



Scale: 5" / 100'
Measured Depth Log

Well Name Davis 1P-9H-G266

Location Sec. 4 T2N R66W

State Colorado

County Weld

Country USA

Rig Number Ensign 153

API Number 05123465030000

AFE # 16191034

Geographic Region Rockies

Field Wattenberg

Spud Date 6/30/2018

Drilling Completed 7/4/2018

Surface Coordinates Lat/Long: 40.154297/-104.777999

SHL: Sec: 4 Twp: 2N 66W
Footage: 2021 FSL 1458 FEL

Bottom Hole Coordinates Proposed BHL: Sec: 4 Twp: 2N 66W
Latitude: 40.172955, Longitude: -104.787139

Ground Elevation 4,917'

K.B. Elevation 4,940'

Logged Interval 6,500' **To** 15,305'

Total Depth 15,305'

Formation Codell

Type of Drilling Fluid Synthetic Oil Based Mud

Operator

Company Crestone Peak Resources

Address 370 17th Street #2170
Denver, CO 80202



CRESTONE PEAK
RESOURCES

Geologist

Zone Color Coding

Geologist

Name John Ready

Company Crestone Peak Resources

Address 370 17th Street #2170
Denver, CO 80202



CRESTONE PEAK
RESOURCES

Zone Color Coding



Oil



Condensate



Gas



Note



Core



Pressure



Error



Water



Seal

Other

Loggers: Heather Davis / Byron Pitulski

Services Provided: 2-Man Mudlogging / Geosteering

Equipment: ML-567

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

Job #: 1327RK1806

Start Date 6/30/2018

Release Date: 07/05/2018

Rock Types

? UNKNOWN

ANHYDRITE

GYPSUM

SALT

SIDERITE or LIMONITE

LIMESTONE

DOLOMITE

CHERT

COAL

MARLSTONE

CHALK

SHALE

SHALE GRAY

SHALE COLORED

SILTSTONE

SANDSTONE

CONGLOMERATE

BRECCIA

TILL

BENTONITE

TUFF

IGNEOUS

METAMORPHIC

CEMENT

Accessories

Fossils

ALGAE
AMPHIPORA
BELEMNITE
BIOCLASTIC
BRACHIOPOD
BRYOZOA
CEPHALOPOD
CORAL
CRINOID
ECHINOID
FISH
FORAMINIFERA

F FOSSIL

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

Minerals

ANHYDRITIC

ARGILLACEOUS

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

GLAUCONITE

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

Stringer

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

Other Symbols

Oil Show

- DEAD
- EVEN
- QUESTIONABLE
- SPOTTED STAINING

Porosity

- E EARTHY
- F FENESTRAL
- F FRACTURE
- X INTERCRYSTALLINE
- Q INTEROOLITIC
- M 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

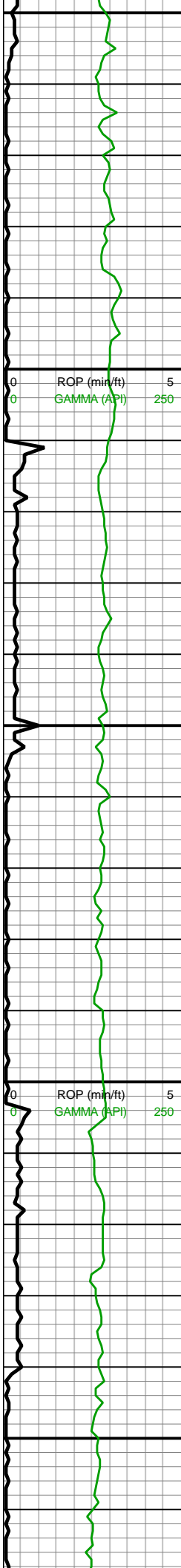
- BOUNDSTONE
- CHALKY
- CRYPTOXLN
- E EARTHY
- F FINELYXLN
- GRAINSTONE

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

Sorting

- M MODERATE
- P POOR
- W WELL

<div>ROP</div> <div>ROP</div> <div>GAMMA</div>		Slide/Rotate	Depth Labels	Notes	% Lith	<div>Total Gas</div> <div>GAS</div> <div>C1</div> <div>C2</div> <div>C3</div> <div>C4</div> <div>C5</div>	Lithology Descriptions	Images
<div>Crestone Peak Resources Davis 1P-9H-G266</div> <div>9 5/8" Surface Casing @ 2,182'</div> <div>Spud Date: 06/30/2018</div> <div>2 man Logging Began: 06/30/2018 @ 6,500' MD</div> <div>All Depths Correspond to Driller's Pipe Tally</div>				<div>Bit #: 1</div> <div>Type: U516M</div> <div>Size: 8 1/2</div> <div>Depth In: 2,200'</div> <div>Depth Out: 5,965'</div> <div>Hours: 8.9 hrs</div> <div>Avg Ft/Hr: 423 ' /hr</div> <div>Jets: 6x12</div> <div>S/N: 41522</div>		<div>0.50</div> <div>0.5E3</div> <div>0.5E4</div> <div>0.5E5</div> <div>0.5E6</div>		
				<div>Bit #: 2</div> <div>Type: U516M</div> <div>Size: 8 1/2</div> <div>Depth In: 5,965'</div> <div>Depth Out: 14,017'</div> <div>Hours: 44.9 hrs</div> <div>Avg Ft/Hr: 179 ' /hr</div> <div>Jets: 6x12</div> <div>S/N: 41713</div>		<div>150</div> <div>1.5E3</div> <div>1.5E4</div> <div>1.5E5</div> <div>1.5E6</div>	<div>SYSTEM CALIBRATED</div> <div>1% Methane = 100 Units</div> <div>100% Methane = 10000 Units</div>	
<div>ROP (min/ft)</div> <div>GAMMA (API)</div>				<div>MD: 6,553'</div> <div>INC: 25.4°</div> <div>AZM: 252.87°</div> <div>TVD: 6,139.84'</div> <div>VS: -19.35'</div>		<div>14u</div>		
				<div>MW IN: 9.7</div> <div>VIS IN: 60</div> <div>MW OUT: 9.8</div> <div>VIS OUT: 55</div>			<div>6500-6600 SLTY SH (60%): gyshbn-med gy, mot lt gy, frm-v frm, sb blk-y-tab, slty-sl sm tex, micmica; SLTST (40%): dk gy-med gy, tab-blky, frm-sl hrd, rgh-slty tex, v wk calc</div>	
				<div>WOB: 21.5klbs</div> <div>RPM: 70</div> <div>SPM: 176</div> <div>SPP: 4,125psi</div>		<div>1</div> <div>10</div> <div>100</div> <div>1,000</div> <div>1E4</div>		
<div>ROP (min/ft)</div> <div>GAMMA (API)</div>				<div>MD: 6,648'</div> <div>INC: 26.15°</div>		<div>150</div> <div>1.5E3</div> <div>1.5E4</div> <div>1.5E5</div> <div>1.5E6</div>	<div>13u</div>	



6,650
6,660
6,670
6,680
6,690
6,700
6,710
6,720
6,730
6,740
6,750
6,760
6,770
6,780
6,790
6,800
6,810
6,820
6,830
6,840
6,850
6,860

AZM: 251.55°
TVD: 6,225.39'
VS: -17.33'

MW IN: 9.8
VIS IN: 60
MW OUT: 9.8
VIS OUT: 54

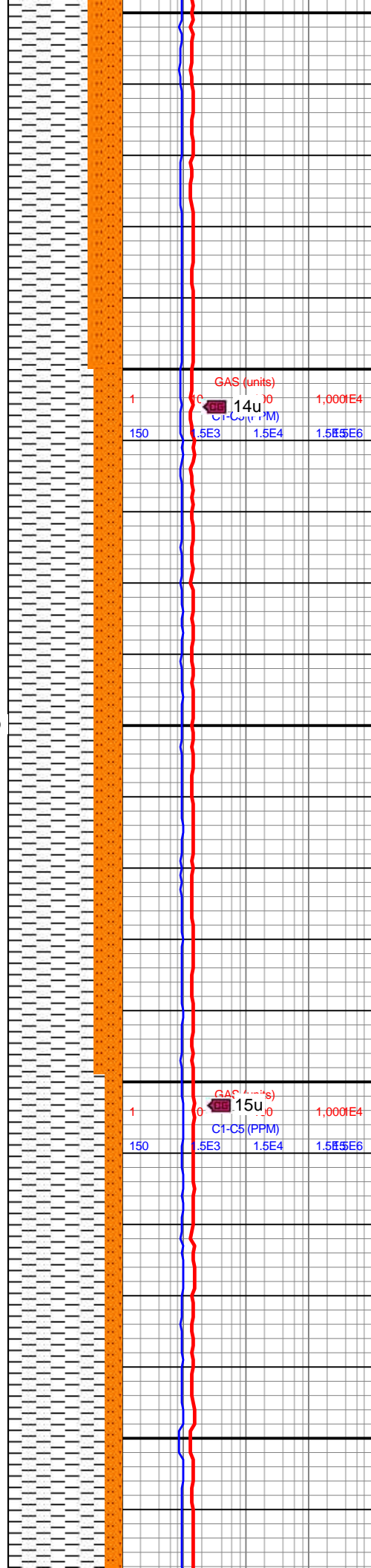


Teepee Buttes
6,748'MD/6,315'TVD

MD: 6,742'
INC: 27.2°
AZM: 252.87°
TVD: 6,309.39'
VS: -15.26'

WOB: 4.8klbs
RPM: 0
SPM: 178
SPP: 3,573psi

MD: 6,837'
INC: 28.39°
AZM: 249.18°
TVD: 6,393.43'
VS: -14.04'

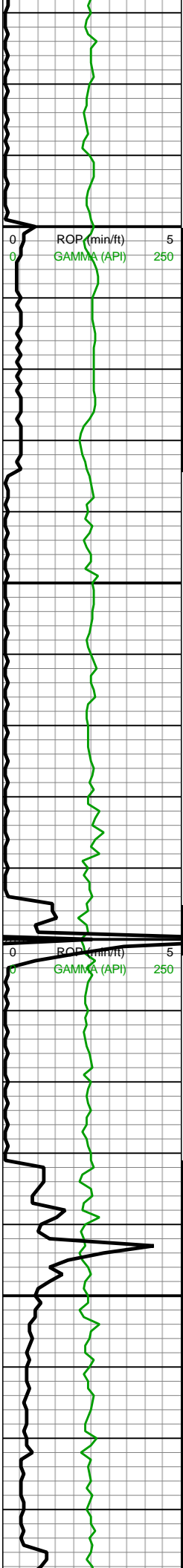


6600-6700 SLTY SH
(70%): gyshbn-med gy,
mot lt gy, frm-v frm, sb
blky-tab, slty-sl sm tex,
micmica; SLTST (30%):
dk gy-med gy, tab-blky,
frm-sl hrd, rgh-slty tex, v
wk calc



6700-6800 SLTY SH
(75%): med gy-dk gy, mot
bnshgy, sb hd-v frm, slty
tex, sb plty-sb blky, scat
micmica, non calc;
SLTST (25%): gy-dk gy,
blky, frm-sl hrd, slty-sl
abrsv tex, non calc





MD: 6,931'
INC: 28.52°
AZM: 249.09°
TVD: 6,476.07'
VS: -14.26'

MW IN: 9.8
VIS IN: 57
MW OUT: 9.8
VIS OUT: 53

MD: 6,972'
INC: 26.98°
AZM: 248.04°
TVD: 6,512.36'
VS: -14.54'

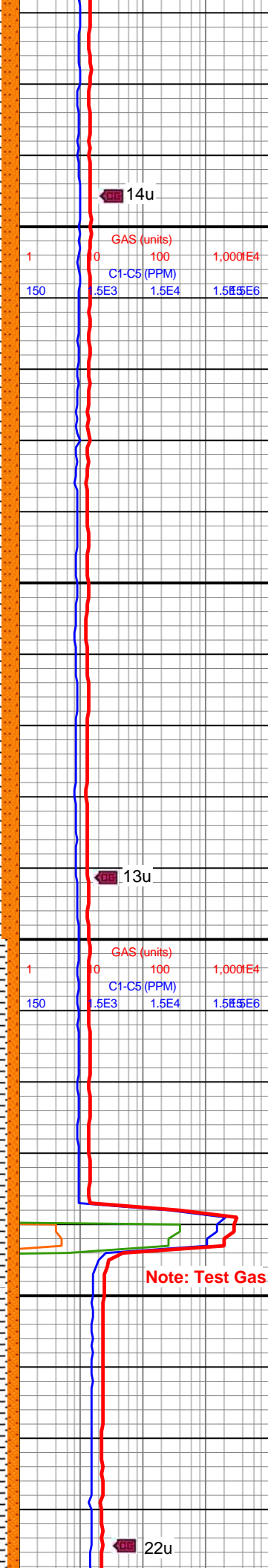
WOB: 6.4klbs
RPM: 0
SPM: 177
SPP: 3,644psi

MD: 7,025'
INC: 25.84°
AZM: 246.54°
TVD: 6,559.83'
VS: -15.4'

KOP
7,031' MD

MW IN: 9.8
VIS IN: 57
MW OUT: 9.8
VIS OUT: 54

MD: 7,072'
INC: 28.21°
AZM: 252.78°
TVD: 6,601.7'
VS: -15.26'



14u

13u

Note: Test Gas

22u

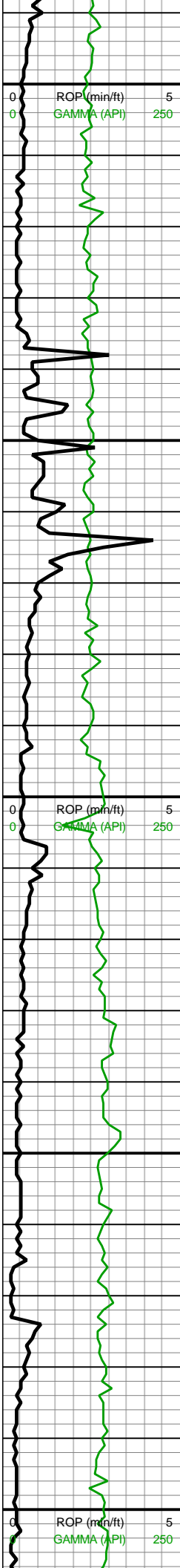
6850-6900 SLTY SH
(85%): med gy-dk gy,
gyshbn-lt gy, slty-abrsv
tex, frm-sl frm, sb plty-sb
blky, vf lam,; SLTST
(15%): med gy-dk gy,
slty-rgh tex, frm-sl hrd,
blky, non calc

6900-7000 SLTY SH
(85%): med gy-dk gy,
gyshbn-lt gy, slty-abrsv
tex, frm-sl frm, sb plty-sb
blky, vf lam,; SLTST
(15%): med gy-dk gy,
slty-rgh tex, frm-sl hrd,
blky, non calc

7000-7050 SLTY SH
(90%): med gy-dk gy,
gyshbn-lt gy, slty-abrsv
tex, frm-sl frm, sb plty-sb
blky, vf lam, med calc,
occ calc intbds; SLTST
(10%): med gy-dk gy,
slty-rgh tex, frm-sl hrd,
blky, non calc

7050-7100 SLTY SH
(90%): med gy-dk gy,
gyshbn-lt gy, slty-abrsv
tex, frm-sl frm, sb plty-sb
blky, vf lam, med calc,
occ calc intbds; SLTST





7,090
7,100
7,110
7,120
7,130
7,140
7,150
7,160
7,170
7,180
7,190
7,200
7,210
7,220
7,230
7,240
7,250
7,260
7,270
7,280
7,290
7,300

MW IN: 9.8
VIS IN: 59
MW OUT: 9.8
VIS OUT: 54

MD: 7,119'
INC: 32.48°
AZM: 258.67°
TVD: 6,642.26'
VS: -12.58'

MW IN: 9.8
VIS IN: 58
MW OUT: 9.8
VIS OUT: 54

WOB: 20.9klbs
RPM: 0
SPM: 132
SPP: 2,507psi

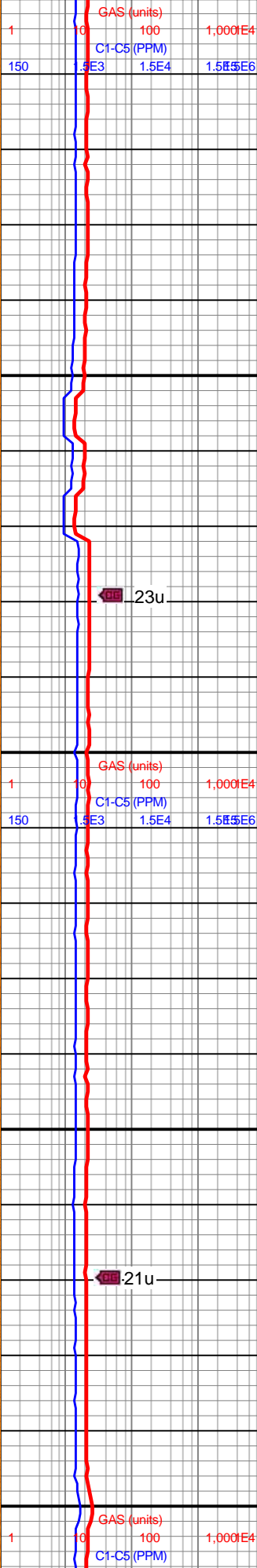
Mitten Marker 2
7,201MD/6,708'TVD

MD: 7,214'
INC: 41.22°
AZM: 267.64°
TVD: 6,718.53'
VS: 1.11'

MW IN: 9.8
VIS IN: 57
MW OUT: 9.8
VIS OUT: 54

MD: 7,261'
INC: 43.77°
AZM: 271.68°
TVD: 6,753.19'
VS: 12.12'

MD: 7,308'
INC: 46.45°
AZM: 274.05°
TVD: 6,798.19'
VS: 12.12'



occ calc intbds, SLTST
(10%): med gy-dk gy,
silty-rgh tex, frm-sl hrd,
blkly, non calc

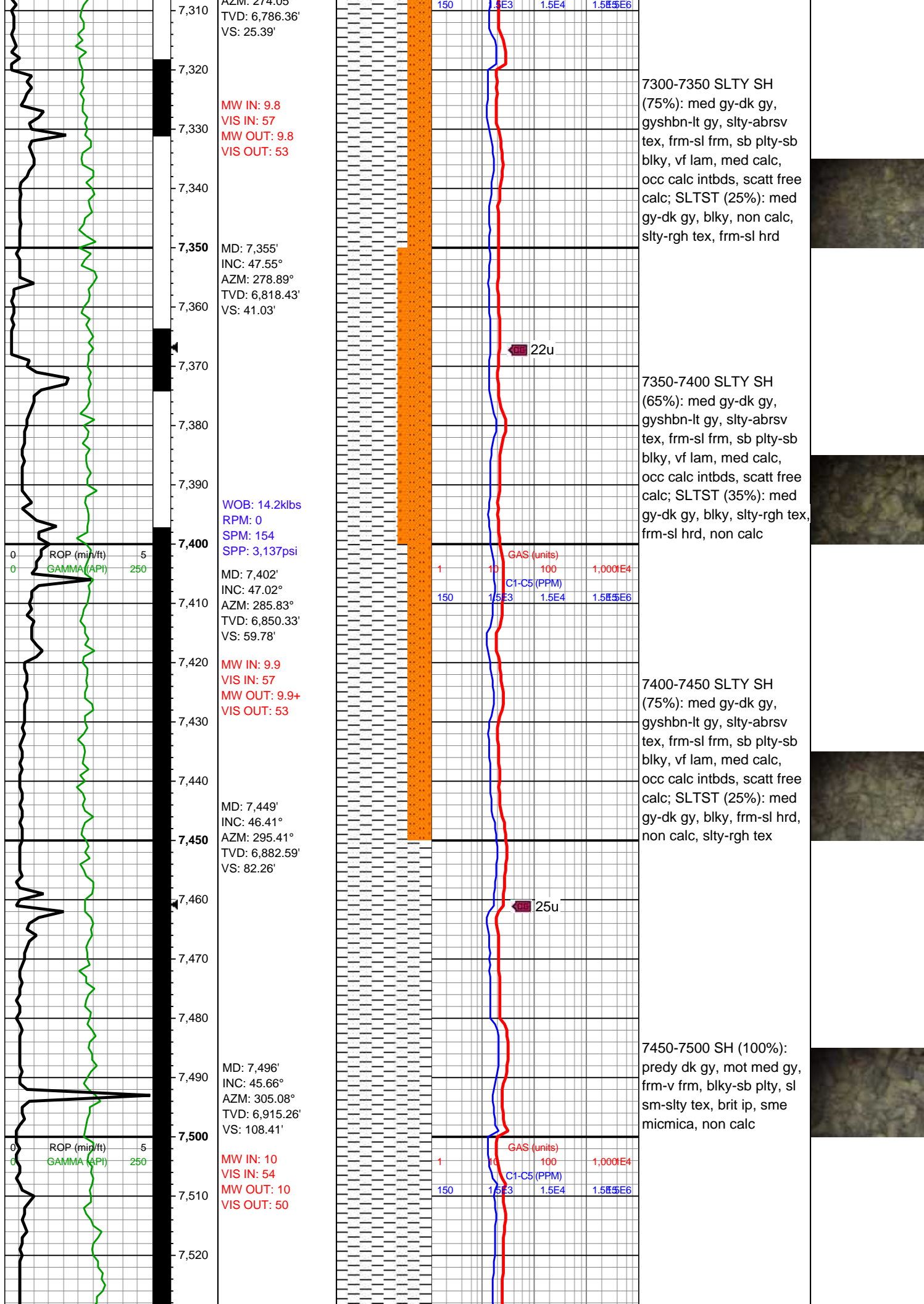
7100-7150 SLTY SH
(80%): med gy-dk gy,
gyshbn-lt gy, slty-abrsv
tex, frm-sl frm, sb plty-sb
blkly, vf lam, med calc,
occ calc intbds; SLTST
(20%): med gy-dk gy,
silty-rgh tex, frm-sl hrd,
blkly, non calc

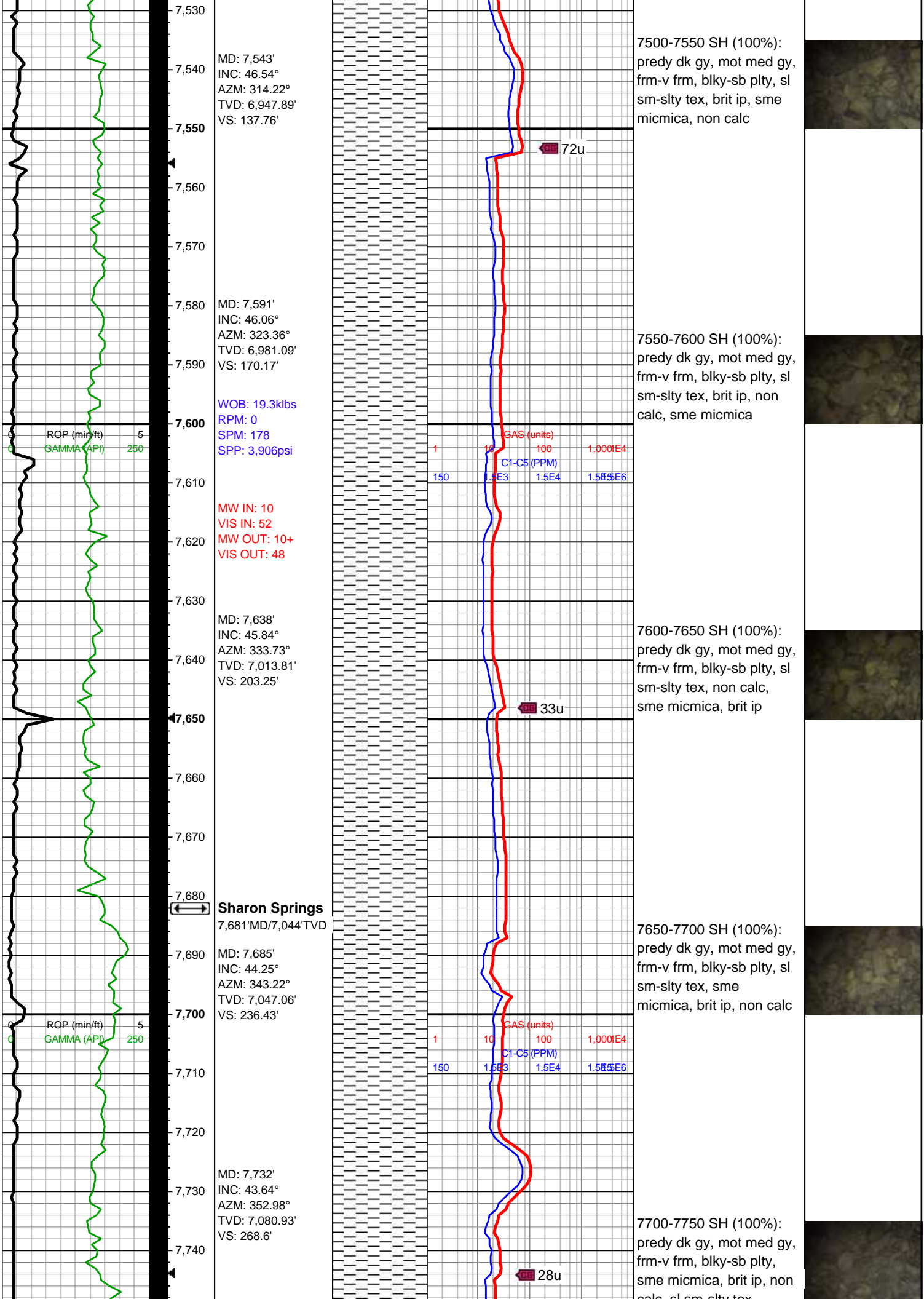
7150-7200 SLTY SH
(75%): med gy-dk gy,
gyshbn-lt gy, slty-abrsv
tex, frm-sl frm, sb plty-sb
blkly, vf lam, med calc,
occ calc intbds, scatt free
calc; SLTST (25%): med
gy-dk gy, slty-rgh tex,
frm-sl hrd, blkly, non calc

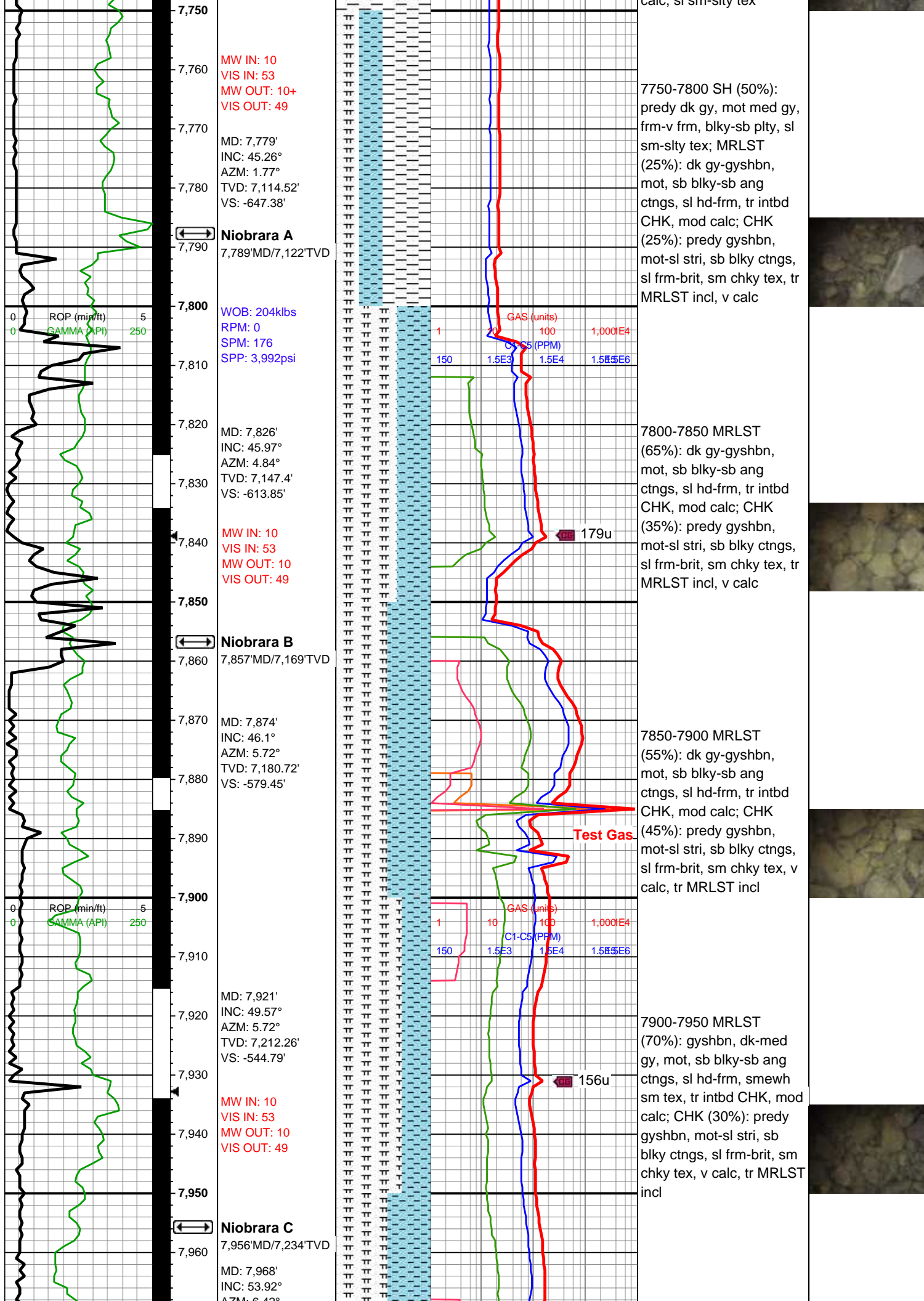
7200-7250 SLTY SH
(75%): med gy-dk gy,
gyshbn-lt gy, slty-abrsv
tex, frm-sl frm, sb plty-sb
blkly, vf lam, med calc,
occ calc intbds, scatt free
calc; SLTST (25%): med
gy-dk gy, slty-rgh tex,
frm-sl hrd, blkly, non calc

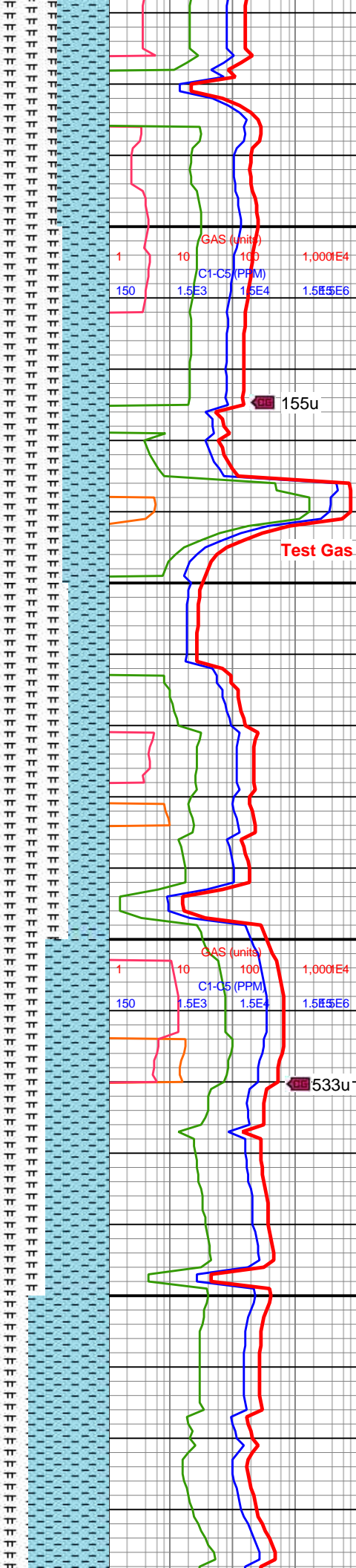
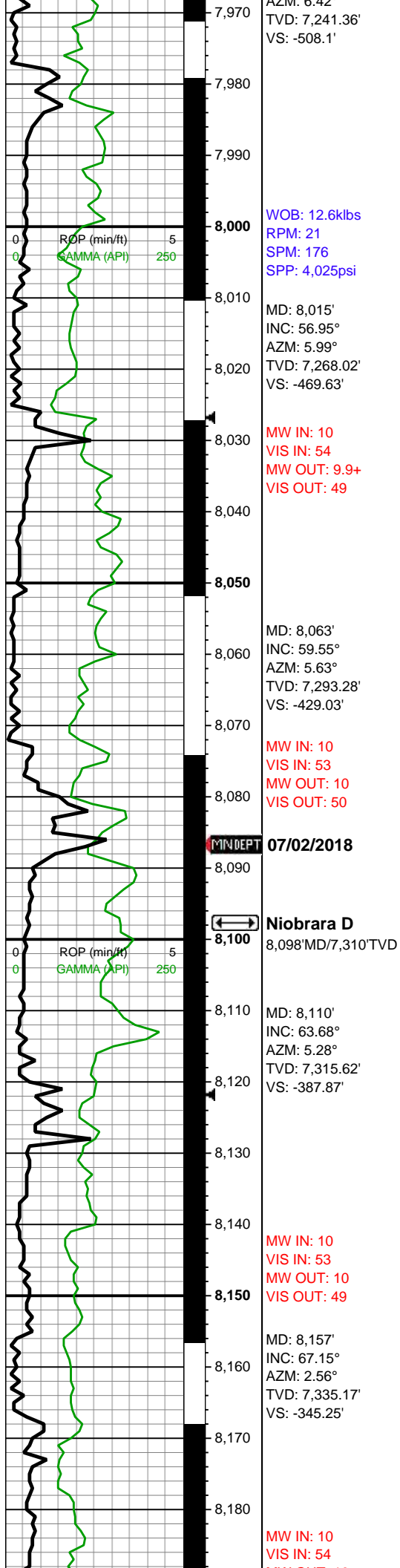
7250-7300 SLTY SH
(70%): med gy-dk gy,
gyshbn-lt gy, slty-abrsv
tex, frm-sl frm, sb plty-sb
blkly, vf lam, med calc,
occ calc intbds, scatt free
calc; SLTST (30%): med
gy-dk gy, frm-sl hrd, blkly,
non calc, slty-rgh tex











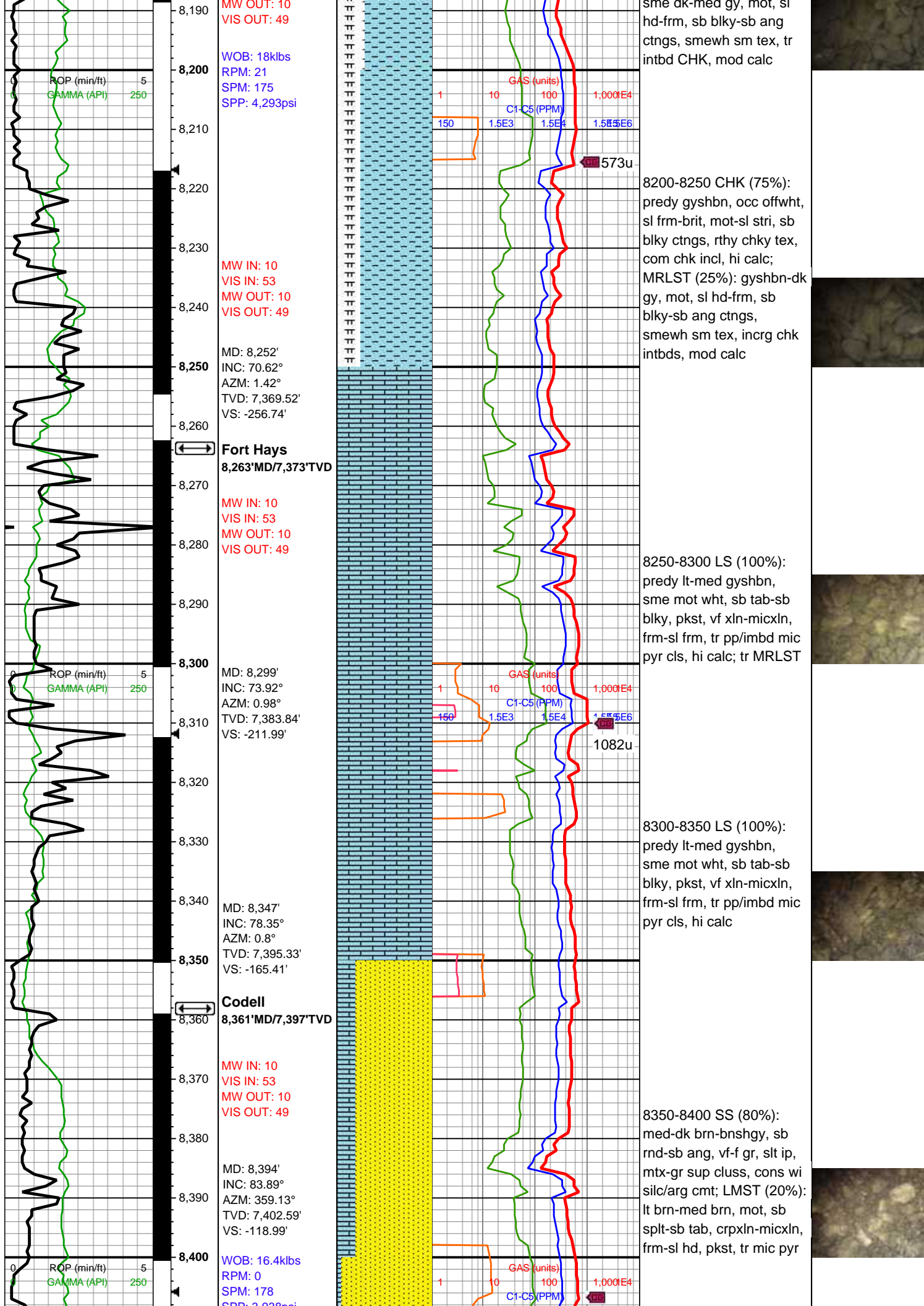
7950-8000 MRLST
(55%): gyshbn, dk-med
gy, mot, sb blk-y-sb ang
ctngs, sl hd-frn, smewh
sm tex, tr intbd CHK, mod
calc; CHK (45%): predy
gyshbn, mot-sl stri, sb
blk-y ctngs, sl frm-brit, sm
chky tex, v calc

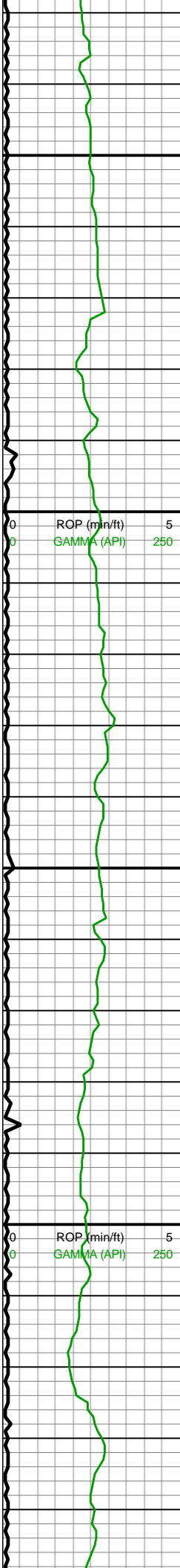
8000-8050 MRLST
(60%): gyshbn, dk-med
gy, mot, sl hd-frn, sb
blk-y-sb ang ctngs,
smewh sm tex, tr intbd
CHK, mod calc; CHK
(40%): predy gyshbn, sl
frm-brit, mot-sl stri, sb
blk-y ctngs, com chk incl,
sm chky tex, hi calc

8050-8100 MRLST
(65%): gyshbn, dk-med
gy, mot, sl hd-frn, sb
blk-y-sb ang ctngs,
smewh sm tex, tr intbd
CHK, mod calc; CHK
(35%): predy gyshbn, occ
offwht, sl frm-brit, mot-sl
stri, sb blk-y ctngs, com
chk incl, sm chky tex, v hi
calc

8100-8150 ; CHK (55%):
predy gyshbn, occ offwht,
sl frm-brit, mot-sl stri, sb
blk-y ctngs, rthy chky tex,
com chk incl, hi calc;
MRLST (45%): gyshbn,
sme dk-med gy, mot, sl
hd-frn, sb blk-y-sb ang
ctngs, smewh sm tex, tr
intbd CHK, mod calc

8150-8200 CHK (70%):
predy gyshbn, occ offwht,
sl frm-brit, mot-sl stri, sb
blk-y ctngs, rthy chky tex,
com chk incl, hi calc;
MRLST (30%): gyshbn,
sme dk-med gy, mot, sl
hd-frn, sb blk-y-sb ang
ctngs, smewh sm tex, tr
intbd CHK, mod calc





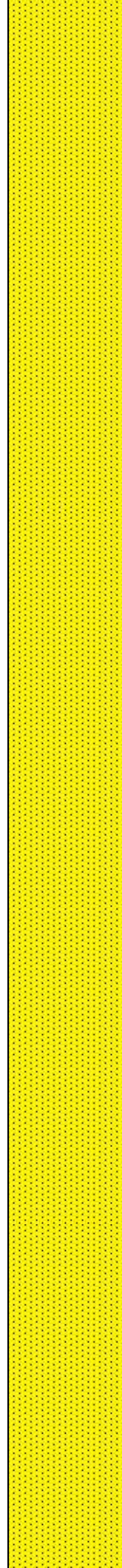
MD: 8,629'
INC: 88.81°
AZM: 359.66°
TVD: 7,412.35'
VS: 115.74'

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

MD: 8,724'
INC: 89.12°
AZM: 359.75°
TVD: 7,414.06'
VS: 210.72'

WOB: 23.1klbs
RPM: 69
SPM: 178
SPP: 4,573psi

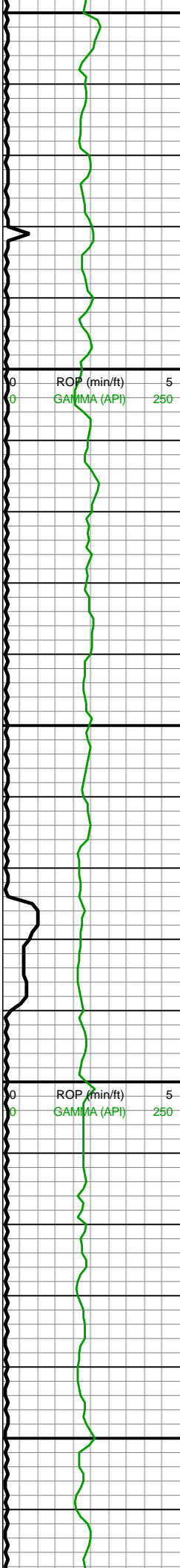
MD: 8,819'
INC: 88.64°
AZM: 358.78°
TVD: 7,415.92'
VS: 305.69'



8600-8700 SS (100%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, mod srtd, grn
sup clus, silc cmt, sme
med gy-dk gy gr sup ss
clus, tr pp mic pyr cls,
non-sl calc

8700-8800 SS (100%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, mod srtd,
grn sup clus, silc cmt,
sme med gy-dk gy gr sup
ss clus, tr pp mic pyr cls,
non-sl calc





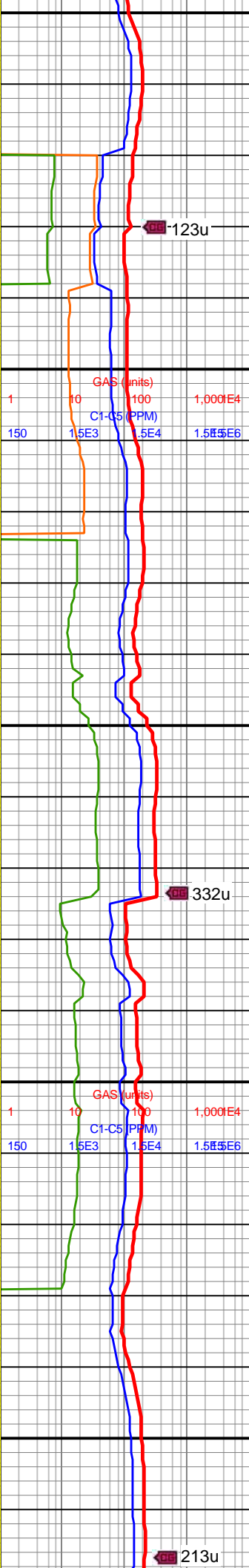
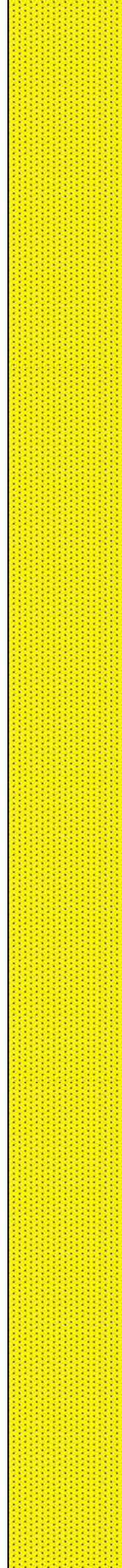
8,850
8,860
8,870
8,880
8,890
8,900
8,910
8,920
8,930
8,940
8,950
8,960
8,970
8,980
8,990
9,000
9,010
9,020
9,030
9,040
9,050
9,060

MD: 8,913'
INC: 87.67°
AZM: 357.55°
TVD: 7,418.95'
VS: 399.59'

WOB: 18.5klbs
RPM: 70
SPM: 178
SPP: 4,576psi

MD: 9,008'
INC: 89.47°
AZM: 358.16°
TVD: 7,421.32'
VS: 494.49'

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



8800-8900 SS (100%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, mod srted,
grn sup clus, silc cmt,
sme med gy-dk gy gr sup
ss clus, non-sl calc, tr pp
mic pyr cls

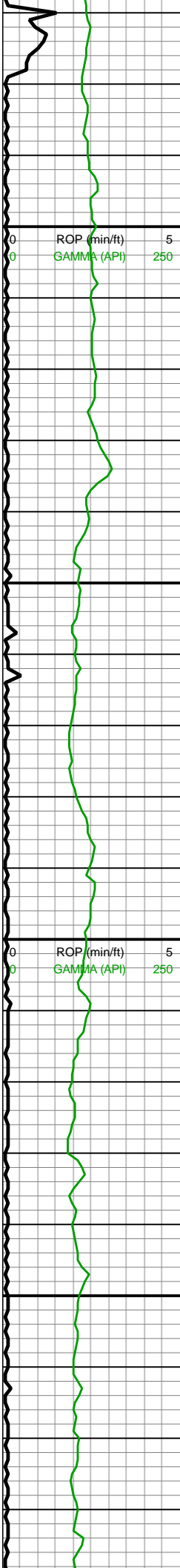
8900-9000 SS (100%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, mod srted,
grn sup clus, silc cmt,
non-sl calc, tr pp mic pyr
cls, sme med gy-dk gy gr
sup ss clus



123u

332u

213u

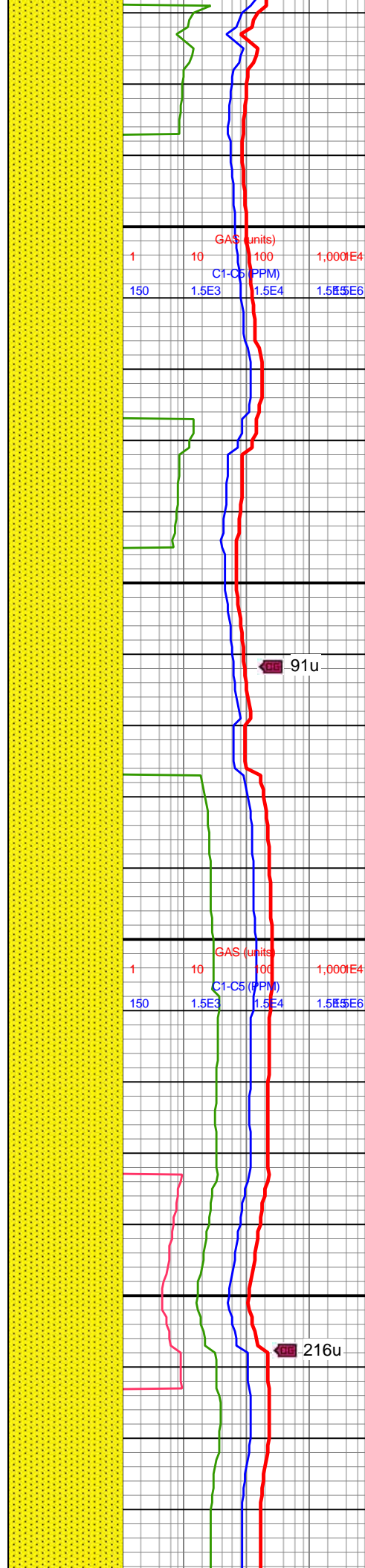


MD: 9,102'
INC: 90.62°
AZM: 358.69°
TVD: 7,421.24'
VS: 588.45'

MD: 9,197'
INC: 91.01°
AZM: 358.95°
TVD: 7,419.89'
VS: 683.42'

WOB: 25.1klbs
RPM: 70
SPM: 176
SPP: 4,822psi

MD: 9,291'
INC: 91.01°
AZM: 358.95°
TVD: 7,419.89'
VS: 683.42'

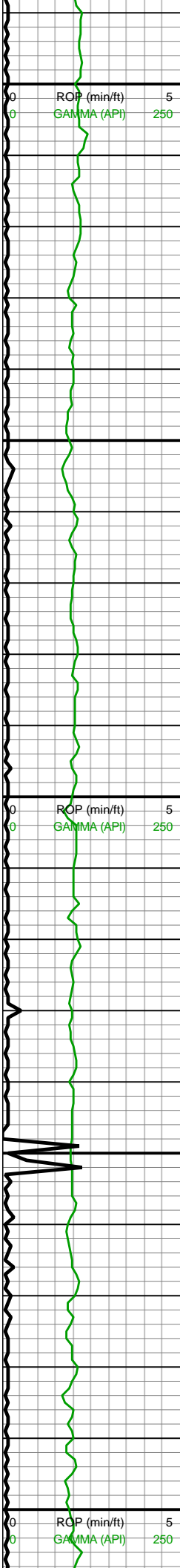


9000-9100 SS (100%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, mod srted, grn
sup clus, silc cmt, tr pp
mic pyr cls, sme med
gy-dk gy gr sup ss clus,
non-sl calc

9100-9200 SS (100%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, mod srted, grn
sup clus, tr pp mic pyr
cls, sme med gy-dk gy gr
sup ss clus, non-sl calc,
silc cmt

9200-9300 SS (100%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, mod srted,





9,290
9,300
9,310
9,320
9,330
9,340
9,350
9,360
9,370
9,380
9,390
9,400
9,410
9,420
9,430
9,440
9,450
9,460
9,470
9,480
9,490
9,500

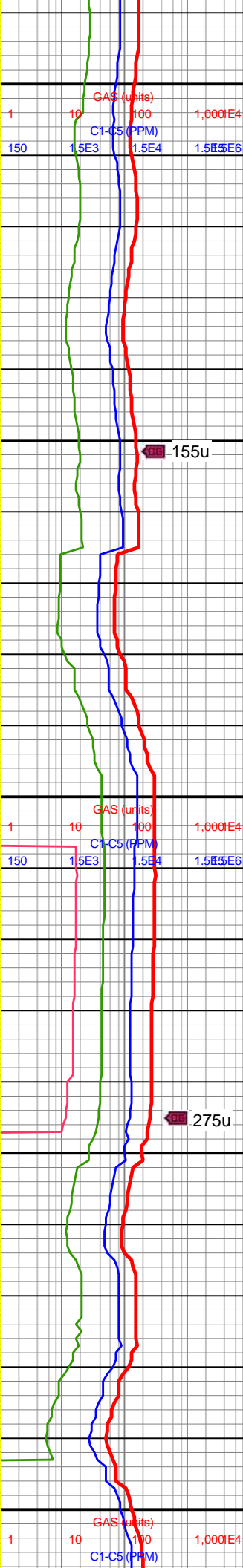
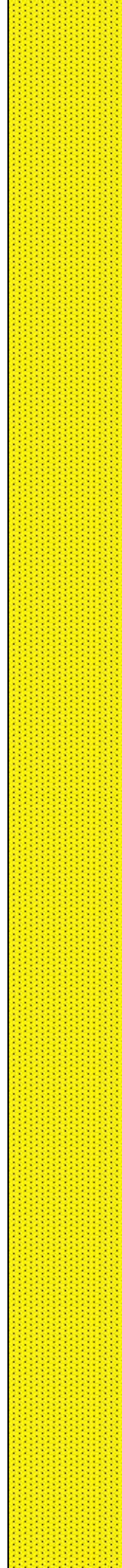
INC: 91.14°
AZM: 358.51°
TVD: 7,418.13'
VS: 777.38'

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

MD: 9,386'
INC: 91.06°
AZM: 358.25°
TVD: 7,416.31'
VS: 872.33'

WOB: 21.8klbs
RPM: 69
SPM: 177
SPP: 4,834psi

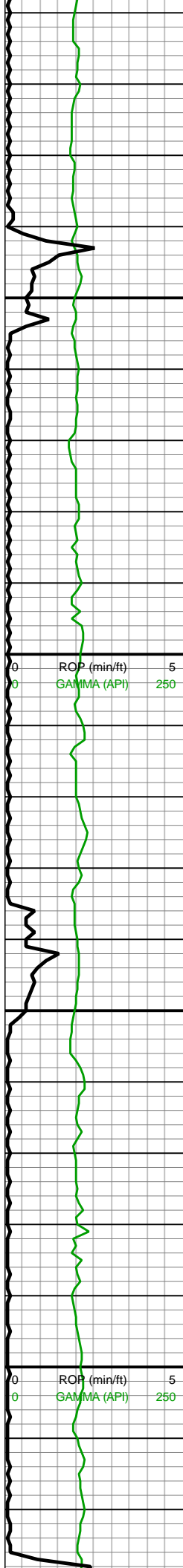
MD: 9,480'
INC: 88.81°
AZM: 356.49°
TVD: 7,416.41'
VS: 966.22'



grn sup clus, sme med
gy-dk gy gr sup ss clus,
non-sl calc, silc cmt, tr pp
mic pyr cls

9300-9400 SS (100%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, grn sup
clus, tr pp mic pyr cls,
sme med gy-dk gy gr sup
ss clus, non-sl calc, silc
cmt, mod srtd

9400-9500 SS (100%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, grn sup clus,
tr pp mic pyr cls, sme
med gy-dk gy gr sup ss
clus, silc cmt, mod srtd,
non-sl calc, abnt free qtz
cls, suc



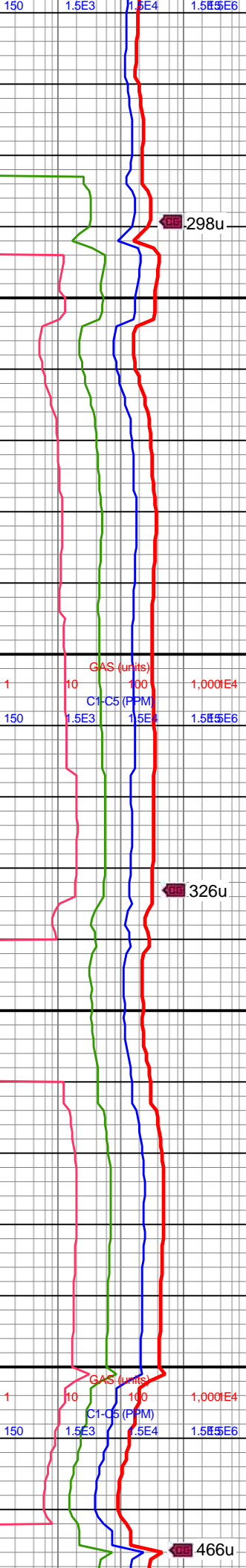
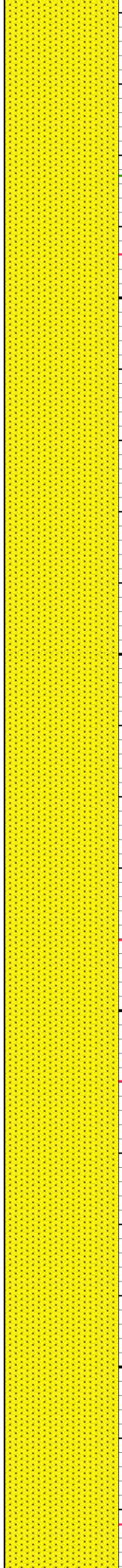
9,510
9,520
9,530
9,540
9,550
9,560
9,570
9,580
9,590
9,600
9,610
9,620
9,630
9,640
9,650
9,660
9,670
9,680
9,690
9,700
9,710
9,720

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

MD: 9,574'
INC: 89.74°
AZM: 357.02°
TVD: 7,417.6'
VS: 1,060.06'

WOB: 21.8kbs
RPM: 70
SPM: 176
SPP: 4,759psi

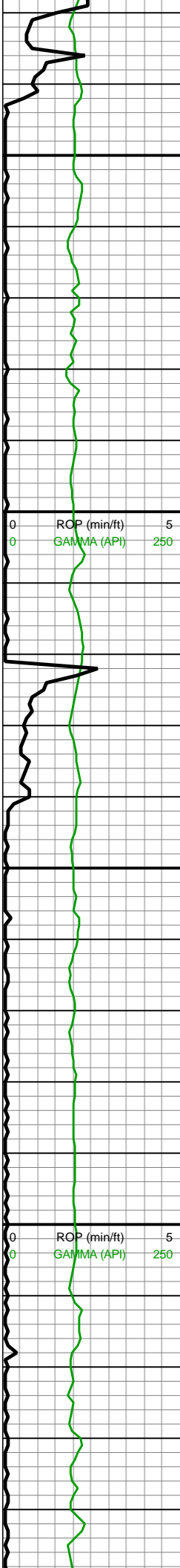
MD: 9,668'
INC: 89.82°
AZM: 358.69°
TVD: 7,417.96'
VS: 1,153.99'



9500-9600 SS (100%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, grn sup clus,
tr pp mic pyr cls, sme
med gy-dk gy gr sup ss
clus, silc cmt, mod srted,
non-sl calc, suc, abnt
free qtz cls

9600-9700 SS (100%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, grn sup clus,
tr pp mic pyr cls, sme
med gy-dk gy gr sup ss
clus, silc cmt, mod srted,
non-sl calc, abnt free qtz
cls, suc



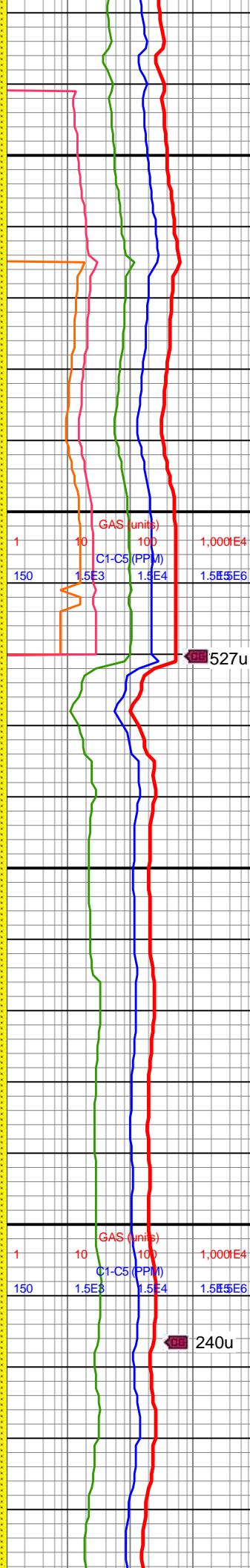


MD: 9,763'
INC: 91.14°
AZM: 359.04°
TVD: 7,417.17'
VS: 1,248.97'

WOB: 23.9klbs
RPM: 70
SPM: 177
SPP: 4,910psi

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

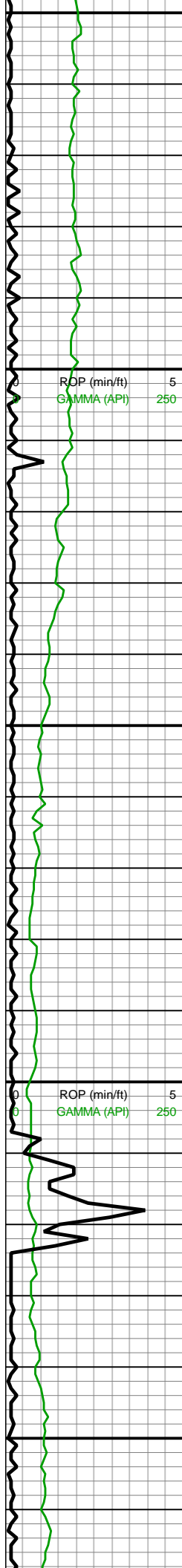
MD: 9,857'
INC: 90.92°
AZM: 0.98°
TVD: 7,415.48'
VS: 1,342.95'



9700-9800 SS (100%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, grn sup clus,
tr pp mic pyr cls, sme
med gy-dk gy gr sup ss
clus, mod srtd, non-sl
calc, suc, abnt free qtz
cls, silc cmt

9800-9900 SS (100%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, grn sup clus,
tr pp mic pyr cls, sme
med gy-dk gy gr sup ss
clus, mod srtd, non-sl
calc, suc, silc cmt, occ
free qtz cls





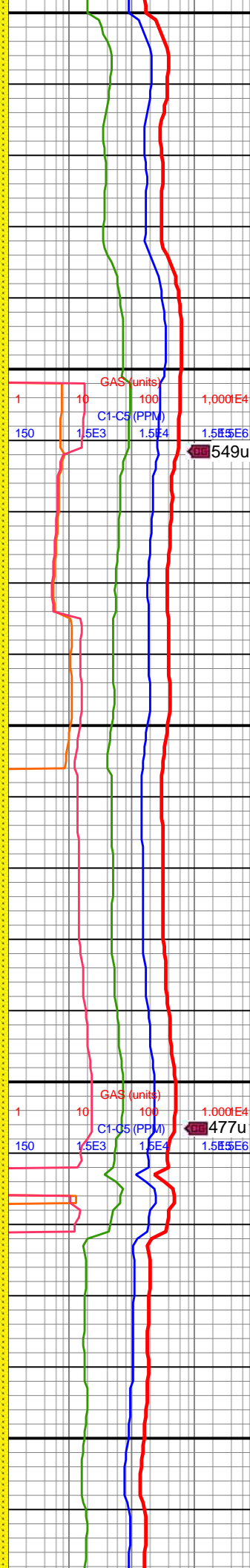
9,950
9,960
9,970
9,980
9,990
10,000
10,010
10,020
10,030
10,040
10,050
10,060
10,070
10,080
10,090
10,100
10,110
10,120
10,130
10,140
10,150
10,160

WOB: 18.9klbs
RPM: 70
SPM: 177
SPP: 4,923psi

MD: 10,047'
INC: 89.87°
AZM: 358.95°
TVD: 7,413.66'
VS: 1,532.92'

MW IN: 10
VIS IN: 51
MW OUT: 10.0
VIS OUT: 48

MD: 10,141'
INC: 90.22°
AZM: 0.54°
TVD: 7,413.59'
VS: 1,626.92'



9900-10000 SS (100%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, grn sup clus,
tr pp mic pyr cls, sme
med gy-dk gy gr sup ss
clus, mod srted, non-sl
calc, silc cmt, occ free qtz
cls, mod suc

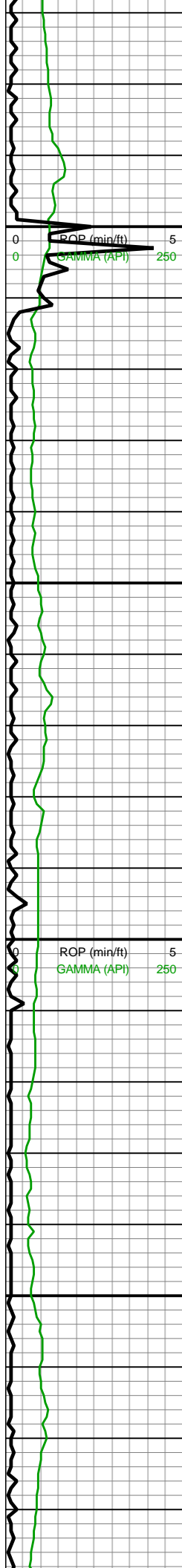


10000-10100 SS (60%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, grn sup clus,
tr pp mic pyr cls, sme
med gy-dk gy gr sup ss
clus, mod srted, non-sl
calc, silc cmt, occ free qtz
cls, mod suc; LMST
(40%): lt brn-med brn,
mot, sb spl-sb tab,
crpxln-micxln, frm-sl hd,
pkst, tr mic pyr



10100-10200 SS (50%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, grn sup clus,
tr pp mic pyr cls, sme
med gy-dk gy gr sup ss
clus, mod srted, non-sl
calc, silc cmt, occ free qtz
cls, mod suc





10,170
10,180
10,190
10,200
10,210
10,220
10,230
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

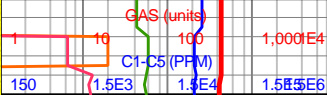
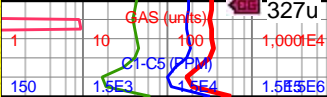
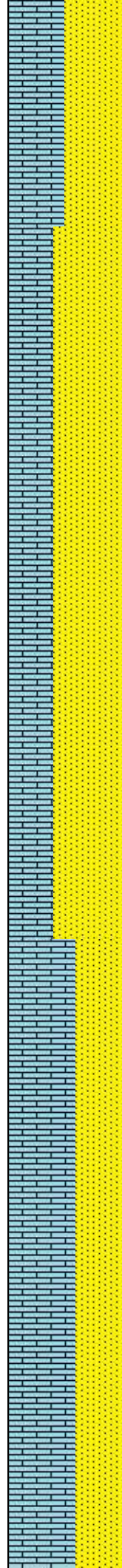
WOB: 23.2klbs
RPM: 0
SPM: 176
SPP: 4,176psi

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

MD: 10,236'
INC: 89.6°
AZM: 1.42°
TVD: 7,413.74'
VS: 1,721.9'

MD: 10,330'
INC: 90.35°
AZM: 0.8°
TVD: 7,413.78'
VS: 1,815.89'

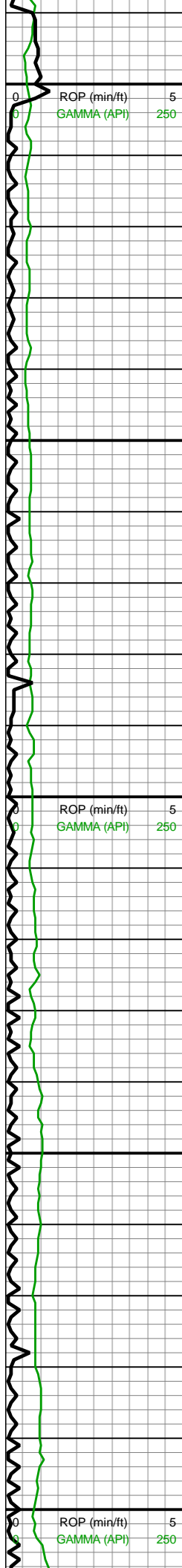
MW IN: 10+
VIS IN: 52
MW OUT: 10.1
VIS OUT: 48



sb frm-frm, grn sup clus,
tr pp mic pyr cls, sme
med gy-dk gy gr sup ss
clus, mod srtd, non-sl
calc, silc cmt, occ free qtz
cls, mod suc; LMST
(50%): lt brn-med brn,
mot, sb splt-sb tab,
crpxln-micxln, frm-sl hd,
pkst, tr mic pyr

10200-10300 SS (60%):
med-dk brn-bnshgy, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt; LMST (40%):
lt brn-med brn, mot, sb
splt-sb tab, crpxln-micxln,
frm-sl hd, tr mic pyr, pkst

10300-10400 LMST
(60%): lt brn-med brn,
mot, sb splt-sb tab,
frm-sl hd, tr mic pyr, pkst,
crpxln-micxln; SS (40%):
med-dk brn-bnshgy, sb



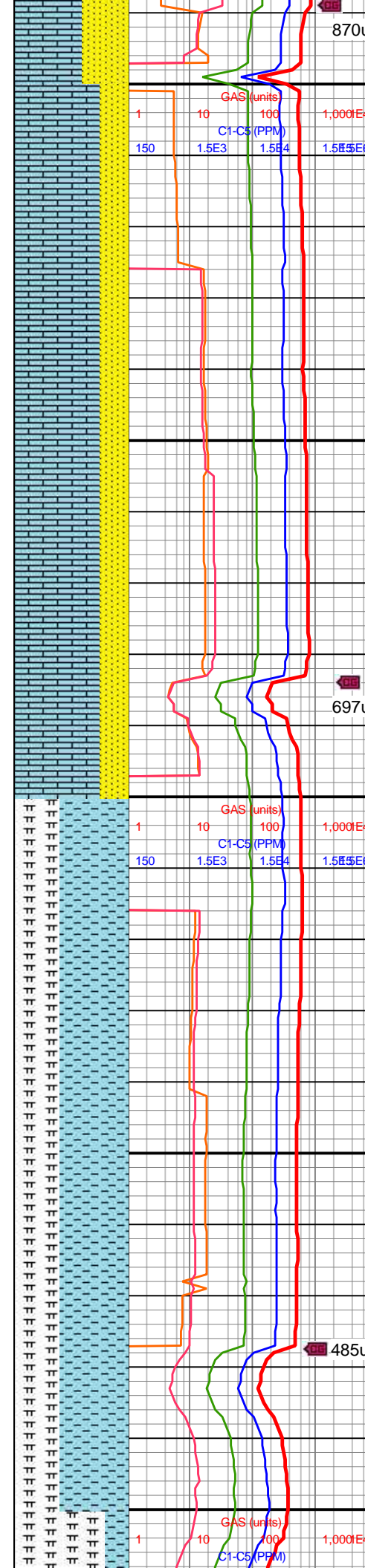
WOB: 6.3klbs
RPM: 70
SPM: 178
SPP: 4,384psi

MD: 10,424'
INC: 88.64°
AZM: 0.45°
TVD: 7,414.61'
VS: 1,909.87'

MD: 10,519'
INC: 89.12°
AZM: 0.18°
TVD: 7,416.46'
VS: 2,004.85'

MW IN: 10.0+
VIS IN: 53
MW OUT: 10.1
VIS OUT: 49

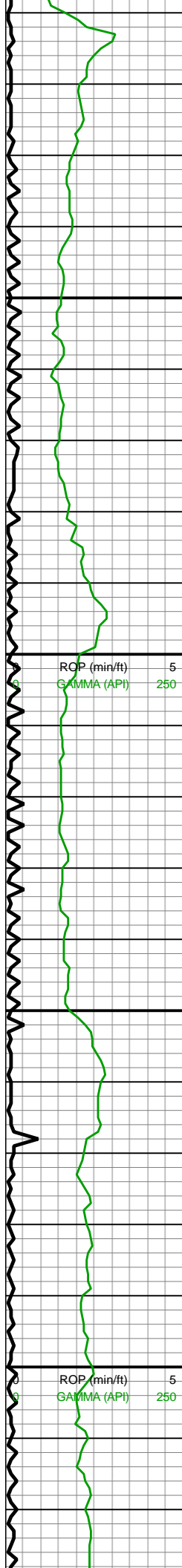
WOB: 21.1klbs
RPM: 70
SPM: 177
SPP: 5,085psi



med-dk brn-bnshgy, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt, suc

10400-10500 LMST
(75%): lt brn-med brn,
mot, sb splt-sb tab,
frm-sl hd, tr mic pyr, pkst,
crpxln-micxln; SS (25%):
med-dk brn-bnshgy, sb
rnd-sb ang, vf-f gr, slt ip,
mtx-gr sup cluss, cons wi
silc/arg cmt, suc

10500-10600 CHK
(60%): predy gyshbn,
mot-sl stri, sb blk cyctngs,
sl frm-brit, sm chky tex, tr
MRLST incl, v calc;
MRLST (40%): dk
gy-gyshbn, mot, sb
blk cy-sb ang ctns, sl
hd-frm, tr intbd CHK, mod
calc

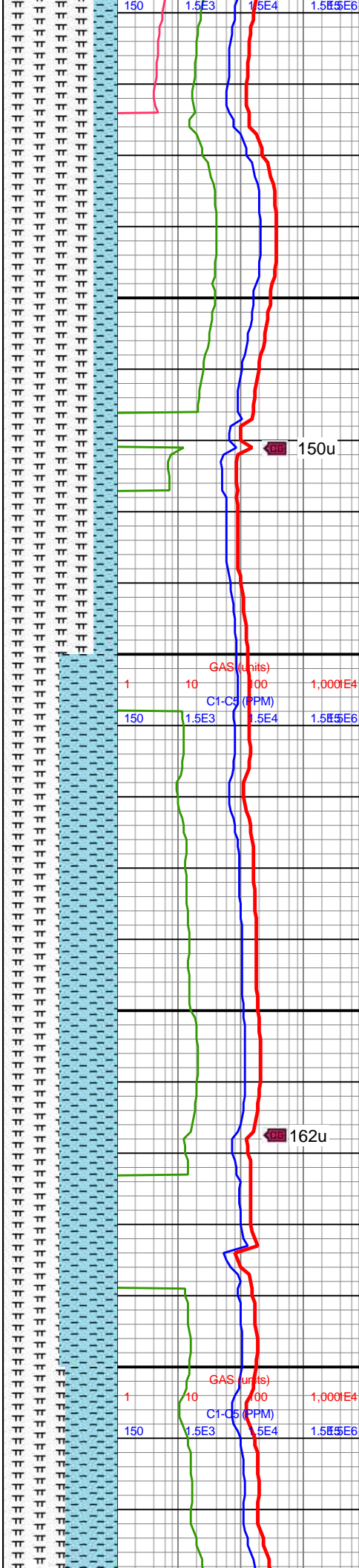


MD: 10,613'
INC: 89.96°
AZM: 0.54°
TVD: 7,417.22'
VS: 2,098.85'

MD: 10,708'
INC: 89.65°
AZM: 359.48°
TVD: 7,417.54'
VS: 2,193.84'

MD: 10,802'
INC: 89.96°
AZM: 358.87°
TVD: 7,417.86'
VS: 2,287.83'

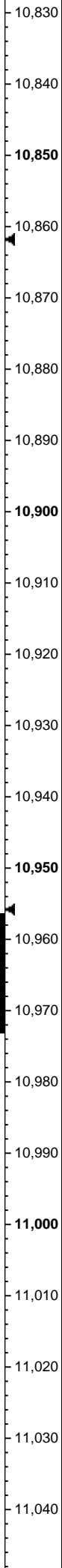
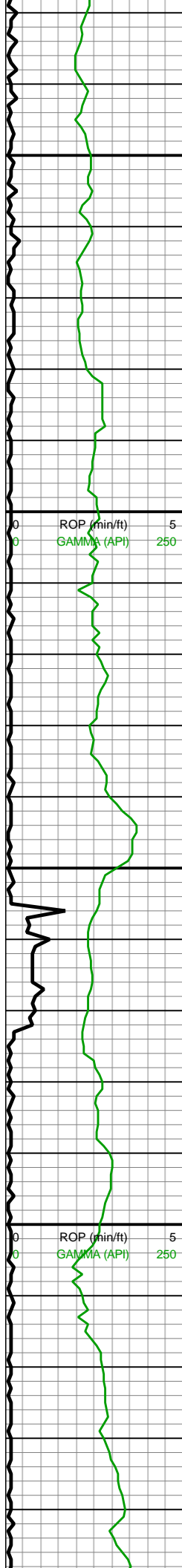
WOB: 17.7klbs
RPM: 70
SPM: 178
SPP: 5,017psi



10600-10700 MRLST
(80%): dk gy-gyshbn,
mot, sb blk-y-sb ang
ctngs, sl hd-frm, tr intbd
CHK, mod calc; CHK
(20%): predy gyshbn,
mot-sl stri, sb blk-y ctngs,
sl frm-brit, sm chky tex, tr
MRLST incl, v calc

10700-10800 MRLST
(50%): dk gy-gyshbn,
mot, sb blk-y-sb ang
ctngs, sl hd-frm, tr intbd
CHK, mod calc; CHK
(50%): predy gyshbn,
mot-sl stri, sb blk-y ctngs,
sl frm-brit, sm chky tex, v
calc, tr MRLST incl





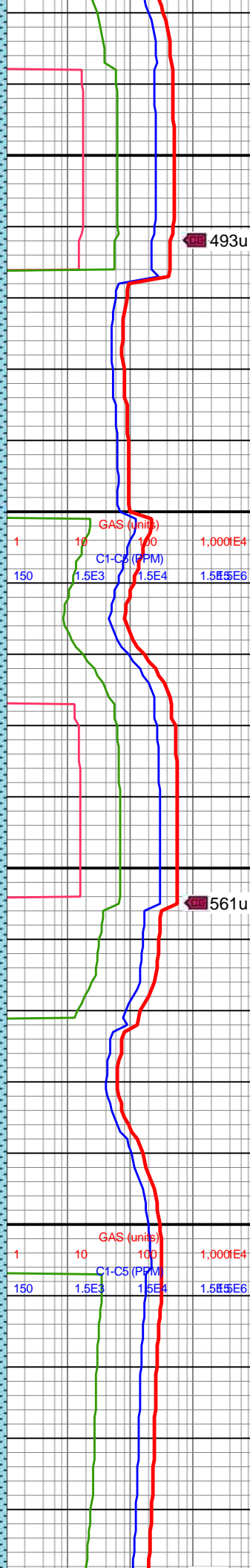
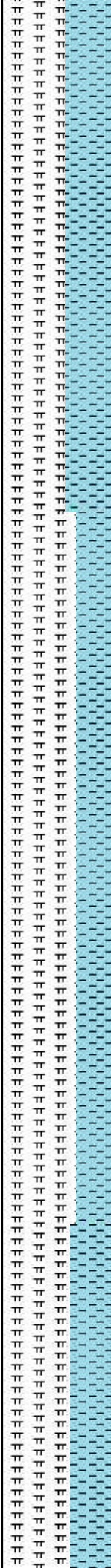
MW IN: 10.0+
VIS IN: 55
MW OUT: 10.1
VIS OUT: 50

MD: 10,897'
INC: 90.09°
AZM: 358.69°
TVD: 7,417.82'
VS: 2,382.81'

MW IN: 10+
VIS IN: 55
MW OUT: 10.1
VIS OUT: 50

MD: 10,991'
INC: 91.1°
AZM: 0.36°
TVD: 7,416.84'
VS: 2,476.8'

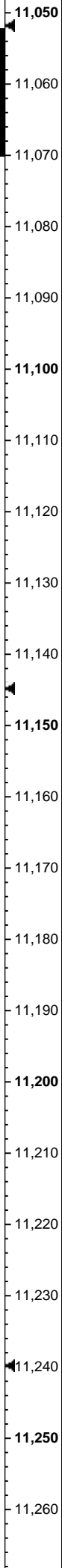
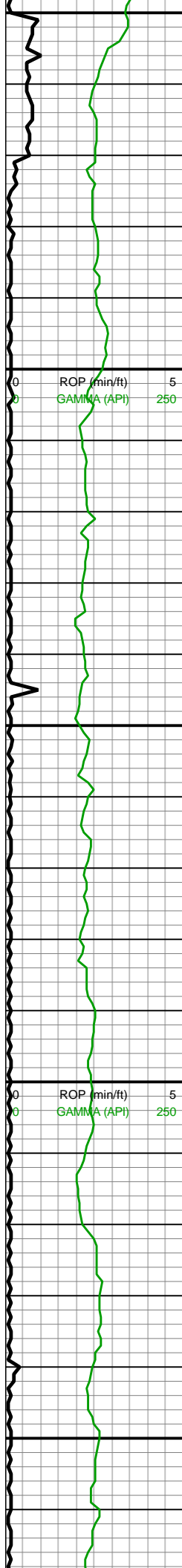
WOB: 19klbs
RPM: 69
SPM: 177
SPP: 5,030psi



10800-10900 MRLST
(55%): gyshbn-dk gy,
mot, sb blkyl-sb ang
ctngs, sl hd-frm, tr CHK
intbds, mod calc; CHK
(45%): predy gyshbn,
mot-sl stri, sb blkyl ctngs,
sl frm-brit, sm chky tex, tr
MRLST incl, v calc

10900-11000 MRLST
(65%): gyshbn-dk gy,
mot, sb blkyl-sb ang
ctngs, sl hd-frm, tr CHK
intbds, mod calc; CHK
(35%): gyshbn, sme scat
crm frags, mot-sl stri, sb
blkyl ctngs, fri-brit, sm
chky tex, tr MRLST incl, v
calc, tr pp mic pyr



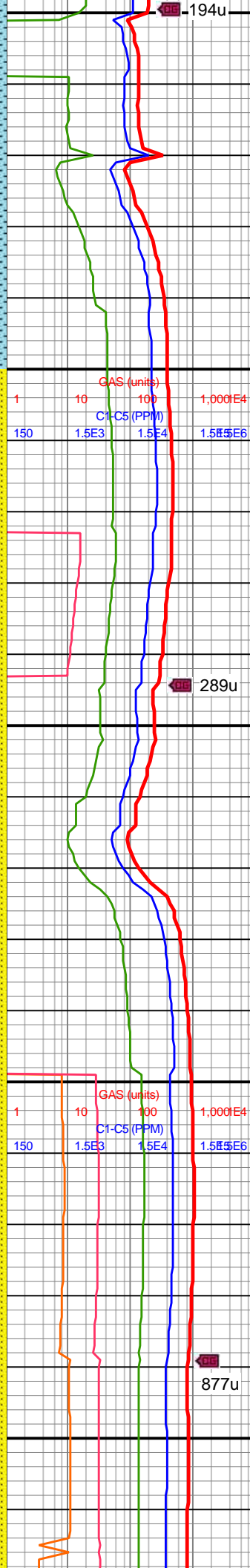
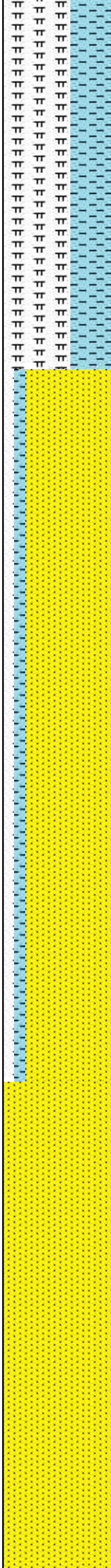


MD: 11,085'
INC: 89.82°
AZM: 0.8°
TVD: 7,416.09'
VS: 2,570.79'

MW IN: 10+
VIS IN: 56
MW OUT: 10.1
VIS OUT: 51

MD: 11,180'
INC: 90°
AZM: 0.27°
TVD: 7,416.24'
VS: 2,665.78'

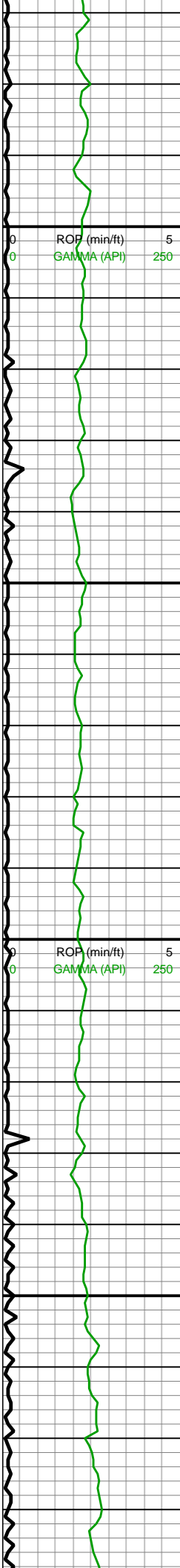
WOB: 27klbs
RPM: 69
SPM: 176
SPP: 5,123psi



11000-11100 MRLST (60%): gyshbn-dk gy, mot, sb blkyl-sb ang ctngs, sl hd-frm, tr CHK intbds, v hi calc; CHK (40%): gyshbn, sme scat crm frags, mot-sl stri, sb blkyl ctngs, fri-brit, sm rthy tex, tr MRLST intbds, hi calc

11100-11200 SS (80%): gyshbn-lt brn, vf-f gr, sb ang-sb rd, frm, grn sup clus, tr pp mic pyr cls, sme med gy-dk gy gr sup ss clus, silc cmt, mod srted, non-sl calc, suc; MRLST (10%): gyshbn-dk gy, mot, sb blkyl-sb ang ctngs, sl hd-frm, tr CHK intbds; CHK (10%): gyshbn, mot-sl stri, sb blkyl ctngs, fri-brit, sm rthy tex





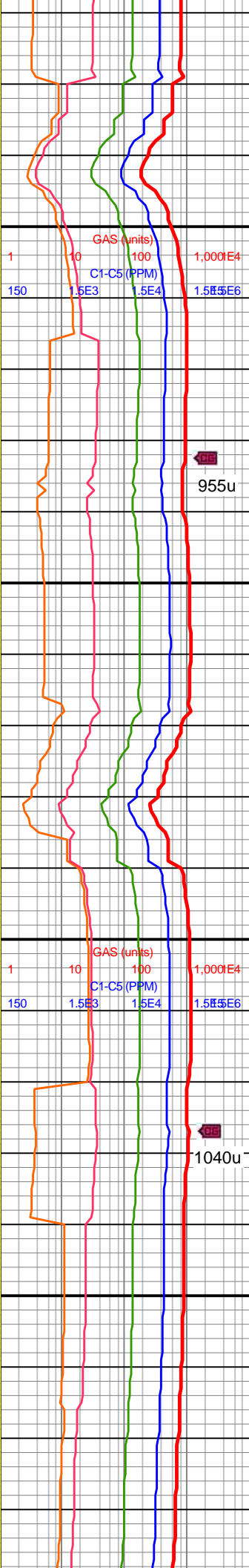
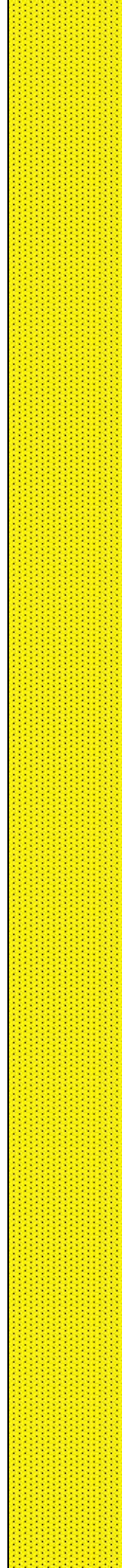
MD: 11,274'
INC: 90.44°
AZM: 0.18°
TVD: 7,415.88'
VS: 2,759.78'

MD: 11,369'
INC: 90.84°
AZM: 0.36°
TVD: 7,414.82'
VS: 2,854.78'

WOB: 25klbs
RPM: 69
SPM: 177
SPP: 5,139psi

MW IN: 10+
VIS IN: 57
MW OUT: 10.1+
VIS OUT: 55

MD: 11,463'
INC: 91.23°
AZM: 0.18°
TVD: 7,413.12'
VS: 2,948.76'



11200-11300 SS (100%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, grn sup clus,
tr pp mic pyr cls, sme
med gy-dk gy gr sup ss
clus, silc cmt, mod srtd,
no-sl calc, suc

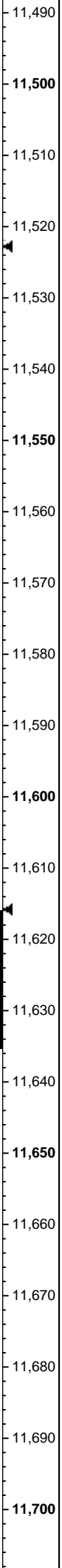
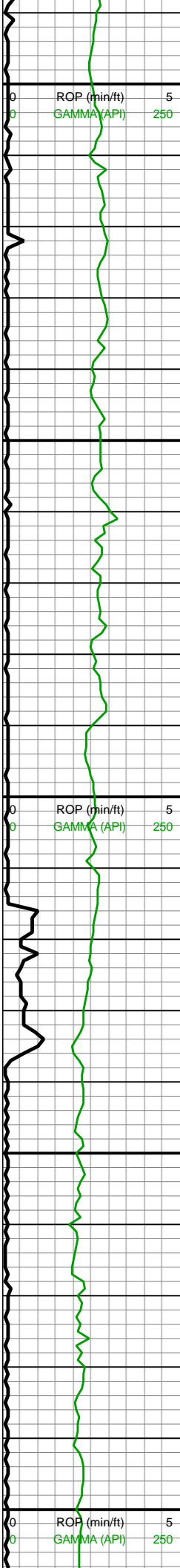
955u

11300-11400 SS (100%):
gyshbn-lt brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, grn sup clus,
tr pp mic pyr cls, sme
med gy-dk gy gr sup ss
clus, silc cmt, mod srtd,
no-sl calc, suc, tr blk sh

1040u

11400-11500 SS (100%):
gyshbn-lt brn, mot med
brn, tr blk sh intbds, vf-f
gr, sb ang-sb rd, sb
frm-frm, grn sup clus, tr



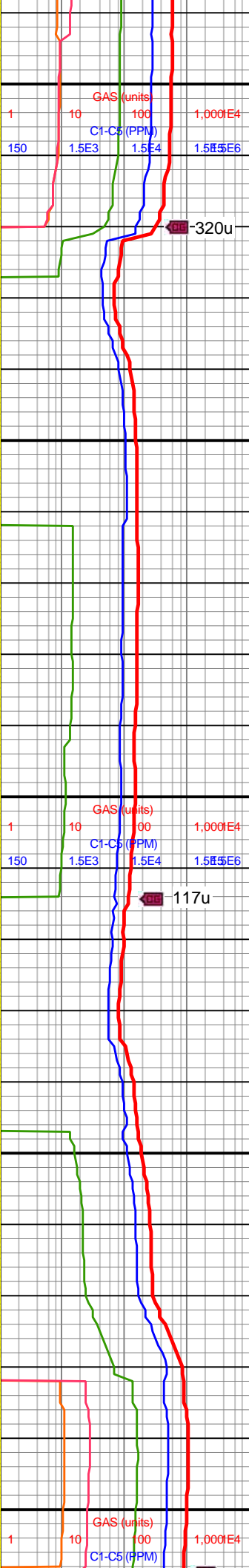
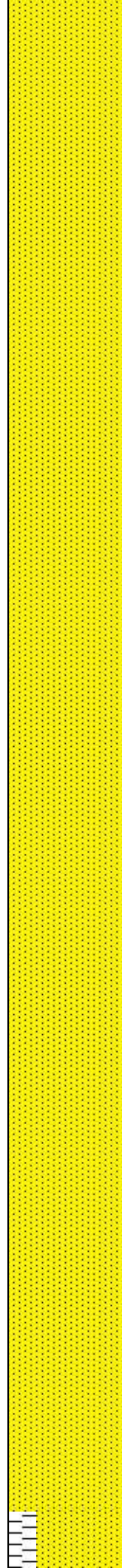


MD: 11,557'
INC: 92.15°
AZM: 0.8°
TVD: 7,410.35'
VS: 3,042.71'

WOB: 30klbs
RPM: 70
SPM: 175
SPP: 5,120psi

MD: 11,651'
INC: 92.15°
AZM: 0.71°
TVD: 7,406.82'
VS: 3,136.64'

MW IN: 10.1
VIS IN: 60
MW OUT: 10.2
VIS OUT: 58

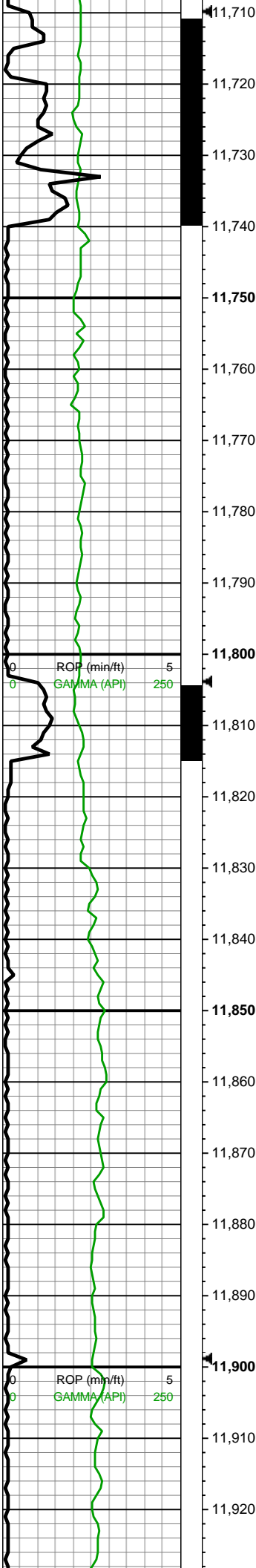


pp mic pyr cls, sme med
gy-dk gy gr sup ss clus,
silc cmt, mod srtd, no-sl
calc

11500-11600 SS (100%):
gyshbn-lt brn, mot med
brn, tr blk sh intbds, vf-f
gr, sb ang-sb rd, sb
frm-frm, grn sup clus, tr
pp mic pyr cls, sme med
gy-dk gy gr sup ss clus,
silc cmt, suc, mod srtd,
no-sl calc

11600-11700 SS (100%):
gyshbn-lt brn, mot med
brn, tr blk sh intbds, vf-f
gr, sb ang-sb rd, sb
frm-frm, p-mod srtd, grn
sup clus, tr pp mic pyr
cls, dk gy gr sup ss clus,
silc cmt, suc, no-sl calc



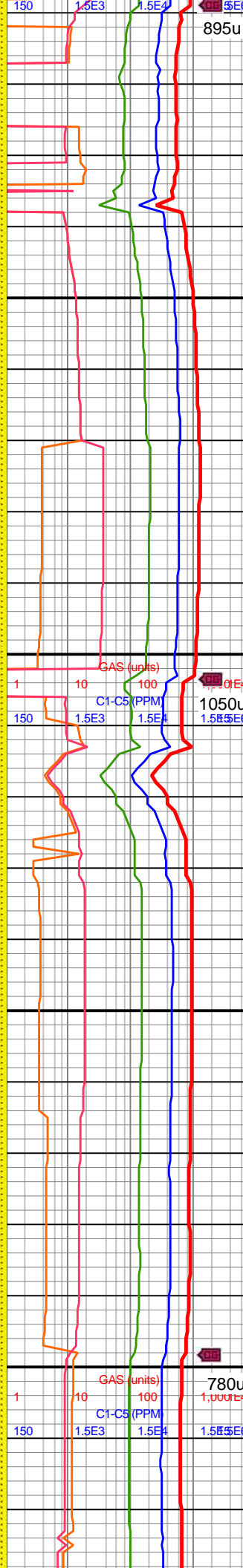
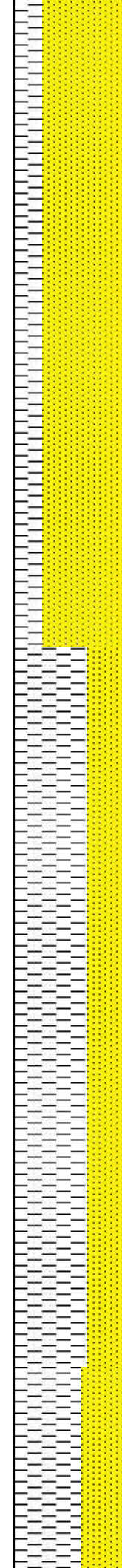


MD: 11,745'
INC: 90°
AZM: 1.85°
TVD: 7,405.06'
VS: 3,230.59'

WOB: 22klbs
RPM: 70
SPM: 175
SPP: 5,190psi

MW IN: 10.1+
VIS IN: 58
MW OUT: 10.2
VIS OUT: 55

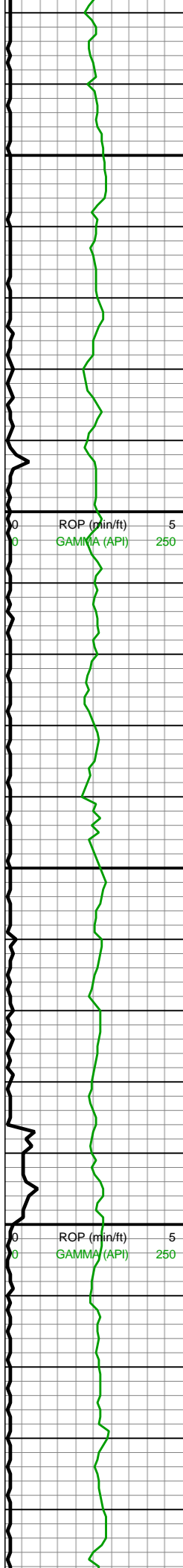
MD: 11,839'
INC: 89.08°
AZM: 1.33°
TVD: 7,405.81'
VS: 3,324.55'



11700-11800 SST (75%):
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, tr pyr nod; SH
(25%): dk gy-blk, v
frm-hrd, blk, sme plty,
calc, micmica, tr pp pyr,
rgh tex

11800-11900 SH (65%):
dk gy-blk, v frm-hrd, blk,
sme plty, calc, micmica,
tr pp pyr, rgh tex; SST
(35%): 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, tr pyr nod





MD: 11,934'
INC: 89.43°
AZM: 1.24°
TVD: 7,407.05'
VS: 3,419.52'

11,950

11,960

11,970

11,980

11,990

12,000

12,010

12,020

12,030

12,040

12,050

12,060

12,070

12,080

12,090

12,100

12,110

12,120

12,130

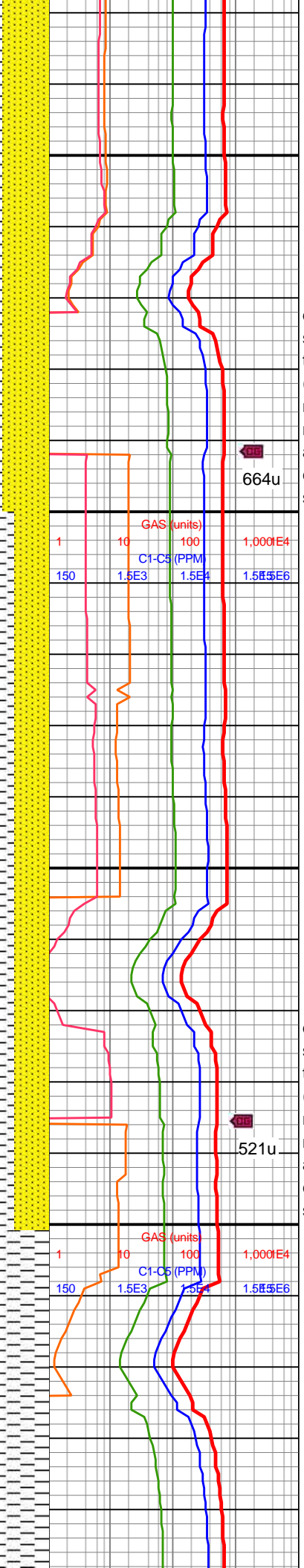
12,140

MD: 12,028'
INC: 89.78°
AZM: 1.24°
TVD: 7,407.69'
VS: 3,513.5'

MD: 12,122'
INC: 89.25°
AZM: 0.1°
TVD: 7,408.49'
VS: 3,607.48'

MW IN: 10.1
VIS IN: 56
MW OUT: 10.2
VIS OUT: 53

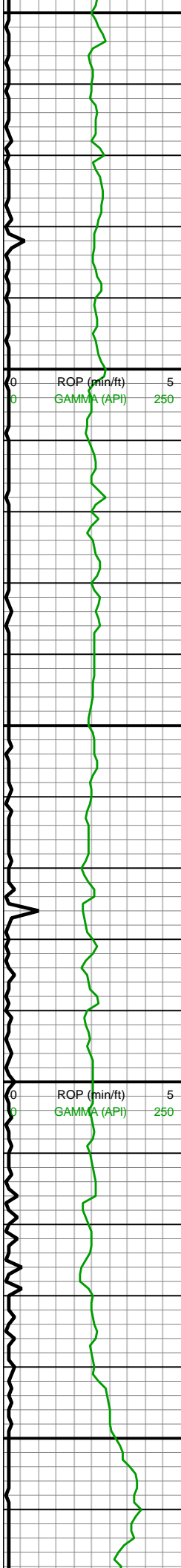
WOB: 21klbs
RPM: 70
SPM: 174
SPP: 5,044psi



11900-12000 SH (60%):
dk gy-blk, v frm-hrd, blk, y,
sme plty, calc, micnica,
tr pp pyr, rgh tex; SST
(40%): 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 pyr nod

12000-12100 SH (70%):
dk gy-blk, v frm-hrd, blk, y,
sme plty, calc, micnica,
tr pp pyr, rgh tex; SST
(30%): 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 pyr nod





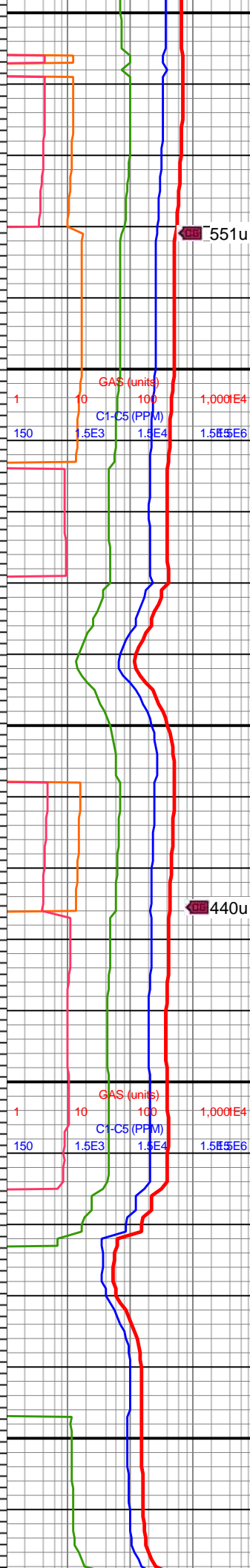
12,150
12,160
12,170
12,180
12,190
12,200
12,210
12,220
12,230
12,240
12,250
12,260
12,270
12,280
12,290
12,300
12,310
12,320
12,330
12,340
12,350
12,360

WOB: 20.6klbs
RPM: 70
SPM: 176
SPP: 5,297psi

MD: 12,216'
INC: 89.52°
AZM: 0.27°
TVD: 7,409.5'
VS: 3,701.48'

MW IN: 10.1
VIS IN: 58
MW OUT: 10.2
VIS OUT: 55

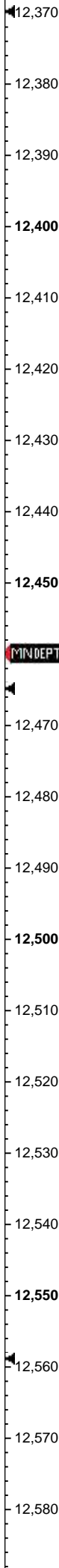
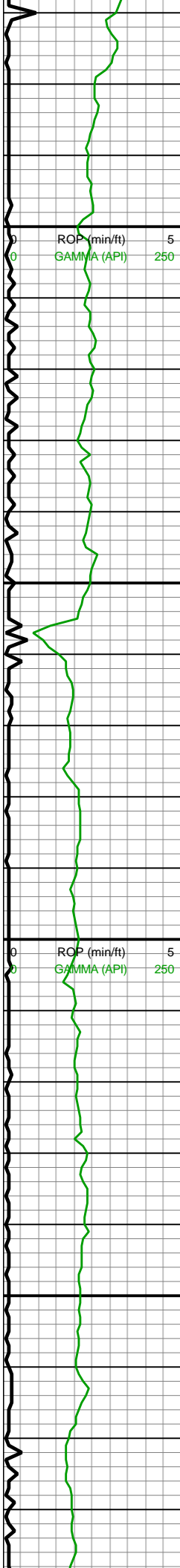
MD: 12,311'
INC: 89.87°
AZM: 359.66°
TVD: 7,410'
VS: 3,796.48'



12100-12200 SH
(100%): dk gy-blk, v
frm-hrd, blk, sme plty,
calc, micmica, tr pp pyr,
rgh tex; tr SS

12200-12300 SH
(100%): dk gy-blk, v
frm-hrd, blk, sme plty,
calc, micmica, tr pp pyr,
rgh tex; tr SS





WOB: 22.9klbs
RPM: 70
SPM: 173
SPP: 5,296psi

MD: 12,405'
INC: 89.78°
AZM: 358.6°
TVD: 7,410.29'
VS: 3,890.46'

MIN DEPT

07/03/2018

MD: 12,500'
INC: 90.04°
AZM: 358.51°
TVD: 7,410.44'
VS: 3,985.43'

MW IN: 10.1
VIS IN: 58
MW OUT: 10.2
VIS OUT: 55

MD: 12,594'

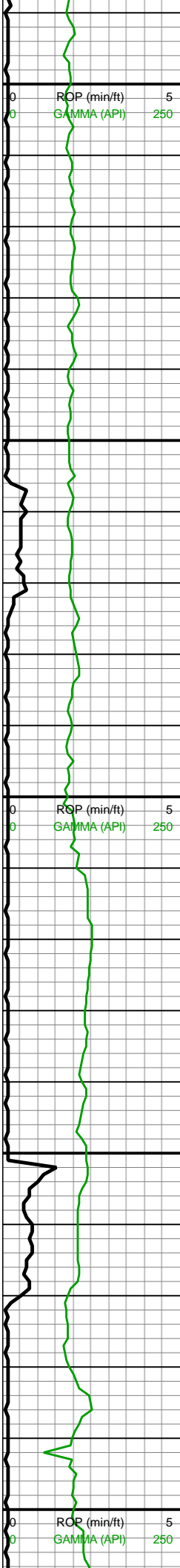


12300-12400 SH
(100%): dk gy-blk, v
frm-hrd, blk, sme plty,
calc, micmica, tr pp pyr,
rgh tex; tr SS

12400-12500 SS (100%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, mod srtd,
grn sup clus, silc cmt,
sme med gy-dk gy gr sup
ss clus, non-sl calc, tr pp
mic pyr

12500-12600 SS (100%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, mod srtd,





12,590
AZM: 89.87°
TVD: 7,410.51'
VS: 4,079.37'

12,600
WOB: 17.6klbs
RPM: 70
SPM: 178
SPP: 5,404psi

12,610

12,620

12,630

12,640

12,650

12,660

12,670

12,680

12,690
MD: 12,689'
INC: 89.47°
AZM: 357.81°
TVD: 7,411.06'
VS: 4,174.28'

12,700

12,710

12,720

12,730

12,740

12,750
MW IN: 10.1
VIS IN: 58
MW OUT: 10.2
VIS OUT: 54

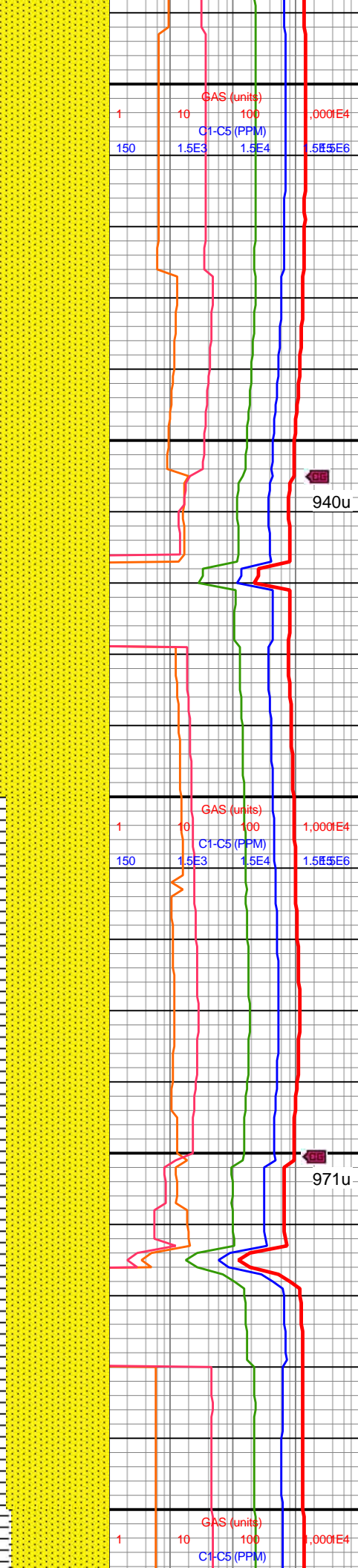
12,760

12,770

12,780
MD: 12,783'
INC: 89.91°
AZM: 359.39°
TVD: 7,411.57'
VS: 4,268.25'

12,790

12,800
WOB: 16.8klbs
RPM: 70
SPM: 178
SPP: 5,502psi



grn sup clus, silc cmt,
sme med gy-dk gy gr sup
ss clus, non-sl calc, tr pp
mic pyr

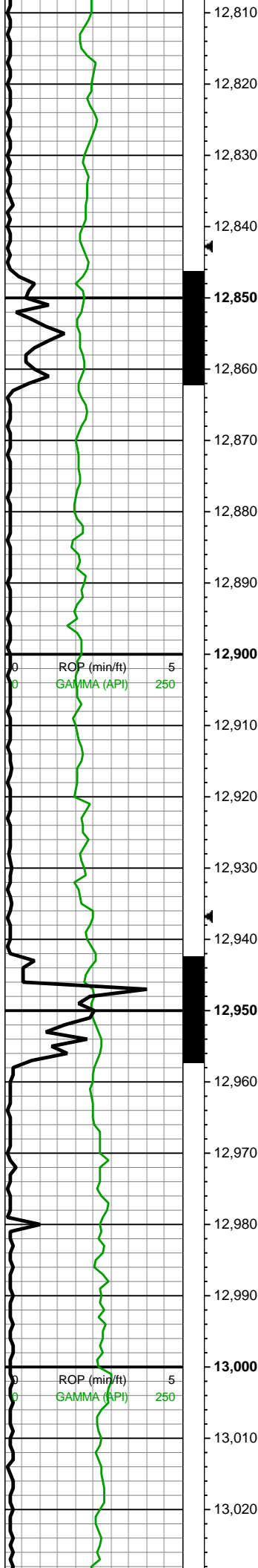
940u

12600-12700 SS (100%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, mod srtd,
grn sup clus, silc cmt,
sme med gy-dk gy gr sup
ss clus, non-sl calc, tr pp
mic pyr

971u

12700-12800 SS (90%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, mod srtd,
grn sup clus, silc cmt,
sme med gy-dk gy gr sup
ss clus, non-sl calc, tr pp
mic pyr; SH (10%): dk
gy-blk, v frm-hrd, blk, y,
sme plty, calc, micmica,
tr pp pyr, rgh tex



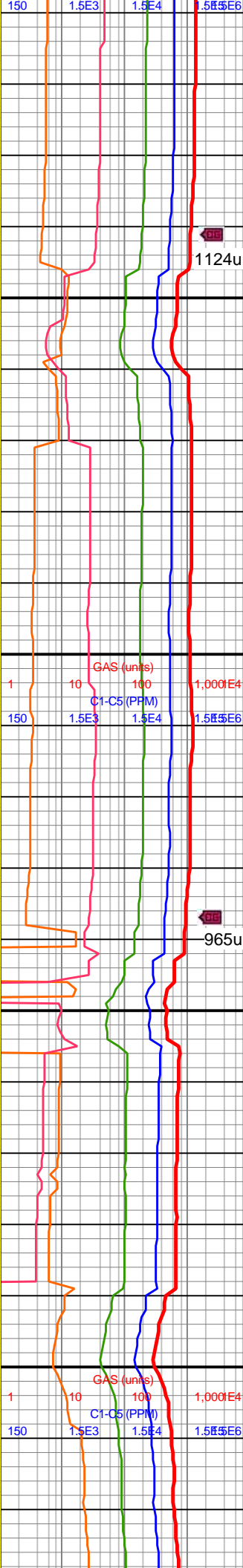
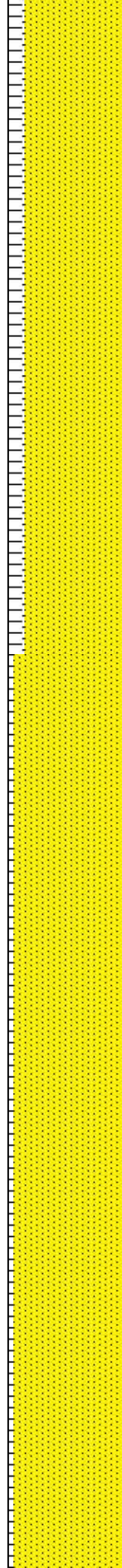


MD: 12,878'
INC: 90.53°
AZM: 0.18°
TVD: 7,411.2'
VS: 4,363.24'

MW IN: 10.1
VIS IN: 57
MW OUT: 10.2
VIS OUT: 50

MD: 12,972'
INC: 90.4°
AZM: 359.04°
TVD: 7,410.44'
VS: 4,457.24'

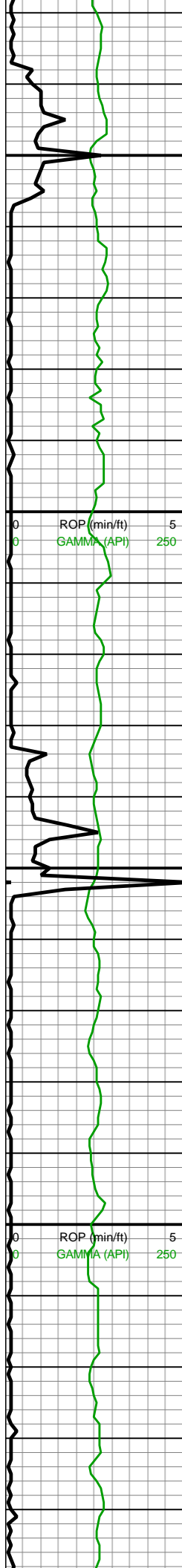
WOB: 12.9klbs
RPM: 70
SPM: 177
SPP: 5,552psi



12800-12900 SS (85%):
gyshbn-brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, mod srted,
grn sup clus, silc cmt,
sme med gy-dk gy gr sup
ss clus, non-sl calc, tr pp
mic pyr; SH (15%): dk
gy-blk, v frm-hrd, blkly,
sme plty, calc, micmica,
tr pp pyr, rgh tex

12900-13000 SS (95%):
gyshbn-brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, mod srted, grn
sup clus, silc cmt, sme
med gy-dk gy gr sup ss
clus, non-sl calc, tr pp
mic pyr; SH (5%): dk
gy-blk, v frm-hrd, blkly,
sme plty, calc, micmica,
tr pp pyr, rgh tex





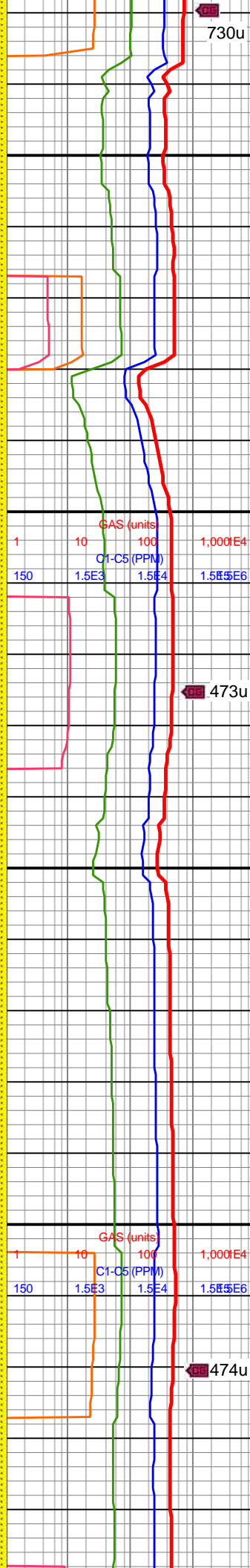
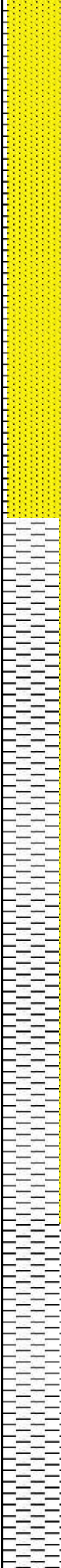
13,030
13,040
13,050
13,060
13,070
13,080
13,090
13,100
13,110
13,120
13,130
13,140
13,150
13,160
13,170
13,180
13,190
13,200
13,210
13,220
13,230
13,240

MW IN: 10.1
VIS IN: 57
MW OUT: 10.2
VIS OUT: 52

MD: 13,067'
INC: 91.23°
AZM: 0.36°
TVD: 7,409.09'
VS: 4,552.22'

MD: 13,161'
INC: 90.53°
AZM: 1.77°
TVD: 7,407.65'
VS: 4,646.19'

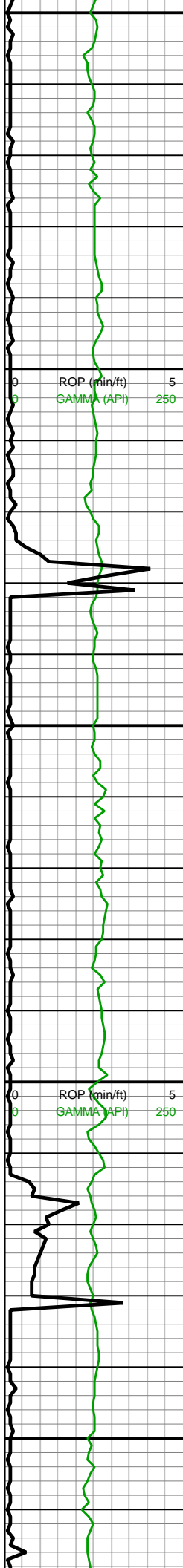
WOB: 25.4klbs
RPM: 70
SPM: 178
SPP: 5,541psi



13000-13100 SS (95%):
gyshbn-brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, mod srted, grn
sup clus, silc cmt, sme
med gy-dk gy gr sup ss
clus, non-sl calc, tr pp
mic pyr; SH (5%): dk
gy-blk, v frm-hrd, blk, y,
sme plty, calc, micmica,
tr pp pyr, rgh tex

13100-13200 SH (50%):
dk gy-blk, v frm-hrd, blk, y,
sme plty, calc, micmica,
tr pp pyr, rgh tex; SST
(50%): 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, tr pyr nod





MD: 13,255'
INC: 91.01°
AZM: 1.59°
TVD: 7,406.38'
VS: 4,740.14'

MW IN: 10.1
VIS IN: 52
MW OUT: 10.2
VIS OUT: 48

MD: 13,350'
INC: 91.27°
AZM: 2.47°
TVD: 7,404.49'
VS: 4,835.06'

WOB: 20.7klbs
RPM: 70
SPM: 177
SPP: 5,578psi

MW IN: 10.1
VIS IN: 52
MW OUT: 10.2
VIS OUT: 48

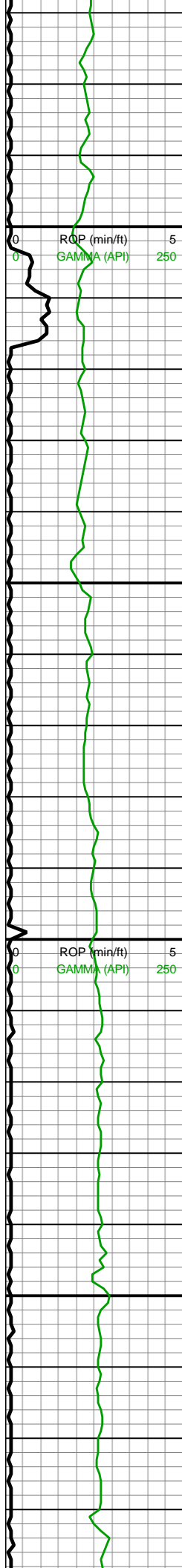
MD: 13,444'
INC: 90.18°
AZM: 2.21°
TVD: 7,403.3'
VS: 4,928.98'



13200-13300 SH (60%):
dk gy-blk, v frm-hrd, blk, y,
sme plty, calc, micmica,
tr pp pyr, rgh tex; SST
(40%): 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 pyr nod;

13300-13400 SH (65%):
dk gy-blk, v frm-hrd, blk, y,
sme plty, calc, micmica,
tr pp pyr, rgh tex; SST
(35%): 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 pyr nod;





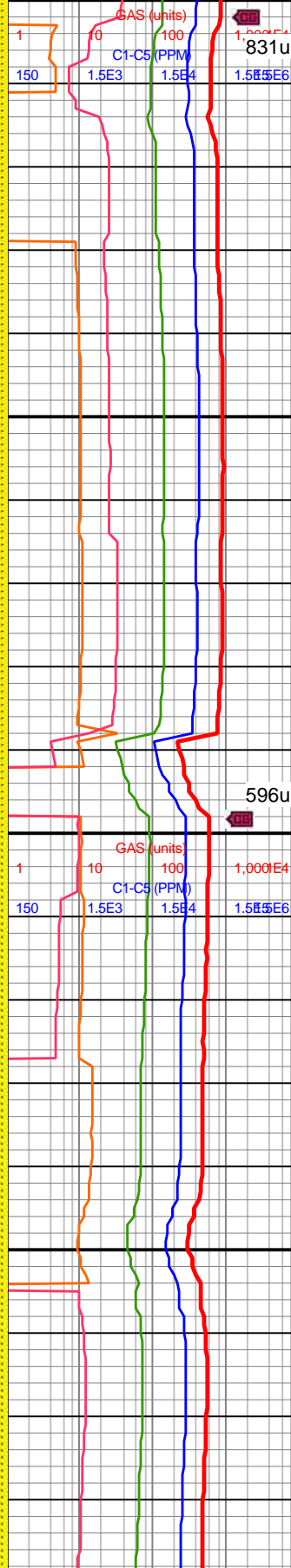
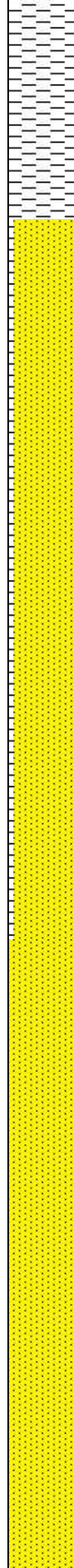
13,470
13,480
13,490
13,500
13,510
13,520
13,530
13,540
13,550
13,560
13,570
13,580
13,590
13,600
13,610
13,620
13,630
13,640
13,650
13,660
13,670
13,680

MD: 13,539'
INC: 88.86°
AZM: 2.65°
TVD: 7,404.1'
VS: 5,023.88'

WOB: 10.1klbs
RPM: 70
SPM: 178
SPP: 5,009psi

MD: 13,633'
INC: 89.25°
AZM: 1.77°
TVD: 7,405.65'
VS: 5,117.8'

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

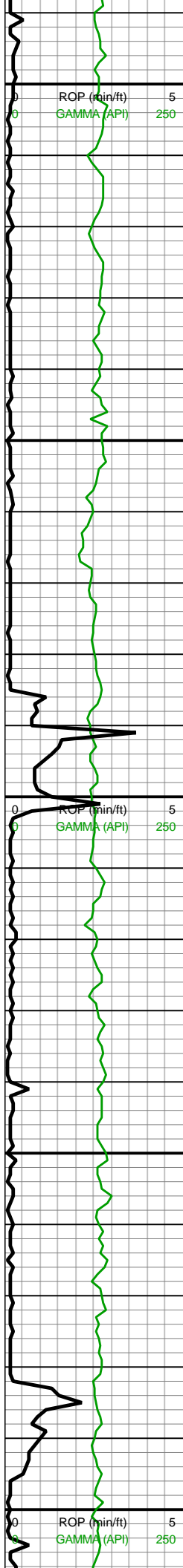


13400-13500 SH (60%):
dk gy-blk, v frm-hrd, blk, y,
sme plty, calc, micmica,
tr pp pyr, rgh tex; SST
(40%): gyshbn-med brn,
mot lt gy, occ dk gy, vf-f gr,
mod srted, sb frm-frm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc, tr pyr nod;

13500-13600 SS (95%):
gyshbn-brn, mot med
brn, vf-f gr, sb ang-sb rd,
sb frm-frm, mod srted, grn
sup clus, silc cmt, sme
med gy-dk gy gr sup ss
clus, non-sl calc, tr pp
mic pyr; SH (5%): dk
gy-blk, v frm-hrd, blk, y,
sme plty, calc, micmica,
tr pp pyr, rgh tex

13600-13700 SS (100%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, mod srted,





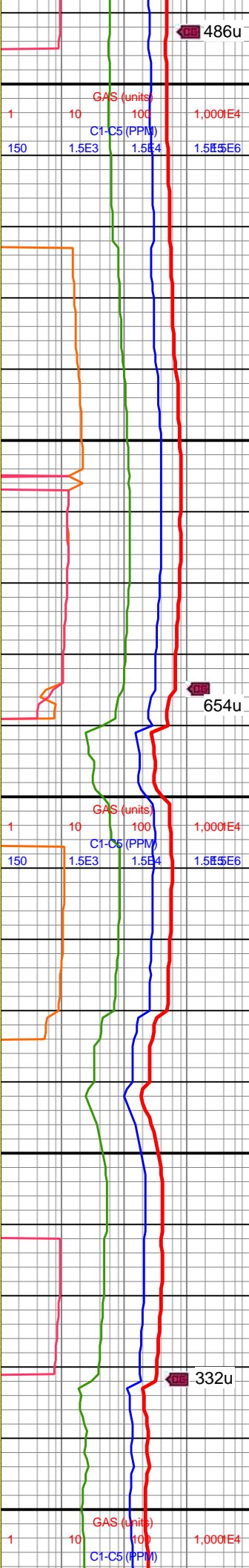
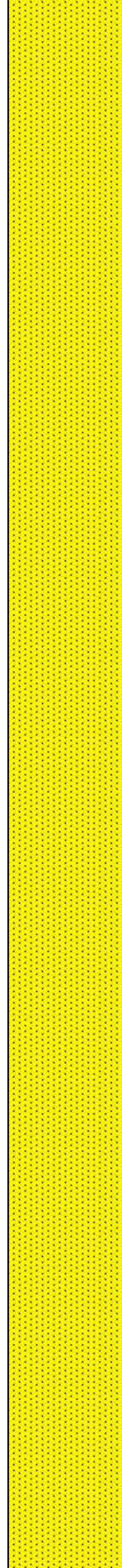
13,690
13,700
13,710
13,720
13,730
13,740
13,750
13,760
13,770
13,780
13,790
13,800
13,810
13,820
13,830
13,840
13,850
13,860
13,870
13,880
13,890
13,900

MD: 13,727'
INC: 90.26°
AZM: 1.59°
TVD: 7,406.05'
VS: 5,211.76'

WOB: 44.9klbs
RPM: 0
SPM: 177
SPP: 4,901psi

MD: 13,822'
INC: 90.7°
AZM: 0.1°
TVD: 7,405.26'
VS: 5,306.74'

MW IN: 10.1
VIS IN: 52
MW OUT: 10.2
VIS OUT: 48

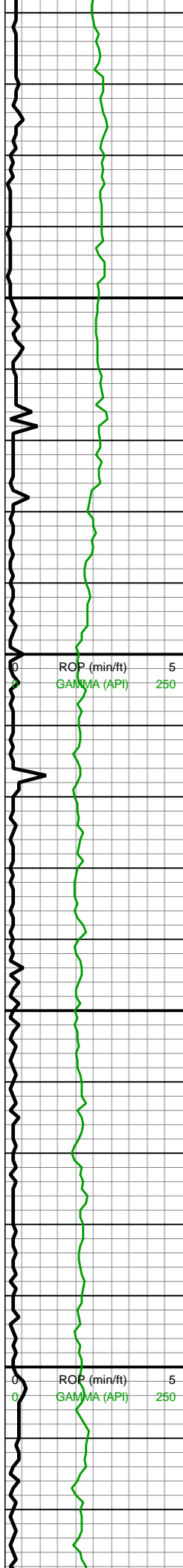


grn sup clus, silc cmt,
sme med gy-dk gy gr sup
ss clus, non-sl calc, tr pp
mic pyr

13700-13800 SS (100%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-f gr, sb ang-sb
rd, sb frm-frm, mod srted,
grn sup clus, silc cmt,
sme med gy-dk gy gr sup
ss clus, non-sl calc, tr pp
mic pyr

13800-13900 SS (100%):
gyshbn-lt brn, mot med
brn, scatt dk gy-blk ang
shy grs, vf-med gr, sb
ang-sb rd, sb frm-frm,
mod srted, grn sup clus,
silc cmt, sme med gy-dk
gy gr sup ss clus, non-sl
calc, tr pp mic pyr





MD: 13,917'
INC: 89.78°
AZM: 358.6°
TVD: 7,404.86'
VS: 5,401.73'

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

WOB: 14.1klbs
RPM: 70
SPM: 176
SPP: 5,614psi

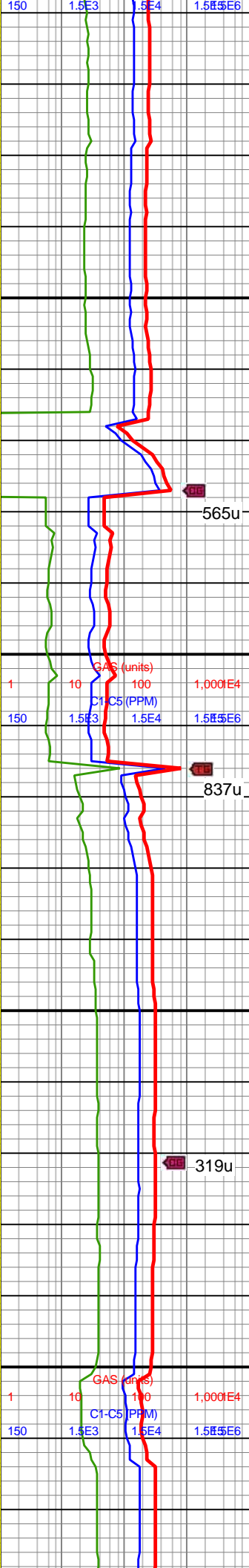
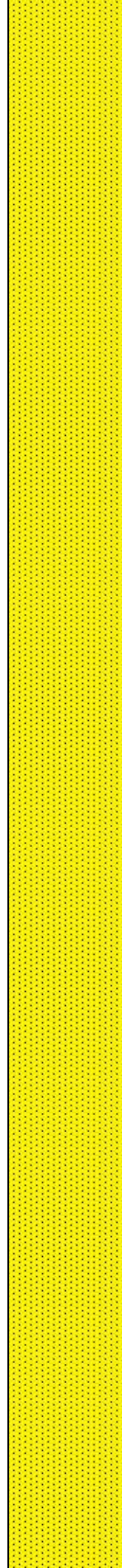
TOOH for bit/motor 07/03/2018

MIN DEPT 07/04/2018

Bit #: 3
Type: U516M
Size: 8 1/2
Depth In: 14,017'
Depth Out: 15,305'
Hours: 5.9 hrs
Avg Ft/Hr: 218.31 'hr
Jets: 6x12
S/N: 37612

MD: 14,042'
INC: 91.01°
AZM: 358.51°
TVD: 7,404'
VS: 5,526.69'

MW IN: 10.3
VIS IN: 64
MW OUT: 10.3
VIS OUT: 57

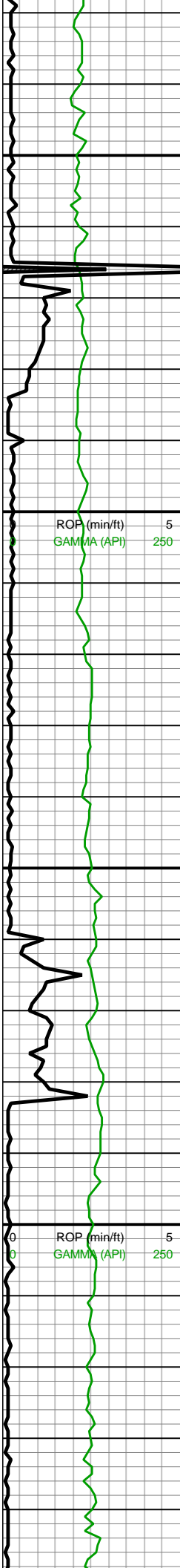


13900-14000 SS (100%):
med-dk gyshbn, sme lt brn, mot med brn, scatt dk gy-blk ang shy grs, vf-med gr, sb ang-sb rd, sb frm-frm, mod srted, grn sup clus, silc cmt, sme med gy-dk gy gr sup ss clus, non-sl calc, tr pp mic pyr



14000-14100 SS (100%):
lt-med gyshbn, sme lt brn, mot med brn, tr dk gy-blk ang shy grs, vf-med gr, sb ang-sb rd, sb frm-frm, mod srted, grn sup clus, silc cmt, non-sl calc, tr pp mic pyr





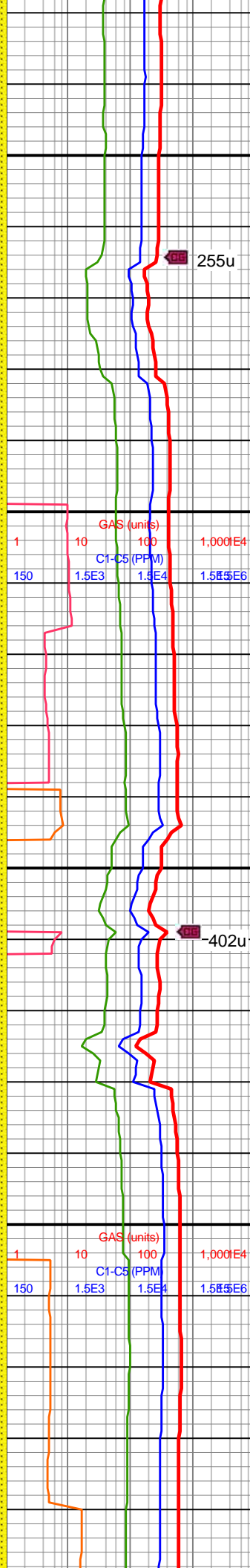
MD: 14,137'
INC: 90.53°
AZM: 358.87°
TVD: 7,402.72'
VS: 5,621.65'

WOB: 22.4klbs
RPM: 0
SPM: 174
SPP: 5,195psi

MD: 14,232'
INC: 89.91°
AZM: 0.27°
TVD: 7,402.36'
VS: 5,716.65'

MW IN: 10.2
VIS IN: 56
MW OUT: 10.2
VIS OUT: 53

MD: 14,327'
INC: 90.53°
AZM: 359.13°
TVD: 7,401.99'
VS: 5,811.64'

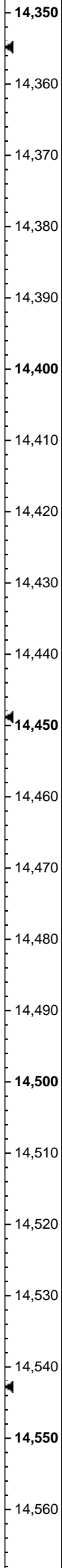
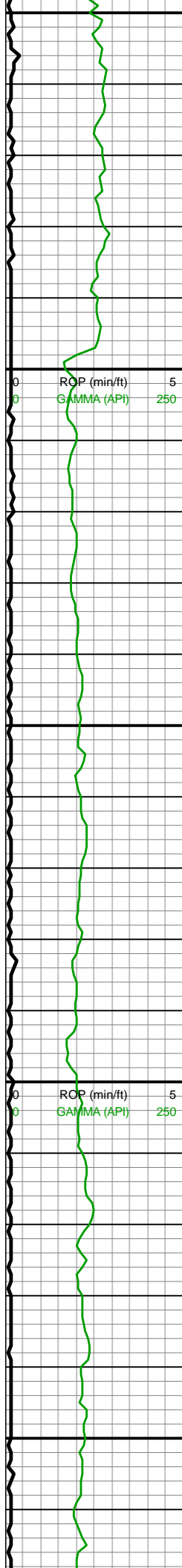


255u

14100-14200 SS (100%):
lt-med gyshbn, sme lt
brn, mot med brn, tr dk
gy-blk ang shy grs,
vf-med gr, sb ang-sb rd,
sb frm-frm, mod srted, grn
sup clus, silc cmt, non-sl
calc, tr pp mic pyr

402u

14200-14300 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

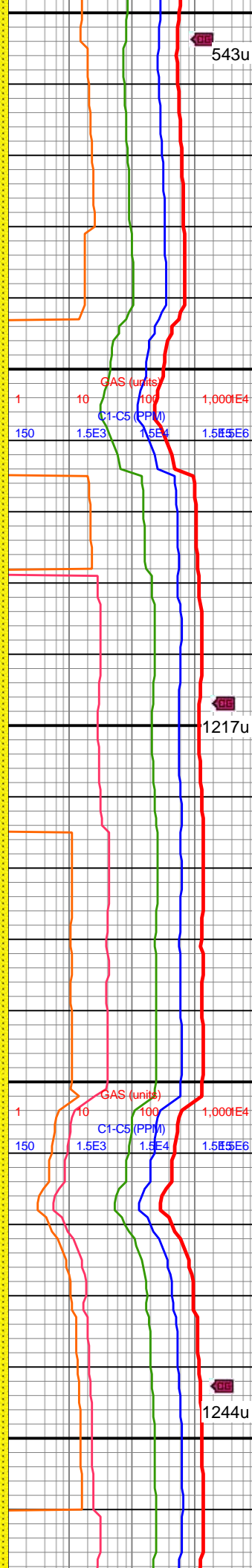


WOB: 20.2klbs
RPM: 0
SPM: 176
SPP: 5,131psi

MD: 14,421'
INC: 88.64°
AZM: 0.18°
TVD: 7,402.67'
VS: 5,905.63'

MW IN: 10.2
VIS IN: 56
MW OUT: 10.3
VIS OUT: 52

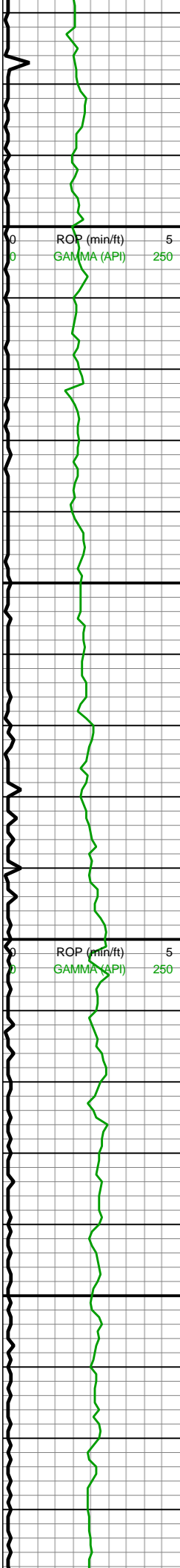
MD: 14,515'
INC: 89.03°
AZM: 359.92°
TVD: 7,404.58'
VS: 5,999.61'



14300-14400 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 diss pyr
cls

14400-14500 SST
(100%): predy dsky brn,
com lt gy, sme med-dk
gy, frm-hd, fri, sme med-brit,
blky-sb blky, sb rnd-sb
ang, vf-f, mod-w srt,
predy cls sup, mtx sup ip,
qtz mtx, silc-calc cmt,
scat pp pyr





14,570
14,580
14,590
14,600
14,610
14,620
14,630
14,640
14,650
14,660
14,670
14,680
14,690
14,700
14,710
14,720
14,730
14,740
14,750
14,760
14,770
14,780
14,790

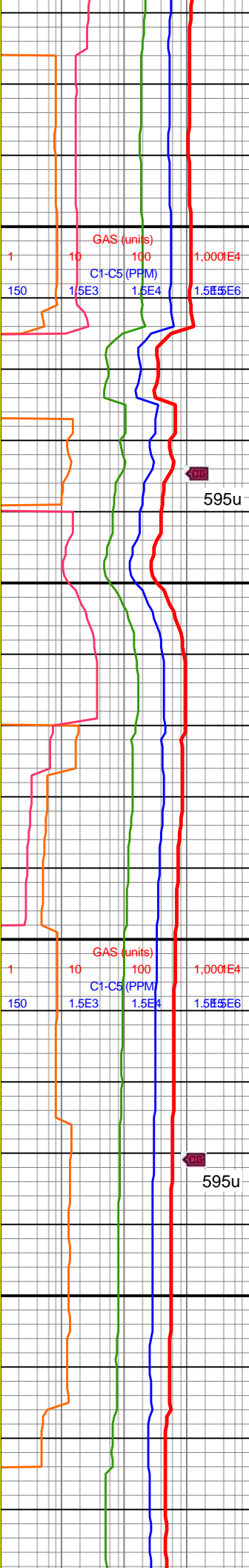
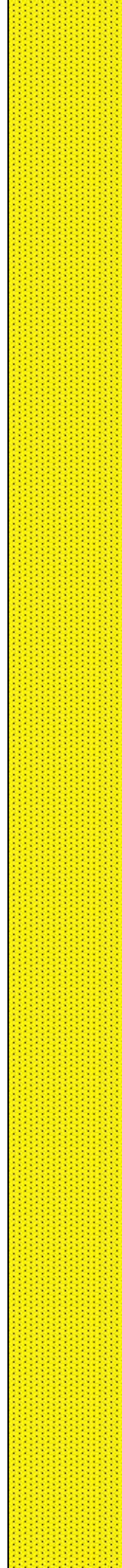
WOB: 20.7klbs
RPM: 70
SPM: 174
SPP: 5.620psi

MD: 14,609'
INC: 89.21°
AZM: 359.31°
TVD: 7,406.03'
VS: 6,093.6'

MD: 14,704'
INC: 89.39°
AZM: 358.78°
TVD: 7,407.19'
VS: 6,188.58'

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

MD: 14,799'

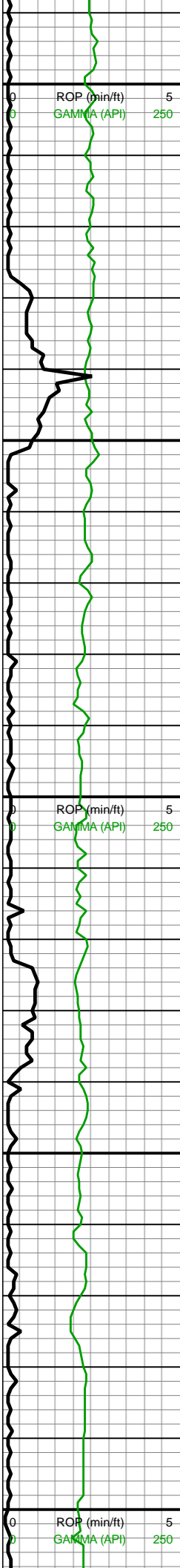


14500-14600 SS (100%):
lt-med gyshbn, sme lt
brn, mot med brn, tr dk
gy-blk ang shy grs,
vf-med gr, sb ang-sb rd,
sb frm-frm, mod srtd, grn
sup clus, silc cmt, non-sl
calc, tr pp mic pyr

14600-14700 SS (100%):
lt-med gyshbn, sme lt
brn, mot med brn, tr dk
gy-blk ang shy grs,
vf-med gr, sb ang-sb rd,
sb frm-frm, mod srtd, grn
sup clus, silc cmt, non-sl
calc, tr pp mic pyr

14700-14800 SS (100%):
lt-med gyshbn, sme lt
brn, mot med brn, tr dk
gy-blk ang shy grs,





14,790
AZM: 89.65°
TVD: 7,407.98'
VS: 6,283.55'

14,800
WOB: 18.4klbs
RPM: 70
SPM: 175
SPP: 5,630psi

14,810

14,820

14,830

14,840

14,850

14,860

14,870
MW IN: 10.2
VIS IN: 55
MW OUT: 10.3
VIS OUT: 53

14,880

14,890
MD: 14,893'
INC: 90.09°
AZM: 359.75°
TVD: 7,408.2'
VS: 6,377.54'

14,900

14,910

14,920

14,930

14,940

14,950

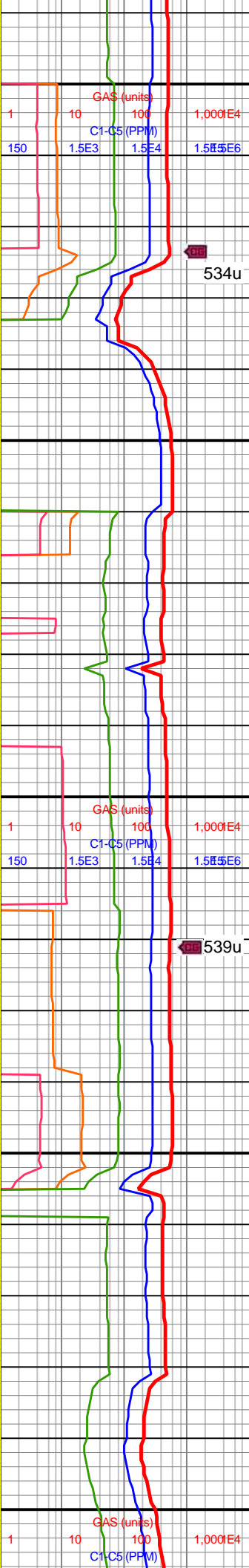
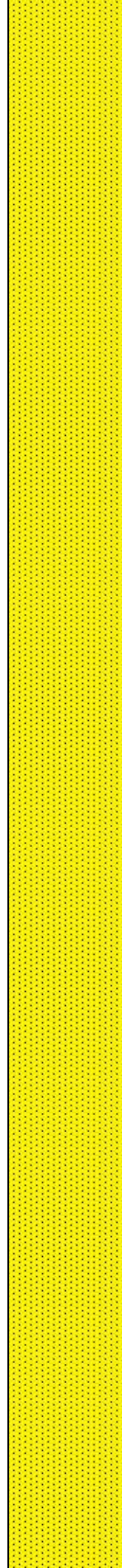
14,960

14,970

14,980

14,990
MD: 14,987'
INC: 90.18°
AZM: 3.26°
TVD: 7,407.97'
VS: 6,471.49'

15,000
WOB: 18klbs
RPM: 70
SPM: 174
SPP: 5,605psi



vf-med gr, sb ang-sb rd,
sb frm-frm, mod srted, grn
sup clus, silc cmt, non-sl
calc, tr pp mic pyr

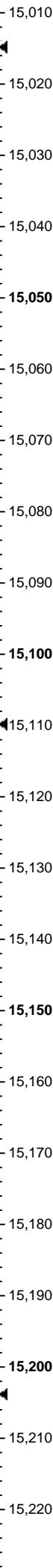
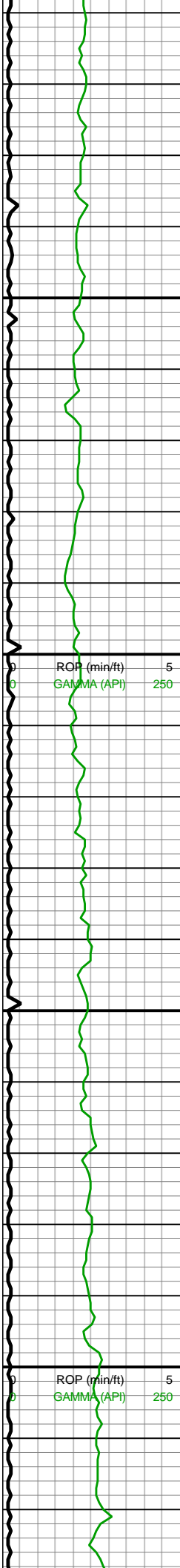
534u

14800-14900 SS (100%):
lt-med gyshbn, sme lt
brn, mot med brn, tr dk
gy-blk ang shy grs,
vf-med gr, sb ang-sb rd,
sb frm-frm, mod srted, grn
sup clus, silc cmt, non-sl
calc, tr pp mic pyr

539u

14900-15000 SS (100%):
lt-med gyshbn, sme lt
brn, mot med brn, tr dk
gy-blk ang shy grs,
vf-med gr, sb ang-sb rd,
sb frm-frm, mod srted, grn
sup clus, silc cmt, non-sl
calc, tr pp mic pyr



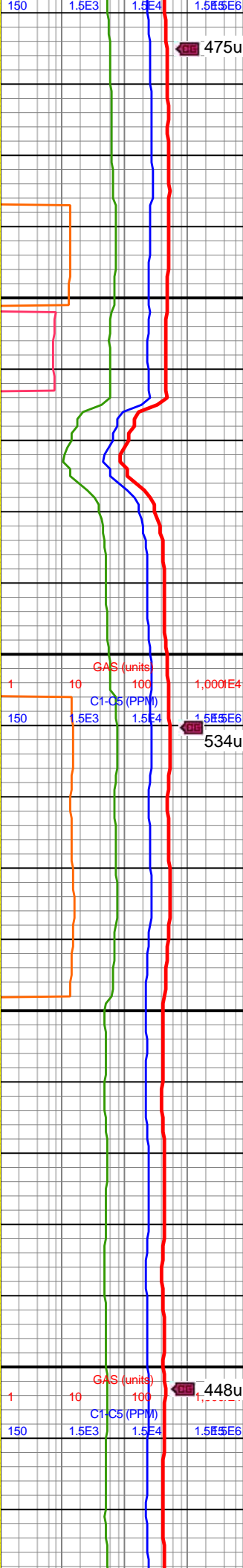
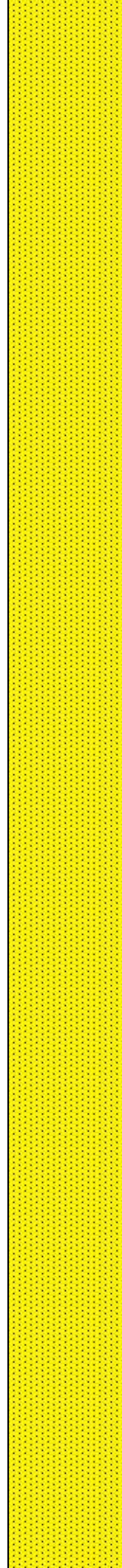


MD: 15,082'
INC: 90.84°
AZM: 4.93°
TVD: 7,407.13'
VS: 6,566.24'

MW IN: 10.2
VIS IN: 54
MW OUT: 10.3
VIS OUT: 52

MD: 15,176'
INC: 91.41°
AZM: 6.25°
TVD: 7,405.28'
VS: 6,659.77'

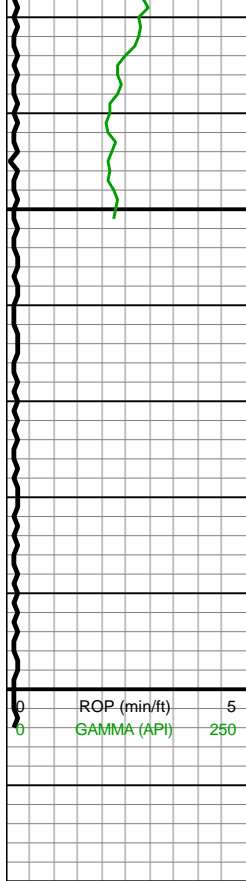
WOB: 16.5klbs
RPM: 70
SPM: 174
SPP: 5,646psi



15000-15100 SS (100%):
lt-med gyshbn, sme lt
brn, mot med brn, tr dk
gy-blk ang shy grs,
vf-med gr, sb ang-sb rd,
sb frm-frm, mod srted, grn
sup clus, silc cmt, non-sl
calc, tr pp mic pyr

15100-15200 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, tr dissd pyr
cls





15,230
15,240
15,250
15,260
15,270
15,280
15,290
15,300
15,310
15,320

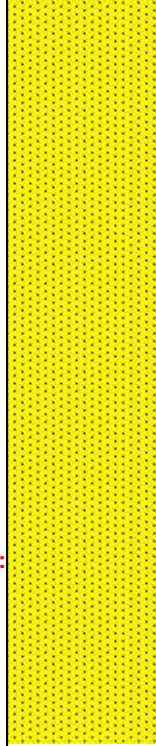
MD: 15,246'
INC: 91.71°
AZM: 5.46°
TVD: 7,403.38'
VS: 6,729.38'

MW IN: 10.2
VIS IN: 54
MW OUT: 10.3
VIS OUT: 52

Projection to Bit:

MD: 15,305'
INC: 91.71°
AZM: 5.46°
TVD: 7,401.62'
VS: 6,788.09'

Total Depth
15,305' MD
07/04/2018
14:54



15200-15300 SST
(100%): gyshbn-med brn,
mot lt gy, occ dk gy, vf-f gr,
mod srtd, sb frm-firm, sb
ang-sb rd, mtx sup arg
clus, silc cmt, arg ip,
sl-non calc, tr dissim pyr
cls

