



Scale: 5" / 100'
Measured Depth Log

Well Name Davis 1D-9H-G266

Location Sec. 4 T2N R66W

State Colorado

County Weld

Country USA

Rig Number Ensign 153

API Number 05123465870000

AFE # 16191022

Geographic Region Rockies

Field Wattenberg

Spud Date 9/2/2018

Drilling Completed 9/6/2018

Surface Coordinates Lat/Long: 40.1546002/-104.7772603

SHL: Sec: 4 Twp: 2N 66W
Footage: 2180 FNL 250 FEL

Bottom Hole Coordinates Proposed BHL: Sec: 4 Twp: 2N 66W
Footages: 460 FNL 290 FEL

Ground Elevation 4,917'

K.B. Elevation 4,940'

Logged Interval 6,500' **To** 14,840'

Total Depth 14,840'

Formation Codell

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

Start Date 9/03/2018

Release Date: 09/08/2018

Job #: 1543RK1809

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 FERRUGINOUS

F FISH

F FORAMINIFERA

Minerals

ANHYDRITIC

F FERRUGINOUS

F FERRUGINOUS PELLET

F FERRUGINOUS

F FERRUGINOUS

F SILTY

F TUFFACEOUS

F FINELY CRINOID

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

BIT

CASING

C CONNECTION (LEFT)

C CONNECTION (RIGHT)

C CONNECTION GAS

C CORE - LOST

C CORE - RECOVERED

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

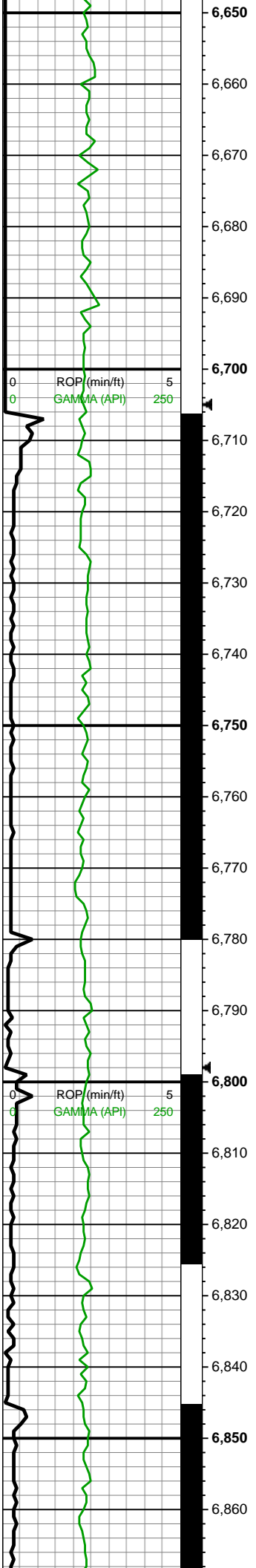
Sorting

M MODERATE

P POOR

W WELL

Slide/Rotate	Depth Labels	Notes	% Lith	Total Gas						Lithology Descriptions	Images
				GAS	C1	C2	C3	C4	C5		
Crestone Peak Resources											
Davis 1D-9H-G266											
9 5/8" Surface Casing @ 2,186'											
Spud Date: 09/03/2018		Bit #: 1									
2 man Logging Began: 09/0232018		Type: U516M									
		Size: 8 1/2"									
		Depth In: 2,205"									
		Depth Out: 9,255"									
		Hours: 21.6 hrs									
		Avg Ft/Hr: 326.48 '/hr									
		Jets: 6x14									
		S/N: 43263									
All Depths Correspond to Driller's Pipe Tally											
		Tepee Buttes									
		6,500'MD/6,360'TVD									
		MD: 6,545' INC: 12.22° AZM: 136.57° TVD: 6,403.54' VS: -818.58'									
		MW IN: 9.9 VIS IN: 51 MW OUT: 9.8+ VIS OUT: 48									
		WOB: 35.5klbs RPM: 70 SPM: 223 SPP: 5,578psi									
		MD: 6,640' INC: 12.74° AZM: 129.28° TVD: 6,496.31' VS: -831.78'									
										6500-6600 SLTY SH (60%): gyshbn-med gy, mot lt gy, frm-v frm, sb blky-tab, slty-sl sm tex, micmica; SLTST (40%): dk gy-med gy, tab-blky, frm-sl hrd, rgh-slty tex, v wk calc	



KOP @ 6,704'
MD

MD: 6,734'
INC: 8.97°
AZM: 97.72°
TVD: 6,588.69'
VS: -838.61'

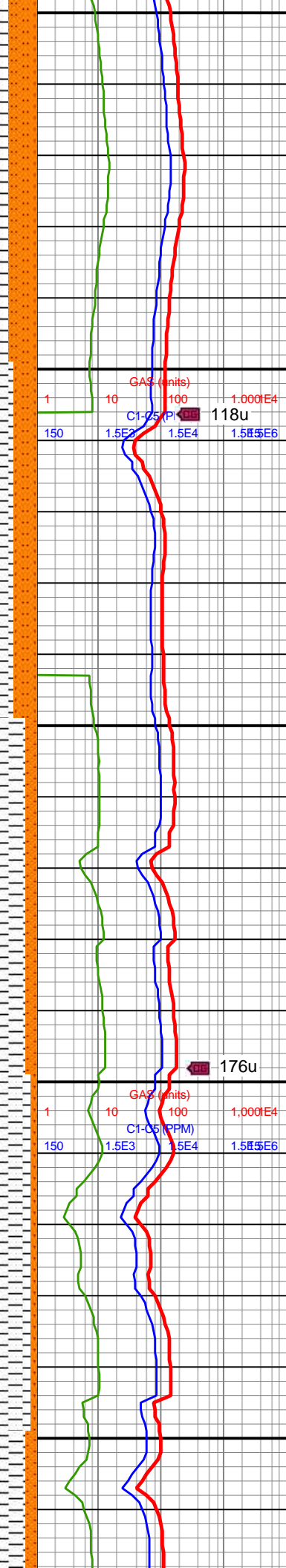
MW IN: 10
VIS IN: 52
MW OUT: 9.9
VIS OUT: 48

MD: 6,781'
INC: 10.55°
AZM: 65.56°
TVD: 6,635.04'
VS: -836.96'

WOB: 6.8klbs
RPM: 0
SPM: 152
SPP: 2,801psi

MD: 6,829'
INC: 10.37°
AZM: 43.14°
TVD: 6,682.26'
VS: -831.67'

MD: 6,876'



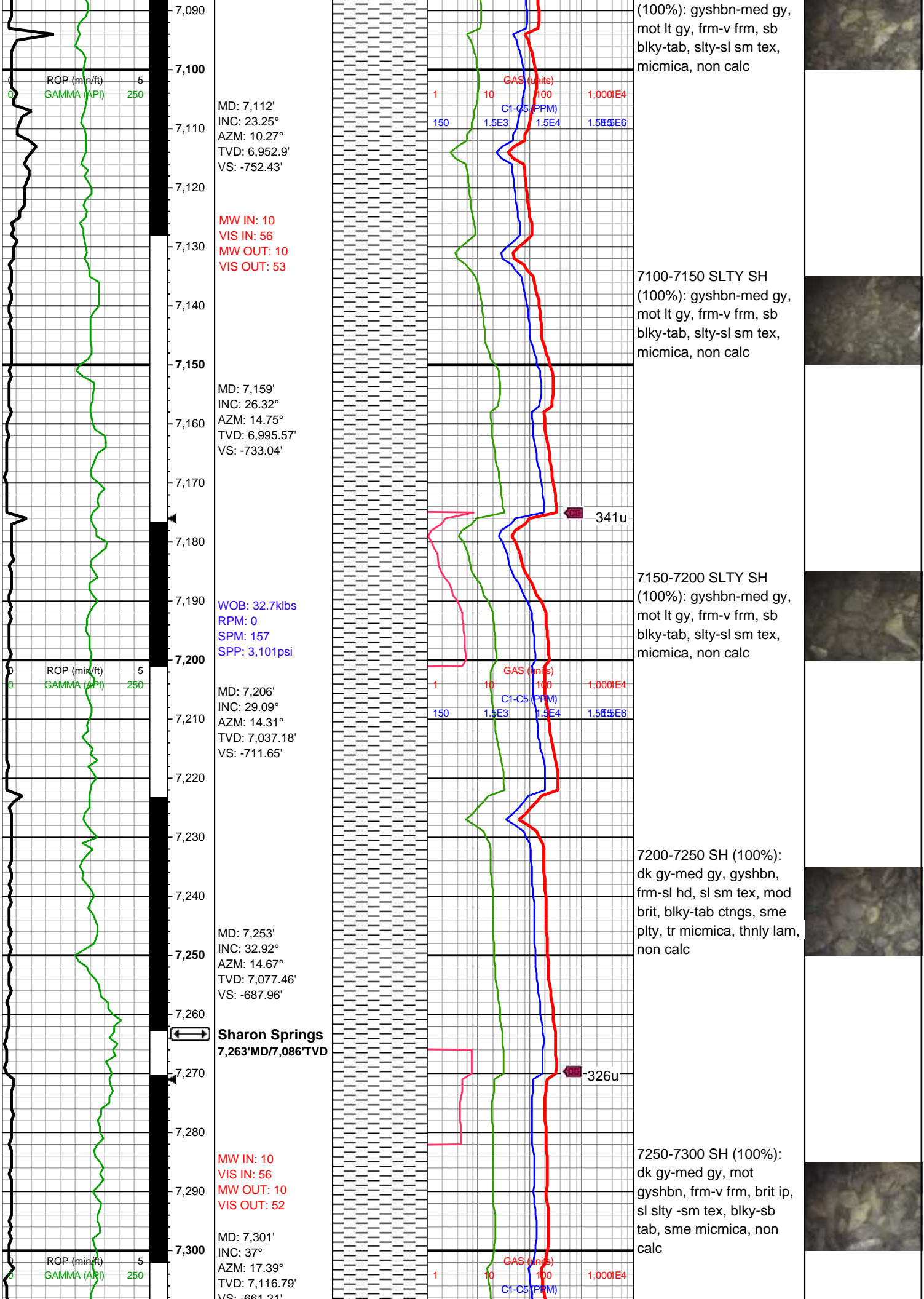
6600-6700 SLTY SH
(75%): gyshbn-med gy,
mot lt gy, frm-v frm, sb
blky-tab, slty-sl sm tex,
micmica; SLTST (25%):
dk gy-med gy, tab-blky,
frm-sl hrd, rgh-sltly tex, v
wk calc

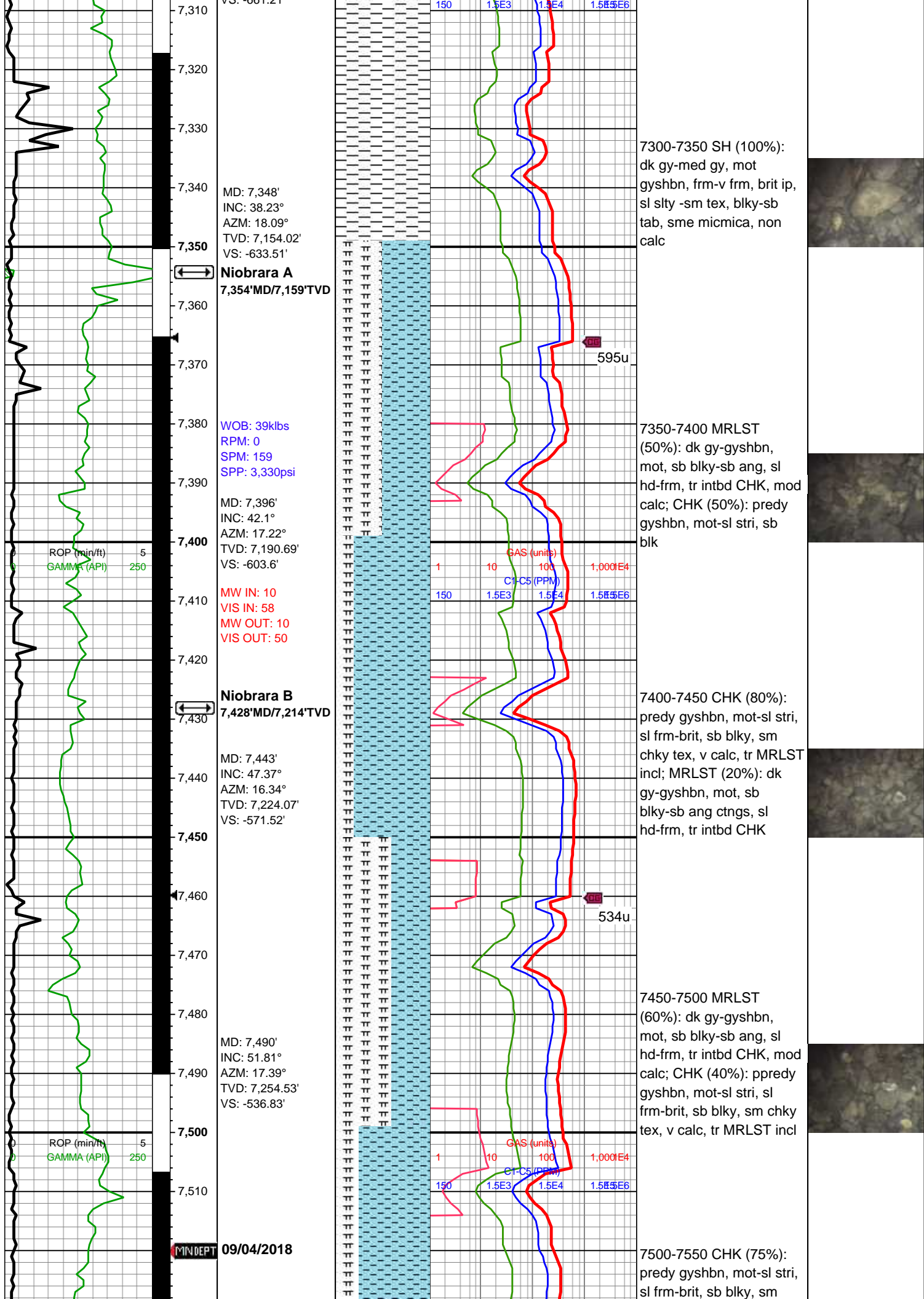
6700-6750 SLTY SH
(80%): gyshbn-med gy,
mot lt gy, frm-v frm, sb
blky-tab, slty-sl sm tex,
micmica; SLTST (20%):
dk gy-med gy, tab-blky,
frm-sl hrd, rgh-sltly tex, v
wk calc

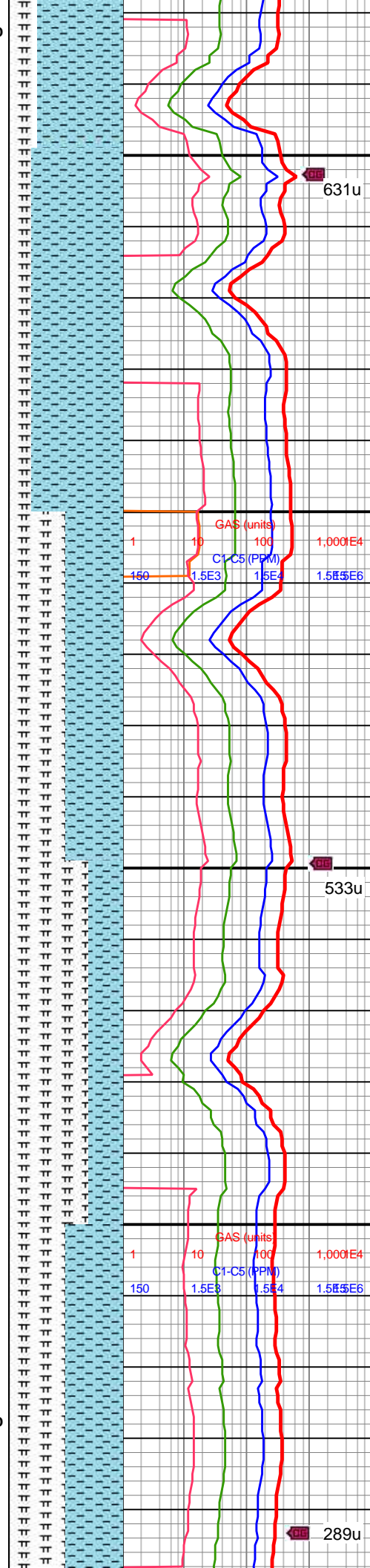
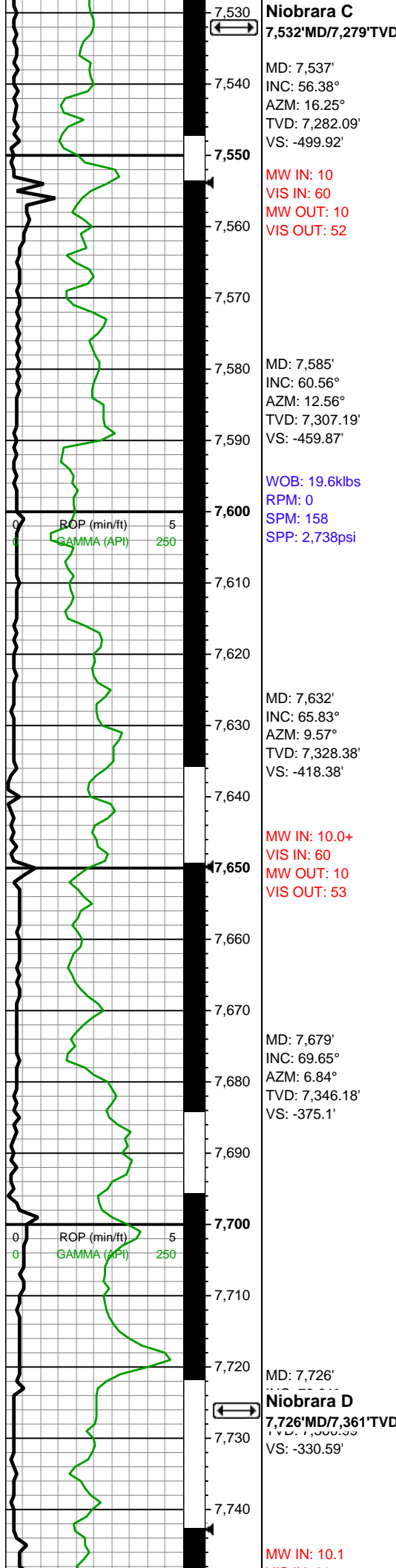
6750-6800 SLTY SH
(90%): gyshbn-med gy,
mot lt gy, frm-v frm, sb
blky-tab, slty-sl sm tex,
micmica; SLTST (10%):
dk gy-med gy, tab-blky,
frm-sl hrd, rgh-sltly tex, v
wk calc

6800-6850 SLTY SH
(95%): gyshbn-med gy,
mot lt gy, frm-v frm, sb
blky-tab, slty-sl sm tex,
micmica; SLTST (5%): dk
gy-med gy, tab-blky,
frm-sl hrd, rgh-sltly tex, v
wk calc









chky tex, v calc, tr MRLST incl; MRLST (25%): med gy-dk gy, frm-sl hd, sb blkly-tab, mod brit, mod fis, vf lamn, mnr f chky incl, mod calc, tr pyr nod

631u

7550-7600 CHK (80%): gyshbn-med gy, mot lt gy, sl sm-chky tex, sl frm, sb blkly-tab, hi calc; MRLST (20%): med gy-dk gy, frm-sl hd, sb blkly-tab, mod brit, mod fis, mnr f chky incl, mod calc, tr pyr nod

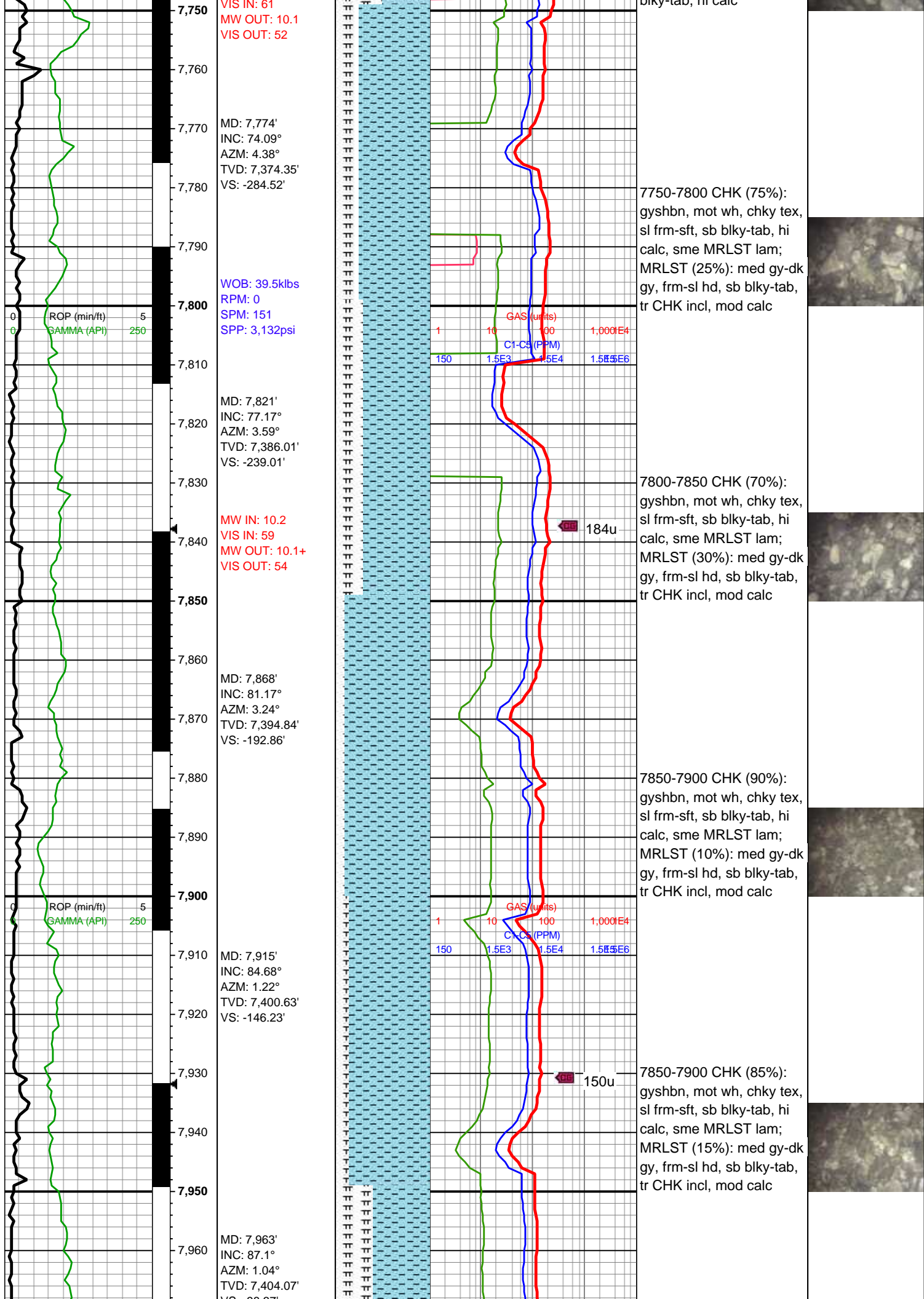
7600-7650 CHK (50%): gyshbn-med gy, mot lt gy, sl sm-chky tex, sl frm, sb blkly-tab, hi calc; MRLST (50%): med gy-dk gy, frm-sl hd, sb blkly-tab, mod brit, mod fis, vf lamn, mnr f chky incl, mod calc, tr pyr nod

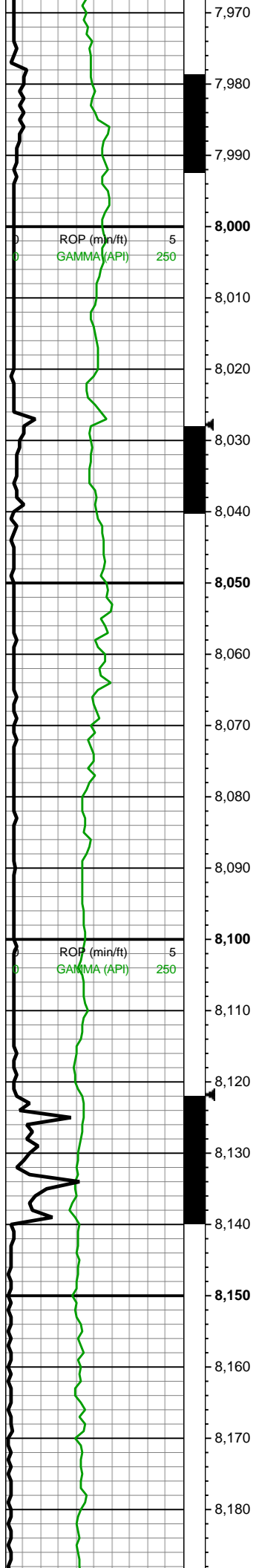
533u

7650-7700 MRLST (70%): med gy-dk gy, frm-sl hd, sb blkly-tab, mod brit, mod fis, vf lamn, mnr f chky incl, mod calc, tr pyr nod; CHK (30%): gyshbn-med gy, mot lt gy, sl sm-chky tex, sl frm, sb blkly-tab, tr dissm mic pyr, hi calc

7700-7750 MRLST (50%): med gy-dk gy, frm-sl hd, sb blkly-tab, vf lamn, tr CHK incl, mod calc; CHK (50%): gyshbn-med gy, mot lt gy, sl sm-chky tex, sl frm, sb blkly-tab, hi calc

289u





VS: -98.37'

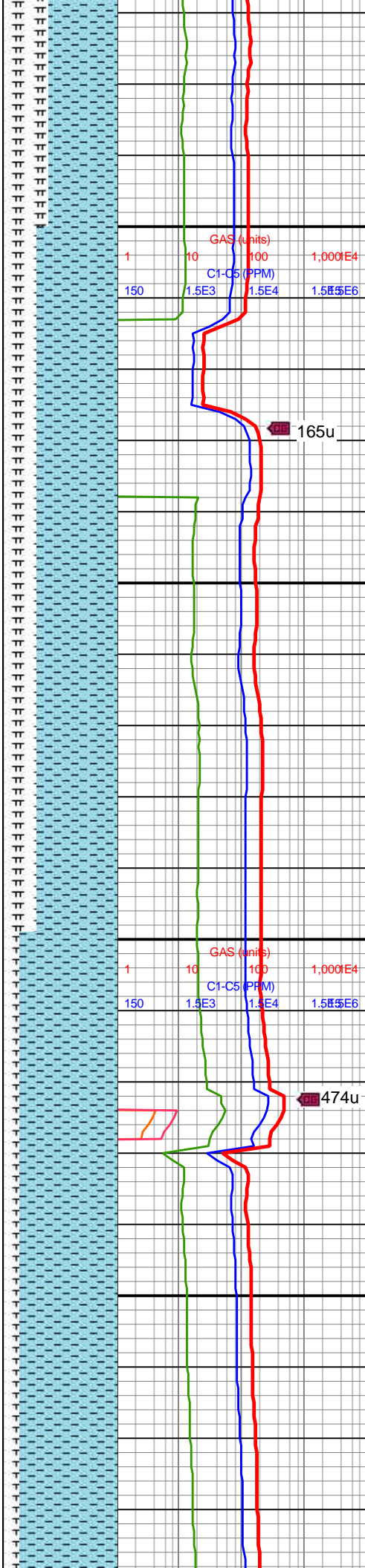
WOB: 28.3klbs
RPM: 26
SPM: 154
SPP: 3,443psi

Land Curve @
8040' MD

MD: 8,058'
INC: 90.66°
AZM: 357.53°
TVD: 7,405.92'
VS: -3.59'

MW IN: 10.2
VIS IN: 60
MW OUT: 10.2
VIS OUT: 52

MD: 8,152'
INC: 89.08°
AZM: 355.86°
TVD: 7,406.14'
VS: 89.88'



7950-8000 CHK (60%):
gyshbn-crm, mot wht,
frm-sl frm, sb tab-sb blk,
sme MRLST lamn, hi
calc, tr pp/imbd mic pyr
nod; MRLST (40%): dk
gy-med gy, sl slty-sm tex,
frm-sl hd, mod brit, tr
CHK incl, mod calc

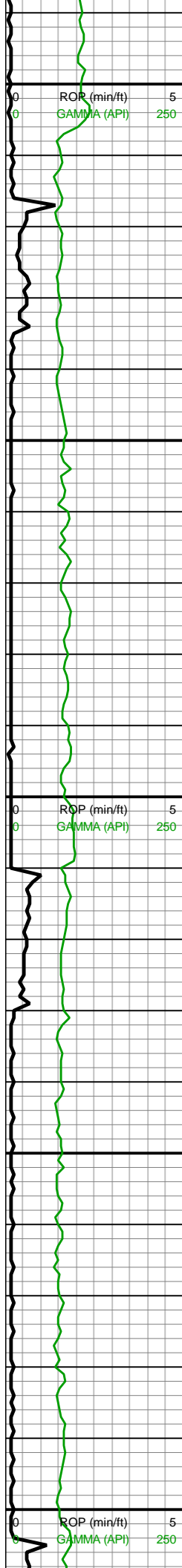
165u

8000-8100 CHK (70%):
gyshbn-crm, mot wht,
frm-sl frm, sb tab-sb blk,
sme MRLST lamn, hi
calc, tr pp/imbd mic pyr
nod; MRLST (30%): dk
gy-med gy, sl slty-sm tex,
frm-sl hd, mod brit, tr
CHK incl, mod calc

474u

8100-8200 CHK (85%):
gyshbn-crm, mot wht,
frm-sl frm, sb tab-sb blk,
sme MRLST lamn, hi
calc, tr pp/imbd mic pyr





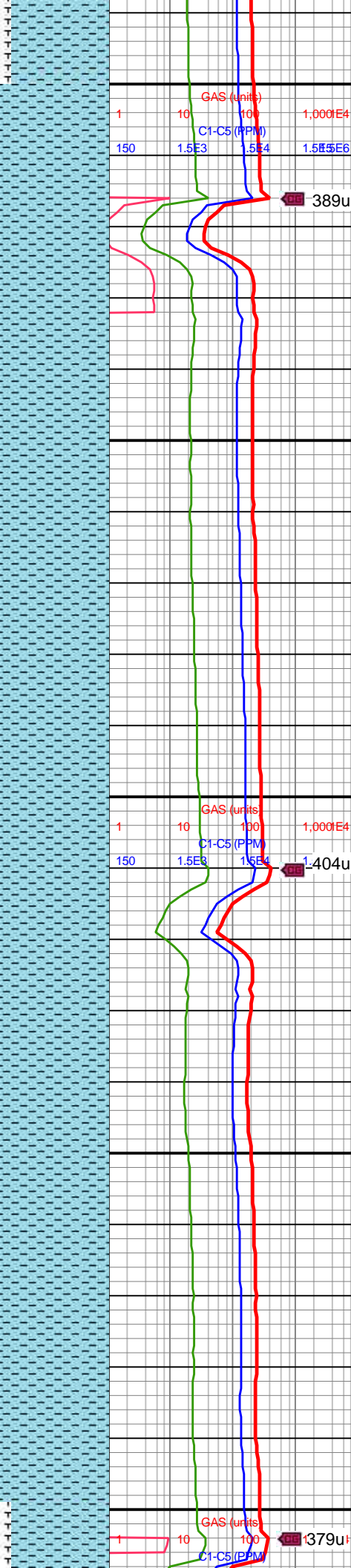
WOB: 31.2klbs
RPM: 50
SPM: 214
SPP: 5,528psi

MD: 8,246'
INC: 87.58°
AZM: 356.91°
TVD: 7,408.88'
VS: 183.27'

MW IN: 10.1
VIS IN: 3
MW OUT: 10.1
VIS OUT: 49

MD: 8,340'
INC: 87.32°
AZM: 358.14°
TVD: 7,413.06'
VS: 276.79'

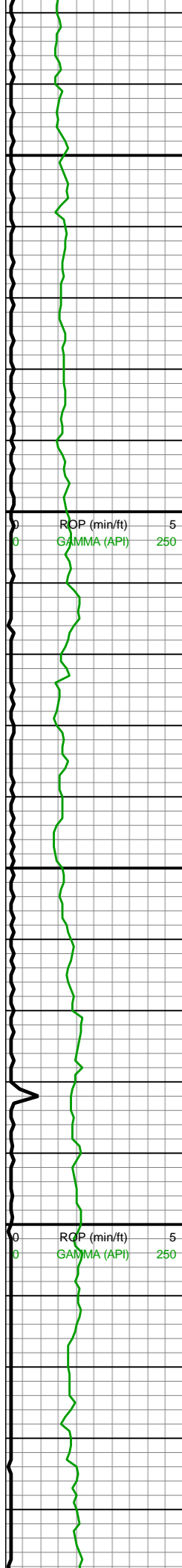
WOB: 36klbs
RPM: 70
SPM: 214
SPP: 5,555psi



nod; MRLST (15%): dk
gy-med gy, sl slty-sm tex,
frm-sl hd, mod brit, tr
CHK incl, mod calc

8200-8300 CHK (95%):
predy gyshbn-crm, sme
mot wht, frm-sft, sb
tab-sb blk, tr MRLST
lamn, hi calc, tr pp/imbd
mic pyr nod; MRLST
(5%): dk gy-med gy, sl
slty-sm tex, frm-sl hd,
mod brit, com CHK incl,
hi calc

8300-8400 CHK (95%):
predy gyshbn-crm, sme
mot wht, frm-sft, sb
tab-sb blk, tr MRLST
lamn, hi calc, tr pp/imbd
mic pyr nod; MRLST
(5%): dk gy-med gy, sl
slty-sm tex, frm-sl hd,
mod brit, com CHK incl,
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

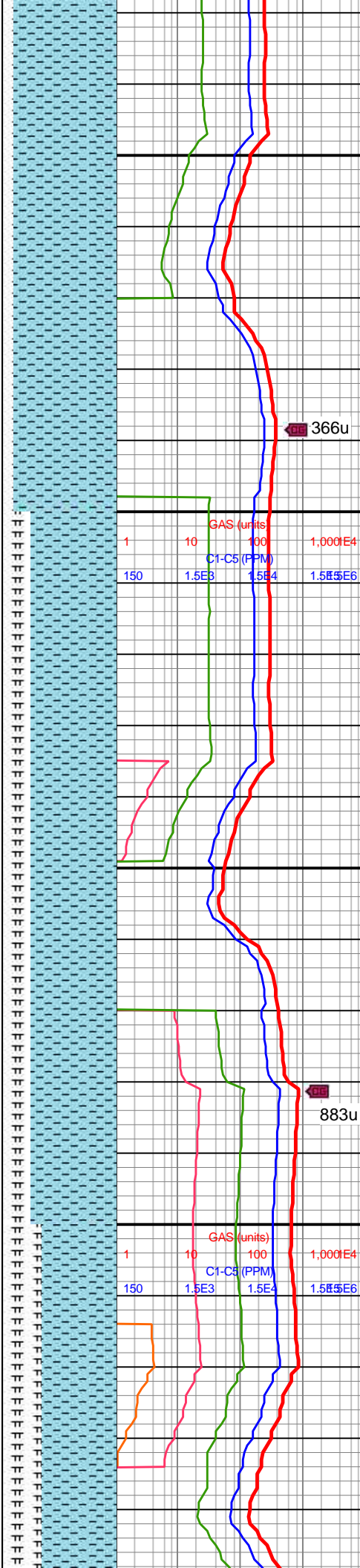
TVD: 7,413.77'
VS: 560.47'

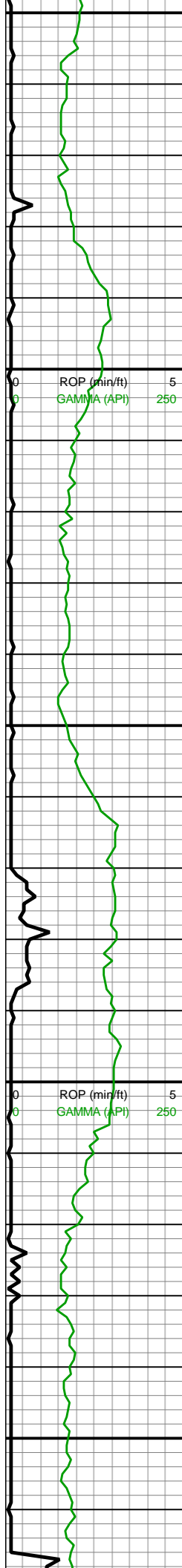
MD: 8,718'
INC: 90.18°
AZM: 0.16°
TVD: 7,413.34'
VS: 654.4'

WOB: 34.8klbs
RPM: 70
SPM: 212
SPP: 5,594psi

MD: 8,812'
INC: 89.96°
AZM: 0.16°
TVD: 7,413.22'
VS: 748.3'

MW IN: 10.2
VIS IN: 51
MW OUT: 10.2
VIS OUT: 49





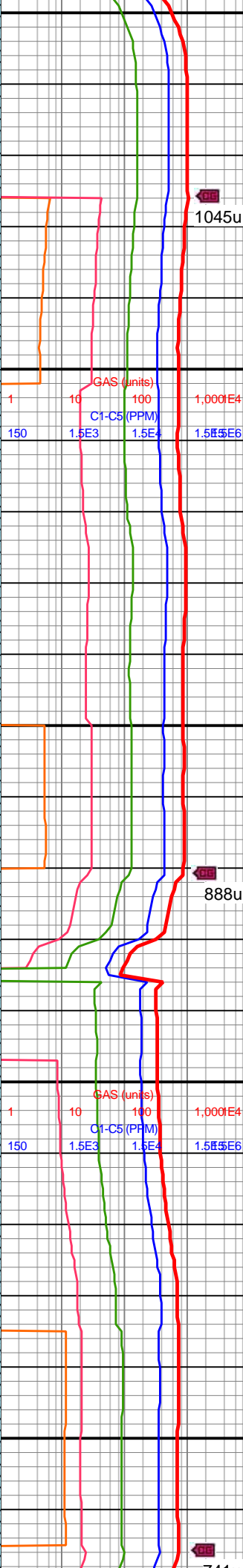
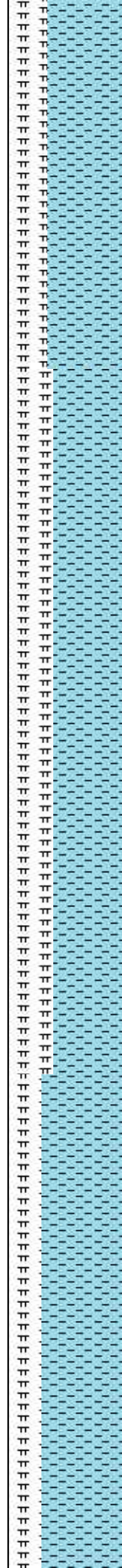
8,850
8,860
8,870
8,880
8,890
8,900
8,910
8,920
8,930
8,940
8,950
8,960
8,970
8,980
8,990
9,000
9,010
9,020
9,030
9,040
9,050
9,060

MD: 8,907'
INC: 89.17°
AZM: 0.08°
TVD: 7,413.94'
VS: 843.2'

MW IN: 10.2
VIS IN: 51
MW OUT: 10.2
VIS OUT: 47

MD: 9,002'
INC: 89.69°
AZM: 1.13°
TVD: 7,414.89'
VS: 938.13'

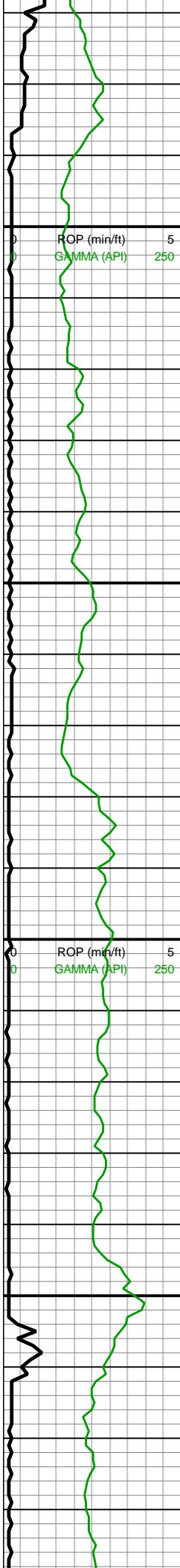
WOB: 29.3klbs
RPM: 70
SPM: 199
SPP: 5,320psi



8800-8900 CHK (65%):
gyshbn-crm, mot wht,
med gy, frm-sl frm, mod
fis, sb tab-sb plty, sme
MRLST lamn, tr pp mic
pyr, hi calc; MRLST
(35%): dk gyshbn-dk gy,
frm-sl hd, sl slty-sm tex,
mod brit, tr CHK incl,
mod calc

8900-9000 CHK (60%):
gyshbn-crm, mot wht,
med gy, frm-sl frm, mod
fis, sb tab-sb plty, sme
MRLST lamn, tr pp mic
pyr, hi calc; MRLST
(40%): dk gyshbn-dk gy,
frm-sl hd, sl slty-sm tex,
mod brit, tr CHK incl,
mod calc





MD: 9,096'
INC: 91.63°
AZM: 1.69°
TVD: 7,413.8'
VS: 1,032.1'

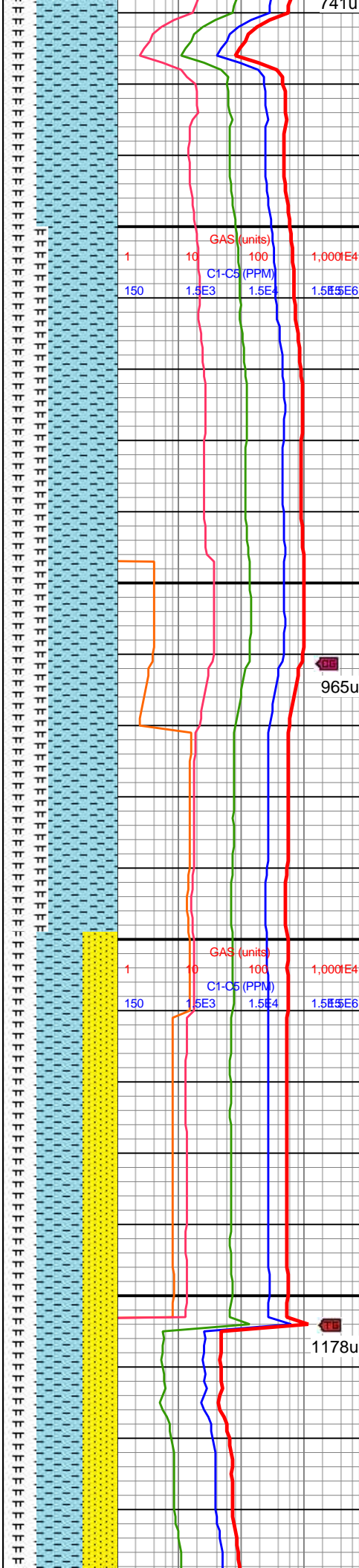
MD: 9,191'
INC: 91.8°
AZM: 359.9°
TVD: 7,410.96'
VS: 1,127'

WOB: 23.4klbs
RPM: 70
SPM: 200
SPP: 5,170psi

Bit #: 2
Type: U516M
Size: 8 1/2
Depth In: 9,255"
Depth Out: 14,840"
Hours: 18.2 hrs
Avg Ft/Hr: 306.87 '/hr
Jets: 6x14
S/N: 43263

MINDEPTH 09/05/2018

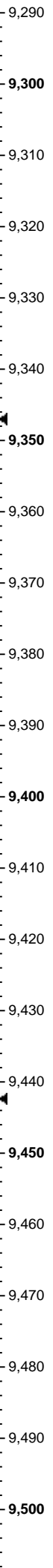
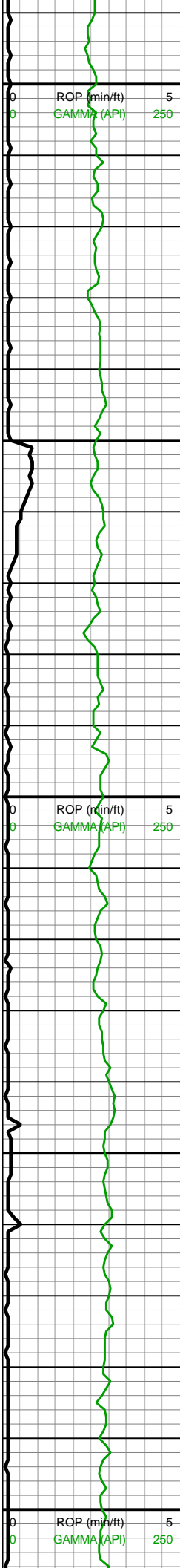
MD: 9,285'
INC: 91.93°
AZM: 359.81°
TVD: 7,407.9'



9000-9100 CHK (70%):
gyshbn-crm, mot wht,
med gy, frm-sl frm, mod
fis, sb tab-sb plty, sme
MRLST lamn, tr pp mic
pyr, hi calc; MRLST
(30%): dk gyshbn-dk gy,
frm-sl hd, sl slty-sm tex,
mod brit, tr CHK incl,
mod calc

9100-9200 CHK (60%):
predy med gyshbn, sme
mot wht-crm, frm-sl frm,
mod fis, sb tab-sb plty,
sme MRLST lamn, tr pp
mic pyr, hi calc; MRLST
(40%): dk gyshbn-dk gy,
frm-sl hd, sl slty-sm tex,
mod brit, tr CHK incl,
mod calc

9200-9300 CHK (40%):
predy med gyshbn, sme
mot wht-crm, frm-sl frm,
mod fis, sb tab-sb plty,
sme MRLST lamn, tr pp
mic pyr, hi calc; MRLST
(30%): dk gyshbn-dk gy,
frm-sl hd, sme slty-sm
tex, mod brit, tr CHK incl,
mod calc, tr pyr nod; SS
(20%): dk gyshbn-dk gy,
frm-sl hd, sl slty-sm tex,
mod brit, tr CHK incl,
mod calc



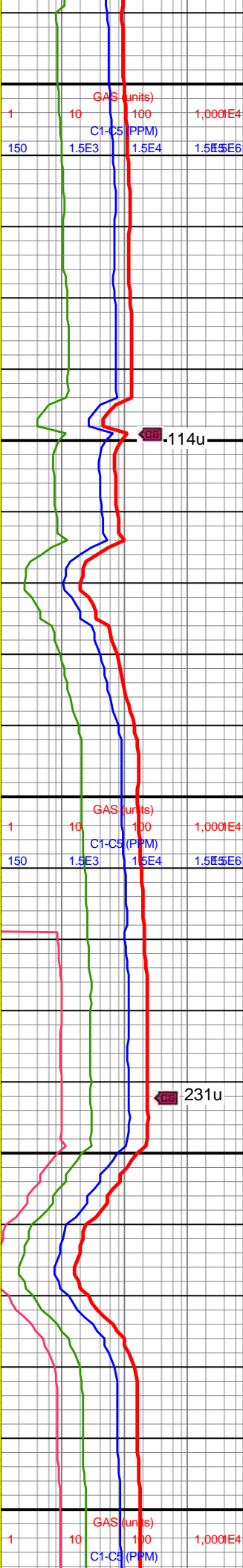
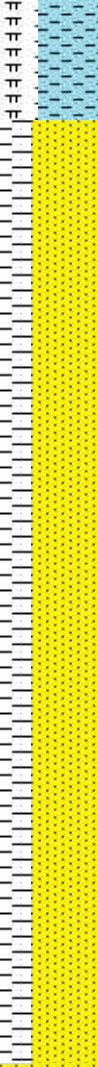
MD: 9,407.5'
VS: 1,220.83'

MD: 9,380'
INC: 90.26°
AZM: 0.34°
TVD: 7,406.09'
VS: 1,315.71'

WOB: 35.1klbs
RPM: 70
SPM: 184
SPP: 4,772psi

MW IN: 10.4+
VIS IN: 62
MW OUT: 10.5
VIS OUT: 56

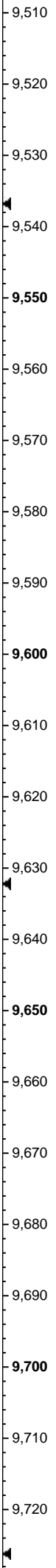
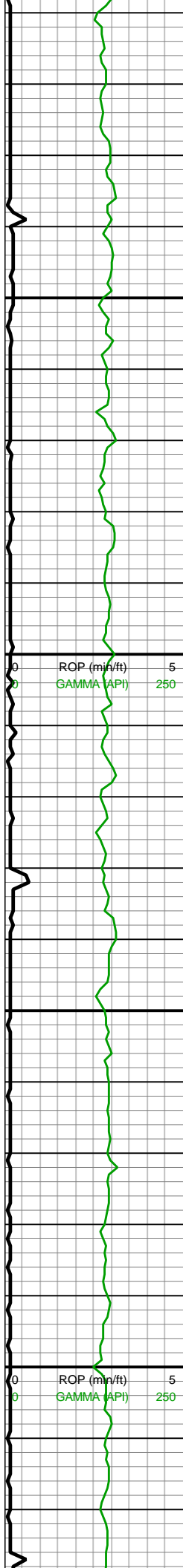
MD: 9,475'
INC: 90.26°
AZM: 0.16°
TVD: 7,405.65'
VS: 1,410.62'



(30%): dk gy-dk gyshbn, slty-vf gr, mod-w srt, frm-sl fri, ab rnd-ang, silc cmt, non-sl calc;

9300-9400 SS (75%): dk gy-dk gyshbn, slty-vf gr, mod-w srt, frm-sl fri, ab rnd-ang, silc cmt, non-sl calc; SLTY SH (25%): dk gy-v dk gy, mot med gy, frm-sl frm, sb blk-y-tab ctngs, slty-sl sm tex, micmica, sl-mod calc, tr-mnr SS grdg

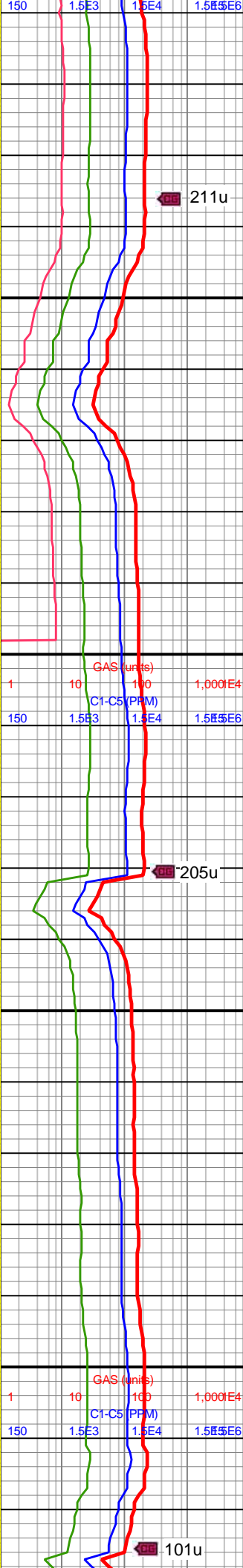
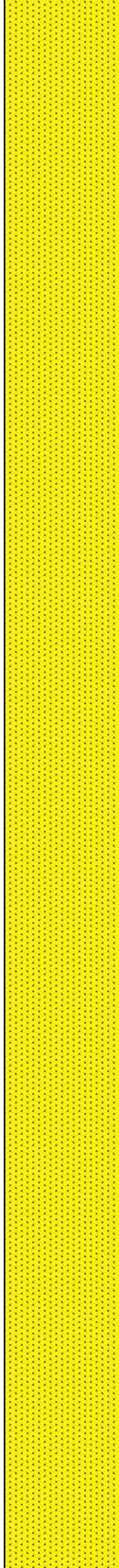
9400-9500 SS (100%): med brn-bnshgy, lt brn, gyshbn, sb rnd-sb ang, vf-slty gr, mtx-gr sup cluss, cons wi silc/arg cmt, tr diss/PP mic pyr, mod-hi calc; tr SH



MD: 9,570'
INC: 90.09°
AZM: 359.37°
TVD: 7,405.36'
VS: 1,505.5'

WOB: 35.5klbs
RPM: 70
SPM: 187
SPP: 4,784psi

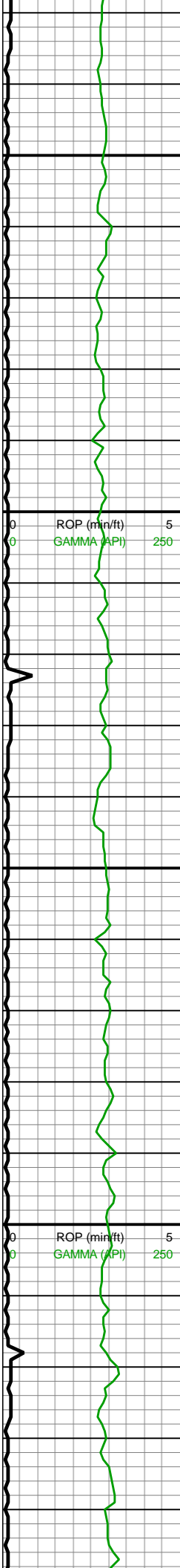
MD: 9,664'
INC: 90.26°
AZM: 359.29°
TVD: 7,405.08'
VS: 1,599.33'



9500-9600 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-slty gr, mtx-gr sup
cluss, cons wi silc/arg
cmt, tr dissm/pp mic pyr,
mod-hi calc; tr SH

9600-9700 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-slty gr, mtx-gr sup
cluss, cons wi silc/arg
cmt, tr dissm/pp mic pyr,
mod-hi calc





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
9,900
9,910
9,920
9,930
9,940

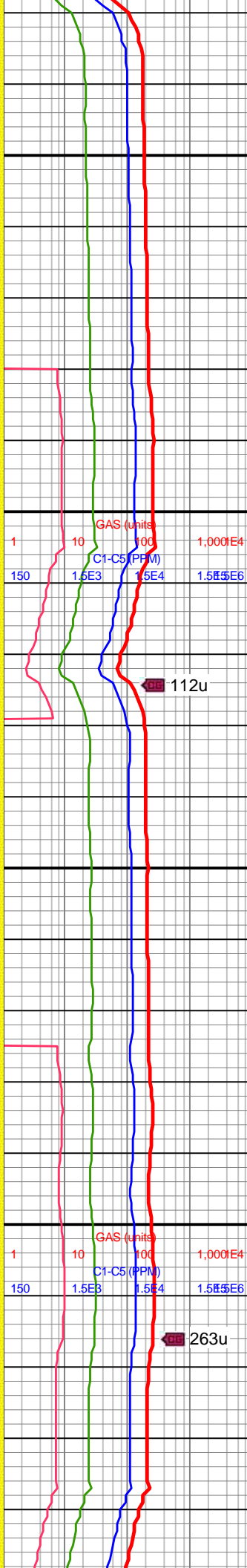
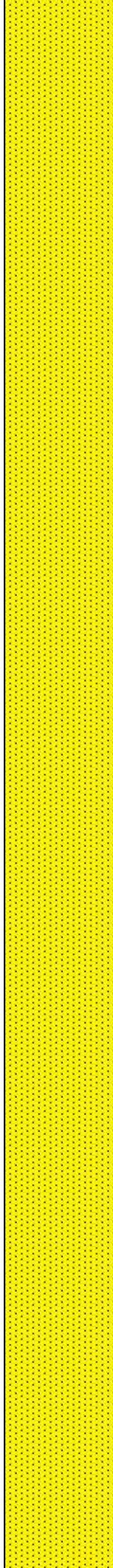
MD: 9,759'
INC: 90.22°
AZM: 0.52°
TVD: 7,404.68'
VS: 1,694.21'

WOB: 33.6klbs
RPM: 70
SPM: 187
SPP: 4,935psi

MW IN: 10.4
VIS IN: 58
MW OUT: 10.4+
VIS OUT: 56

MD: 9,853'
INC: 90.13°
AZM: 0.34°
TVD: 7,404.39'
VS: 1,788.14'

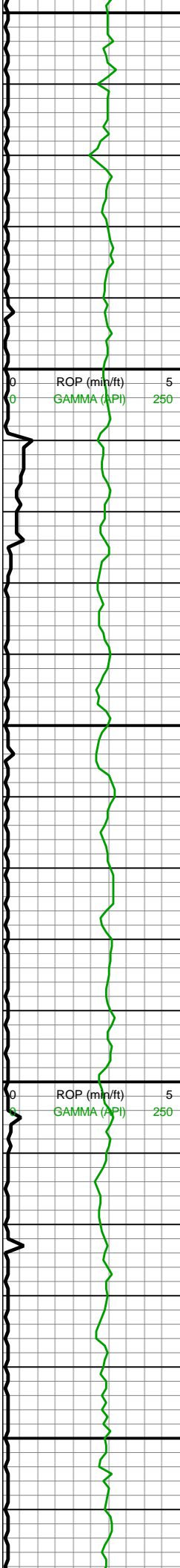
MD: 9,947'
INC: 89.56°
AZM: 0.34°
TVD: 7,404.39'
VS: 1,788.14'



9700-9800 SS (100%):
med brn-bnshgy, lt brn,
gyshbn, sb rnd-sb ang,
vf-slty gr, mtx-gr sup
cluss, cons wi silc/arg
cmt, tr dissm/pp mic pyr,
mod-hi calc

9800-9900 SST (100%):
pred med gyshbn, occ lt
gy-lt brn, sme red-brn,
frm-v frm, blk, pred
mod-w cons, gr sup,
cons wi silc cmt, non
calc, vf-f grnd, occ grdg to
slt, com micmica, tr imbd
pyr, scat sh frags





9,950
9,960
9,970
9,980
9,990
10,000
10,010
10,020
10,030
10,040
10,050
10,060
10,070
10,080
10,090
10,100
10,110
10,120
10,130
10,140
10,150
10,160

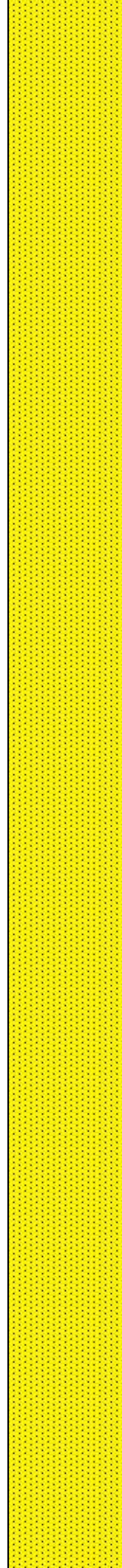
AZM: 1.04°
TVD: 7,404.65'
VS: 1,882.08'

WOB: 34.5klbs
RPM: 70
SPM: 188
SPP: 4,980psi

MW IN: 10.4
VIS IN: 58
MW OUT: 10.4
VIS OUT: 55

MD: 10,041'
INC: 90.57°
AZM: 0.25°
TVD: 7,404.54'
VS: 1,976.02'

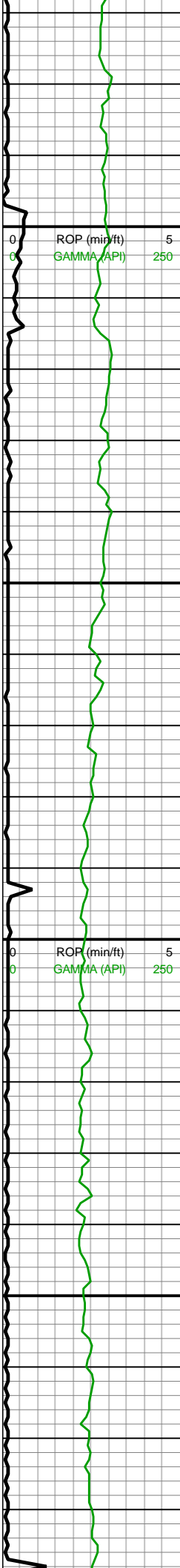
MD: 10,135'
INC: 90.22°
AZM: 1.48°
TVD: 7,403.89'
VS: 2,069.96'



9900-10000 SST (100%):
pred med gyshbn, occ lt
gy-lt brn, sme red-brn,
frm-v frm, blk, pred
mod-w cons, gr sup,
cons wi silc cmt, non
calc, vf-f grnd, occ grdg to
slt, com micmica, tr imbd
pyr, scat sh frags

10000-10100 SST
(100%): pred med
gyshbn, occ lt gy-lt brn,
sme red-brn, frm-v frm,
blk, pred mod-w cons,
gr sup, cons wi silc cmt,
non calc, vf-f grnd, occ
grdg to slt, com micmica,
tr imbd pyr, scat sh frags



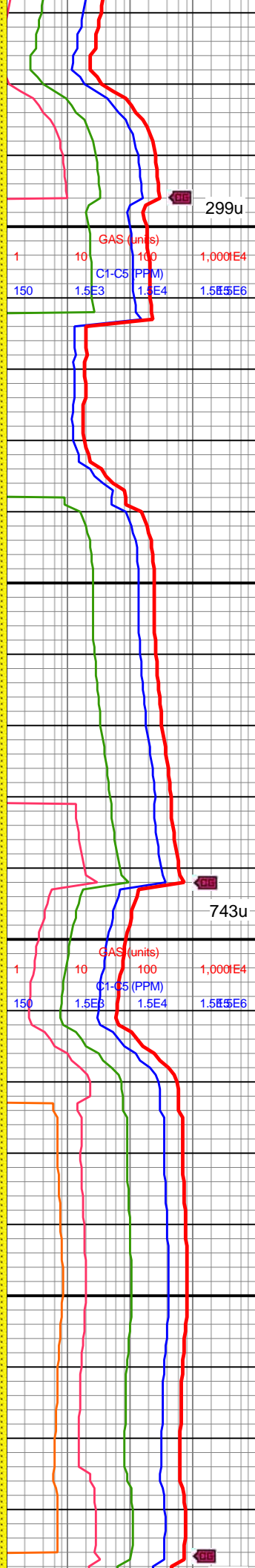


WOB: 38.8klbs
RPM: 3
SPM: 200
SPP: 5,045psi

MD: 10,230'
INC: 91.45°
AZM: 359.64°
TVD: 7,402.51'
VS: 2,164.88'

MW IN: 10.4
VIS IN: 59
MW OUT: 10.4
VIS OUT: 54

MD: 10,325'
INC: 91.45°
AZM: 359.37°
TVD: 7,400.1'
VS: 2,259.7'

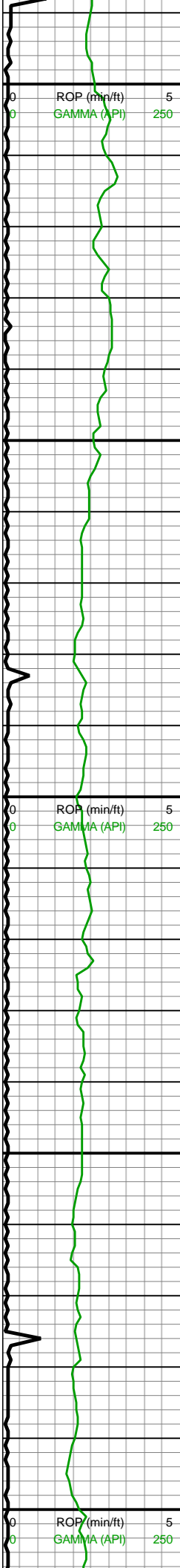


10100-10200 SST
(100%): gy-dk gy s&p sst
clus, sme tn sst clus,
mod srted f sb rd-rd sd
grs, frm-hd sl fri predy gr
sup ss clus cons wi silc
cmt, occ mtx sup ss clus
cons wi arg & sl silc cmt,
predy non calc

10200-10300 SST
(100%): gy-dk gy s&p sst
clus, sme tn sst clus,
mod srted f sb rd-rd sd
grs, frm-hd sl fri predy gr
sup ss clus cons wi silc
cmt, occ mtx sup ss clus
cons wi arg & sl silc cmt,
predy non calc

10300-10400 SST
(100%): gyshbn-lt gy, dk
quin, p mod srted f f sh





WOB: 26.2klbs
RPM: 70
SPM: 201
SPP: 5,370psi

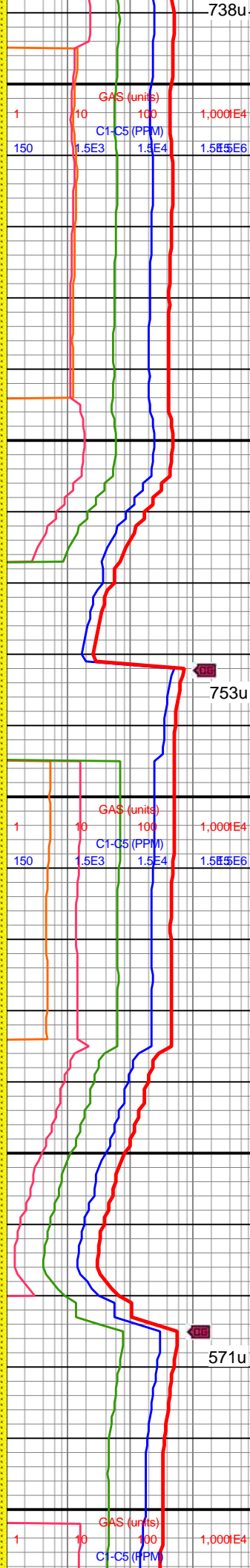
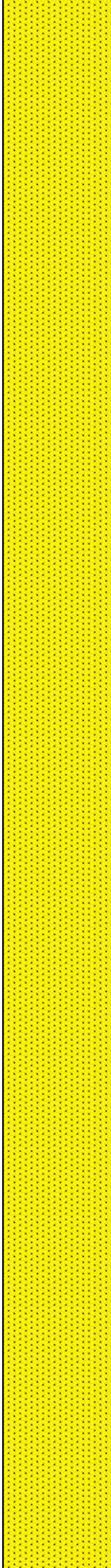
MD: 10,420'
INC: 91.71°
AZM: 359.11°
TVD: 7,397.48'
VS: 2,354.49'

MW IN: 10.4
VIS IN: 57
MW OUT: 10.4
VIS OUT: 55

MD: 10,514'
INC: 91.54°
AZM: 358.06°
TVD: 7,394.82'
VS: 2,448.21'

WOB: 33.2klbs
RPM: 70
SPM: 199
SPP: 5,633psi

MD: 10,608'

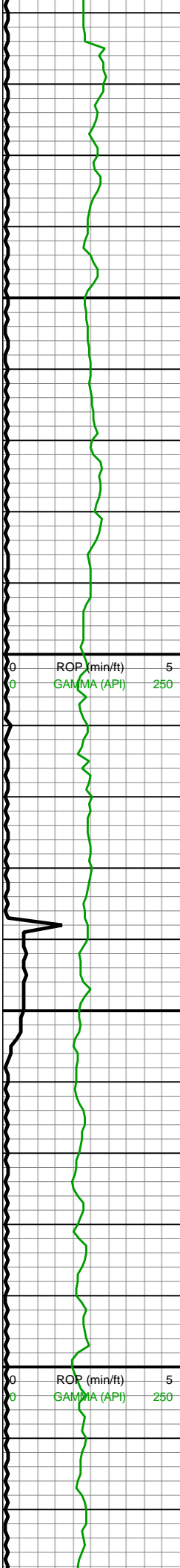


gy ip, p-mod srted, vf-f, sb
ang-sb rd, predy frm lt gy
mtx sup clus, arg cmt, tr
pp mic pyr

10400-10500 SST
(100%): gyshbn-lt gy, dk
gy ip, p-mod srted, vf-f, sb
ang-sb rd, predy frm lt gy
mtx sup clus, arg cmt, tr
pp mic pyr

10500-10600 SST
(100%): gyshbn-lt gy, dk
gy ip, p-mod srted, vf-f, sb
ang-sb rd, predy frm lt gy
mtx sup clus, arg cmt, tr
pp mic pyr





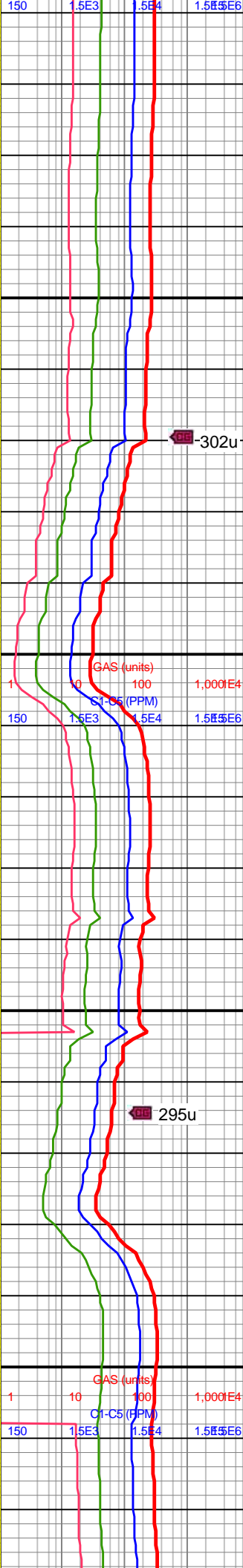
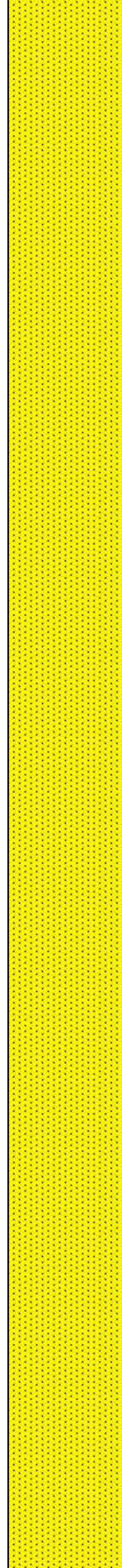
INC: 91.27°
AZM: 358.41°
TVD: 7,392.51'
VS: 2,541.89'

MD: 10,702'
INC: 91.41°
AZM: 357.79°
TVD: 7,390.32'
VS: 2,635.56'

MW IN: 10.4
VIS IN: 57
MW OUT: 10.4
VIS OUT: 54

MD: 10,797'
INC: 89.56°
AZM: 358.85°
TVD: 7,389.51'
VS: 2,730.28'

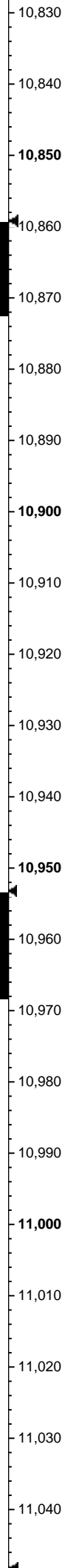
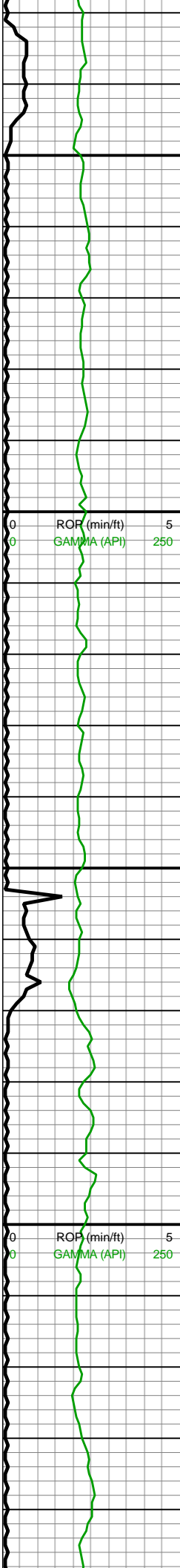
WOB: 31.7klbs
RPM: 70
SPM: 198
SPP: 5,635psi



10600-10700 SST
(100%): dk gy-dk gy brn,
gr-mtx sup clus, occ lt
gy-gy mtx, shy ss, pred dk
gy wi f sb rd qtz sd gr incl,
p srted, vf-f, pred sb rd-rd,
sl fri, grn sup clus, silc &
arg cmt, unconsl ip, non
calc

10700-10800 SST
(100%): dk gy-dk gy brn,
gr-mtx sup clus, occ lt
gy-gy mtx, shy ss, pred dk
gy wi f sb rd qtz sd gr incl,
p srted, vf-f, pred sb rd-rd,
sl fri, grn sup clus, silc &
arg cmt, unconsl ip, non
calc





MD: 10,891'
INC: 88.81°
AZM: 359.29°
TVD: 7,390.85'
VS: 2,824.08'

MW IN: 10.4
VIS IN: 58
MW OUT: 10.4
VIS OUT: 50

MD: 10,986'
INC: 89.39°
AZM: 0.78°
TVD: 7,392.34'
VS: 2,918.96'

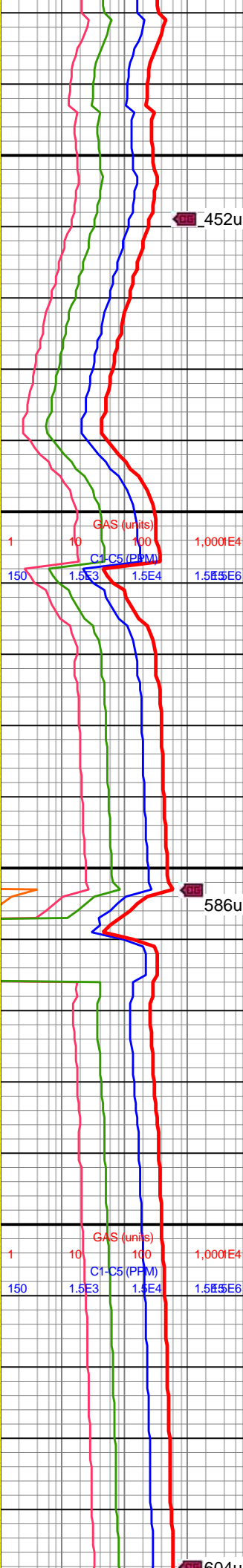
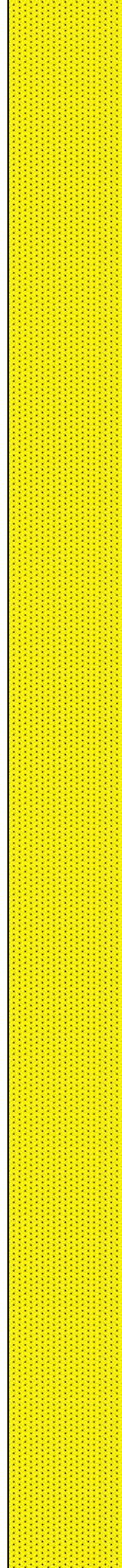
WOB: 31.3klbs
RPM: 70
SPM: 198
SPP: 5,532psi

0 5
0 250

ROP (min/ft)
GAMMA (API)

0 5
0 250

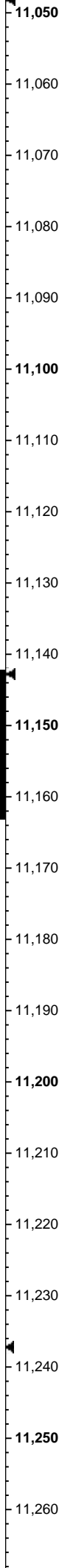
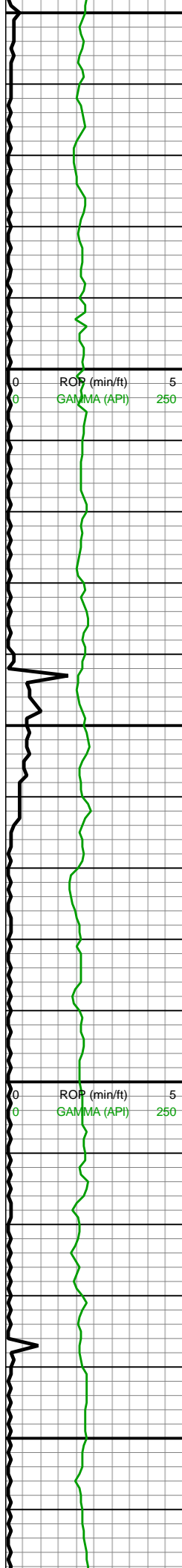
ROP (min/ft)
GAMMA (API)



10800-10900 SST
(100%): gyshbn-lt gy, dk
gy ip, p-mod srtd, vf-f, sb
ang-sb rd, predy frm lt gy
mtx sup clus, arg cmt, tr
pp pyr, rr pyr nod

10900-11000 SST
(100%): gyshbn-lt gy, dk
gy ip, p-mod srtd, vf-f, sb
ang-sb rd, predy frm lt gy
mtx sup clus, arg cmt, tr
pp pyr, rr pyr nod





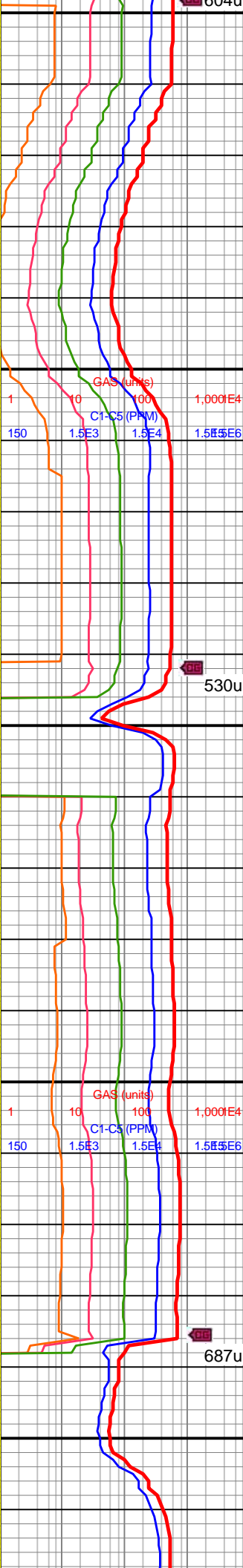
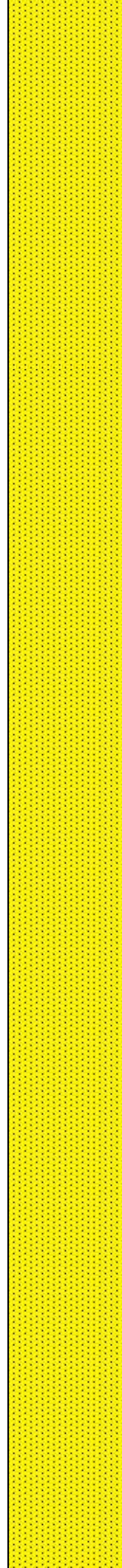
MD: 11,080'
INC: 88.9°
AZM: 358.93°
TVD: 7,393.74'
VS: 3,012.83'

MW IN: 10.4
VIS IN: 55
MW OUT: 10.4
VIS OUT: 50

MD: 11,175'
INC: 90.13°
AZM: 2.27°
TVD: 7,394.55'
VS: 3,107.74'

WOB: 34.4klbs
RPM: 70
SPM: 197
SPP: 5,660psi

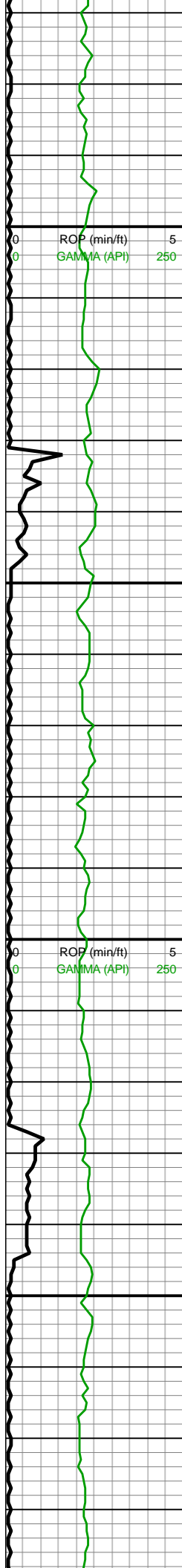
MD: 11,269'
INC: 90.18°



11000-11100 SST
(100%): gyshbn-lt gy, dk
gy ip, p-mod srtd, vf-f, sb
ang-sb rd, predy frm lt gy
mtx sup clus, arg cmt, tr
pp pyr, rr pyr nod

11100-11200 SST
(100%): gyshbn-med brn,
mot lt gy, occ dk gy, vf-f gr,
mod srtd, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc, tr dissn pyr
cls





AZM: 2.45°
TVD: 7,394.29'
VS: 3,201.74'

ROP (min/ft) 0 5
GAMMA (API) 0 250

ROP (min/ft) 0 5
GAMMA (API) 0 250

MD: 11,364'
INC: 92.24°
AZM: 3.24°
TVD: 7,392.29'
VS: 3,296.71'

WOB: 32.6klbs
RPM: 70
SPM: 196
SPP: 5,628psi

MW IN: 10.5
VIS IN: 55
MW OUT: 10.5
VIS OUT: 51

MD: 11,458'
INC: 90.97°
AZM: 0.34°
TVD: 7,389.65'
VS: 3,390.65'

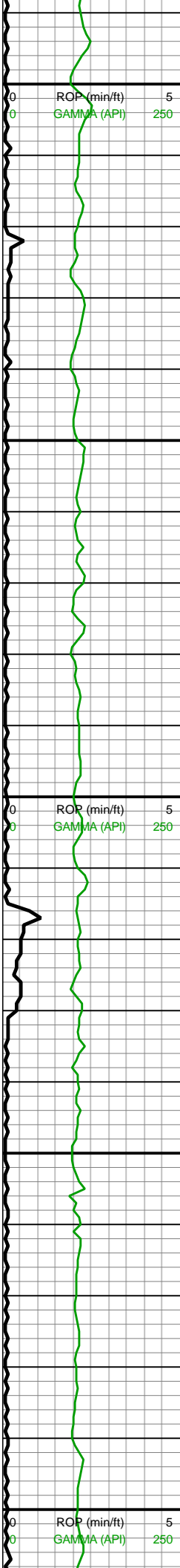


11200-11300 SST
(100%): med-lt gy bn, occ
dk gy, mod srted, vf-f sb
ang-sb rd, sb frm-frm,
lt-med gy mtx sup arg ss
clus-com frm-hd sl fri,
gy-dk gy gr sup ss clus
cons wi silc cmt, l-no calc

11300-11400 SST
(100%): med-lt gy bn, occ
dk gy, mod srted, vf-f sb
ang-sb rd, sb frm-frm,
lt-med gy mtx sup arg ss
clus-com frm-hd sl fri,
gy-dk gy gr sup ss clus
cons wi silc cmt, l-no calc

11400-11500 SST
(100%): med-lt gy bn, occ
dk gy, mod srted, vf-f sb
ang-sb rd, sb frm-frm,



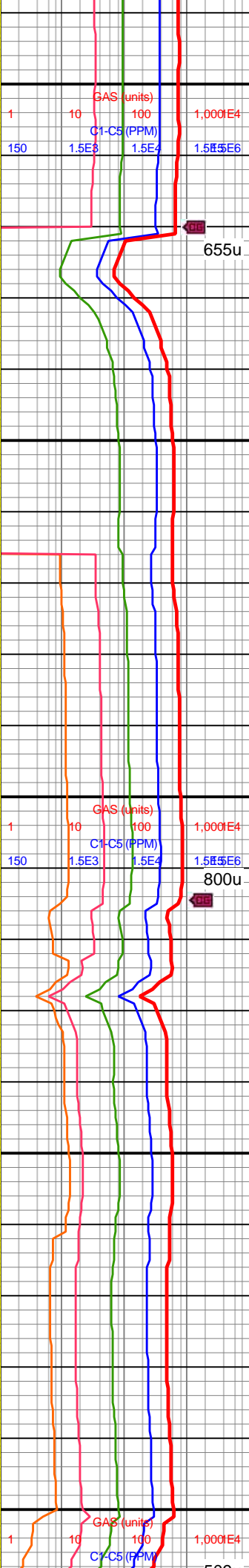
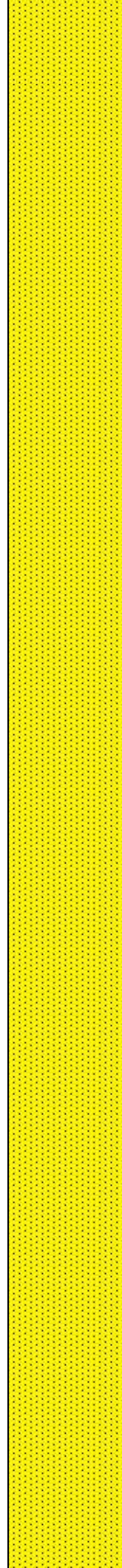


11,490
11,500
11,510
11,520
11,530
11,540
11,550
11,560
11,570
11,580
11,590
11,600
11,610
11,620
11,630
11,640
11,650
11,660
11,670
11,680
11,690
11,700

MW IN: 10.5
VIS IN: 54
MW OUT: 10.5
VIS OUT: 49

WOB: 33.3klbs
RPM: 70
SPM: 196
SPP: 5,597psi

MD: 11,647'
INC: 90.44°
AZM: 358.41°
TVD: 7,386.82'
VS: 3,579.41'

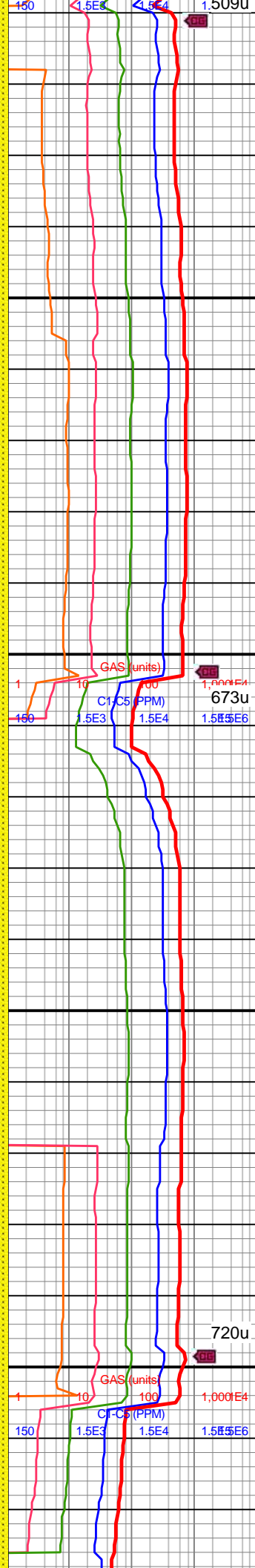
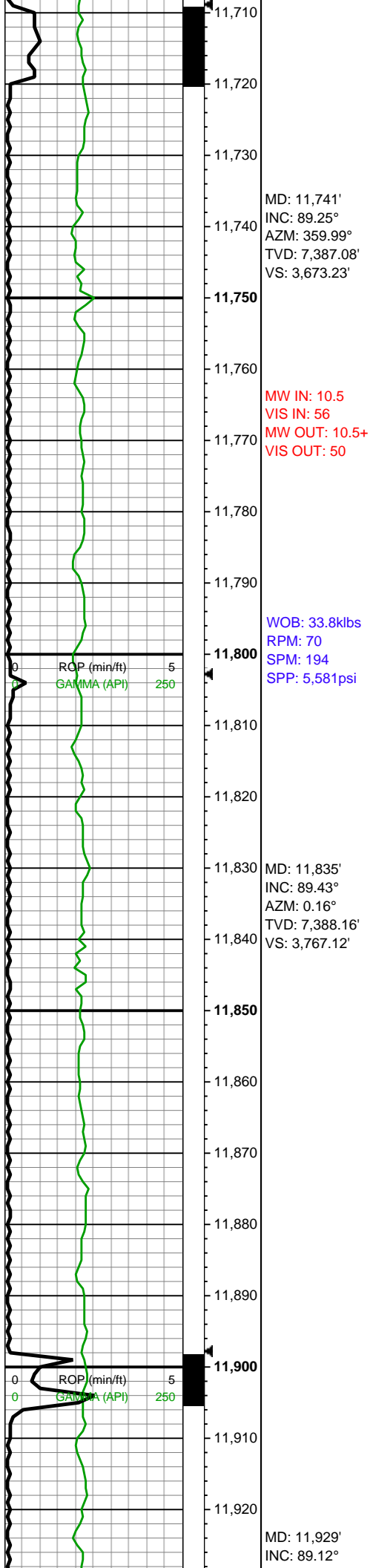


lt-med gy mtx sup arg ss
clus-com frm-hd sl fri,
gy-dk gy gr sup ss clus
cons wi silc cmt, l-no calc

11500-11600 SS (100%):
bnshgy-med brn, mot lt
brn, vf-f gr, slt ip, sb
rnd-sb ang, mtx-gr sup
clus, silc/arg cmt, tr
dissm pyr cls, non-sl calc

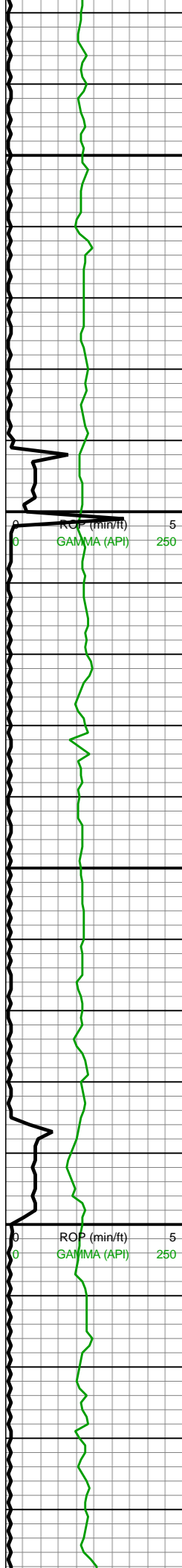
11600-11700 SS (100%):
bnshgy-med brn, mot lt
brn, vf-f gr, slt ip, sb
rnd-sb ang, mtx-gr sup
clus, silc/arg cmt, tr
dissm pyr cls, non-sl calc





11700-11800 SST
(100%): gyshbn-lt gy, dk
gy ip, p-mod srtd, vf-f, sb
ang-sb rd, predy frm lt gy
mtx sup clus, arg cmt, tr
pp pyr, rr pyr nod

11800-11900 SST
(100%): predy gyshbn,
gy-lt gy, occ dk gy, mod
srtd, vf-f sb ang-sb rd sd
grs, sb frm-frm, lt gy mtx
sup arg ss clus-com
frm-hd sl fri, silc cmt,
gy-dk gy gr sup ss clus,
l-no calc



AZM: 0.08°
TVD: 7,389.35'
VS: 3,861.02'

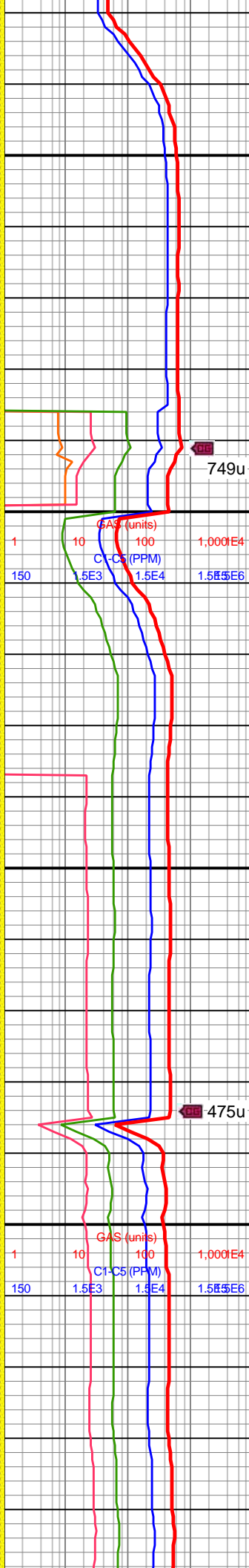
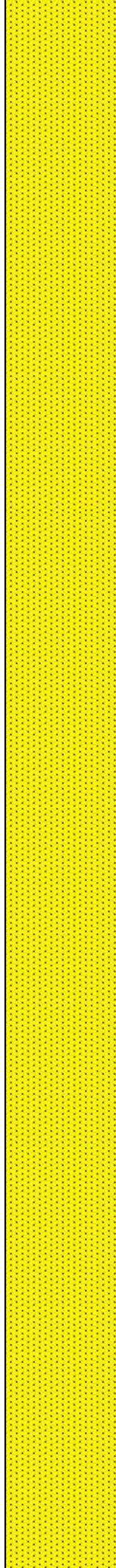
MW IN: 10.5
VIS IN: 56
MW OUT: 10.5
VIS OUT: 51

WOB: 62.6klbs
RPM: 0
SPM: 192
SPP: 5,142psi

MD: 12,023'
INC: 89.34°
AZM: 359.37°
TVD: 7,390.61'
VS: 3,954.88'

MW IN: 10.5
VIS IN: 55
MW OUT: 10.5+
VIS OUT: 50

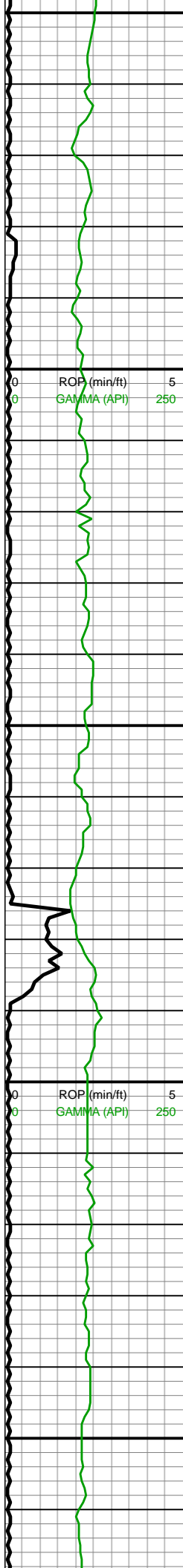
MD: 12,118'
INC: 88.15°
AZM: 358.14°
TVD: 7,392.69'
VS: 4,049.63'



11900-12000 SST
(100%): predy gyshbn,
gy-lt gy, occ dk gy, mod
srted, vf-f sb ang-sb rd sd
grs, sb frm-frm, lt gy mtx
sup arg ss clus-com
frm-hd sl fri, silc cmt,
gy-dk gy gr sup ss clus,
l-no calc

12000-12100 SST
(100%): med-lt gy bbn, occ
dk gy, mod srted, vf-f sb
ang-sb rd, sb frm-frm,
lt-med gy mtx sup arg ss
clus, com frm-hd sl fri,
gy-dk gy gr sup ss clus
cons wi silc cmt, l-no calc





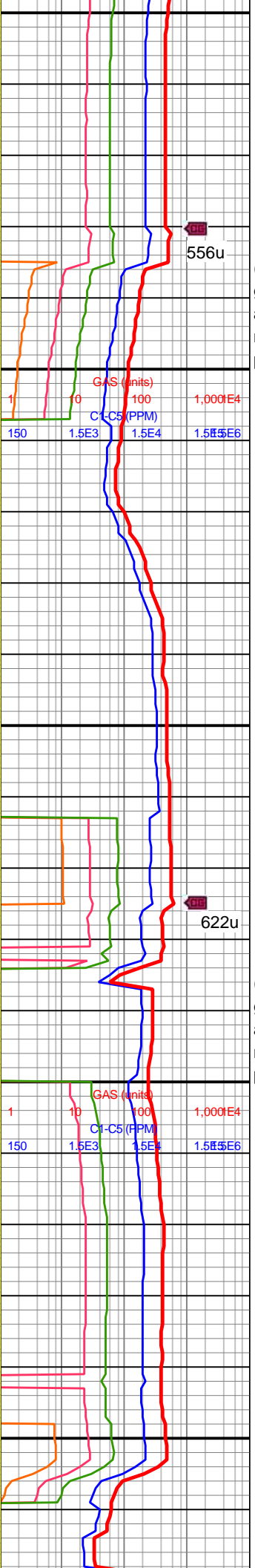
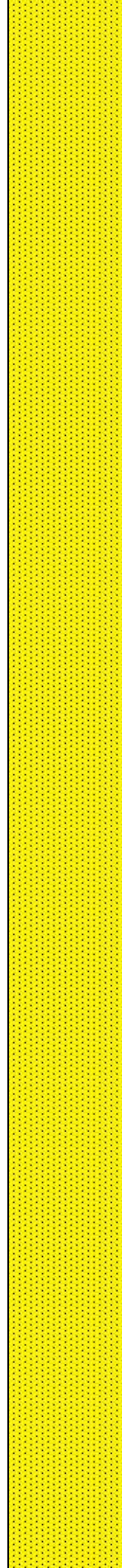
12,150
12,160
12,170
12,180
12,190
12,200
12,210
12,220
12,230
12,240
12,250
12,260
12,270
12,280
12,290
12,300
12,310
12,320
12,330
12,340
12,350
12,360

WOB: 35.3klbs
RPM: 69
SPM: 193
SPP: 5,712psi

MD: 12,212'
INC: 88.15°
AZM: 359.02°
TVD: 7,395.73'
VS: 4,143.34'

MD: 12,306'
INC: 88.99°
AZM: 358.32°
TVD: 7,398.07'
VS: 4,237.07'

MW IN: 10.5
VIS IN: 56
MW OUT: 10.5
VIS OUT: 50



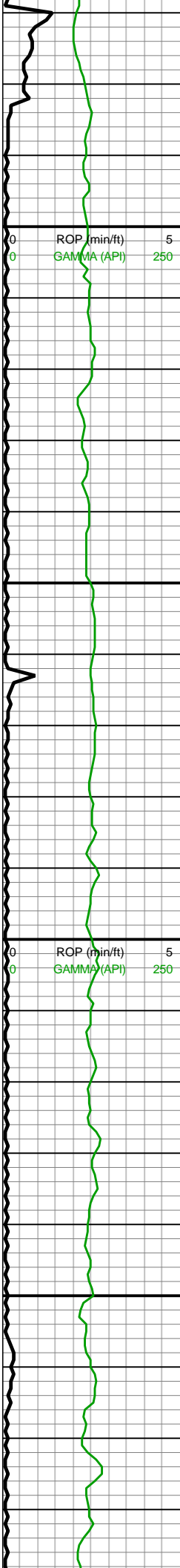
556u

12100-12200 SST
(100%): gyshbn-lt gy, dk
gy ip, p-mod srtd, vf-f, sb
ang-sb rd, predy frm lt gy
mtx sup clus, arg cmt, tr
pp pyr, rr pyr nod

622u

12200-12300 SST
(100%): gyshbn-lt gy, dk
gy ip, p-mod srtd, vf-f, sb
ang-sb rd, predy frm lt gy
mtx sup clus, arg cmt, tr
pp pyr, tr pyr nod





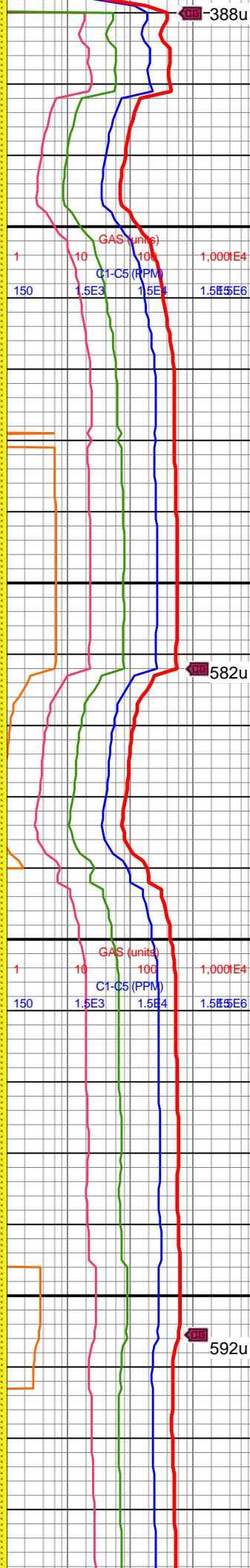
WOB: 31.9klbs
RPM: 69
SPM: 190
SPP: 5,551psi

MD: 12,400'
INC: 91.14°
AZM: 359.73°
TVD: 7,397.97'
VS: 4,330.87'

MD: 12,494'
INC: 91.23°
AZM: 359.2°
TVD: 7,396.02'
VS: 4,424.7'

MW IN: 10.4+
VIS IN: 56
MW OUT: 10.5+
VIS OUT: 50

MD: 12,589'
INC: 91.23°
AZM: 359.55°
TVD: 7,393.98'

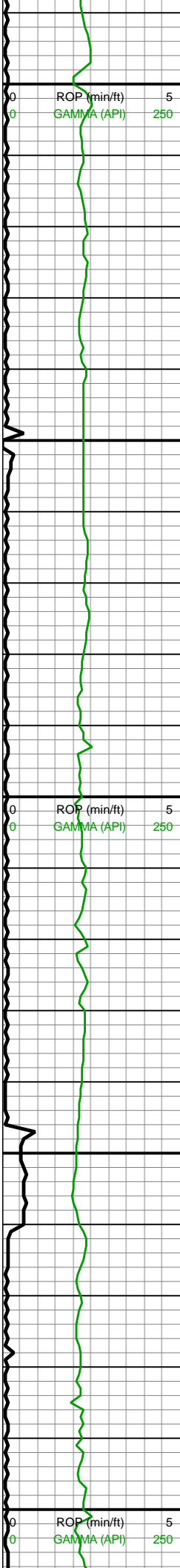


12300-12400 SST
(100%): pred med
gyshbn, occ lt gy-lt brn,
sme red-brn, frm-v frm,
blky, pred mod-w cons,
gr sup, cons wi silc cmt,
non calc, vf-f grnd, occ
grdg to slt, com micmica,
tr imbd pyr, scat sh frags

12400-12500 SST
(100%): pred med
gyshbn, occ lt gy-lt brn,
sme red-brn, frm-v frm,
blky, pred mod-w cons,
gr sup, cons wi silc cmt,
non calc, vf-f grnd, occ
grdg to slt, com micmica,
tr imbd pyr, scat sh frags

12500-12600 SST
(100%): gyshbn-med brn,
mot lt gy, occ dk gy, vf-f gr





VD: 7,393.96'
VS: 4,519.52'

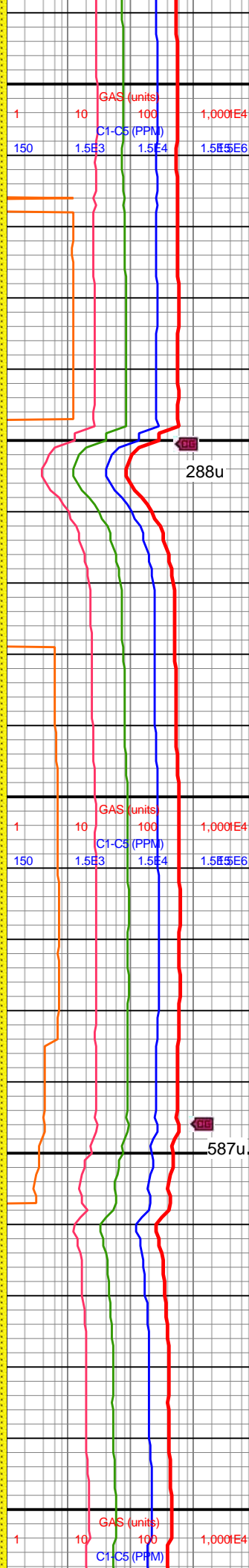
WOB: 35.6klbs
RPM: 69
SPM: 190
SPP: 5,609psi

MD: 12,684'
INC: 91.67°
AZM: 0.43°
TVD: 7,391.58'
VS: 4,614.38'

MW IN: 10.5
VIS IN: 56
MW OUT: 10.5+
VIS OUT: 52

MD: 12,778'
INC: 91.85°
AZM: 359.37°
TVD: 7,388.69'
VS: 4,708.22'

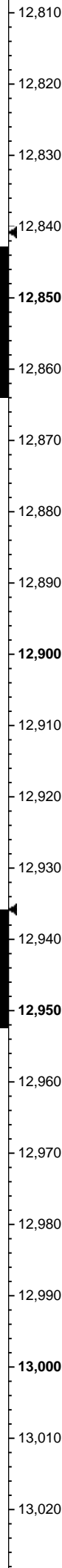
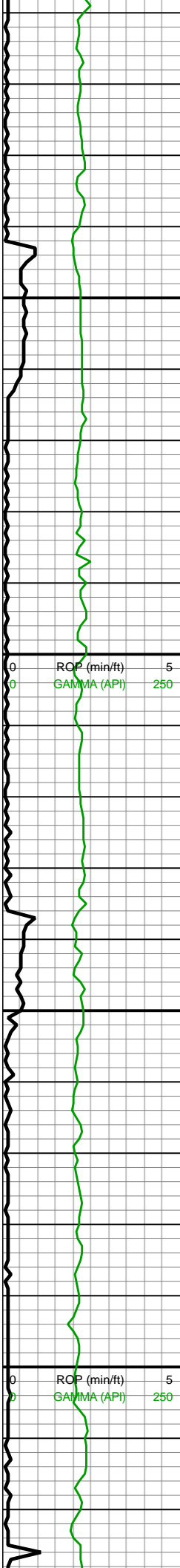
WOB: 34.8klbs
RPM: 69
SPM: 188
SPP: 5,695psi



mod srted, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc, tr pyr nod

12600-12700 SST
(100%): gyshbn-med brn,
mot lt gy, occ dk gy, vf-f gr,
mod srted, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc

12700-12800 SST
(100%): gyshbn-med brn,
mot lt gy, occ dk gy, vf-f gr,
mod srted, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc

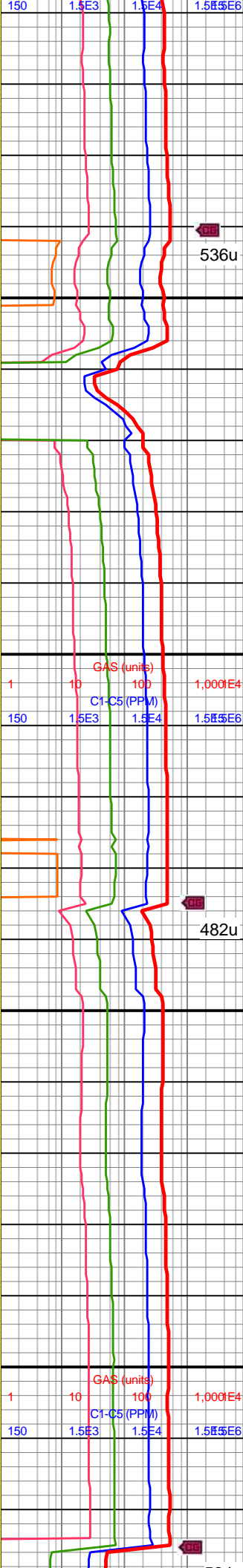
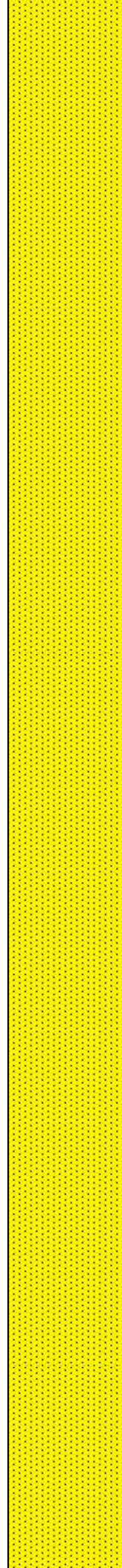


MD: 12,873'
INC: 90.62°
AZM: 358.49°
TVD: 7,386.65'
VS: 4,802.99'

MW IN: 10.5+
VIS IN: 57
MW OUT: 10.6
VIS OUT: 52

MD: 12,967'
INC: 88.73°
AZM: 356.74°
TVD: 7,387.18'
VS: 4,896.61'

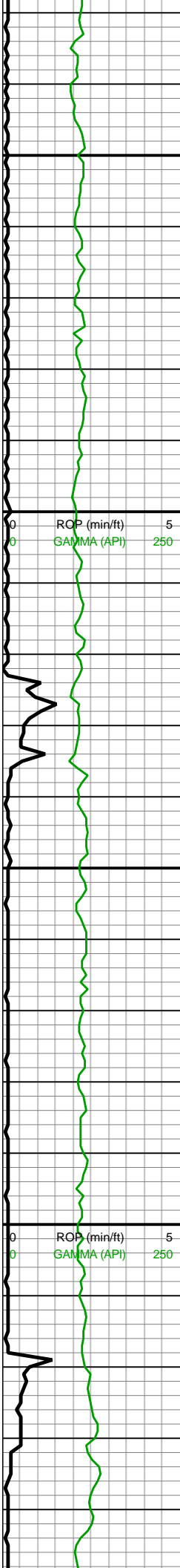
WOB: 23.4klbs
RPM: 70
SPM: 188
SPP: 5,491psi



12800-12900 SST
(100%): gyshbn-med brn,
mot lt gy, occ dk gy, vf-f gr,
mod srtd, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc

12900-13000 SST
(100%): gyshbn-med brn,
mot lt gy, occ dk gy, vf-f gr,
mod srtd, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc





13,030
13,040
13,050
13,060
13,070
13,080
13,090
13,100
13,110
13,120
13,130
13,140
13,150
13,160
13,170
13,180
13,190
13,200
13,210
13,220
13,230
13,240

Note: C/O ROT Head

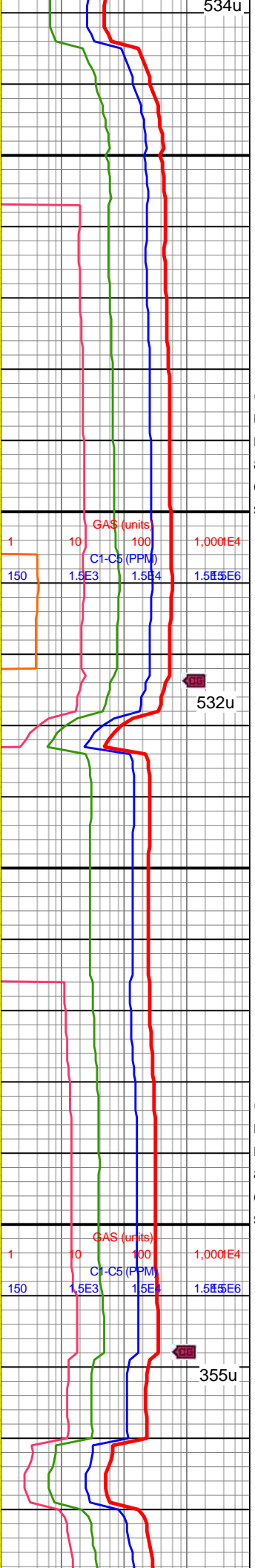
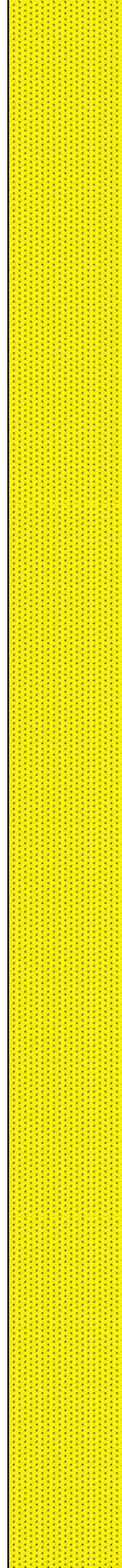
MD: 13,062'
INC: 88.64°
AZM: 356.74°
TVD: 7,389.36'
VS: 4,991.07'

MW IN: 10.5+
VIS IN: 56
MW OUT: 10.6
VIS OUT: 52

MD: 13,156'
INC: 88.81°
AZM: 357.97°
TVD: 7,391.45'
VS: 5,084.63'

WOB: 36.9klbs
RPM: 70
SPM: 188
SPP: 5,631psi

MD: 13,250'
INC: 88.11°



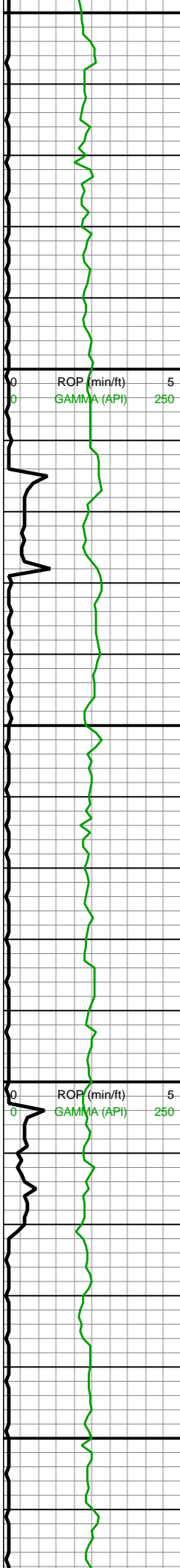
13000-13100 SST
(100%): gyshbn-med brn, mot lt gy, occ dk gy, vf-f gr, mod srtd, sb frm-frm, sb ang-sb rd, mtx sup arg clus, silc cmt, arg ip, sl-non calc

13100-13200 SST
(100%): gyshbn-med brn, mot lt gy, occ dk gy, vf-f gr, mod srtd, sb frm-frm, sb ang-sb rd, mtx sup arg clus, silc cmt, arg ip, sl-non calc



534u
532u

355u



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

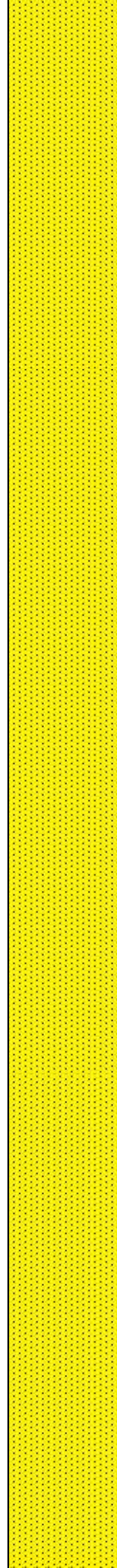
INC: 88.11°
AZM: 358.76°
TVD: 7,393.98'
VS: 5,178.33'

MD: 13,345'
INC: 88.33°
AZM: 359.37°
TVD: 7,396.93'
VS: 5,273.09'

MW IN: 10.6
VIS IN: 56
MW OUT: 10.6+
VIS OUT: 52

WOB: 30.5klbs
RPM: 70
SPM: 185
SPP: 5,579psi

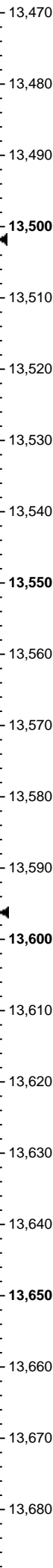
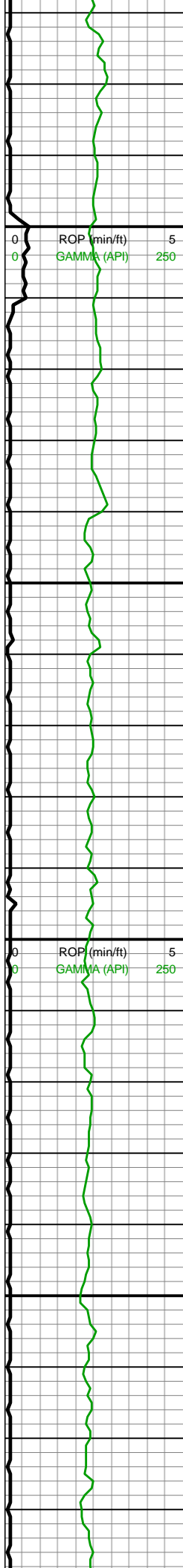
MD: 13,439'
INC: 89.34°
AZM: 0.34°
TVD: 7,398.84'
VS: 5,366.95'



13200-13300 SST
(100%): gyshbn-med brn,
mot lt gy, occ dk gy, vf-f gr,
mod srtd, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc, tr sh frags

13300-13400 SST
(100%): gyshbn-med brn,
mot lt gy, occ dk gy, vf-f gr,
mod srtd, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc, tr sh frags



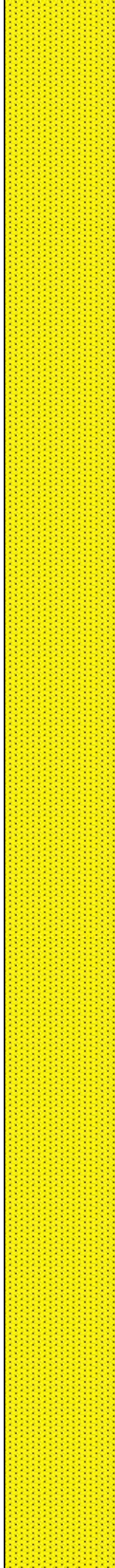


MW IN: 10.6
VIS IN: 57
MW OUT: 10.6
VIS OUT: 53

MD: 13,534'
INC: 90.57°
AZM: 1.66°
TVD: 7,398.91'
VS: 5,461.9'

WOB: 18.9klbs
RPM: 70
SPM: 188
SPP: 5,365psi

MD: 13,628'
INC: 90.66°
AZM: 1.75°
TVD: 7,397.9'
VS: 5,555.88'



13400-13500 SST
(100%): gyshbn-med brn,
sme dk gy, vf-f gr, mod
srted, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc, rr sh frags

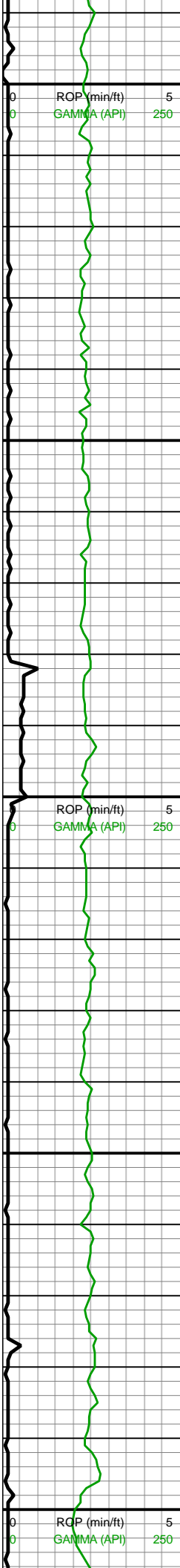


13500-13600 SST
(100%): gyshbn-med brn,
sme dk gy, vf-f gr, mod
srted, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc, rr sh frags



13600-13700 SST
(100%): gyshbn-med brn,
sme dk gy, vf-f gr, mod





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

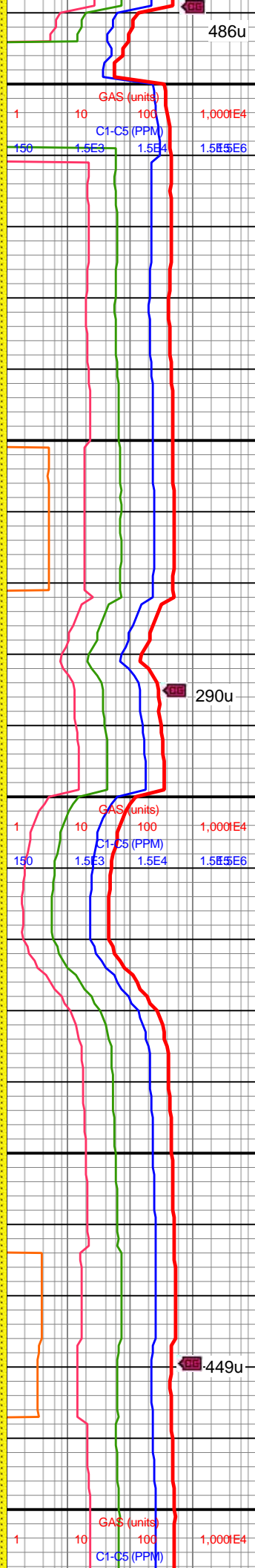
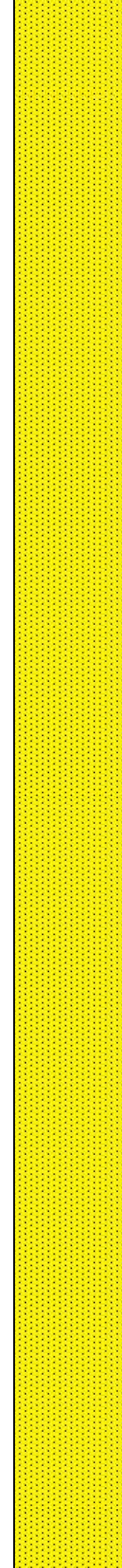
MD: 13,723'
INC: 91.01°
AZM: 2.8°
TVD: 7,396.52'
VS: 5,650.87'

MW IN: 10.6
VIS IN: 55
MW OUT: 10.6
VIS OUT: 51

WOB: 54.6klbs
RPM: 22
SPM: 187
SPP: 5,460psi

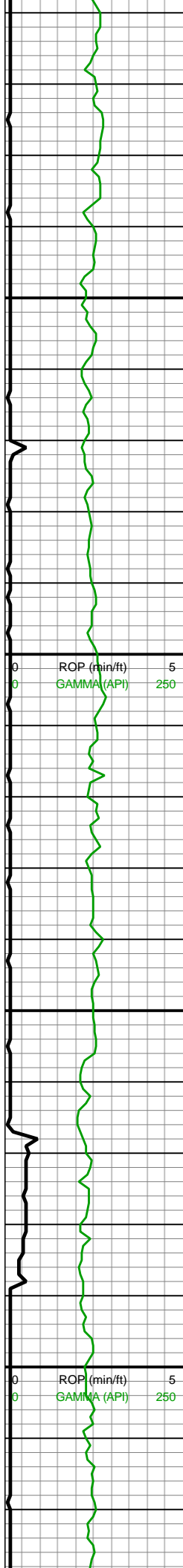
MD: 13,817'
INC: 90.97°
AZM: 1.04°
TVD: 7,394.9'
VS: 5,744.84'

MD: 13,911'



486u
srtd, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc
13600-13700 SST
(100%): gyshbn-med brn,
mot lt gy, sme dk gy, vf-f
gr, mod srtd, sb frm-frm,
sb ang-sb rd, mtx sup
arg clus, silc cmt, arg ip,
sl-non calc
290u
13800-13900 SST
(100%): gyshbn-med brn,
mot lt gy, sme dk gy, vf-f
gr, mod srtd, sb frm-frm,
sb ang-sb rd, mtx sup
arg clus, silc cmt, arg ip,
sl-non calc
449u





INC: 91.41°
AZM: 0.69°
TVD: 7,392.94'
VS: 5,838.77'

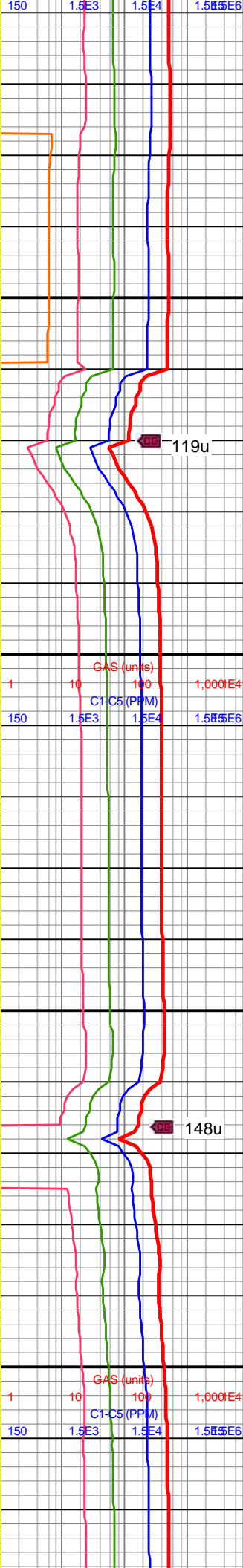
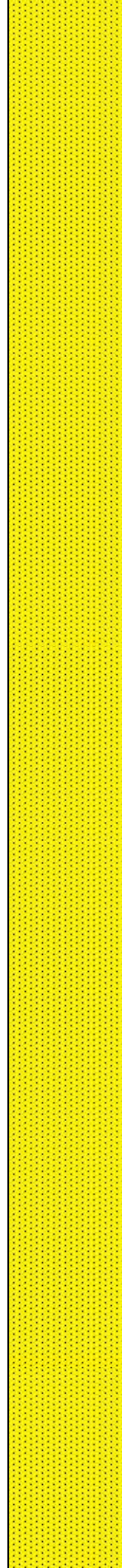
09/06/2018

WOB: 24.1klbs
RPM: 70
SPM: 185
SPP: 5,685psi

MD: 14,006'
INC: 91.67°
AZM: 1.83°
TVD: 7,390.39'
VS: 5,933.71'

MW IN: 10.6
VIS IN: 55
MW OUT: 10.6+
VIS OUT: 51

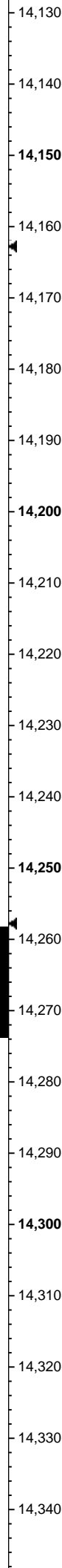
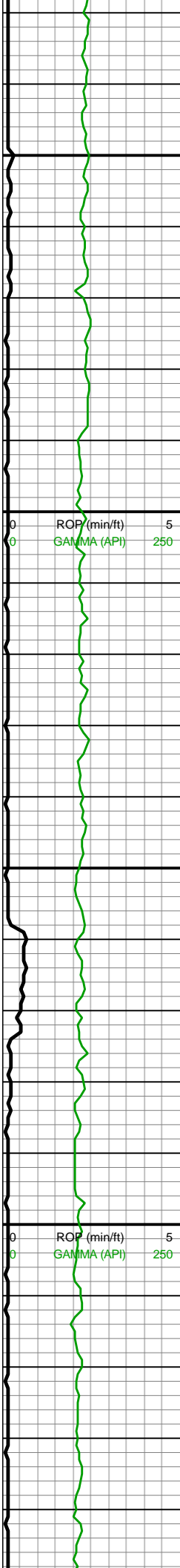
MD: 14,100'
INC: 91.1°
AZM: 358.58°
TVD: 7,388.12'
VS: 6,027.58'



13900-14000 SST
(100%): gyshbn-med brn,
mot lt gy, sme dk gy, vf-f
gr, mod srtd, sb frm-frm,
sb ang-sb rd, mtx sup
arg clus, silc cmt, arg ip,
sl-non calc, tr sh frags

14000-14100 SST
(100%): gyshbn-med brn,
mot lt gy, sme dk gy, vf-f
gr, mod srtd, sb frm-frm,
sb ang-sb rd, mtx sup
arg clus, silc cmt, arg ip,
sl-non calc, tr sh frags



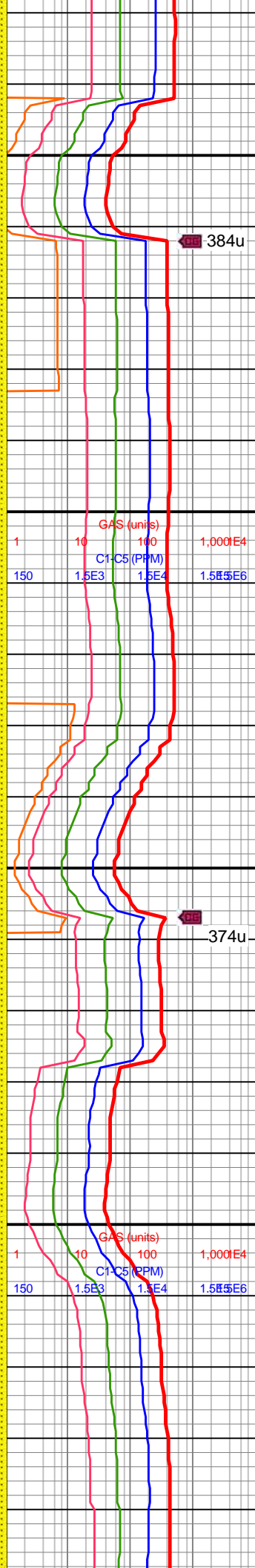
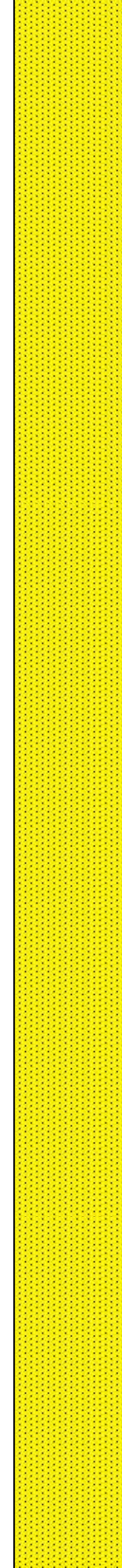


MW IN: 10.6+
VIS IN: 56
MW OUT: 10.6+
VIS OUT: 52

MD: 14,195'
INC: 91.8°
AZM: 359.37°
TVD: 7,385.71'
VS: 6,122.34'

WOB: 20.4klbs
RPM: 70
SPM: 185
SPP: 5,606psi

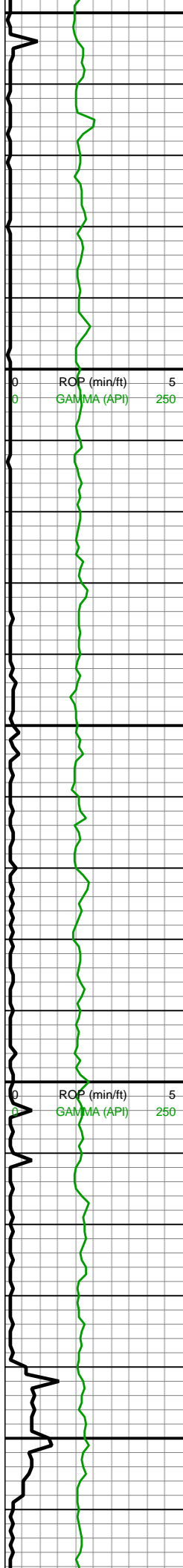
MD: 14,290'
INC: 90.62°
AZM: 358.41°
TVD: 7,383.71'
VS: 6,217.11'



14100-14200 SST
(100%): gyshbn-med brn,
mot lt gy, sme dk gy, vf-f
gr, mod srtd, sb frm-frm,
sb ang-sb rd, mtx sup
arg clus, silc cmt, arg ip,
sl-non calc, sme sh frags

14200-14300 SST
(100%): gyshbn-med brn,
mot lt gy, sme dk gy, vf-f
gr, mod srtd, sb frm-frm,
sb ang-sb rd, mtx sup
arg clus, silc cmt, arg ip,
sl-non calc, sme sh frags





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

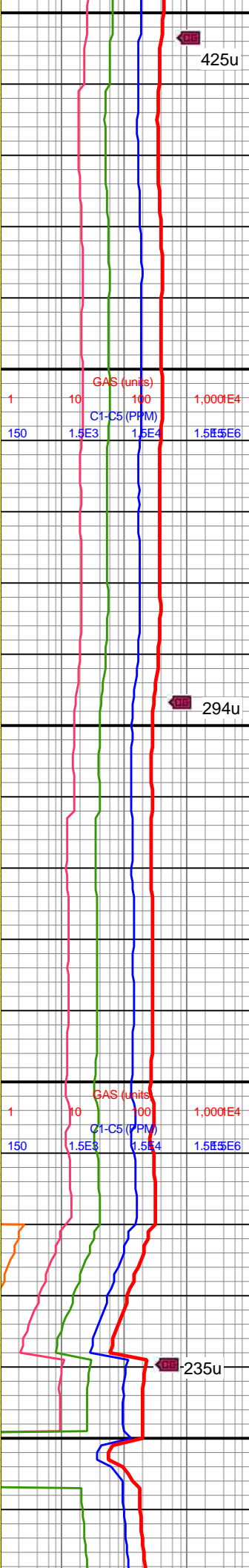
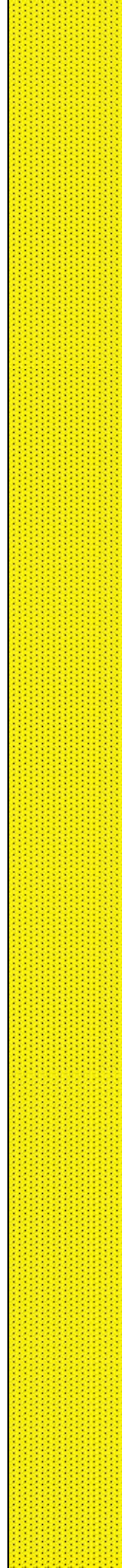
MW IN: 10.6+
VIS IN: 58
MW OUT: 10.7
VIS OUT: 54

MD: 14,384'
INC: 90.7°
AZM: 357.62°
TVD: 7,382.62'
VS: 6,310.79'

WOB: 20.3klbs
RPM: 70
SPM: 184
SPP: 5,682psi

MD: 14,478'
INC: 88.37°
AZM: 354.28°
TVD: 7,383.39'
VS: 6,404.11'

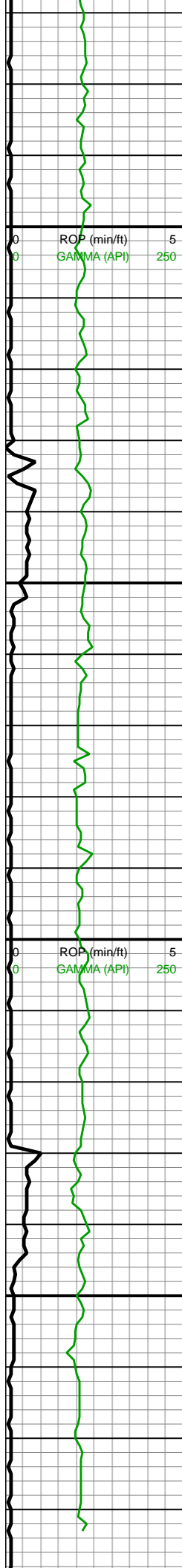
MW IN: 10.6+
VIS IN: 58
MW OUT: 10.7
VIS OUT: 55



14300-14400 SST
(100%): gyshbn, sme dk
gy, vf-f gr, mod srted, sb
frm-frm, sb ang-sb rd,
mtx sup arg clus, silc
cmt, arg ip, abnt free qtz,
sl-non calc, tr sh frags

14400-14500 SST
(100%): gyshbn, sme dk
gy, vf-f gr, mod srted, sb
frm-frm, sb ang-sb rd,
mtx sup arg clus, silc
cmt, arg ip, abnt free qtz,
sl-non calc, tr sh frags





MD: 14,573'
INC: 88.55°
AZM: 353.13°
TVD: 7,385.94'
VS: 6,497.9'

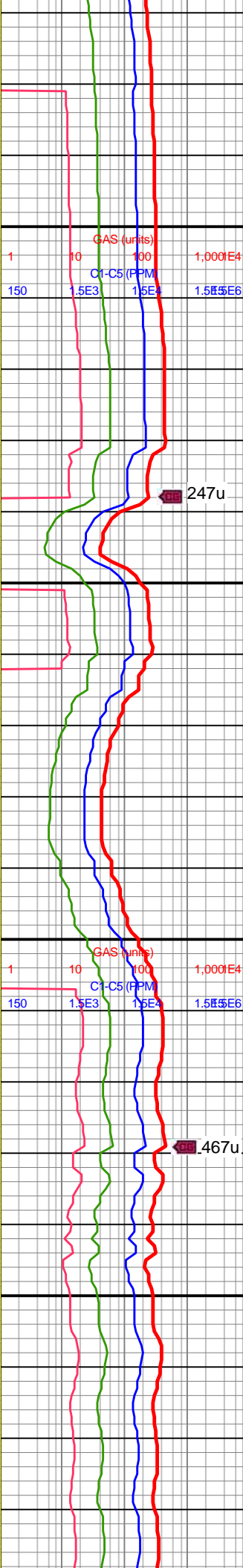
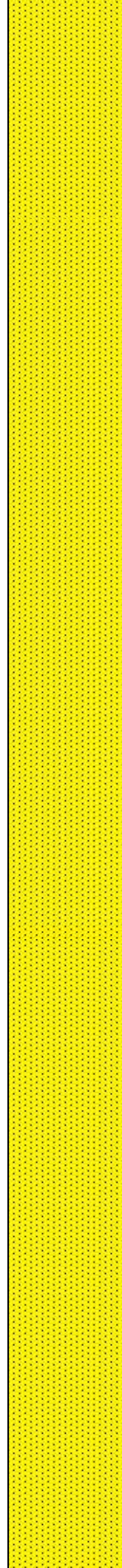
WOB: 23.2klbs
RPM: 70
SPM: 180
SPP: 5,557psi

MW IN: 10.5+
VIS IN: 58
MW OUT: 10.6+
VIS OUT: 55

MD: 14,667'
INC: 89.56°
AZM: 354.72°
TVD: 7,387.49'
VS: 6,590.78'

MD: 14,762'
INC: 90.13°
AZM: 355.68°
TVD: 7,387.75'
VS: 6,684.97'

MD: 14,778'
INC: 90.31°
AZM: 356.82°
TVD: 7,387.69'
VS: 6,700.87'

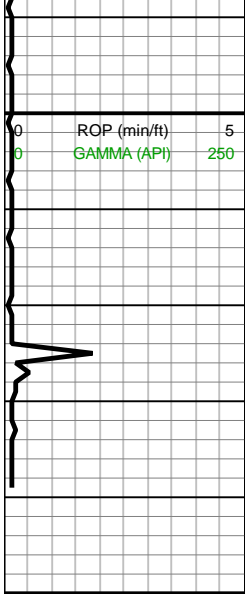


14500-14600 SST
(100%): gyshbn-med brn,
mot lt gy, sme dk gy, vf-f
gr, mod srtd, sb frm-frm,
sb ang-sb rd, mtx sup
arg clus, silc cmt, arg ip,
sl-non calc, rr free qtz, tr
sh frags

14600-14700 SST
(100%): gyshbn-med brn,
mot lt gy, sme dk gy, vf-f
gr, mod srtd, sb frm-frm,
sb ang-sb rd, mtx sup
arg clus, silc cmt, arg ip,
sl-non calc, tr sh frags

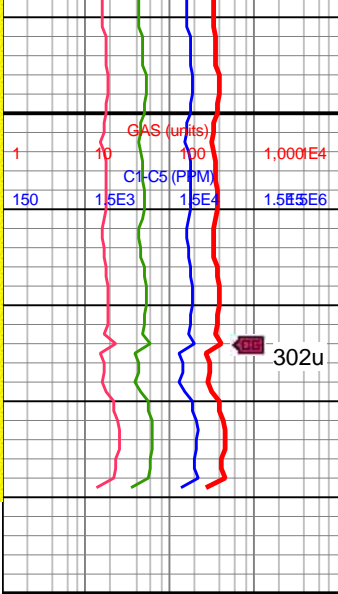
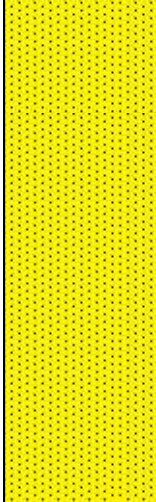
14700-14800 SST
(100%): gyshbn-med brn,
mot lt gy, sme dk gy, vf-f





14,790
14,800
14,810
14,820
14,830
14,840
14,850

WOB: 25.5klbs
RPM: 70
SPM: 180
SPP: 5,578psi
MW IN: 10.7
VIS IN: 55
MW OUT: 10.7
VIS OUT: 53
Projection to Bit:
MD: 14,840'
INC: 90.31°
AZM: 356.82°
TVD: 7,387.35'
VS: 6,762.54'
Total Depth of
14,840' MD
Reached on
09/06/2018 @
0500 MST



gr, mod srted, sb frm-frm,
sb ang-sb rd, mtx sup
arg clus, silc cmt, arg ip,
sl-non calc, tr sh frags
14800-14840 SST
(100%): gyshbn-med brn,
mot lt gy, sme dk gy, vf-f
gr, mod srted, sb frm-frm,
sb ang-sb rd, mtx sup
arg clus, silc cmt, arg ip,
sl-non calc, rr free qtz, tr
sh frags

