



Scale: 5" / 100'
Measured Depth Log

Well Name Salt Ranch 506-1035H

State CO

County Weld

Country USA

Rig Number Unit 406

API Number 05-123-46500

Drilling Completed 4/23/2019

Geographic Region DJ

Spud Date 4/11/2019

Surface Coordinates Lat : 40.94220869
Long : -104.5252816
X : 1,771,521
Y : 14,869,519
Sec Calls : 607' FEL (sec 10)
357' FNL (sec 10)

Bottom Hole Coordinates Lat : 40.97088697
Long : -104.5198071
X : 1,772,975
Y : 14,879,972
Sec Calls : 940' FWL (sec 35)
600' FNL (sec 35)

Ground Elevation 5,434'

K.B. Elevation 5,456'

Logged Interval 5,000' **To** 18,057'

Total Depth 18,057'

Formation CODELL

Type of Drilling Fluid OIL BASED MUD

Operator

Company Clear Creek Resource Partners

Address 717 17th St. Ste 1525
Denver, CO 80202



CLEAR CREEK
Resource Partners

Geologist

Zone Color Coding

Name Steen Jergensen

Company Clear Creek Resource Partners

Address 717 17th St. Ste 1525
Denver, CO 80202



CLEAR CREEK
Resource Partners

Oil

Condensate

Gas

Note

Core

Pressure

Error

Water

Seal

Other

Loggers: Robert Kelly/ Bruce Benik/ Micah Morgan

Services Provided: 2-Man Logging

Equipment: ML-593

Address: 6360 West Sam Houston Pkwy N
Houston, Texas, 77041

Start Date: 4/19/2019

End Date: 4/23/2019

Job #: 2133RK1904

Rock Types

UNKNOWN
 ANHYDRITE
 GYPSUM
 SALT
 SIDERITE or LIMONITE
 LIMESTONE

DOLOMITE
 CHERT
 COAL
 MARLSTONE
 CLAYSTONE
 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

ORGANIC

PINPOINT

UNLucky

FORMATION TOP

GAS SHOW

UNlucky

Rounding

Angular

LITHOGRAPHIC

MICROXLN

MUDSTONE

DEAD

EVEN

QUESTIONABLE

SPOTTED STAINING

Porosity

E EARTHY

F FENESTRAL

F FRACTURE

X INTERCRYSTALLINE

INTEROOLITIC

MOLDIC

VUGGY

Engineering

BIT

CASING

CONNECTION (LEFT)

CONNECTION (RIGHT)

CONNECTION GAS

CORE - LOST

CORE - RECOVERED

DST INTERVAL

FAULT

MINDEPTH MIN 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

ANGULAR

ROUNDED

SUBANG

SUBRND

Textures

BOUNDSTONE

CHALKY

CRYPTOXLN

E EARTHY

F FINELYXLN

GRAINSTONE

MUDSTONE

PACKSTONE

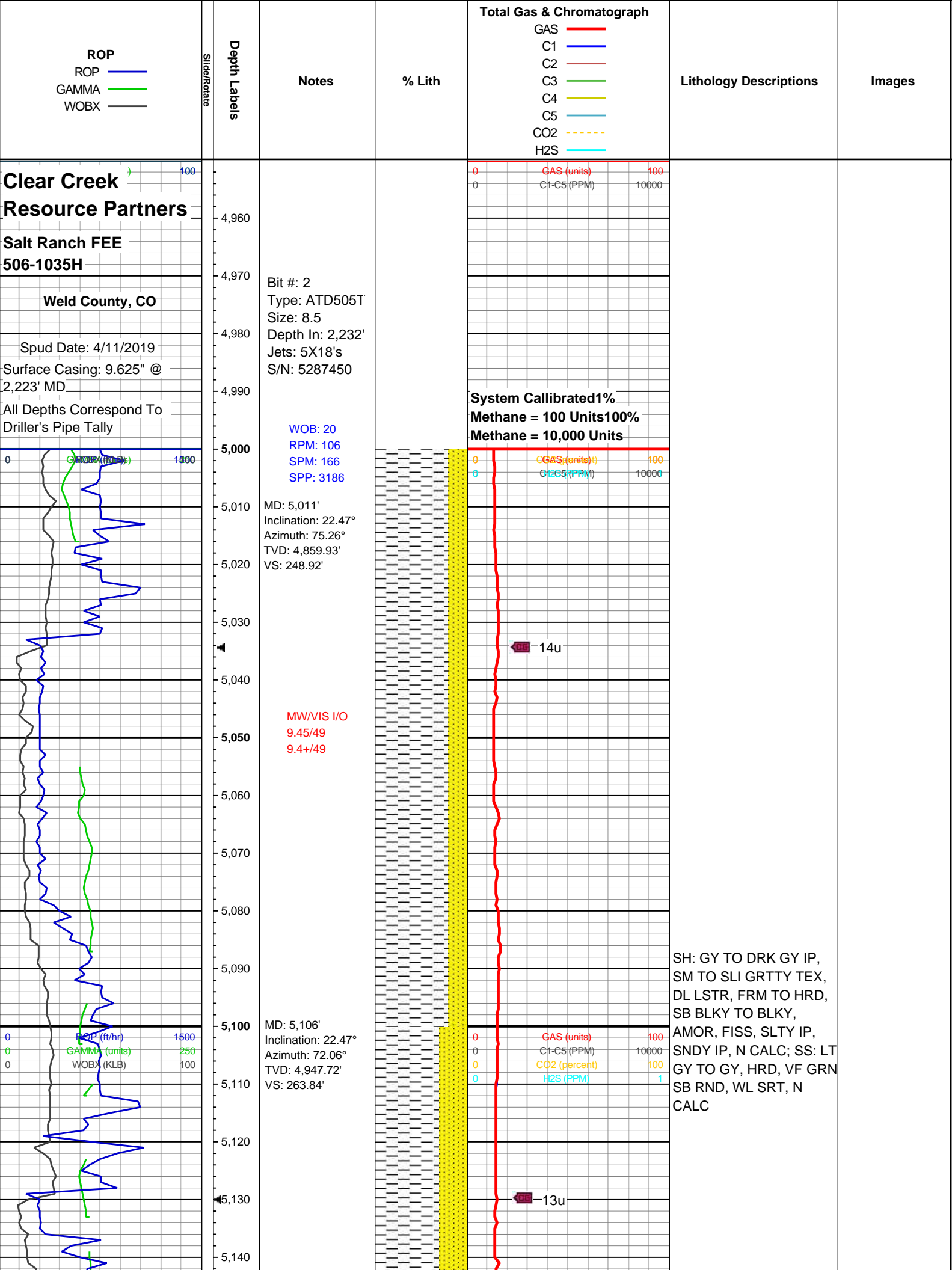
WACKESTONE

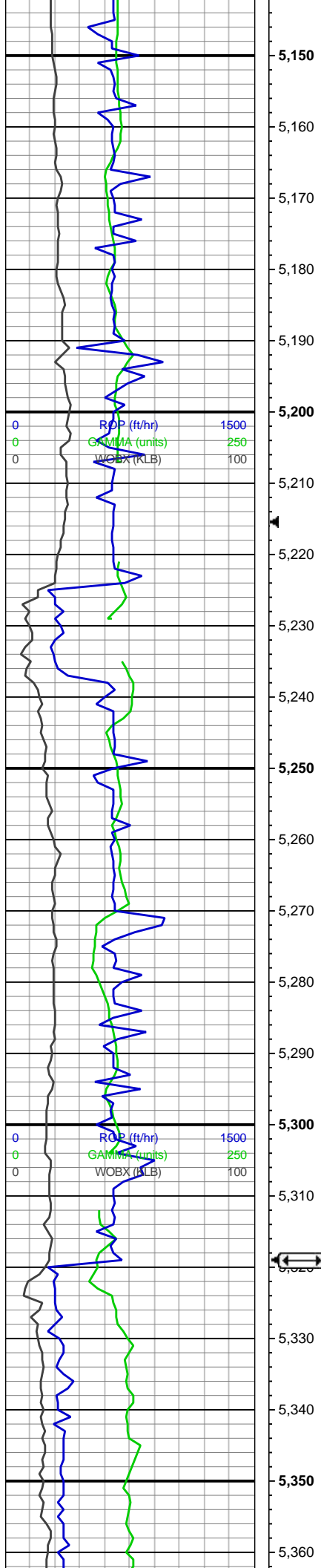
Sorting

MODERATE

POOR

WELL





MD: 5,202'
Inclination: 22.25°
Azimuth: 72.04°
TVD: 5,036.51'
VS: 279.77'

WOB: 15
RPM: 105
SPM: 112
SPP: 1917

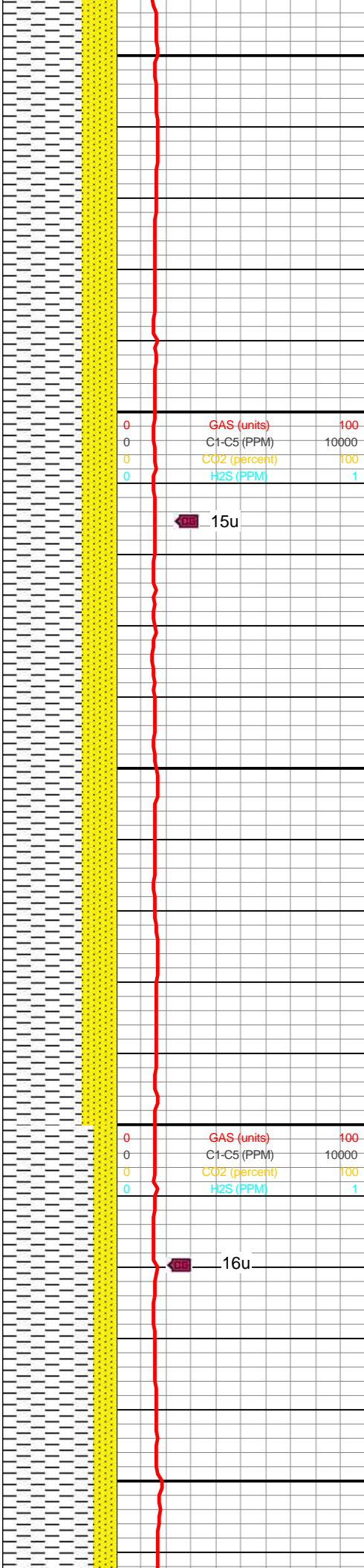
ROP (ft/hr) 1500
GAMMA (units) 250
WOBX (KLB) 100

MW/VIS I/O
9.45/49
9.4+/49

MD: 5,296'
Inclination: 22.34°
Azimuth: 74.98°
TVD: 5,123.48'
VS: 294.5'

ROP (ft/hr) 1500
GAMMA (units) 250
WOBX (KLB) 100

SUSSEX
5,320'MD
5,145'TVD



GAS (units) 100
C1-C5 (PPM) 10000
CO2 (percent) 100
H2S (PPM) 1

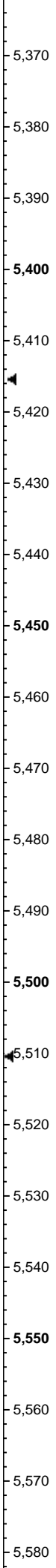
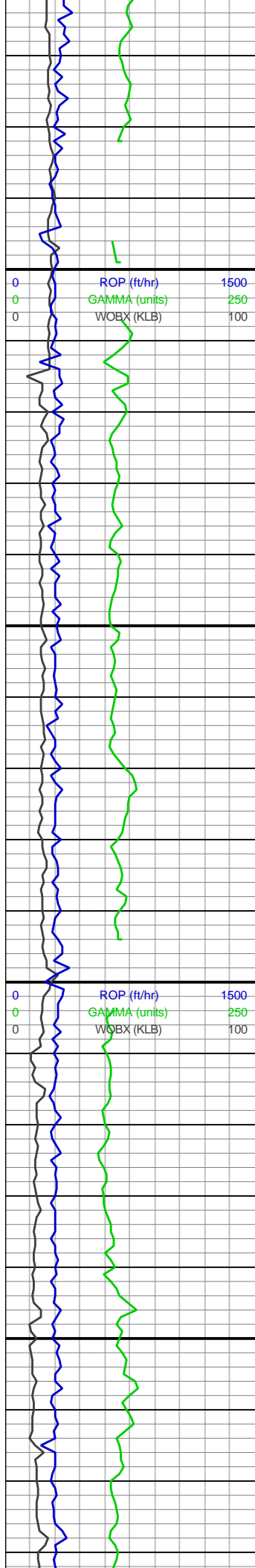
15u

GAS (units) 100
C1-C5 (PPM) 10000
CO2 (percent) 100
H2S (PPM) 1

16u

SH: GY TO DRK GY IP,
SM TO SLI GRTTY TEX,
DL LSTR, FRM TO HRD,
SB BLKY TO BLKY,
AMOR, FISS, SLTY IP,
SNDY IP, N CALC; SS:
LT GY TO GY, HRD, VF
GRN SB RND, WL SRT,
N CALC

SH: GY TO DRK GY IP,
SM TO SLI GRTTY TEX,
DL LSTR, FRM TO HRD,
SB BLKY TO BLKY,
AMOR, FISS, SLTY IP, SL
SNDY IP, N CALC; SS:
LT GY TO GY, HRD, VF
GRN SB RND, WL SRT,
N CALC



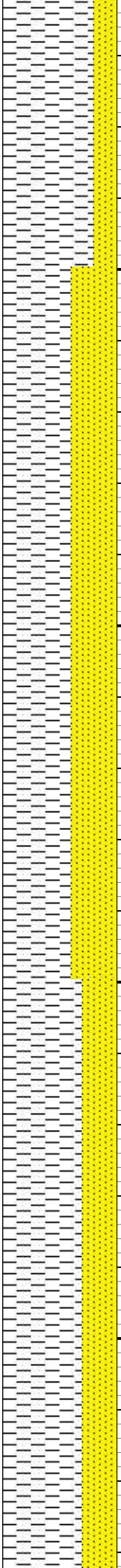
MD: 5,392'
Inclination: 22.41°
Azimuth: 77.15°
TVD: 5,212.26'
VS: 308.1'

WOB: 15
RPM: 106
SPM: 112
SPP: 1905

MW/VIS I/O
9.45/49
9.4+/49

MD: 5,486'
Inclination: 22.24°
Azimuth: 79.48°
TVD: 5,299.21'
VS: 320.09'

MD: 5,580'
Inclination: 22.34°
Azimuth: 81.48°



GAS (units) 100
C1-C5 (PPM) 10000
CO2 (percent) 100
H2S (PPM) 1

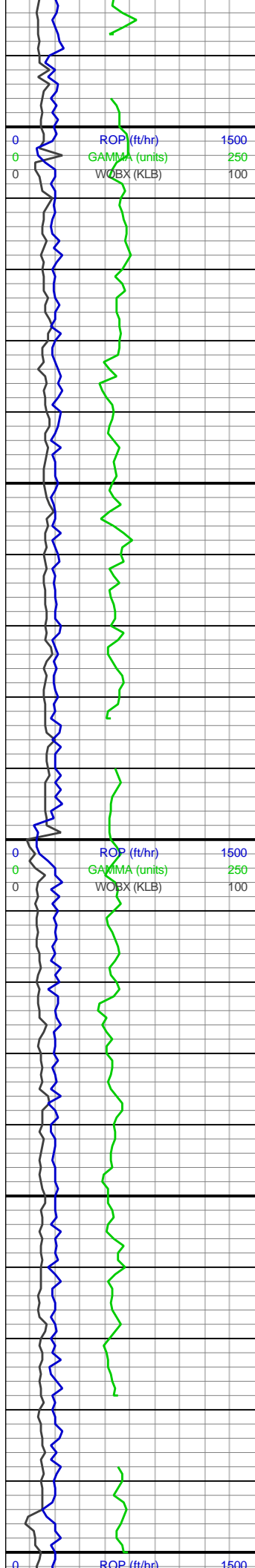
16u

GAS (units) 100
C1-C5 (PPM) 10000
CO2 (percent) 100
H2S (PPM) 1

15u

SH: GY TO DRK GY IP, SM TO SLI GRTTY TEX, DL LSTR, HRD, SB BLKY TO BLKY, AMOR, FISS, SLTY IP, SL SNDY IP, N CALC; SS: LT GY TO GY, HRD, VF GRN, SB RND, WL SRT, N CALC

SH: GY TO DRK GY, SM TO SL GRTTY TEX, DL TO SL RTHY LSTR, HRD, SB BLKY TO BLKY, AMOR, FISS, SLTY, SNDY IP, N CALC; SS: GY, HRD, VF GRN, SB RND, WL SRT, WL CONSL, N CALC



TVD: 5,386.19'
VS: 330.77'

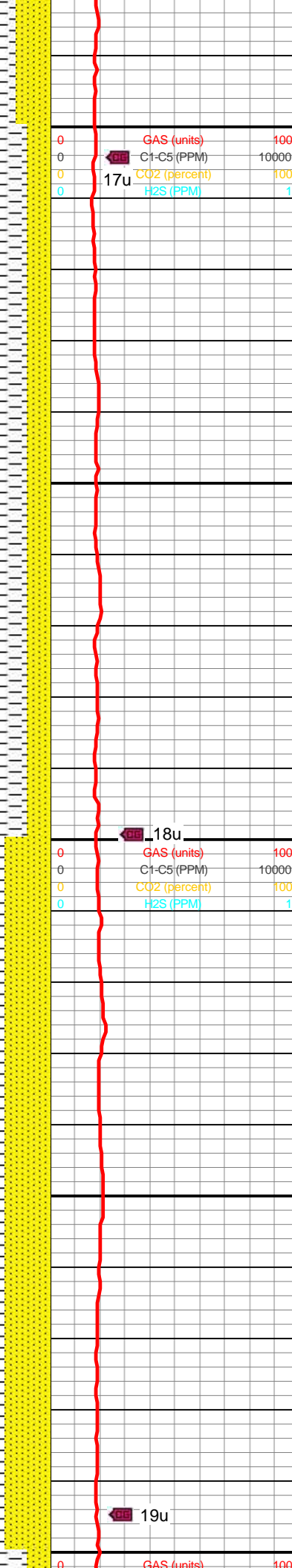
WOB: 16
RPM: 105
SPM: 112
SPP: 1891

MW/VIS I/O
9.45/49
9.4+/49

MD: 5,675'
Inclination: 22.35°
Azimuth: 83.49°
TVD: 5,474.06'
VS: 340.38'

MD: 5,770'
Inclination: 22.27°
Azimuth: 85.39°
TVD: 5,561.95'
VS: 348.79'

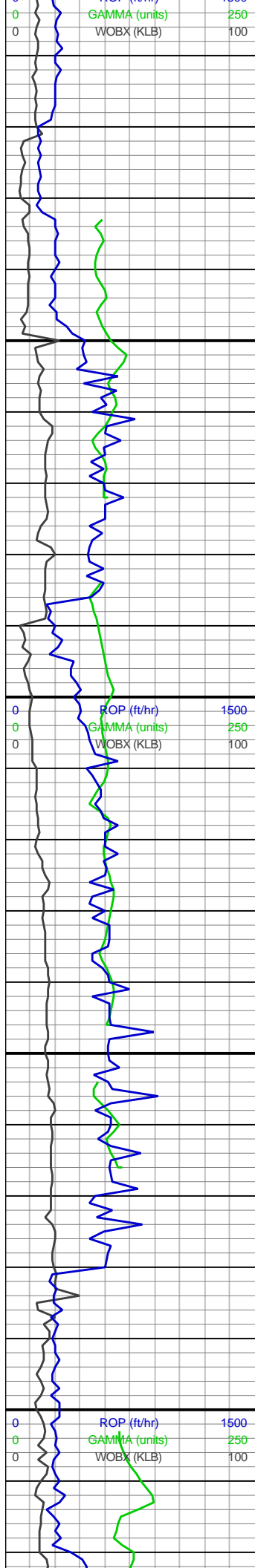
WOB: 15
RPM: 106
SPM: 112
SPP: 1891



SH: GY TO DRK GY, SM TO SL GRTTY TEX, DL TO SL RTHY LSTR, HRD, SB BLKY TO BLKY, AMOR, FISS, SLTY, SNDY IP, N CALC; SS: GY, HRD, VF GRN, SB RND, WL SRT, WL CONSL, N CALC

SH: GY TO DRK GY, SM TO SL GRTTY TEX, DL LSTR, HRD, SB BLKY TO BLKY, AMOR, FISS, SLTY, SL SNDY IP, N CALC; SS: GY, HRD, VF GRN, SB RND, WL SRT, WL CONSL, N CALC

SH: GY TO DRK GY, SM TO SL GRTTY TEX, DL LSTR, HRD, SB BLKY TO BLKY, AMOR, FISS, SLTY, SL SNDY IP, N



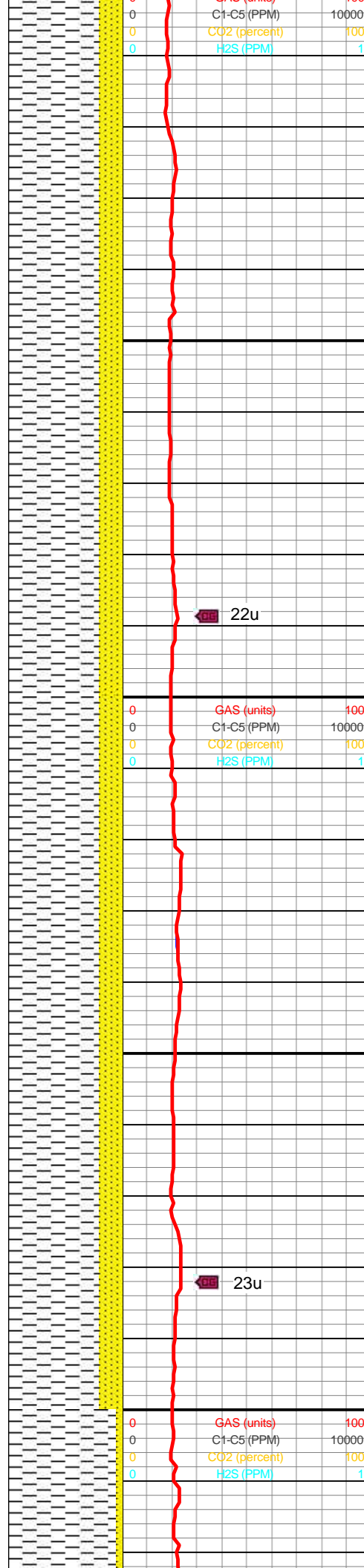
SPM: 166
SPP: 3246

MW/VIS I/O
9.4/47

MD: 5,865'
Inclination: 22.52°
Azimuth: 86.52°
TVD: 5,649.78'
VS: 356.29'

Shannon
5,980'MD
5,756'TVD

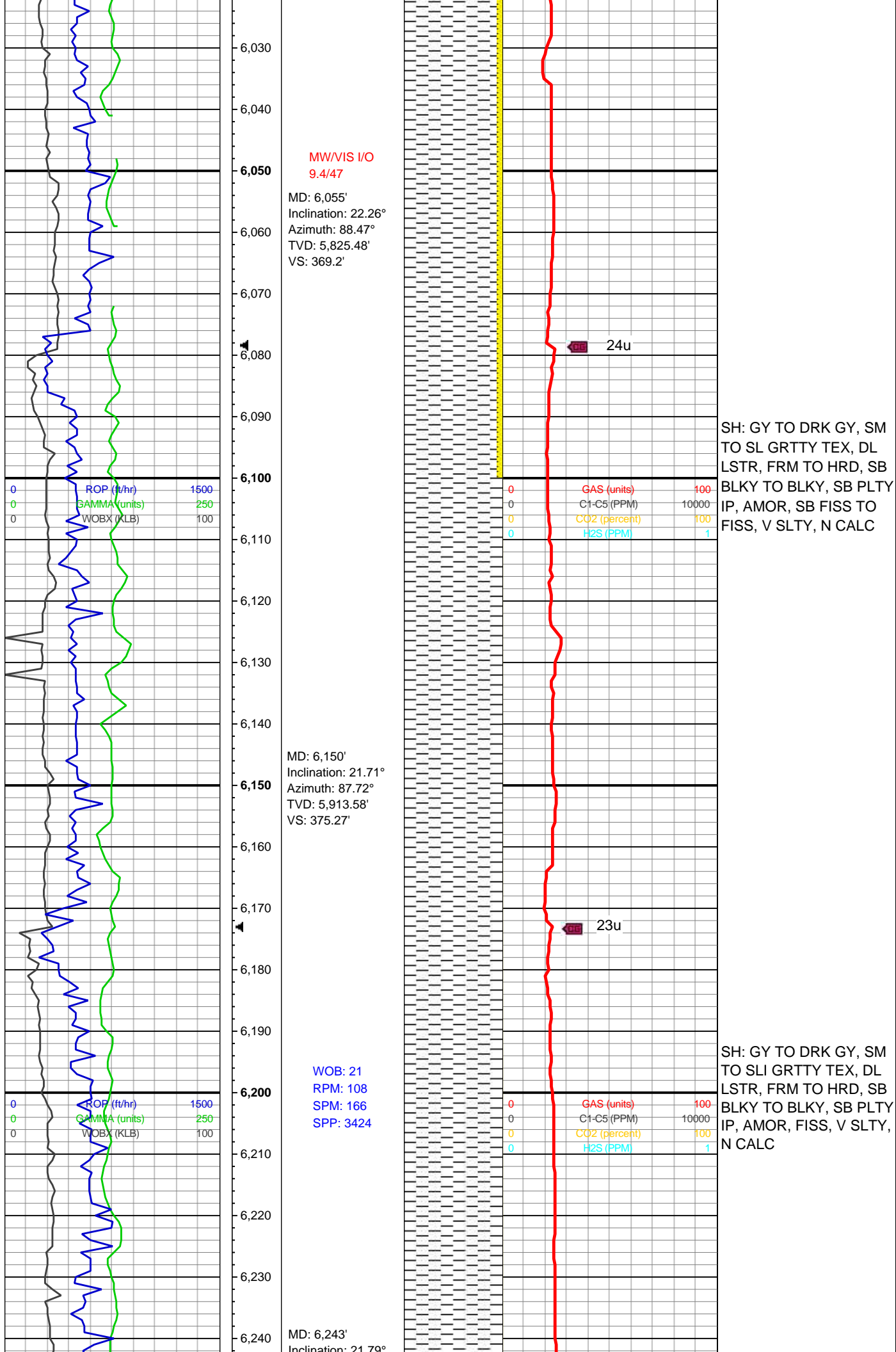
WOB: 19
RPM: 105
SPM: 166
SPP: 3050

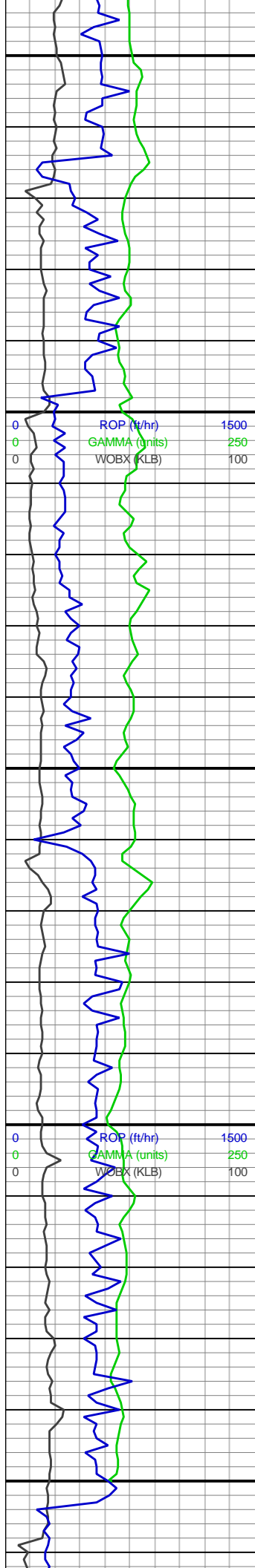


CALC; SS: GY, HRD, VF
GRN, SB RND, WL SRT,
WL CONSL, N CALC

SH: GY TO DRK GY, SM
TO SL GRTTY TEX, DL
LSTR, HRD, SB BLKY TO
BLKY, AMOR, FISS,
SLTY, SL SNDY IP, N
CALC; SS: GY, HRD, VF
GRN, SB RND, WL SRT,
WL CONSL, N CALC

SH: GY TO DRK GY, SM
TO SLI GRTTY TEX, DL
LSTR, FRM TO HRD, SB
BLKY TO BLKY, SB PLTY
IP, AMOR, SB FISS TO
FISS, V SLTY, SL SNDY
IP, N CALC, TR SS





Information: 21.75°
Azimuth: 88.18°
TVD: 5,999.96'
VS: 381.24'

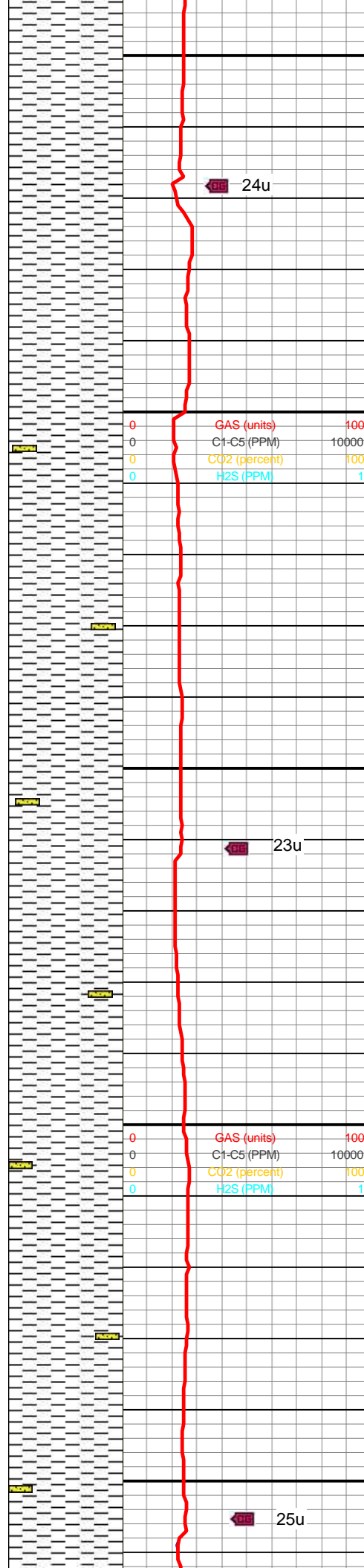
MW/VIS I/O
9.4/47

MD: 6,337'
Inclination: 20.21°
Azimuth: 86.42°
TVD: 6,087.71'
VS: 387.42'

WOB: 15
RPM: 106
SPM: 166
SPP: 3290

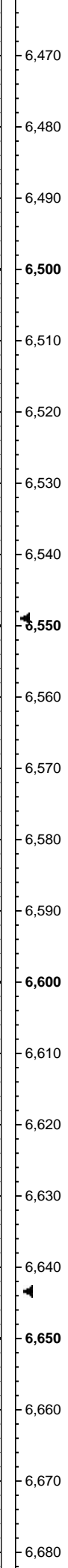
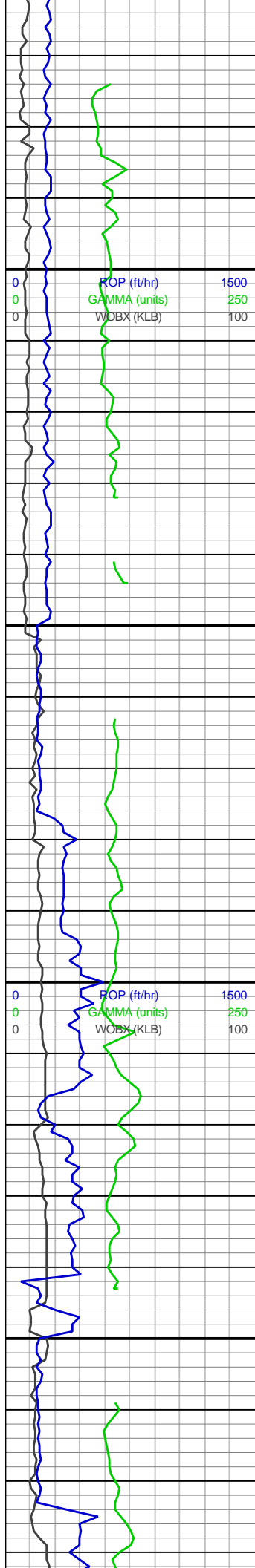
MD: 6,432'
Inclination: 16.67°
Azimuth: 77.92°
TVD: 6,177.83'
VS: 395.36'

MW/VIS I/O
9.5/47



SH: GY TO DRK GY, SM
TO SLI GRITY TEX, DL
LSTR, FRM TO HRD, SB
BLKY TO BLKY, SB PLTY
IP, AMOR, FISS, V SLTY,
N CALC, TR SS

SH: GY TO DRK GY, SM
TO SLI GRITY TEX, DL
LSTR, FRM TO HRD, SB
BLKY TO BLKY, SB PLTY
IP, AMOR, FISS, V SLTY,
SL SNDR IP, N CALC, TR
SS

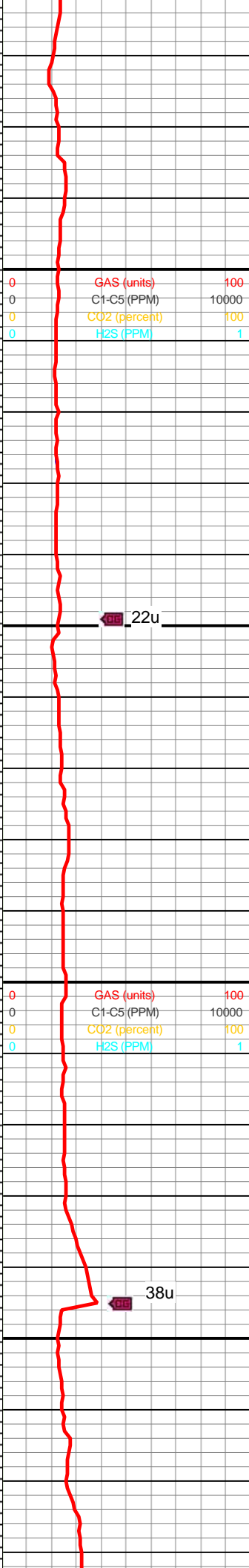
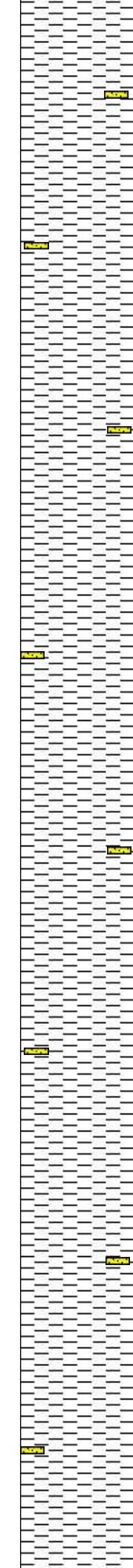


MD: 6,526'
Inclination: 17.07°
Azimuth: 79.24°
TVD: 6,267.79'
VS: 404.39'

WOB: 17
RPM: 105
SPM: 166
SPP: 3204

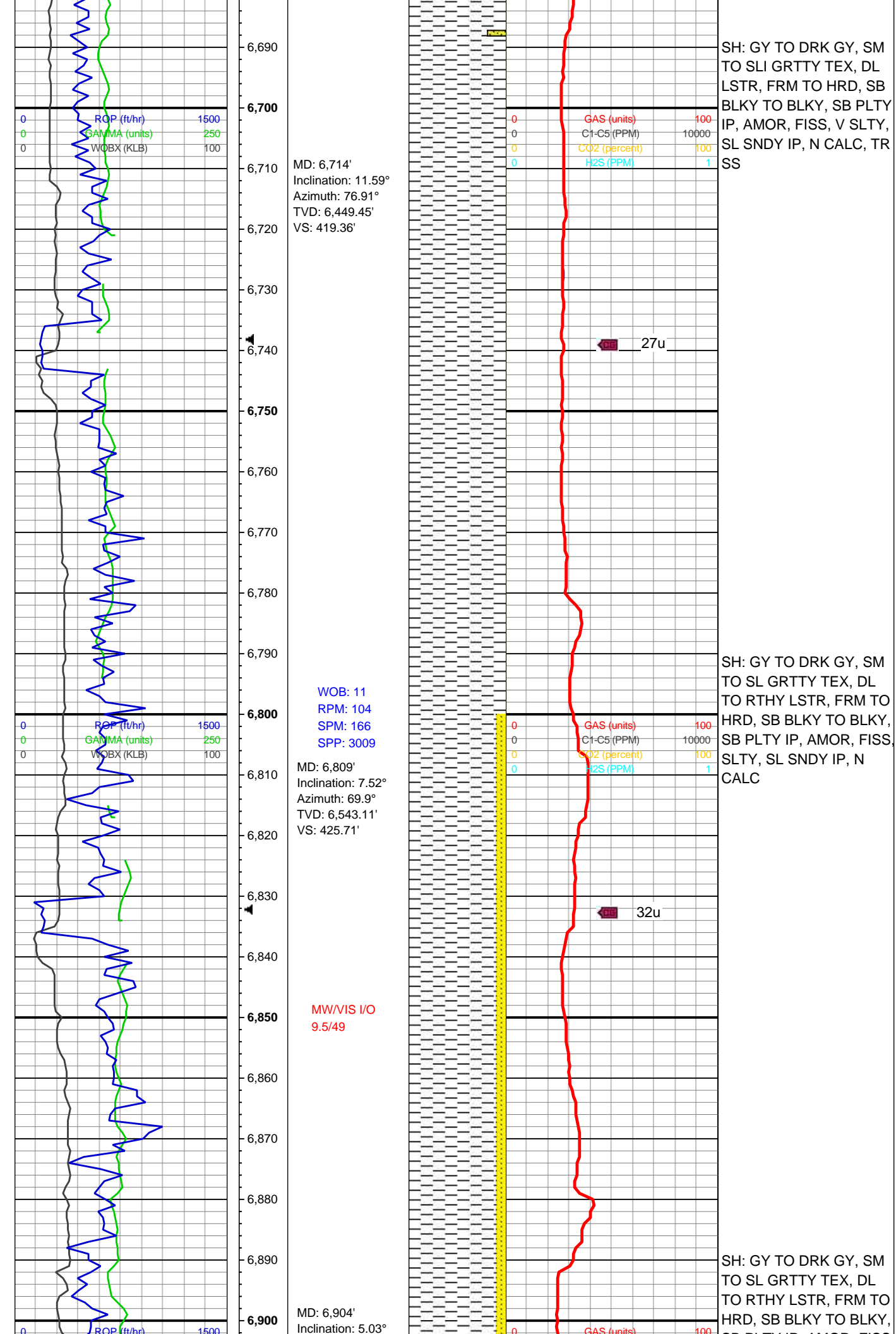
MD: 6,620'
Inclination: 15.36°
Azimuth: 81.2°
TVD: 6,358.05'
VS: 412.39'

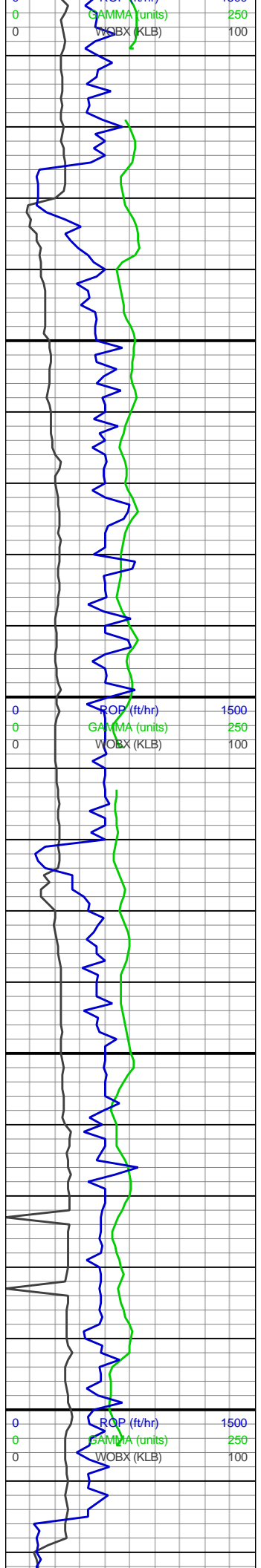
MW/VIS I/O
9.5/49



SH: GY TO DRK GY, SM TO SLI GRITY TEX, DL LSTR, FRM TO HRD, SB BLKY TO BLKY, SB PLTY IP, AMOR, FISS, V SLTY, SL SNKY IP, N CALC, TR SS

SH: GY TO DRK GY, SM TO SLI GRITY TEX, DL LSTR, FRM TO HRD, SB BLKY TO BLKY, SB PLTY IP, AMOR, FISS, V SLTY, SL SNKY IP, N CALC, TR SS





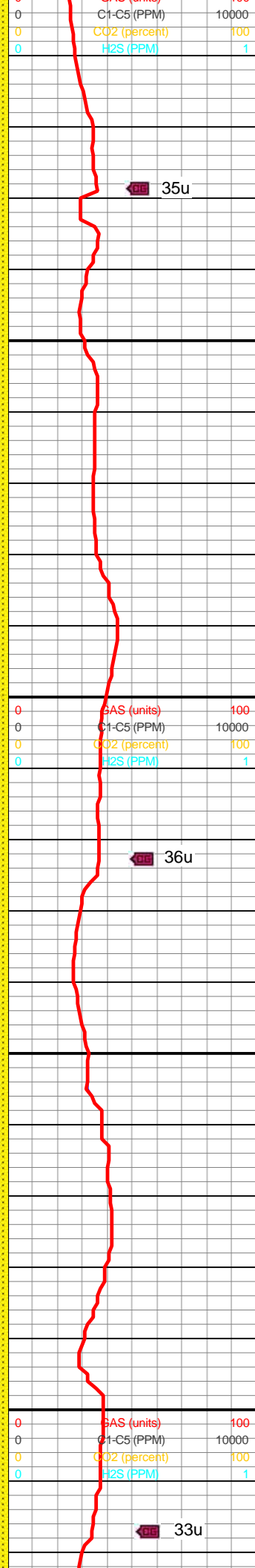
Azimuth: 68.18°
TVD: 6,637.53'
VS: 430.69'

MD: 6,998'
Inclination: 5.17°
Azimuth: 85.67°
TVD: 6,731.17'
VS: 433.64'

WOB: 15
RPM: 106
SPM: 166
SPP: 2954

MW/VIS I/O
9.5/49

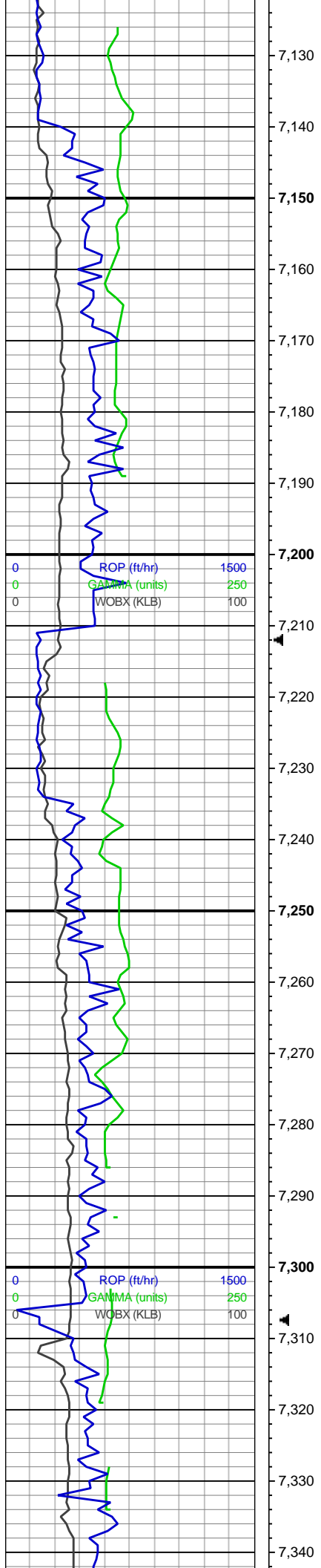
MD: 7,093'
Inclination: 5.23°
Azimuth: 98.88°
TVD: 6,825.78'
VS: 434.47'



SB PLTY IP, AMOR, FISS, SLTY, SL SNDY IP, N CALC, TR SS

SH: GY TO DRK GY, SM TO SL GRTTY TEX, DL TO RTHY LSTR, FRM TO HRD, SB BLKY TO BLKY, SB PLTY IP, AMOR, FISS, SLTY, SL SNDY IP, N CALC, TR SS

SH: GY TO DRK GY, SM TO SL GRTTY TEX, DL TO RTHY LSTR, FRM TO HRD, SB BLKY TO BLKY, SB PLTY IP, AMOR, FISS, SLTY, SL SNDY IP, N CALC; SS: LT GY, VFN GRN, PR TO FR SRT, WL CONSL, FRM TO HRD, N CALC

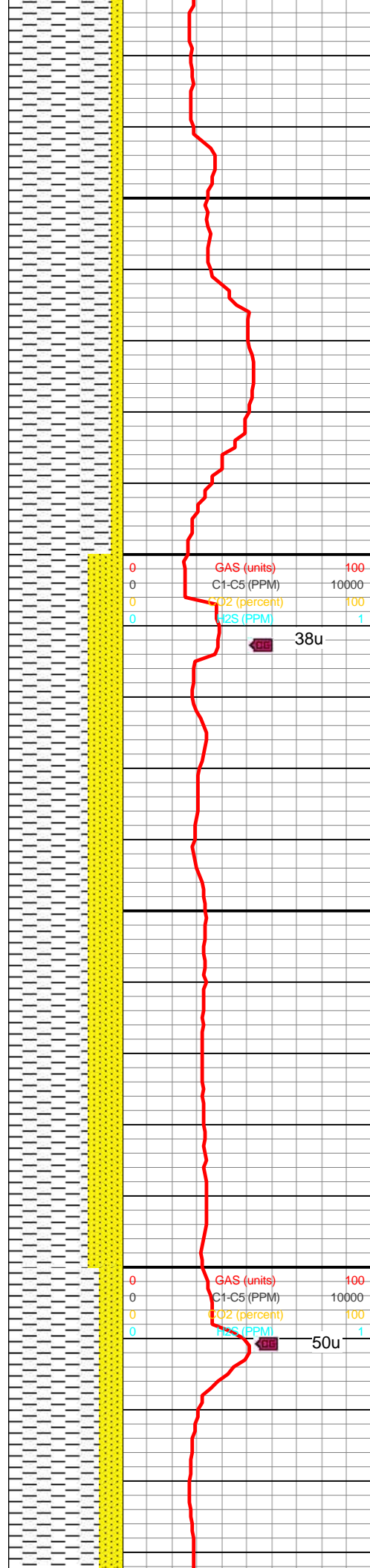


MD: 7,188'
Inclination: 3.02°
Azimuth: 115.6°
TVD: 6,920.53'
VS: 433.64'

WOB: 11
RPM: 104
SPM: 166
SPP: 2981

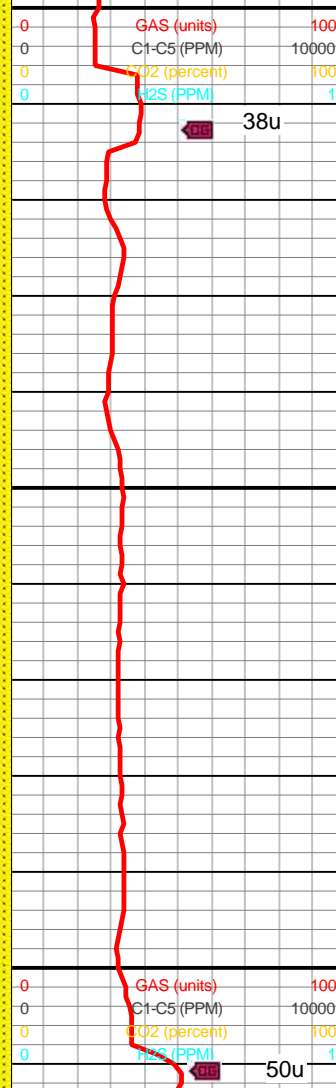
MW/VIS I/O
9.5/48

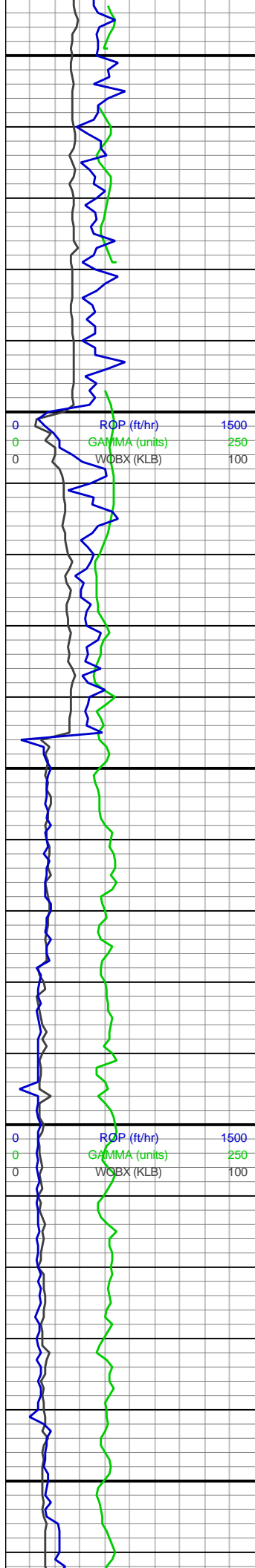
MD: 7,283'
Inclination: 0.11°
Azimuth: 79.63°
TVD: 7,015.49'
VS: 432.91'



SH: GY TO DRK GY, SM
TO SL GRTTY TEX, DL
LSTR, FRM TO HRD IP,
SB BLKY TO BLKY, SB
PLTY IP, AMOR, FISS,
SLTY, SL SNDY IP, N
CALC; SS: LT GY, VFN
GRN, PR TO FR SRT, WL
CONSL, FRM TO HRD, N
CALC

SH: GY TO DRK GY, SM
TO SL GRTTY TEX, DL
LSTR, FRM TO HRD IP,
SB BLKY TO BLKY, SB
PLTY IP, AMOR, FISS,
SLTY, SL SNDY IP, N
CALC; SS: LT GY, VFN
GRN, PR TO FR SRT,
WL CONSL, FRM TO
HRD, N CALC





7,350
7,360
7,370
7,380
7,390
7,400
7,410
7,420
7,430
7,440
7,450
7,460
7,470
7,480
7,490
7,500
7,510
7,520
7,530
7,540
7,550
7,560

MD: 7,378'
Inclination: 0.03°
Azimuth: 239.09°
TVD: 7,110.49'
VS: 432.92'

WOB: 19
RPM: 105
SPM: 166
SPP: 2180

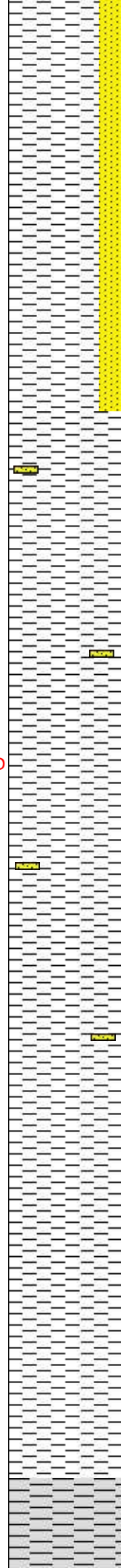
KOP @ 7,450'MD

MW/VIS I/O
9.6/45

ON BUSTER

MD: 7,472'
Inclination: 1.97°
Azimuth: 250.72°
TVD: 7,204.47'
VS: 432.17'

ROP (ft/hr) 1500
GAMMA (units) 250
WOBX (KLB) 100



0 GAS (units) 33u 100
0 C1-C5 (PPM) 10000
0 CO2 (percent) 100
0 H2S (PPM) 1

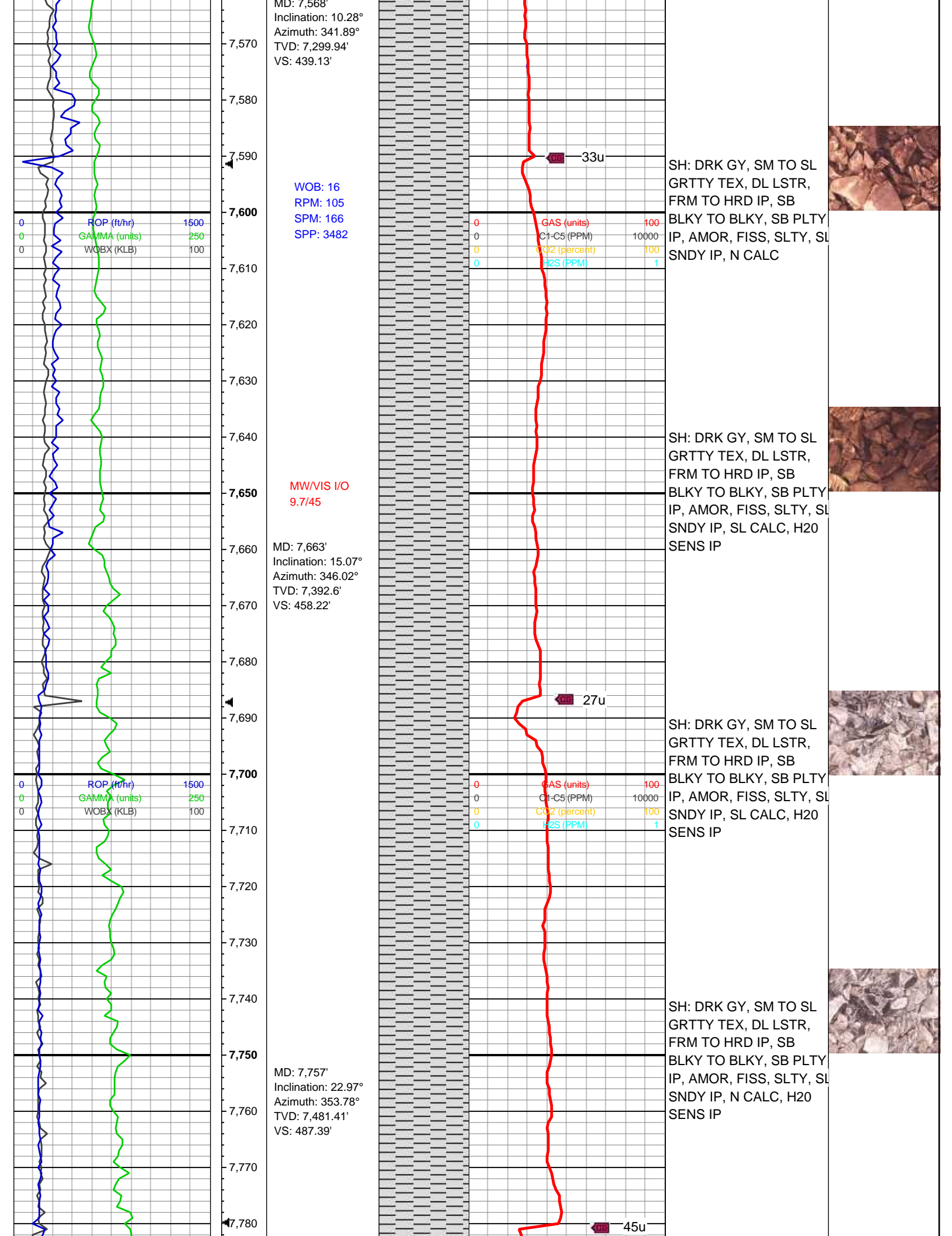
0 GAS (units) 25u 100
0 C1-C5 (PPM) 10000
0 CO2 (percent) 100
0 H2S (PPM) 1

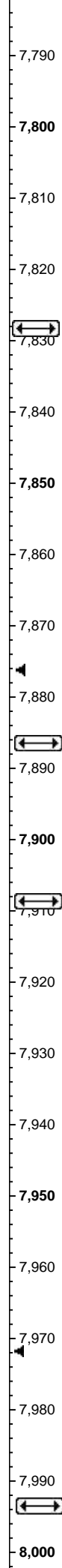
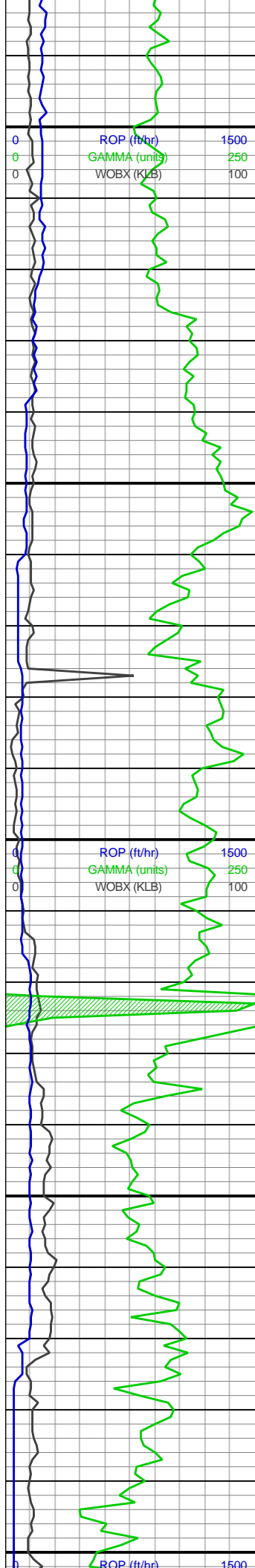
SH: GY TO DRK GY, SM TO SL GRTTY TEX, DL LSTR, FRM TO HRD IP, SB BLKY TO BLKY, SB PLTY IP, AMOR, FISS, SLTY, SL SNDY IP, N CALC; SS: LT GY, VFN GRN, PR TO FR SRT, WL CONSL, FRM TO HRD, N CALC

SH: GY TO DRK GY, SM TO SL GRTTY TEX, DL LSTR, FRM TO HRD IP, SB BLKY TO BLKY, SB PLTY IP, AMOR, FISS, SLTY, SL SNDY IP, N CALC; TR SS

SH: DRK GY, SM TO SL GRTTY TEX, DL LSTR, FRM TO HRD IP, SB BLKY TO BLKY, SB PLTY IP, AMOR, FISS, SLTY, SL SNDY IP, N CALC







WOB: 9
RPM: 120
SPM: 142
SPP: 2550
20' Samples

Sharon Springs
7,830'MD
7,547'TVD

MW/VIS I/O
9.8/45
9.7+/45

MD: 7,853'
Inclination: 29.42°
Azimuth: 13.68°
TVD: 7,567.67'
VS: 529.14'

Nio A
7,887'MD
7,596'TVD

MW/VIS I/O
9.8/45
9.75/45

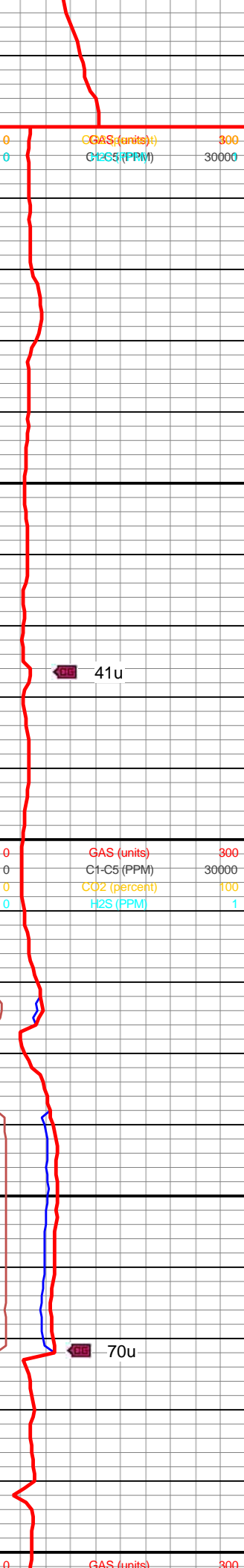
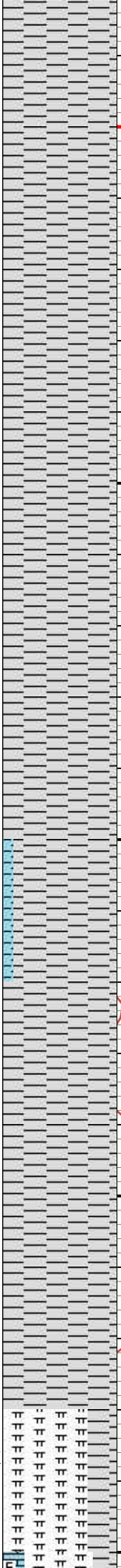
NIO B-1
7,909'MD
7,615'TVD

MD: 7,948'
Inclination: 37.09°
Azimuth: 12.86°
TVD: 7,647.05'
VS: 580.97'

MW/VIS I/O
9.8/44
9.8/45

NIO B CHALK
7,994'MD
7,682'TVD

WOB: 4



SH: DRK GY, SM TO SL
GRTTY TEX, DL LSTR,
FRM TO HRD IP, SB
BLKY TO BLKY, SB PLTY
IP, AMOR, FISS, SLTY,
SNDY IP, N CALC, H2O
SENS IP

SH: BLK, SM TEX, DL
LSTR, FRM IP, MECH
CTG, FISS, LT CALC

SH: BLK & GY, SLTY-F
SD TEX, DL LSTR, FRM,
MECH-ANG CTG, FISS,
LT CALC

SH: BLK & GY, SLTY-F
SD TEX, DL LSTR, FRM,
MECH-ANG CTG, FISS,
CALC

SH: BLK, SLTY-SM TEX,
DL LSTR, FRM,
MECH-ANG CTG, FISS, V
CALC

SH: BLK, SLTY-SM TEX,
DL LSTR, FRM,
MECH-ANG CTG, FISS, V
CALC; CLYST: WH, SFT,
IMBD DK GRNS, NO
CALC

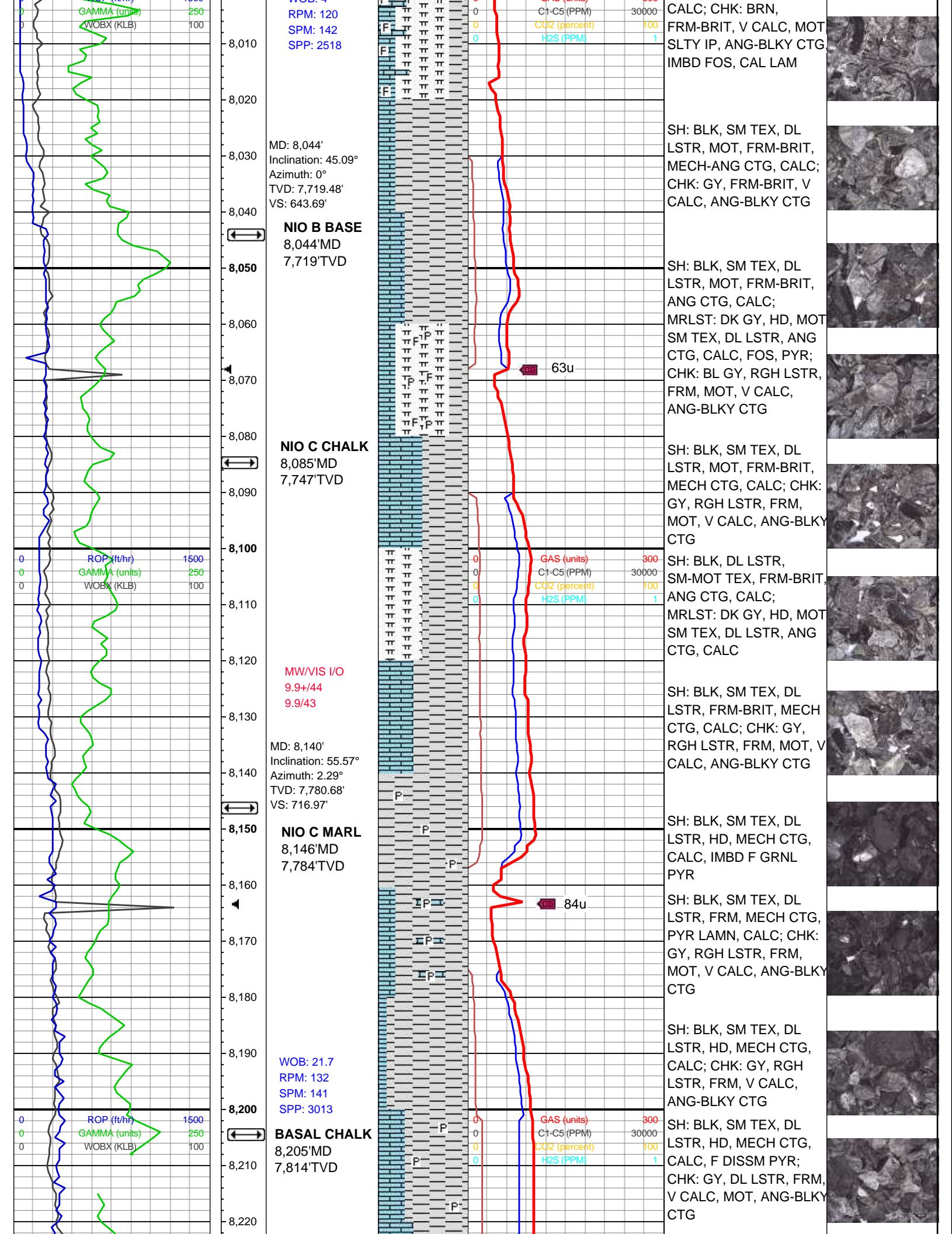
SH: BLK, SLTY-SM TEX,
DL LSTR, FRM,
MECH-ANG CTG, FISS, V
CALC

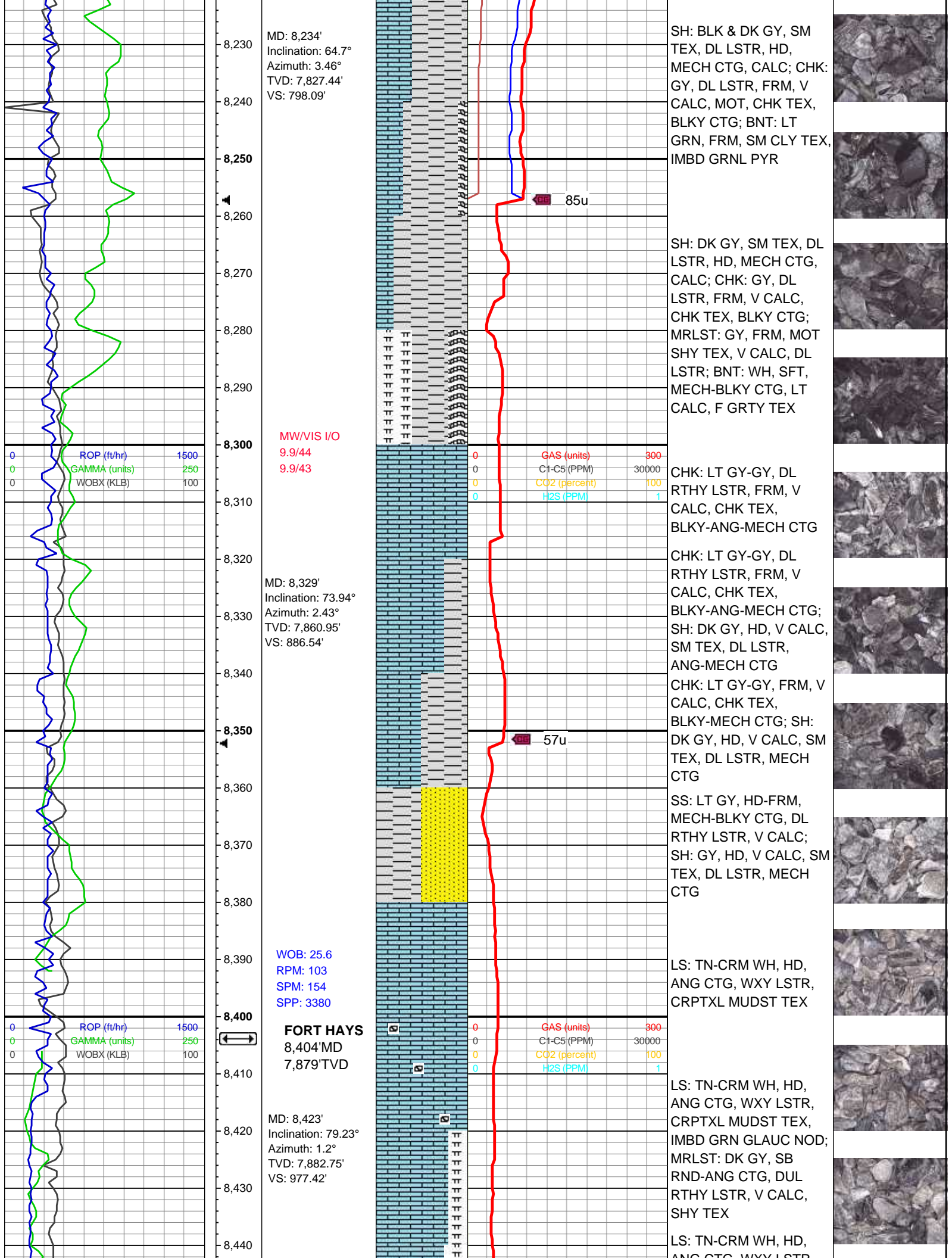
SH: BLK & DK GY, SM
TEX, DL LSTR,
FRM-BRIT, MECH-ANG
CTG, V CALC

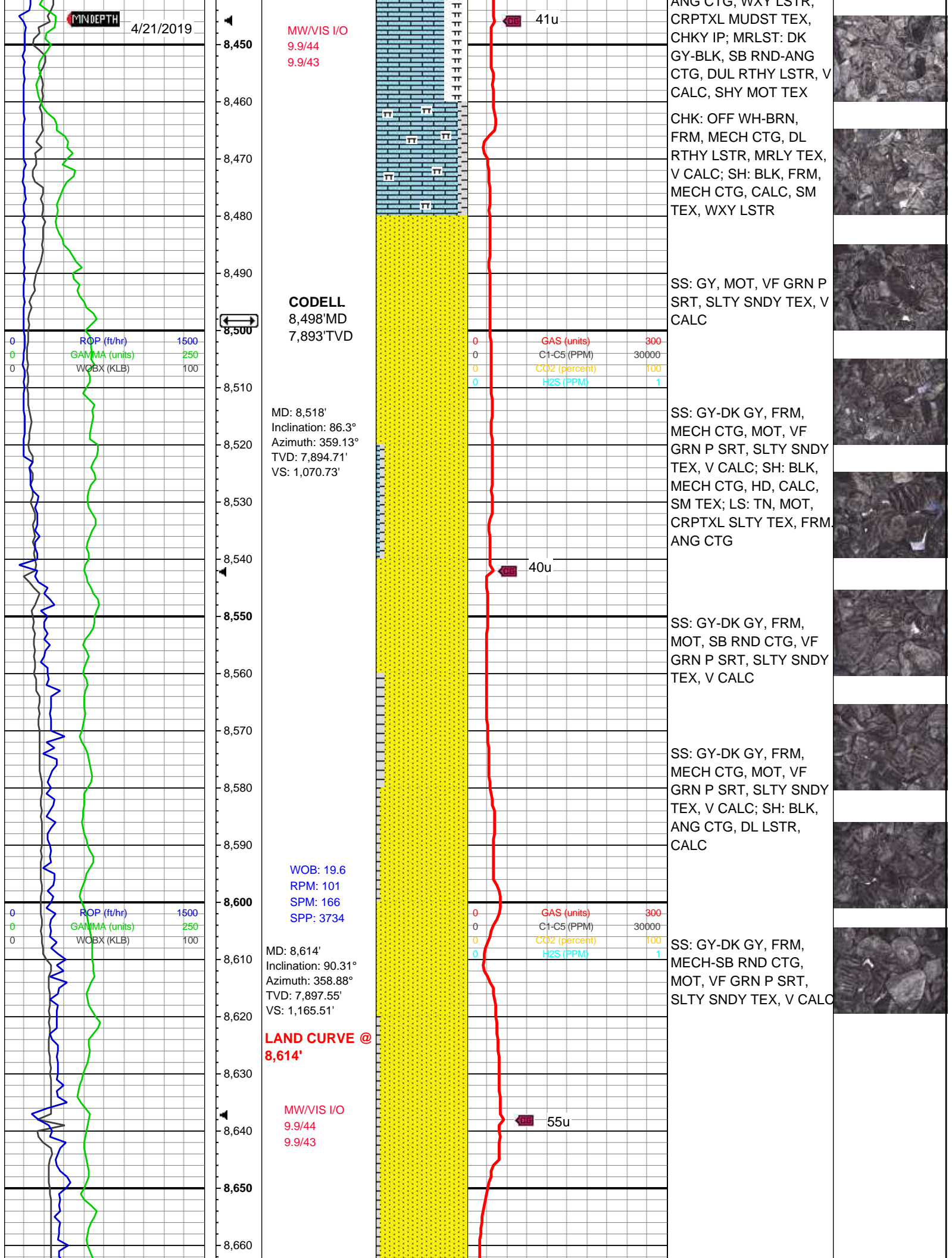
SH: BLK & DK GY, SM
TEX, DL LSTR, MOTT,
FRM-BRIT, MECH-ANG
CTG, V CALC

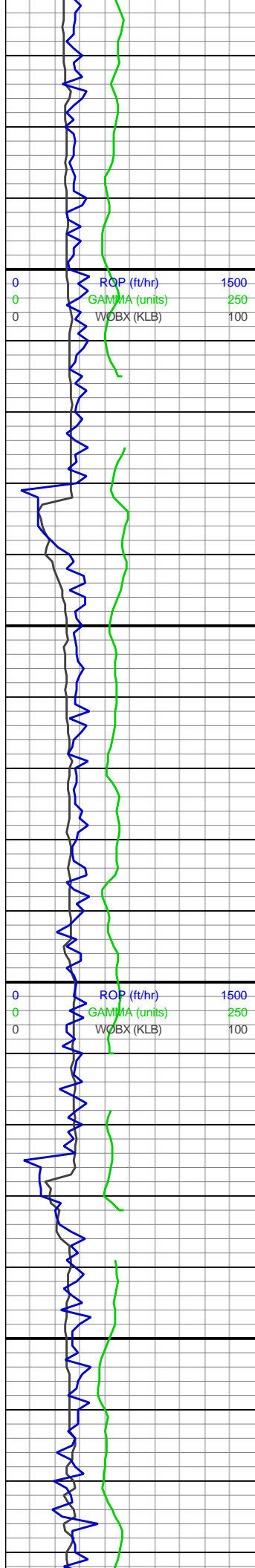
MRLST: BRN, LAM TEX, V
CALC, CHK IP,
FRM-BRIT; SH: BLK & DK
GY, SM TEX, DL LSTR,
MOT, FRM-BRIT,
MECH-ANG CTG, V











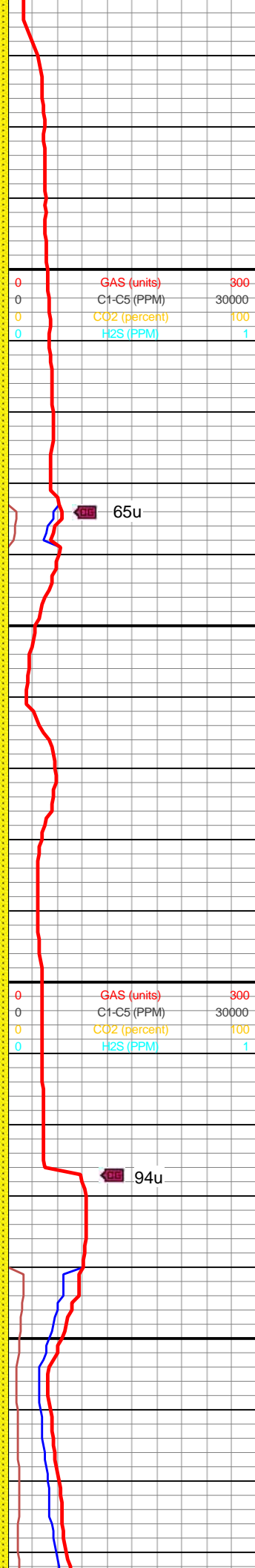
8,670
8,680
8,690
8,700
8,710
8,720
8,730
8,740
8,750
8,760
8,770
8,780
8,790
8,800
8,810
8,820
8,830
8,840
8,850
8,860
8,870
8,880

MD: 8,709'
Inclination: 90.25°
Azimuth: 358.05°
TVD: 7,897.09'
VS: 1,259.22'

WOB: 27.5
RPM: 102
SPM: 166
SPP: 3928

MD: 8,804'
Inclination: 90.18°
Azimuth: 357.59°
TVD: 7,896.73'
VS: 1,352.75'

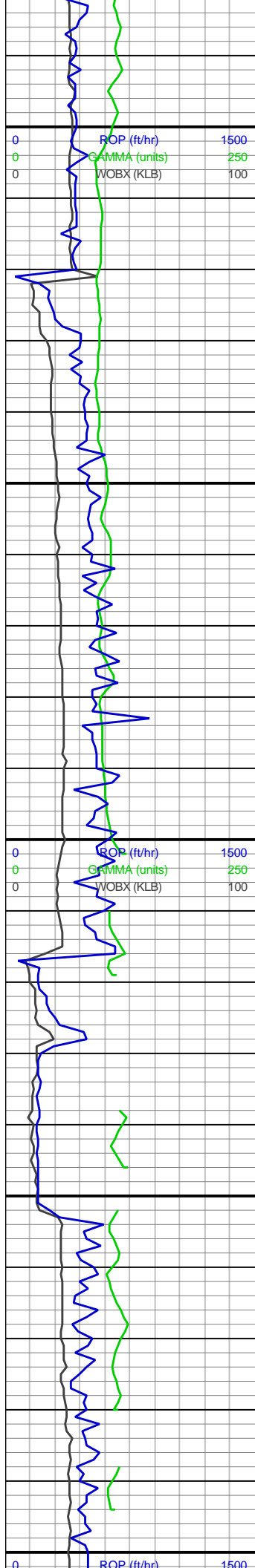
MW/VIS I/O
9.9+/44
9.9/43



SS: GY-DK GY, FRM,
MECH CTG, MOT, VF
GRN P SRT, SLTY SNDY
TEX, V CALC; SH: BLK,
ANG CTG, DL LSTR, V
CALC

SS: GY-DK GY, FRM,
MECH-SB RND CTG,
MOT, VF GRN P SRT,
SLTY SNDY TEX, V CALC





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
9,070
9,080
9,090
9,100

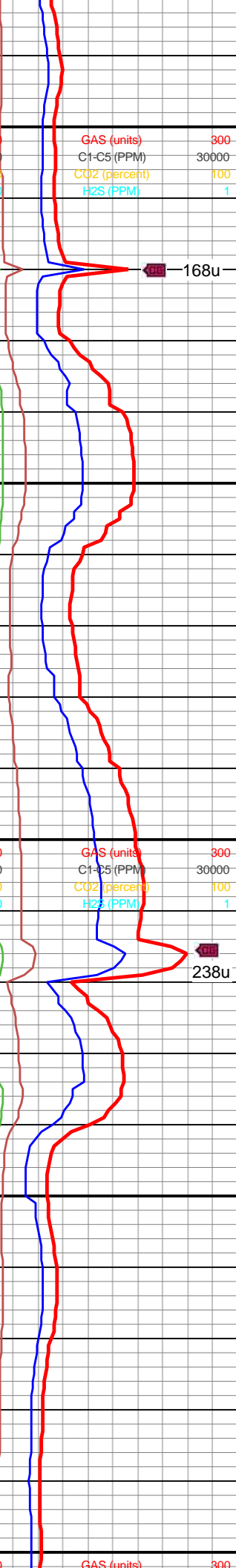
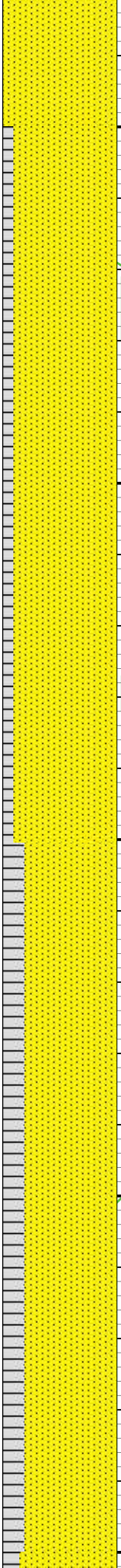
MD: 8,898'
Inclination: 90.12°
Azimuth: 357.81°
TVD: 7,896.48'
VS: 1,445.25'

WOB: 23.3
RPM: 101
SPM: 165
SPP: 4028

MD: 8,992'
Inclination: 90.12°
Azimuth: 356.99°
TVD: 7,896.29'
VS: 1,537.67'

MW/VIS I/O
10.1+/46

MD: 9,087'
Inclination: 90.12°
Azimuth: 357.17°
TVD: 7,896.09'
VS: 1,630.98'

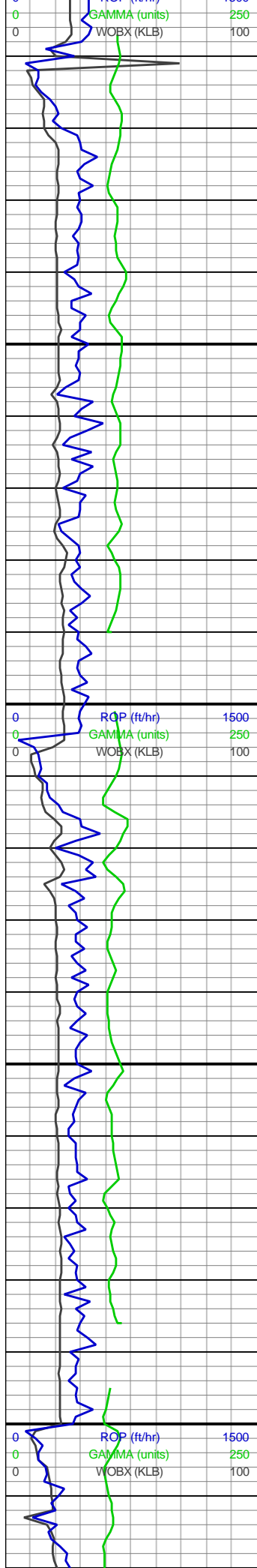


SS: DK GY, FRM,
MECH-SB RND CTG,
MOT, VF GRN P SRT,
SLTY SNDY TEX, V CALC

SS: GY-DK GY, FRM,
MECH-SB RND CTG,
MOT, VF GRN P SRT,
SLTY SNDY TEX, V
CALC; SH: BLK,
HD-BRIT, MECH CTG,
CALC, WXY LSTR

SS: GY-DK GY, FRM, SB
RND CTG, MOT, VF GRN
P SRT, SLTY SNDY TEX,
V CALC, SH BLK





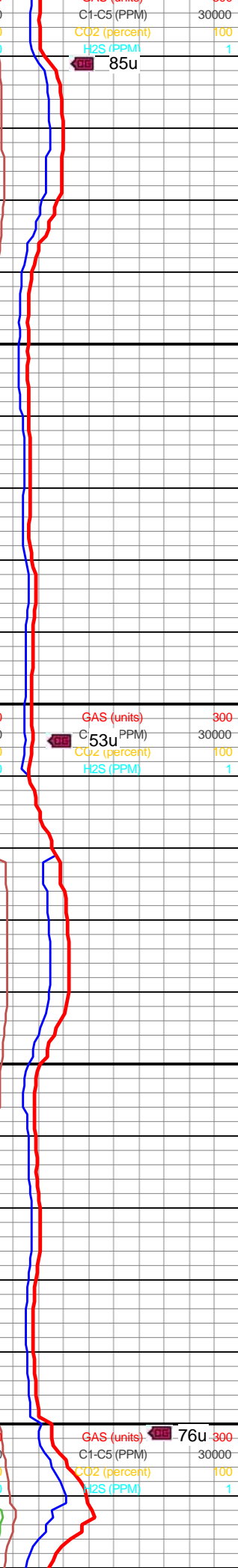
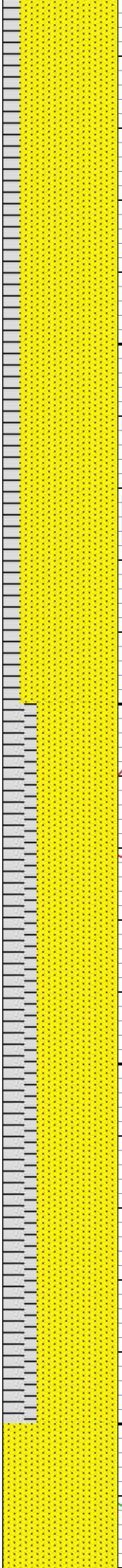
9,110
9,120
9,130
9,140
9,150
9,160
9,170
9,180
9,190
9,200
9,210
9,220
9,230
9,240
9,250
9,260
9,270
9,280
9,290
9,300
9,310
9,320

MD: 9,182'
Inclination: 90.25°
Azimuth: 359.36°
TVD: 7,895.78'
VS: 1,724.63'

WOB: 22.6
RPM: 102
SPM: 166
SPP: 4073

MW/VIS I/O
10.1+/46

MD: 9,277'
Inclination: 90.22°
Azimuth: 0°
TVD: 7,895.39'
VS: 1,818.64'

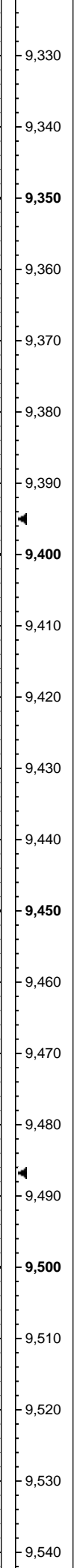
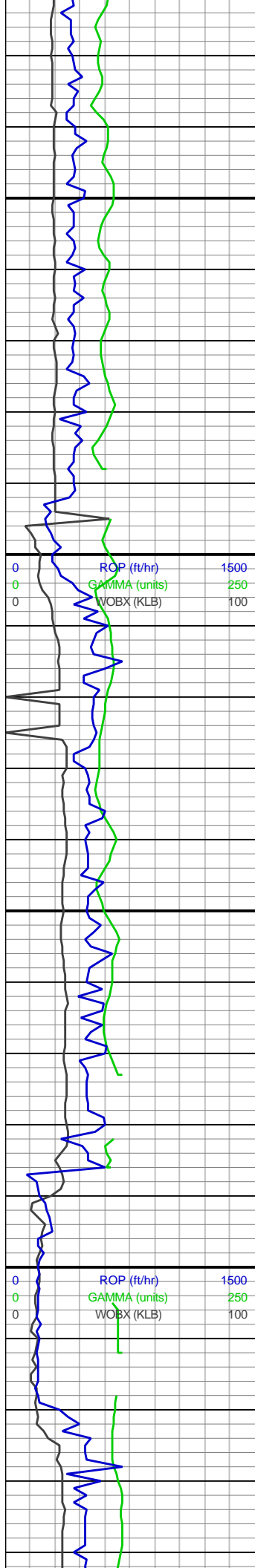


V CALC; SH: BLK,
HD-FRM, MECH CTG,
CALC, WXY LSTR

SS: GY-DK GY, FRM,
MECH-RND CTG, MOT,
VF GRN P SRT, SLTY
SNDY TEX, V CALC; SH:
BLK, HD-BRIT,
MECH-PLTY CTG, CALC,
WXY LSTR

SS: GY-DK GY, FRM,
MECH-SB RND CTG,
MOT, VF GRN P SRT,
SLTY SNDY TEX, V
CALC; SH: BLK, HD,
MECH CTG, CALC, WXY
LSTR



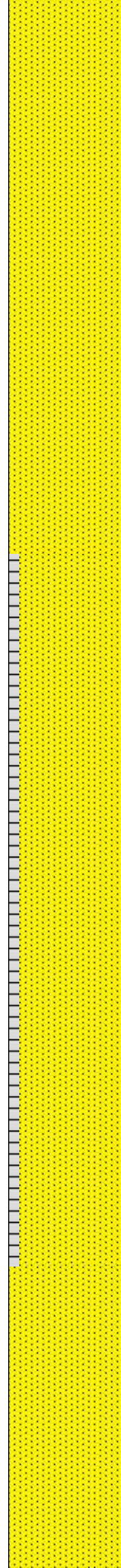
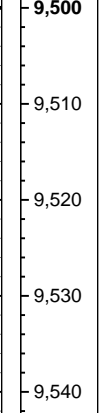
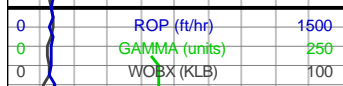


MD: 9,371'
Inclination: 90.18°
Azimuth: 0.75°
TVD: 7,895.06'
VS: 1,911.83'

WOB: 14.8
RPM: 101
SPM: 166
SPP: 3852

MW/VIS I/O
10.1+/-46

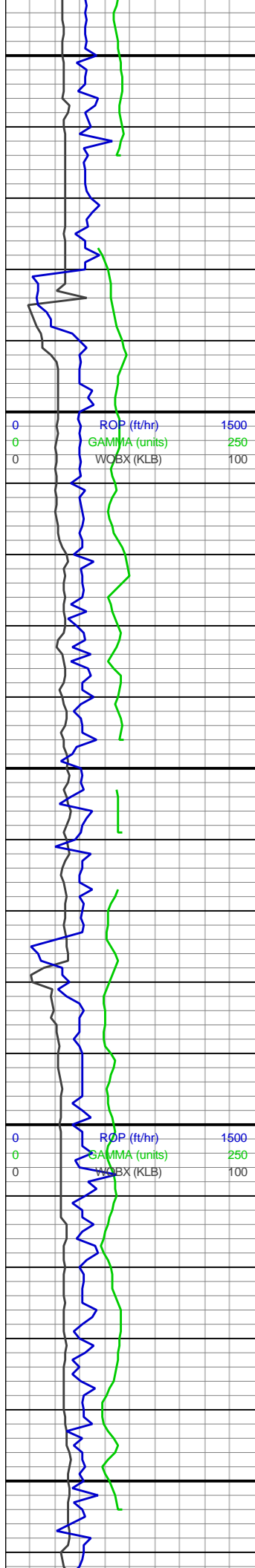
MD: 9,464'
Inclination: 90.09°
Azimuth: 2.59°
TVD: 7,894.84'
VS: 2,004.27'



SS: GY-DK GY, FRM,
RND CTG, MOT, VF GRN
P SRT, SLTY SNDY TEX,
V CALC

SS: GY-DK GY, FRM,
MECH-SB RND CTG,
MOT, VF GRN P SRT,
SLTY SNDY TEX, V
CALC; SH: BLK, HD,
MECH CTG, CALC, WXY
LSTR





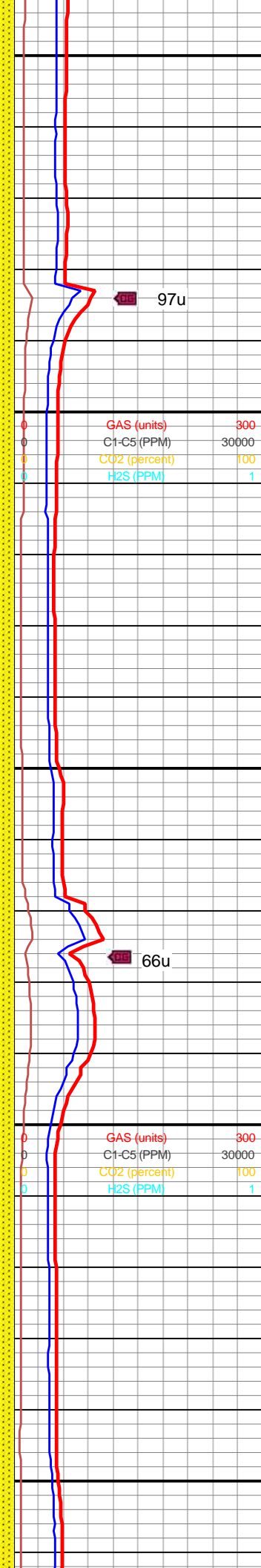
MD: 9,557'
Inclination: 90.25°
Azimuth: 4.19°
TVD: 7,894.57'
VS: 2,096.98'

WOB: 21
RPM: 100
SPM: 166
SPP: 4219

MW/VIS I/O
10/43
10/44

MD: 9,652'
Inclination: 90.22°
Azimuth: 3.69°
TVD: 7,894.18'
VS: 2,191.75'

MD: 9,747'
Inclination: 90.25°
Azimuth: 3.43°
TVD: 7,893.79'
VS: 2,286.47'



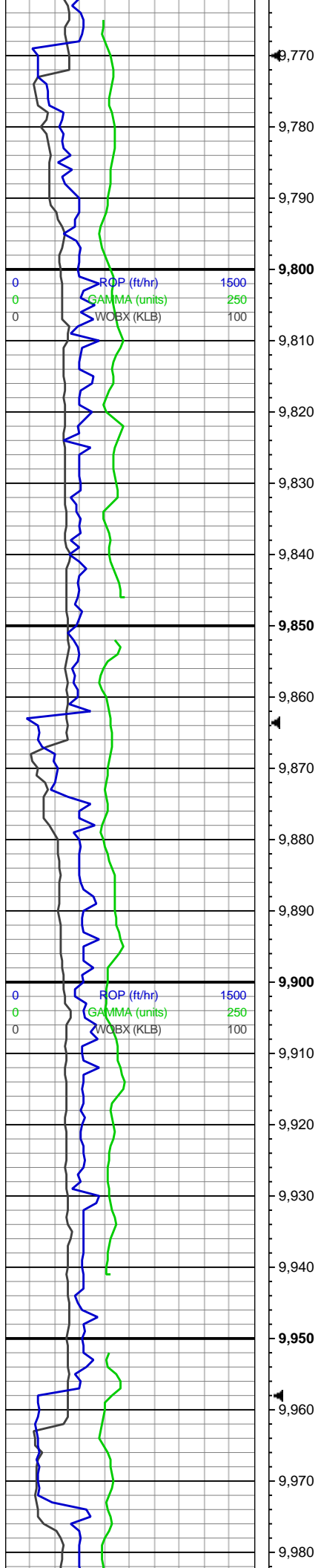
97u

66u

SS: GY-DK GY, FRM,
RND-ANG CTG, MOT, VF
GRN P SRT, SLTY SNDY
TEX, V CALC

SS: GY-DK GY, FRM,
RND-ANG CTG, MOT, VF
GRN P SRT, SLTY SNDY
TEX, V CALC

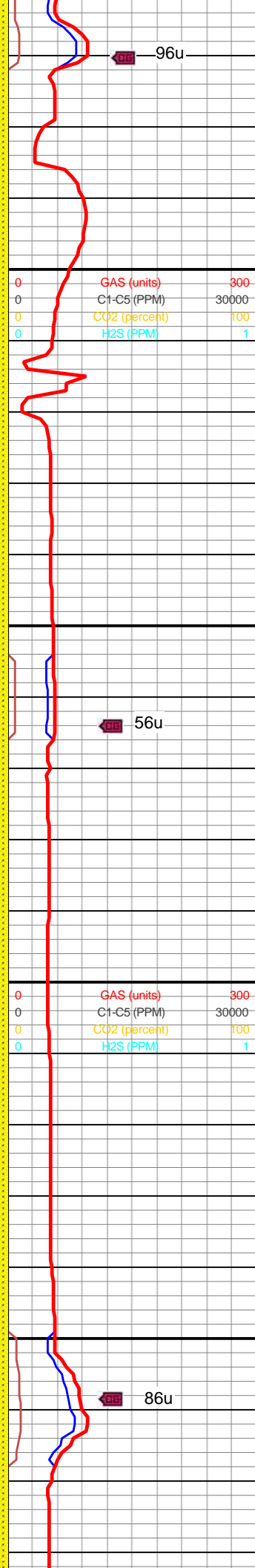




WOB: 23
RPM: 101
SPM: 166
SPP: 4262

MD: 9,840'
Inclination: 90.28°
Azimuth: 2.56°
TVD: 7,893.36'
VS: 2,379.13'
MW/VIS I/O
10/43
10/44

MD: 9,934'
Inclination: 90.18°
Azimuth: 1.11°
TVD: 7,892.98'
VS: 2,472.59'



96u

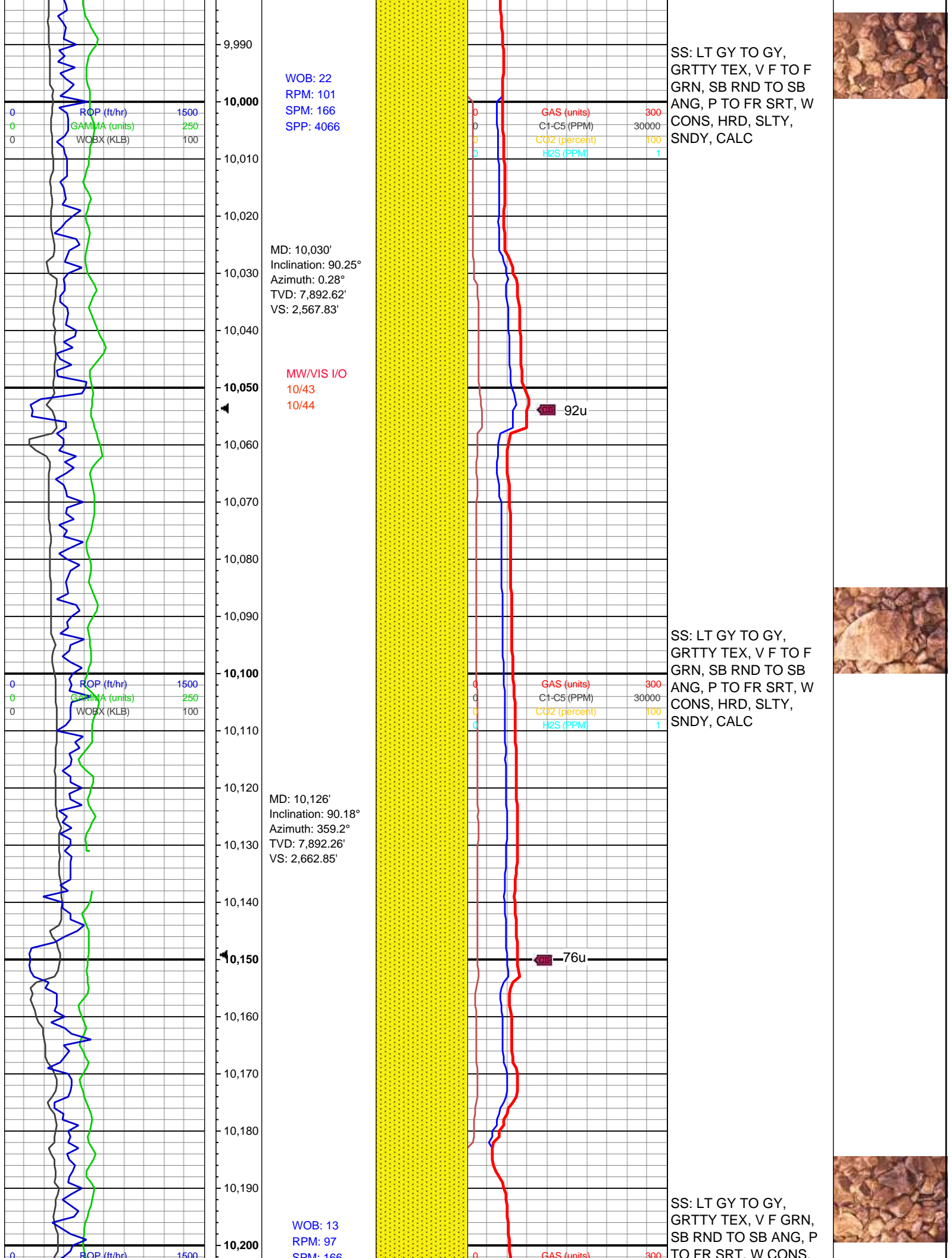
56u

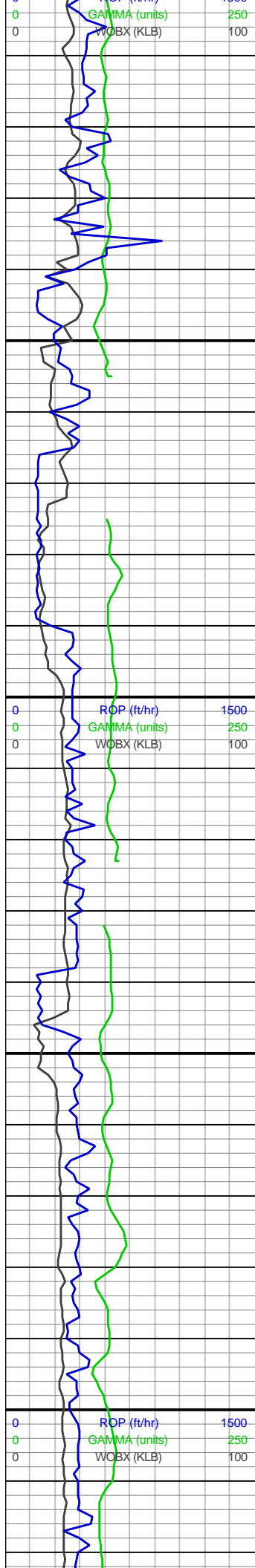
86u

SS: GY-DK GY, FRM,
RND-ANG CTG, MOT, VF
GRN P SRT, SLTY SNDY
TEX, V CALC

SS: LT GY TO GY,
GRTTY TEX, V F TO F
GRN, SB RND TO SB
ANG, P TO FR SRT, W
CONS, HRD, SLTY,
SNDY, CALC







SPP: 4208

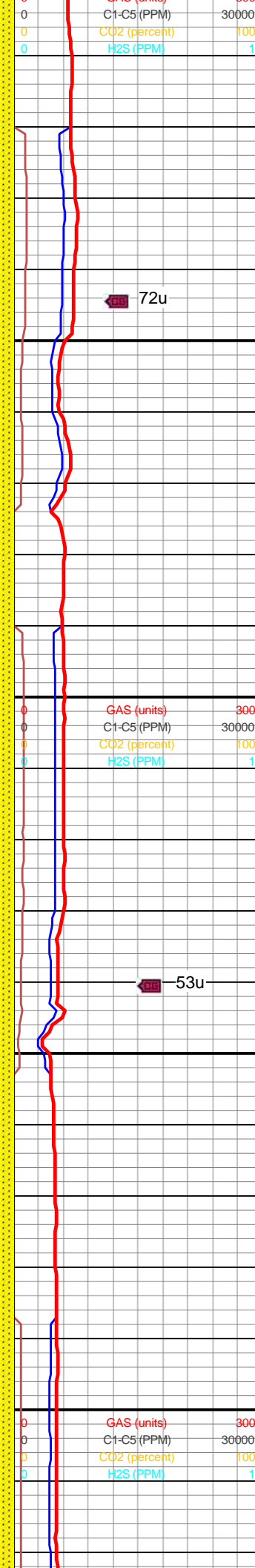
MD: 10,221'
Inclination: 90.22°
Azimuth: 357.98°
TVD: 7,891.93'
VS: 2,756.59'

MW/VIS I/O
10.1/45

MD: 10,317'
Inclination: 90.09°
Azimuth: 356.68°
TVD: 7,891.67'
VS: 2,850.95'

WOB: 23
RPM: 100
SPM: 166
SPP: 4557

MD: 10,412'
Inclination: 90.09°
Azimuth: 356.5°
TVD: 7,891.52'

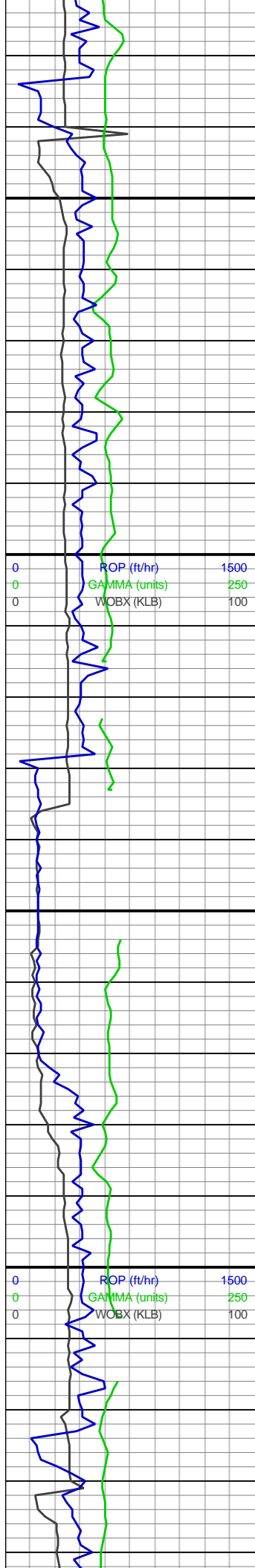


HRD, SLTY, SNDY, CALC

SS: LT GY TO GY,
GRTTY TEX, V F GRN,
SB RND TO SB ANG, P
TO FR SRT, W CONS,
HRD, SLTY, SNDY, CALC

SS: LT GY TO GY,
GRTTY TEX, V F GRN,
SB RND TO SB ANG, P
TO FR SRT, W CONS,
HRD, SLTY, SNDY, CALC





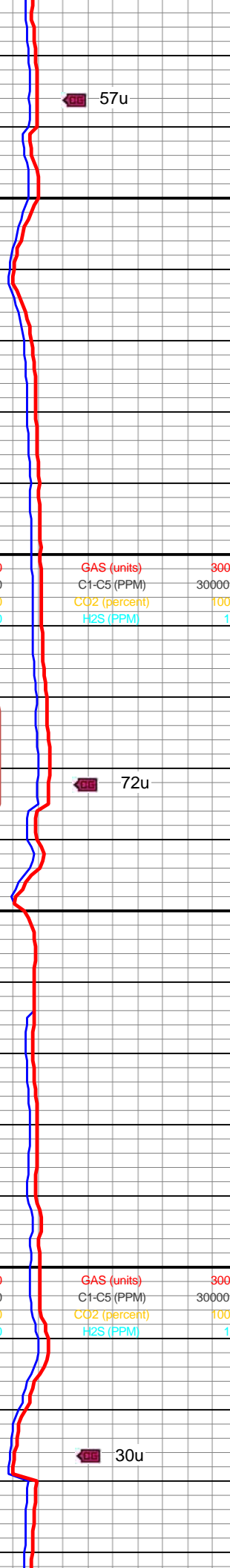
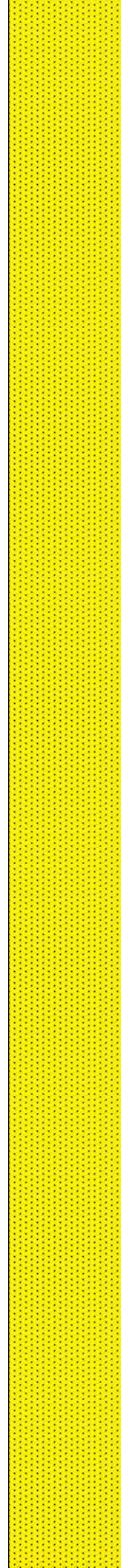
TVD: 7,891.32'
VS: 2,944.1'

MW/VIS I/O
10.1/46

MD: 10,507'
Inclination: 90.15°
Azimuth: 356.72°
TVD: 7,891.32'
VS: 3,037.26'

WOB: 23
RPM: 100
SPM: 166
SPP: 4559

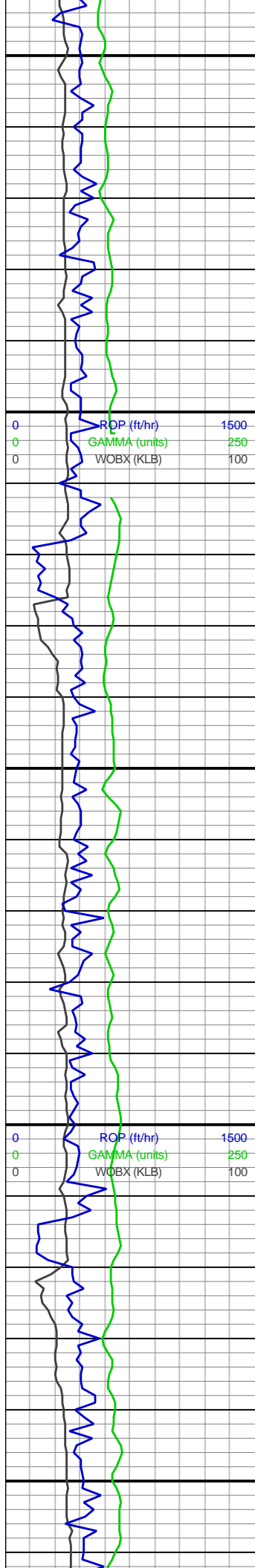
MD: 10,603'
Inclination: 89.88°
Azimuth: 357.02°
TVD: 7,891.3'
VS: 3,131.48'



SS: LT GY TO GY,
GRTTY TEX, V F GRN,
SB RND TO SB ANG, P
TO FR SRT, W CONS,
HRD, SLTY, SNDY, CALC

SS: LT GY TO GY, GRTTY
TEX, V F TO F GRN, SB
RND TO SB ANG, P TO
FR SRT, W CONS, HRD,
SLTY, SNDY, SL CALC





10,650
10,660
10,670
10,680
10,690
10,700
10,710
10,720
10,730
10,740
10,750
10,760
10,770
10,780
10,790
10,800
10,810
10,820
10,830
10,840
10,850
10,860

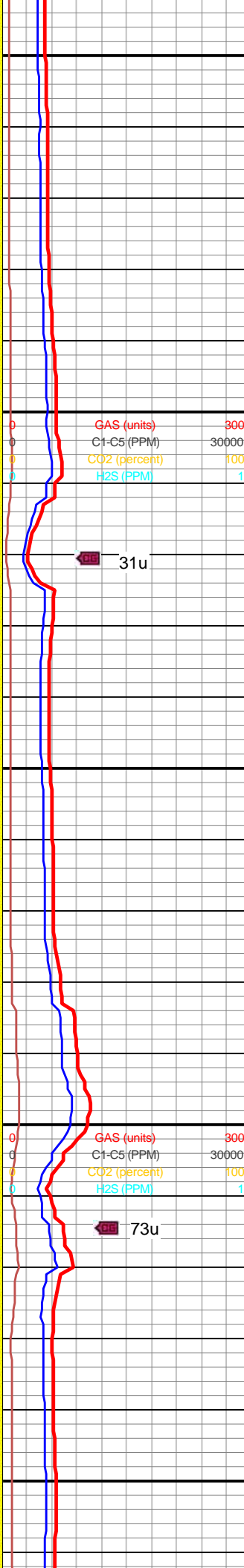
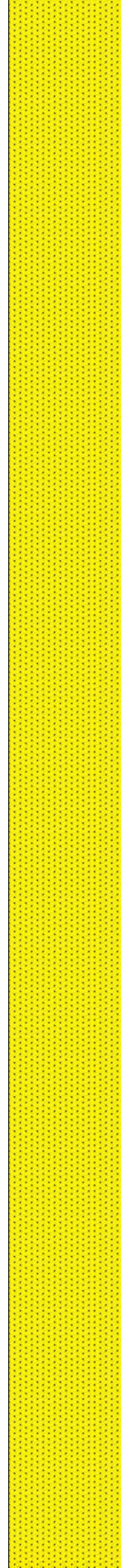
MW/VIS I/O
10.2/46

MD: 10,698'
Inclination: 89.94°
Azimuth: 357.48°
TVD: 7,891.45'
VS: 3,224.84'

MD: 10,792'
Inclination: 89.91°
Azimuth: 357.73°
TVD: 7,891.57'
VS: 3,317.32'

WOB: 25
RPM: 101
SPM: 166
SPP: 4550

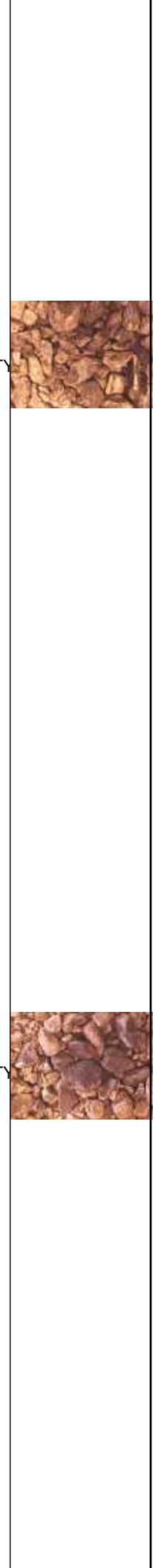
MW/VIS I/O
10.2/46



GAS (units) 300
C1-C5 (PPM) 30000
CO2 (percent) 100
H2S (PPM) 1

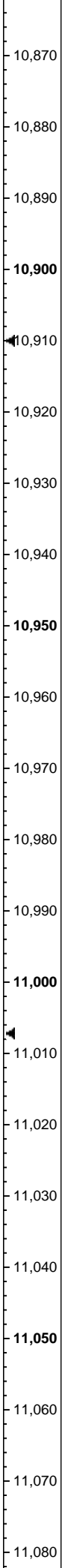
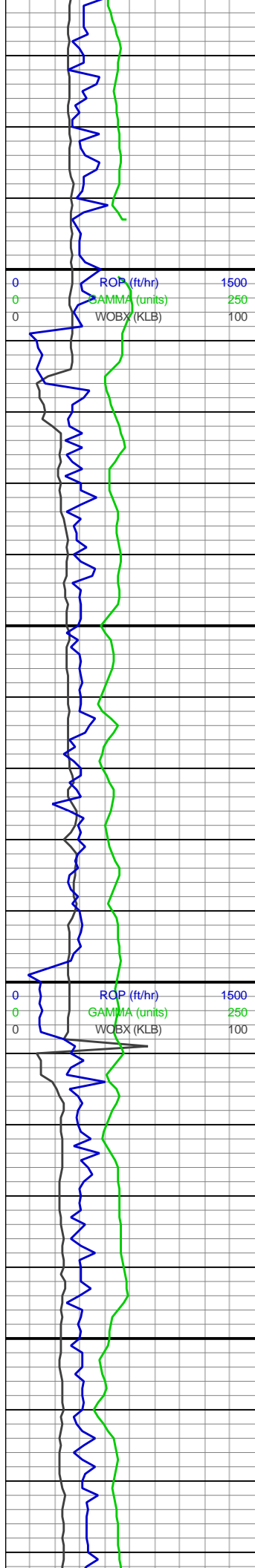
31u

73u



SS: LT GY TO GY, GRTTY
TEX, V F TO F GRN, SB
RND TO SB ANG, P TO
FR SRT, W CONS, HRD,
SLTY, SNDY, SL CALC

SS: LT GY TO GY, GRTTY
TEX, V F TO F GRN, SB
RND TO SB ANG, P TO
FR SRT, W CONS, HRD,
SLTY, SNDY, CALC



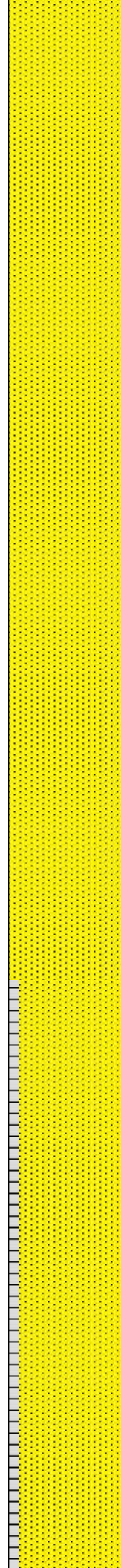
MD: 10,886'
Inclination: 89.97°
Azimuth: 358.33°
TVD: 7,891.67'
VS: 3,409.92'

MD: 10,982'
Inclination: 89.88°
Azimuth: 359.24°
TVD: 7,891.79'
VS: 3,504.7'

WOB: 21
RPM: 100
SPM: 166
SPP: 4580

MW/VIS I/O
10.2/46

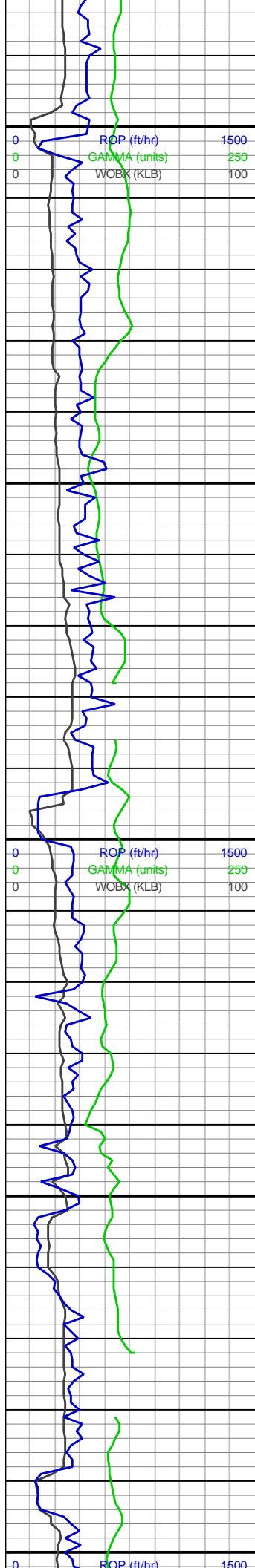
MD: 11,076'
Inclination: 89.94°
Azimuth: 0.21°
TVD: 7,891.94'
VS: 3,597.74'



SS: LT GY TO GY, GRTTY
TEX, V F TO F GRN, SB
RND TO SB ANG, P TO
FR SRT, W CONS, HRD,
SLTY, SNDY, CALC

SS: LT GY TO GY, GRTTY
TEX, V F TO F GRN, SB
RND TO SB ANG, P TO
FR SRT, W CONS, HRD,
SLTY, SNDY, CALC





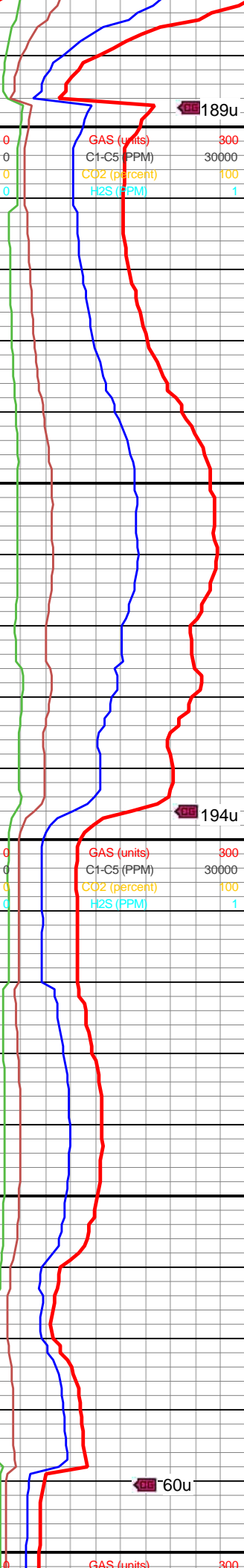
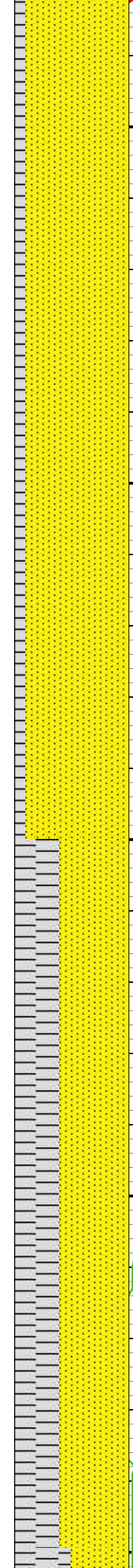
11,090
11,100
11,110
11,120
11,130
11,140
11,150
11,160
11,170
11,180
11,190
11,200
11,210
11,220
11,230
11,240
11,250
11,260
11,270
11,280
11,290
11,300

MD: 11,171'
Inclination: 90°
Azimuth: 0.93°
TVD: 7,891.99'
VS: 3,691.96'

WOB: 12
RPM: 100
SPM: 166
SPP: 4131

MW/VIS I/O
10.2/46

MD: 11,266'
Inclination: 89.94°
Azimuth: 0.93°
TVD: 7,892.04'
VS: 3,786.25'

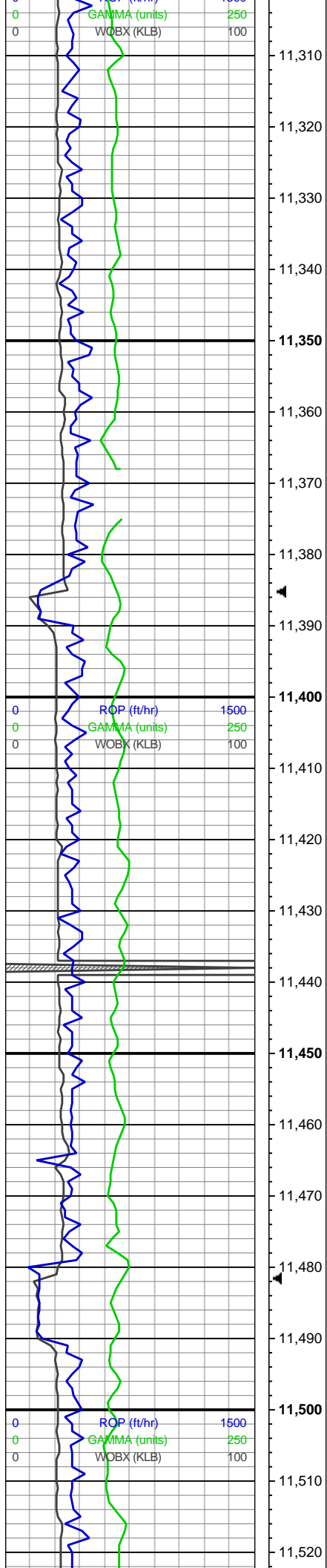


SS: LT GY TO GY, GRTTY
TEX, V F TO F GRN, SB
RND TO SB ANG, P TO
FR SRT, W CONS, HRD,
SLTY, SNDY, CALC; SH:
DRK GY TO BLK, GRTTY
TEX, DL TO SB WXY
LSTR, AMOR, CALC

SS: LT GY TO GY,
GRTTY TEX, V F TO F
GRN, SB RND TO SB
ANG, P TO FR SRT, W
CONS, HRD, SLTY,
SNDY, CALC; SH: DRK
GY TO BLK, GRTTY TEX,
DL TO SB WXY LSTR,
AMOR, CALC

SS: LT GY TO GY,
GRTTY TEX, V F TO F
GRN, SB RND TO SB
ANG, P TO FR SRT, W
CONS, HRD, SLTY,



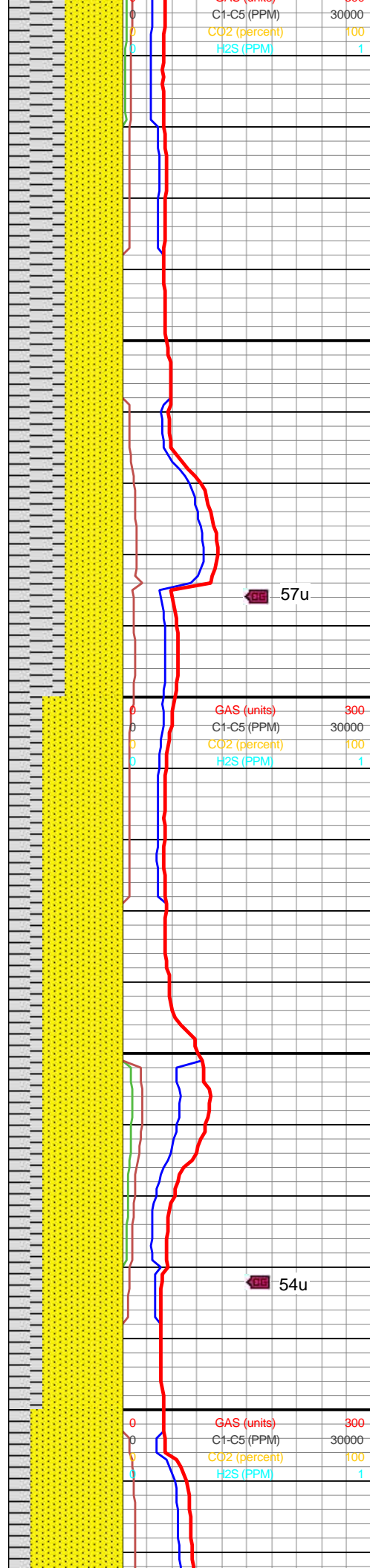


MD: 11,362'
Inclination: 89.97°
Azimuth: 0.86°
TVD: 7,892.11'
VS: 3,881.53'

WOB: 21
RPM: 101
SPM: 166
SPP: 4556

MW/VIS I/O
10.2/46

MD: 11,457'
Inclination: 89.91°
Azimuth: 0.75°
TVD: 7,892.21'
VS: 3,975.8'



57u

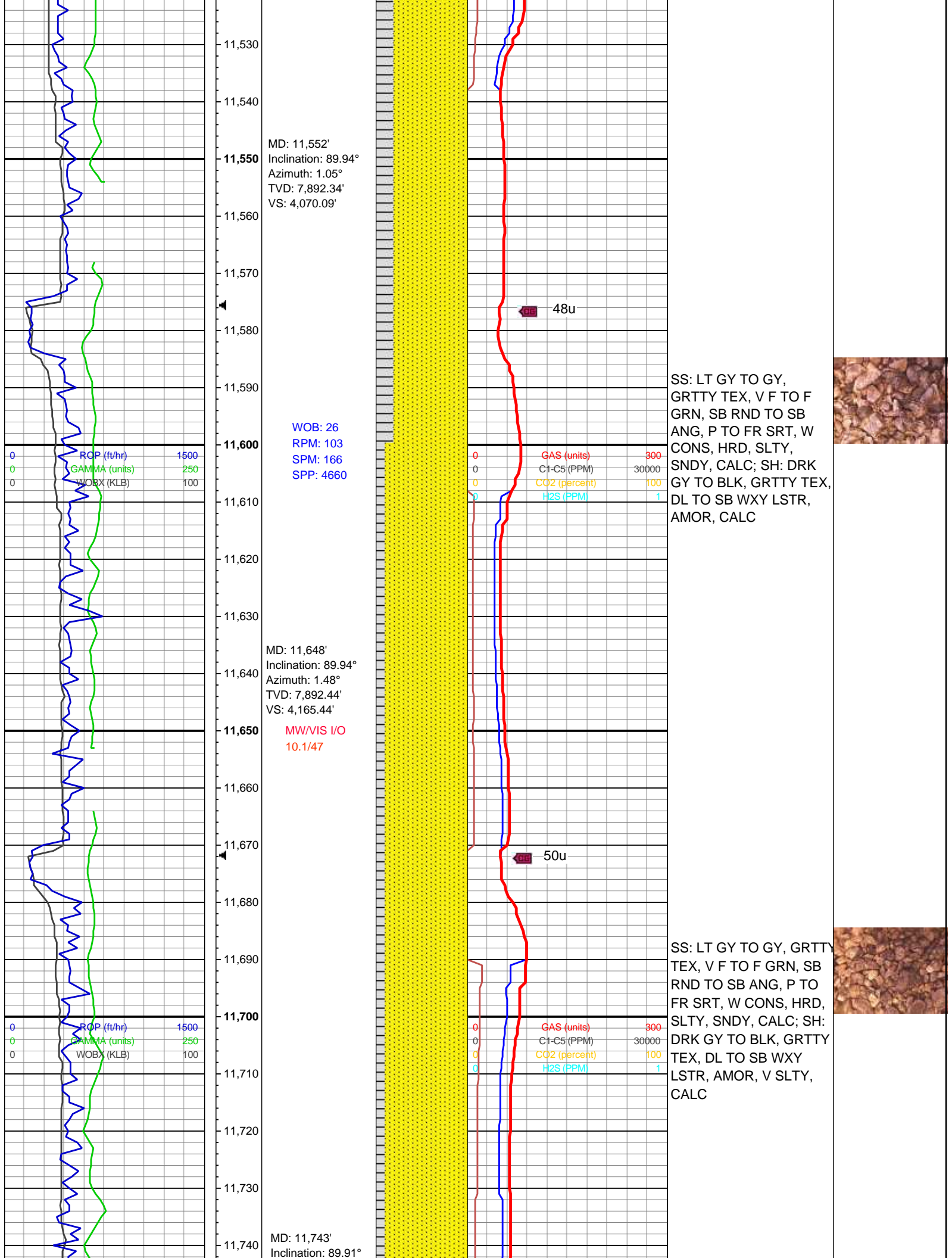
54u

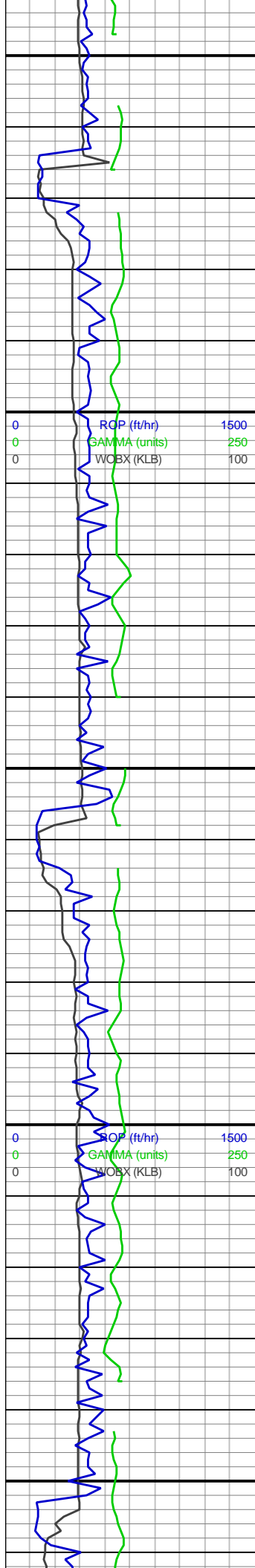
SNDY, CALC; SH: DRK GY TO BLK, GRTTY TEX, DL TO SB WXY LSTR, AMOR, CALC

SS: LT GY TO GY, GRTTY TEX, V F TO F GRN, SB RND TO SB ANG, P TO FR SRT, W CONS, HRD, SLTY, SNDY, CALC; SH: DRK GY TO BLK, GRTTY TEX, DL TO SB WXY LSTR, AMOR, CALC

SS: LT GY TO GY, GRTTY TEX, V F TO F GRN, SB RND TO SB ANG, P TO FR SRT, W CONS, HRD, SLTY, SNDY, CALC; SH: DRK GY TO BLK, GRTTY TEX, DL TO SB WXY LSTR, AMOR, CALC







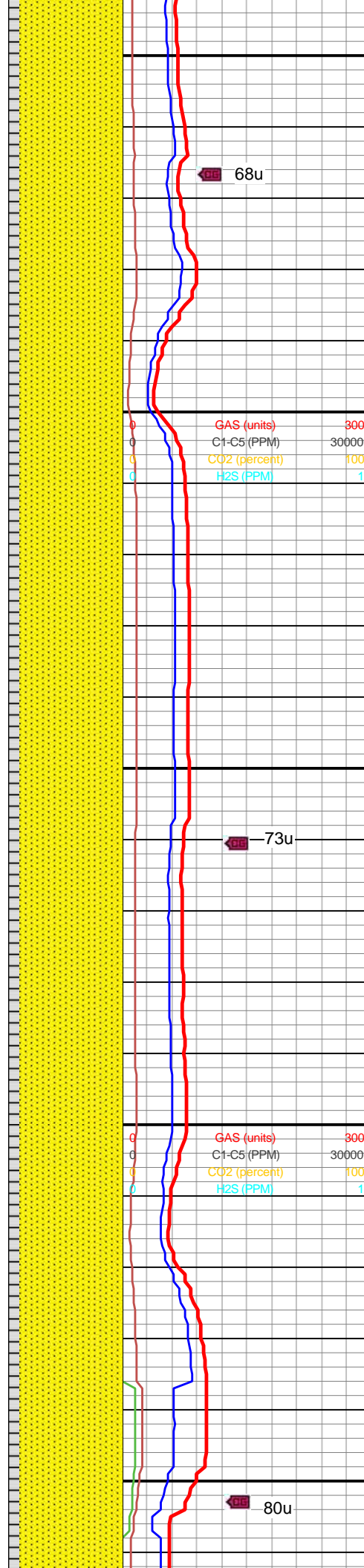
Azimuth: 1.66°
TVD: 7,892.56'
VS: 4,259.86'

WOB: 30
RPM: 100
SPM: 158
SPP: 4629

MD: 11,837'
Inclination: 89.97°
Azimuth: 2.36°
TVD: 7,892.66'
VS: 4,353.36'

MW/VIS I/O
10.1/47

MD: 11,929'
Inclination: 89.97°
Azimuth: 3.4°
TVD: 7,892.71'
VS: 4,445'



SS: LT GY TO GY, GRTTY
TEX, V F TO F GRN, SB
RND TO SB ANG, P TO
FR SRT, W CONS, HRD,
SLTY, SNDY, CALC; SH:
DRK GY TO BLK, GRTTY
TEX, DL TO SB WXY
LSTR, AMOR, V SLTY,
CALC

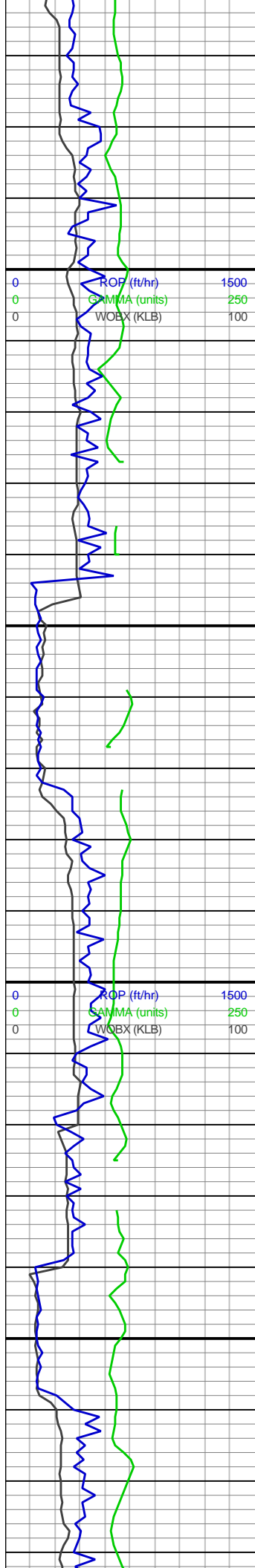


SS: LT GY TO GY,
GRTTY TEX, V F TO F
GRN, SB RND TO SB
ANG, P TO FR SRT, W
CONS, HRD, SLTY,
SNDY, CALC; SH: DRK
GY TO BLK, GRTTY TEX,
DL TO SB WXY LSTR,
AMOR, V SLTY, CALC

68u

73u

80u



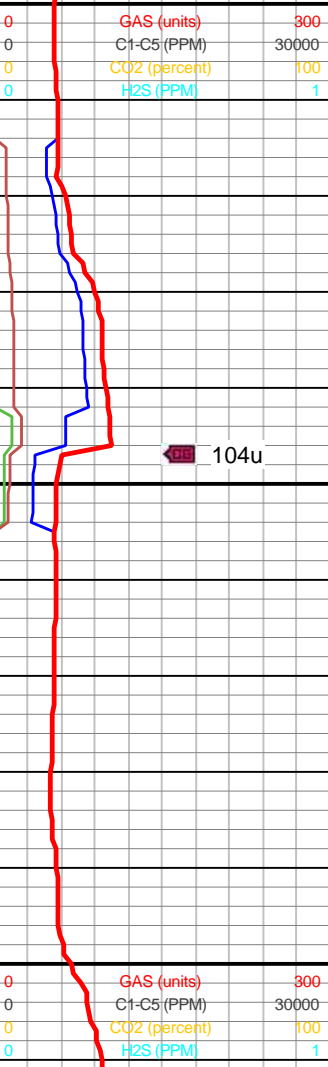
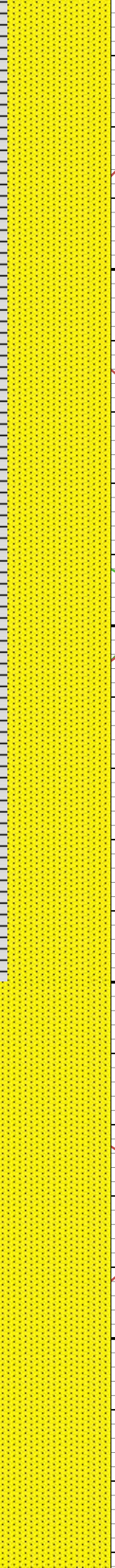
11,970
11,980
11,990
12,000
12,010
12,020
12,030
12,040
12,050
12,060
12,070
12,080
12,090
12,100
12,110
12,120
12,130
12,140
12,150
12,160
12,170
12,180

WOB: 22
RPM: 100
SPM: 166
SPP: 4795

MD: 12,022'
Inclination: 89.88°
Azimuth: 3.81°
TVD: 7,892.83'
VS: 4,537.74'

MW/VIS I/O
10.1/47

MD: 12,117'
Inclination: 90.03°
Azimuth: 3.89°
TVD: 7,892.91'
VS: 4,632.5'



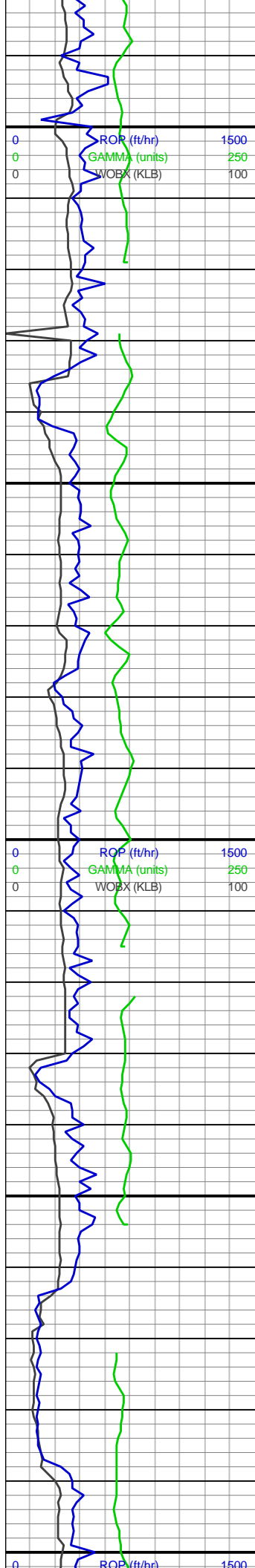
SS: LT GY TO GY,
GRTTY TEX, V F TO F
GRN, SB RND TO SB
ANG, P TO FR SRT, W
CONS, HRD, SLTY,
SNDY, CALC; SH: DRK
GY TO BLK, GRTTY TEX,
DL TO SB WXY LSTR,
AMOR, V SLTY, CALC

SS: LT GY TO GY,
GRTTY TEX, V F TO F
GRN, SB RND TO SB
ANG, P TO FR SRT, W
CONS, HRD, SLTY,
SNDY, CALC; SH: DRK
GY TO BLK, GRTTY TEX,
DL TO SB WXY LSTR,
AMOR, V SLTY, CALC



104u

52u



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
12,370
12,380
12,390
12,400

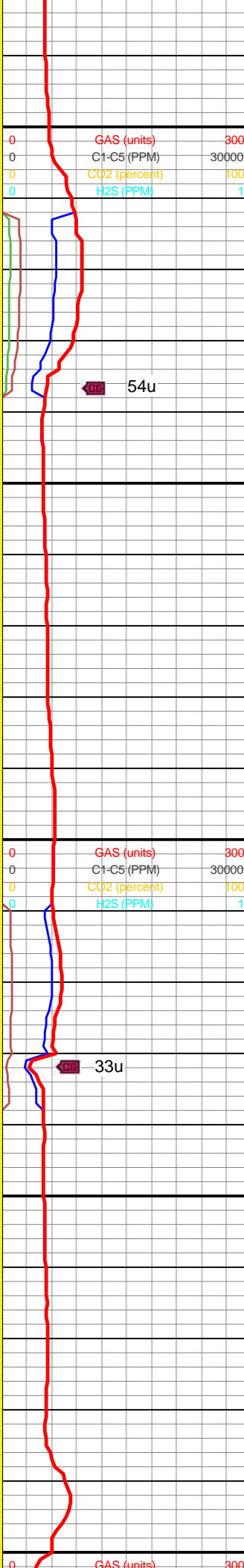
WOB: 24
RPM: 99
SPM: 166
SPP: 4804

MD: 12,217'
Inclination: 89.97°
Azimuth: 2.05°
TVD: 7,892.91'
VS: 4,732.12'

MW/VIS I/O
10.05/47

MD: 12,307'
Inclination: 89.97°
Azimuth: 359.53°
TVD: 7,892.95'
VS: 4,821.42'

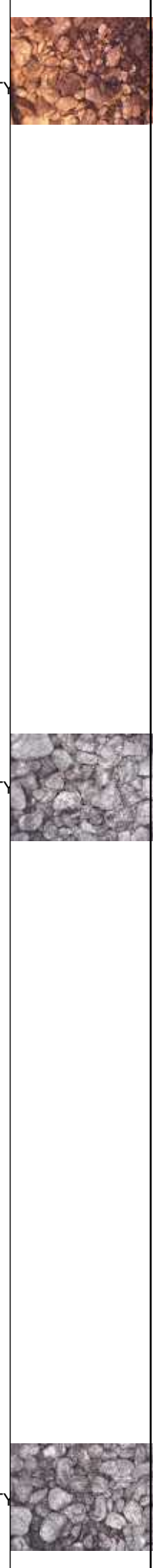
MD: 12,401'
Inclination: 88.98°
Azimuth: 356.54°
TVD: 7,893.82'
VS: 4,914'

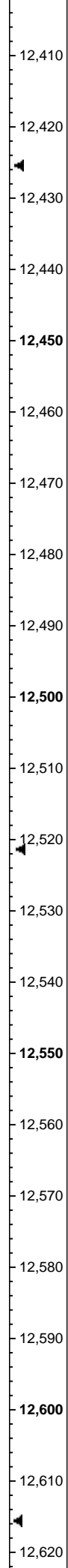
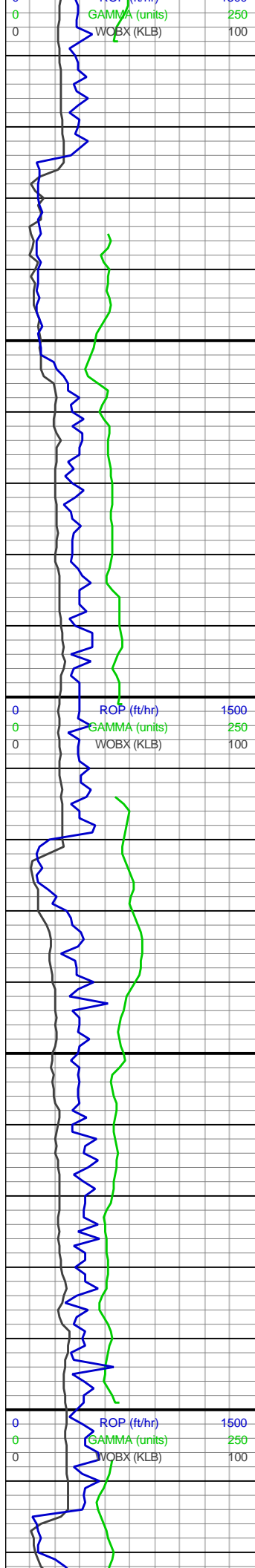


SS: LT GY TO GY, GRTTY
TEX, V F TO F GRN, SB
RND TO SB ANG, P TO
FR SRT, W CONS, HRD,
SLTY, SNDY, CALC

SS: LT GY TO GY, GRTTY
TEX, V F TO F GRN, SB
RND TO SB ANG, P TO
FR SRT, W CONS, HRD,
SLTY, SNDY, CALC

SS: LT GY TO GY, GRTTY
TEX, V F TO F GRN, SB
RND TO SB ANG, P TO
FR SRT, W CONS, HRD,
SLTY, SNDY, CALC





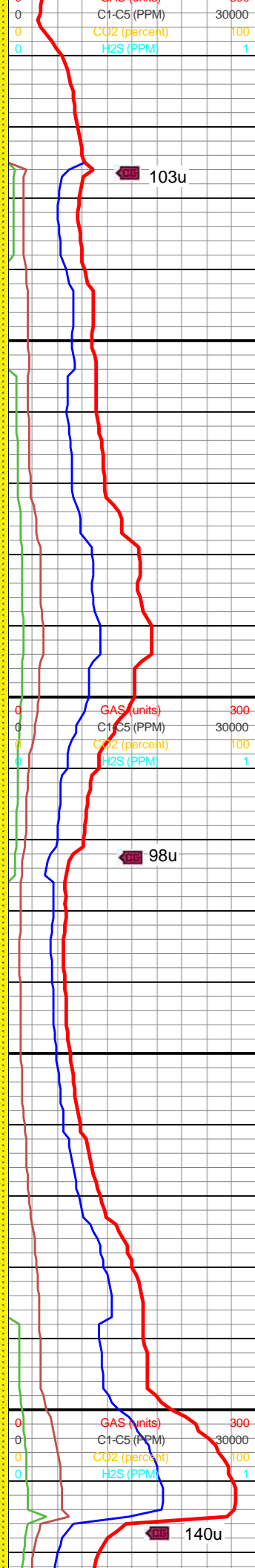
RPM: 100
SPM: 166
SPP: 4693

MW/VIS I/O
10.05/47

MD: 12,497'
Inclination: 88.92°
Azimuth: 356.09°
TVD: 7,895.57'
VS: 5,008.03'

MD: 12,592'
Inclination: 88.92°
Azimuth: 356.75°
TVD: 7,897.36'
VS: 5,101.1'

WOB: 19
RPM: 102
SPM: 166
SPP: 4717

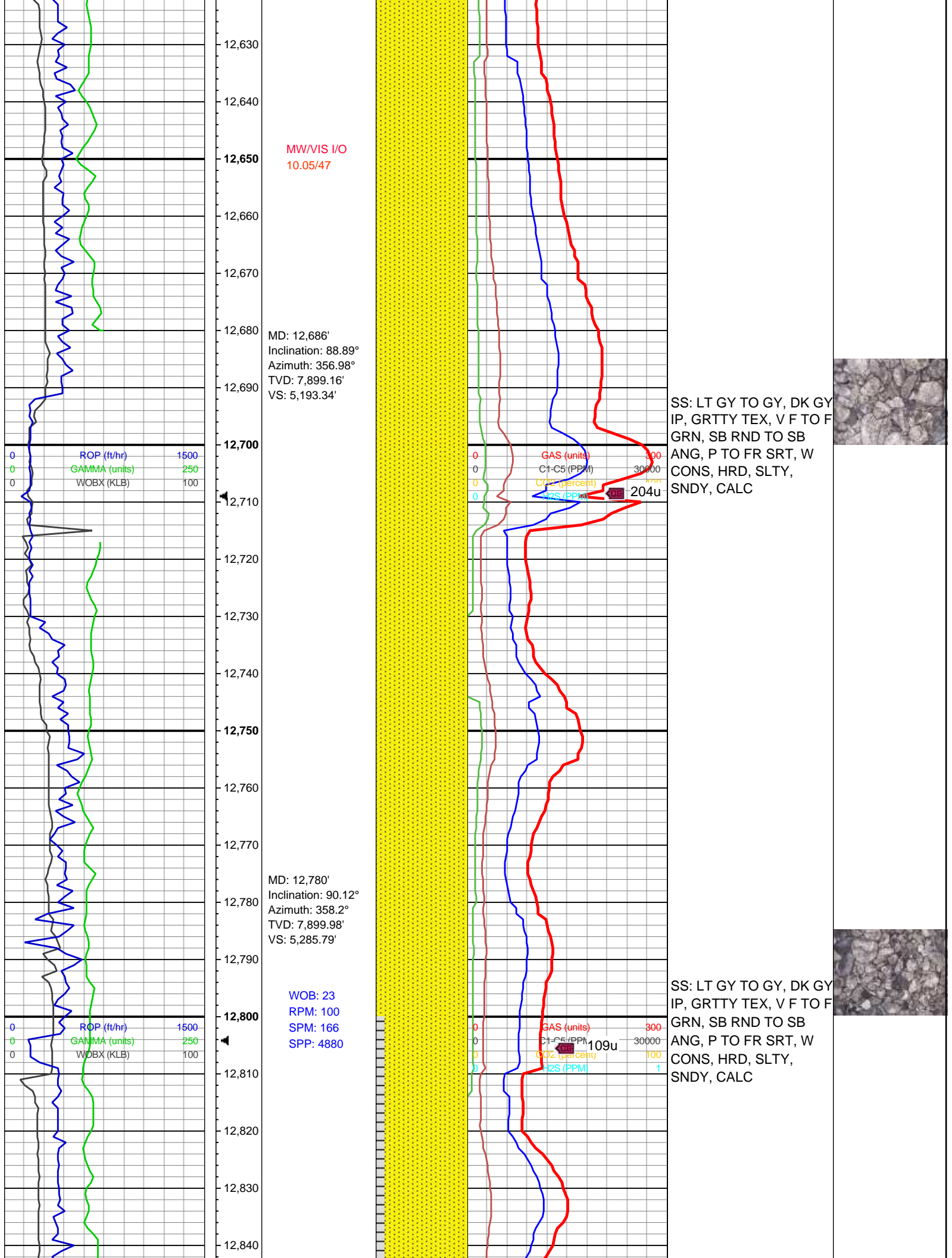


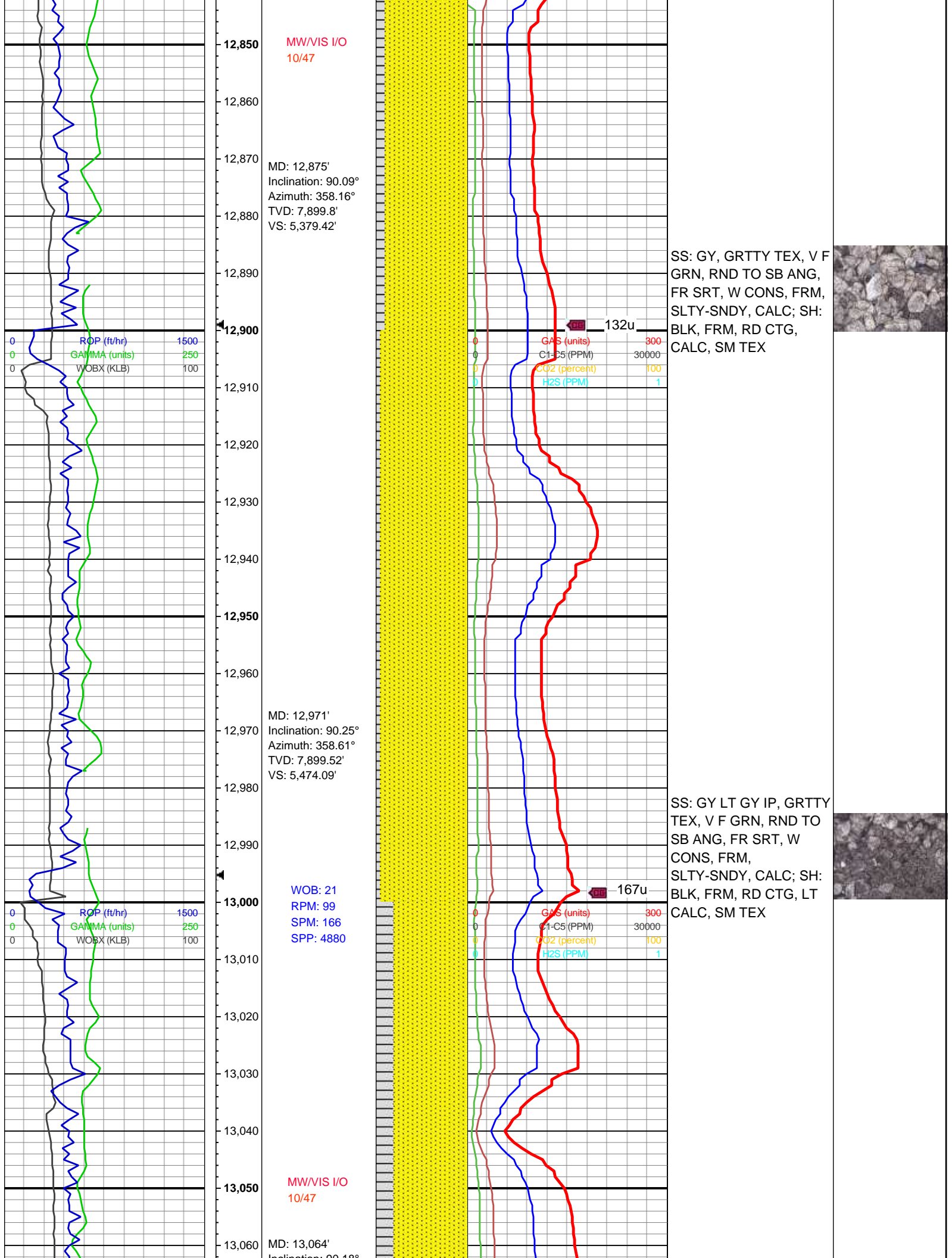
FR SRT, W CONS, HRD,
SLTY, SNDY, CALC

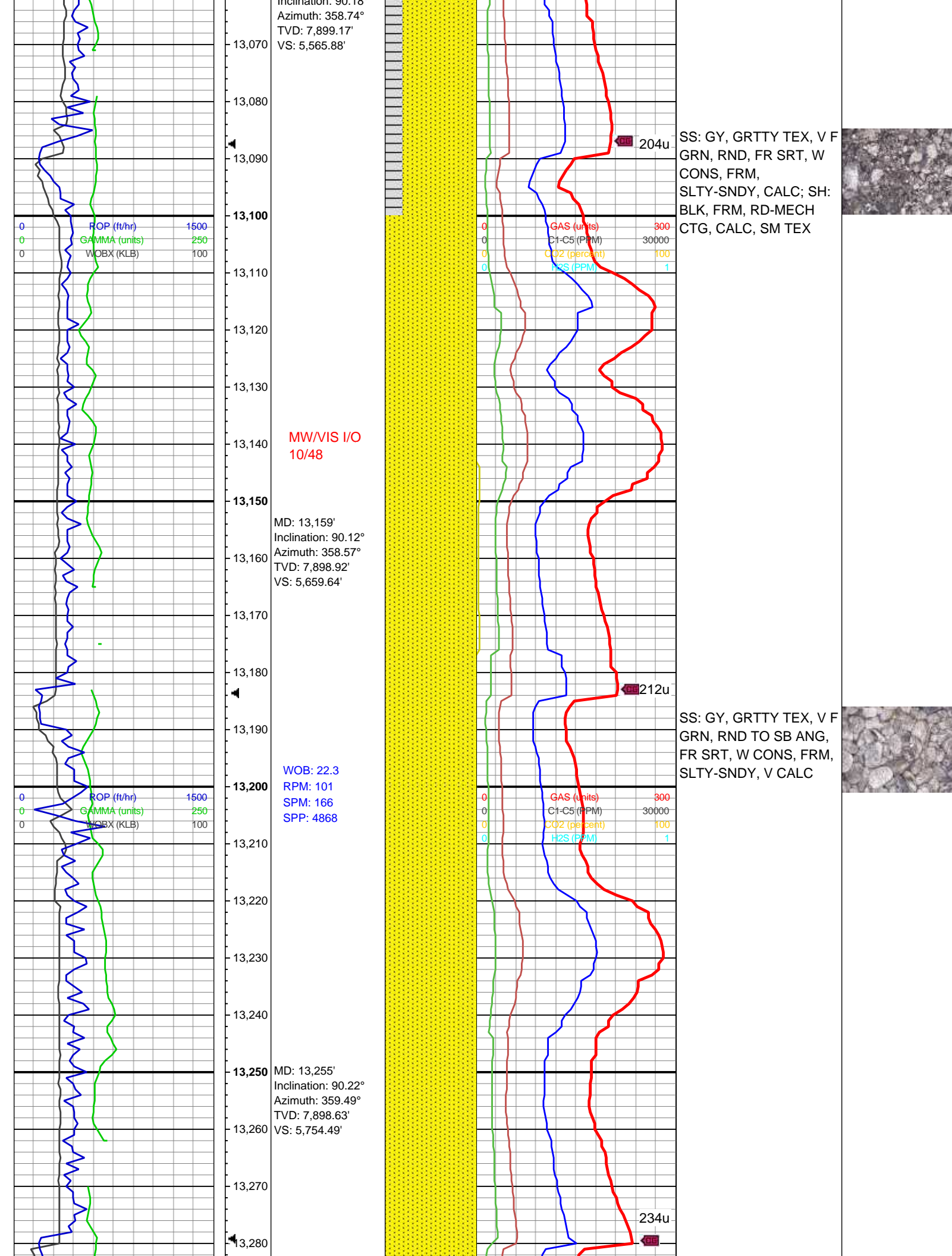
SS: LT GY TO GY, DK GY
IP, GRTTY TEX, V F TO F
GRN, SB RND TO SB
ANG, P TO FR SRT, W
CONS, HRD, SLTY,
SNDY, CALC

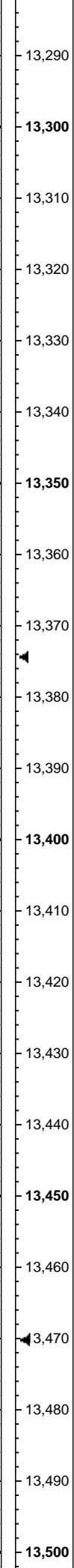
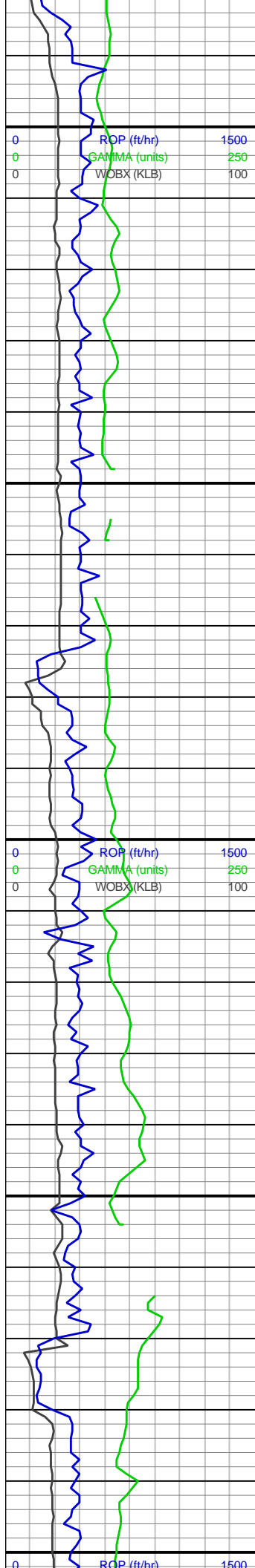
SS: LT GY TO GY, DK GY
IP, GRTTY TEX, V F TO F
GRN, SB RND TO SB
ANG, P TO FR SRT, W
CONS, HRD, SLTY,
SNDY, CALC









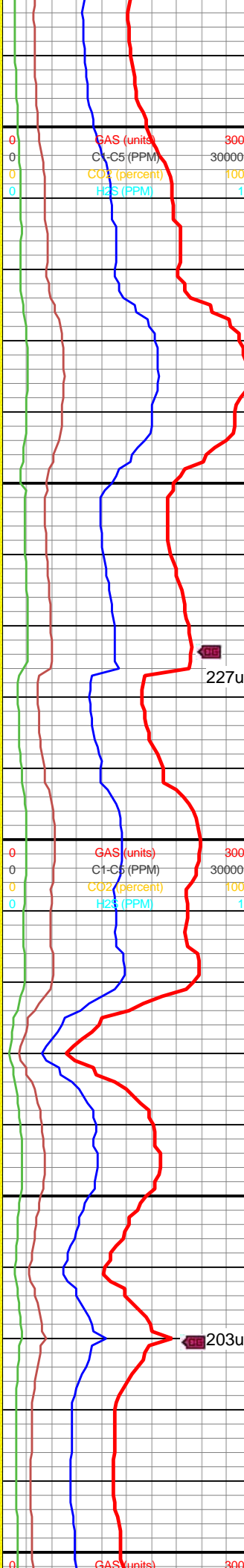
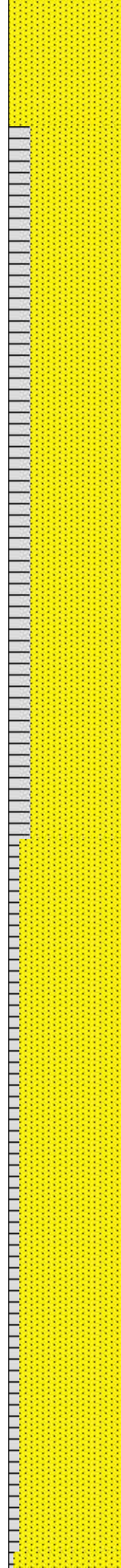


MD: 13,351'
Inclination: 90.18°
Azimuth: 358.15°
TVD: 7,898.3'
VS: 5,849.28'

WOB: 20.5
RPM: 101
SPM: 166
SPP: 4839

MD: 13,447'
Inclination: 90.12°
Azimuth: 357.11°
TVD: 7,898.05'
VS: 5,943.73'

MW/VIS I/O
10.1/48
10.2/48



SS: GY, BLK BND IP,
GRTTY TEX, V F GRN,
RND TO SB ANG, FR
SRT, W CONS, FRM,
SLTY-SNDY, CALC

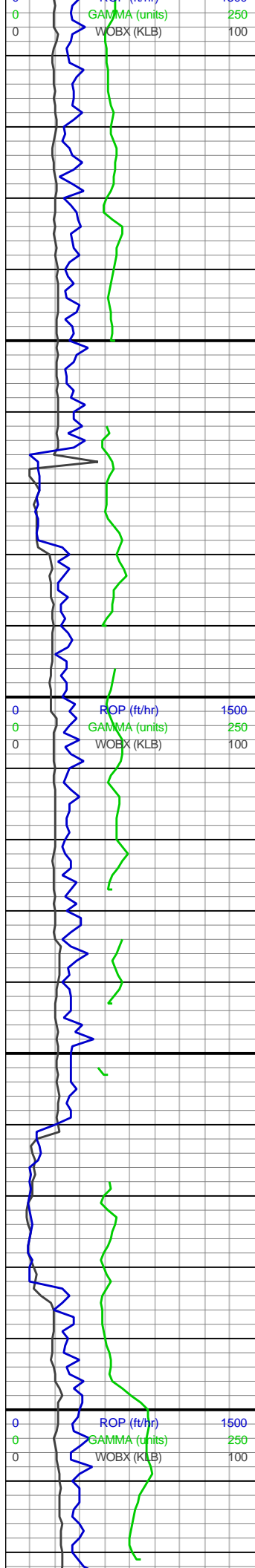
SS: GY, BLK BND IP,
GRTTY TEX, V F-F GRN,
RND TO SB ANG, FR
SRT, W CONS, FRM,
SLTY-SNDY, CALC; SH:
BLK, FRM, RD CTG,
CALC, SM TEX

SS: GY, BLK BND IP,
XBED, GRTTY TEX, V F-F
GRN, RND TO SB ANG,
FR SRT, W CONS, FRM,
SLTY-SNDY, CALC; SH:
BLK, FRM, RD CTG,
CALC, SM TEX



227u

203u



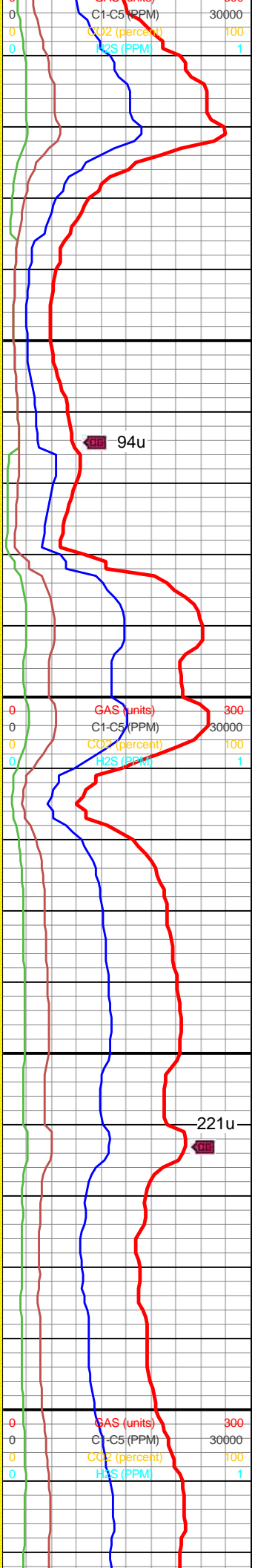
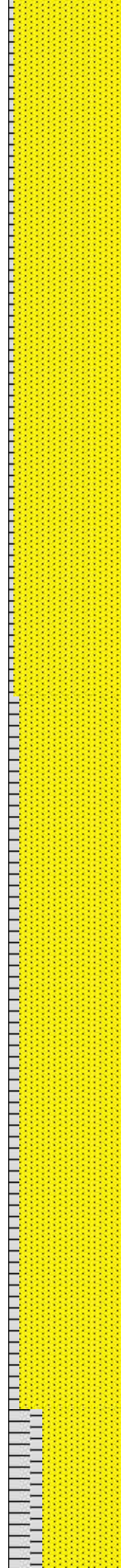
13,510
13,520
13,530
13,540
13,550
13,560
13,570
13,580
13,590
13,600
13,610
13,620
13,630
13,640
13,650
13,660
13,670
13,680
13,690
13,700
13,710
13,720

MD: 13,542'
Inclination: 90.25°
Azimuth: 357.14°
TVD: 7,897.74'
VS: 6,037.05'

WOB: 21.1
RPM: 104
SPM: 166
SPP: 4880

MW/VIS I/O
10.1/48
10.2/48

MD: 13,638'
Inclination: 90.22°
Azimuth: 356.78°
TVD: 7,897.35'
VS: 6,131.3'

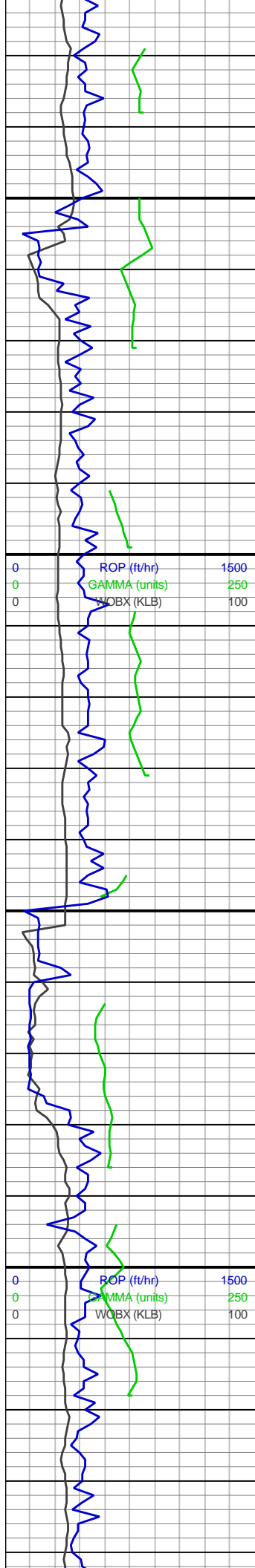


CALC, SM TEX
SS: GY, BLK BND IP,
GRTTY TEX, V F-F GRN,
RND TO SB ANG, FR
SRT, W CONS, FRM,
SLTY-SNDY, SH LAMN,
CALC; SH: BLK, FRM, RD
CTG, CALC, SM TEX, DL
LSTR



SS: GY, BLK BND IP,
GRTTY TEX, F GRN,
RND TO SB ANG, FR
SRT, W CONS, FRM,
SLTY-SNDY, SH LAMN,
GRNL PYR, CALC; SH:
BLK, FRM, RD CTG,
CALC, SM TEX, DL LSTR





MD: 13,732'
Inclination: 90.31°
Azimuth: 358.86°
TVD: 7,896.91'
VS: 6,223.84'

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

13,910

13,920

13,930

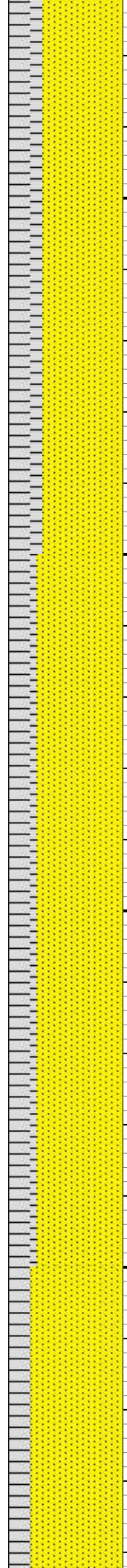
13,940

MD: 13,827'
Inclination: 90.09°
Azimuth: 1.76°
TVD: 7,896.58'
VS: 6,317.99'

MD: 13,923'
Inclination: 90.18°
Azimuth: 2.25°
TVD: 7,896.35'
VS: 6,413.48'

MW/VIS I/O
10.1/48
10.2/48

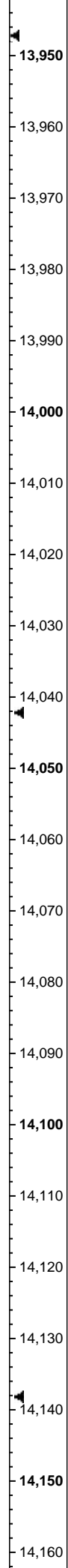
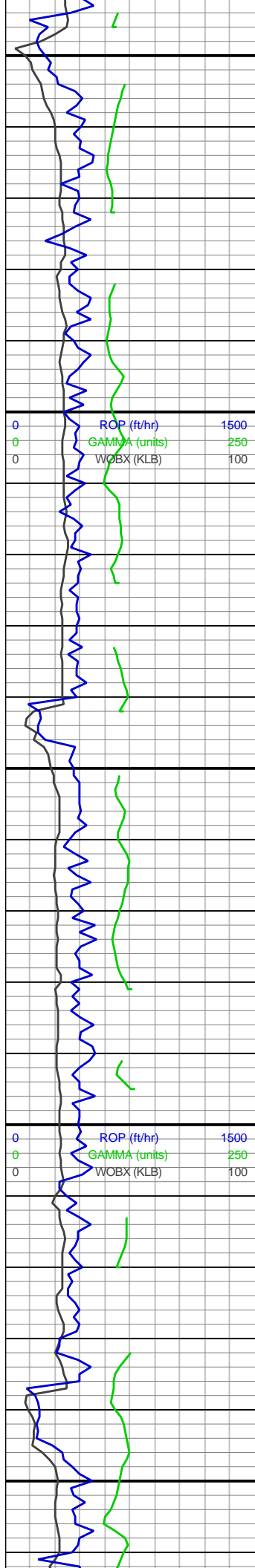
WOB: 21.9
RPM: 102
SPM: 166
SPP: 4964



SS: GY, BLK BND IP,
GRTY TEX, F GRN,
RND-SB ANG, FR SRT,
W CONS, FRM,
SLTY-SDY, SH LAMN,
CALC; SH: BLK, FRM, RD
CTG, CALC, SM PLTY
TEX, DL LSTR

SS: GY, GRTY TEX, F
GRN, RND-SB ANG, FR
SRT, W CONS, FRM,
SLTY-SDY, CALC; SH:
BLK, FRM, RD CTG,
CALC, SM PLTY TEX, DL
LSTR





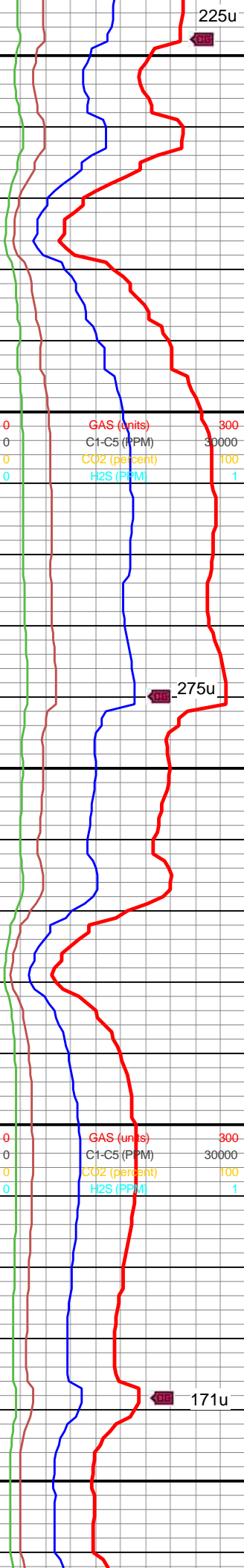
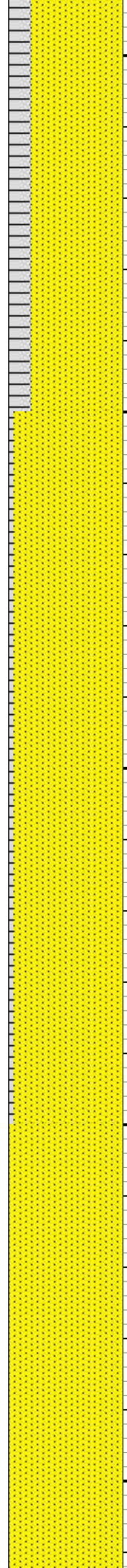
MW/VIS I/O
10.1/49
10.1+/49

WOB: 24.4
RPM: 100
SPM: 166
SPP: 5084

MD: 14,019'
Inclination: 90.15°
Azimuth: 2.55°
TVD: 7,896.08'
VS: 6,509.03'

MD: 14,115'
Inclination: 90.28°
Azimuth: 1.25°
TVD: 7,895.72'
VS: 6,604.5'

MW/VIS I/O
10.1/48
10.2/48



SS: GY, GR TY TEX, VF-F
GRN, RND-SB ANG, FR
SRT, W CONS, FRM,
SLTY-SDY, CALC; SH:
BLK, FRM, RD CTG, LT
CALC, SM PLTY TEX, DL
LSTR

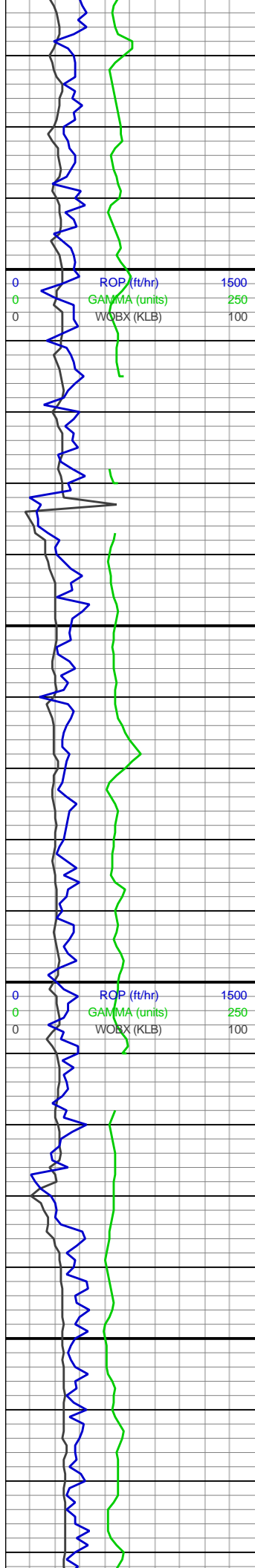
SS: GY, GR TY TEX, F
GRN, RND CTG, FR
SRT, W CONS, FRM,
SLTY-SDY, CALC; SH:
BLK, FRM, PLTY-RD
CTG, CALC, SM PLTY
TEX, DL LSTR



225u

275u

171u



14,170
14,180
14,190
14,200
14,210
14,220
14,230
14,240
14,250
14,260
14,270
14,280
14,290
14,300
14,310
14,320
14,330
14,340
14,350
14,360
14,370
14,380

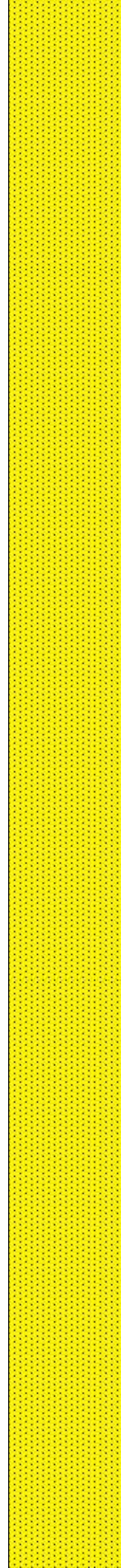
WOB: 23.4
RPM: 101
SPM: 166
SPP: 5096

MD: 14,210'
Inclination: 90.25°
Azimuth: 0.66°
TVD: 7,895.28'
VS: 6,698.8'

MD: 14,305'
Inclination: 90.18°
Azimuth: 359.91°
TVD: 7,894.92'
VS: 6,792.95'

MW/VIS I/O
10.1+/50
10.1+/49

WOB: 26.3
RPM: 101



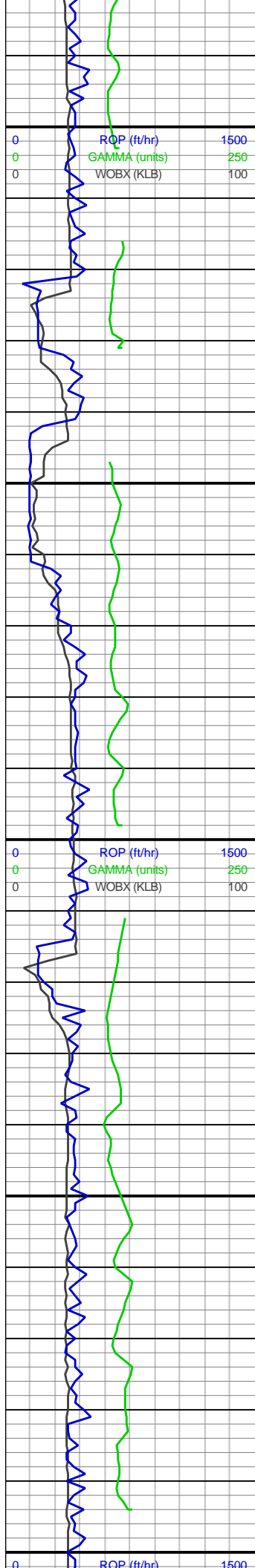
SS: GY, GRTY TEX, F
GRN, RND-SB ANG, FR
SRT, W CONS, FRM,
SLTY-SDY, CALC

SS: GY, GRTY TEX, F
GRN, RND-SB ANG, FR
SRT, W CONS, FRM,
SLTY-SDY, CALC



119u

121u



RPM: 101
SPM: 166
SPP: 5288

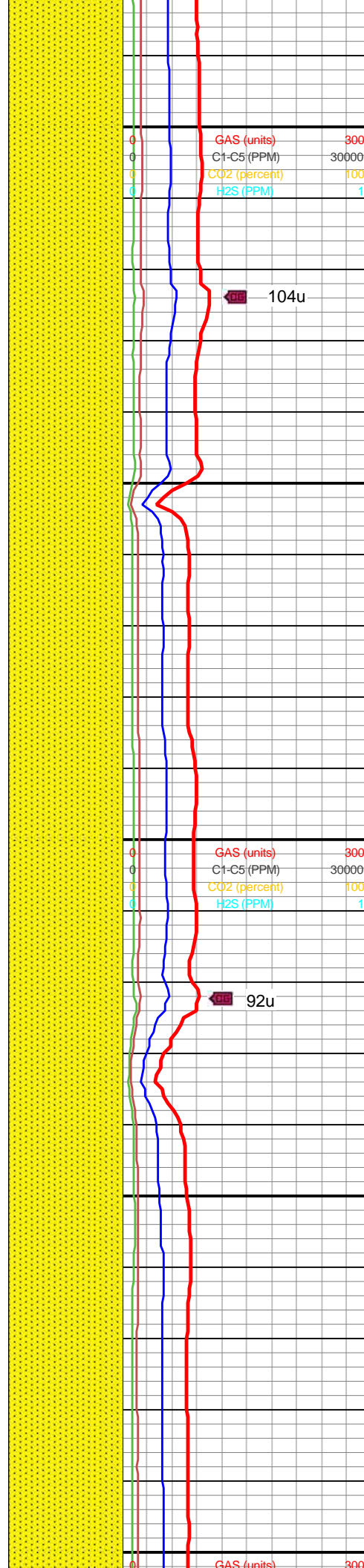
MD: 14,401'
Inclination: 90.28°
Azimuth: 358.55°
TVD: 7,894.54'
VS: 6,887.85'

MD: 14,496'
Inclination: 89.91°
Azimuth: 358.97°
TVD: 7,894.38'
VS: 6,981.64'

MW/VIS I/O
10.2/48
10.2+/48

MD: 14,591'
Inclination: 89.91°
Azimuth: 0.09°
TVD: 7,894.53'
VS: 7,075.62'

WOB: 25.9

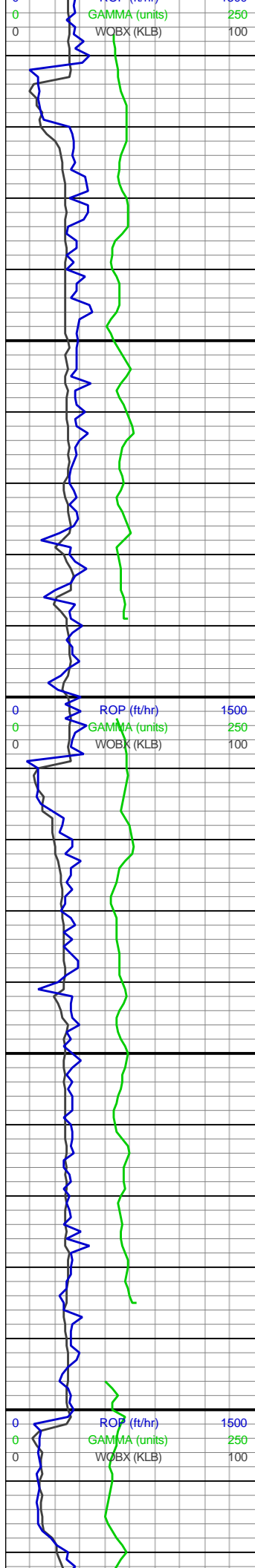


SS: GY, GRTY TEX, F
GRN, RND CTG, FR
SRT, W CONS, FRM,
SLTY-SDY, CALC

SS: GY, GRTY TEX, BLK
BND IP, F GRN, RND-SB
ANG, FR SRT, W CONS,
FRM, SLTY-SDY, CALC

SS: DK GY, GRTY TEX, F
GRN, RND-SB ANG, FR
SRT, W CONS, FRM,
SLTY-SDY, CALC





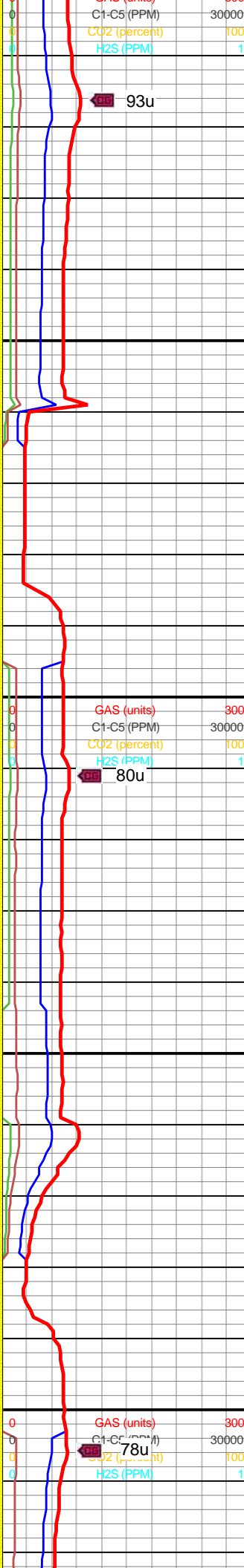
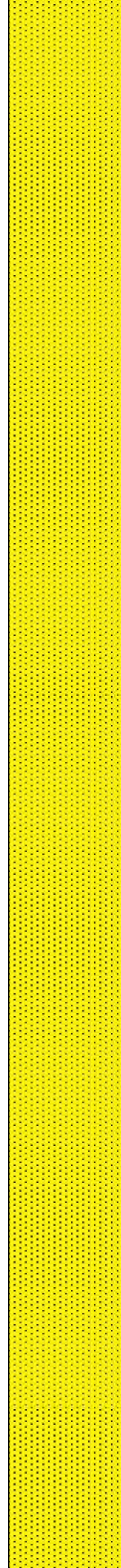
RPM: 102
SPM: 166
SPP: 5277

MD: 14,687'
Inclination: 89.97°
Azimuth: 1.16°
TVD: 7,894.63'
VS: 7,170.84'

MW/VIS I/O
10.2/48
10.2+/48

MD: 14,782'
Inclination: 89.88°
Azimuth: 1.17°
TVD: 7,894.75'
VS: 7,265.18'

WOB: 25.9
RPM: 102
SPM: 166
SPP: 5298



GAS - 93u

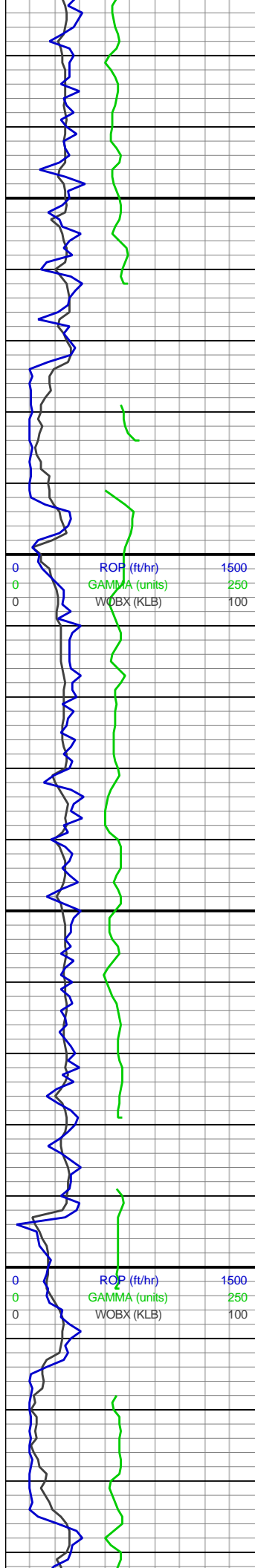
GAS - 80u

GAS - 78u

SS: DK GY, GR TY TEX,
VF GRN, RND-SB ANG,
FR SRT, W CONS, FRM,
SLTY-SDY, CALC

SS: DK GY, GR TY TEX, F
GRN, RND-SB ANG CTG,
FR SRT, W CONS, FRM,
SLTY-SDY, CALC





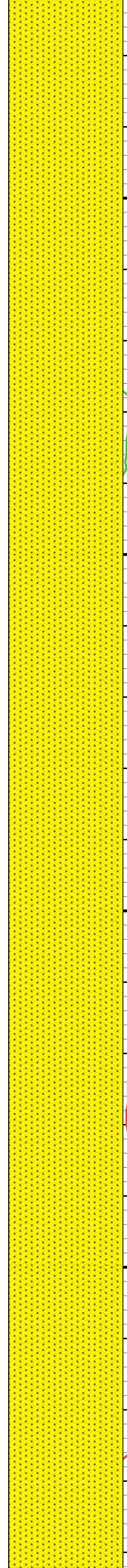
14,830
14,840
14,850
14,860
14,870
14,880
14,890
14,900
14,910
14,920
14,930
14,940
14,950
14,960
14,970
14,980
14,990
15,000
15,010
15,020
15,030
15,040

MD: 14,876'
Inclination: 89.85°
Azimuth: 2.91°
TVD: 7,894.98'
VS: 7,358.68'

MW/VIS I/O
10.2/48
10.2+/48

MD: 14,972'
Inclination: 89.75°
Azimuth: 4.41°
TVD: 7,895.31'
VS: 7,454.41'

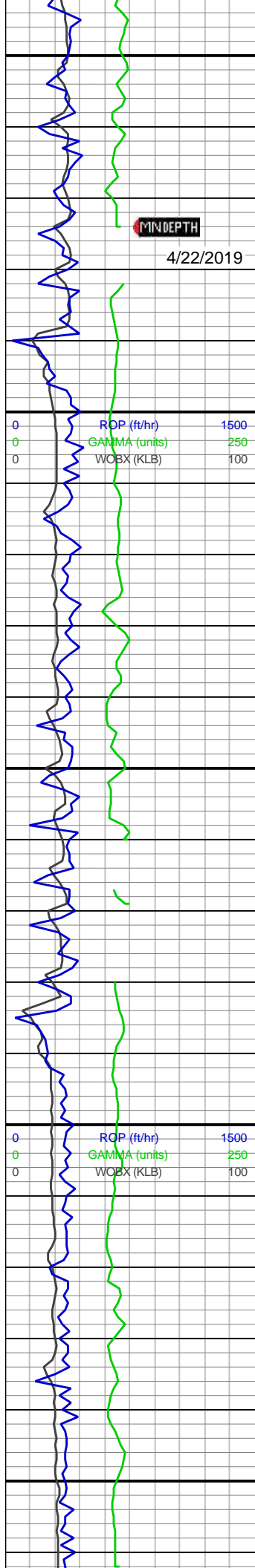
WOB: 16.1
RPM: 100
SPM: 166
SPP: 4978



SS: DK GY, GR TY TEX, V
F GRN, RND CTG, FR
SRT, W CONS, FRM,
SLTY-SDY, CALC

SS: DK GY, GR TY TEX, V
F GRN, RND-SB ANG
CTG, FR SRT, W CONS,
FRM, SLTY-SDY, CALC





15,050
15,060
15,070
15,080
15,090
15,100
15,110
15,120
15,130
15,140
15,150
15,160
15,170
15,180
15,190
15,200
15,210
15,220
15,230
15,240
15,250
15,260

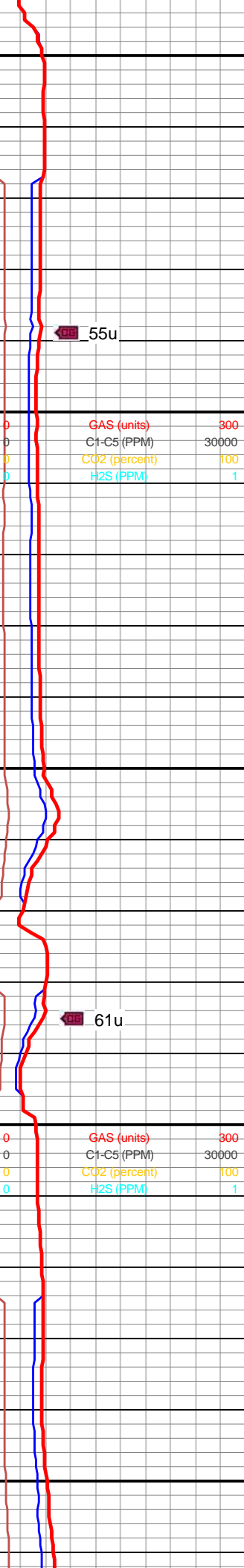
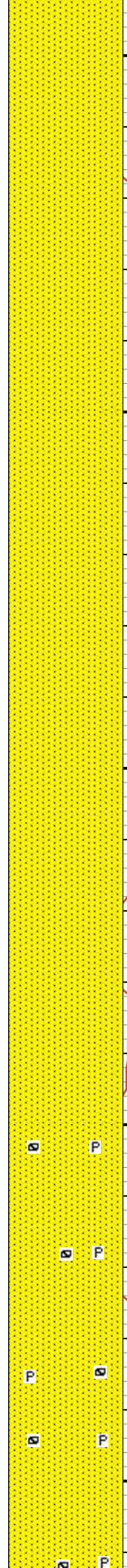
MD: 15,067'
Inclination: 89.57°
Azimuth: 4.25°
TVD: 7,895.87'
VS: 7,549.23'

MW/VIS I/O
10.2/49
10.2/48

MD: 15,161'
Inclination: 89.72°
Azimuth: 2.92°
TVD: 7,896.46'
VS: 7,642.95'

WOB: 19.2
RPM: 100
SPM: 166
SPP: 5306

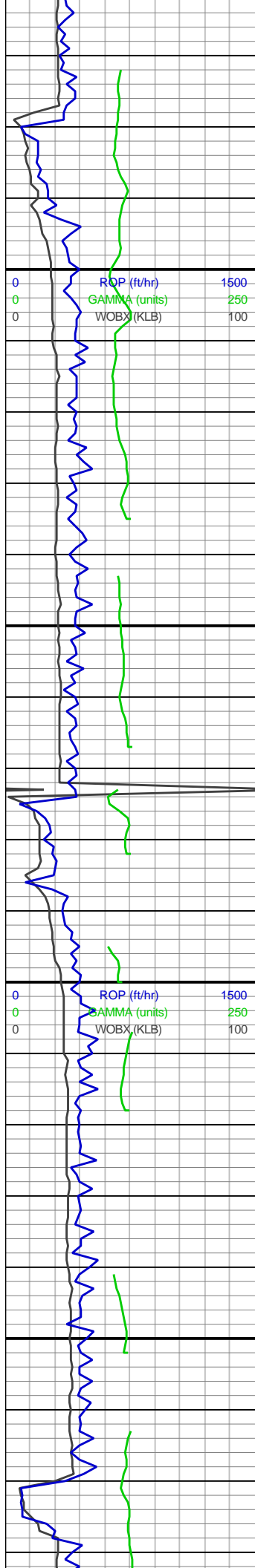
MD: 15,256'
Inclination: 89.75°
Azimuth: 0.77°
TVD: 7,896.9'
VS: 7,737.41'



SS: DK GY SUB BLK,
GRTY TEX, V F GRN,
RND-SB ANG CTG, FR
SRT, W CONS, FRM,
SLTY-SDY, CALC

SS: DK GY SUB BLK,
GRTY TEX, V F-SLT GRN
RND-SB ANG CTG, FR
SRT, W CONS, FRM,
SLTY, CALC





15,270
15,280
15,290
15,300
15,310
15,320
15,330
15,340
15,350
15,360
15,370
15,380
15,390
15,400
15,410
15,420
15,430
15,440
15,450
15,460
15,470
15,480

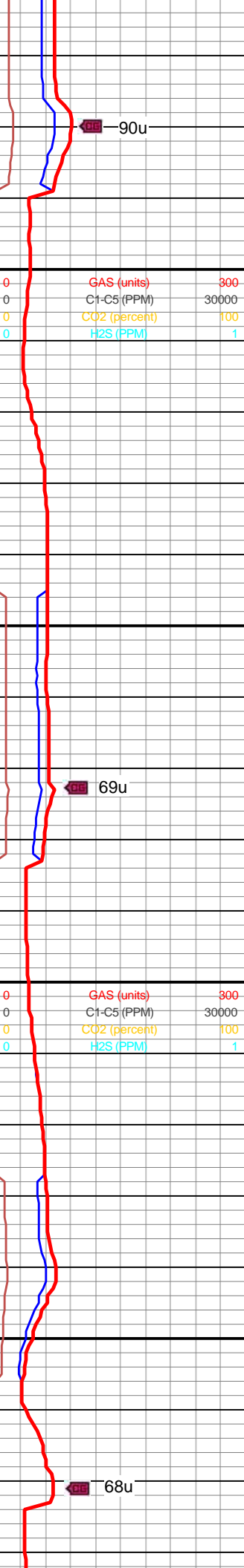
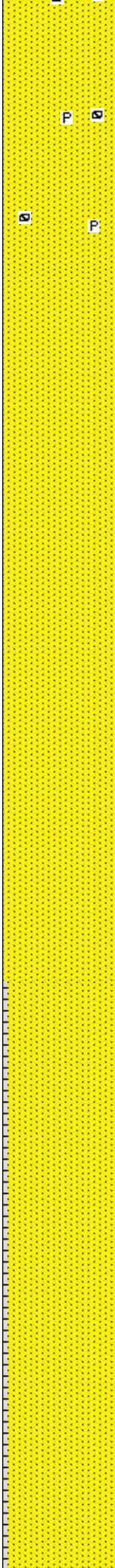
MW/VIS I/O
10.2/49
10.2/49

MD: 15,351'
Inclination: 89.78°
Azimuth: 353.76°
TVD: 7,897.29'
VS: 7,830.72'

WOB: 22.1
RPM: 100
SPM: 166
SPP: 5342

MD: 15,447'
Inclination: 89.75°
Azimuth: 1.19°
TVD: 7,897.68'
VS: 7,925.06'

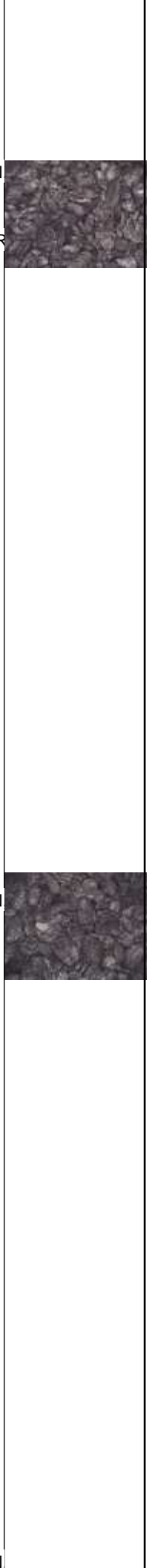
MW/VIS I/O
10.2/49
10.2/49

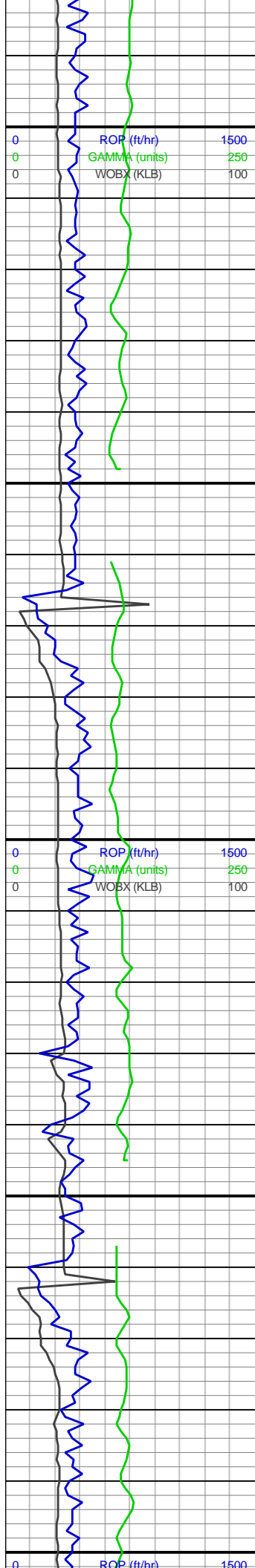


SS: DK GY SUB BLK,
GR TY TEX, V F-SLT GRN
RND-SB ANG CTG, FR
SRT, W CONS, FRM,
SLTY, V CALC, IMBD PYR
NOD

SS: DK GY SUB BLK,
GR TY TEX, V F-SLT GRN
RND-SB ANG CTG, FR
SRT, W CONS, FRM,
SLTY, LT CALC

SS: DK GY SUB BLK,
GR TY TEX, V F-SLT GRN





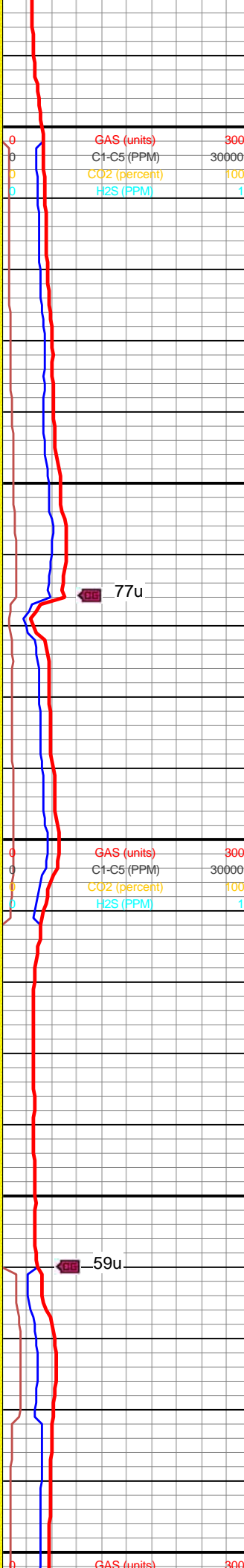
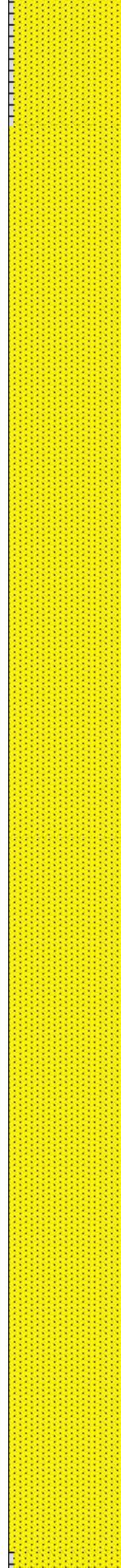
15,490
15,500
15,510
15,520
15,530
15,540
15,550
15,560
15,570
15,580
15,590
15,600
15,610
15,620
15,630
15,640
15,650
15,660
15,670
15,680
15,690
15,700

MD: 15,542'
Inclination: 89.72°
Azimuth: 1.91°
TVD: 7,898.12'
VS: 8,019.47'

WOB: 21.7
RPM: 102
SPM: 166
SPP: 5467

MW/VIS I/O
10.2/48
10.2/48

MD: 15,637'
Inclination: 89.82°
Azimuth: 0.34°
TVD: 7,898.5'
VS: 8,113.8'

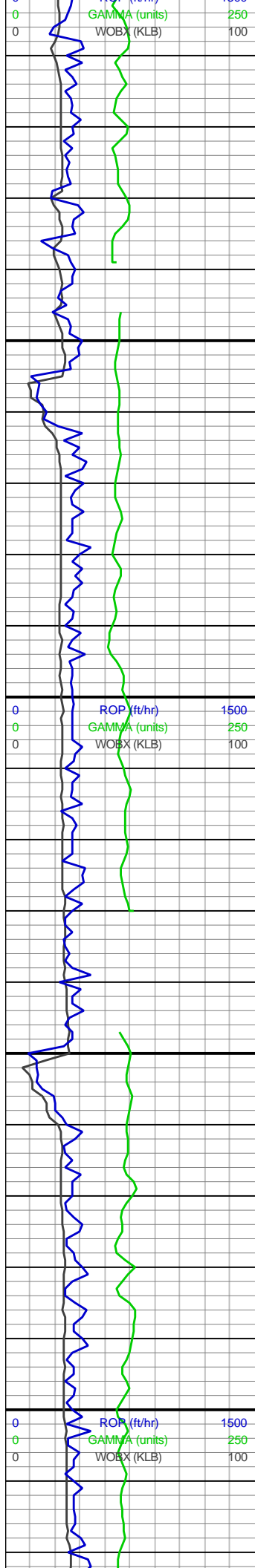


RND-SB ANG CTG, FR
SRT, W CONS, FRM,
SLTY, LT CALC; SH: BLK,
ANG CTG, WXY LSTR,
FRM, SM TEX, NON
CALC

SS: DK GY SUB BLK,
GRTY TEX, V F-SLT GRN
RND CTG, FR SRT, W
CONS, FRM, SLTY, LT
CALC

SS: DK GY SB BLK, BLK
BND IP, GRTY TEX, V
F-SLT GRN, RND CTG,
FR SRT, W CONS, FRM,
SLTY, LT CALC





15,710
15,720
15,730
15,740
15,750
15,760
15,770
15,780
15,790
15,800
15,810
15,820
15,830
15,840
15,850
15,860
15,870
15,880
15,890
15,900
15,910
15,920

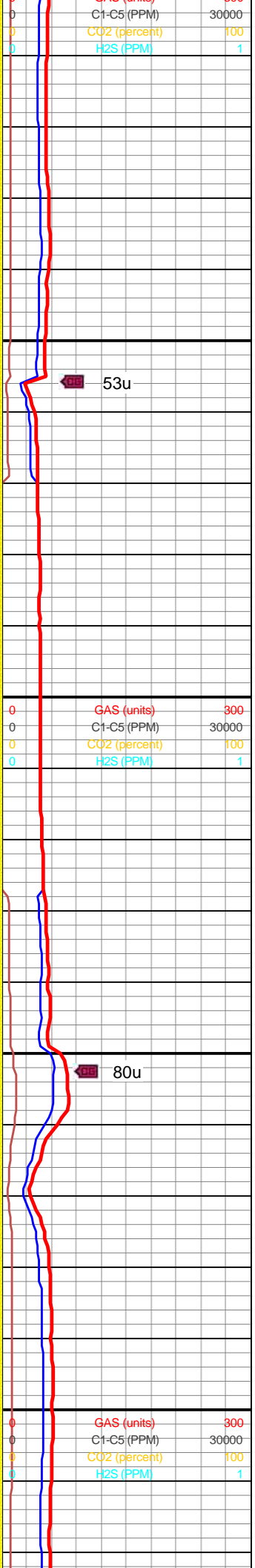
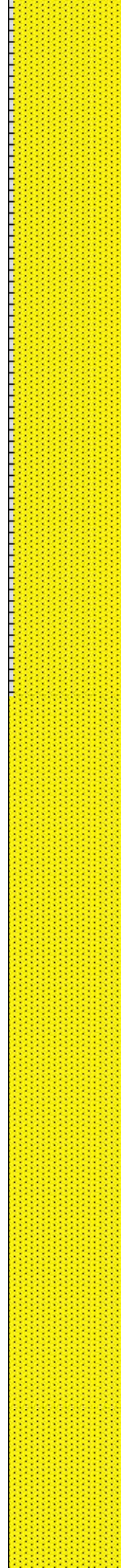
MD: 15,733'
Inclination: 89.75°
Azimuth: 0.15°
TVD: 7,898.86'
VS: 8,208.94'

MW/VIS I/O
10.2/48
10.2/48

WOB: 23.4
RPM: 101
SPM: 166
SPP: 5519

MD: 15,828'
Inclination: 89.69°
Azimuth: 359.32°
TVD: 7,899.33'
VS: 8,302.97'

MD: 15,924'
Inclination: 89.69°
Azimuth: 359.32°
TVD: 7,899.33'
VS: 8,302.97'



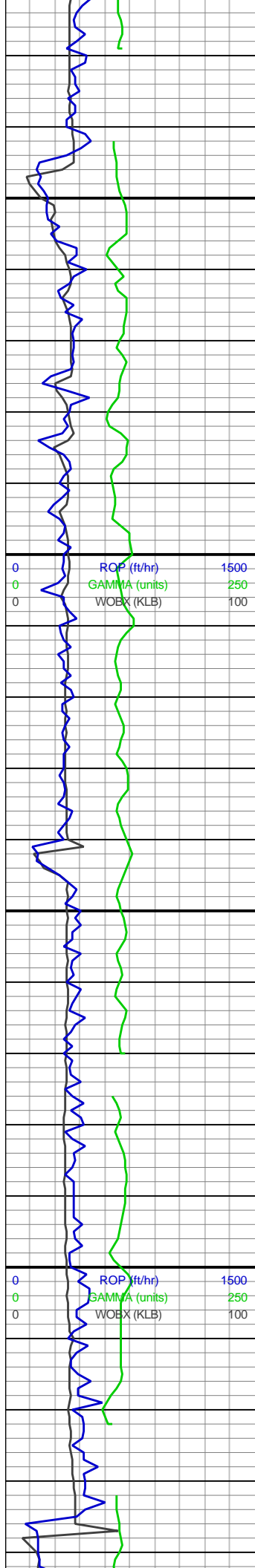
53u

80u

SS: DK GY SB BLK, BLK
BND IP, GRTY TEX, V
F-SLT GRN, RND CTG,
FR SRT, W CONS, FRM,
SLTY, LT CALC; SH: BLK,
BRIT, LT CALC, SM TEX,
MECH CTG

SS: DK GY SB BLK, BLK
BND IP, GRTY TEX,
F-SLT GRN, RND CTG,
FR SRT, W CONS, FRM,
SLTY, LT CALC





15,930
15,940
15,950
15,960
15,970
15,980
15,990
16,000
16,010
16,020
16,030
16,040
16,050
16,060
16,070
16,080
16,090
16,100
16,110
16,120
16,130
16,140

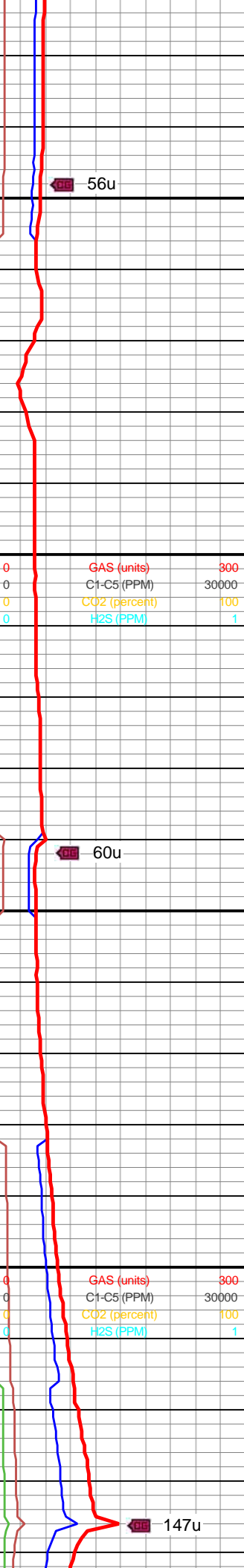
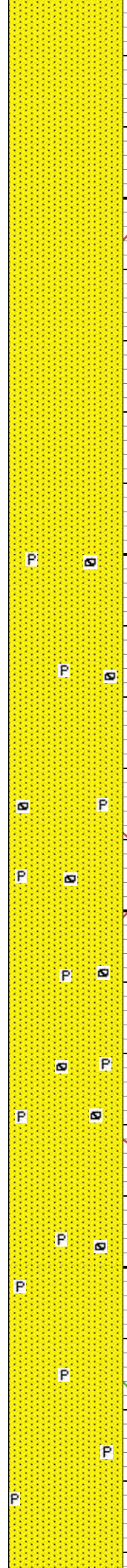
Inclination: 89.66°
Azimuth: 359.26°
TVD: 7,899.87'
VS: 8,397.88'

MW/VIS I/O
10.2/47
10.2/48

WOB: 24.7
RPM: 100
SPM: 166
SPP: 5494

MD: 16,019'
Inclination: 89.69°
Azimuth: 358.06°
TVD: 7,900.41'
VS: 8,491.64'

MD: 16,114'
Inclination: 89.85°
Azimuth: 358.5°
TVD: 7,900.79'
VS: 8,585.3'



56u

60u

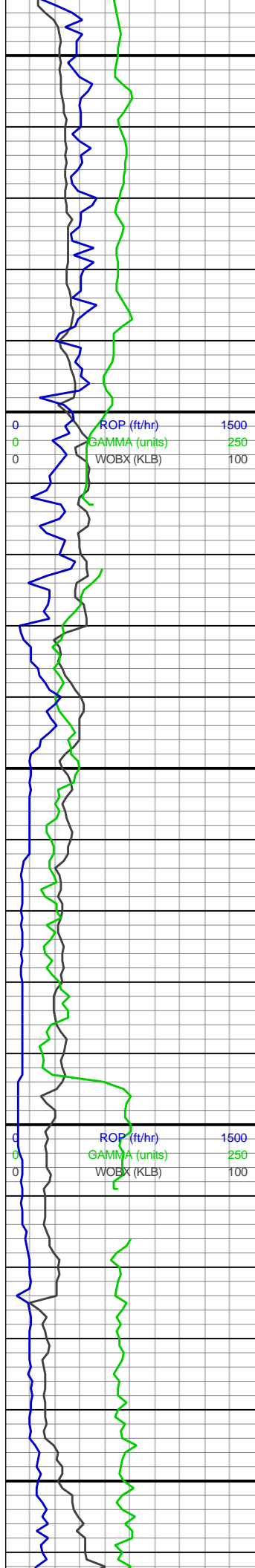
147u

SS: DK GY SB BLK, BLK
BND IP, GRTY TEX, V
F-SLT GRN, RND CTG,
FR SRT, FRM, SLTY, LT
CALC



SS: DK GY SB BLK,
GRTY TEX, V F-SLT GRN
RND CTG, FR SRT, W
CONS, FRM, SLTY, LT
CALC, PYR NOD





16,150
16,160
16,170
16,180
16,190
16,200
16,210
16,220
16,230
16,240
16,250
16,260
16,270
16,280
16,290
16,300
16,310
16,320
16,330
16,340
16,350
16,360

WOB: 28.5
RPM: 103
SPM: 166
SPP: 5651

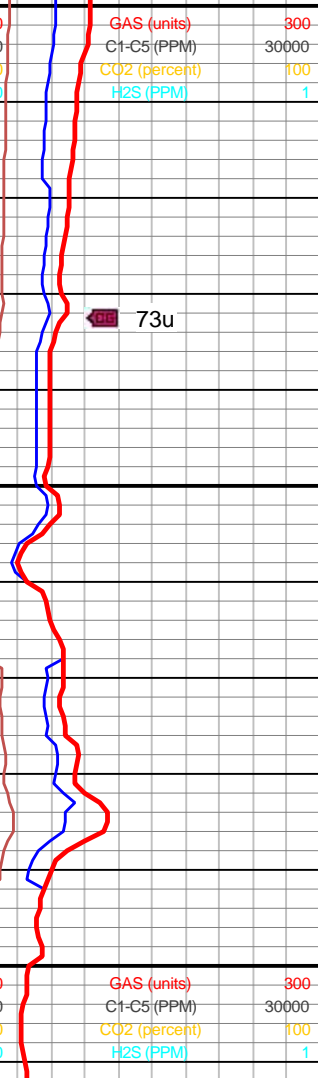
MD: 16,208'
Inclination: 89.78°
Azimuth: 356.86°
TVD: 7,901.09'
VS: 8,677.8'

**ENTERED
GRABEN @
16235'MD**

MW/VIS I/O
10.2/48
10.2/49

MD: 16,301'
Inclination: 89.42°
Azimuth: 356.72°
TVD: 7,901.74'
VS: 8,769.04'

MW/VIS I/O



73u

41u

SS: DK GY SB BLK,
GRTY TEX, V F-SLT GRN
RND CTG, FR SRT, W
CONS, FRM, SLTY, LT
CALC, XL PYR

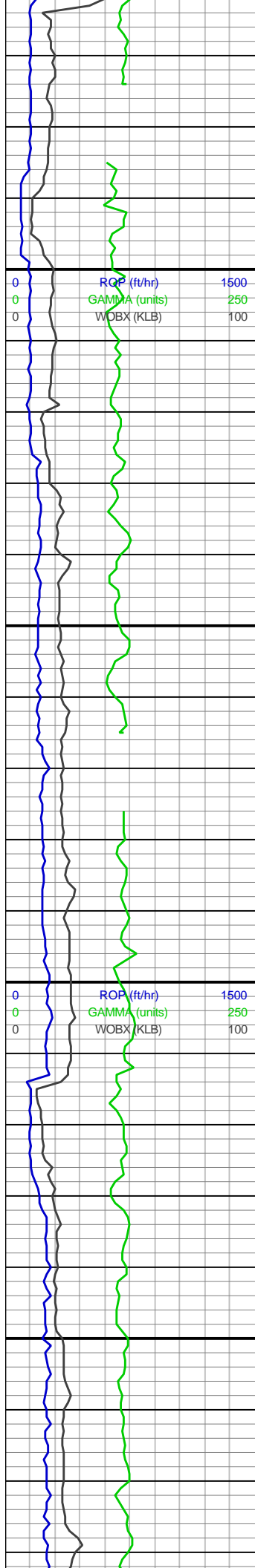
LS: TN, HD, ANG CTG,
WXY LSTR, CRPTXL
TEX; SS: DK GY SB BLK,
GRTY TEX, F GRN, RND
CTG, FR SRT, W CONS,
FRM, SLTY, CALC

LS: TN & GRY, HD, ANG
CTG, WXY LSTR,
CRPTXL TEX; SH: BLK,
FRM, MECH CTG, V
CALC, DL LSTR, CALC
LAM; SS: DK GY SB BLK,
GRTY TEX, F GRN, RND
CTG

LS: TN & GRY, HD-FRM,
ANG CTG, WXY LSTR,
CRPTXL TEX; SH: BLK,
FRM-BRIT, MECH CTG, V
CALC, DL LSTR, FIB
CAL; SS: DK GY, F GRN,
RND CTG

LS: TN, HD, ANG CTG,
WXY LSTR, CRPTXL
TEX, SH: BLK, BRIT





16,370
16,380
16,390
16,400
16,410
16,420
16,430
16,440
16,450
16,460
16,470
16,480
16,490
16,500
16,510
16,520
16,530
16,540
16,550
16,560
16,570
16,580

MW/VIS I/O
10.2/48

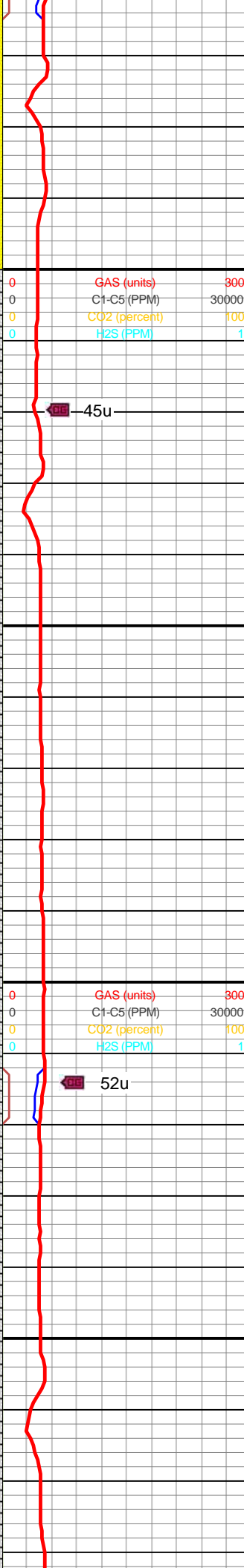
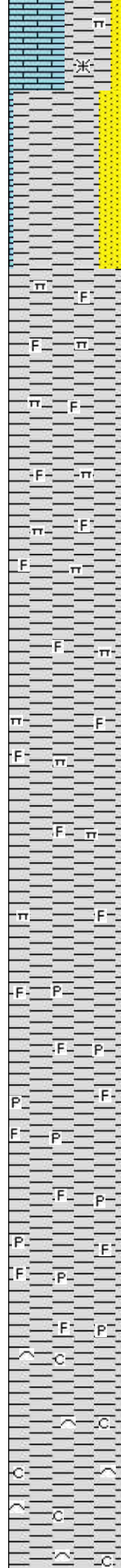
MD: 16,395'
Inclination: 88.68°
Azimuth: 359.22°
TVD: 7,903.3'
VS: 8,861.61'

WOB: 15.4
RPM: 98
SPM: 166
SPP: 5079

MD: 16,490'
Inclination: 88.12°
Azimuth: 0.62°
TVD: 7,905.95'
VS: 8,955.65'

MW/VIS I/O
10.1/48

MD: 16,586'



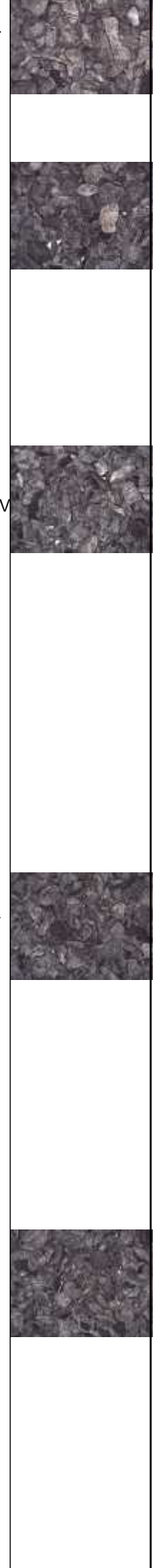
TEX; SH: BLK, BRIT, MECH CTG, V CALC, DL LSTR; SS: DK GY, F GRN, RND CTG

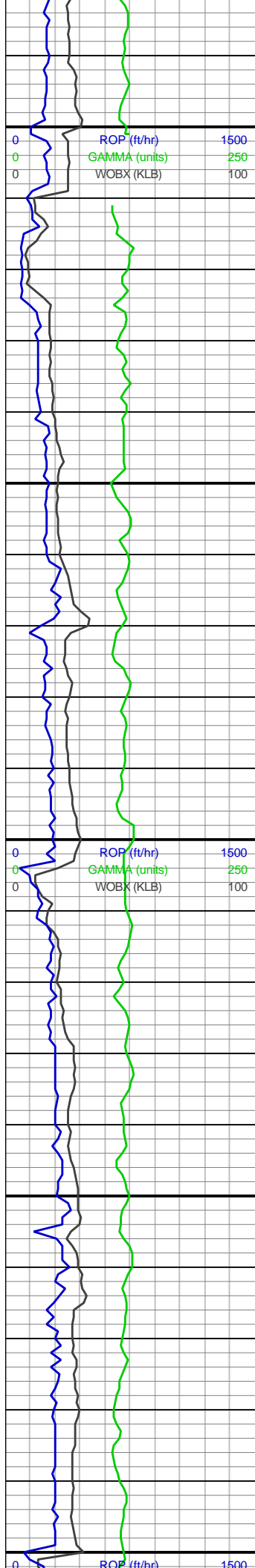
SH: BLK, BRIT, MECH-PLTY CTG, V CALC, DL LSTR; SS: DK GY, F GRN, RND CTG; LS: TN, HD, ANG-BLKY CTG, WXY LSTR, CRPTXL TEX

SH: BLK, BRIT, MRLY TEX, MECH-PLTY CTG, V CALC, DL LSTR, IMBD FIB CAL FOS

SH: BLK & DK GY, BRIT, MRLY TEX, MECH-PLTY CTG, V CALC, DL LSTR, IMBD FIB CAL FOS

SH: BLK & DK GY, BRIT, SM TEX, MECH-PLTY CTG, V CALC, DL LSTR, PYR LAM, FOS





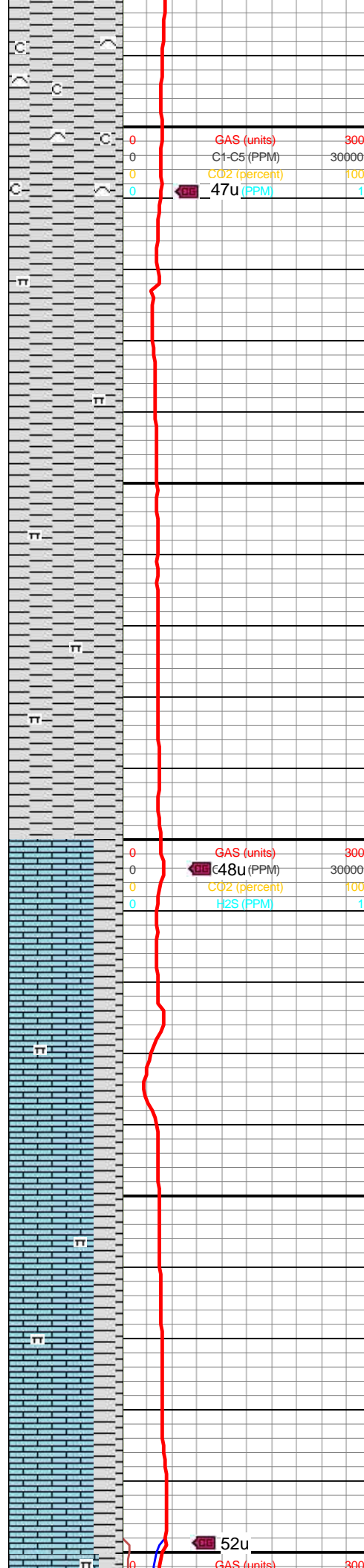
MD: 16,588'
Inclination: 88.12°
Azimuth: 2.01°
TVD: 7,909.1'
VS: 9,050.95'

WOB: 31.4
RPM: 105
SPM: 166
SPP: 5800

MD: 16,682'
Inclination: 88.09°
Azimuth: 1.88°
TVD: 7,912.28'
VS: 9,146.38'

MD: 16,776'
Inclination: 88.09°
Azimuth: 0.94°
TVD: 7,915.41'
VS: 9,239.72'

WOB: 8.8
RPM: 101
SPM: 166
SPP: 4000



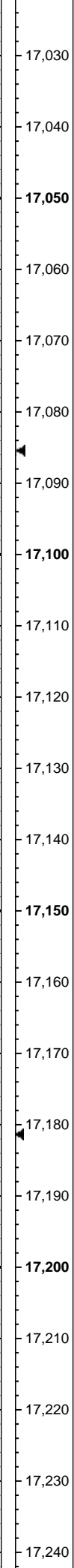
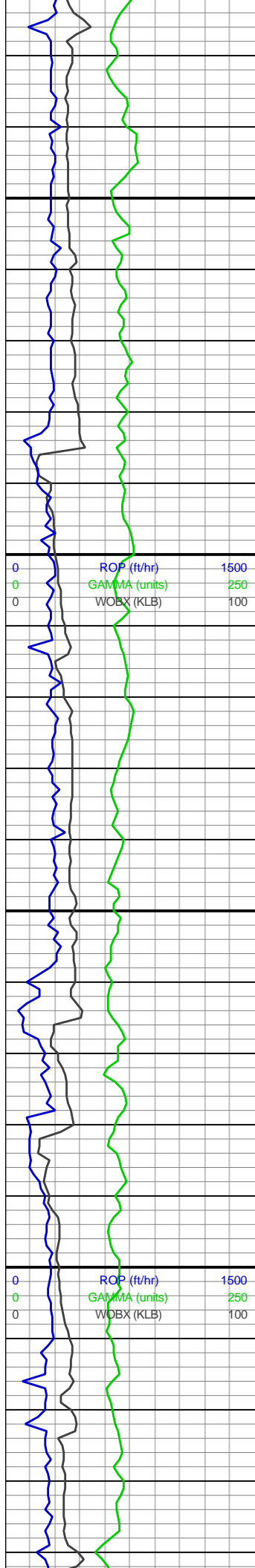
SH: DK GY, BRIT, CHKY
IP, SM TEX, MECH-PLTY
CTG, V CALC, DL LSTR,
FIB CAL FOS

SH: DK GY, BLK IP, BRIT,
SM MOT TEX,
MECH-PLTY CTG, V
CALC, DL LSTR

CH: DK GY, FRM, RTHY
LSTR, PLTY BLKY CTG,
CHKY TEX, CALC; SH:
DK GY, BLK IP, BRIT, SM
MOT TEX, MECH CTG, V
CALC, DL LSTR



CH: MED GY, FRM, RTHY
LSTR, SB BLKY-BLKY
CTG, CHKY TEX, CALC;
SH: DK GY, BLK IP, BRIT,
SM MOT TEX, MECH
CTG, V CALC, DL LSTR

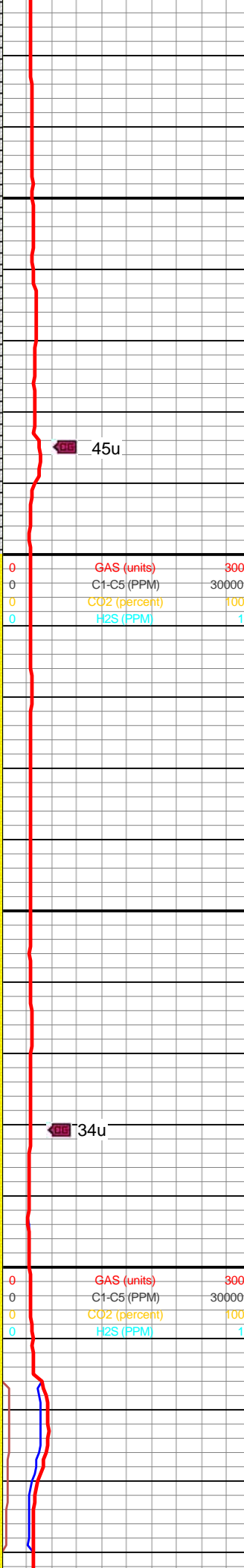


MD: 17,062'
Inclination: 87.08°
Azimuth: 358.14°
TVD: 7,928.99'
VS: 9,522.21'

MD: 17,157'
Inclination: 87.11°
Azimuth: 357.6°
TVD: 7,933.8'
VS: 9,615.63'

MW/VIS I/O
10.1+/49

WOB: 22
RPM: 100
SPM: 166
SPP: 5466



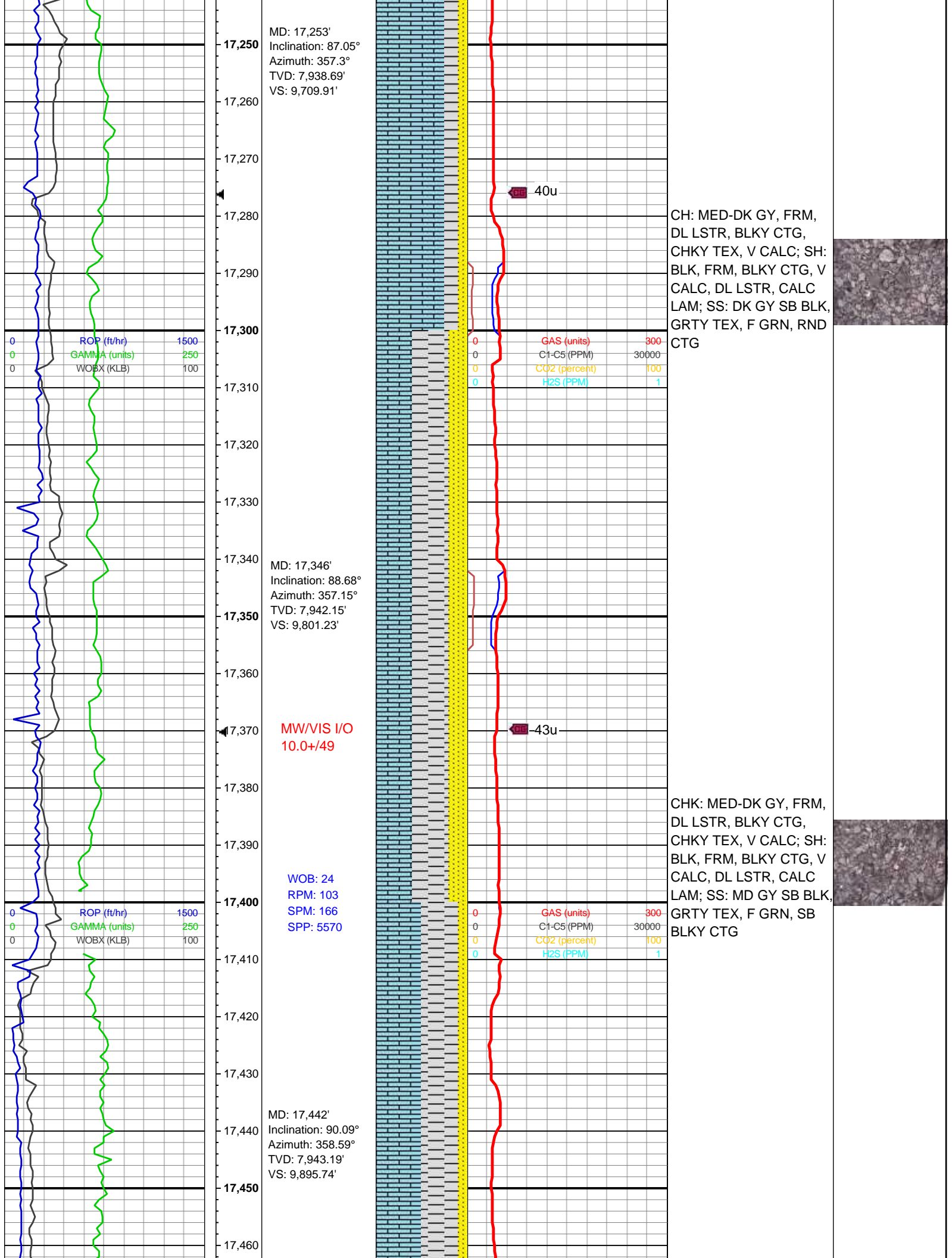
45u

34u

CH: DK GY, FRM, RTHY LSTR, BLKY CTG, CHKY TEX, V CALC; SH: DK GY BLK IP, BRIT, SM MOT TEX, SB BLKY CTG, V CALC, RTHY LSTR

CH: MED-DK GY, FRM, DL LSTR, BLKY CTG, CHKY TEX, V CALC; SH: DK GY, BLK IP, BRIT, SM MOT TEX, SB BLKY-BLKY CTG, V CALC, RTHY LSTR; TR SS





MD: 17,253'
Inclination: 87.05°
Azimuth: 357.3°
TVD: 7,938.69'
VS: 9,709.91'

17,250
17,260
17,270
17,280
17,290
17,300
17,310
17,320
17,330
17,340
17,350
17,360
17,370
17,380
17,390
17,400
17,410
17,420
17,430
17,440
17,450
17,460

ROP (ft/hr) 1500
GAMMA (units) 250
WOBX (KLB) 100

GAS (units) 300
C1-C5 (PPM) 30000
CO2 (percent) 100
H2S (PPM) 1

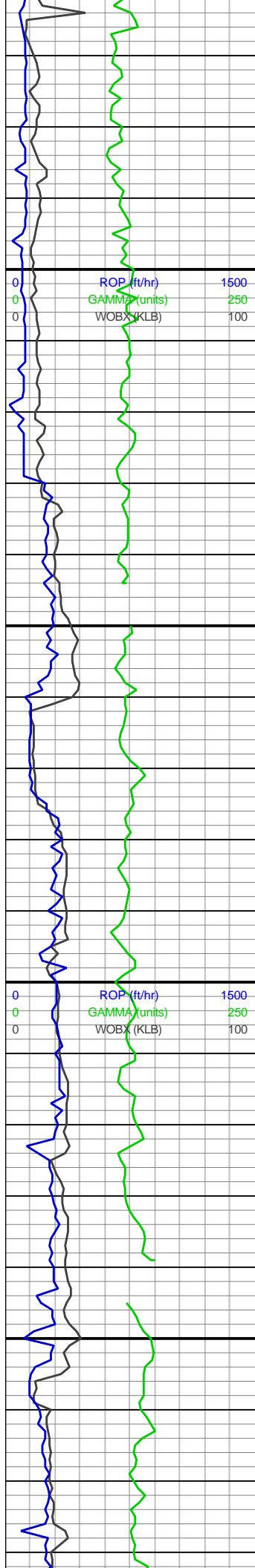
MW/VIS I/O
10.0+/49

WOB: 24
RPM: 103
SPM: 166
SPP: 5570

MD: 17,442'
Inclination: 90.09°
Azimuth: 358.59°
TVD: 7,943.19'
VS: 9,895.74'

CH: MED-DK GY, FRM,
DL LSTR, BLKY CTG,
CHKY TEX, V CALC; SH:
BLK, FRM, BLKY CTG, V
CALC, DL LSTR, CALC
LAM; SS: DK GY SB BLK,
GRTY TEX, F GRN, RND
CTG

CHK: MED-DK GY, FRM,
DL LSTR, BLKY CTG,
CHKY TEX, V CALC; SH:
BLK, FRM, BLKY CTG, V
CALC, DL LSTR, CALC
LAM; SS: MD GY SB BLK,
GRTY TEX, F GRN, SB
BLKY CTG



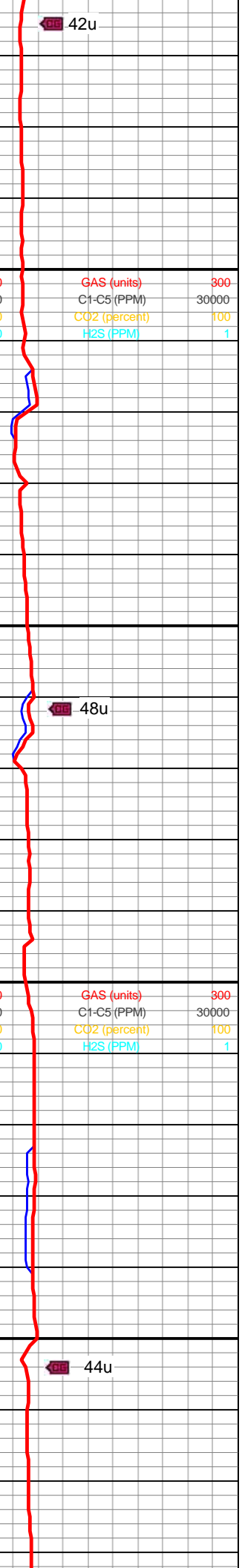
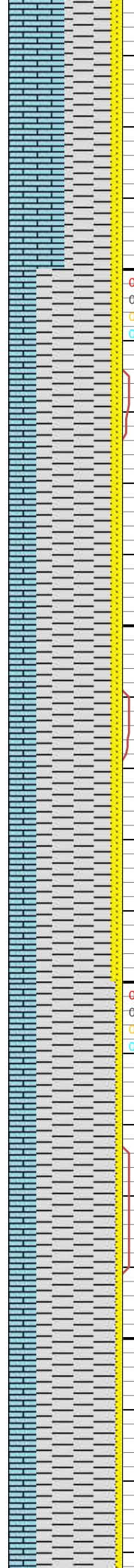
17,470
17,480
17,490
17,500
17,510
17,520
17,530
17,540
17,550
17,560
17,570
17,580
17,590
17,600
17,610
17,620
17,630
17,640
17,650
17,660
17,670
17,680

MW/VIS I/O
10.1/49

MD: 17,538'
Inclination: 90.15°
Azimuth: 359.57°
TVD: 7,942.98'
VS: 9,990.6'

WOB: 18
RPM: 102
SPM: 166
SPP: 5392

MD: 17,633'
Inclination: 89.14°
Azimuth: 359.16°
TVD: 7,943.57'
VS: 10,084.54'

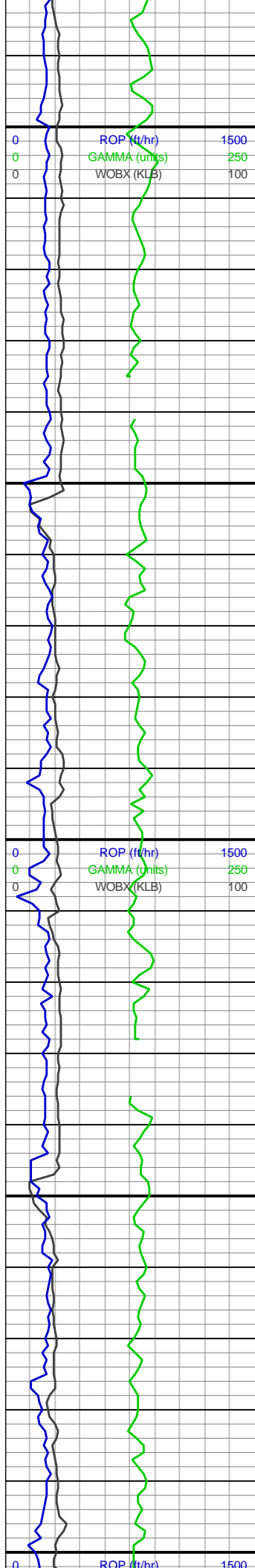


CHK: MED-DK GY, FRM,
DL LSTR, BLKY CTG,
CHKY TEX, V CALC; SH:
BLK, FRM, BLKY CTG, V
CALC, DL LSTR, CALC
LAM; SS: MD GY SB BLK,
GRTY TEX, F GRN, SB
BLKY CTG

SH: DK GY, BRIT, CHKY
IP, SM TEX, SB
BLKY-BLKY CTG, V
CALC, RTHY LSTR, FIB
CAL FOS; CHK: MED-DK
GY, FRM, DL LSTR, BLKY
CTG, CHKY TEX, V
CALC; SS: MD GY, GRTY
TEX, F GRN, SB BLKY
CTG

SH: DK GY-BLK,
BRIT-HRD IP, CHKY IP





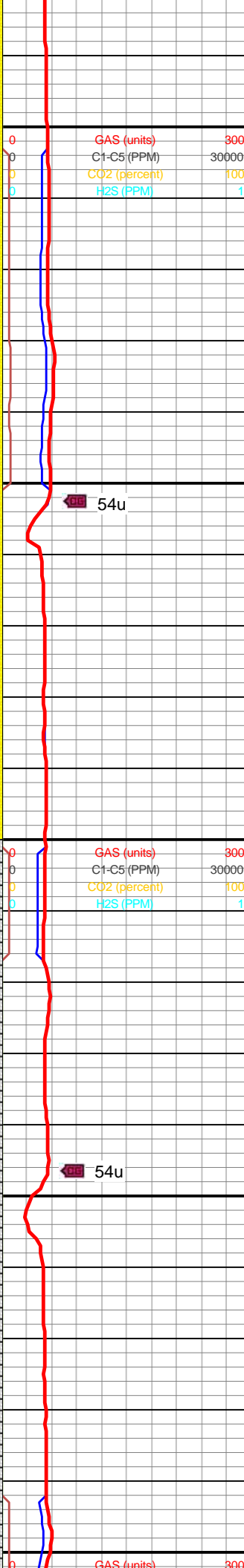
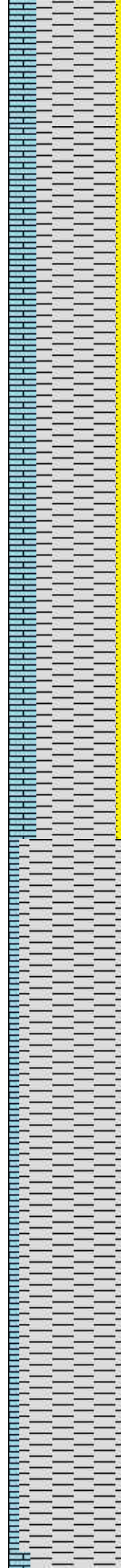
17,690
17,700
17,710
17,720
17,730
17,740
17,750
17,760
17,770
17,780
17,790
17,800
17,810
17,820
17,830
17,840
17,850
17,860
17,870
17,880
17,890
17,900

MW/VIS I/O
10.1/48

MD: 17,728'
Inclination: 89.2°
Azimuth: 358.71°
TVD: 7,944.95'
VS: 10,178.37'

WOB: 21
RPM: 102
SPM: 166
SPP: 5532

MD: 17,823'
Inclination: 89.14°
Azimuth: 358.93°
TVD: 7,946.33'
VS: 10,272.16'

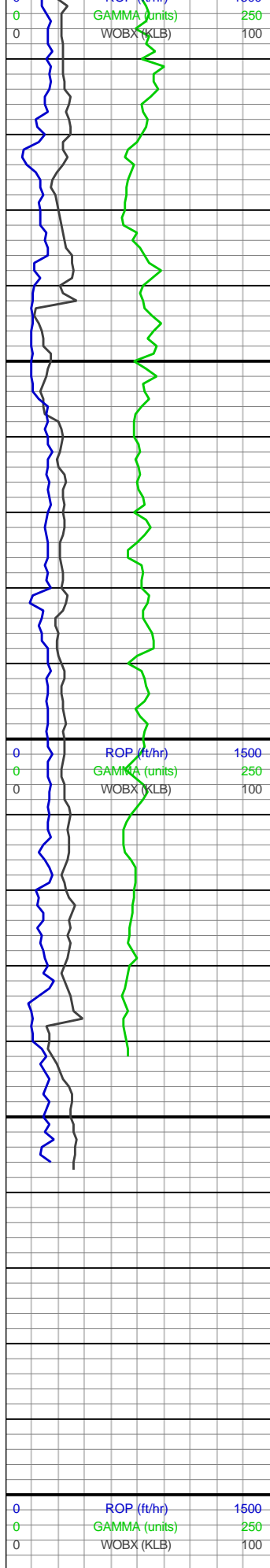


BRIT-HRD IP, CHKY IP,
SM TEX, SB BLKY-BLKY
CTG, V CALC, RTHY
LSTR; CHK: MED-DK GY,
FRM, DL LSTR, SB
BLKY-BLKY CTG, CHKY
TEX, V CALC; TR SS

SH: DK GY-BLK,
BRIT-HRD IP, CHKY IP,
SM TEX, BLKY CTG, V
CALC, RTHY LSTR; CHK:
MED-DK GY, FRM, RTHY
LSTR, SB BLKY-BLKY
CTG, CHKY TEX, V
CALC; TR SS

SH: DK GY-BLK, HD,
CHKY IP, SM TEX, BLKY
CTG, V CALC, RTHY
LSTR; CHK: DK GY, FRM,
RTHY LSTR, SB
BLKY-BLKY CTG, CHKY
TEX, V CALC

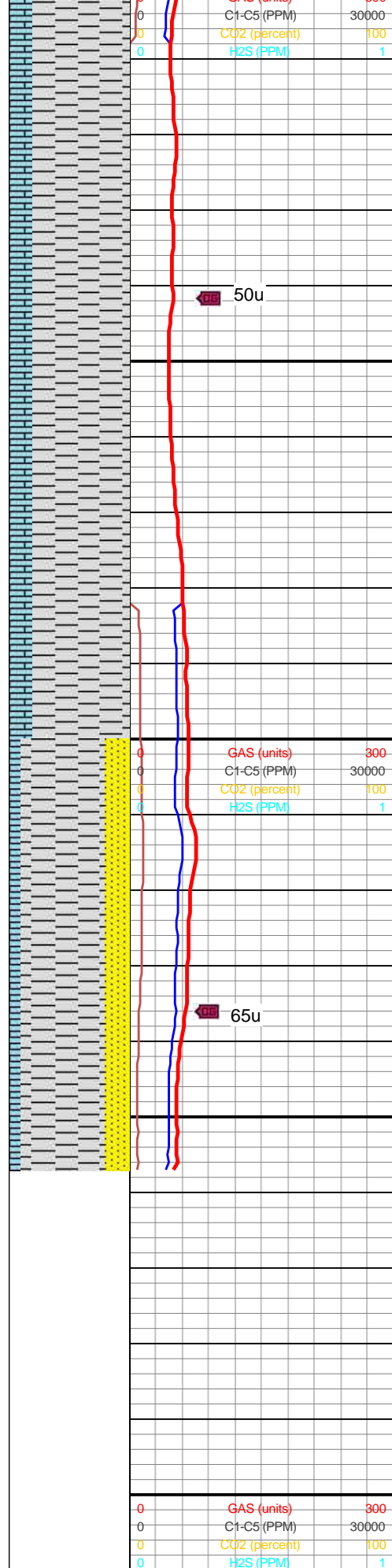




MD: 17,918'
Inclination: 89.11°
Azimuth: 358.95°
TVD: 7,947.78'
VS: 10,365.99'

MD: 18,013'
Inclination: 89.08°
Azimuth: 359.3°
TVD: 7,949.28'
VS: 10,459.86'

MD: 18,057'
Inclination: 89.08°
Azimuth: 359.3°
TVD: 7,949.98'
VS: 10,503.35'



SH: DK GY-BLK, BRIT-HRD, SM TEX, BLKY CTG, V CALC, RTHY LSTR; CHK: DK GY, FRM, RTHY LSTR, BLKY CTG, CHKY TEX, V CALC

SH: DK GY-BLK, BRIT-HRD, SM TEX, BLKY-MECH CTG, V CALC, RTHY LSTR; CHK: DK GY, FRM, RTHY LSTR, BLKY-PLTY CTG, CHKY TEX, V CALC; SS: GY, V HD, F-MED GRN, W SRT, CALC CMT



MW/VIS I/O
10.1/48

50u

65u

TD @ 1748HRS
4/22/2019
18057'MD