calc; CHK (45%): gyshbn, mot-sl stri, sb blk, sl frm, tr MRLST lamn, sm chky tex, v calc

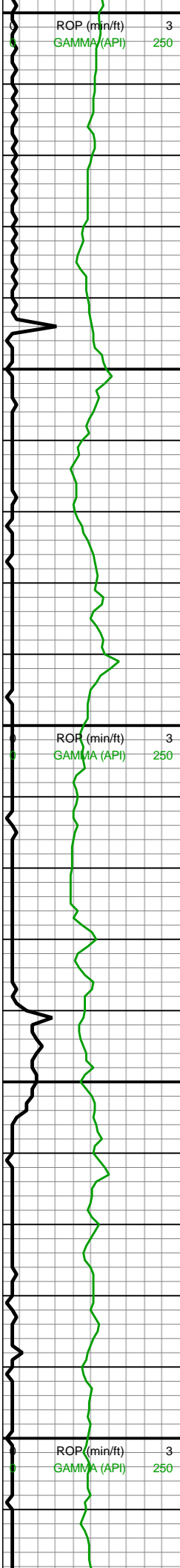
7400-7450 MRLST (50%): dk gy-dk gyshbn, mot, sl hd-frm, sb blk, tr intbd CHK, mod calc, rr free pyr; CHK (50%): gyshbn, mot-sl stri, sb blk, sl frm, tr MRLST lamn, sm chky tex, v calc

7450-7500 MRLST (60%): dk gy-dk gyshbn, mot, sl hd-frm, sb blk, tr intbd CHK, mod calc; CHK (40%): gyshbn, mot-sl stri, sb blk, sl frm, tr MRLST lamn, sm chky tex, v calc

7500-7550 CHK (60%): gyshbn, mot-sl stri, sb blk, sl frm, tr MRLST lamn, sm chky tex, v calc; MRLST (40%): dk gy-dk gyshbn, mot, sl hd-frm, sb blk, tr intbd CHK, mod calc, tr free pyr

7550-7600 CHK (50%): gyshbn, mot-sl stri, sb blk, sl frm, tr MRLST lamn, sm chky tex, v calc; MRLST (50%): dk gy-dk gyshbn, mot, sl hd-frm, sb blk, tr intbd CHK, mod calc, tr free pyr





7,600
7,610
7,620
7,630
7,640
7,650
7,660
7,670
7,680
7,690
7,700
7,710
7,720
7,730
7,740
7,750
7,760
7,770
7,780
7,790
7,800
7,810

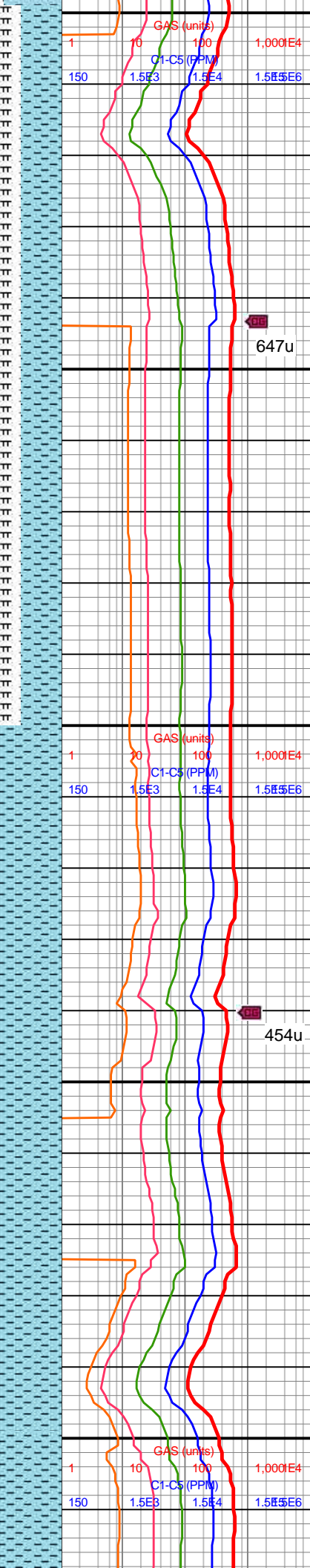
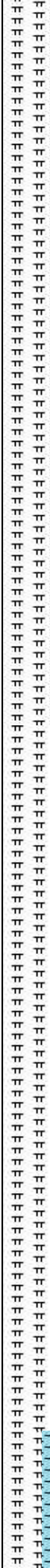
WOB: 37.5klbs
RPM: 26
SPM: 187
SPP: 4,502psi

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

MD: 7,670'
INC: 86.48°
AZM: 90.66°
TVD: 7,141.46'
VS: 379.74'

MD: 7,764'
INC: 86.97°
AZM: 87.85°
TVD: 7,146.83'
VS: 473.5'

WOB: 37.8klbs
RPM: 60
SPM: 184
SPP: 4,431psi

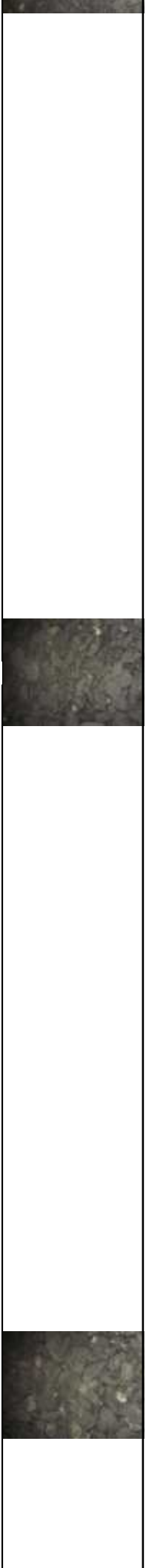


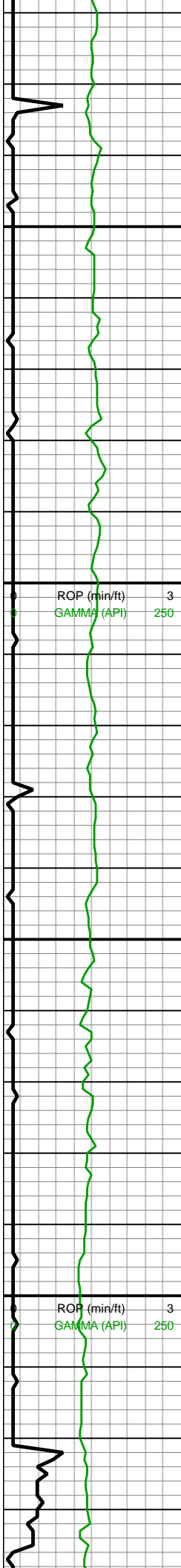
647u

454u

7600-7700 MRLST
(65%): dk gy-dk gyshbn,
mot, sl hd-frm, sb blk, tr
intbd CHK, mod calc;
CHK (35%): gyshbn,
mot-sl stri, sb blk, sl frm,
tr MRLST lamn, sm chky
tex, v calc

7700-7800 CHK (55%):
gyshbn, mot-sl stri, sb
blk, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (45%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blk, tr intbd CHK,
mod calc





7,820
7,830
7,840
7,850
7,860
7,870
7,880
7,890
7,900
7,910
7,920
7,930
7,940
7,950
7,960
7,970
7,980
7,990
8,000
8,010
8,020
8,030

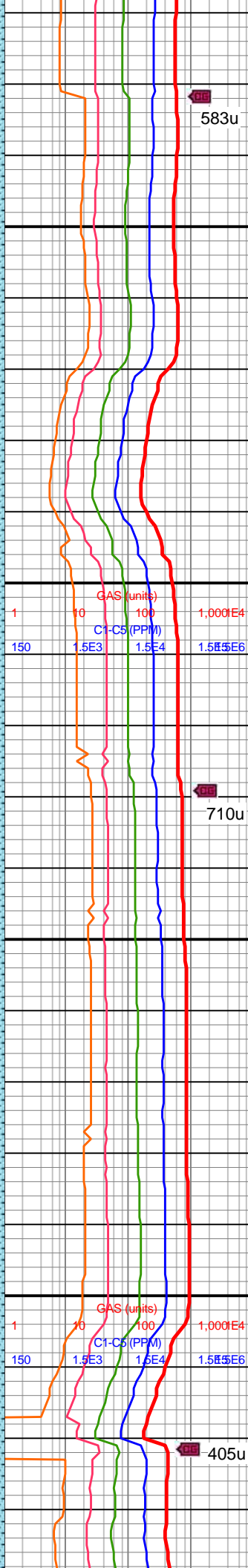
MD: 7,859'
INC: 88.02°
AZM: 86.53°
TVD: 7,150.99'
VS: 568.41'

MW IN: 10
VIS IN: 48
MW OUT: 10+
VIS OUT: 47

MD: 7,953'
INC: 87.23°
AZM: 85.74°
TVD: 7,154.88'
VS: 662.32'

WOB: 35.9klbs
RPM: 60
SPM: 186
SPP: 4,488psi

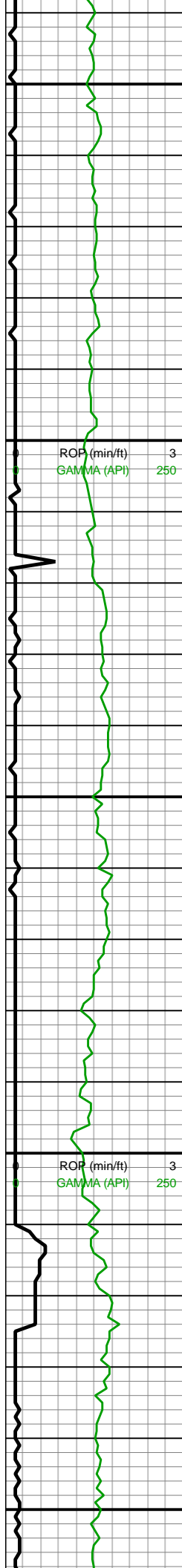
MW IN: 10
VIS IN: 48
MW OUT: 10+
VIS OUT: 46



7800-7900 CHK (65%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (35%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc, tr free pyr

7900-8000 CHK (85%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (15%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc, tr free pyr





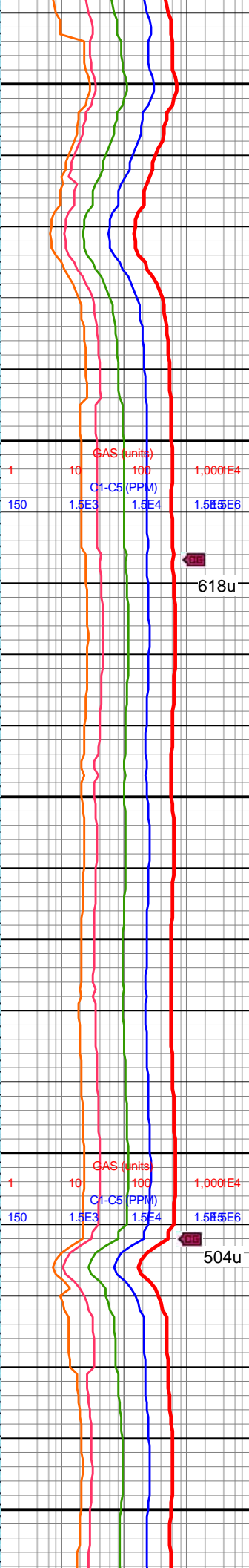
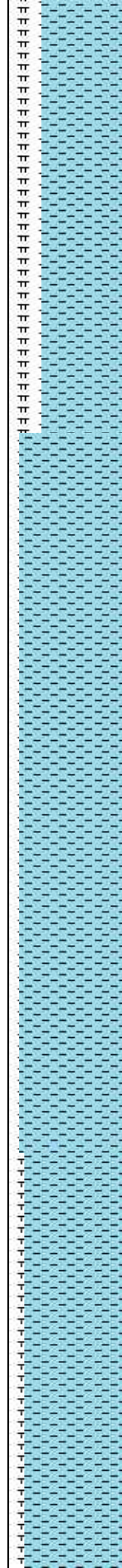
8,040
8,050
8,060
8,070
8,080
8,090
8,100
8,110
8,120
8,130
8,140
8,150
8,160
8,170
8,180
8,190
8,200
8,210
8,220
8,230
8,240
8,250

MD: 8,048'
INC: 87.54°
AZM: 87.67°
TVD: 7,159.22'
VS: 757.21'

MD: 8,142'
INC: 87.01°
AZM: 87.14°
TVD: 7,163.68'
VS: 851.1'

WOB: 36.4kbs
RPM: 60
SPM: 187
SPP: 4,591psi

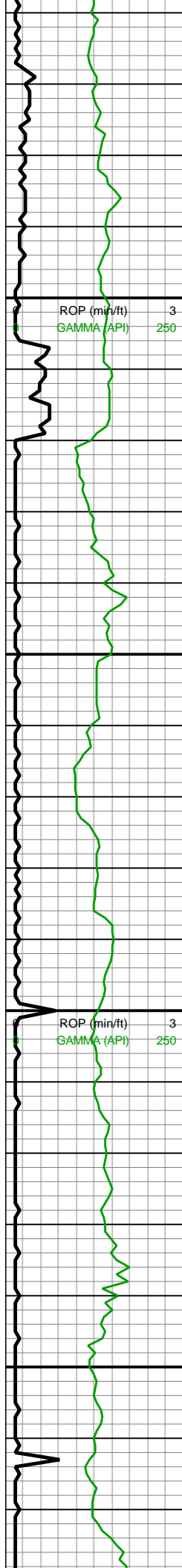
MD: 8,237'
INC: 88.33°
AZM: 88.64°
TVD: 7,167.55'
VS: 946.01'



8000-8100 CHK (70%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (30%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc

8100-8200 CHK (90%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (10%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc



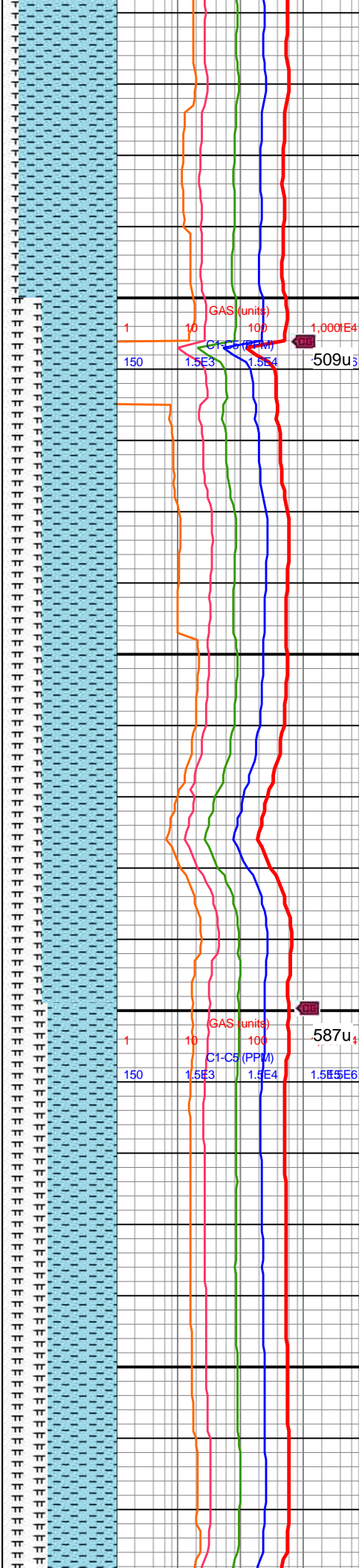


MW IN: 10
VIS IN: 48
MW OUT: 10+
VIS OUT: 45

MD: 8,331'
INC: 89.34°
AZM: 90.13°
TVD: 7,169.46'
VS: 1,039.9'

WOB: 36.9klbs
RPM: 60
SPM: 184
SPP: 4,433psi

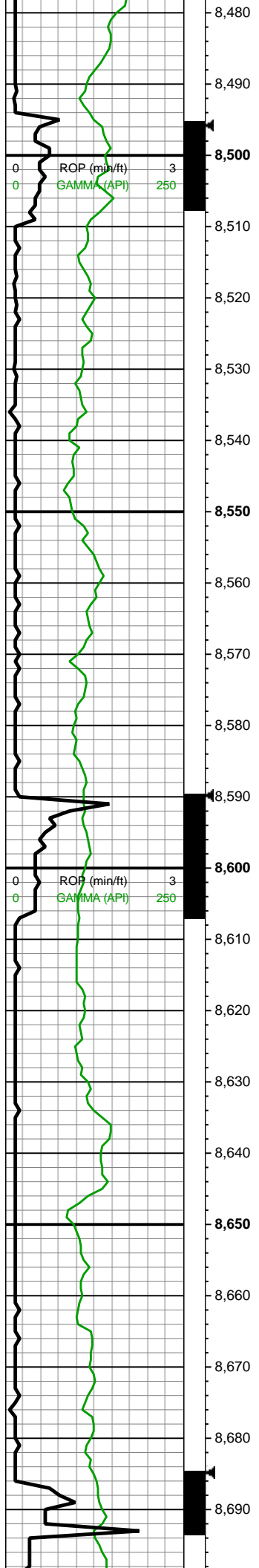
MD: 8,426'
INC: 88.55°
AZM: 89.96°
TVD: 7,171.21'
VS: 1,134.75'



8200-8300 CHK (85%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (15%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc, tr free pyr

8300-8400 CHK (75%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (25%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc, tr free pyr

8400-8500 CHK (60%):



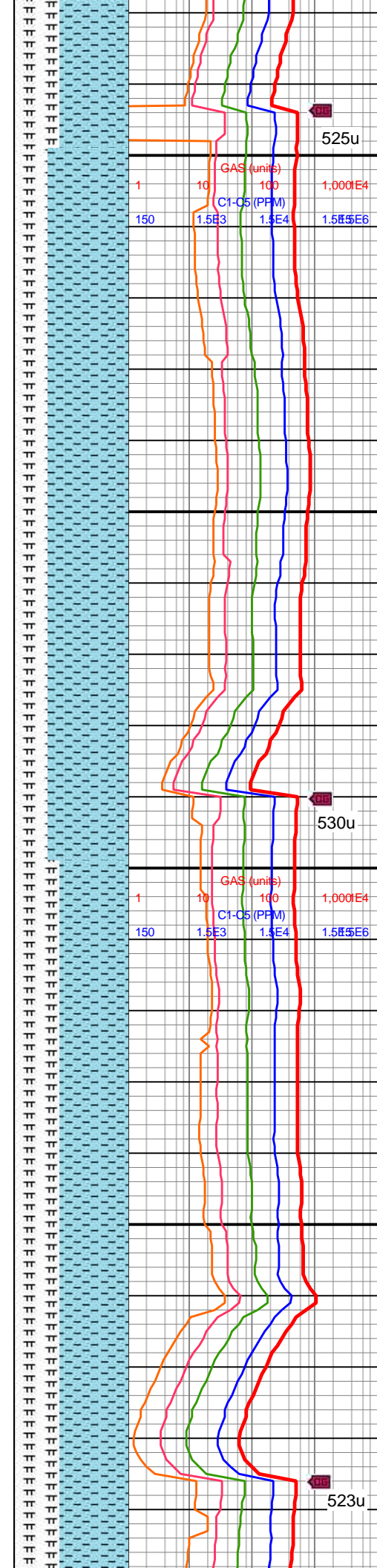
MD: 8,521'
INC: 89.78°
AZM: 90.13°
TVD: 7,172.59'
VS: 1,229.61'

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

WOB: 40klbs
RPM: 0
SPM: 186
SPP: 4,242psi

MD: 8,615'
INC: 91.98°
AZM: 90.48°
TVD: 7,171.15'
VS: 1,323.43'

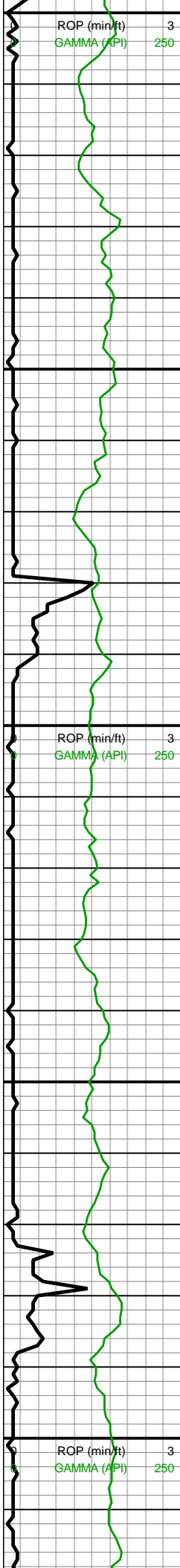
MW IN: 10
VIS IN: 47
MW OUT: 10+
VIS OUT: 46



gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (40%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc

8500-8600 CHK (70%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (30%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc

8600-8700 CHK (60%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (40%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,



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
8,850
8,860
8,870
8,880
8,890
8,900
8,910

VIS OUT: 43

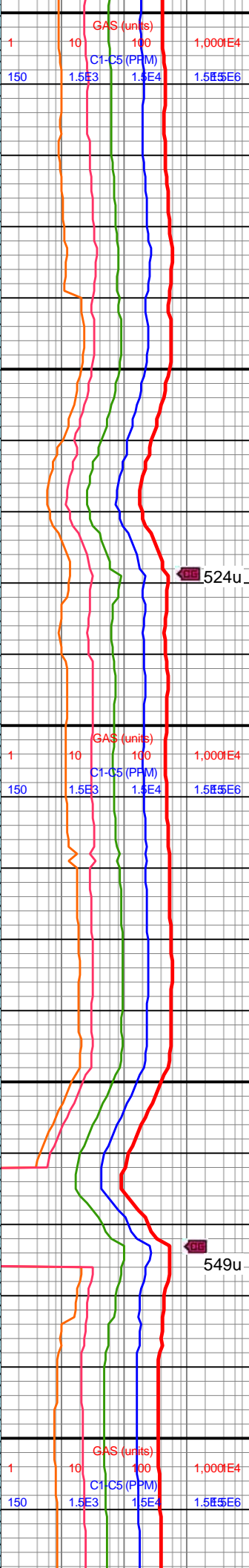
MD: 8,710'
INC: 94.57°
AZM: 88.99°
TVD: 7,165.72'
VS: 1,418.16'

WOB: 31.6klbs
RPM: 60
SPM: 186
SPP: 4,622psi

MD: 8,804'
INC: 94.44°
AZM: 87.58°
TVD: 7,158.34'
VS: 1,511.84'

MW IN: 10
VIS IN: 46
MW OUT: 10+
VIS OUT: 43

MD: 8,898'
INC: 93.52°
AZM: 86.53°
TVD: 7,151.81'
VS: 1,605.61'

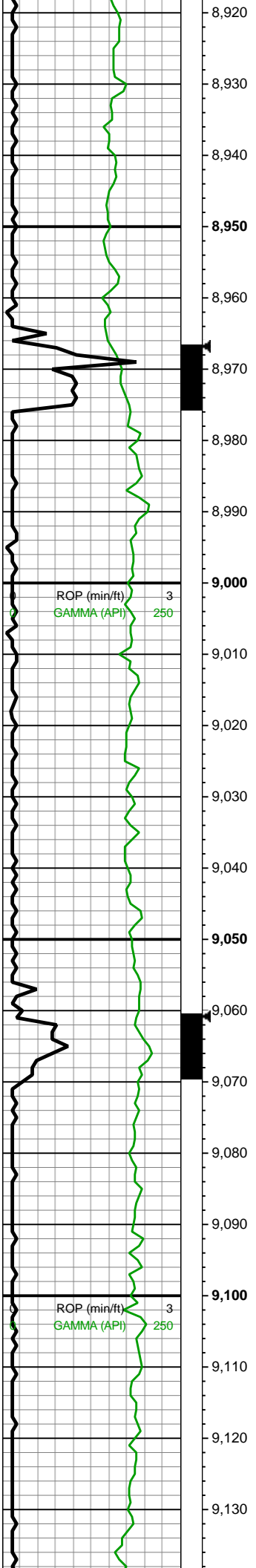


mod calc

8700-8800 CHK (80%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (20%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc

8800-8900 CHK (60%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (40%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc



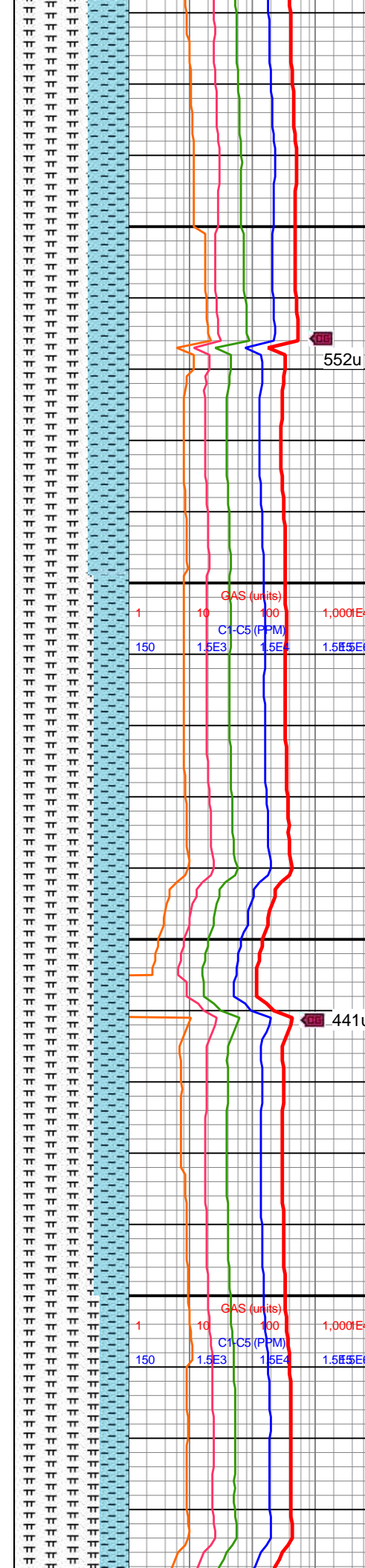


MD: 8,992'
INC: 93.52°
AZM: 87.94°
TVD: 7,146.04'
VS: 1,699.43'

WOB: 31.7klbs
RPM: 60
SPM: 187
SPP: 4,612psi

MW IN: 10
VIS IN: 45
MW OUT: 10
VIS OUT: 43

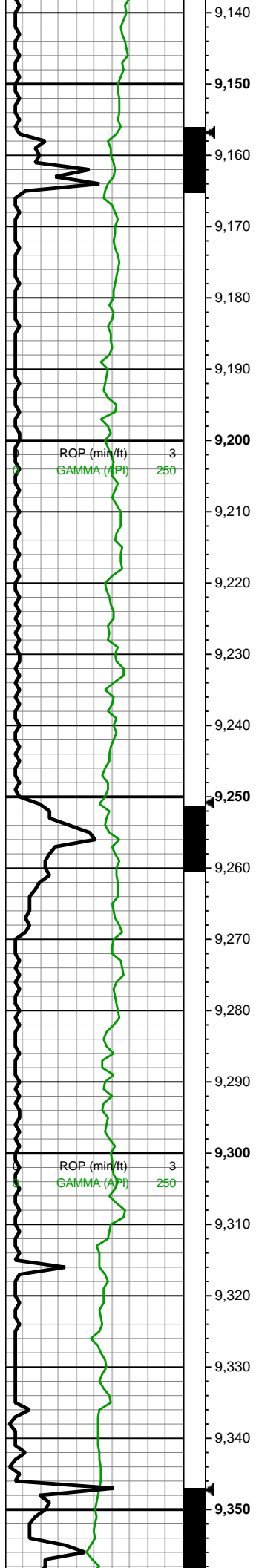
MD: 9,087'
INC: 91.71°
AZM: 87.85°
TVD: 7,141.71'
VS: 1,794.32'



8900-9000 MRLST
(65%): dk gy-dk gyshbn,
mot, sl hd-frm, sb blk, tr
intbd CHK, mod calc;
CHK (35%): gyshbn-lt gy,
mot-sl stri, sb blk, sl frm,
tr MRLST lamn, sm chky
tex, v calc

9000-9100 MRLST
(70%): dk gy-dk gyshbn,
mot, sl hd-frm, sb blk, tr
intbd CHK, mod calc;
CHK (30%): gyshbn-lt gy,
mot-sl stri, sb blk, sl frm,
tr MRLST lamn, sm chky
tex, v calc



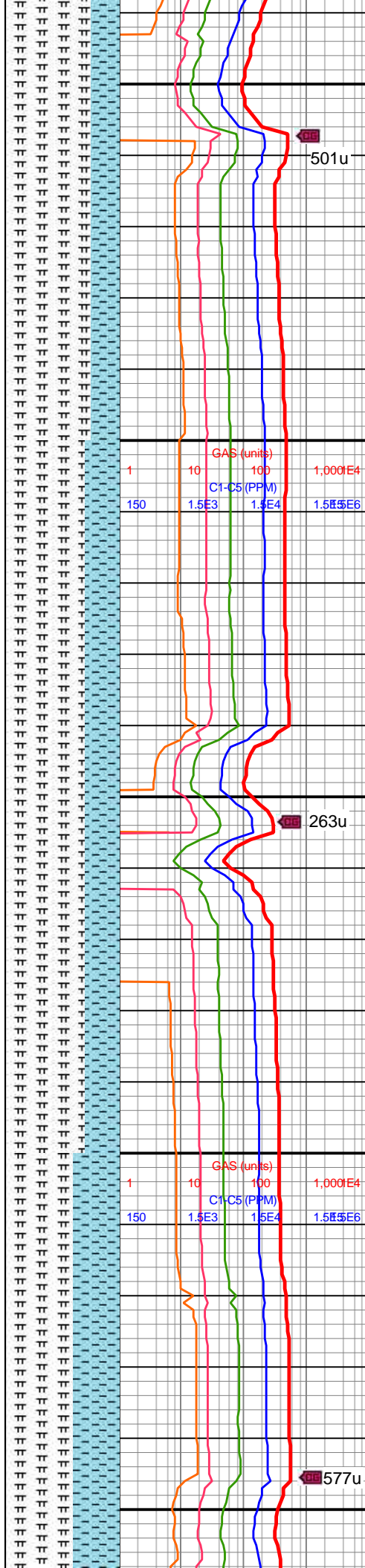


MD: 9,181'
INC: 91.41°
AZM: 87.41°
TVD: 7,139.15'
VS: 1,888.28'

WOB: 35.3klbs
RPM: 60
SPM: 188
SPP: 4,668psi

MD: 9,276'
INC: 91.85°
AZM: 88.99°
TVD: 7,136.45'
VS: 1,983.21'

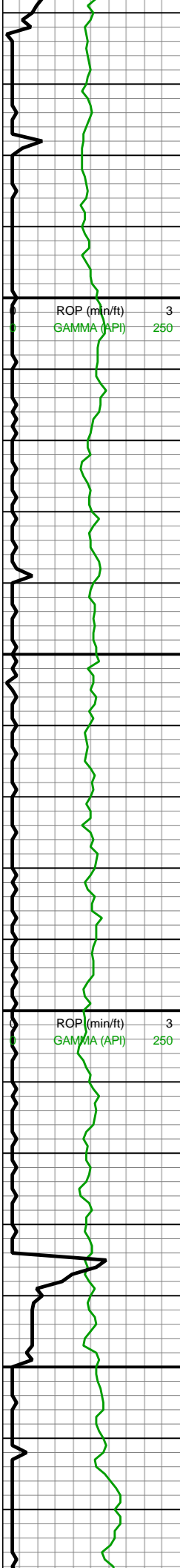
MW IN: 10
VIS IN: 45
MW OUT: 10
VIS OUT: 42



9100-9200 MRLST
(75%): dk gy-dk gyshbn,
mot, sl hd-frm, sb blk, tr
intbd CHK, mod calc, tr
free pyr; CHK (25%):
gyshbn-sme dk gy,
mot-sl stri, sb blk, sl frm,
tr MRLST lamn, sm chky
tex, v calc

9200-9300 MRLST
(70%): dk gy-dk gyshbn,
mot, sl hd-frm, sb blk, tr
intbd CHK, mod calc, tr
free pyr; CHK (30%):
gyshbn-sme dk gy,
mot-sl stri, sb blk, sl frm,
tr MRLST lamn, sm chky
tex, v calc





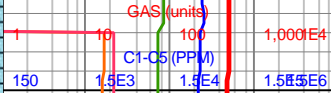
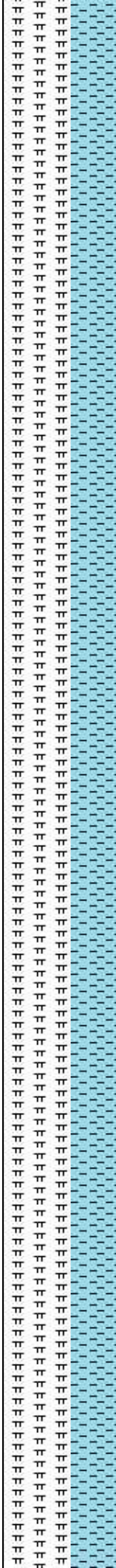
MD: 9,371'
INC: 91.54°
AZM: 89.78°
TVD: 7,133.64'
VS: 2,078.09'

WOB: 33.6klbs
RPM: 60
SPM: 186
SPP: 4,714psi

MD: 9,466'
INC: 91.41°
AZM: 89.08°
TVD: 7,131.37'
VS: 2,175.88'

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

MD: 9,560'
INC: 93.34°
AZM: 89.61°
TVD: 7,127.48'
VS: 2,269.72'

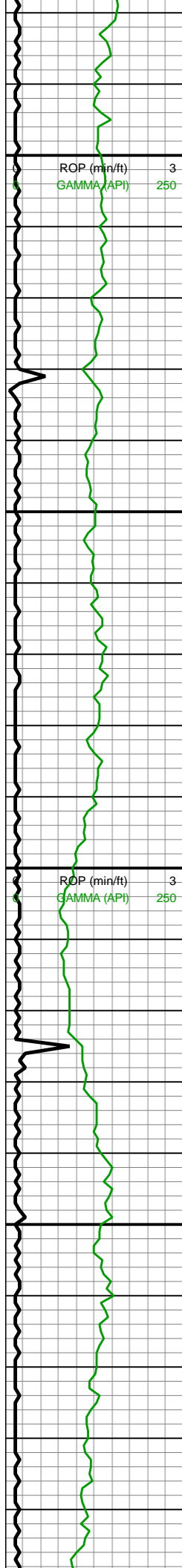


9300-9400 MRLST
(60%): dk gy-dk gyshbn,
mot, sl hd-frn, sb blk, tr
intbd CHK, mod calc, tr
free pyr; CHK (40%):
gyshbn-sme dk gy,
mot-sl stri, sb blk, sl frm,
tr MRLST lamn, sm chky
tex, v calc

9400-9500 MRLST
(60%): dk gy-dk gyshbn,
mot, sl hd-frn, sb blk, tr
intbd CHK, mod calc, tr
free pyr; CHK (40%):
gyshbn-sme dk gy,
mot-sl stri, sb blk, sl frm,
tr MRLST lamn, sm chky
tex, v calc

9500-9600 MRLST
(60%): dk gy-dk gyshbn,





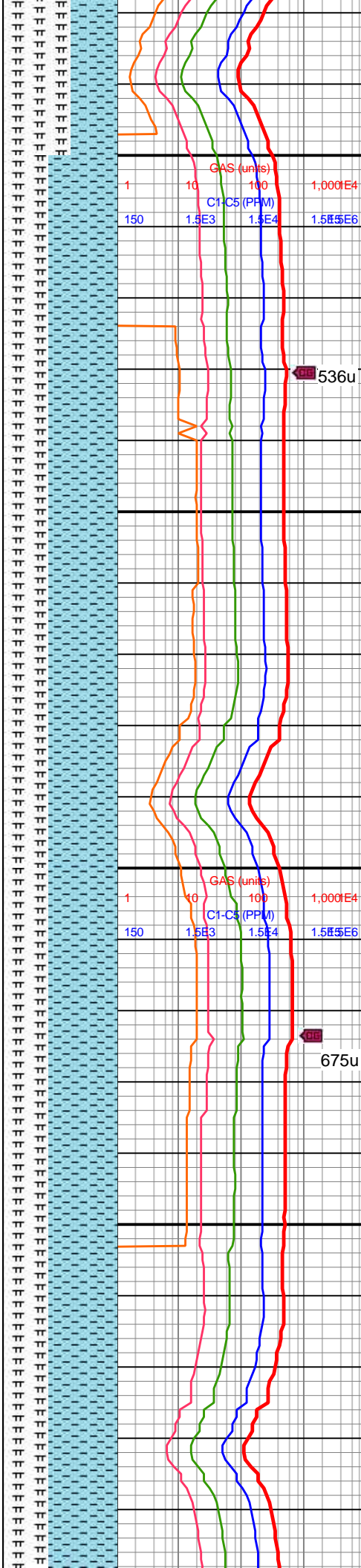
WOB: 33.7klbs
RPM: 60
SPM: 88
SPP: 4,730psi

MD: 9,654'
INC: 93.3°
AZM: 88.99°
TVD: 7,122.04'
VS: 2,363.48'

MW IN: 10
VIS IN: 46
MW OUT: 10.1
VIS OUT: 43

MD: 9,749'
INC: 93.08°
AZM: 88.37°
TVD: 7,116.75'
VS: 2,458.29'

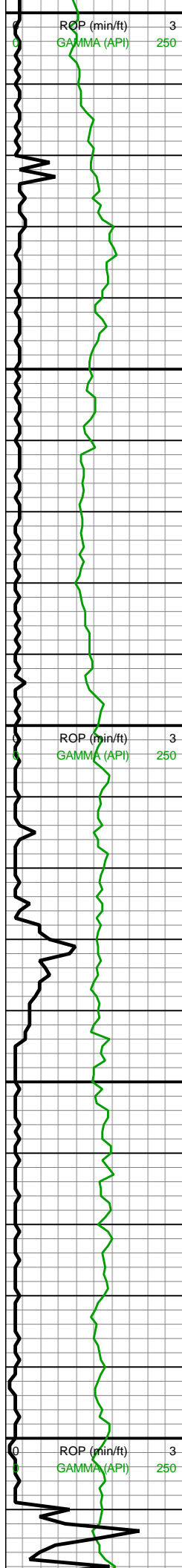
WOB: 37.6klbs



mot, sl hd frm, sb blk, tr
intbd CHK, mod calc, tr
free pyr; CHK (40%):
gyshbn-sm dk gy,
mot-sl stri, sb blk, sl frm,
tr MRLST lamn, sm chky
tex, v calc

9600-9700 CHK (60%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (40%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc

9700-9800 CHK (60%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (40%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc



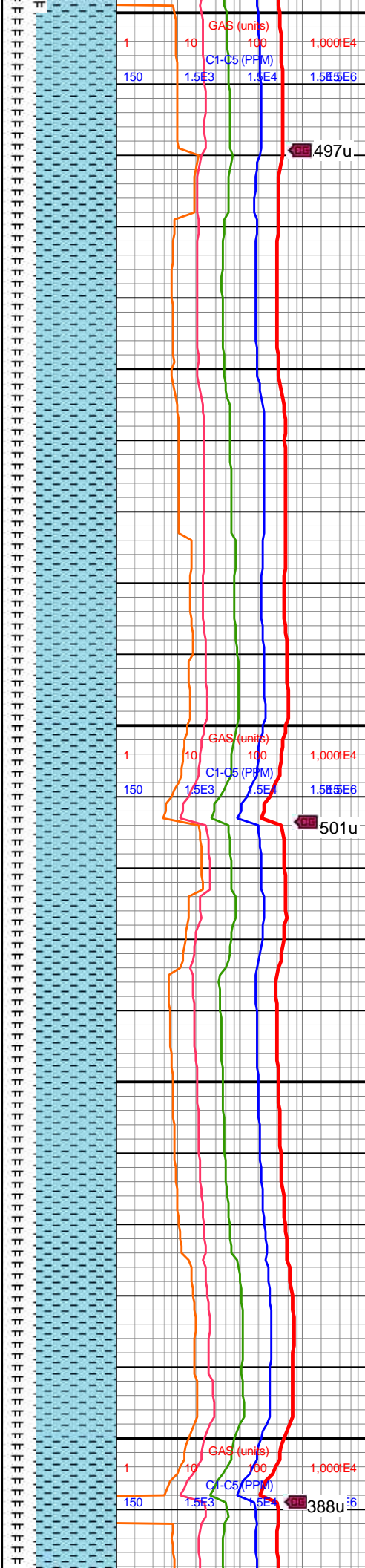
RPM: 60
SPM: 188
SPP: 4,680psi

MD: 9,843'
INC: 93.03°
AZM: 87.67°
TVD: 7,111.74'
VS: 2,552.15'

MW IN: 10.1+
VIS IN: 47
MW OUT: 10.1+
VIS OUT: 44

MD: 9,938'
INC: 92.59°
AZM: 88.64°
TVD: 7,107.08'
VS: 2,647.01'

WOB: 33.8klbs
RPM: 60
SPM: 187
SPP: 4,855psi

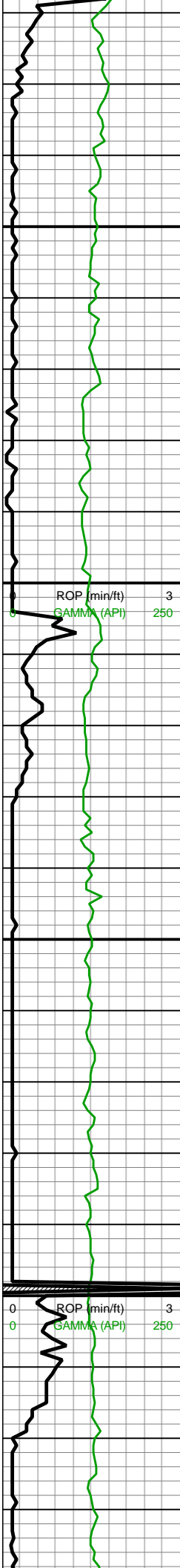


mod calc

9800-9900 CHK (70%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (30%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc

9900-10000 CHK (70%):
gyshbn, mot-sl stri, sb
blky, sl frm, tr MRLST
lamn, sm chky tex, v calc;
MRLST (30%): dk gy-dk
gyshbn, mot, sl hd-frm,
sb blky, tr intbd CHK,
mod calc





MD: 10,032'
INC: 92.2°
AZM: 90.4°
TVD: 7,103.15'
VS: 2,740.83'

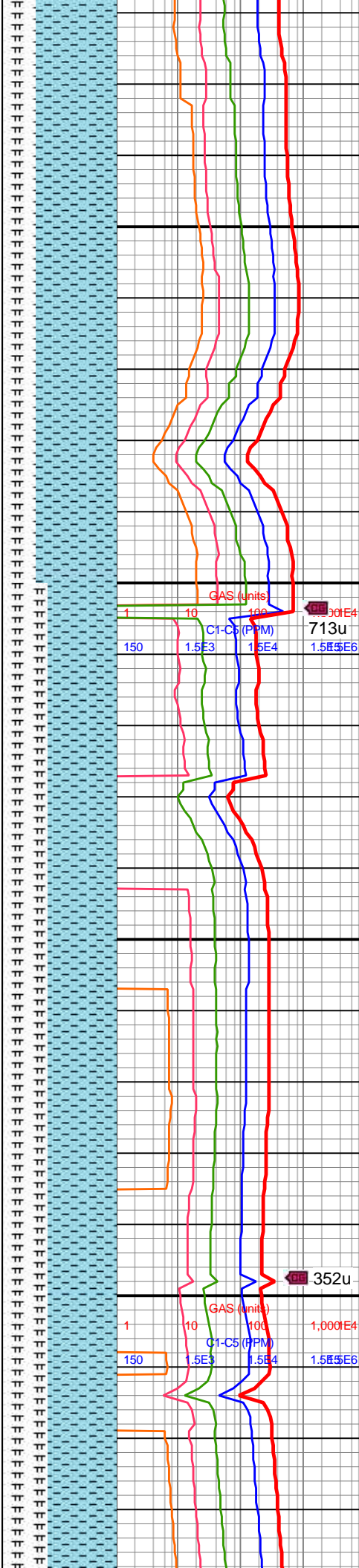
MW IN: 10.1+
VIS IN: 46
MW OUT: 10.2
VIS OUT: 44

MD: 10,126'
INC: 91.63°
AZM: 91.1°
TVD: 7,100.01'
VS: 2,834.58'

WOB: 10.3klbs
RPM: 0
SPM: 187
SPP: 4,375psi

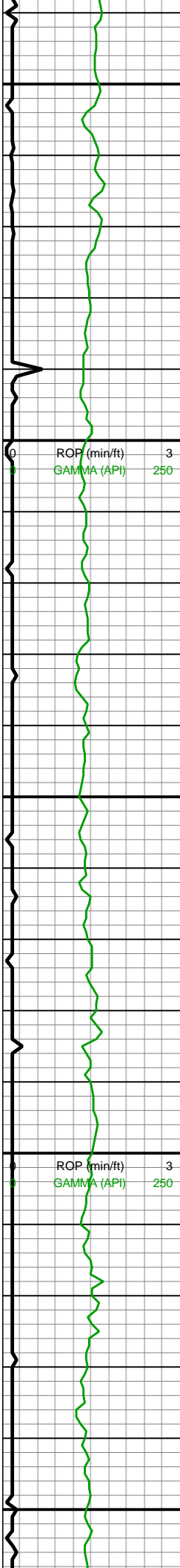
MD: 10,221'
INC: 90.44°
AZM: 92.33°
TVD: 7,098.3'
VS: 2,929.24'

MW IN: 10.2
VIS IN: 49
MW OUT: 10.2
VIS OUT: 44



10000-10100 CHK
(70%): gyshbn, mot-sl
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc; MRLST (30%):
dk gy-dk gyshbn, mot, sl
hd-frm, sb blk, tr intbd
CHK, mod calc

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

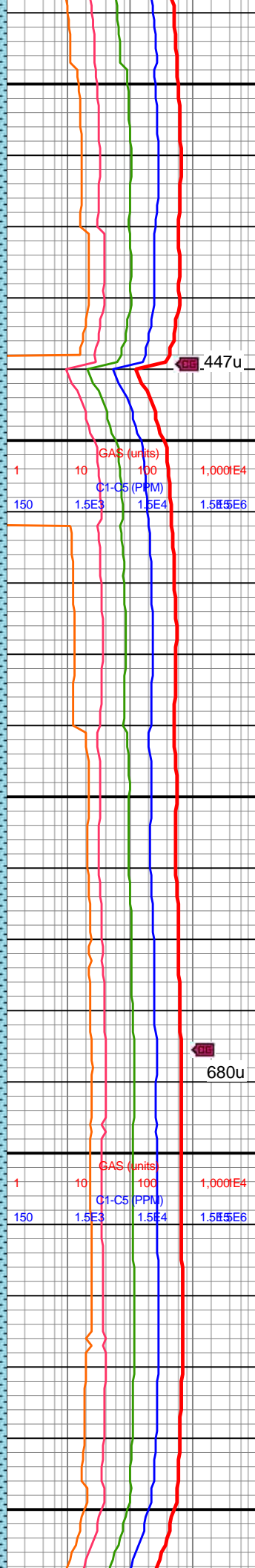
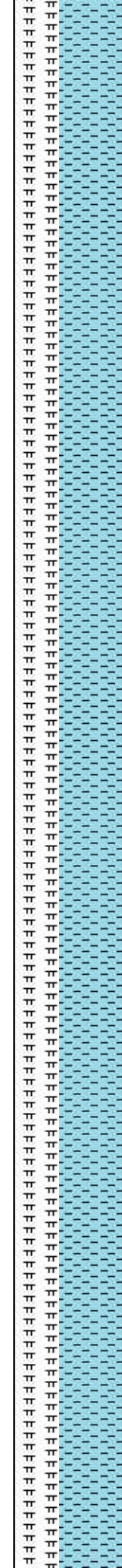


10,240
10,250
10,260
10,270
10,280
10,290
10,300
10,310
10,320
10,330
10,340
10,350
10,360
10,370
10,380
10,390
10,400
10,410
10,420
10,430
10,440
10,450

MD: 10,314'
INC: 90.97°
AZM: 92.15°
TVD: 7,097.15'
VS: 3,021.84'

WOB: 33.4klbs
RPM: 60
SPM: 186
SPP: 4,975psi

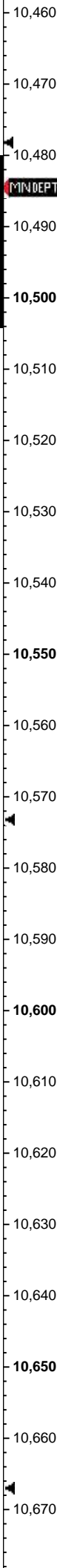
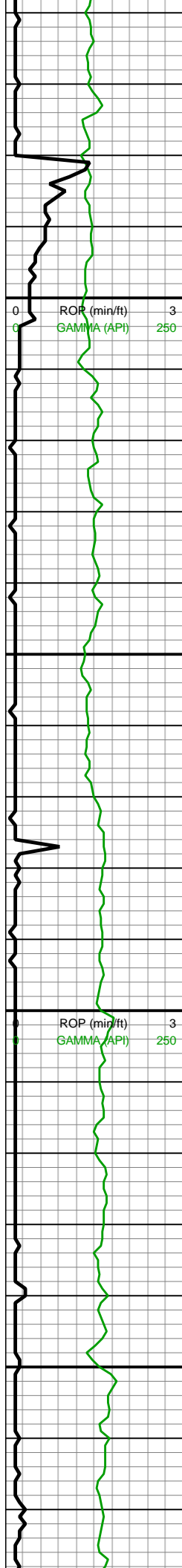
MD: 10,409'
INC: 91.93°
AZM: 91.28°
TVD: 7,094.75'
VS: 3,116.49'



10200-10300 CHK
(60%): gyshbn, mot-sl
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc; MRLST (40%):
dk gy-dk gyshbn, mot, sl
hd-frm, sb blk, tr intbd
CHK, mod calc

10300-10400 CHK
(60%): gyshbn, mot-sl
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc; MRLST (40%):
dk gy-dk gyshbn, mot, sl
hd-frm, sb blk, tr intbd
CHK, mod calc



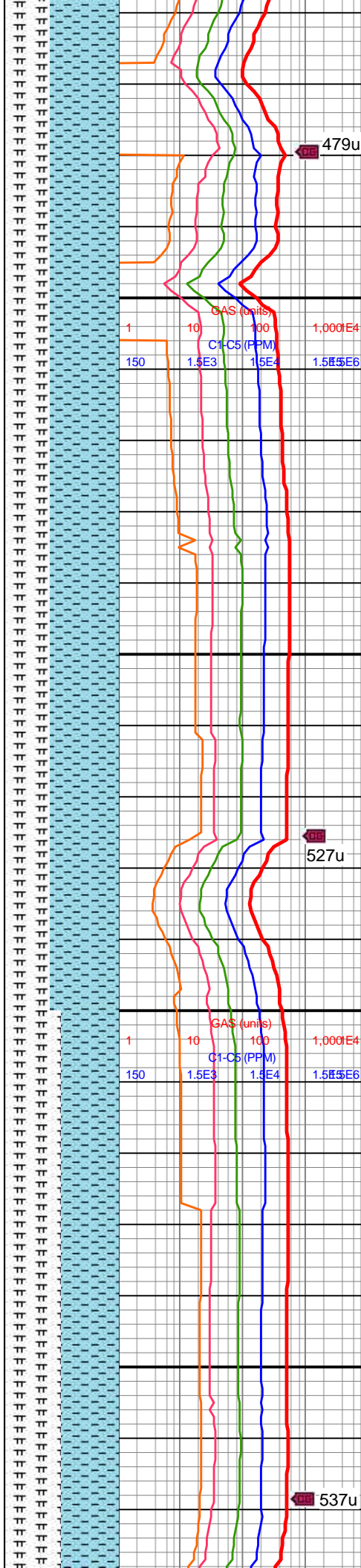


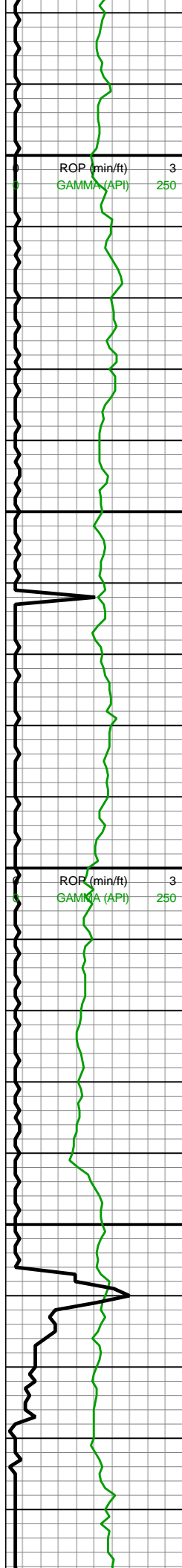
10/24/2018

MD: 10,504'
INC: 89.21°
AZM: 91.98°
TVD: 7,093.8'
VS: 3,211.16'

MD: 10,598'
INC: 88.81°
AZM: 91.54°
TVD: 7,095.43'
VS: 3,304.83'

WOB: 35.9klbs
RPM: 60
SPM: 187
SPP: 5,100psi





10,680
10,690
10,700
10,710
10,720
10,730
10,740
10,750
10,760
10,770
10,780
10,790
10,800
10,810
10,820
10,830
10,840
10,850
10,860
10,870
10,880
10,890

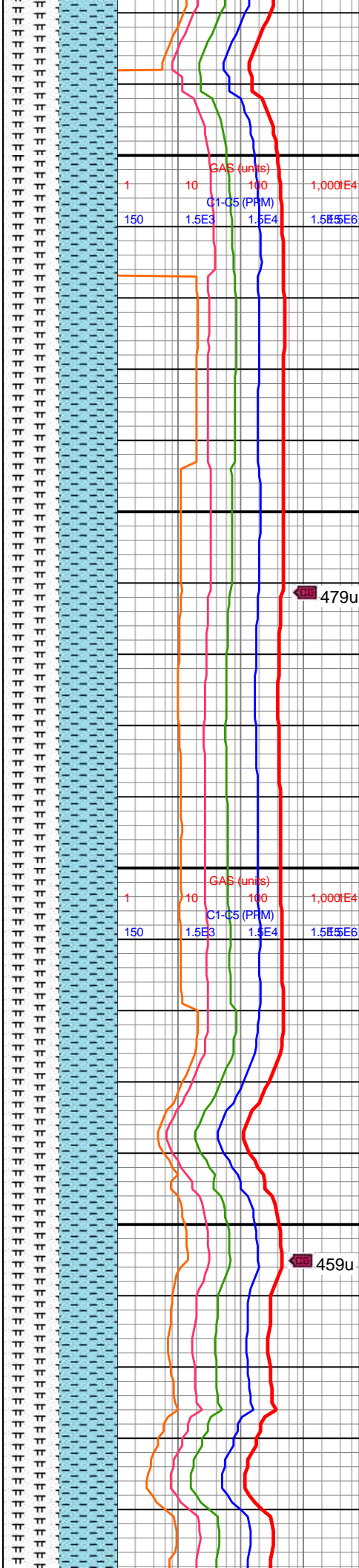
MD: 10,693'
INC: 88.46°
AZM: 91.1°
TVD: 7,097.69'
VS: 3,399.53'

MW IN: 10.2
VIS IN: 47
MW OUT: 10.2+
VIS OUT: 44

MD: 10,787'
INC: 87.85°
AZM: 91.01°
TVD: 7,100.72'
VS: 3,493.24'

WOB: 34klbs
RPM: 60
SPM: 188
SPP: 5,160psi

MD: 10,881'
INC: 89.03°
AZM: 90.22°
TVD: 7,103.28'
VS: 3,587.02'

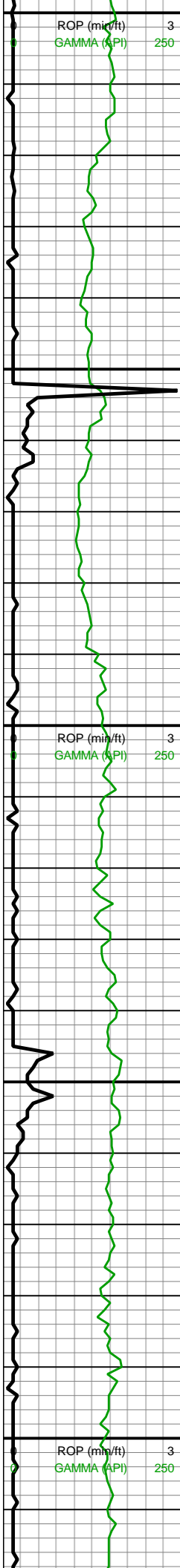


(50%): gyshbn, mot-si
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc; MRLST (50%):
dk gy-dk gyshbn, mot,
hd-frm, sb blk, tr intbd
CHK, mod calc

10700-10800 CHK
(50%): gyshbn, mot-si
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc; MRLST (50%):
dk gy-dk gyshbn, mot,
hd-frm, sb blk, tr intbd
CHK, mod calc

10800-10900 CHK
(50%): gyshbn, mot-si
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc; MRLST (50%):
dk gy-dk gyshbn, mot,
hd-frm, sb blk, tr intbd
CHK, mod calc



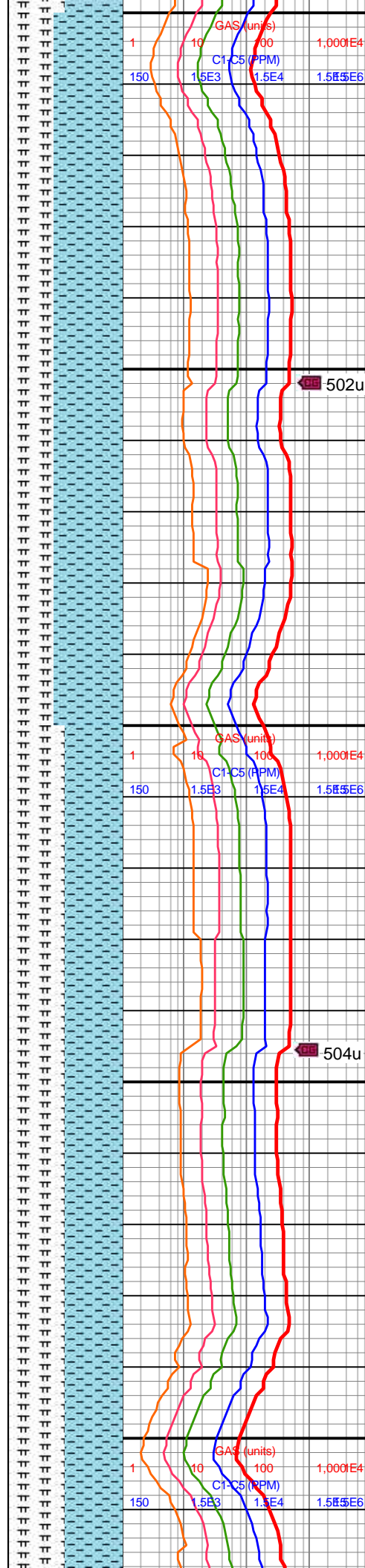


MW IN: 10.2
VIS IN: 47
MW OUT: 10.2+
VIS OUT: 44

MD: 10,976'
INC: 90.44°
AZM: 90.13°
TVD: 7,103.72'
VS: 3,681.87'

WOB: 36.1klbs
RPM: 60
SPM: 188
SPP: 5,140psi

MD: 11,071'
INC: 90.35°
AZM: 89.78°
TVD: 7,103.06'
VS: 3,776.74'

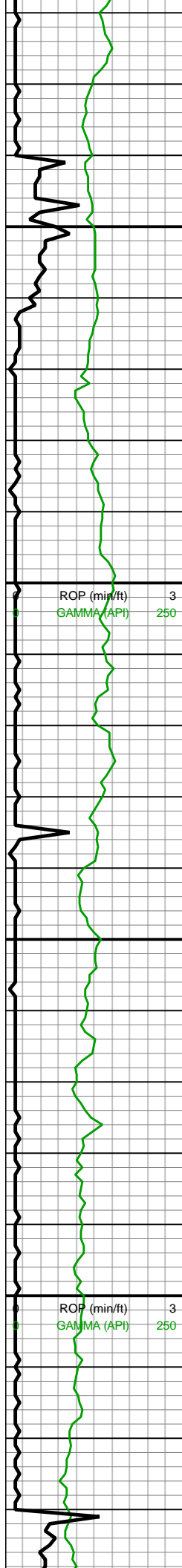


CHK, mod calc

10900-11000 CHK
(60%): gyshbn, mot-sl
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc; MRLST (40%):
dk gy-dk gyshbn, mot, sl
hd-frm, sb blk, tr intbd
CHK, mod calc

11000-11100 CHK
(50%): gyshbn, mot-sl
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc; MRLST (50%):
dk gy-dk gyshbn, mot,
hd-frm, sb blk, tr intbd
CHK, mod calc





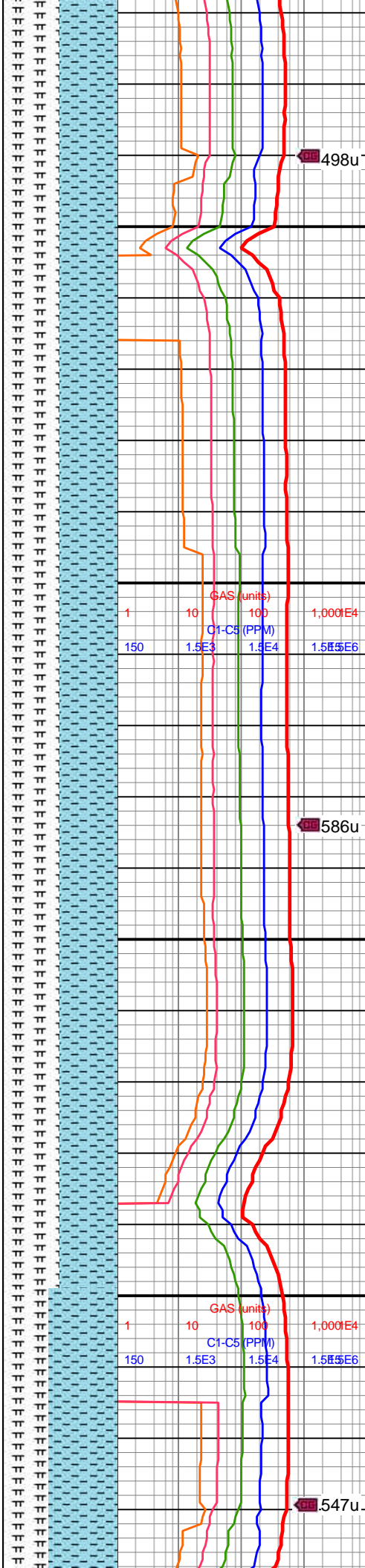
MW IN: 10.2+
VIS IN: 46
MW OUT: 10.2+
VIS OUT: 44

MD: 11,165'
INC: 90.84°
AZM: 89.34°
TVD: 7,102.08'
VS: 3,870.64'

WOB: 36.3klbs
RPM: 60
SPM: 183
SPP: 5,000psi

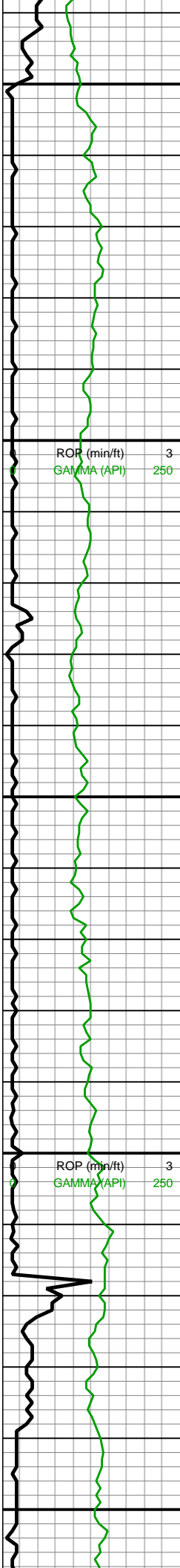
MD: 11,260'
INC: 90.4°
AZM: 88.9°
TVD: 7,101.06'
VS: 3,965.57'

MW IN: 10.3
VIS IN: 47
MW OUT: 10.3
VIS OUT: 44



11100-11200 CHK
(50%): gyshbn, mot-sl
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc; MRLST (50%):
dk gy-dk gyshbn, mot,
hd-frm, sb blk, tr intbd
CHK, mod calc

11200-11300 CHK
(50%): gyshbn, mot-sl
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc; MRLST (50%):
dk gy-dk gyshbn, mot,
hd-frm, sb blk, tr intbd
CHK, mod calc



11,340
11,350
11,360
11,370
11,380
11,390
11,400
11,410
11,420
11,430
11,440
11,450
11,460
11,470
11,480
11,490
11,500
11,510
11,520
11,530
11,540
11,550

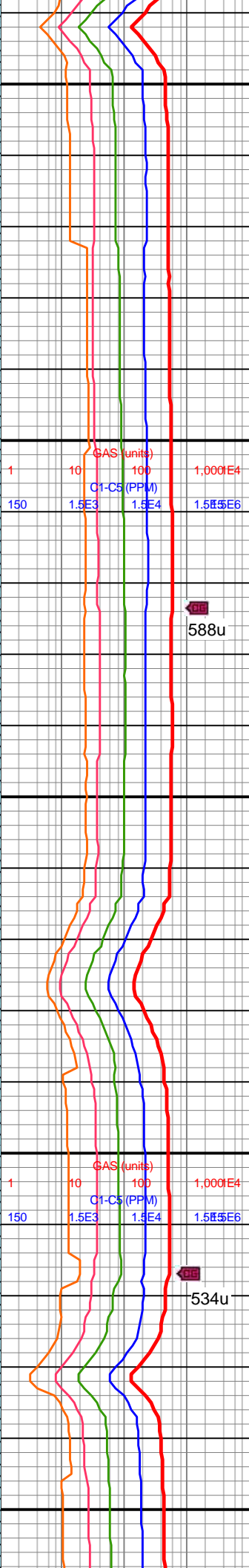
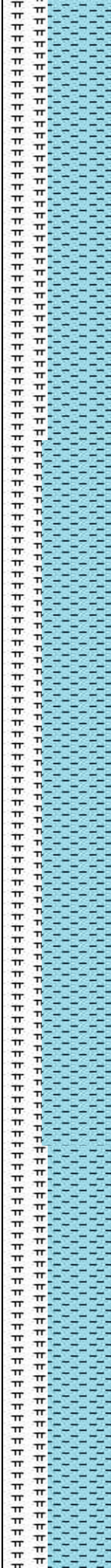
MD: 11,354'
INC: 91.14°
AZM: 89.43°
TVD: 7,099.79'
VS: 4,059.5'

WOB: 36.3klbs
RPM: 60
SPM: 186
SPP: 5,140psi

MD: 11,449'
INC: 91.32°
AZM: 88.81°
TVD: 7,097.75'
VS: 4,154.41'

MW IN: 10.3
VIS IN: 47
MW OUT: 10.3+
VIS OUT: 44

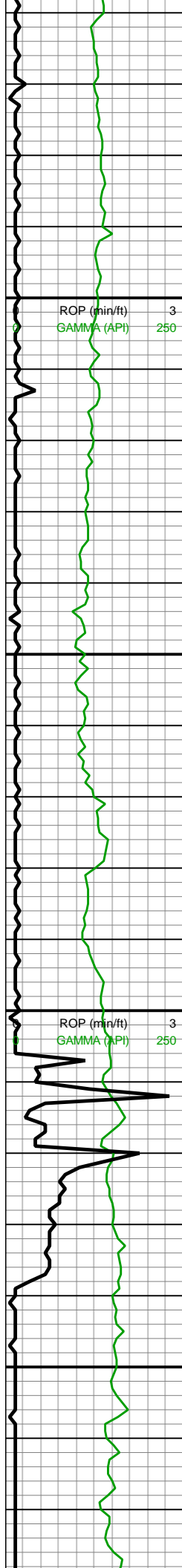
MD: 11,543'
INC: 91.41°
AZM: 90.66°
TVD: 7,095.33'
VS: 4,245.36'



11300-11400 CHK
(60%): gyshbn, mot-sl
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc, tr imbd/dissm
mic pyr; MRLST (40%):
dk gy-dk gyshbn, mot,
hd-frm, sb blk, tr intbd
CHK, mod calc

11400-11500 CHK
(65%): gyshbn, mot-sl
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc, tr imbd/dissm
mic pyr; MRLST (35%):
dk gy-dk gyshbn, mot,
hd-frm, sb blk, tr intbd
CHK, mod calc





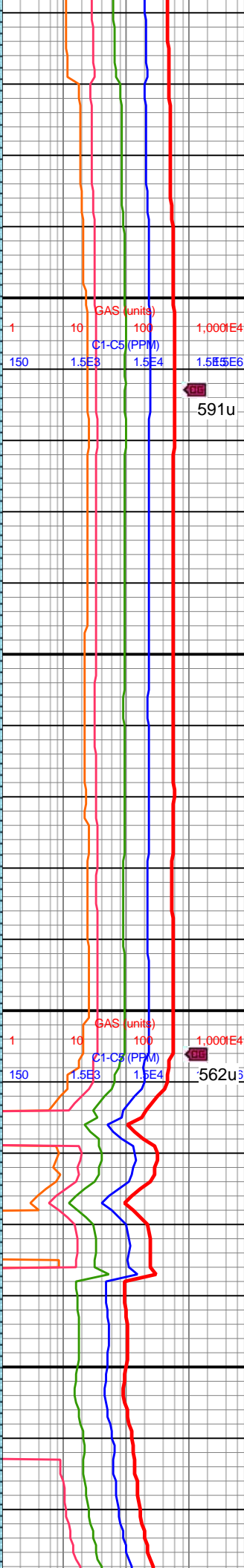
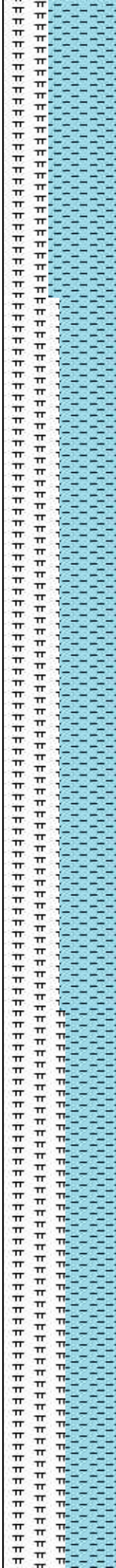
11,560
11,570
11,580
11,590
11,600
11,610
11,620
11,630
11,640
11,650
11,660
11,670
11,680
11,690
11,700
11,710
11,720
11,730
11,740
11,750
11,760
11,770

WOB: 36klbs
RPM: 60
SPM: 188
SPP: 5,165psi

MD: 11,638'
INC: 91.14°
AZM: 89.96°
TVD: 7,093.22'
VS: 4,340.18'

MW IN: 10.3
VIS IN: 48
MW OUT: 10.3
VIS OUT: 43

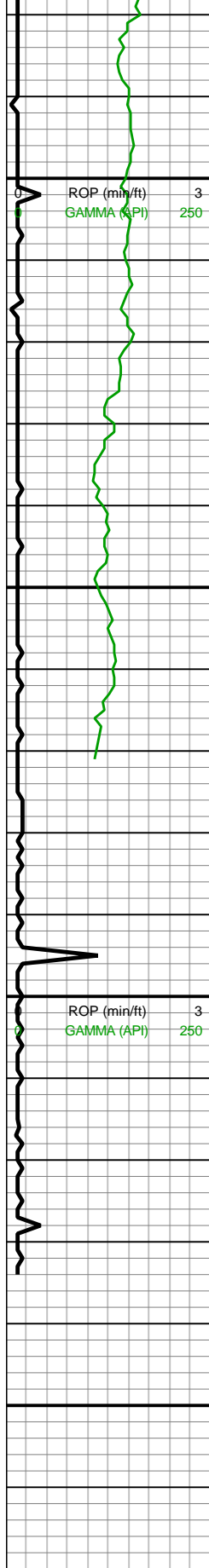
MD: 11,732'
INC: 89.69°
AZM: 90.4°
TVD: 7,092.53'
VS: 4,434.03'



11500-11600 CHK
(60%): gyshbn, mot-sl
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc, tr imbd/dissm
mic pyr; MRLST (40%):
dk gy-dk gyshbn, mot,
hd-frm, sb blk, tr intbd
CHK, mod calc, tr free pyr

11600-11700 CHK
(50%): gyshbn, mot-sl
stri, sb blk, sl frm, tr
MRLST lamn, sm chky
tex, v calc, tr imbd/dissm
mic pyr; MRLST (50%):
dk gy-dk gyshbn, mot,
hd-frm, sb blk, tr intbd
CHK, mod calc, tr free pyr

11700-11800 MRLST
(55%): dk gy-dk gyshbn,



11,780
11,790
11,800
11,810
11,820
11,830
11,840
11,850
11,860
11,870
11,880
11,890
11,900
11,910
11,920
11,930
11,940
11,950
11,960

WOB: 37.7klbs
RPM: 59
SPM: 188
SPP: 5,326psi

MD: 11,826'
INC: 89.39°
AZM: 91.01°
TVD: 7,093.29'
VS: 4,527.83'

MD: 11,866'
INC: 89.3°
AZM: 90.66°
TVD: 7,093.75'
VS: 4,567.74'

MW IN: 10.3
VIS IN: 48
MW OUT: 10.3
VIS OUT: 43

Projection to Bit

MD: 11,935'
INC: 89.3°
AZM: 90.66°
TVD: 7,094.59'
VS: 4,636.59'

Total Depth of
11,935' MD
Reached on
10/24/2018 @
07:15MST



mot, hd-frm, sb blkly, tr
intbd CHK, mod calc, tr
free pyr; CHK (45%):
gyshbn, mot-sl stri, sb
blkly, sl frm, tr MRLST
lamn, sm chky tex, v calc,
tr imbd/dissm mic pyr

11800-11900 MRLST
(60%): dk gy-dk gyshbn,
mot, hd-frm, sb blkly, tr
intbd CHK, mod calc, tr
free pyr; CHK (40%):
gyshbn, mot-sl stri, sb
blkly, sl frm, tr MRLST
lamn, sm chky tex, v calc

11900-11935 MRLST
(55%): dk gy-dk gyshbn,
mot, hd-frm, sb blkly, tr
intbd CHK, mod calc, tr
free pyr; CHK (45%):
gyshbn, mot-sl stri, sb
blkly, sl frm, tr MRLST
lamn, sm chky tex, v calc

