Scale: 5" / 100'
Measured Depth Log

Well Name	Windsor_LV_F_14-H_Horizontal		
State	Colorado	**County**	Weld
Country	USA	**Rig Number**	H&P 319
API Number	05-123-38175-00	**AFE #**	14-757
Region	DJ Basin	**Field**	Wattenburg
Spud Date	11/16/2014	**Drilling Completed**	11/23/2014
Logged Interval	5000' **To** 11,822'	**Total Depth**	6,822'
Formation	Codell		
Type of Drilling Fluid	WBM		

Operator

Company Extraction Oil & Gas, LLC

Geologist

Name Justin Perry & Geoff Sterling

Company ALS Empirica

Address 600 17th Street, Suite 725S
Denver, CO 80202

Other

Logging Start Date 11/18/2014

Release Date 11/23/2014

Zone Color Coding

Oil	Condensate	Gas
Note	Core	Pressure
Error	Water	Seal

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
- SLTY SH
- SHY SS

Accessories

Fossils

- FOSSIL
- GASTROPOD
- ALGAE
- AMPHIPORA
- BELEMNITE
- BIOCLASTIC
- BRACHOIPOD
- BRYOZOA
- CEPHALOPOD
- CORAL
- CRINOID
- ECHINOID
- FISH
- FORAMINIFERA
- 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 S

- ORGANIC
- FAULT

Oil Show

- PINPOINT
- FO
- DEAD
- VUGGY
- GAS SH
- EVEN
- MINDEPTH
- QUESTIONABLE
- NORMAL
- SPOTTED STAINING
- BIT
- OIL SHO
- CASING
- OVERTU

Porosity

- CONNECTION (LEFT)
- REVERS
- EARTHY
- CONNECTION (RIGHT)
- SIDEWAL
- FENESTRAL
- CONNECTION GAS
- SIDEWAL
- FRACTURE
- CG
- SLIDE
- INTERCRYSTALLINE
- CORE - LOST
- SURVE
- INTEROOLITIC
- CORE - RECOVERED
- TRIP G
- MOLDIC
- DST INTERVAL
- WIRELIN

Engineering

Symbols

WIRELINE TESTED - RT

RMATION TOP

MN DEPTH

OW

MN DEPTH

FAULT

OW

RNED STRATA

E FAULT

LL CORE (LEFT)

LL CORE (RIGHT)

EY

AS

E TESTED - LEFT

Rounding

A ANGULAR

R ROUNDED

a SUBANG

r SUBRND

Textures

BS BOUNDSTONE

C CHALKY

CX CRYPTOXLN

E EARTHY

FX FINELYXLN

GS GRAINSTONE

L LITHOGRAPHIC

MX MICROXLN

MS MUDSTONE

PS PACKSTONE

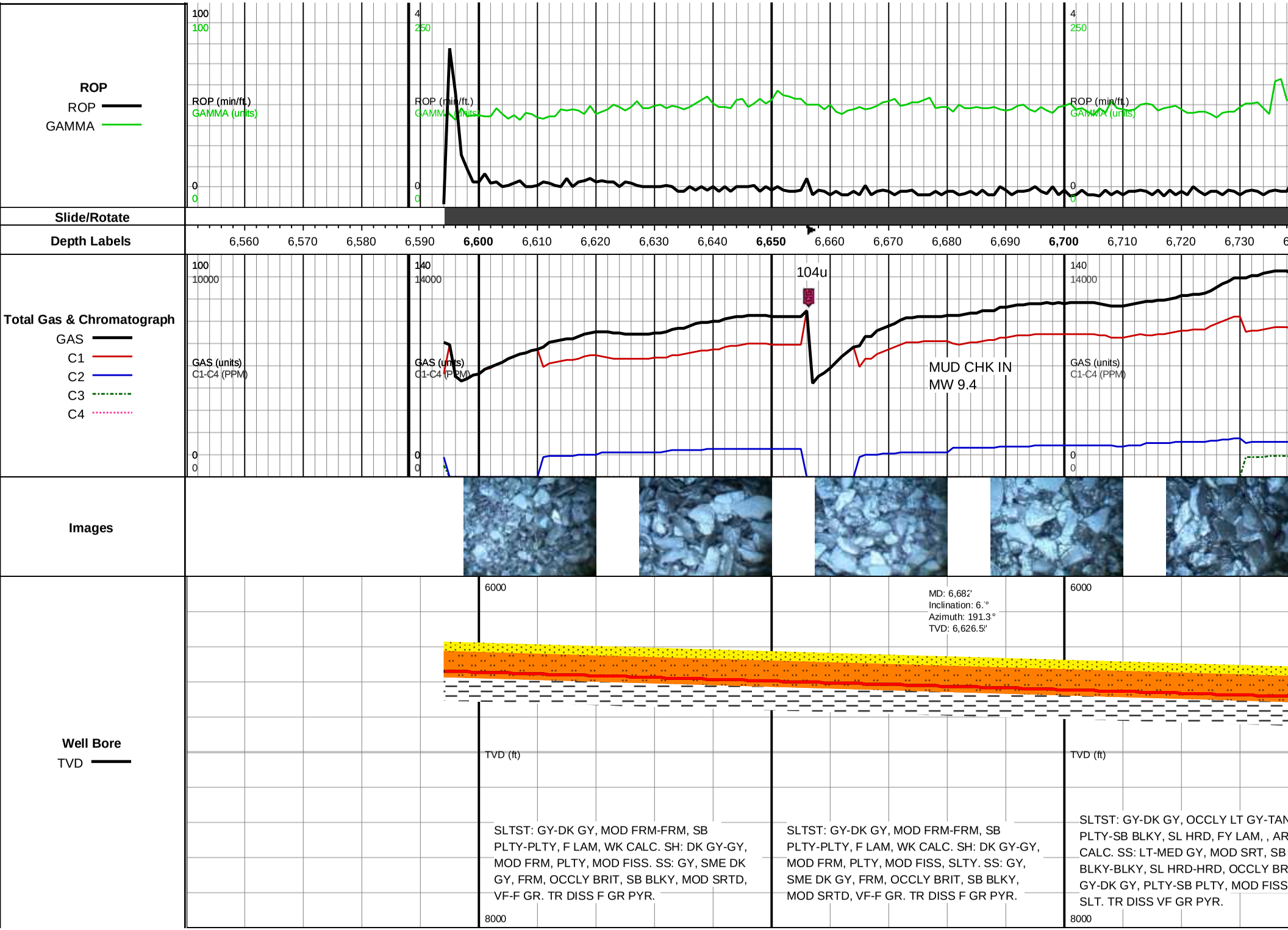
WS WACKESTONE

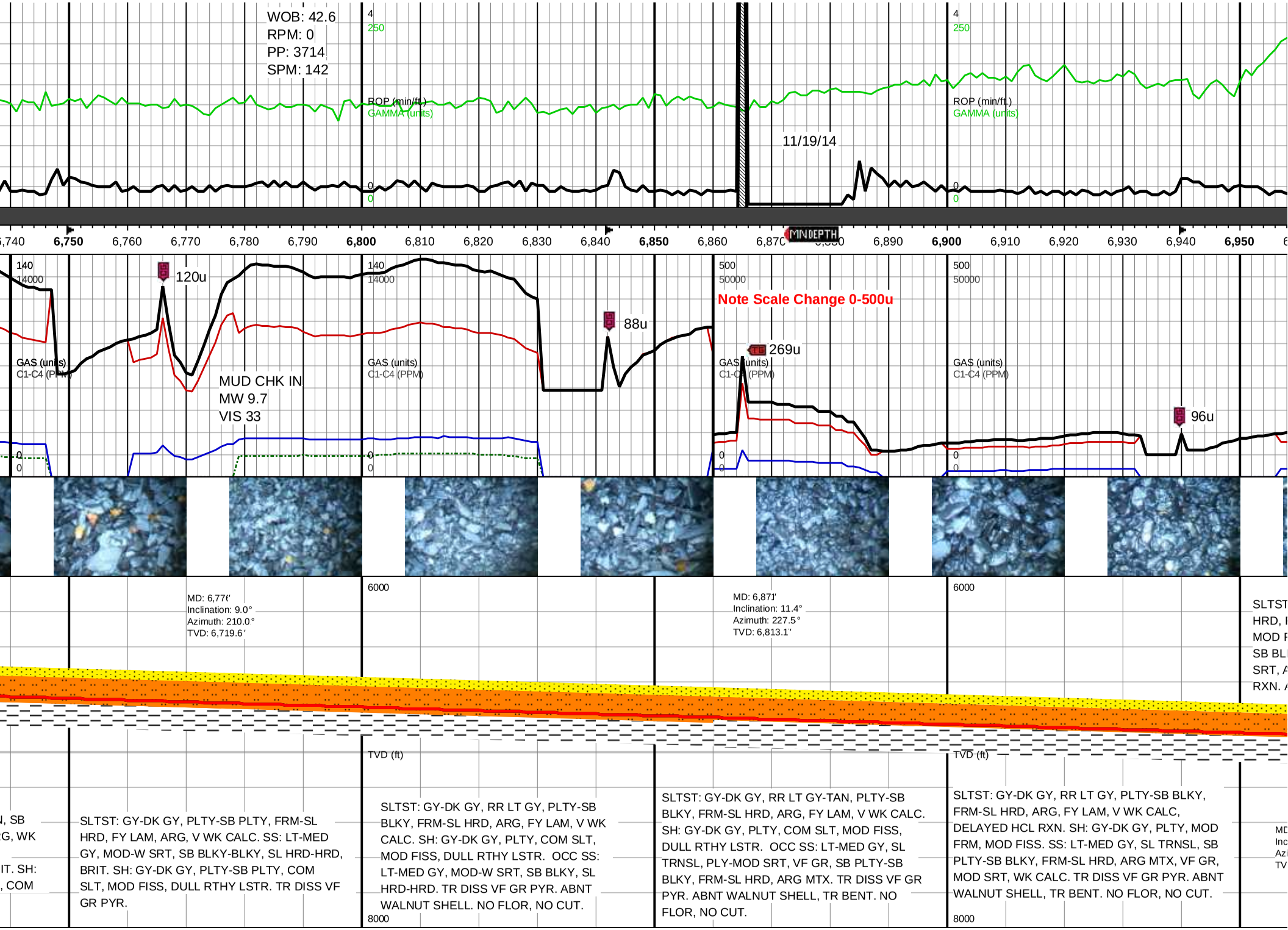
Sorting

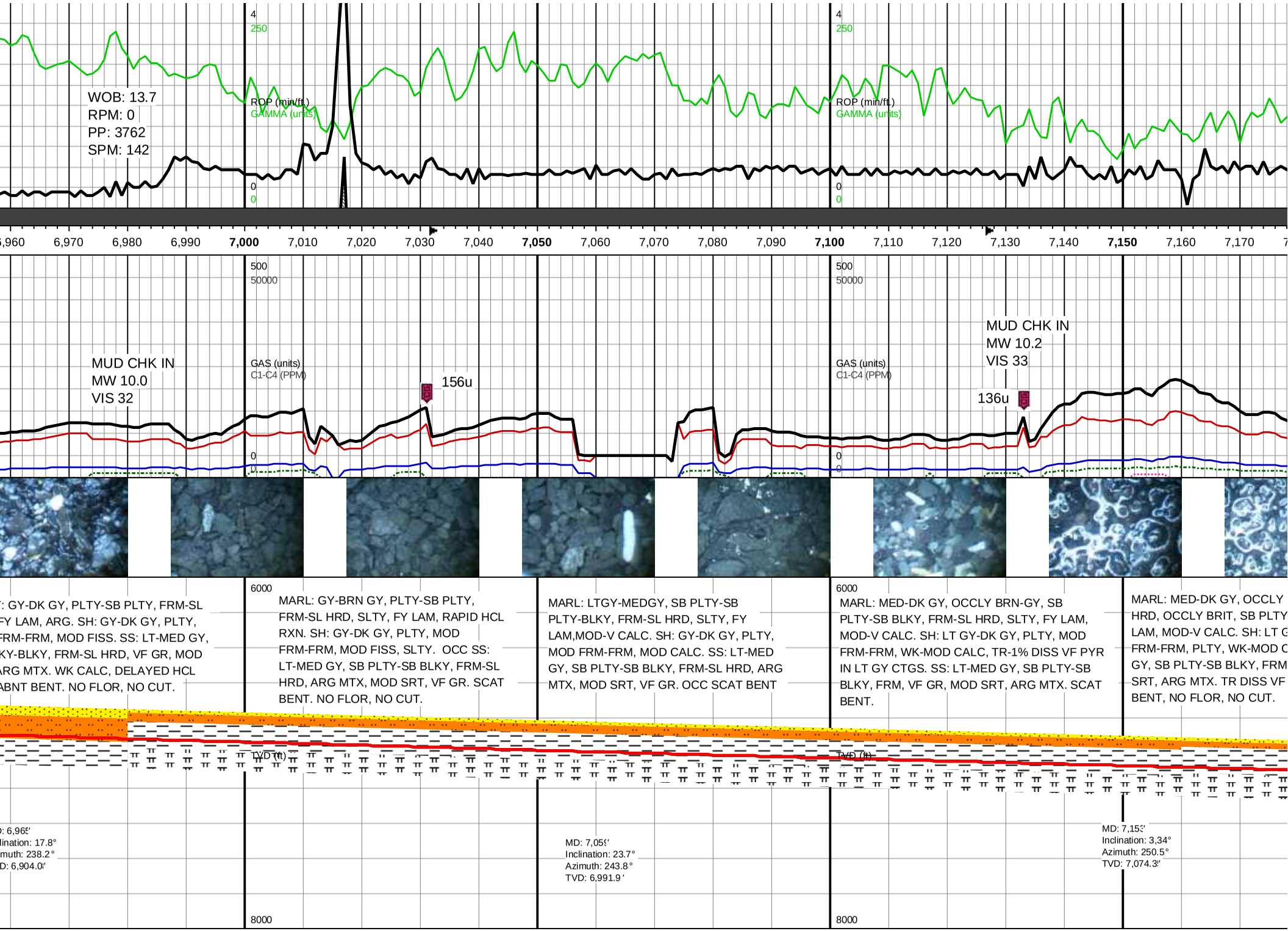
M MODERATE

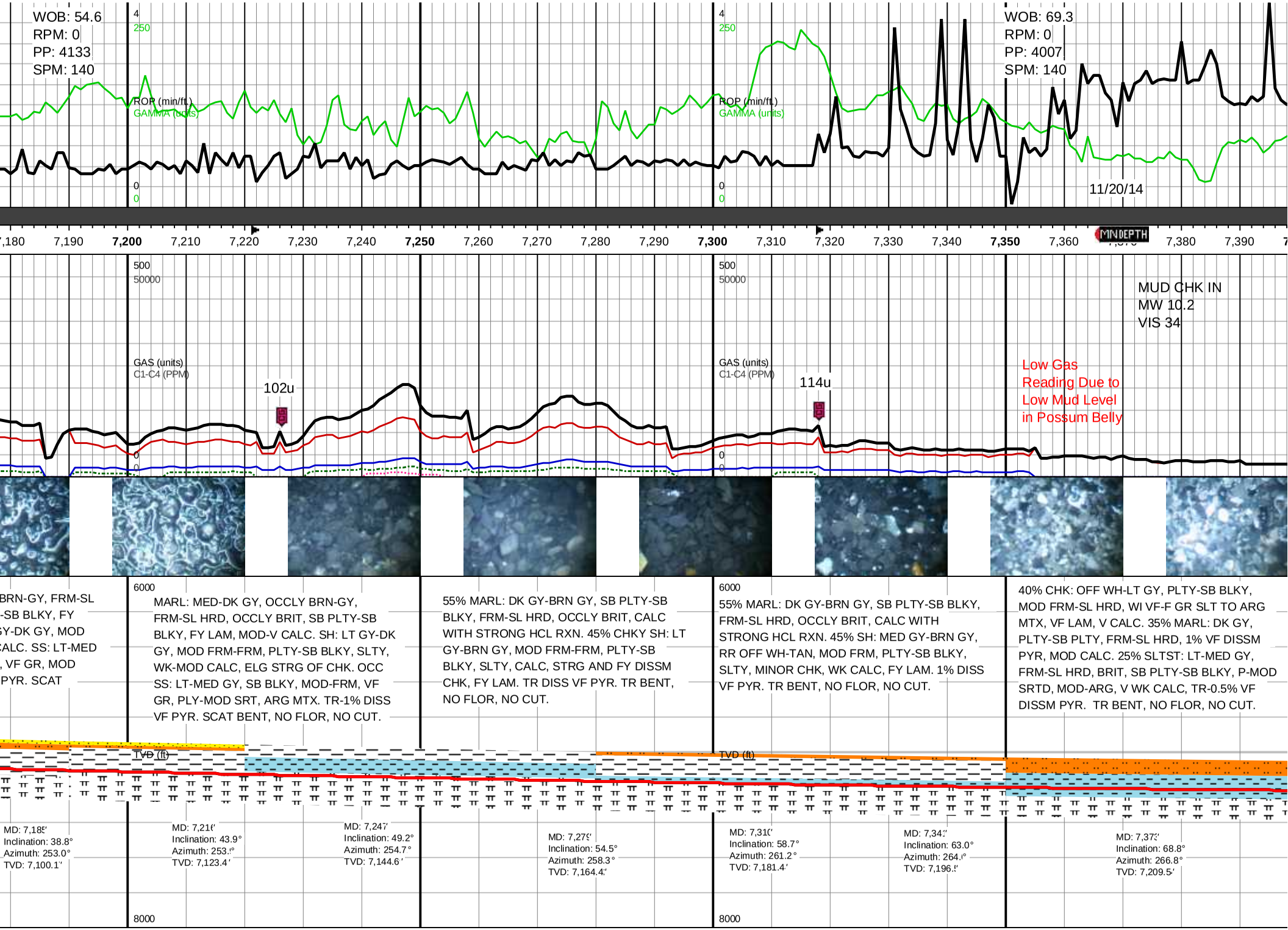
P POOR

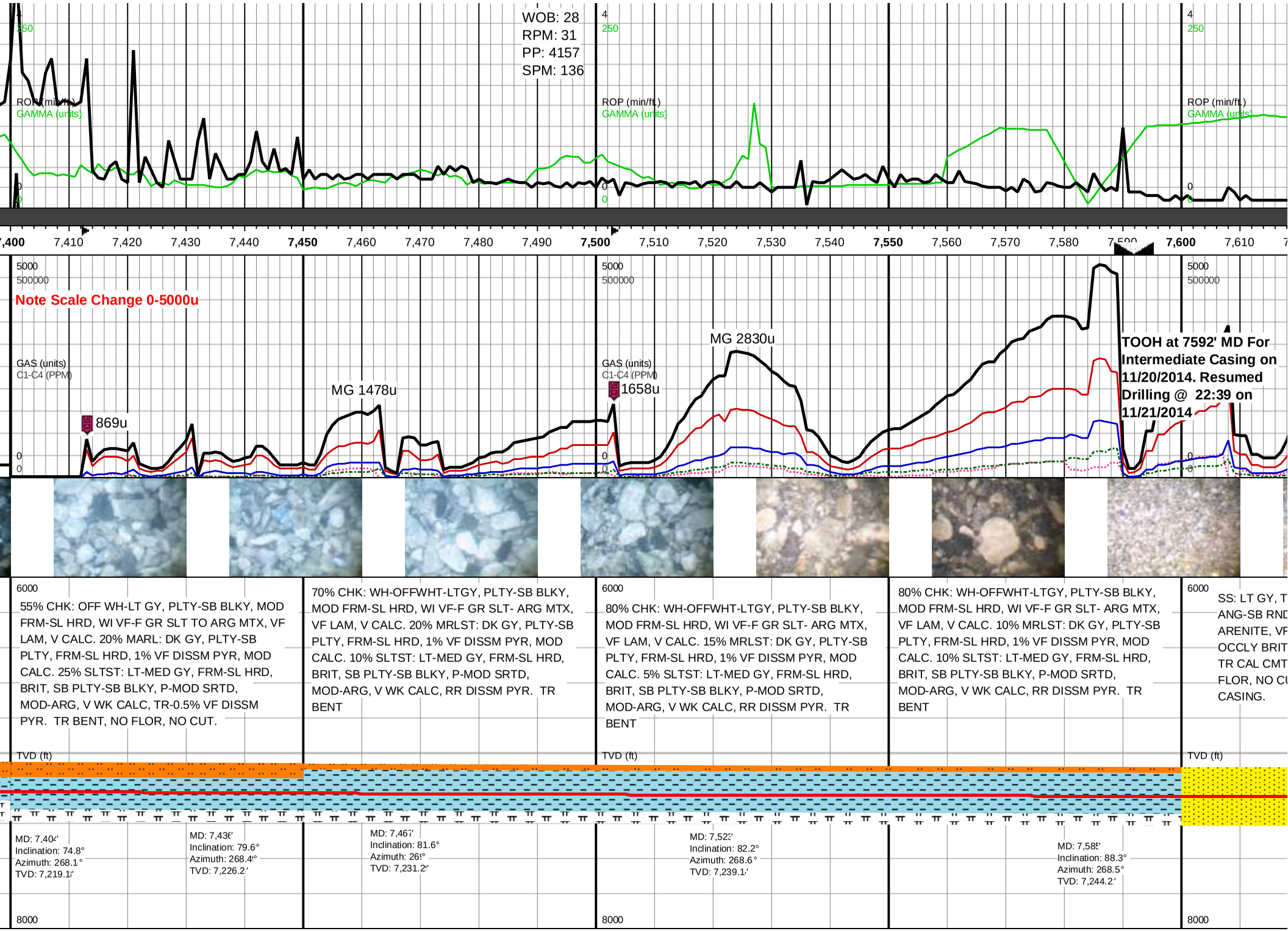
W WELL

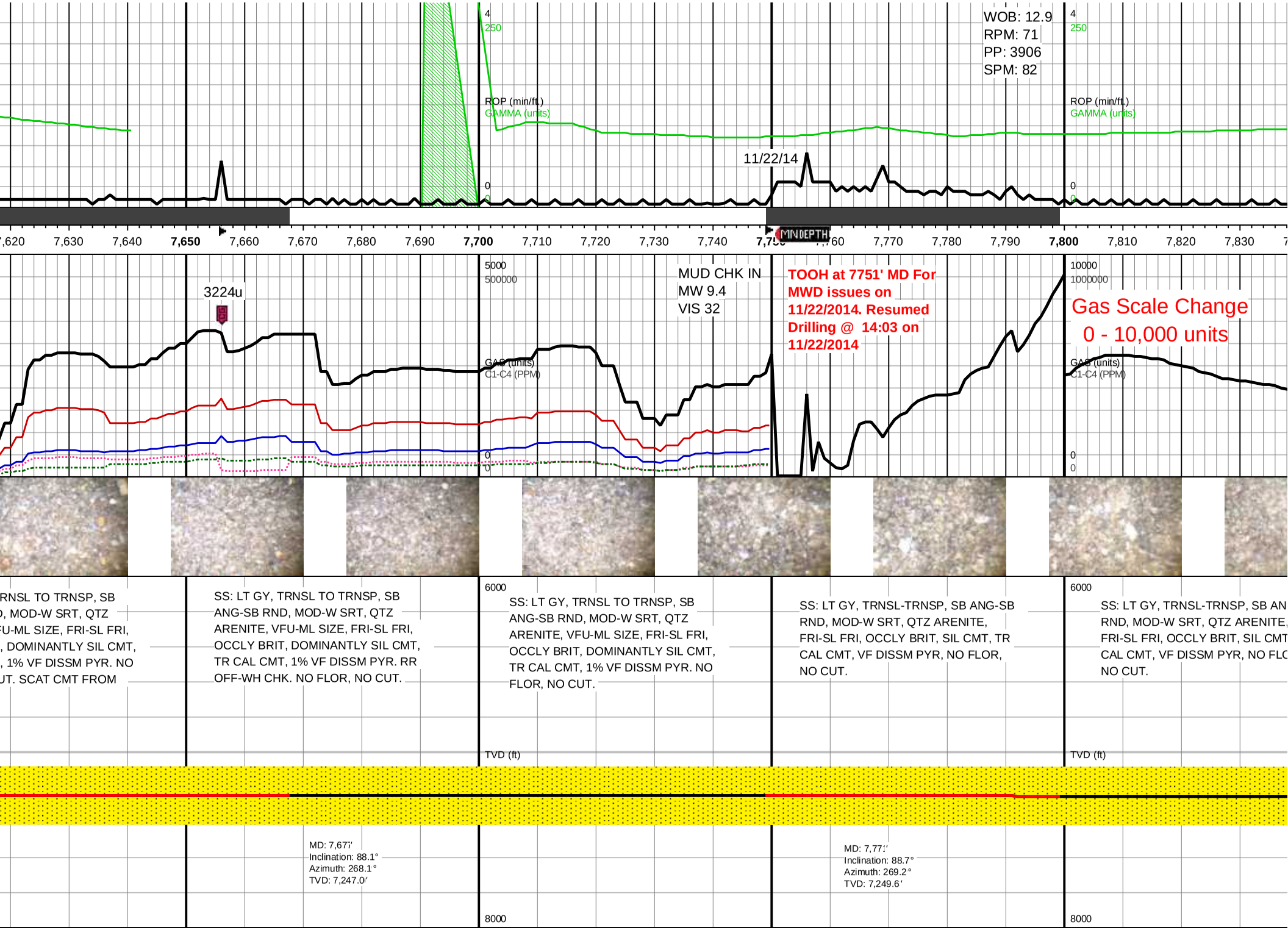

ROP
ROP
GAMMA
100
100
ROP (min/ft.)
GAMMA (units)
0
0
4
250
ROP (min/ft.)
GAMMA (units)
0
0
4
250
ROP (min/ft.)
GAMMA (units)
0
0
Slide/Rotate
Depth Labels
6,560
6,570
6,580
6,590
6,600
6,610
6,620
6,630
6,640
6,650
6,660
6,670
6,680
6,690
6,700
6,710
6,720
6,730
Total Gas & Chromatograph
GAS
C1
C2
C3
C4
100
10000
GAS (units)
C1-C4 (PPM)
0
0
140
14000
104u
MUD CHK IN
MW 9.4
GAS (units)
C1-C4 (PPM)
0
0
140
14000
GAS (units)
C1-C4 (PPM)
0
0
Images
Well Bore
TVD
6000
MD: 6,682'
Inclination: 6.°
Azimuth: 191.3°
TVD: 6,626.5'
6000
TVD (ft)
TVD (ft)
SLTST: GY-DK GY, MOD FRM-FRM, SB PLTY-PLTY, F LAM, WK CALC. SH: DK GY-GY, MOD FRM, PLTY, MOD FISS. SS: GY, SME DK GY, FRM, OCCLY BRIT, SB BLKY, MOD SRTD, VF-F GR. TR DISS F GR PYR.
SLTST: GY-DK GY, MOD FRM-FRM, SB PLTY-PLTY, F LAM, WK CALC. SH: DK GY-GY, MOD FRM, PLTY, MOD FISS, SLTY. SS: GY, SME DK GY, FRM, OCCLY BRIT, SB BLKY, MOD SRTD, VF-F GR. TR DISS F GR PYR.
SLTST: GY-DK GY, OCCLY LT GY-TAN
PLTY-SB BLKY, SL HRD, FY LAM, , AR
CALC. SS: LT-MED GY, MOD SRT, SB
BLKY-BLKY, SL HRD-HRD, OCCLY BR
GY-DK GY, PLTY-SB PLTY, MOD FISS
SLT. TR DISS VF GR PYR.
8000
8000

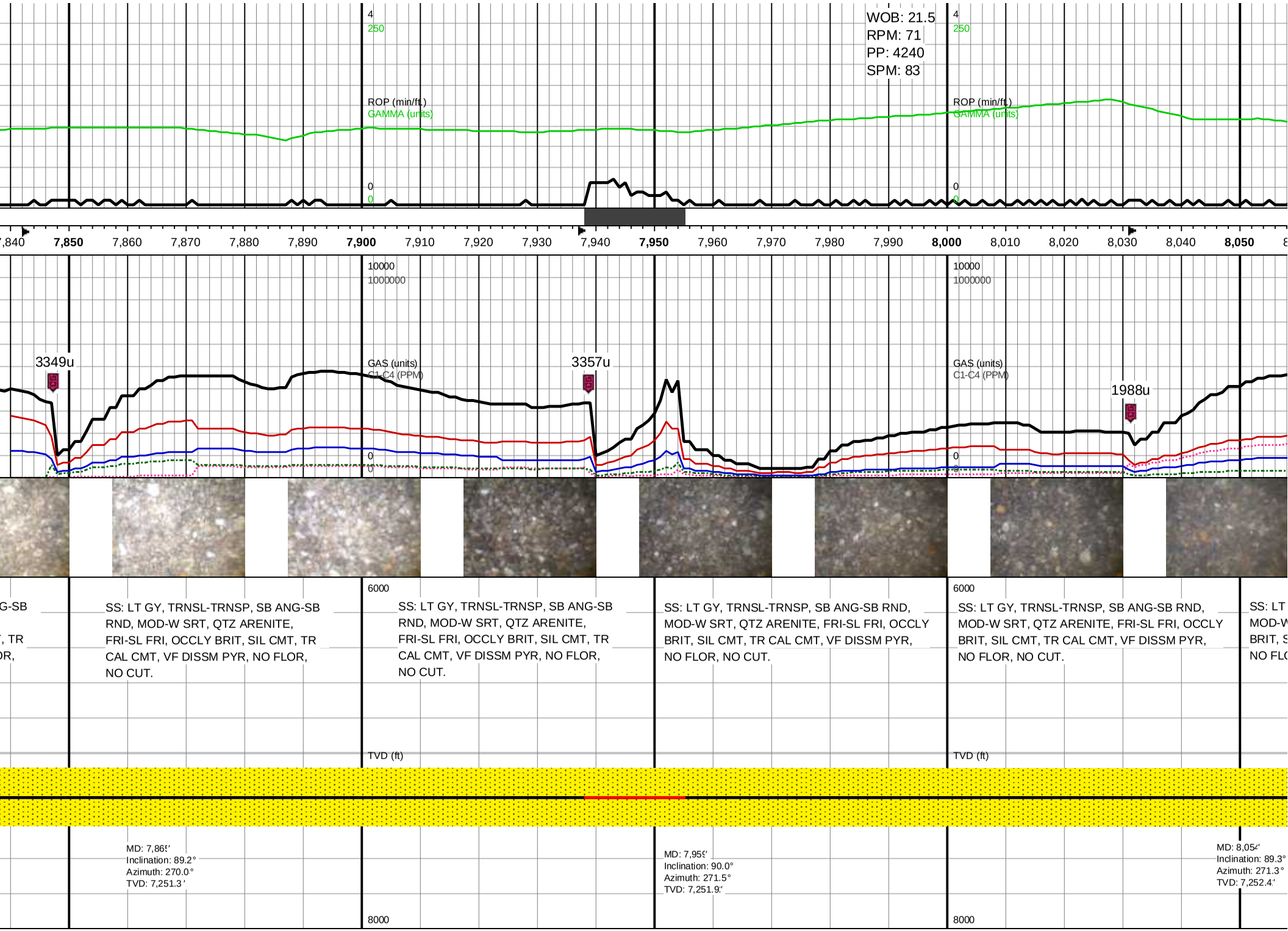

WOB: 42.6
RPM: 0
PP: 3714
SPM: 142
4
250
ROP (min/ft)
GAMMA (units)
0
0
11/19/14
MNDEPTH
6,740
6,750
6,760
6,770
6,780
6,790
6,800
6,810
6,820
6,830
6,840
6,850
6,860
6,870
6,890
6,900
6,910
6,920
6,930
6,940
6,950
140
14000
GAS (units)
C1-C4 (PPM)
120u
MUD CHK IN
MW 9.7
VIS 33
88u
500
50000
Note Scale Change 0-500u
269u
96u
MD: 6,776'
Inclination: 9.0°
Azimuth: 210.0°
TVD: 6,719.6'
MD: 6,871'
Inclination: 11.4°
Azimuth: 227.5°
TVD: 6,813.1'
6000
TVD (ft)
8000
SLTST: GY-DK GY, PLTY-SB PLTY, FRM-SL HRD, FY LAM, ARG, V WK CALC. SS: LT-MED GY, MOD-W SRT, SB BLKY-BLKY, SL HRD-HRD, BRIT. SH: GY-DK GY, PLTY-SB PLTY, COM SLT, MOD FISS, DULL RTHY LSTR. TR DISS VF GR PYR.
SLTST: GY-DK GY, RR LT GY, PLTY-SB BLKY, FRM-SL HRD, ARG, FY LAM, V WK CALC. SH: GY-DK GY, PLTY, COM SLT, MOD FISS, DULL RTHY LSTR. OCC SS: LT-MED GY, MOD-W SRT, SB BLKY, SL HRD-HRD. TR DISS VF GR PYR. ABNT WALNUT SHELL. NO FLOR, NO CUT.
SLTST: GY-DK GY, RR LT GY-TAN, PLTY-SB BLKY, FRM-SL HRD, ARG, FY LAM, V WK CALC. SH: GY-DK GY, PLTY, COM SLT, MOD FISS, DULL RTHY LSTR. OCC SS: LT-MED GY, SL TRNSL, PLY-MOD SRT, VF GR, SB PLTY-SB BLKY, FRM-SL HRD, ARG MTX. TR DISS VF GR PYR. ABNT WALNUT SHELL, TR BENT. NO FLOR, NO CUT.
SLTST: GY-DK GY, RR LT GY, PLTY-SB BLKY, FRM-SL HRD, ARG, FY LAM, V WK CALC, DELAYED HCL RXN. SH: GY-DK GY, PLTY, MOD FRM, MOD FISS. SS: LT-MED GY, SL TRNSL, SB PLTY-SB BLKY, FRM-SL HRD, ARG MTX, VF GR, MOD SRT, WK CALC. TR DISS VF GR PYR. ABNT WALNUT SHELL, TR BENT. NO FLOR, NO CUT.

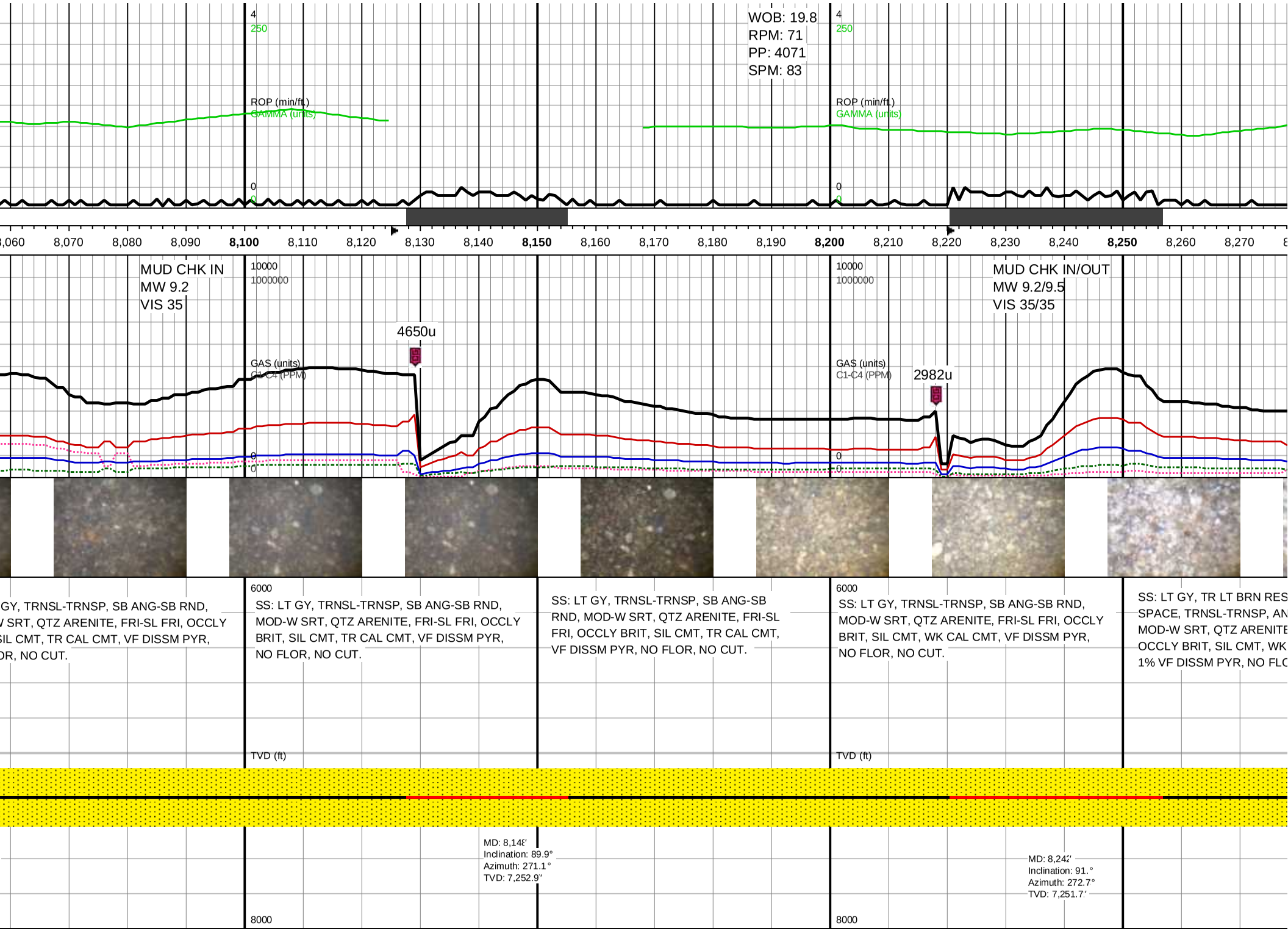

WOB: 13.7
RPM: 0
PP: 3762
SPM: 142
ROP (min/ft)
GAMMA (units)
4
250
0
0
6,960
6,970
6,980
6,990
7,000
7,010
7,020
7,030
7,040
7,050
7,060
7,070
7,080
7,090
7,100
7,110
7,120
7,130
7,140
7,150
7,160
7,170
MUD CHK IN
MW 10.0
VIS 32
GAS (units)
C1-C4 (PPM)
500
50000
156u
MUD CHK IN
MW 10.2
VIS 33
136u
: GY-DK GY, PLTY-SB PLTY, FRM-SL
FY LAM, ARG. SH: GY-DK GY, PLTY,
FRM-FRM, MOD FISS. SS: LT-MED GY,
KY-BLKY, FRM-SL HRD, VF GR, MOD
ARG MTX. WK CALC, DELAYED HCL
ABNT BENT. NO FLOR, NO CUT.
MARL: GY-BRN GY, PLTY-SB PLTY, FRM-SL HRD, SLTY, FY LAM, RAPID HCL RXN. SH: GY-DK GY, PLTY, MOD FRM-FRM, MOD FISS, SLTY. OCC SS: LT-MED GY, SB PLTY-SB BLKY, FRM-SL HRD, ARG MTX, MOD SRT, VF GR. SCAT BENT. NO FLOR, NO CUT.
MARL: LTGY-MEDGY, SB PLTY-SB PLTY-BLKY, FRM-SL HRD, SLTY, FY LAM,MOD-V CALC. SH: GY-DK GY, PLTY, MOD FRM-FRM, MOD CALC. SS: LT-MED GY, SB PLTY-SB BLKY, FRM-SL HRD, ARG MTX, MOD SRT, VF GR. OCC SCAT BENT
MARL: MED-DK GY, OCCLY BRN-GY, SB PLTY-SB BLKY, FRM-SL HRD, SLTY, FY LAM, MOD-V CALC. SH: LT GY-DK GY, PLTY, MOD FRM-FRM, WK-MOD CALC, TR-1% DISS VF PYR IN LT GY CTGS. SS: LT-MED GY, SB PLTY-SB BLKY, FRM, VF GR, MOD SRT, ARG MTX. SCAT BENT.
MARL: MED-DK GY, OCCLY
HRD, OCCLY BRIT, SB PLTY
LAM, MOD-V CALC. SH: LT G
FRM-FRM, PLTY, WK-MOD C
GY, SB PLTY-SB BLKY, FRM
SRT, ARG MTX. TR DISS VF
BENT, NO FLOR, NO CUT.
6000
8000
TVD (ft)
: 6,965'
lination: 17.8°
muth: 238.2°
D: 6,904.0'
MD: 7,05
Inclination: 23.7°
Azimuth: 243.8°
TVD: 6,991.9'
MD: 7,15
Inclination: 3,34°
Azimuth: 250.5°
TVD: 7,074.3'

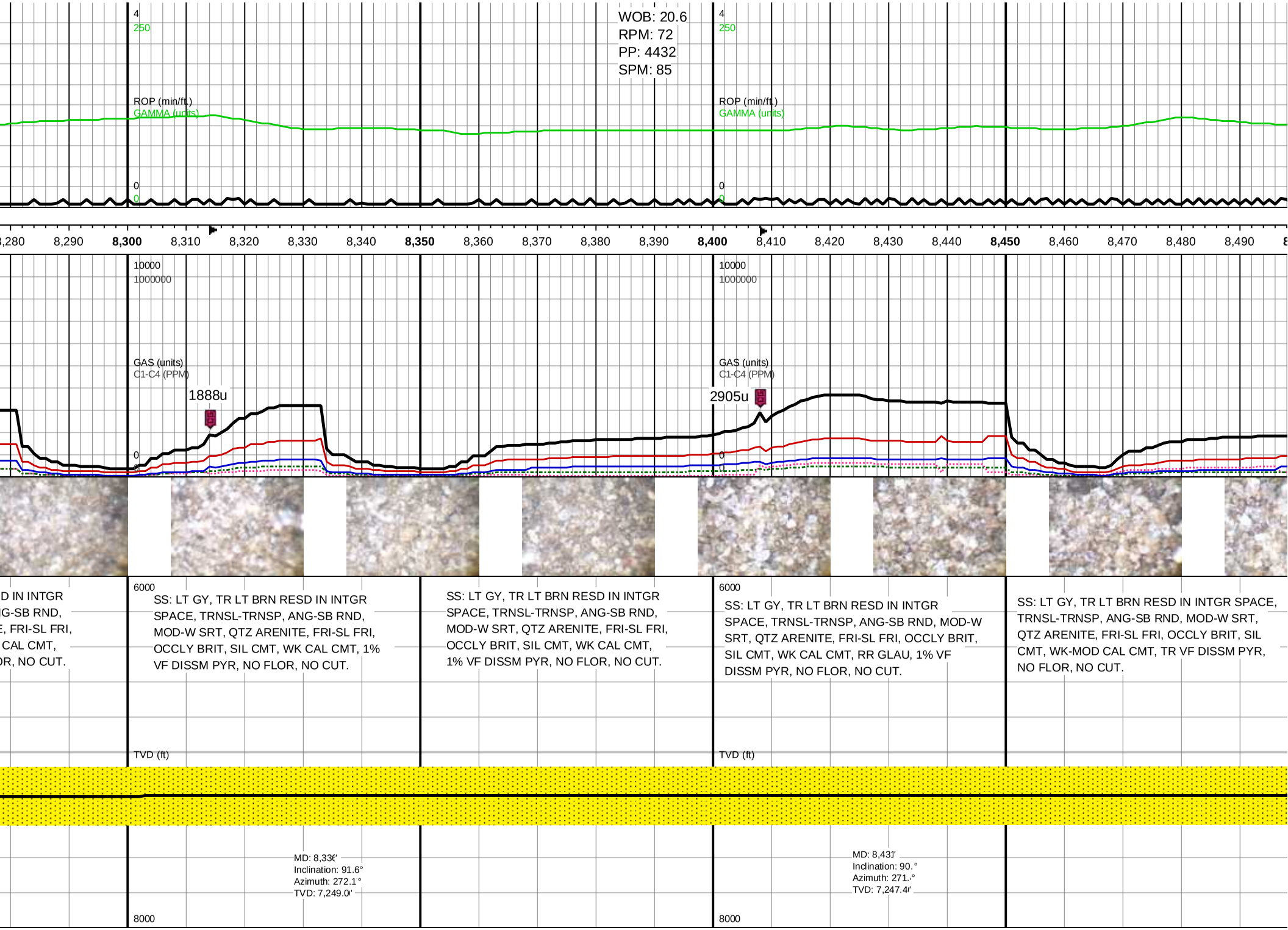

WOB: 54.6
RPM: 0
PP: 4133
SPM: 140
4
250
ROP (min/ft)
GAMMA (units)
0
0
WOB: 69.3
RPM: 0
PP: 4007
SPM: 140
11/20/14
7,180
7,190
7,200
7,210
7,220
7,230
7,240
7,250
7,260
7,270
7,280
7,290
7,300
7,310
7,320
7,330
7,340
7,350
7,360
MD DEPTH
7,380
7,390
500
50000
GAS (units)
C1-C4 (PPM)
102u
114u
MUD CHK IN
MW 10.2
VIS 34
Low Gas
Reading Due to
Low Mud Level
in Possum Belly
BRN-GY, FRM-SL
-SB BLKY, FY
GY-DK GY, MOD
CALC. SS: LT-MED
, VF GR, MOD
PYR. SCAT
6000
MARL: MED-DK GY, OCCLY BRN-GY, FRM-SL HRD, OCCLY BRIT, SB PLTY-SB BLKY, FY LAM, MOD-V CALC. SH: LT GY-DK GY, MOD FRM-FRM, PLTY-SB BLKY, SLTY, WK-MOD CALC, ELG STRG OF CHK. OCC SS: LT-MED GY, SB BLKY, MOD-FRM, VF GR, PLY-MOD SRT, ARG MTX. TR-1% DISS VF PYR. SCAT BENT, NO FLOR, NO CUT.
55% MARL: DK GY-BRN GY, SB PLTY-SB BLKY, FRM-SL HRD, OCCLY BRIT, CALC WITH STRONG HCL RXN. 45% CHKY SH: LT GY-BRN GY, MOD FRM-FRM, PLTY-SB BLKY, SLTY, CALC, STRG AND FY DISSM CHK, FY LAM. TR DISS VF PYR. TR BENT, NO FLOR, NO CUT.
6000
55% MARL: DK GY-BRN GY, SB PLTY-SB BLKY, FRM-SL HRD, OCCLY BRIT, CALC WITH STRONG HCL RXN. 45% SH: MED GY-BRN GY, RR OFF WH-TAN, MOD FRM, PLTY-SB BLKY, SLTY, MINOR CHK, WK CALC, FY LAM. 1% DISS VF PYR. TR BENT, NO FLOR, NO CUT.
40% CHK: OFF WH-LT GY, PLTY-SB BLKY, MOD FRM-SL HRD, WI VF-F GR SLT TO ARG MTX, VF LAM, V CALC. 35% MARL: DK GY, PLTY-SB PLTY, FRM-SL HRD, 1% VF DISSM PYR, MOD CALC. 25% SLTST: LT-MED GY, FRM-SL HRD, BRIT, SB PLTY-SB BLKY, P-MOD SRTD, MOD-ARG, V WK CALC, TR-0.5% VF DISSM PYR. TR BENT, NO FLOR, NO CUT.
TVD (ft)
MD: 7,18
Inclination: 38.8°
Azimuth: 253.0°
TVD: 7,100.1
MD: 7,21
Inclination: 43.9°
Azimuth: 253.
TVD: 7,123.4
MD: 7,24
Inclination: 49.2°
Azimuth: 254.7°
TVD: 7,144.6
MD: 7,27
Inclination: 54.5°
Azimuth: 258.3°
TVD: 7,164.4
MD: 7,31
Inclination: 58.7°
Azimuth: 261.2°
TVD: 7,181.4
MD: 7,34
Inclination: 63.0°
Azimuth: 264.
TVD: 7,196.
MD: 7,37
Inclination: 68.8°
Azimuth: 266.8°
TVD: 7,209.5
8000

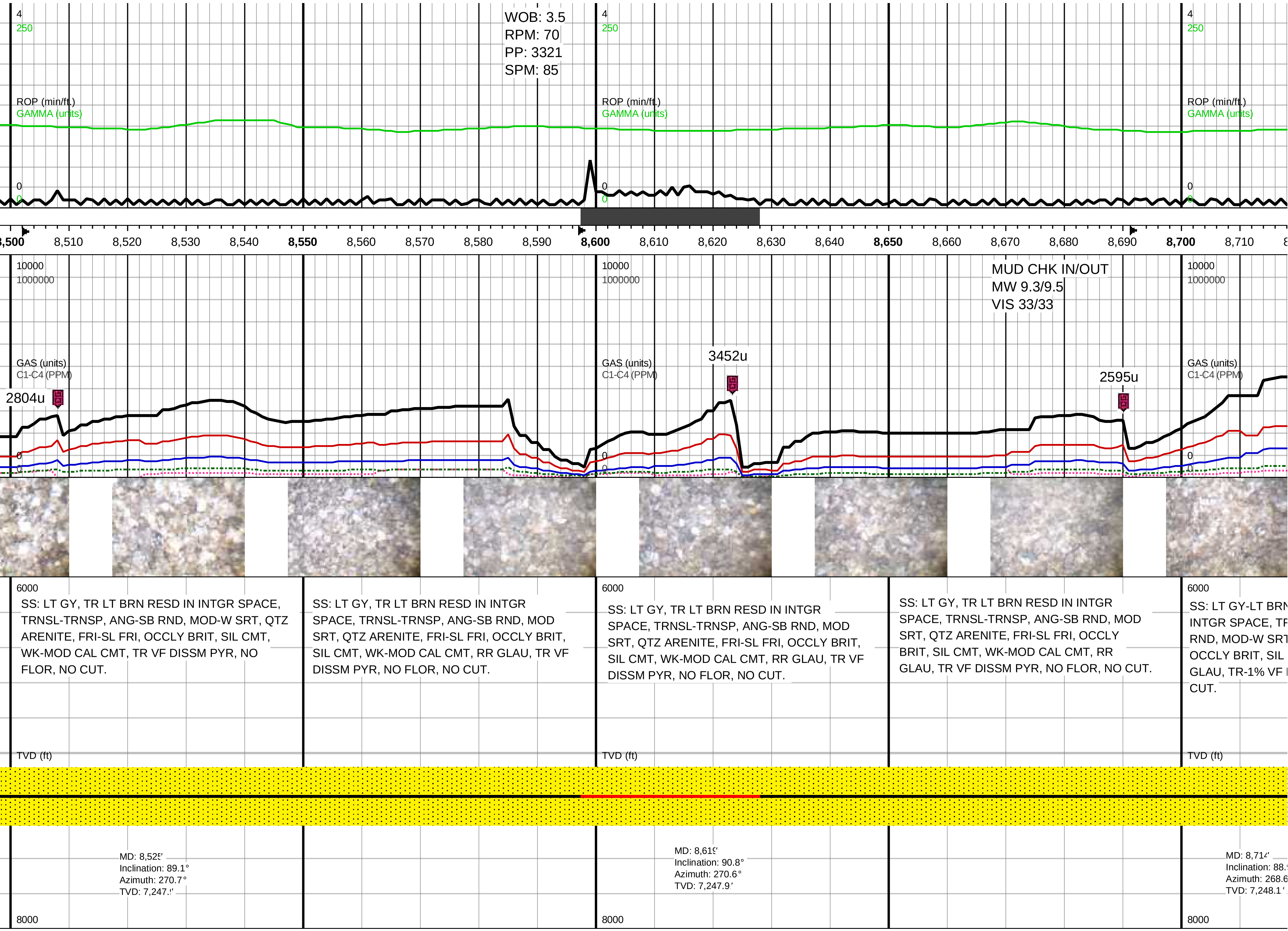

WOB: 28
RPM: 31
PP: 4157
SPM: 136
ROP (min/ft)
GAMMA (units)
4
250
0
0
7,400
7,410
7,420
7,430
7,440
7,450
7,460
7,470
7,480
7,490
7,500
7,510
7,520
7,530
7,540
7,550
7,560
7,570
7,580
7,600
7,610
5000
500000
Note Scale Change 0-5000u
GAS (units)
C1-C4 (PPM)
869u
MG 1478u
1658u
MG 2830u
TOOH at 7592' MD For Intermediate Casing on 11/20/2014. Resumed Drilling @ 22:39 on 11/21/2014
6000
8000
55% CHK: OFF WH-LT GY, PLTY-SB BLKY, MOD FRM-SL HRD, WI VF-F GR SLT TO ARG MTX, VF LAM, V CALC. 20% MARL: DK GY, PLTY-SB PLTY, FRM-SL HRD, 1% VF DISSM PYR, MOD CALC. 25% SLTST: LT-MED GY, FRM-SL HRD, BRIT, SB PLTY-SB BLKY, P-MOD SRTD, MOD-ARG, V WK CALC, TR-0.5% VF DISSM PYR. TR BENT, NO FLOR, NO CUT.
70% CHK: WH-OFFWHT-LTGY, PLTY-SB BLKY, MOD FRM-SL HRD, WI VF-F GR SLT- ARG MTX, VF LAM, V CALC. 20% MRLST: DK GY, PLTY-SB PLTY, FRM-SL HRD, 1% VF DISSM PYR, MOD CALC. 10% SLTST: LT-MED GY, FRM-SL HRD, BRIT, SB PLTY-SB BLKY, P-MOD SRTD, MOD-ARG, V WK CALC, RR DISSM PYR. TR BENT
80% CHK: WH-OFFWHT-LTGY, PLTY-SB BLKY, MOD FRM-SL HRD, WI VF-F GR SLT- ARG MTX, VF LAM, V CALC. 15% MRLST: DK GY, PLTY-SB PLTY, FRM-SL HRD, 1% VF DISSM PYR, MOD CALC. 5% SLTST: LT-MED GY, FRM-SL HRD, BRIT, SB PLTY-SB BLKY, P-MOD SRTD, MOD-ARG, V WK CALC, RR DISSM PYR. TR BENT
80% CHK: WH-OFFWHT-LTGY, PLTY-SB BLKY, MOD FRM-SL HRD, WI VF-F GR SLT- ARG MTX, VF LAM, V CALC. 10% MRLST: DK GY, PLTY-SB PLTY, FRM-SL HRD, 1% VF DISSM PYR, MOD CALC. 10% SLTST: LT-MED GY, FRM-SL HRD, BRIT, SB PLTY-SB BLKY, P-MOD SRTD, MOD-ARG, V WK CALC, RR DISSM PYR. TR BENT
SS: LT GY, T
ANG-SB RND
ARENITE, VF
OCCLY BRIT
TR CAL CMT
FLOR, NO CU
CASING.
TVD (ft)
MD: 7,40
Inclination: 74.8°
Azimuth: 268.1°
TVD: 7,219.1
MD: 7,43
Inclination: 79.6°
Azimuth: 268.4°
TVD: 7,226.2
MD: 7,467
Inclination: 81.6°
Azimuth: 26
TVD: 7,231.2
MD: 7,52
Inclination: 82.2°
Azimuth: 268.6°
TVD: 7,239.1
MD: 7,58
Inclination: 88.3°
Azimuth: 268.5°
TVD: 7,244.2

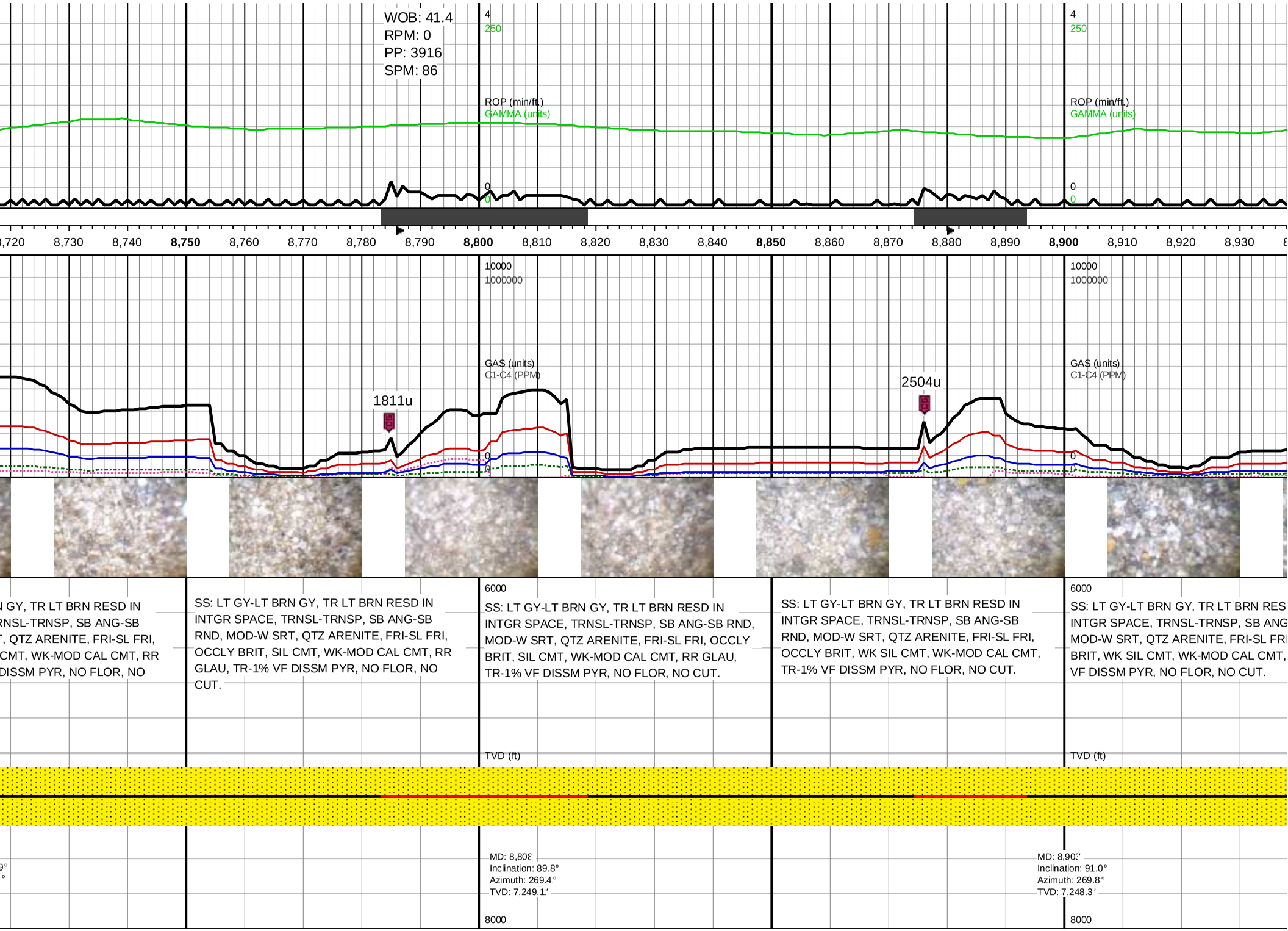

WOB: 12.9
RPM: 71
PP: 3906
SPM: 82
4
250
ROP (min/ft)
GAMMA (units)
0
0
11/22/14
MNDEPTH
7,620
7,630
7,640
7,650
7,660
7,670
7,680
7,690
7,700
7,710
7,720
7,730
7,740
7,760
7,770
7,780
7,790
7,800
7,810
7,820
7,830
5000
500000
GAS (units)
C1-C4 (PPM)
3224u
MUD CHK IN
MW 9.4
VIS 32
TOOH at 7751' MD For MWD issues on 11/22/2014. Resumed Drilling @ 14:03 on 11/22/2014
10000
1000000
Gas Scale Change
0 - 10,000 units
6000
8000
TVD (ft)
SS: LT GY, TRNSL TO TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, VFU-ML SIZE, FRI-SL FRI, OCCLY BRIT, DOMINANTLY SIL CMT, TR CAL CMT, 1% VF DISSM PYR. RR OFF-WH CHK. NO FLOR, NO CUT.
SS: LT GY, TRNSL TO TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, VFU-ML SIZE, FRI-SL FRI, OCCLY BRIT, DOMINANTLY SIL CMT, TR CAL CMT, 1% VF DISSM PYR. NO FLOR, NO CUT.
SS: LT GY, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, TR CAL CMT, VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY, TRNSL-TRNSP, SB AN RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT CAL CMT, VF DISSM PYR, NO FLO NO CUT.
MD: 7,677'
Inclination: 88.1°
Azimuth: 268.1°
TVD: 7,247.0'
MD: 7,77:'
Inclination: 88.7°
Azimuth: 269.2°
TVD: 7,249.6'

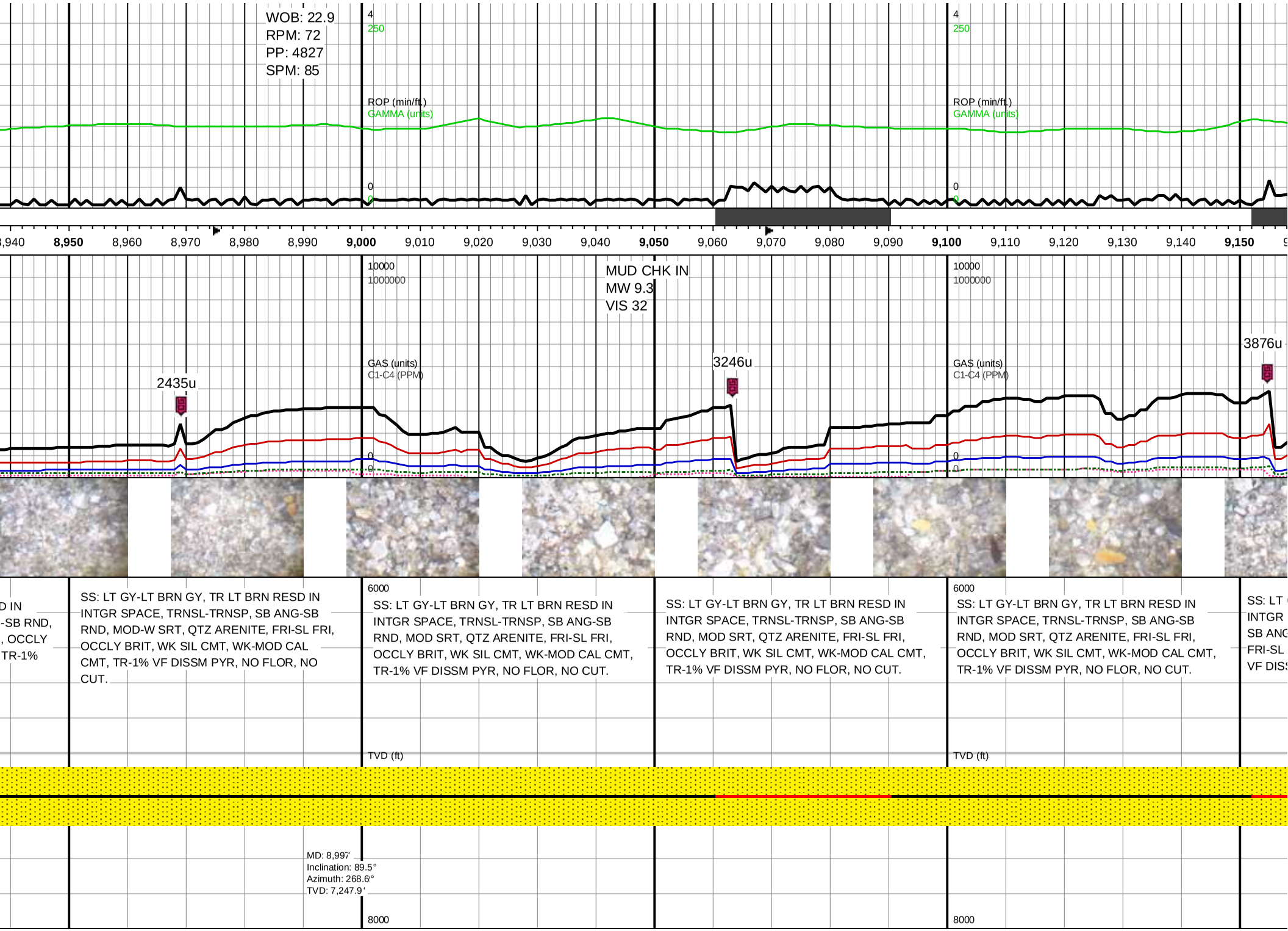

WOB: 21.5
RPM: 71
PP: 4240
SPM: 83
4
250
ROP (min/ft)
GAMMA (units)
0
0
7,840
7,850
7,860
7,870
7,880
7,890
7,900
7,910
7,920
7,930
7,940
7,950
7,960
7,970
7,980
7,990
8,000
8,010
8,020
8,030
8,040
8,050
10000
1000000
GAS (units)
C1-C4 (PPM)
3349u
3357u
1988u
6000
SS: LT GY, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, TR CAL CMT, VF DISSM PYR, NO FLOR, NO CUT.
TVD (ft)
MD: 7,865'
Inclination: 89.2°
Azimuth: 270.0°
TVD: 7,251.3'
MD: 7,955'
Inclination: 90.0°
Azimuth: 271.5°
TVD: 7,251.9'
MD: 8,054'
Inclination: 89.3°
Azimuth: 271.3°
TVD: 7,252.4'
8000

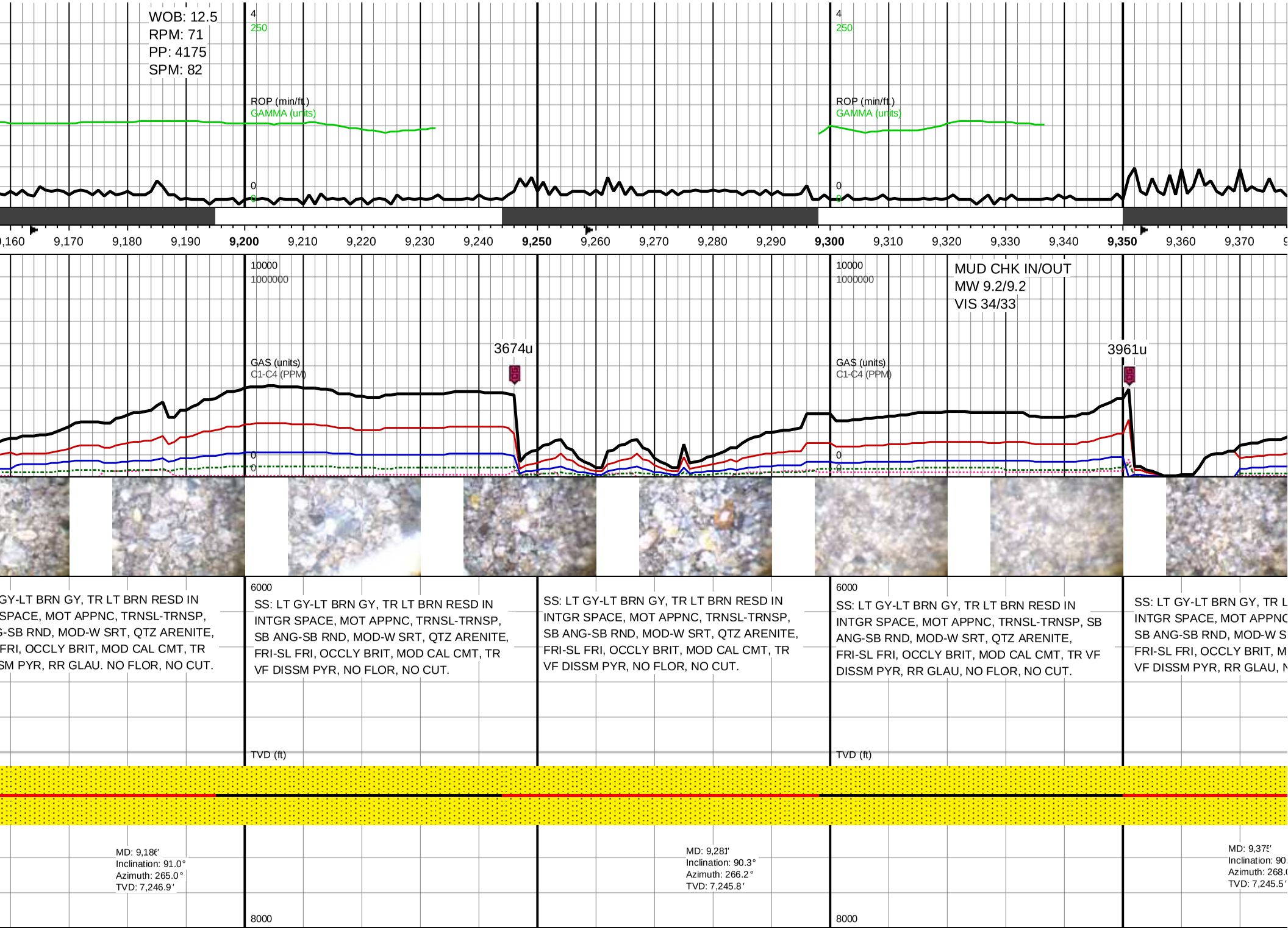

WOB: 19.8
RPM: 71
PP: 4071
SPM: 83
4
250
ROP (min/ft.)
GAMMA (units)
0
0
8,060
8,070
8,080
8,090
8,100
8,110
8,120
8,130
8,140
8,150
8,160
8,170
8,180
8,190
8,200
8,210
8,220
8,230
8,240
8,250
8,260
8,270
MUD CHK IN
MW 9.2
VIS 35
MUD CHK IN/OUT
MW 9.2/9.5
VIS 35/35
10000
1000000
GAS (units)
C1-C4 (PPM)
4650u
2982u
6000
SS: LT GY, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, TR CAL CMT, VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, TR CAL CMT, VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, WK CAL CMT, VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY, TR LT BRN RES SPACE, TRNSL-TRNSP, AN MOD-W SRT, QTZ ARENITE OCCLY BRIT, SIL CMT, WK 1% VF DISSM PYR, NO FLO
TVD (ft)
MD: 8,148′
Inclination: 89.9°
Azimuth: 271.1°
TVD: 7,252.9′
MD: 8,242′
Inclination: 91.°
Azimuth: 272.7°
TVD: 7,251.7′
8000

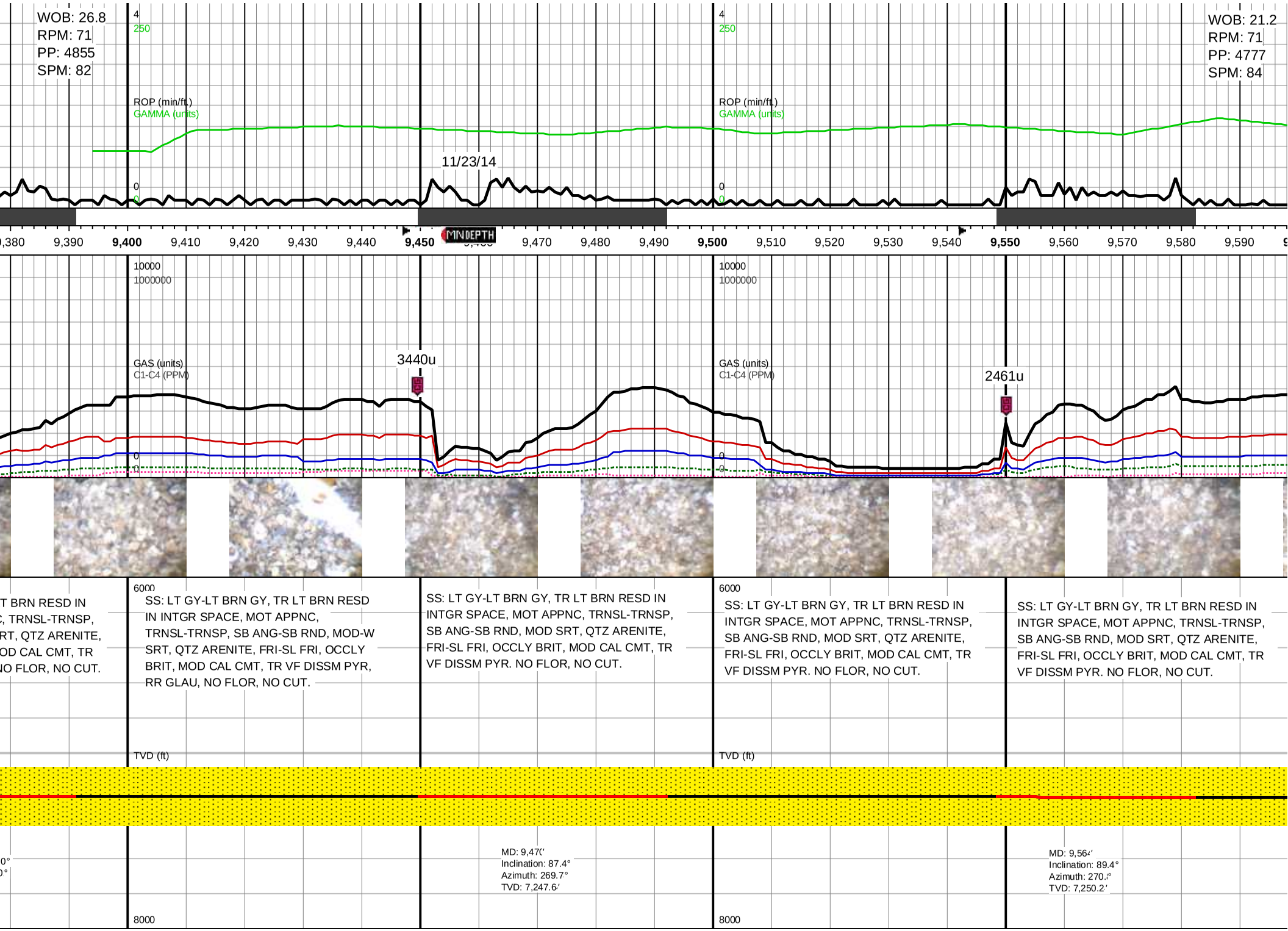

WOB: 20.6
RPM: 72
PP: 4432
SPM: 85
4
250
ROP (min/ft)
GAMMA (units)
0
0
8,280
8,290
8,300
8,310
8,320
8,330
8,340
8,350
8,360
8,370
8,380
8,390
8,400
8,410
8,420
8,430
8,440
8,450
8,460
8,470
8,480
8,490
10000
1000000
GAS (units)
C1-C4 (PPM)
1888u
2905u
6000
SS: LT GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, WK CAL CMT, 1% VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, WK CAL CMT, 1% VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, WK CAL CMT, RR GLAU, 1% VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, WK-MOD CAL CMT, TR VF DISSM PYR, NO FLOR, NO CUT.
TVD (ft)
MD: 8,33€'
Inclination: 91.6°
Azimuth: 272.1°
TVD: 7,249.0'
MD: 8,431'
Inclination: 90.°
Azimuth: 271.°
TVD: 7,247.4'
8000

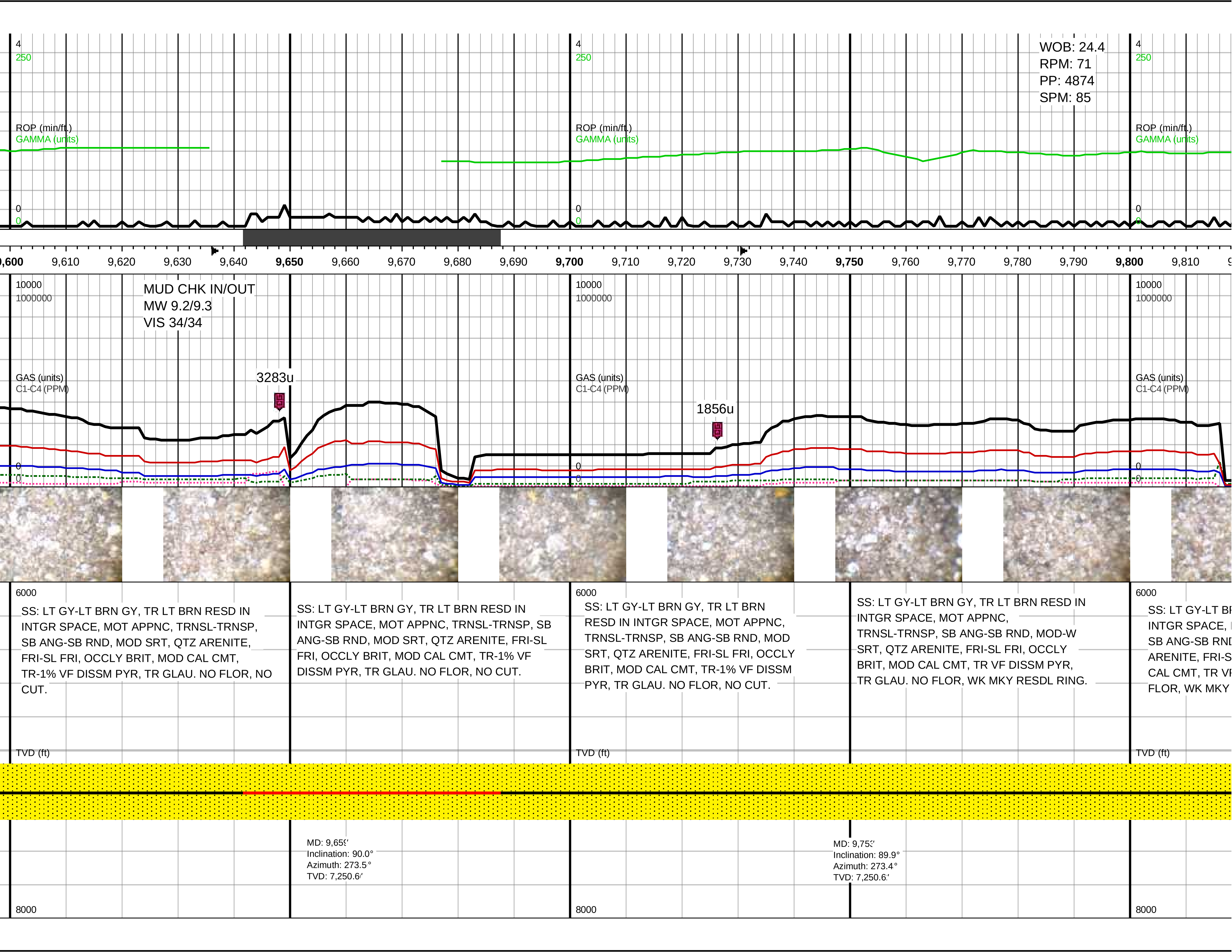

WOB: 3.5
RPM: 70
PP: 3321
SPM: 85
ROP (min/ft.)
GAMMA (units)
8,500
8,510
8,520
8,530
8,540
8,550
8,560
8,570
8,580
8,590
8,600
8,610
8,620
8,630
8,640
8,650
8,660
8,670
8,680
8,690
8,700
8,710
MUD CHK IN/OUT
MW 9.3/9.5
VIS 33/33
GAS (units)
C1-C4 (PPM)
2804u
3452u
2595u
SS: LT GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, WK-MOD CAL CMT, TR VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, WK-MOD CAL CMT, RR GLAU, TR VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, WK-MOD CAL CMT, RR GLAU, TR VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, WK-MOD CAL CMT, RR GLAU, TR VF DISSM PYR, NO FLOR, NO CUT.
TVD (ft)
MD: 8,525'
Inclination: 89.1°
Azimuth: 270.7°
MD: 8,619'
Inclination: 90.8°
Azimuth: 270.6°
TVD: 7,247.9'
TVD: 7,248.1'

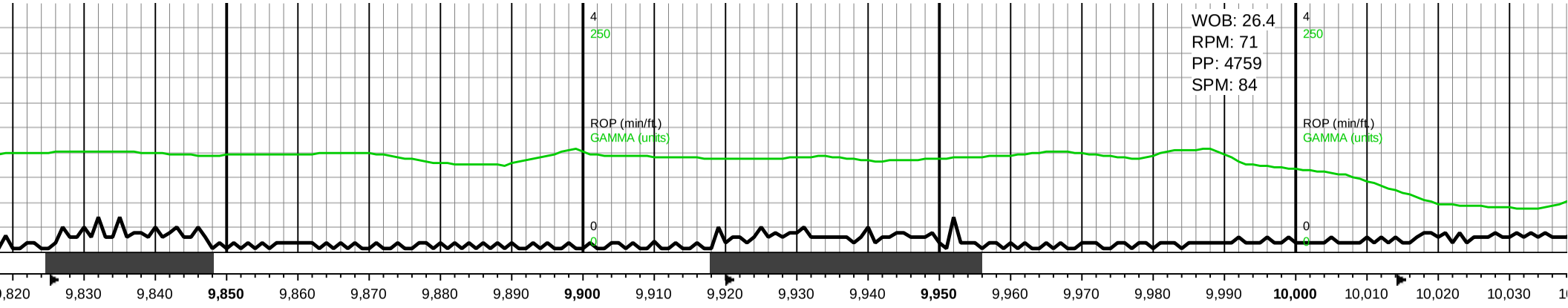

WOB: 41.4
RPM: 0
PP: 3916
SPM: 86
4
250
ROP (min/ft)
GAMMA (units)
0
0
8,720
8,730
8,740
8,750
8,760
8,770
8,780
8,790
8,800
8,810
8,820
8,830
8,840
8,850
8,860
8,870
8,880
8,890
8,900
8,910
8,920
8,930
10000
1000000
GAS (units)
C1-C4 (PPM)
1811u
2504u
6000
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, SIL CMT, WK-MOD CAL CMT, RR GLAU, TR-1% VF DISSM PYR, NO FLOR, NO CUT.
TVD (ft)
MD: 8,80
Inclination: 89.8°
Azimuth: 269.4°
TVD: 7,249.1'
MD: 8,90
Inclination: 91.0°
Azimuth: 269.8°
TVD: 7,248.3'
8000

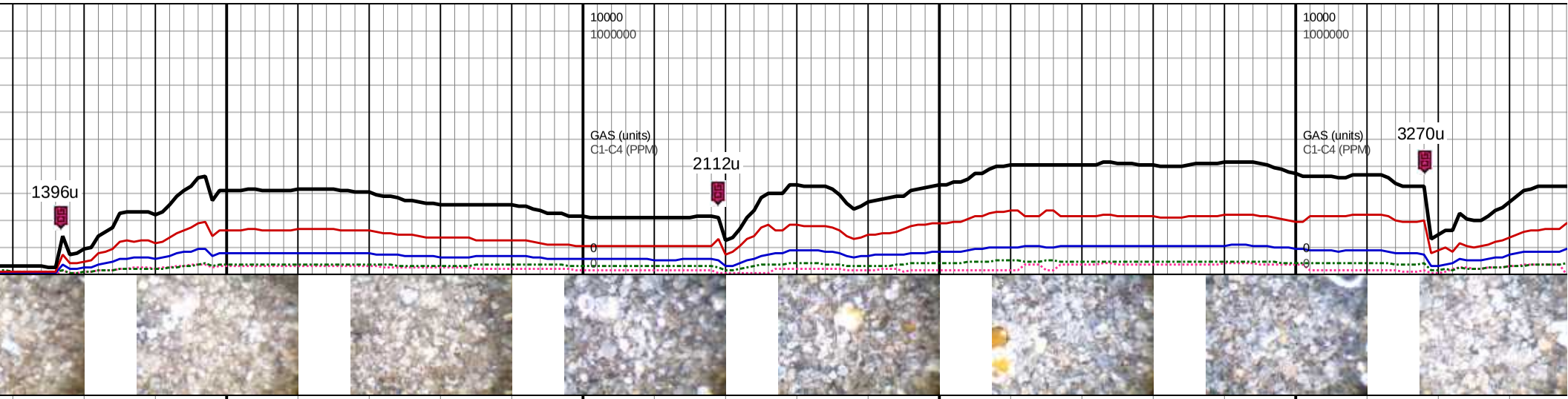

WOB: 22.9
RPM: 72
PP: 4827
SPM: 85
4
250
ROP (min/ft)
GAMMA (units)
0
0
4
250
ROP (min/ft)
GAMMA (units)
0
0
8,940
8,950
8,960
8,970
8,980
8,990
9,000
9,010
9,020
9,030
9,040
9,050
9,060
9,070
9,080
9,090
9,100
9,110
9,120
9,130
9,140
9,150
10000
1000000
GAS (units)
C1-C4 (PPM)
2435u
MUD CHK IN
MW 9.3
VIS 32
3246u
10000
1000000
GAS (units)
C1-C4 (PPM)
3876u
0
0
0
0
D IN
-SB RND,
, OCCLY
TR-1%
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, WK SIL CMT, WK-MOD CAL CMT, TR-1% VF DISSM PYR, NO FLOR, NO CUT.
6000
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, SB ANG-SB RND, MOD SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, WK SIL CMT, WK-MOD CAL CMT, TR-1% VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, SB ANG-SB RND, MOD SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, WK SIL CMT, WK-MOD CAL CMT, TR-1% VF DISSM PYR, NO FLOR, NO CUT.
6000
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, SB ANG-SB RND, MOD SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, WK SIL CMT, WK-MOD CAL CMT, TR-1% VF DISSM PYR, NO FLOR, NO CUT.
SS: LT
INTGR
SB ANG
FRI-SL
VF DISS
TVD (ft)
TVD (ft)
MD: 8,997'
Inclination: 89.5°
Azimuth: 268.6°
TVD: 7,247.9'
8000
8000


WOB: 12.5
RPM: 71
PP: 4175
SPM: 82
4
250
ROP (min/ft)
GAMMA (units)
0
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
9,330
9,340
9,350
9,360
9,370
10000
1000000
GAS (units)
C1-C4 (PPM)
3674u
MUD CHK IN/OUT
MW 9.2/9.2
VIS 34/33
3961u
GY-LT BRN GY, TR LT BRN RESD IN
SPACE, MOT APPNC, TRNSL-TRNSP,
-SB RND, MOD-W SRT, QTZ ARENITE,
FRI, OCCLY BRIT, MOD CAL CMT, TR
SM PYR, RR GLAU. NO FLOR, NO CUT.
6000
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR, NO FLOR, NO CUT.
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR, RR GLAU, NO FLOR, NO CUT.
SS: LT GY-LT BRN GY, TR L
INTGR SPACE, MOT APPNC
SB ANG-SB RND, MOD-W S
FRI-SL FRI, OCCLY BRIT, M
VF DISSM PYR, RR GLAU, N
TVD (ft)
MD: 9,18
Inclination: 91.0°
Azimuth: 265.0°
TVD: 7,246.9′
MD: 9,281′
Inclination: 90.3°
Azimuth: 266.2°
TVD: 7,245.8′
MD: 9,375
Inclination: 90.
Azimuth: 268.
TVD: 7,245.5
8000


WOB: 26.8
RPM: 71
PP: 4855
SPM: 82
4
250
ROP (min/ft)
GAMMA (units)
0
0
11/23/14
WOB: 21.2
RPM: 71
PP: 4777
SPM: 84
9,380
9,390
9,400
9,410
9,420
9,430
9,440
9,450
MINDEPTH
9,470
9,480
9,490
9,500
9,510
9,520
9,530
9,540
9,550
9,560
9,570
9,580
9,590
10000
1000000
GAS (units)
C1-C4 (PPM)
3440u
2461u
6000
8000
TVD (ft)
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR, RR GLAU, NO FLOR, NO CUT.
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR. NO FLOR, NO CUT.
MD: 9,47(′
Inclination: 87.4°
Azimuth: 269.7°
TVD: 7,247.6′
MD: 9,56‹′
Inclination: 89.4°
Azimuth: 270.!°
TVD: 7,250.2′


4
250
ROP (min/ft.)
GAMMA (units)
0
0
WOB: 24.4
RPM: 71
PP: 4874
SPM: 85
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
9,730
9,740
9,750
9,760
9,770
9,780
9,790
9,800
9,810
10000
1000000
MUD CHK IN/OUT
MW 9.2/9.3
VIS 34/34
GAS (units)
C1-C4 (PPM)
3283u
1856u
6000
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR-1% VF DISSM PYR, TR GLAU. NO FLOR, NO CUT.
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR-1% VF DISSM PYR, TR GLAU. NO FLOR, NO CUT.
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR-1% VF DISSM PYR, TR GLAU. NO FLOR, NO CUT.
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR, TR GLAU. NO FLOR, WK MKY RESDL RING.
SS: LT GY-LT BR[N GY, TR LT BRN RESD IN] INTGR SPACE, SB ANG-SB RN ARENITE, FRI-S CAL CMT, TR VF FLOR, WK MKY
TVD (ft)
MD: 9,65?'
Inclination: 90.0°
Azimuth: 273.5°
TVD: 7,250.6'
MD: 9,75?'
Inclination: 89.9°
Azimuth: 273.4°
TVD: 7,250.6'
8000





RN GY, TR LT BRN RESD IN
MOT APPNC, TRNSL-TRNSP,
D, MOD-W SRT, QTZ
L FRI, OCCLY BRIT, MOD
F DISSM PYR, TR GLAU. NO
RESDL RING.

SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR, TR GLAU. NO FLOR, WK MKY RESDL RING.

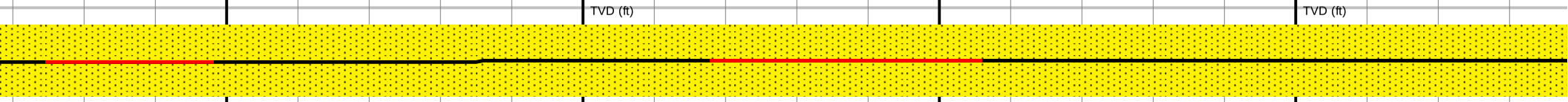
6000

SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR, ABNT BENT. NO FLOR, NO CUT.

SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR, ABNT BENT. NO FLOR, NO CUT.

6000

SS: LT GY-LT BRN GY, TR LT BRN RE
IN INTGR SPACE, MOT APPNC,
TRNSL-TRNSP, SB ANG-SB RND, MO
SRT, QTZ ARENITE, FRI-SL FRI, OCC
BRIT, MOD CAL CMT, TR VF DISSM F
ABNT BENT. NO FLOR, NO CUT.



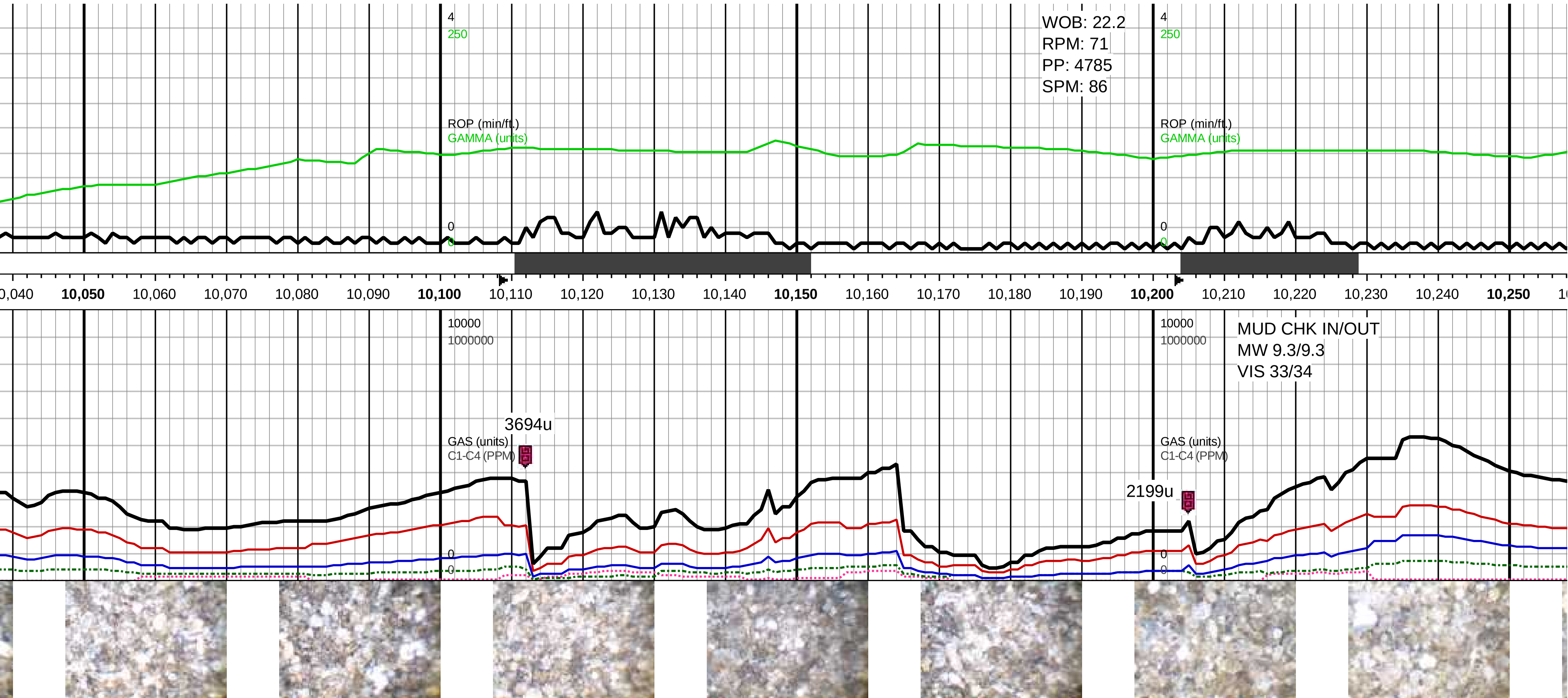
MD: 9,84
Inclination: 90.0°
Azimuth: 272.6°
TVD: 7,250.5'

MD: 9,94
Inclination: 91.6°
Azimuth: 272.0°
TVD: 7,249.1'

MD: 10,03
Inclination:
Azimuth: 2
TVD: 7,24

8000

8000



SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR. NO FLOR, NO CUT.

6000

SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR. NO FLOR, NO CUT.

SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR. NO FLOR, NO CUT.

6000

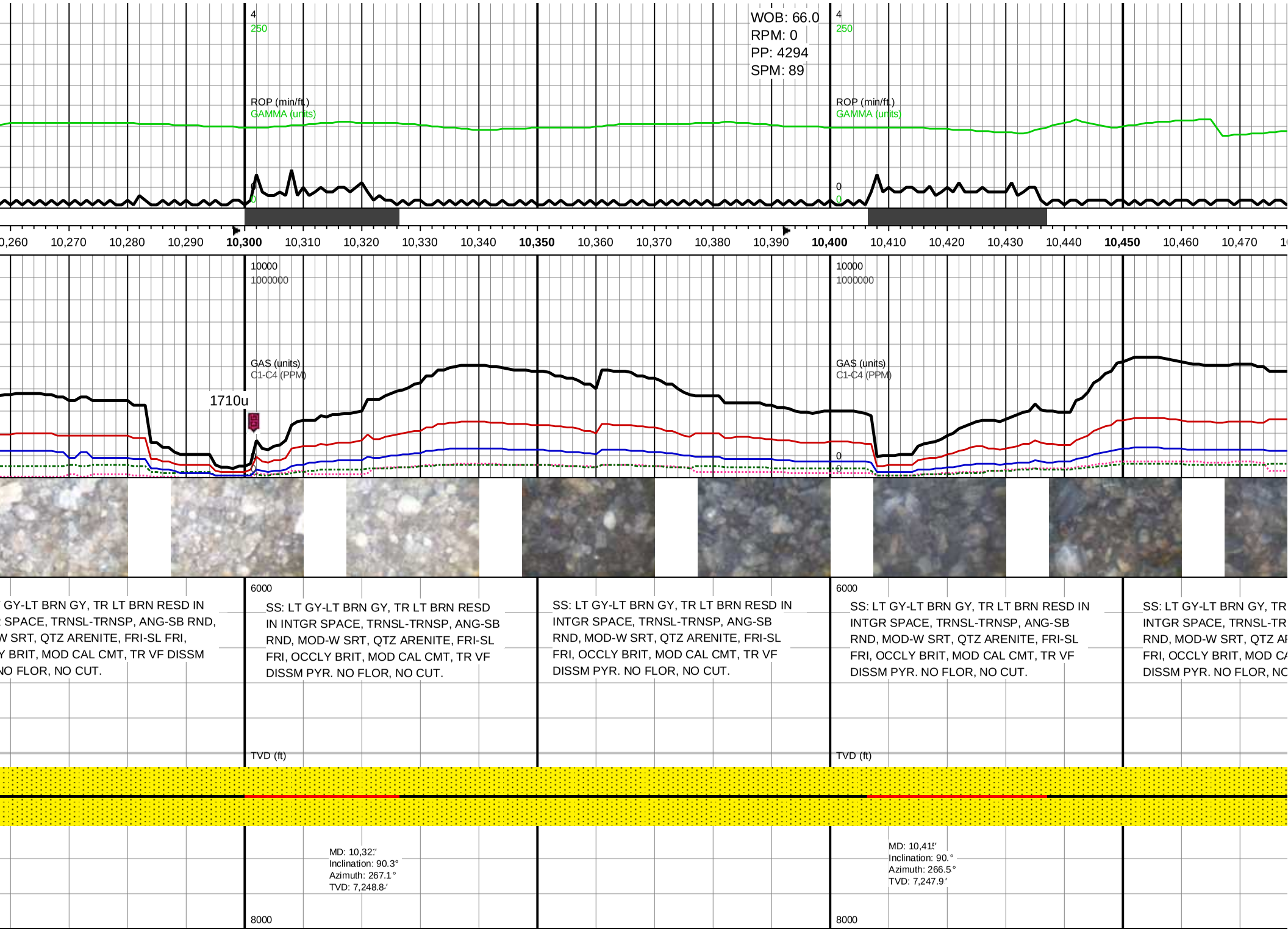
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR. NO FLOR, NO CUT.

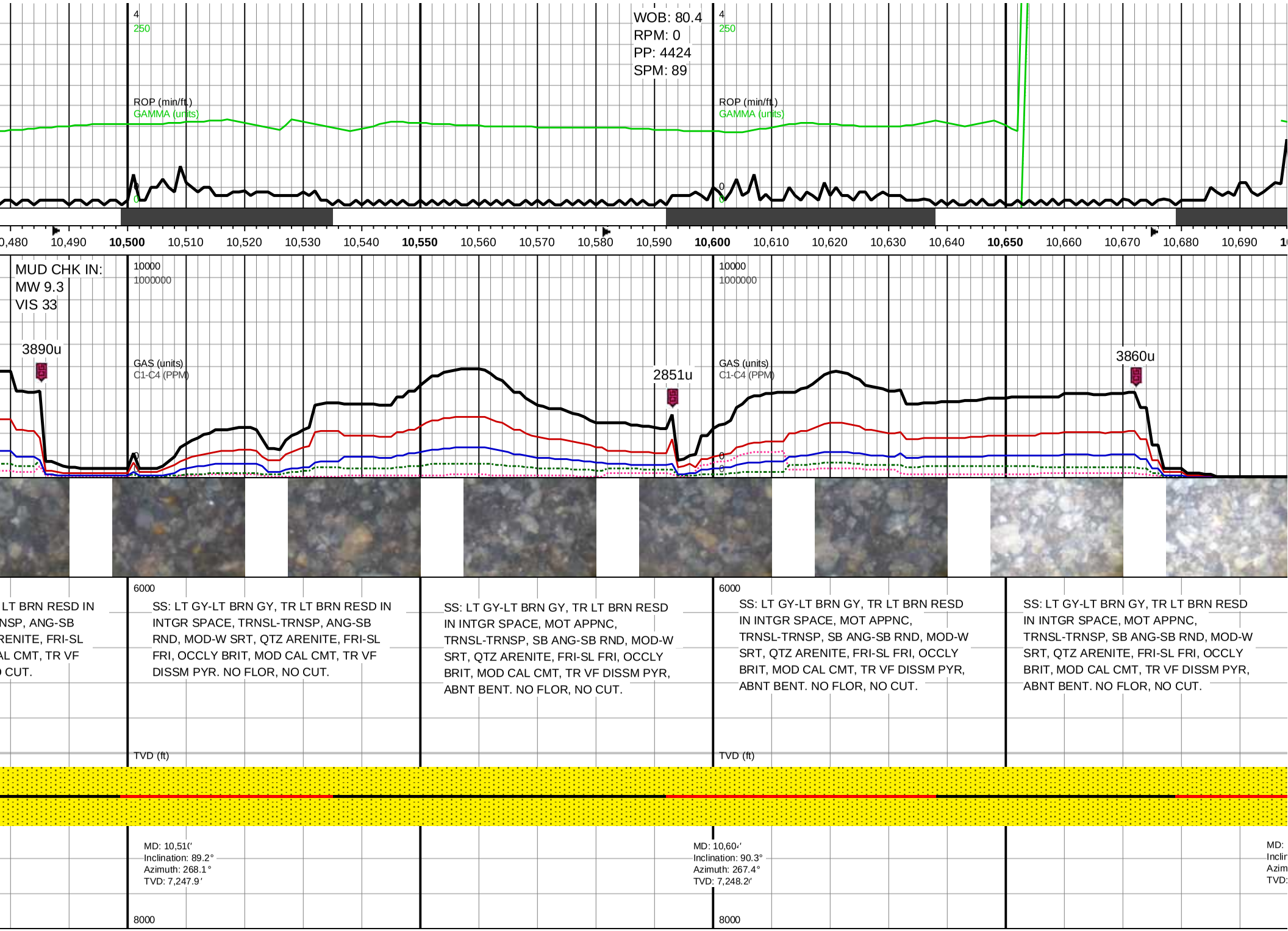
TVD (ft)

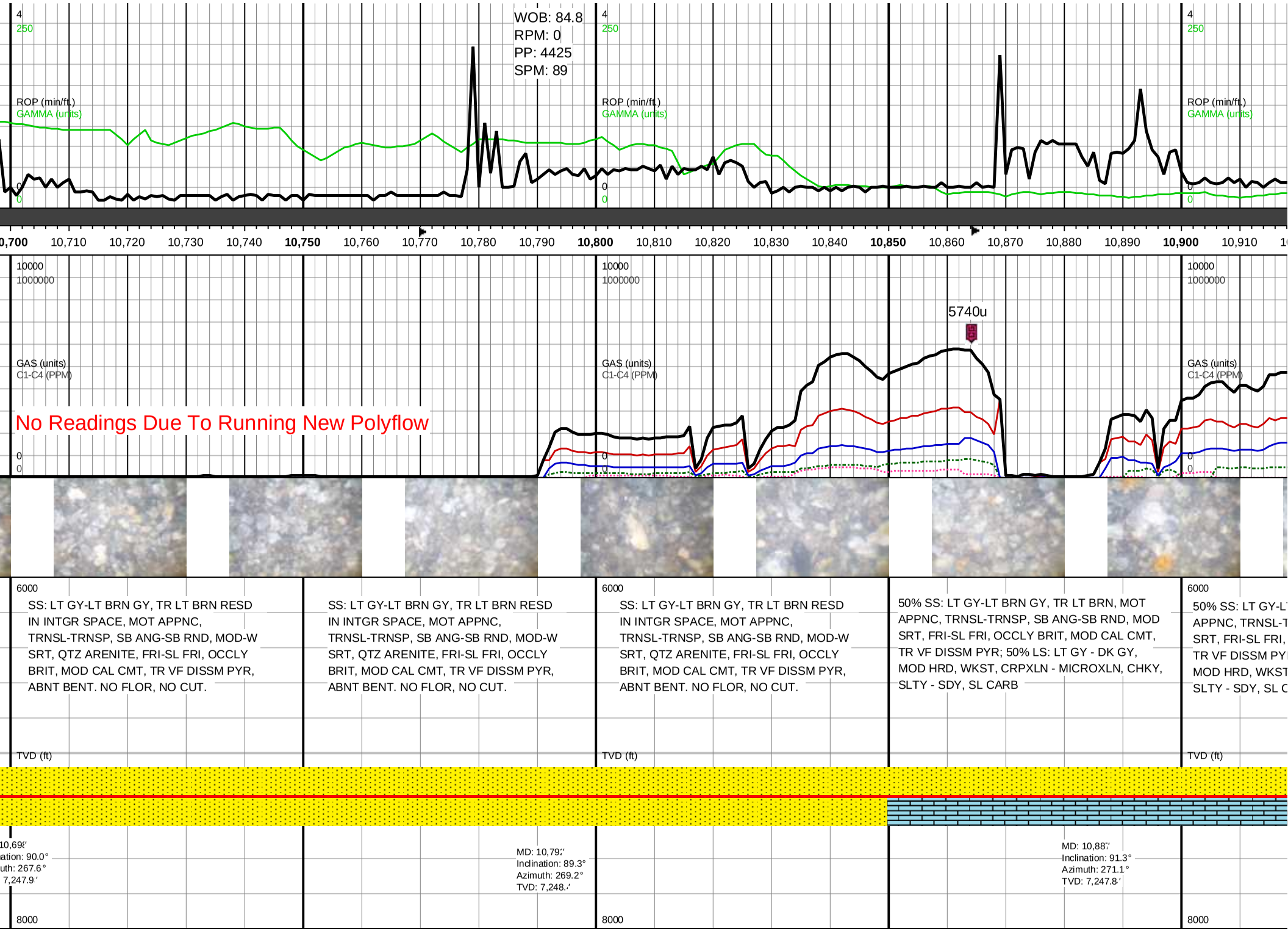
MD: 10,13?'
Inclination: 89.8°
Azimuth: 268.2°
TVD: 7,249.7'

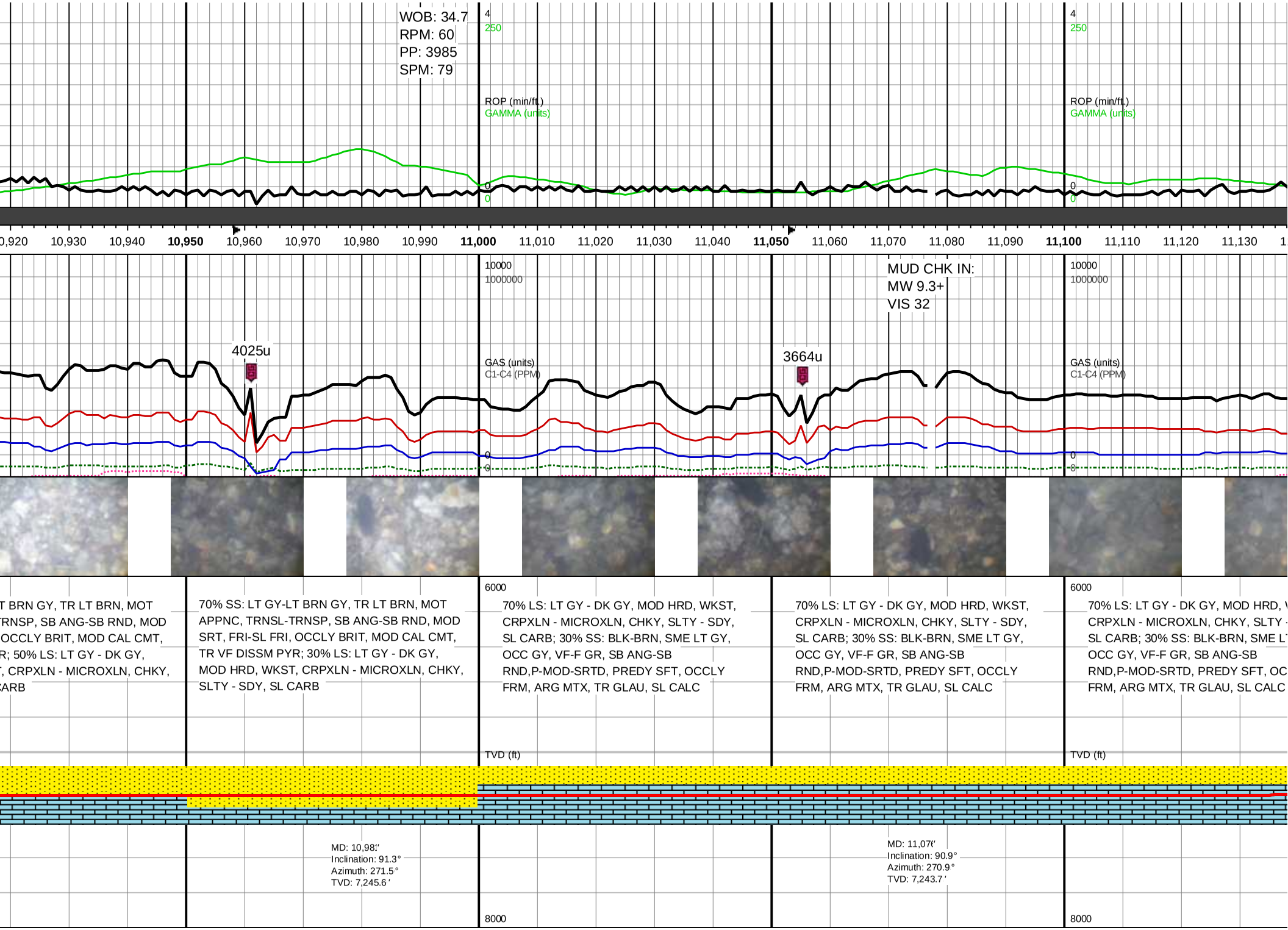
MD: 10,22?'
Inclination: 90.4°
Azimuth: 268.4°
TVD: 7,249.5'

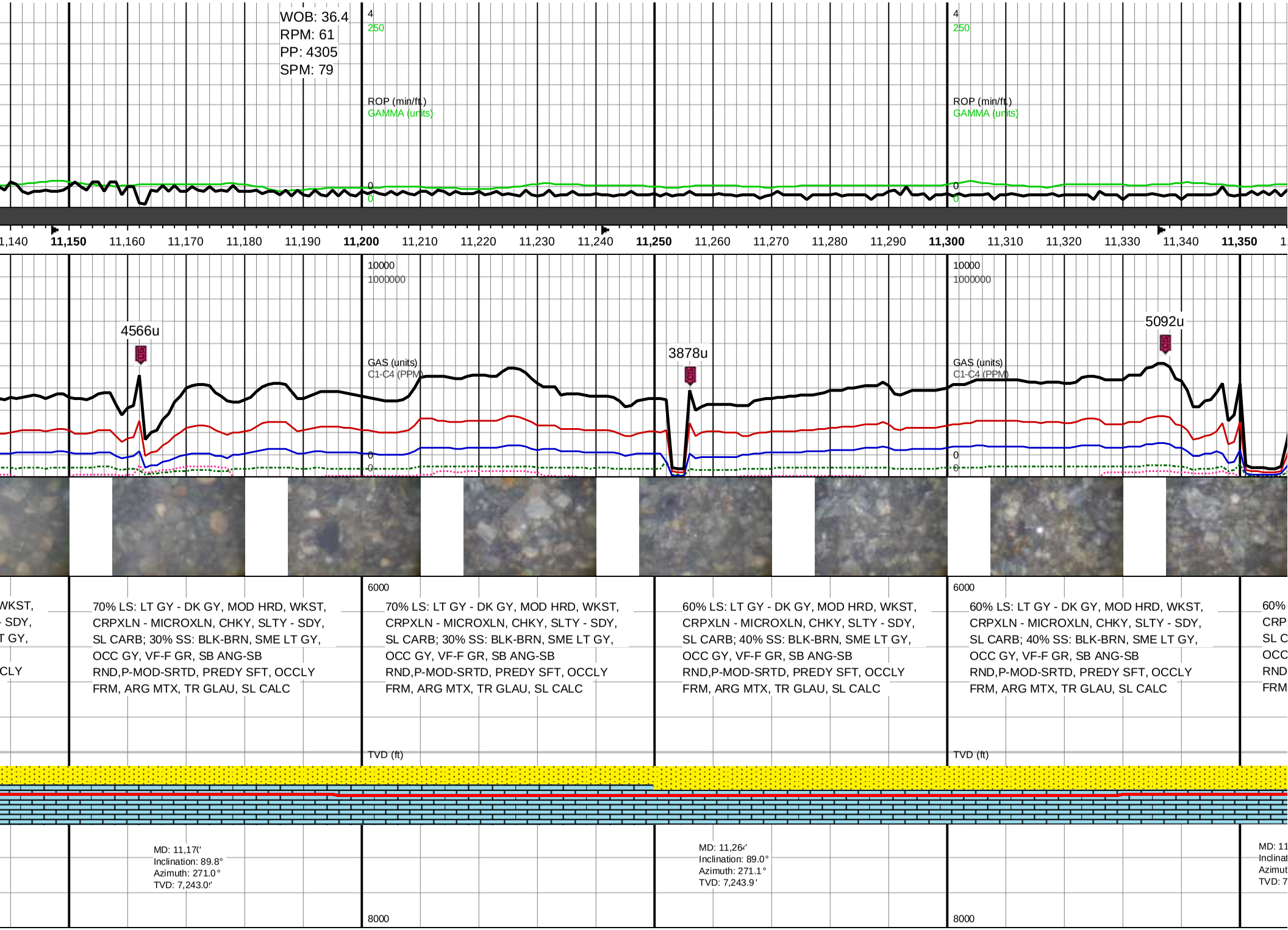
8000

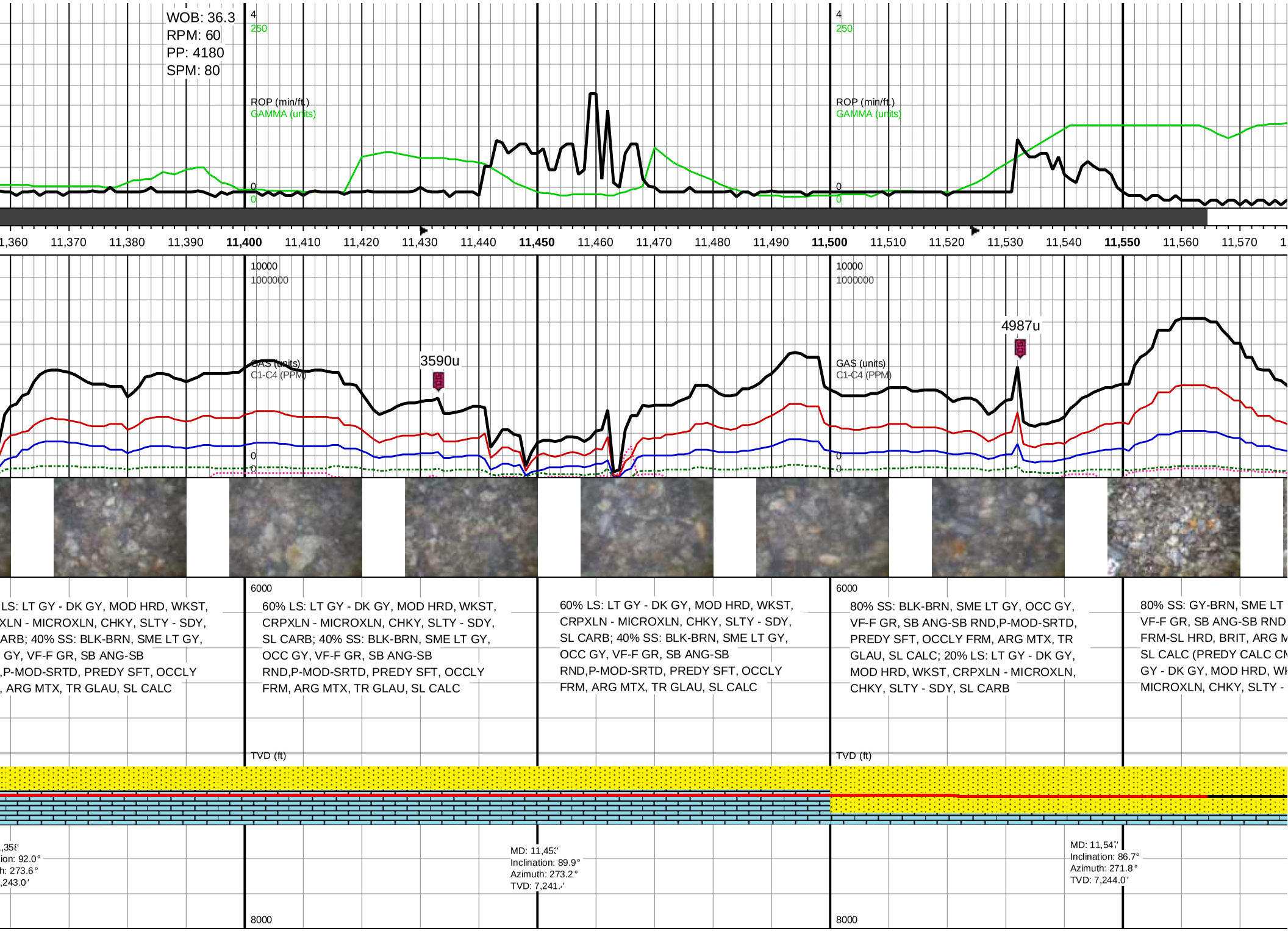

WOB: 66.0
RPM: 0
PP: 4294
SPM: 89
4
250
ROP (min/ft)
GAMMA (units)
0
0
10,260
10,270
10,280
10,290
10,300
10,310
10,320
10,330
10,340
10,350
10,360
10,370
10,380
10,390
10,400
10,410
10,420
10,430
10,440
10,450
10,460
10,470
10000
1000000
GAS (units)
C1-C4 (PPM)
1710u
6000
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR. NO FLOR, NO CUT.
TVD (ft)
MD: 10,32
Inclination: 90.3°
Azimuth: 267.1°
TVD: 7,248.8
MD: 10,41
Inclination: 90.°
Azimuth: 266.5°
TVD: 7,247.9
8000

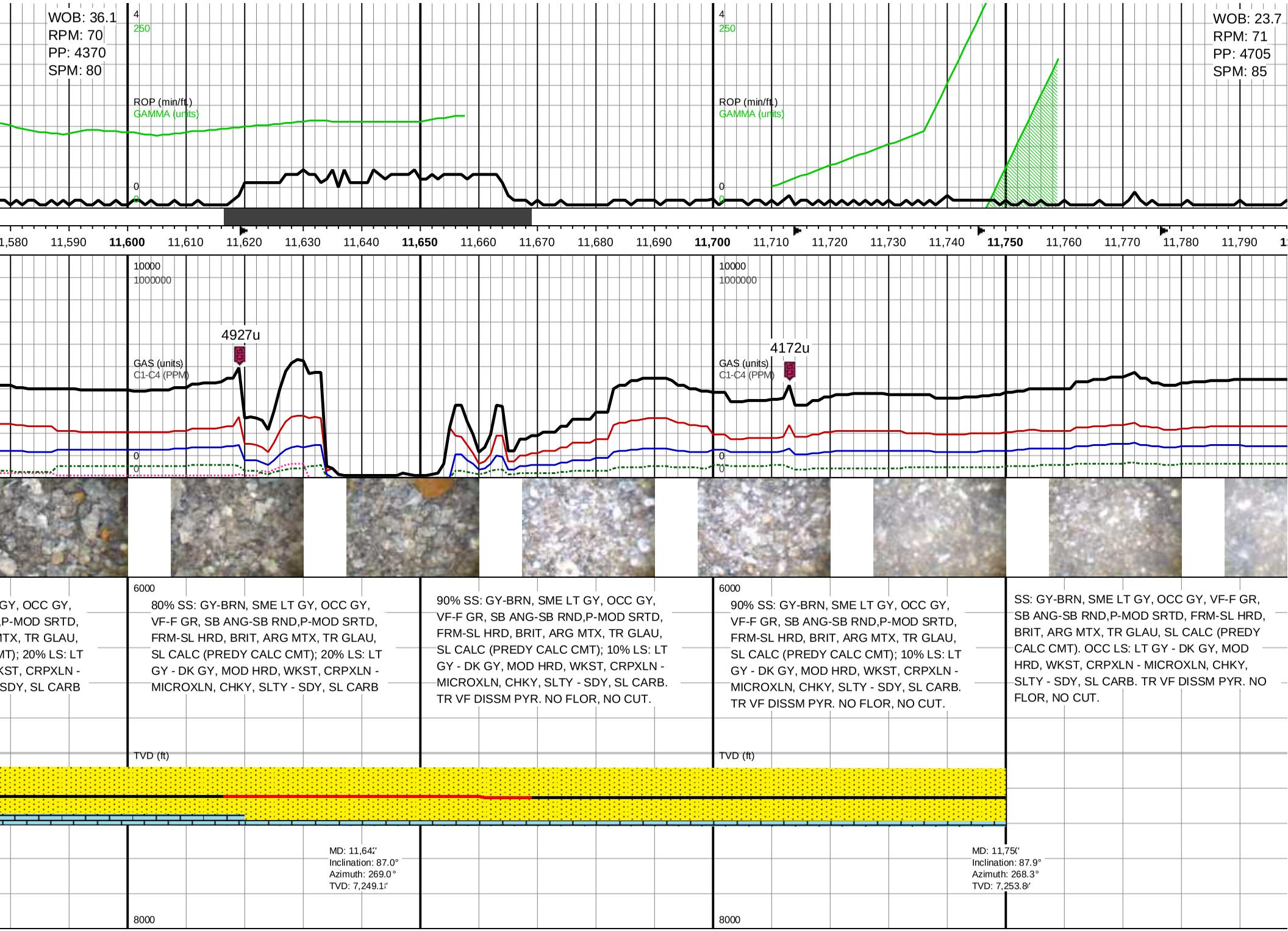

WOB: 80.4
RPM: 0
PP: 4424
SPM: 89
4
250
ROP (min/ft)
GAMMA (units)
0
10,480
10,490
10,500
10,510
10,520
10,530
10,540
10,550
10,560
10,570
10,580
10,590
10,600
10,610
10,620
10,630
10,640
10,650
10,660
10,670
10,680
10,690
MUD CHK IN:
MW 9.3
VIS 33
10000
1000000
GAS (units)
C1-C4 (PPM)
3890u
2851u
3860u
6000
8000
TVD (ft)
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, TRNSL-TRNSP, ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR. NO FLOR, NO CUT.
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR, ABNT BENT. NO FLOR, NO CUT.
MD: 10,51(′
Inclination: 89.2°
Azimuth: 268.1°
TVD: 7,247.9′
MD: 10,60₄′
Inclination: 90.3°
Azimuth: 267.4°
TVD: 7,248.2′

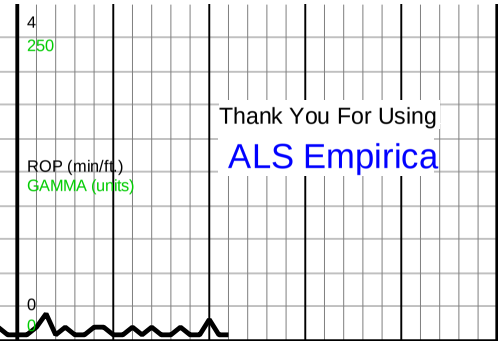

WOB: 84.8
RPM: 0
PP: 4425
SPM: 89
4
250
ROP (min/ft)
GAMMA (units)
0
0
10,700
10,710
10,720
10,730
10,740
10,750
10,760
10,770
10,780
10,790
10,800
10,810
10,820
10,830
10,840
10,850
10,860
10,870
10,880
10,890
10,900
10,910
10000
1000000
GAS (units)
C1-C4 (PPM)
No Readings Due To Running New Polyflow
5740u
6000
SS: LT GY-LT BRN GY, TR LT BRN RESD IN INTGR SPACE, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD-W SRT, QTZ ARENITE, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR, ABNT BENT. NO FLOR, NO CUT.
50% SS: LT GY-LT BRN GY, TR LT BRN, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD SRT, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR; 50% LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB
TVD (ft)
MD: 10,79
Inclination: 89.3°
Azimuth: 269.2°
TVD: 7,248.
MD: 10,88
Inclination: 91.3°
Azimuth: 271.1°
TVD: 7,247.8
8000

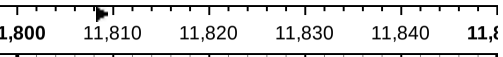

WOB: 34.7
RPM: 60
PP: 3985
SPM: 79
4
250
ROP (min/ft)
GAMMA (units)
0
0
10,920
10,930
10,940
10,950
10,960
10,970
10,980
10,990
11,000
11,010
11,020
11,030
11,040
11,050
11,060
11,070
11,080
11,090
11,100
11,110
11,120
11,130
10000
1000000
GAS (units)
C1-C4 (PPM)
4025u
3664u
MUD CHK IN:
MW 9.3+
VIS 32
T BRN GY, TR LT BRN, MOT
TRNSP, SB ANG-SB RND, MOD
OCCLY BRIT, MOD CAL CMT,
R; 50% LS: LT GY - DK GY,
T, CRPXLN - MICROXLN, CHKY,
CARB
70% SS: LT GY-LT BRN GY, TR LT BRN, MOT APPNC, TRNSL-TRNSP, SB ANG-SB RND, MOD SRT, FRI-SL FRI, OCCLY BRIT, MOD CAL CMT, TR VF DISSM PYR; 30% LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB
6000
70% LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB; 30% SS: BLK-BRN, SME LT GY, OCC GY, VF-F GR, SB ANG-SB RND,P-MOD-SRTD, PREDY SFT, OCCLY FRM, ARG MTX, TR GLAU, SL CALC
70% LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB; 30% SS: BLK-BRN, SME LT GY, OCC GY, VF-F GR, SB ANG-SB RND,P-MOD-SRTD, PREDY SFT, OCCLY FRM, ARG MTX, TR GLAU, SL CALC
6000
70% LS: LT GY - DK GY, MOD HRD,
CRPXLN - MICROXLN, CHKY, SLTY
SL CARB; 30% SS: BLK-BRN, SME L
OCC GY, VF-F GR, SB ANG-SB
RND,P-MOD-SRTD, PREDY SFT, OC
FRM, ARG MTX, TR GLAU, SL CALC
TVD (ft)
MD: 10,98:'
Inclination: 91.3°
Azimuth: 271.5°
TVD: 7,245.6'
MD: 11,07('
Inclination: 90.9°
Azimuth: 270.9°
TVD: 7,243.7'
8000

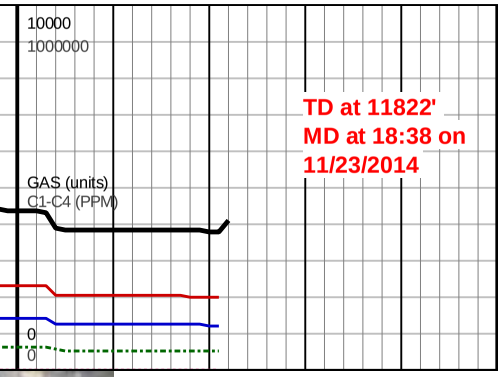

WOB: 36.4
RPM: 61
PP: 4305
SPM: 79
4
250
ROP (min/ft)
GAMMA (units)
0
0
11,140
11,150
11,160
11,170
11,180
11,190
11,200
11,210
11,220
11,230
11,240
11,250
11,260
11,270
11,280
11,290
11,300
11,310
11,320
11,330
11,340
11,350
10000
1000000
GAS (units)
C1-C4 (PPM)
4566u
3878u
5092u
6000
70% LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB; 30% SS: BLK-BRN, SME LT GY, OCC GY, VF-F GR, SB ANG-SB RND,P-MOD-SRTD, PREDY SFT, OCCLY FRM, ARG MTX, TR GLAU, SL CALC
60% LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB; 40% SS: BLK-BRN, SME LT GY, OCC GY, VF-F GR, SB ANG-SB RND,P-MOD-SRTD, PREDY SFT, OCCLY FRM, ARG MTX, TR GLAU, SL CALC
TVD (ft)
MD: 11,17(′
Inclination: 89.8°
Azimuth: 271.0°
TVD: 7,243.0′
MD: 11,26(′
Inclination: 89.0°
Azimuth: 271.1°
TVD: 7,243.9′
8000

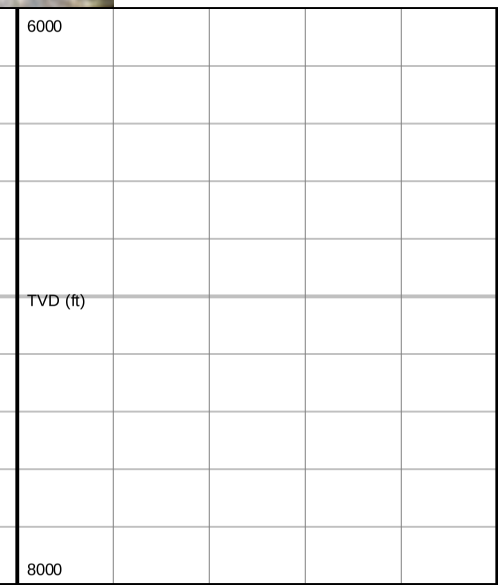

WOB: 36.3
RPM: 60
PP: 4180
SPM: 80
4
250
ROP (min/ft)
GAMMA (units)
0
0
11,360
11,370
11,380
11,390
11,400
11,410
11,420
11,430
11,440
11,450
11,460
11,470
11,480
11,490
11,500
11,510
11,520
11,530
11,540
11,550
11,560
11,570
10000
1000000
GAS (units)
C1-C4 (PPM)
3590u
4987u
6000
8000
TVD (ft)
60% LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB; 40% SS: BLK-BRN, SME LT GY, OCC GY, VF-F GR, SB ANG-SB RND,P-MOD-SRTD, PREDY SFT, OCCLY FRM, ARG MTX, TR GLAU, SL CALC
80% SS: BLK-BRN, SME LT GY, OCC GY, VF-F GR, SB ANG-SB RND,P-MOD-SRTD, PREDY SFT, OCCLY FRM, ARG MTX, TR GLAU, SL CALC; 20% LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB
MD: 11,45
Inclination: 89.9°
Azimuth: 273.2°
TVD: 7,241.
MD: 11,54
Inclination: 86.7°
Azimuth: 271.8°
TVD: 7,244.0′


WOB: 36.1
RPM: 70
PP: 4370
SPM: 80
4
250
ROP (min/ft)
GAMMA (units)
0
0
WOB: 23.7
RPM: 71
PP: 4705
SPM: 85
4
250
ROP (min/ft)
GAMMA (units)
0
0
11,580
11,590
11,600
11,610
11,620
11,630
11,640
11,650
11,660
11,670
11,680
11,690
11,700
11,710
11,720
11,730
11,740
11,750
11,760
11,770
11,780
11,790
10000
1000000
4927u
GAS (units)
C1-C4 (PPM)
0
0
10000
1000000
4172u
GAS (units)
C1-C4 (PPM)
0
0
GY, OCC GY,
P-MOD SRTD,
TX, TR GLAU,
T); 20% LS: LT
KST, CRPXLN -
SDY, SL CARB
6000
80% SS: GY-BRN, SME LT GY, OCC GY, VF-F GR, SB ANG-SB RND,P-MOD SRTD, FRM-SL HRD, BRIT, ARG MTX, TR GLAU, SL CALC (PREDY CALC CMT); 20% LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB
90% SS: GY-BRN, SME LT GY, OCC GY, VF-F GR, SB ANG-SB RND,P-MOD SRTD, FRM-SL HRD, BRIT, ARG MTX, TR GLAU, SL CALC (PREDY CALC CMT); 10% LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB. TR VF DISSM PYR. NO FLOR, NO CUT.
6000
90% SS: GY-BRN, SME LT GY, OCC GY, VF-F GR, SB ANG-SB RND,P-MOD SRTD, FRM-SL HRD, BRIT, ARG MTX, TR GLAU, SL CALC (PREDY CALC CMT); 10% LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB. TR VF DISSM PYR. NO FLOR, NO CUT.
SS: GY-BRN, SME LT GY, OCC GY, VF-F GR, SB ANG-SB RND,P-MOD SRTD, FRM-SL HRD, BRIT, ARG MTX, TR GLAU, SL CALC (PREDY CALC CMT). OCC LS: LT GY - DK GY, MOD HRD, WKST, CRPXLN - MICROXLN, CHKY, SLTY - SDY, SL CARB. TR VF DISSM PYR. NO FLOR, NO CUT.
TVD (ft)
TVD (ft)
MD: 11,64
Inclination: 87.0°
Azimuth: 269.0°
TVD: 7,249.1
MD: 11,75(
Inclination: 87.9°
Azimuth: 268.3°
TVD: 7,253.8
8000
8000


4
250
Thank You For Using
ALS Empirica
ROP (min/ft)
GAMMA (units)
0
0


1,800
11,810
11,820
11,830
11,840
11,8


10000
1000000
TD at 11822'
MD at 18:38 on
11/23/2014
GAS (units)
C1-C4 (PPM)
0
0


6000
TVD (ft)
8000