Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name:	**KERR 36C-25HZ**		
API:	**05123389800000**		
Location:	**Weld County, CO.**		
License Number:		**Region:**	**DJ Basin**
Spud Date:	**1/13/2015**	**Drilling Completed:**	**1/20/2015**
Surface Coordinates:	**576'FSL & 2056'FWL, SEC.13 T2N R67W**		
Bottom Hole Coordinates:	**1'FSL & 2590'FEL, SEC.25 T2N R67W**		
Ground Elevation (ft):	**4883'**	**K.B. Elevation (ft):**	**4899'**
Logged Interval (ft):	**6750' To: 17923'**	**Total Depth (ft):**	**17923'**
Formation:	**Codell**		
Type of Drilling Fluid:	**Water Base Mud**		

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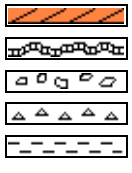
OPERATOR

Company:	**Anadarko Petroleum Corporation**
Address:	**1099 18th Street, Suite 1800**
	Denver, CO 80202-1918

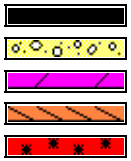
GEOLOGIST

Name: Ben Thompson / Kevin Bettenhausen
Company: Great Divide Consulting, Inc.
Address: 11990 North Grant Street, Suite 220
Northglenn, CO 80233

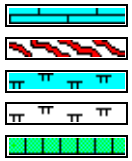
ROCK TYPES



Anhy
Bent
Brec
Cht
Clyst



Coal
Congl
Dol
Gyp
Igne



Lmst
Meta
Mrleb59
Mrlst
Salt

Shale
Shcol
Shgy
Sltst
Ss

Till

ACCESSORIES

MINERAL

Anhy
Arggrn
Arg
Bent
Bit
Brecfrag
Calc
Carb
Chtdk
Chtlt
Dol
Feldspar
Ferrpel
Ferr
Glau

Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt
Sandy
Silt
Sil
Sulphur
Tuff

FOSSIL

Algae
Amph
Belm
Bioclst
Brach
Bryozoa
Cephal
Coral
Crin
Echin
Fish
Foram
Fossil
Gastro
Oolite

Ostra
Pelec
Pellet
Pisolite
Plant
Strom

STRINGER

Anhy
Arg
Bent
Coal
Dol
Gyp
Ls
Mrst

Sltstrg
Ssstrg

TEXTURE

Boundst
Chalky
Cryxln
Earthy
Finexln
Grainst
Lithogr
Microxln
Mudst
Packst
Wackest

OTHER SYMBOLS

POROSITY

Earthy
Fenest
Fracture
Inter
Moldic
Organic
Pinpoint

Vuggy

SORTING

Well
Moderate
Poor

ROUNDING

Rounded
Subrnd
Subang
Angular

OIL SHOW

Even

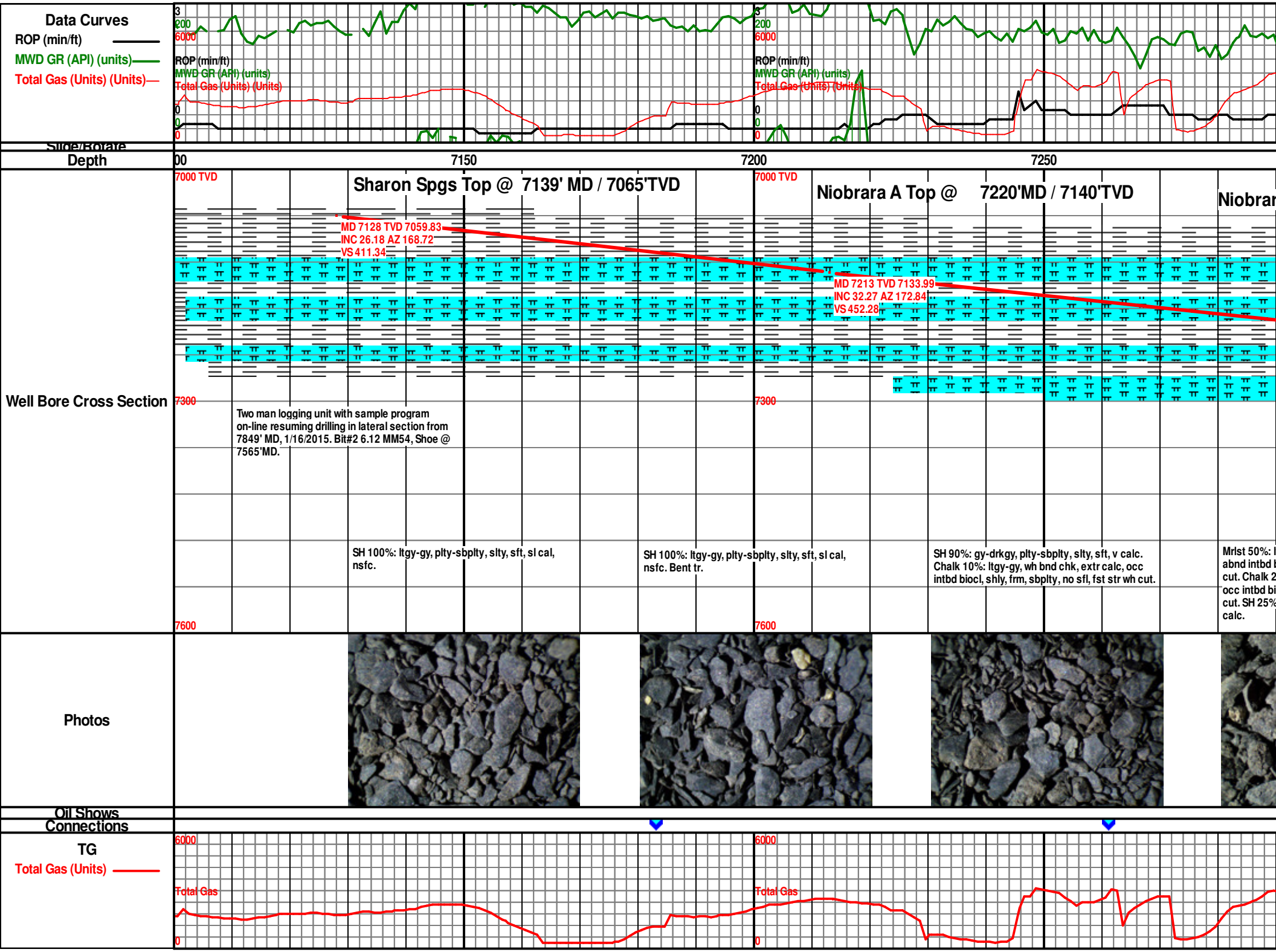
Spotted
Ques
Dead

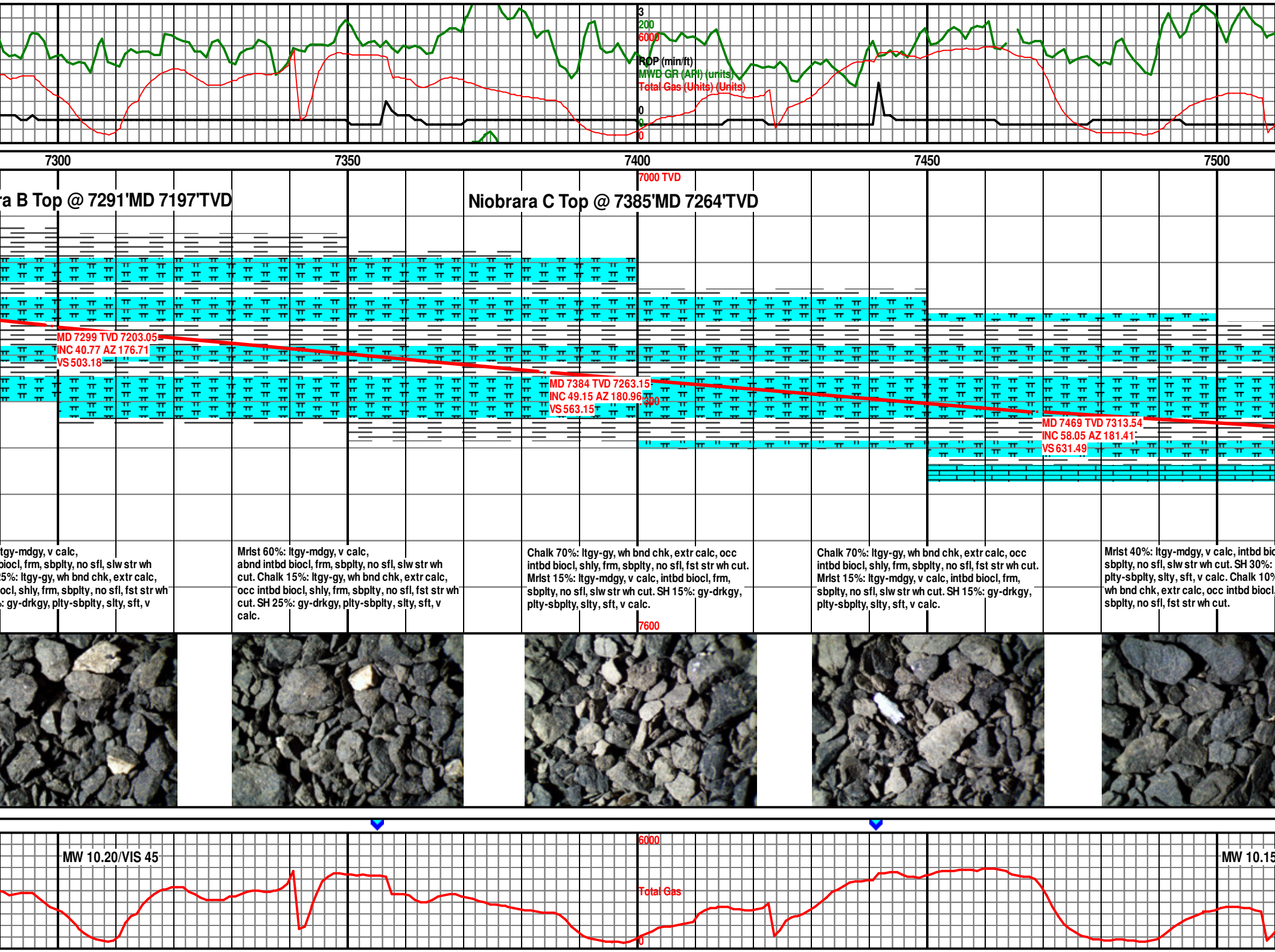
INTERVAL

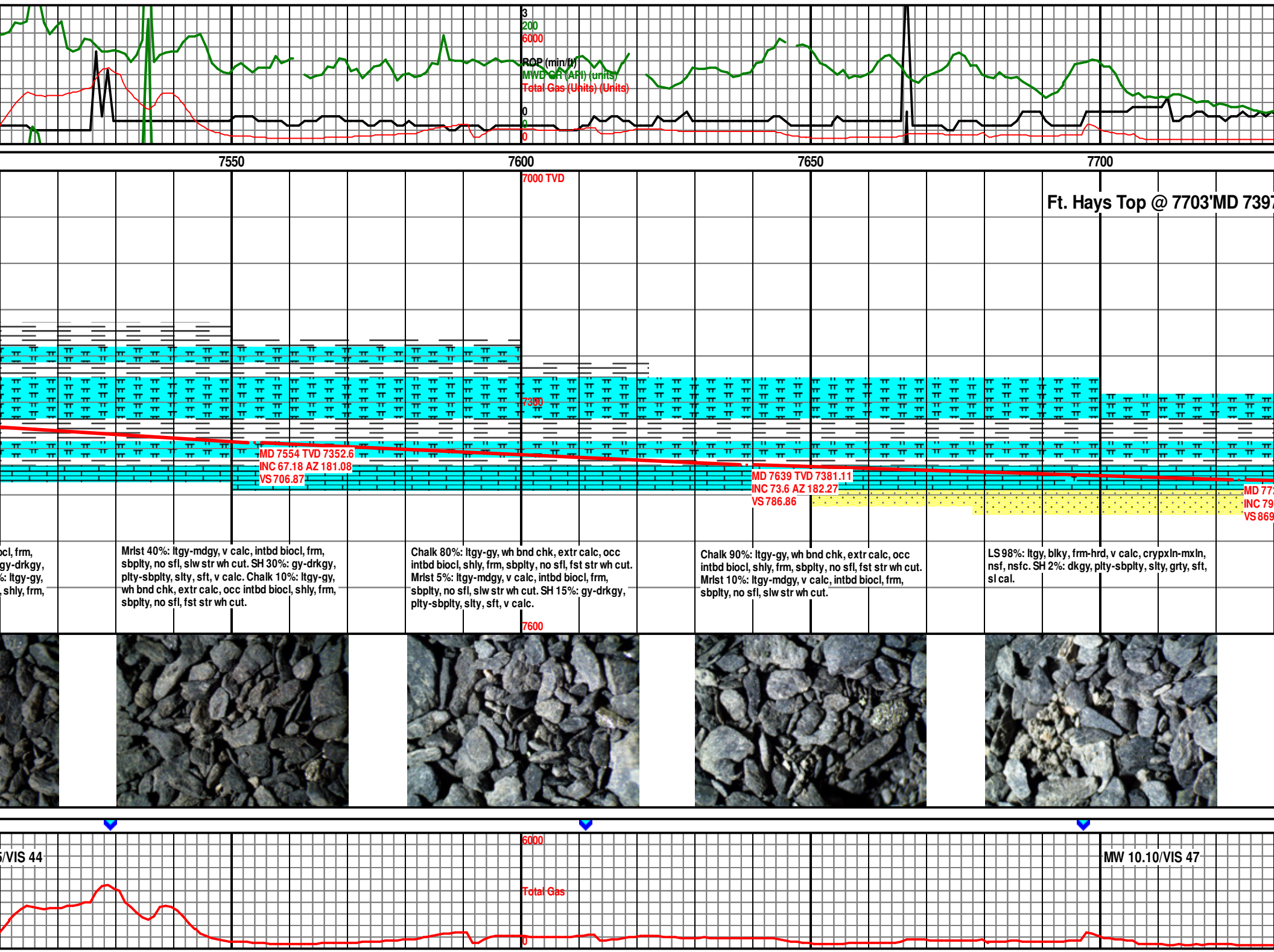
Core
Dst

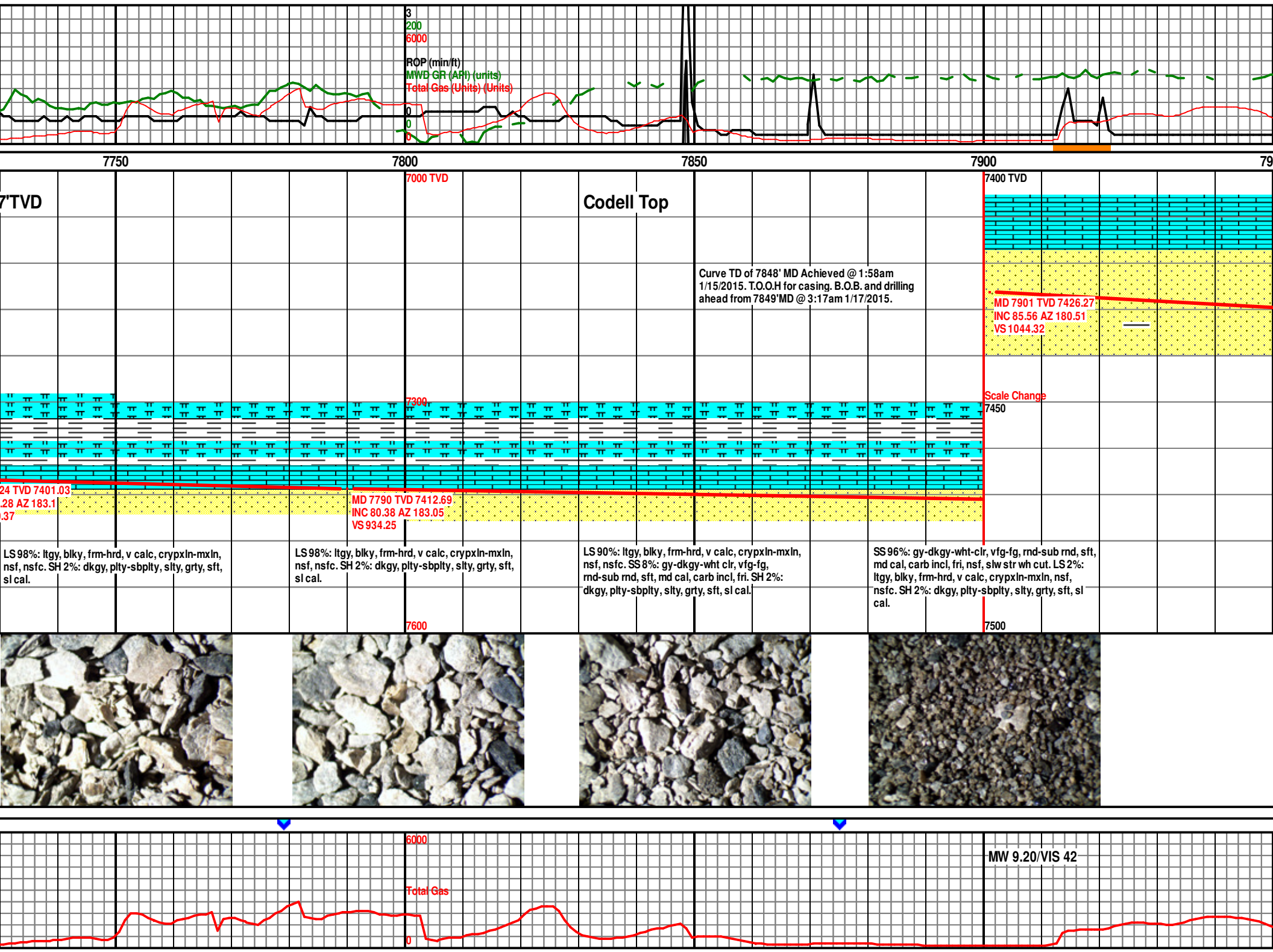
EVENT

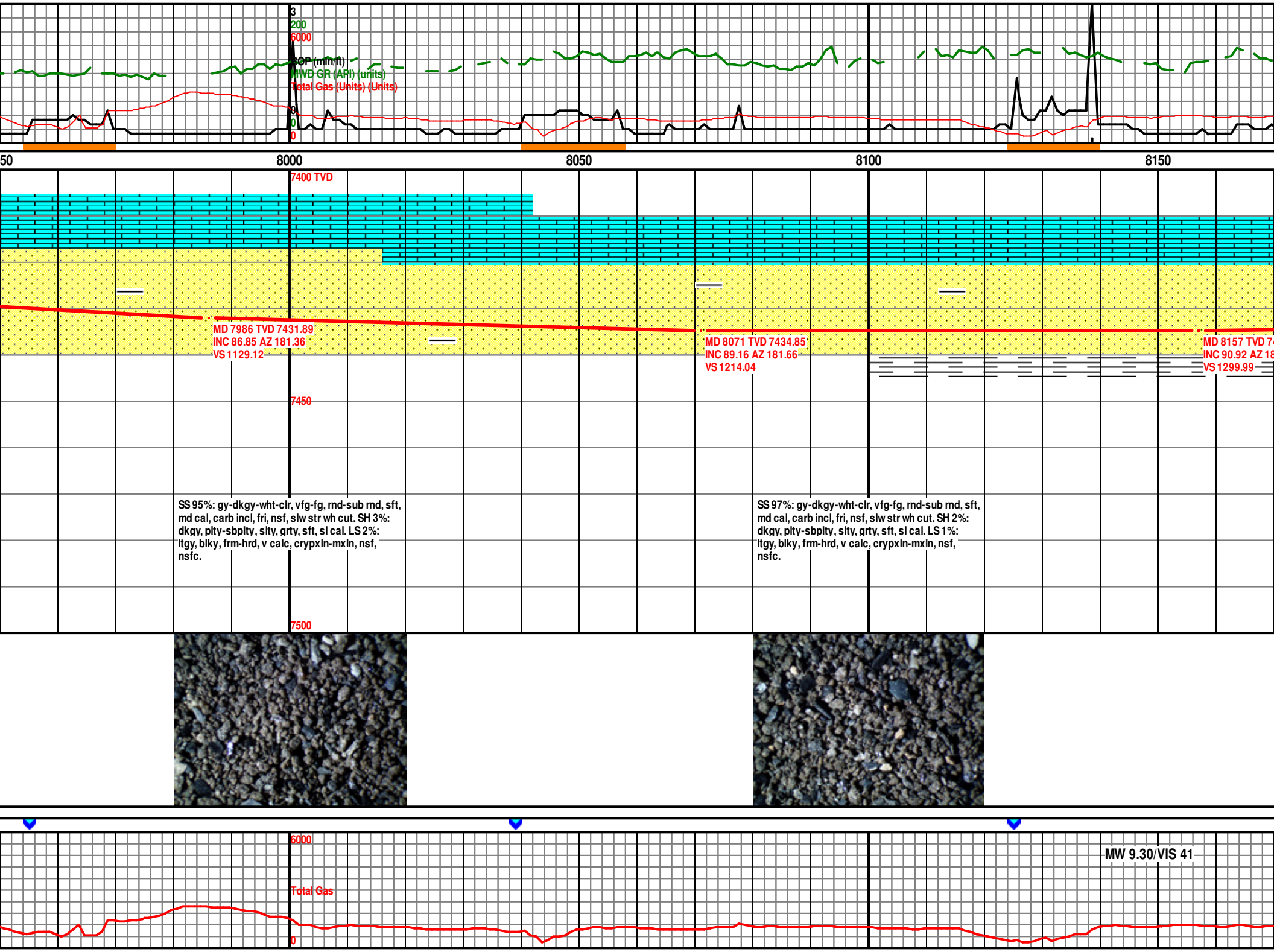
Rft
Sidewall

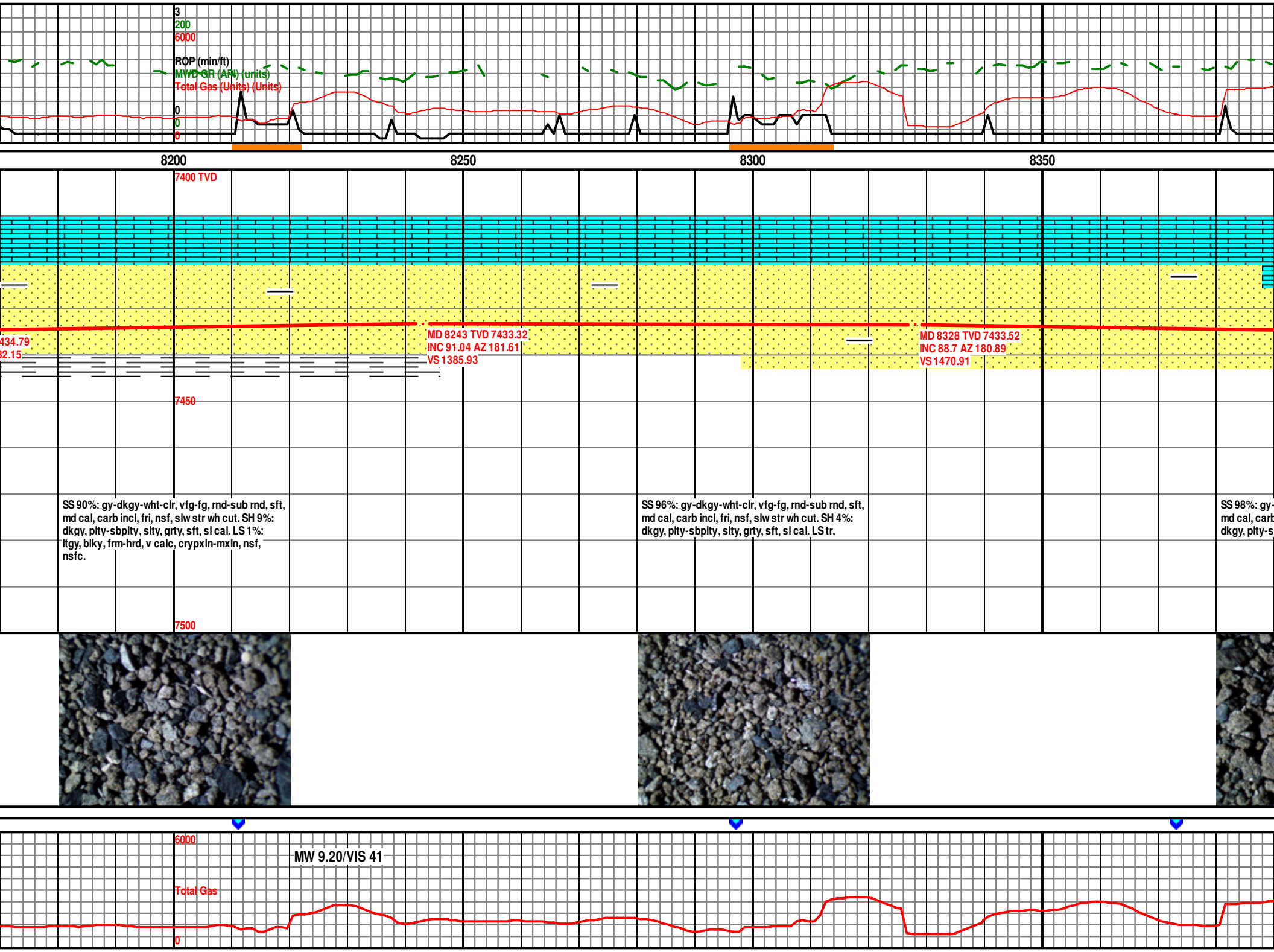

Data Curves
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
3
200
6000
0
0
0
Slide/Rotate
Depth
00
7150
7200
7250
7000 TVD
Sharon Spgs Top @ 7139' MD / 7065'TVD
Niobrara A Top @ 7220'MD / 7140'TVD
Niobrar
MD 7128 TVD 7059.83
INC 26.18 AZ 168.72
VS 411.34
MD 7213 TVD 7133.99
INC 32.27 AZ 172.84
VS 452.28
7300
7600
Well Bore Cross Section
Two man logging unit with sample program on-line resuming drilling in lateral section from 7849' MD, 1/16/2015. Bit#2 6.12 MM54, Shoe @ 7565'MD.
SH 100%: ltgy-gy, plty-sbplty, slty, sft, sl cal, nsfc.
SH 100%: ltgy-gy, plty-sbplty, slty, sft, sl cal, nsfc. Bent tr.
SH 90%: gy-drkgy, plty-sbplty, slty, sft, v calc. Chalk 10%: ltgy-gy, wh bnd chk, extr calc, occ intbd biocl, shly, frm, sbplty, no sfl, fst str wh cut.
Mrlst 50%: l
abnd intbd l
cut. Chalk 2
occ intbd bi
cut. SH 25%
calc.
Photos
Oil Shows
Connections
TG
Total Gas (Units)
6000
Total Gas
0

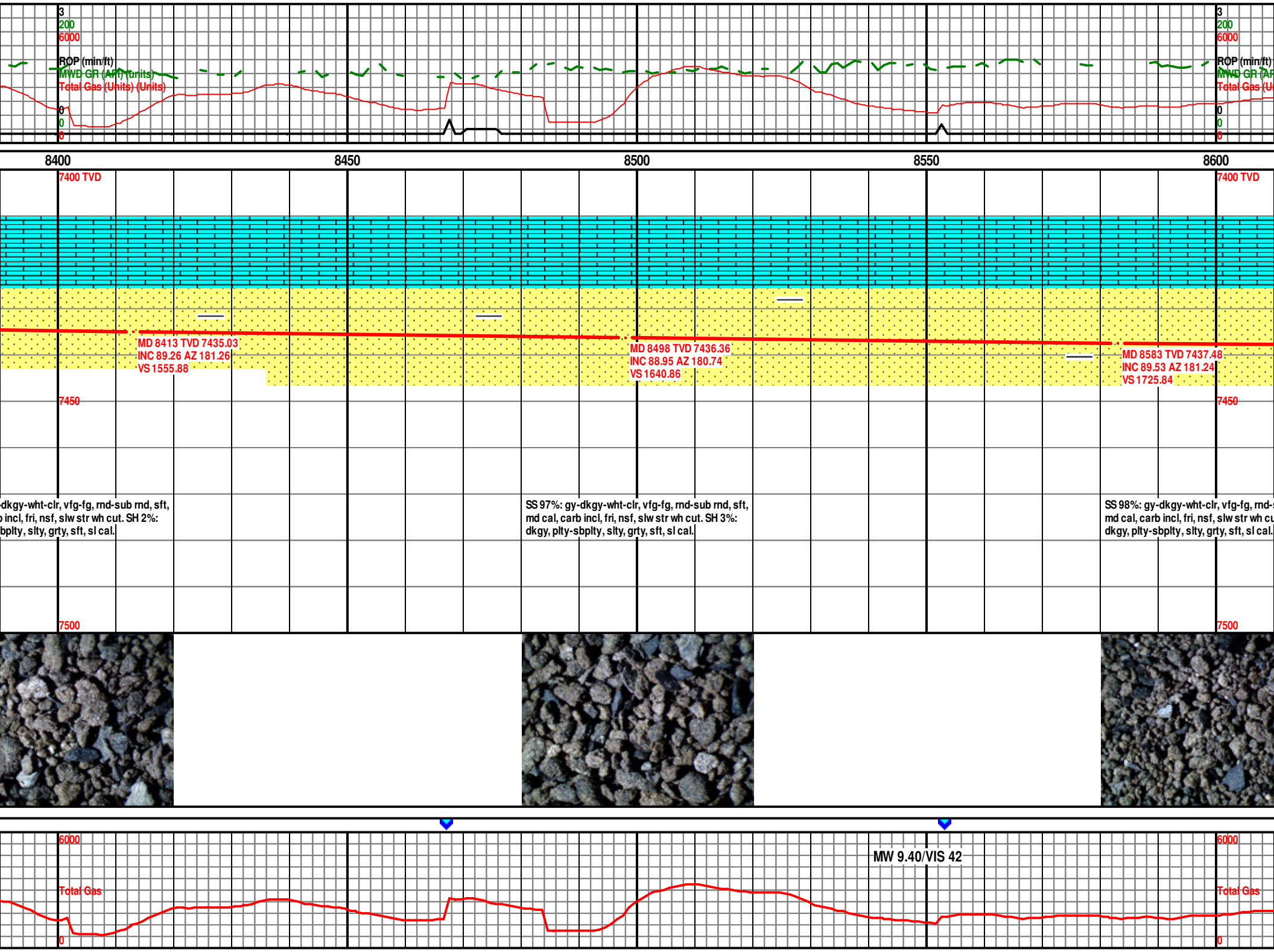

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
7300
7350
7400
7450
7500
7000 TVD
ra B Top @ 7291'MD 7197'TVD
Niobrara C Top @ 7385'MD 7264'TVD
MD 7299 TVD 7203.05
INC 40.77 AZ 176.71
VS 503.18
MD 7384 TVD 7263.15
INC 49.15 AZ 180.96
VS 563.15
MD 7469 TVD 7313.54
INC 58.05 AZ 181.41
VS 631.49
tgy-mdgy, v calc,
biocl, frm, sbplty, no sfl, slw str wh
5%: ltgy-gy, wh bnd chk, extr calc,
ocl, shly, frm, sbplty, no sfl, fst str wh
: gy-drkgy, plty-sbplty, slty, sft, v
Mrlst 60%: ltgy-mdgy, v calc,
abnd intbd biocl, frm, sbplty, no sfl, slw str wh
cut. Chalk 15%: ltgy-gy, wh bnd chk, extr calc,
occ intbd biocl, shly, frm, sbplty, no sfl, fst str wh
cut. SH 25%: gy-drkgy, plty-sbplty, slty, sft, v
calc.
Chalk 70%: ltgy-gy, wh bnd chk, extr calc, occ
intbd biocl, shly, frm, sbplty, no sfl, fst str wh cut.
Mrlst 15%: ltgy-mdgy, v calc, intbd biocl, frm,
sbplty, no sfl, slw str wh cut. SH 15%: gy-drkgy,
plty-sbplty, slty, sft, v calc.
7600
Chalk 70%: ltgy-gy, wh bnd chk, extr calc, occ
intbd biocl, shly, frm, sbplty, no sfl, fst str wh cut.
Mrlst 15%: ltgy-mdgy, v calc, intbd biocl, frm,
sbplty, no sfl, slw str wh cut. SH 15%: gy-drkgy,
plty-sbplty, slty, sft, v calc.
Mrlst 40%: ltgy-mdgy, v calc, intbd bio
sbplty, no sfl, slw str wh cut. SH 30%:
plty-sbplty, slty, sft, v calc. Chalk 10%
wh bnd chk, extr calc, occ intbd biocl
sbplty, no sfl, fst str wh cut.
MW 10.20/VIS 45
6000
Total Gas
0
MW 10.15

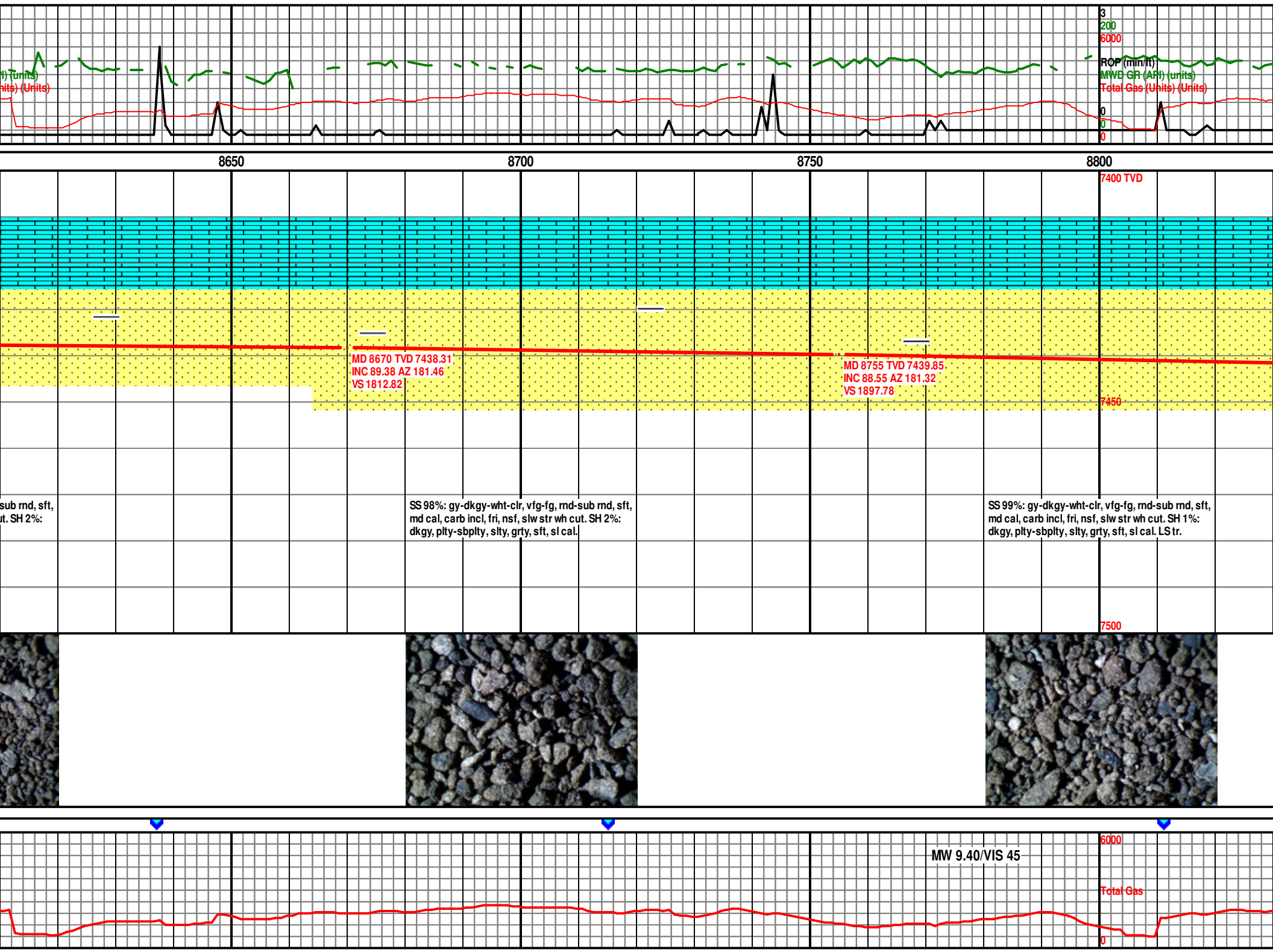

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
7550
7600
7650
7700
7000 TVD
Ft. Hays Top @ 7703'MD 7397
7350
MD 7554 TVD 7352.6
INC 67.18 AZ 181.08
VS 706.87
MD 7639 TVD 7381.11
INC 73.6 AZ 182.27
VS 786.86
MD 77
INC 79
VS 869
cl, frm,
gy-drkgy,
: ltgy-gy,
shly, frm,
Mrlst 40%: ltgy-mdgy, v calc, intbd biocl, frm, sbplty, no sfl, slw str wh cut. SH 30%: gy-drkgy, plty-sbplty, slty, sft, v calc. Chalk 10%: ltgy-gy, wh bnd chk, extr calc, occ intbd biocl, shly, frm, sbplty, no sfl, fst str wh cut.
Chalk 80%: ltgy-gy, wh bnd chk, extr calc, occ intbd biocl, shly, frm, sbplty, no sfl, fst str wh cut. Mrlst 5%: ltgy-mdgy, v calc, intbd biocl, frm, sbplty, no sfl, slw str wh cut. SH 15%: gy-drkgy, plty-sbplty, slty, sft, v calc.
7600
Chalk 90%: ltgy-gy, wh bnd chk, extr calc, occ intbd biocl, shly, frm, sbplty, no sfl, fst str wh cut. Mrlst 10%: ltgy-mdgy, v calc, intbd biocl, frm, sbplty, no sfl, slw str wh cut.
LS 98%: ltgy, blky, frm-hrd, v calc, crypxln-mxln, nsf, nsfc. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
/VIS 44
6000
Total Gas
0
MW 10.10/VIS 47

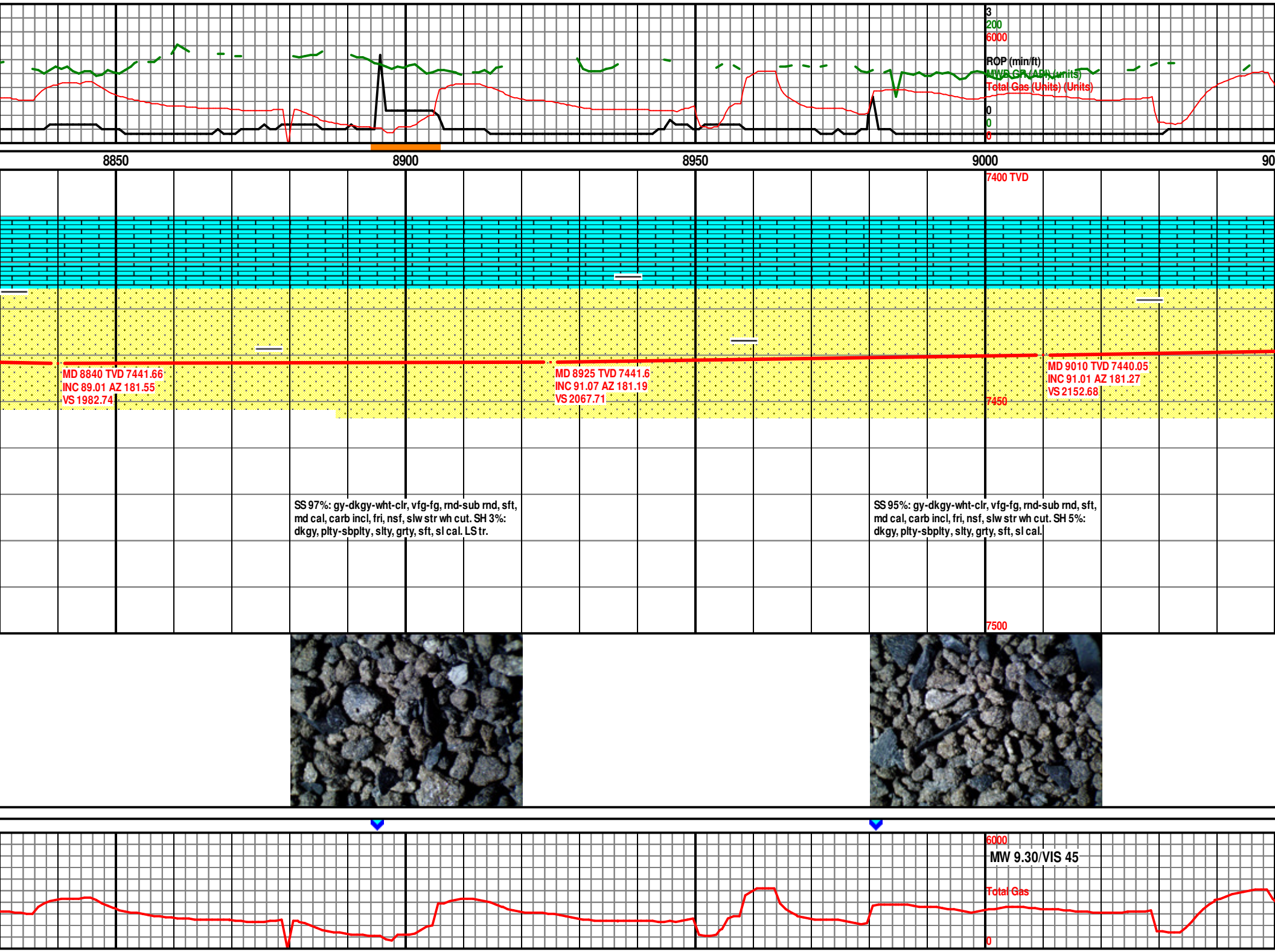

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
7750
7800
7850
7900
79
7000 TVD
7'TVD
Codell Top
7400 TVD
Curve TD of 7848' MD Achieved @ 1:58am 1/15/2015. T.O.O.H for casing. B.O.B. and drilling ahead from 7849'MD @ 3:17am 1/17/2015.
MD 7901 TVD 7426.27
INC 85.56 AZ 180.51
VS 1044.32
Scale Change
7450
7300
24 TVD 7401.03
.28 AZ 183.1
.37
MD 7790 TVD 7412.69
INC 80.38 AZ 183.05
VS 934.25
LS 98%: ltgy, blky, frm-hrd, v calc, crypxln-mxln, nsf, nsfc. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
LS 98%: ltgy, blky, frm-hrd, v calc, crypxln-mxln, nsf, nsfc. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
LS 90%: ltgy, blky, frm-hrd, v calc, crypxln-mxln, nsf, nsfc. SS 8%: gy-dkgy-wht clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 96%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. LS 2%: ltgy, blky, frm-hrd, v calc, crypxln-mxln, nsf, nsfc. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7600
7500
6000
Total Gas
0
MW 9.20/VIS 42


3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
50
8000
8050
8100
8150
7400 TVD
MD 7986 TVD 7431.89
INC 86.85 AZ 181.36
VS 1129.12
MD 8071 TVD 7434.85
INC 89.16 AZ 181.66
VS 1214.04
MD 8157 TVD 74
INC 90.92 AZ 18
VS 1299.99
7450
7500
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS 2%: ltgy, blky, frm-hrd, v calc, crypxln-mxln, nsf, nsfc.
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS 1%: ltgy, blky, frm-hrd, v calc, crypxln-mxln, nsf, nsfc.
6000
Total Gas
0
MW 9.30/VIS 41


3
200
6000
ROP (min/ft)
MWD-GR (API) (units)
Total Gas (Units) (Units)
0
0
0
8200
8250
8300
8350
7400 TVD
MD 8243 TVD 7433.32
INC 91.04 AZ 181.61
VS 1385.93
MD 8328 TVD 7433.52
INC 88.7 AZ 180.89
VS 1470.91
7450
SS 90%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 9%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS 1%: ltgy, blky, frm-hrd, v calc, crypxln-mxln, nsf, nsfc.
SS 96%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 4%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr.
7500
6000
MW 9.20/VIS 41
Total Gas
0


3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
8
8400
8450
8500
8550
8600
7400 TVD
MD 8413 TVD 7435.03
INC 89.26 AZ 181.26
VS 1555.88
MD 8498 TVD 7436.36
INC 88.95 AZ 180.74
VS 1640.86
MD 8583 TVD 7437.48
INC 89.53 AZ 181.24
VS 1725.84
7450
-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
incl, fri, nsf, slw str wh cut. SH 2%:
bplty, slty, grty, sft, sl cal.
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
md cal, carb incl, fri, nsf, slw str wh cut. SH 3%:
dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-
md cal, carb incl, fri, nsf, slw str wh cu
dkgy, plty-sbplty, slty, grty, sft, sl cal.
7500
6000
Total Gas
0
MW 9.40/VIS 42


3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
8650
8700
8750
8800
7400 TVD
7450
7500
MD 8670 TVD 7438.31
INC 89.38 AZ 181.46
VS 1812.82
MD 8755 TVD 7439.85
INC 88.55 AZ 181.32
VS 1897.78
sub rnd, sft,
t. SH 2%:
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr.
MW 9.40/VIS 45
6000
Total Gas
0


3
200
6000
ROP (min/ft)
MWD GR (API units)
Total Gas (Units) (Units)
0
0
0
8850
8900
8950
9000
90
7400 TVD
MD 8840 TVD 7441.66
INC 89.01 AZ 181.55
VS 1982.74
MD 8925 TVD 7441.6
INC 91.07 AZ 181.19
VS 2067.71
MD 9010 TVD 7440.05
INC 91.01 AZ 181.27
VS 2152.68
7450
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr.
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 5%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7500
6000
MW 9.30/VIS 45
Total Gas
0

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0

50 9100 9150 9200 9250

7400 TVD

MD 9095 TVD 7438.17
INC 91.53 AZ 181.33
VS 2237.64

MD 9180 TVD 7436.47
INC 90.76 AZ 180.22
VS 2322.62

7450

SS 96%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 4%: dkgy, plty-sbplty, slty, grty, sft, sl cal.

SS 96%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 4%: dkgy, plty-sbplty, slty, grty, sft, sl cal.

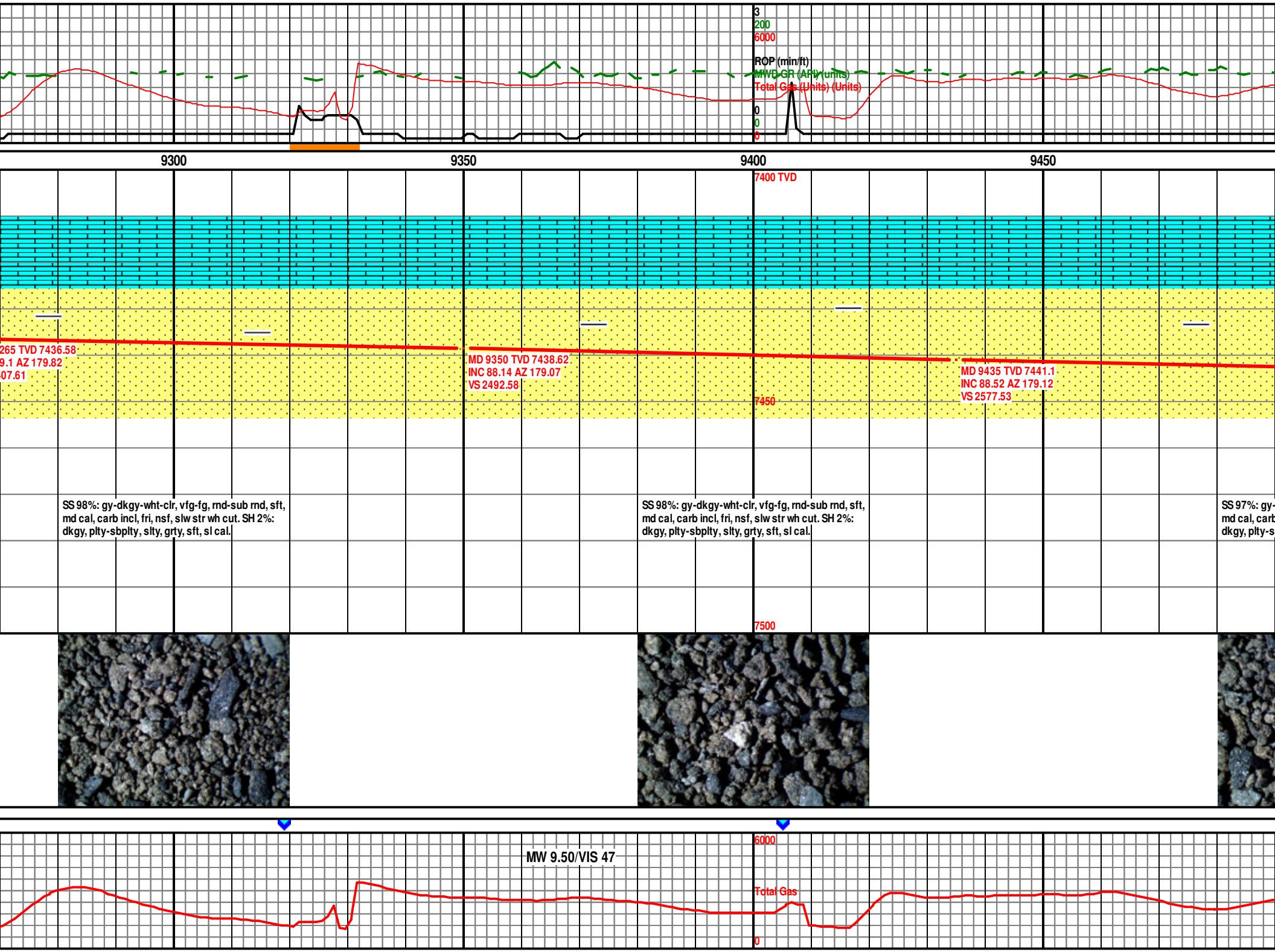
7500

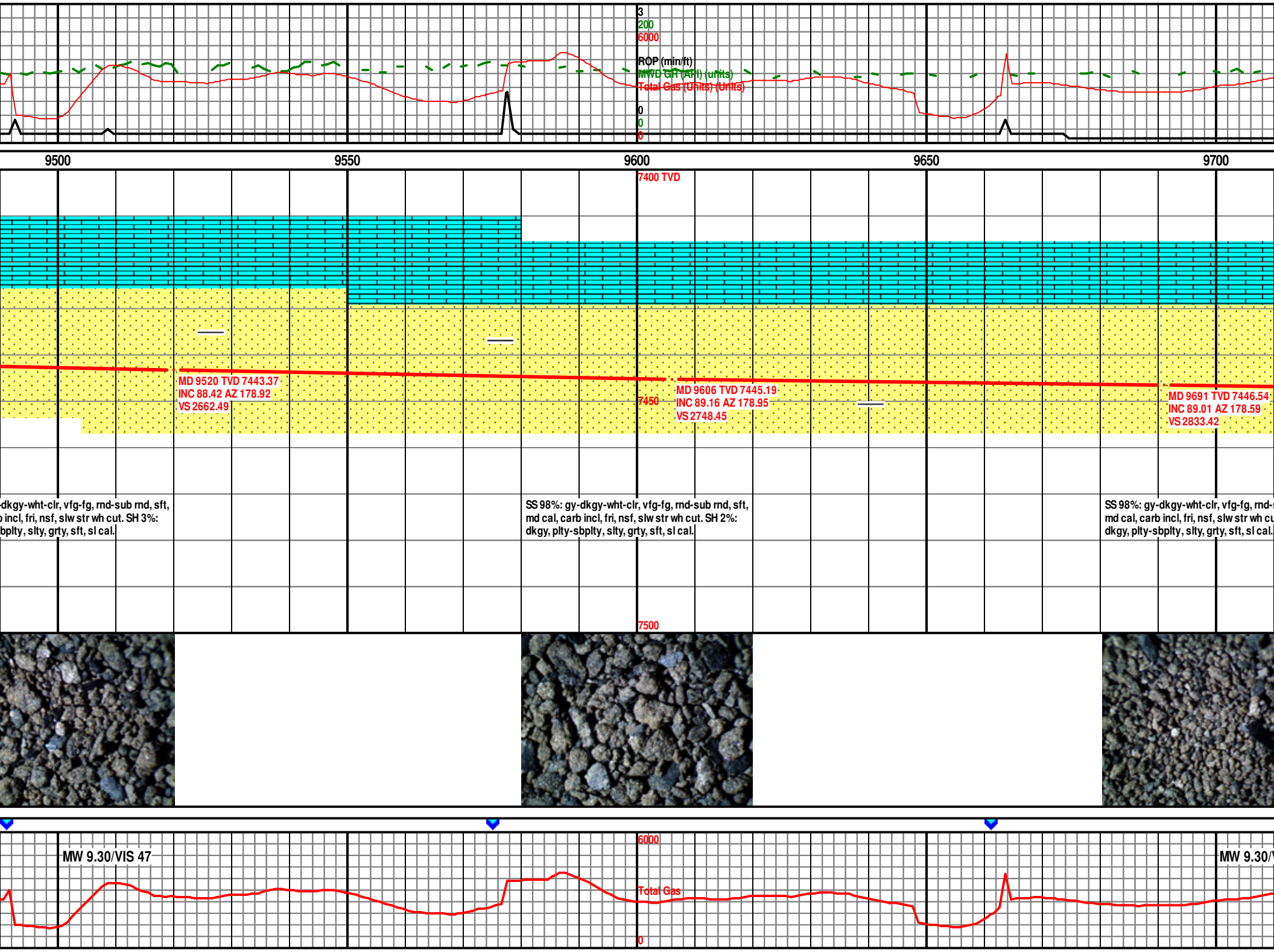
6000

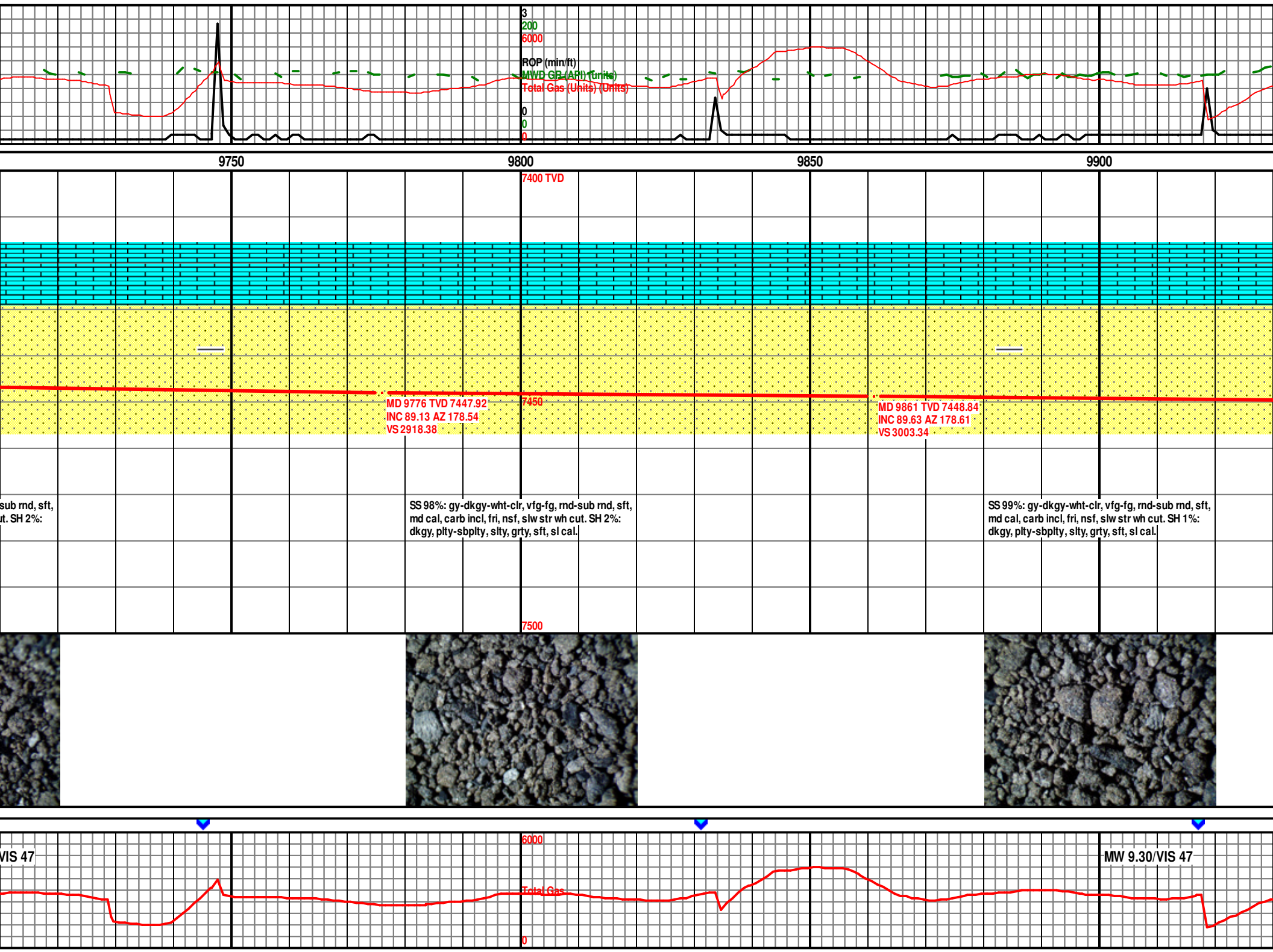
MW 9.30/VIS 45

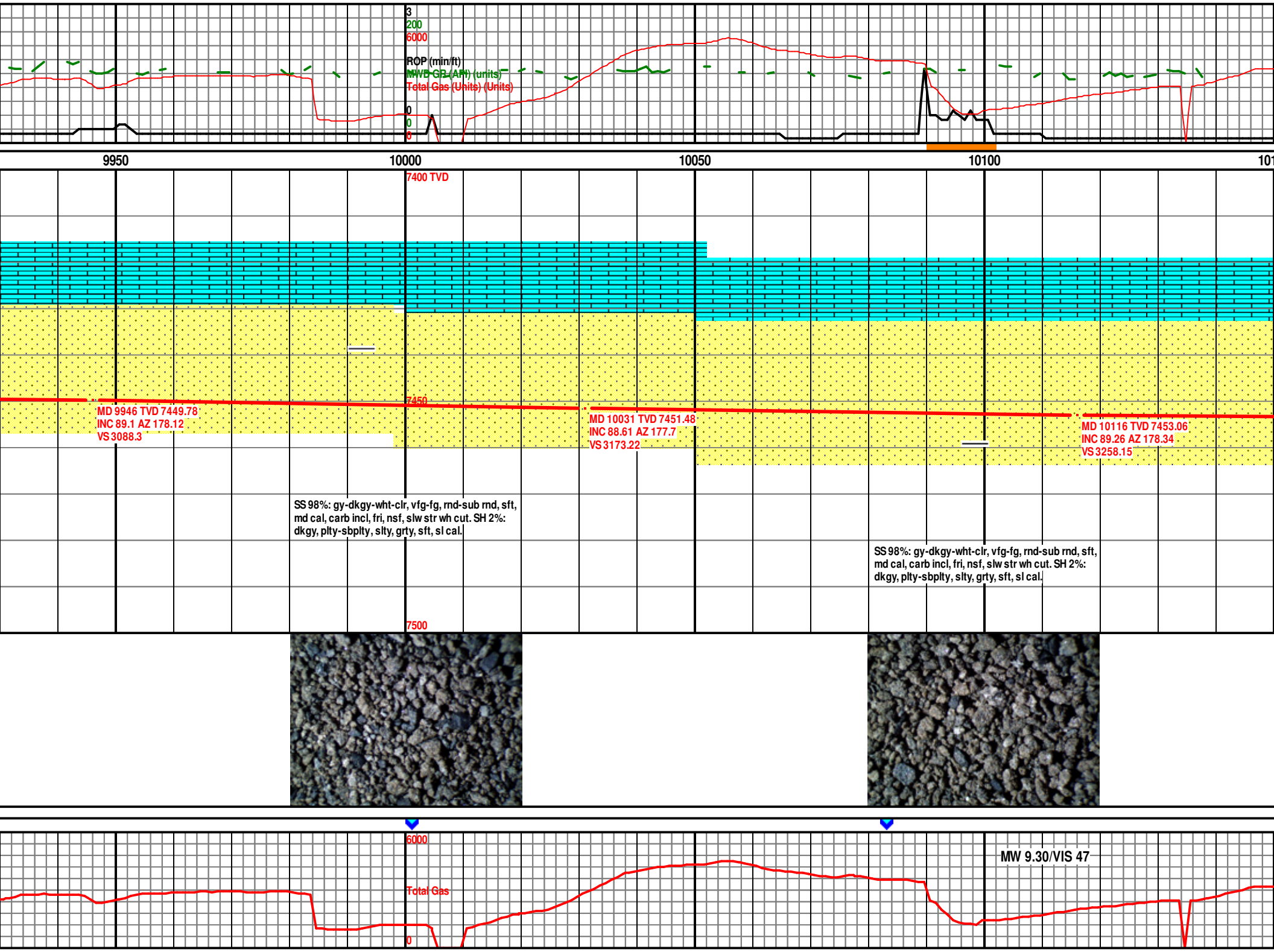
Total Gas

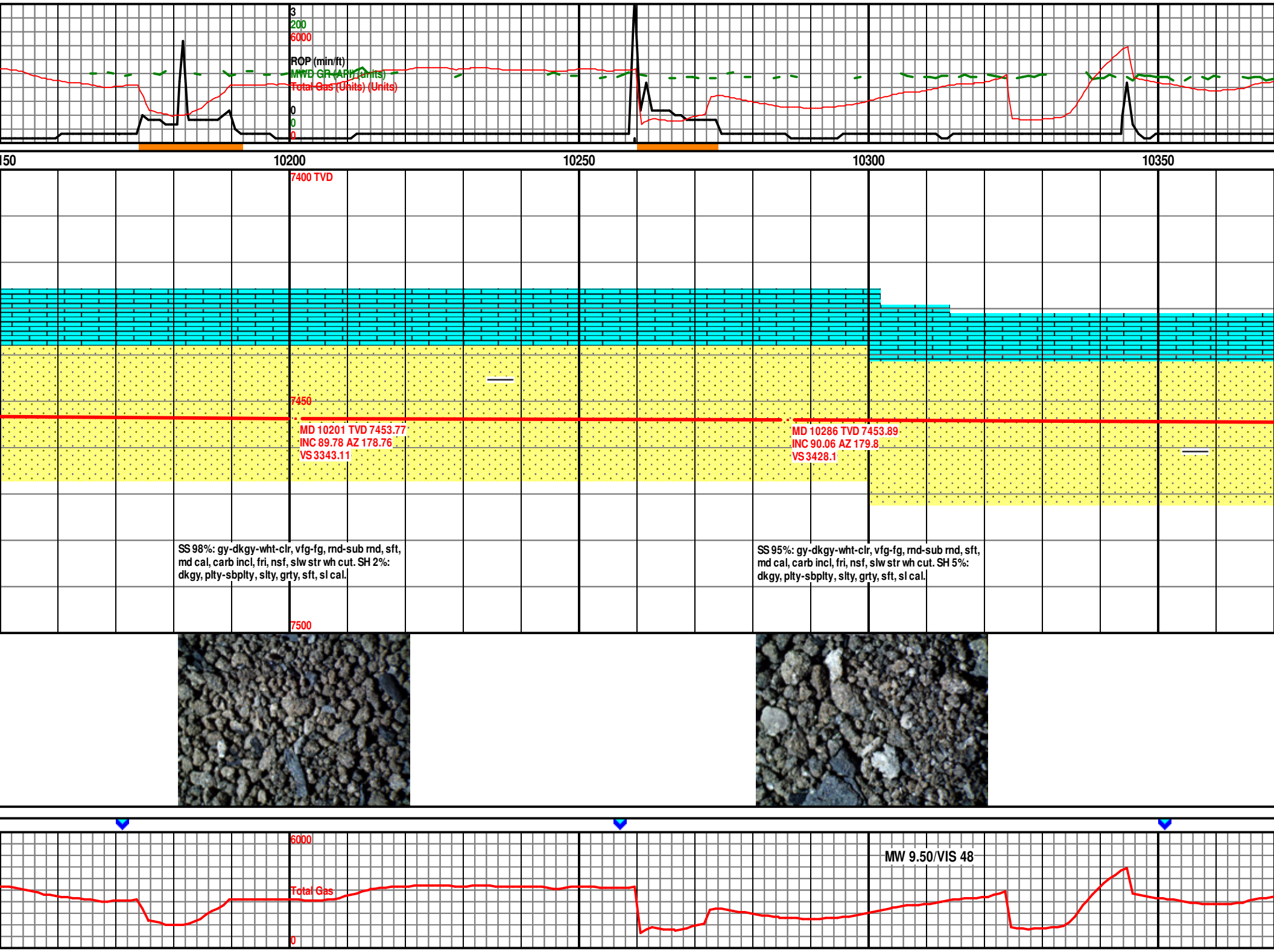
0

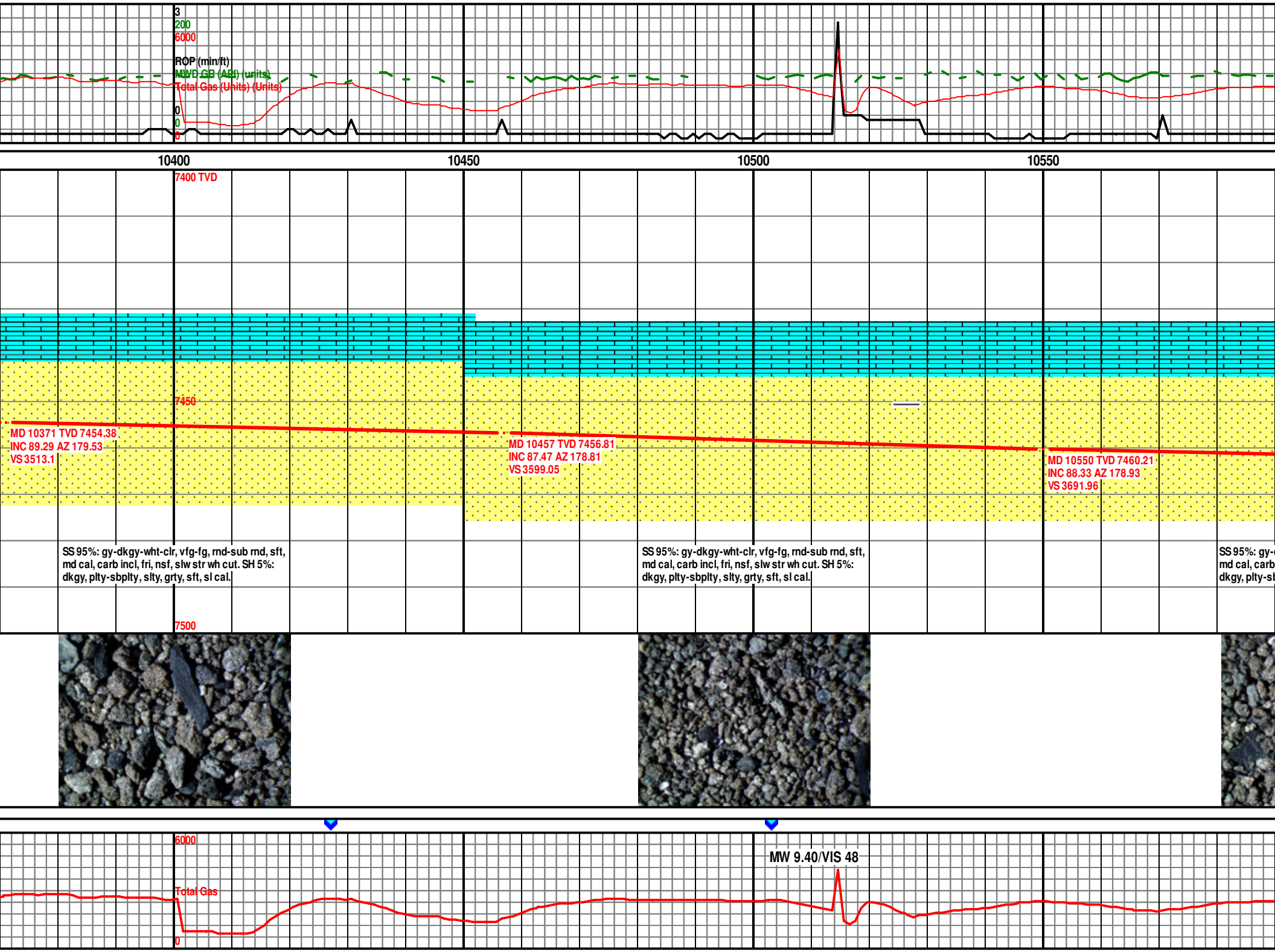

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
9300
9350
9400
9450
7400 TVD
265 TVD 7436.58
9.1 AZ 179.82
07.61
MD 9350 TVD 7438.62
INC 88.14 AZ 179.07
VS 2492.58
MD 9435 TVD 7441.1
INC 88.52 AZ 179.12
VS 2577.53
7450
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 97%: gy-
md cal, carb
dkgy, plty-s
7500
MW 9.50/VIS 47
6000
Total Gas
0

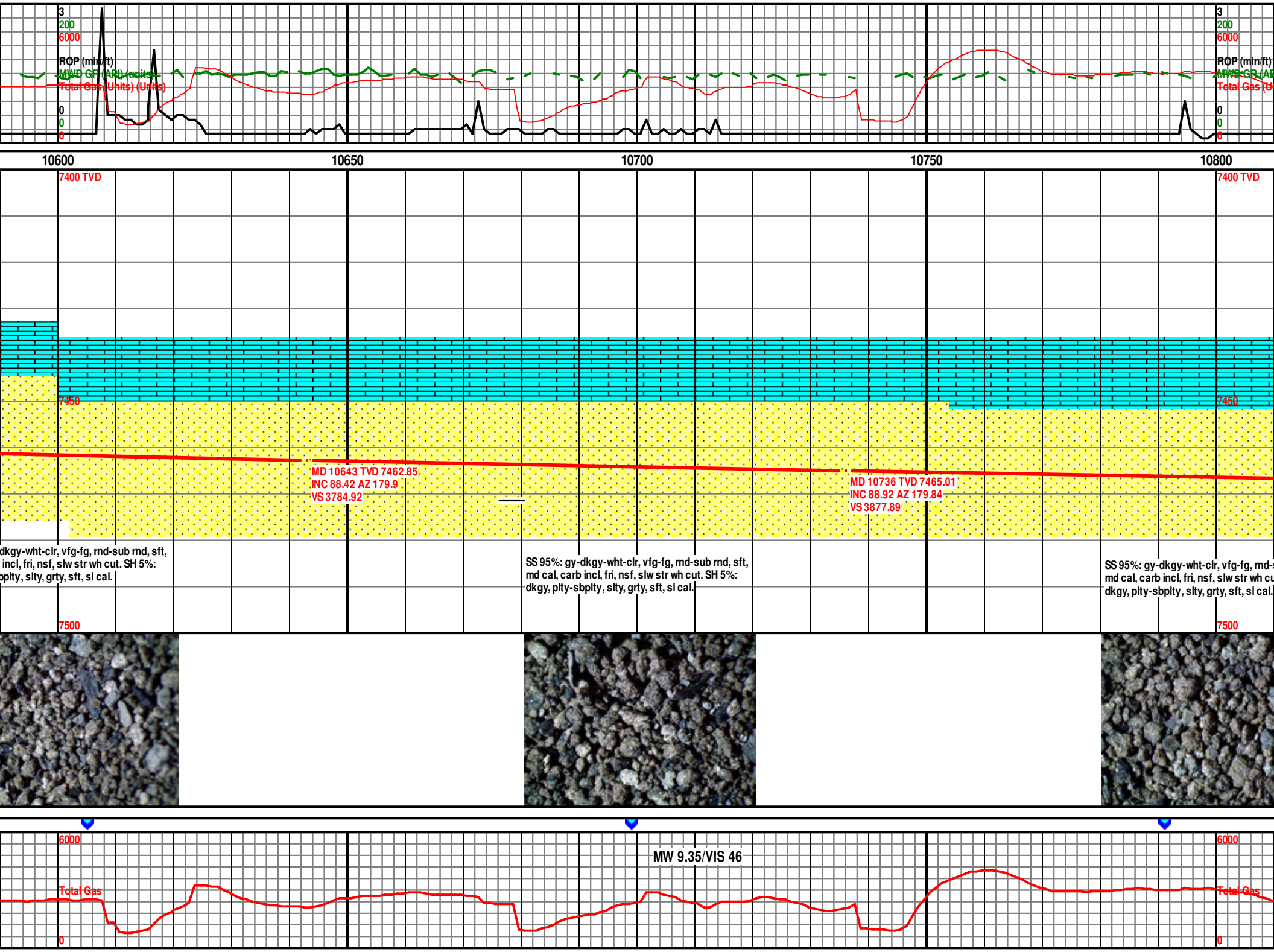

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
9500
9550
9600
9650
9700
7400 TVD
MD 9520 TVD 7443.37
INC 88.42 AZ 178.92
VS 2662.49
7450
MD 9606 TVD 7445.19
INC 89.16 AZ 178.95
VS 2748.45
MD 9691 TVD 7446.54
INC 89.01 AZ 178.59
VS 2833.42
-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
incl, fri, nsf, slw str wh cut. SH 3%:
bplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
md cal, carb incl, fri, nsf, slw str wh cut. SH 2%:
dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-
md cal, carb incl, fri, nsf, slw str wh cu
dkgy, plty-sbplty, slty, grty, sft, sl cal.
7500
MW 9.30/VIS 47
6000
Total Gas
0
MW 9.30/

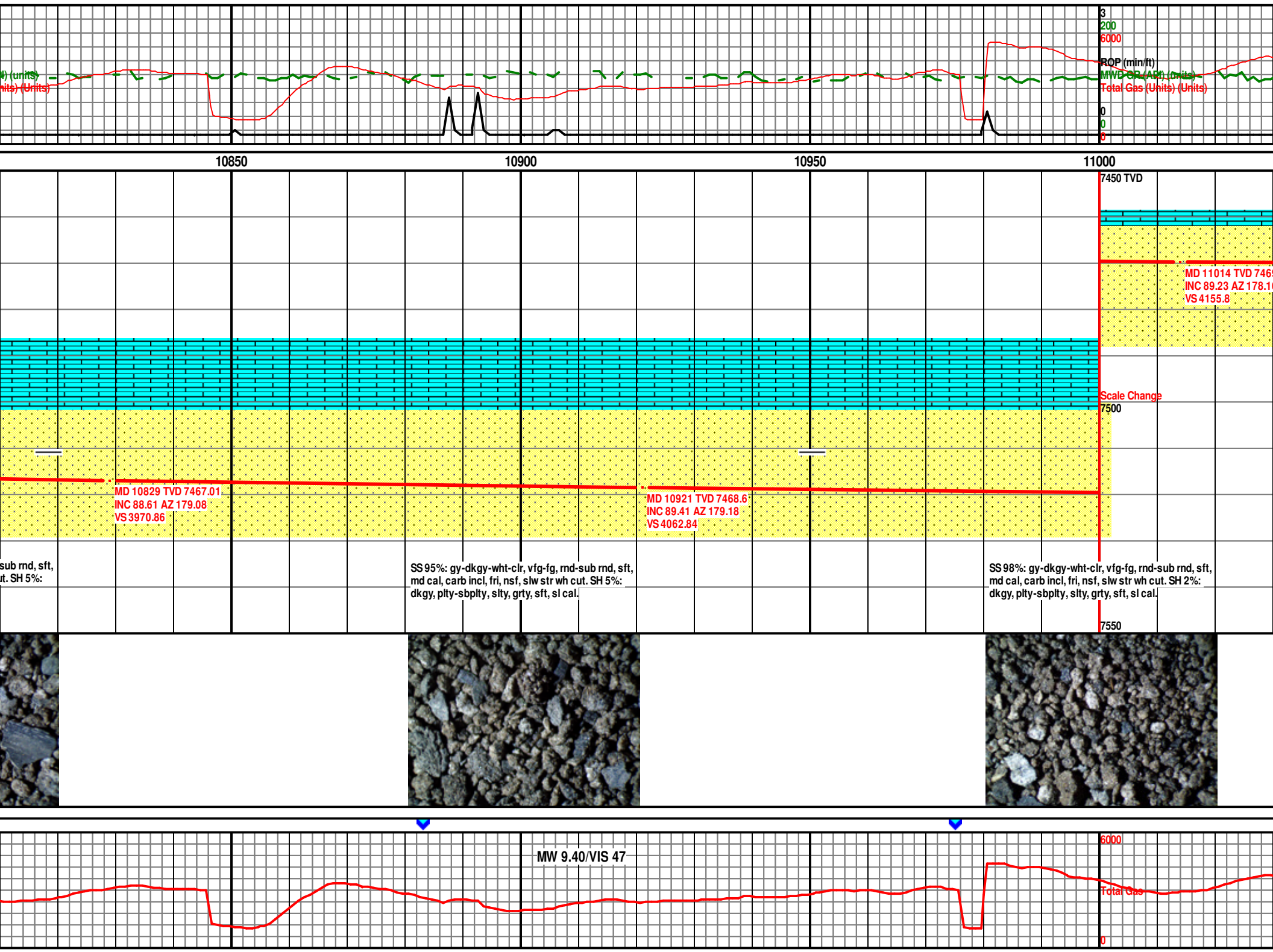

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
9750
9800
9850
9900
7400 TVD
MD 9776 TVD 7447.92
INC 89.13 AZ 178.54
VS 2918.38
7450
MD 9861 TVD 7448.84
INC 89.63 AZ 178.61
VS 3003.34
sub rnd, sft,
t. SH 2%:
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7500
VIS 47
6000
Total Gas
0
MW 9.30/VIS 47

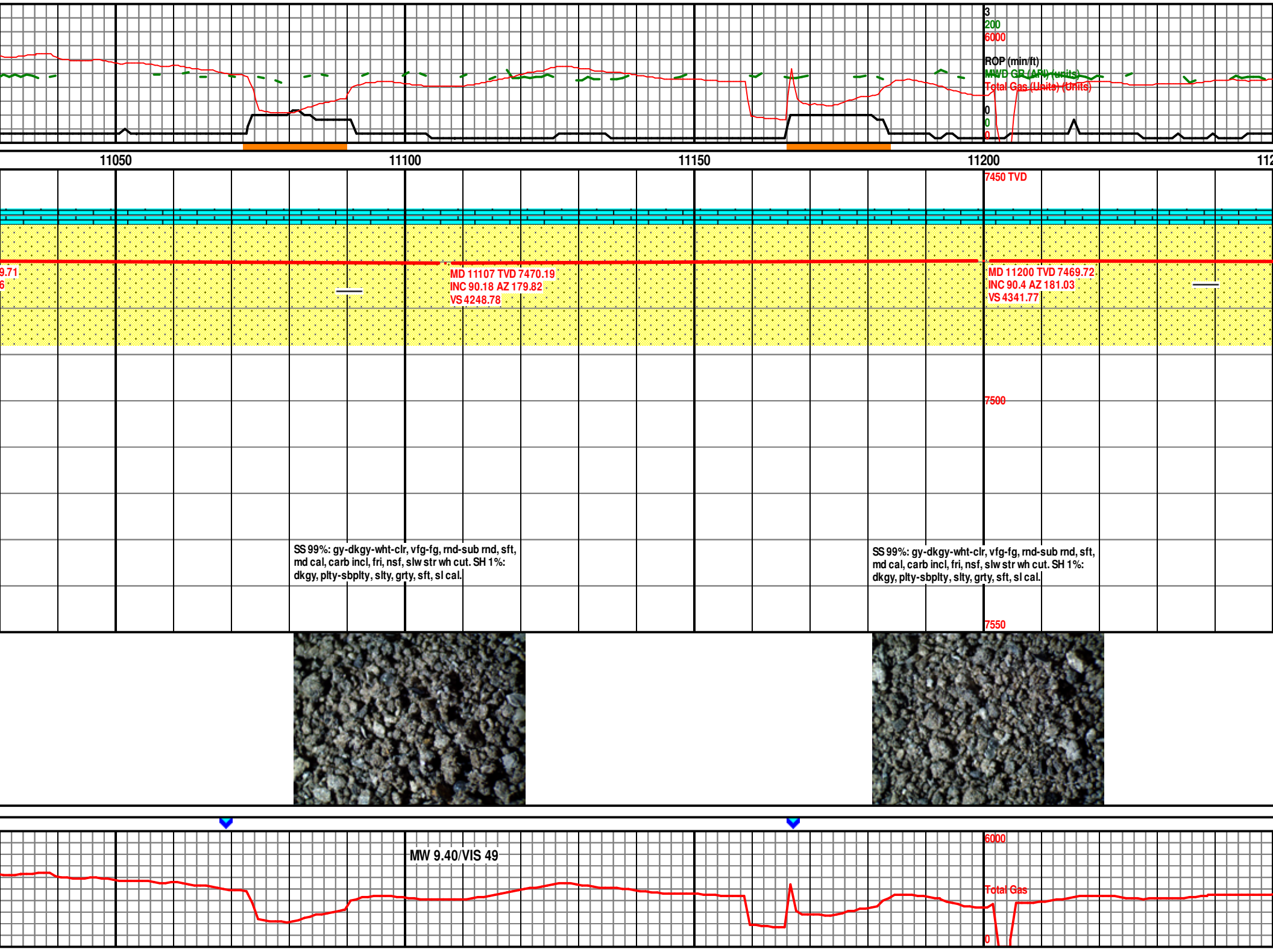

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
9950
10000
10050
10100
7400 TVD
7450
7500
MD 9946 TVD 7449.78
INC 89.1 AZ 178.12
VS 3088.3
MD 10031 TVD 7451.48
INC 88.61 AZ 177.7
VS 3173.22
MD 10116 TVD 7453.06
INC 89.26 AZ 178.34
VS 3258.15
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
6000
Total Gas
0
MW 9.30/VIS 47

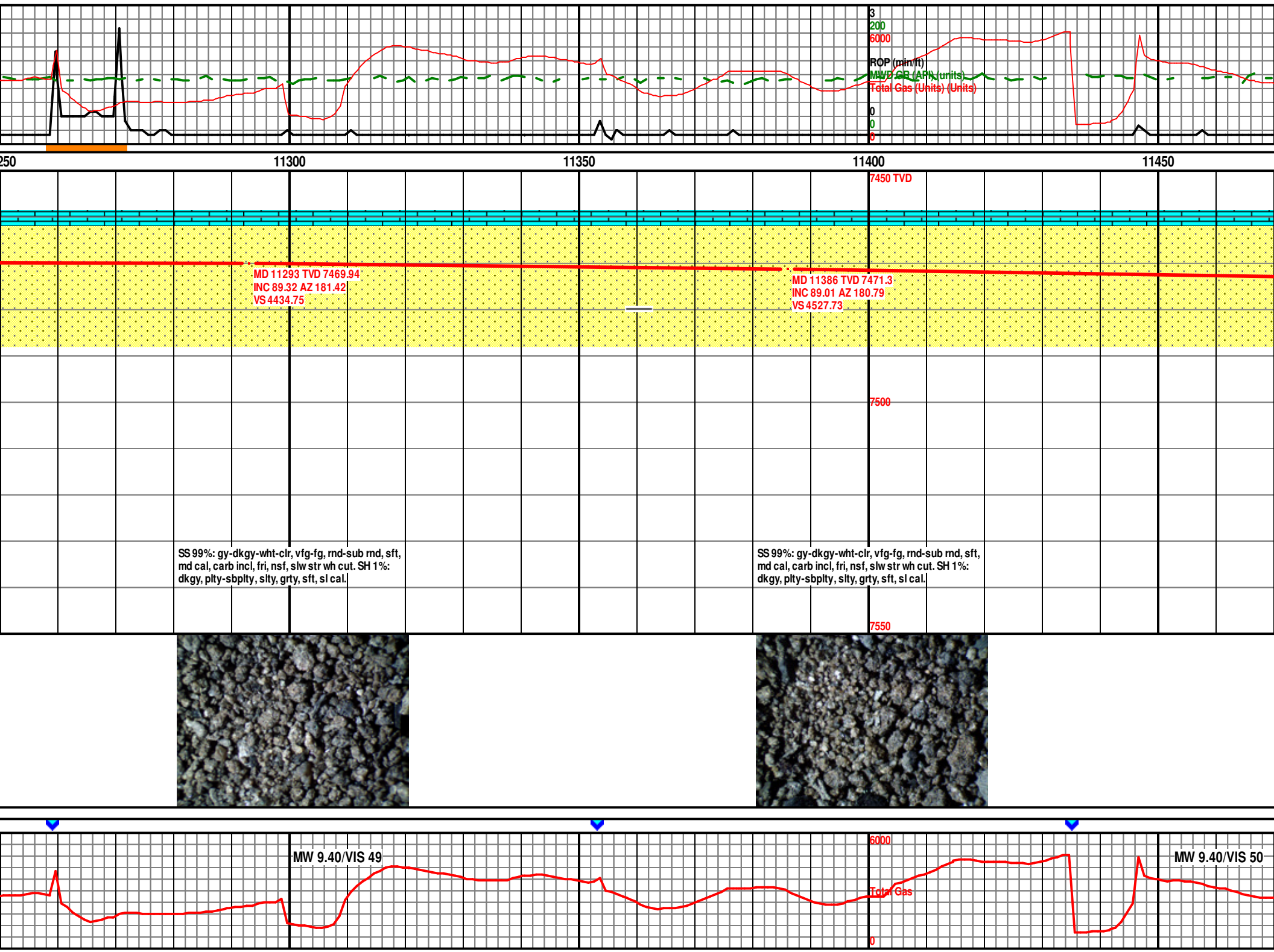

3
200
6000
ROP (min/ft)
MWD GR (API Units)
Total Gas (Units) (Units)
0
0
0
150
10200
10250
10300
10350
7400 TVD
7450
MD 10201 TVD 7453.77
INC 89.78 AZ 178.76
VS 3343.11
MD 10286 TVD 7453.89
INC 90.06 AZ 179.8
VS 3428.1
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 5%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7500
6000
Total Gas
0
MW 9.50/VIS 48

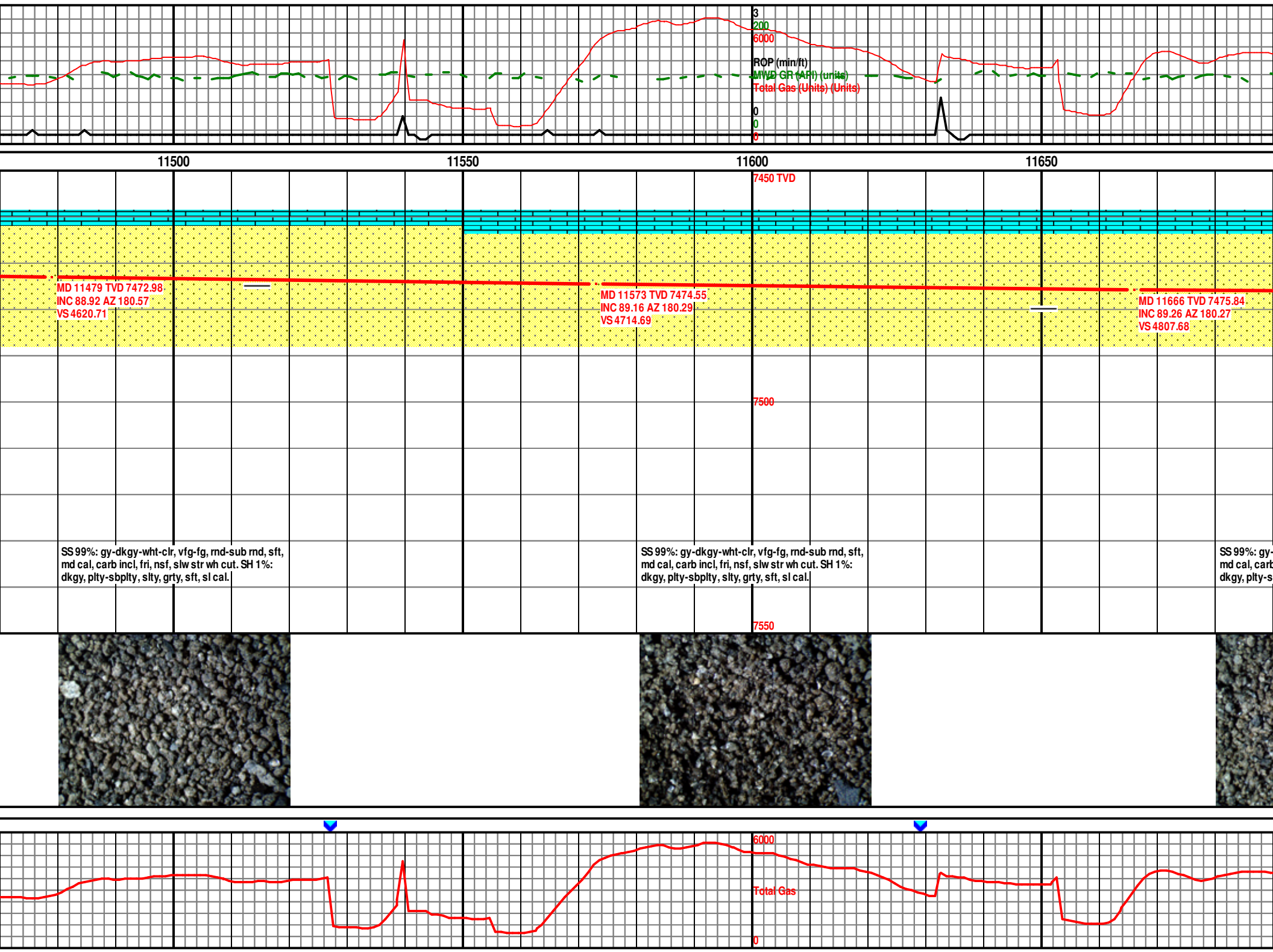

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
10400
10450
10500
10550
7400 TVD
7450
7500
MD 10371 TVD 7454.38
INC 89.29 AZ 179.53
VS 3513.1
MD 10457 TVD 7456.81
INC 87.47 AZ 178.81
VS 3599.05
MD 10550 TVD 7460.21
INC 88.33 AZ 178.93
VS 3691.96
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 5%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 5%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
6000
Total Gas
0
MW 9.40/VIS 48

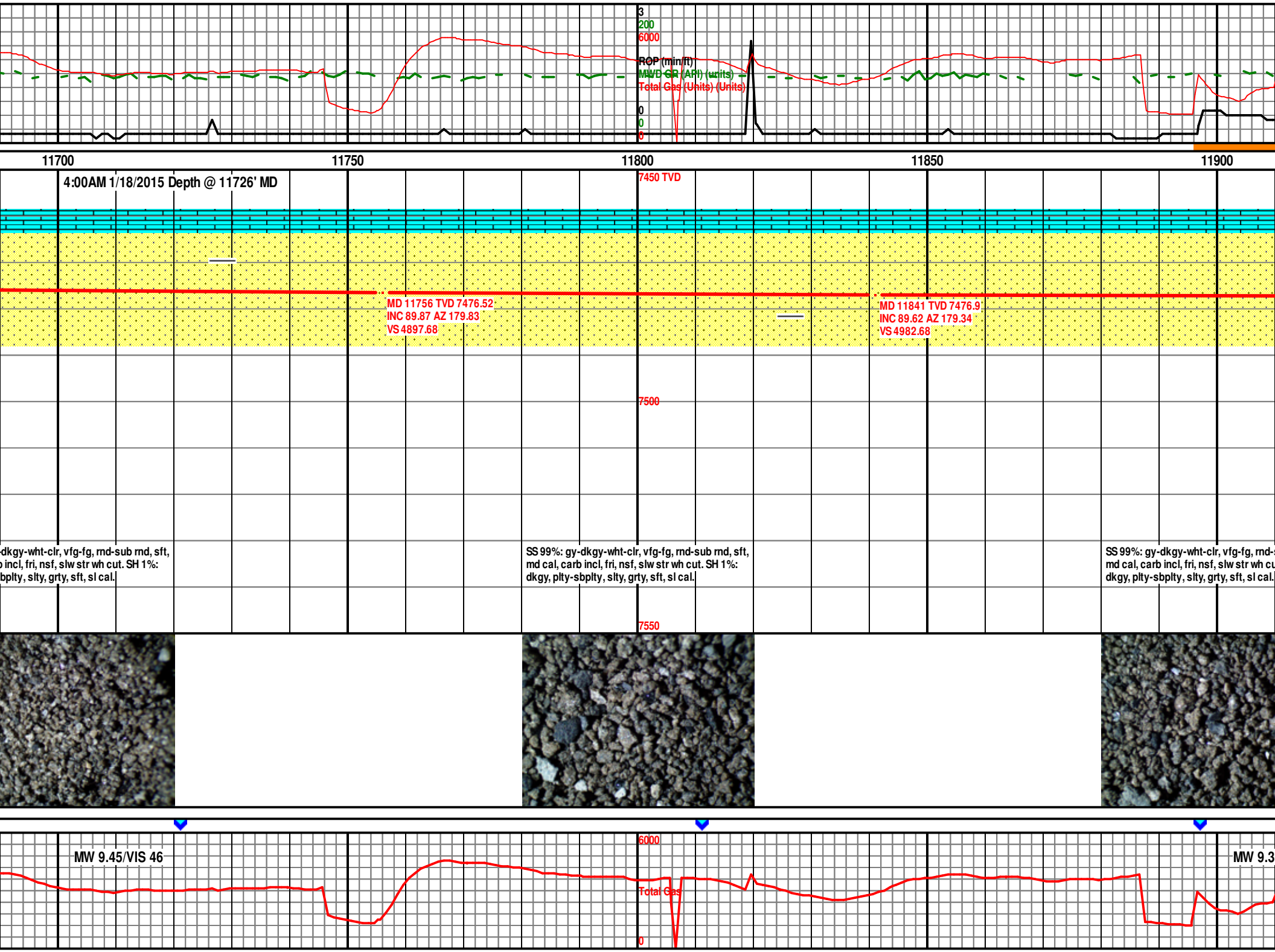

3
200
6000
ROP (min/ft)
MWD GR (API) (scale)
Total Gas (Units) (Units)
0
0
0
10600
10650
10700
10750
10800
7400 TVD
7450
7500
MD 10643 TVD 7462.85
INC 88.42 AZ 179.9
VS 3784.92
MD 10736 TVD 7465.01
INC 88.92 AZ 179.84
VS 3877.89
dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
incl, fri, nsf, slw str wh cut. SH 5%:
pplty, slty, grty, sft, sl cal.
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
md cal, carb incl, fri, nsf, slw str wh cut. SH 5%:
dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-
md cal, carb incl, fri, nsf, slw str wh cu
dkgy, plty-sbplty, slty, grty, sft, sl cal.
6000
Total Gas
0
MW 9.35/VIS 46

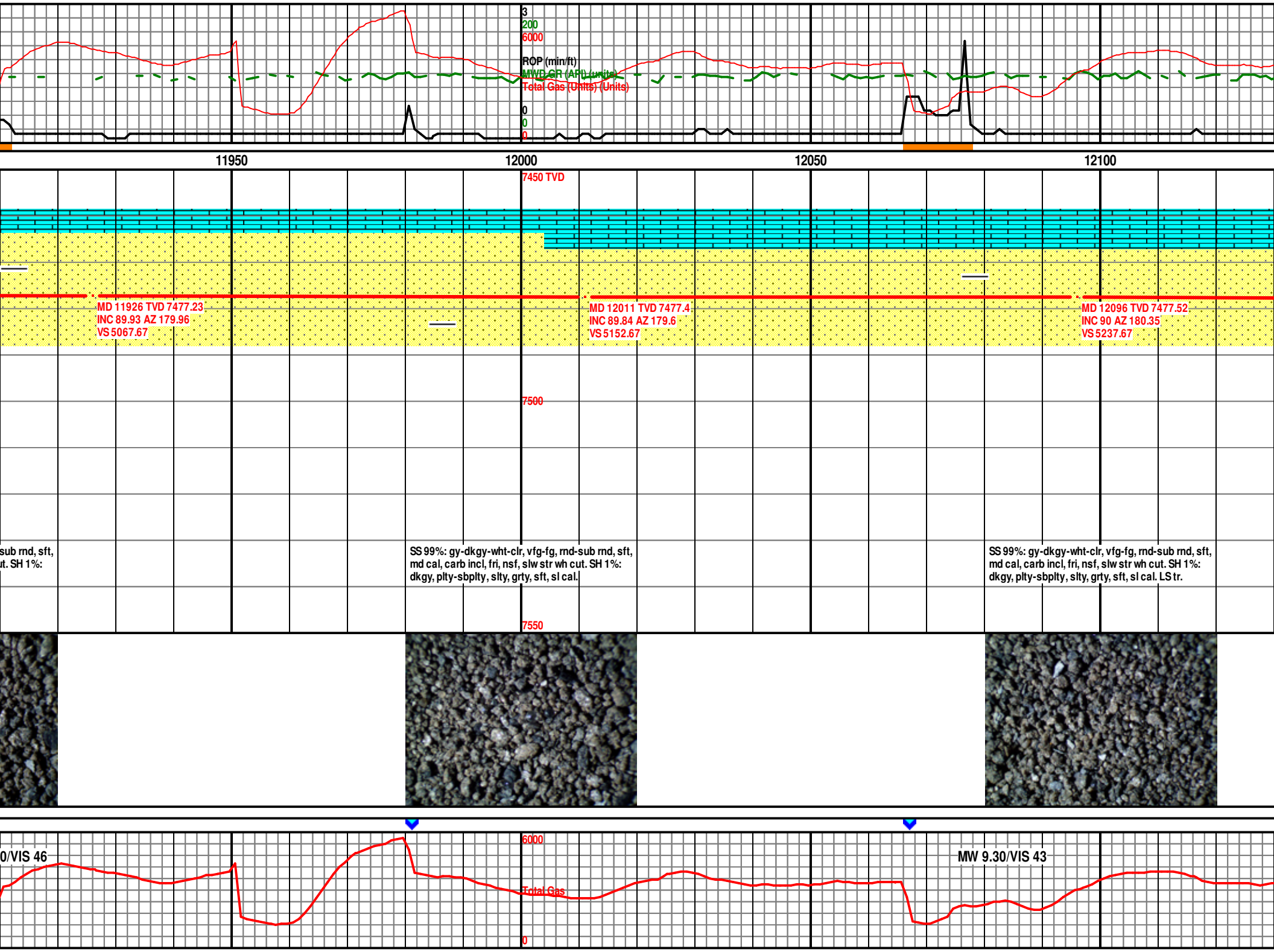

3
200
6000
ROP (min/ft)
MWD GR (API) (Units)
Total Gas (Units) (Units)
0
0
0
10850
10900
10950
11000
7450 TVD
MD 11014 TVD 746
INC 89.23 AZ 178.1
VS 4155.8
Scale Change
7500
MD 10829 TVD 7467.01
INC 88.61 AZ 179.08
VS 3970.86
MD 10921 TVD 7468.6
INC 89.41 AZ 179.18
VS 4062.84
sub rnd, sft,
t. SH 5%:
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 5%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
MW 9.40/VIS 47
6000
Total Gas
0

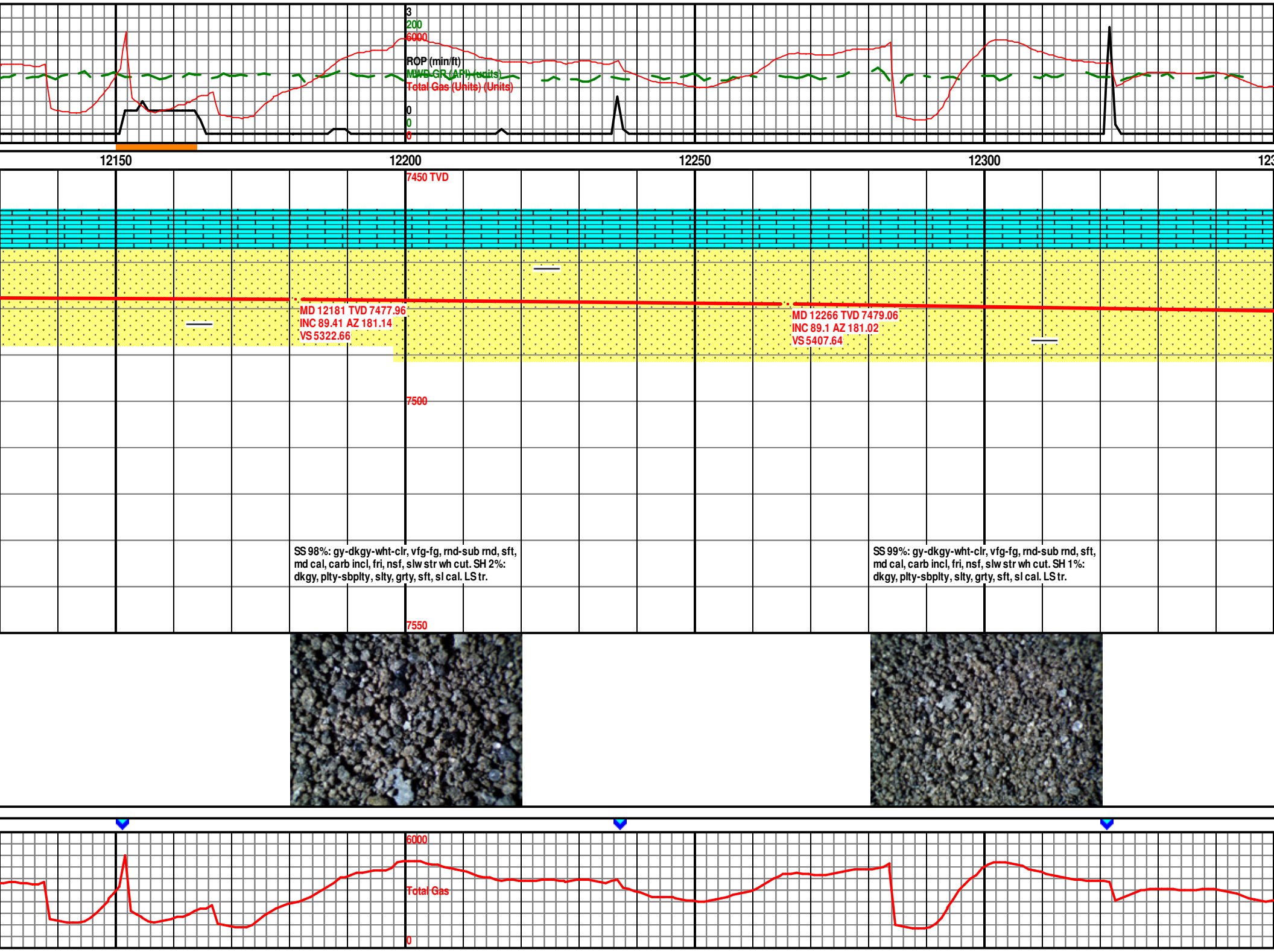

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
11050
11100
11150
11200
7450 TVD
MD 11107 TVD 7470.19
INC 90.18 AZ 179.82
VS 4248.78
MD 11200 TVD 7469.72
INC 90.4 AZ 181.03
VS 4341.77
7500
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
MW 9.40/VIS 49
6000
Total Gas
0

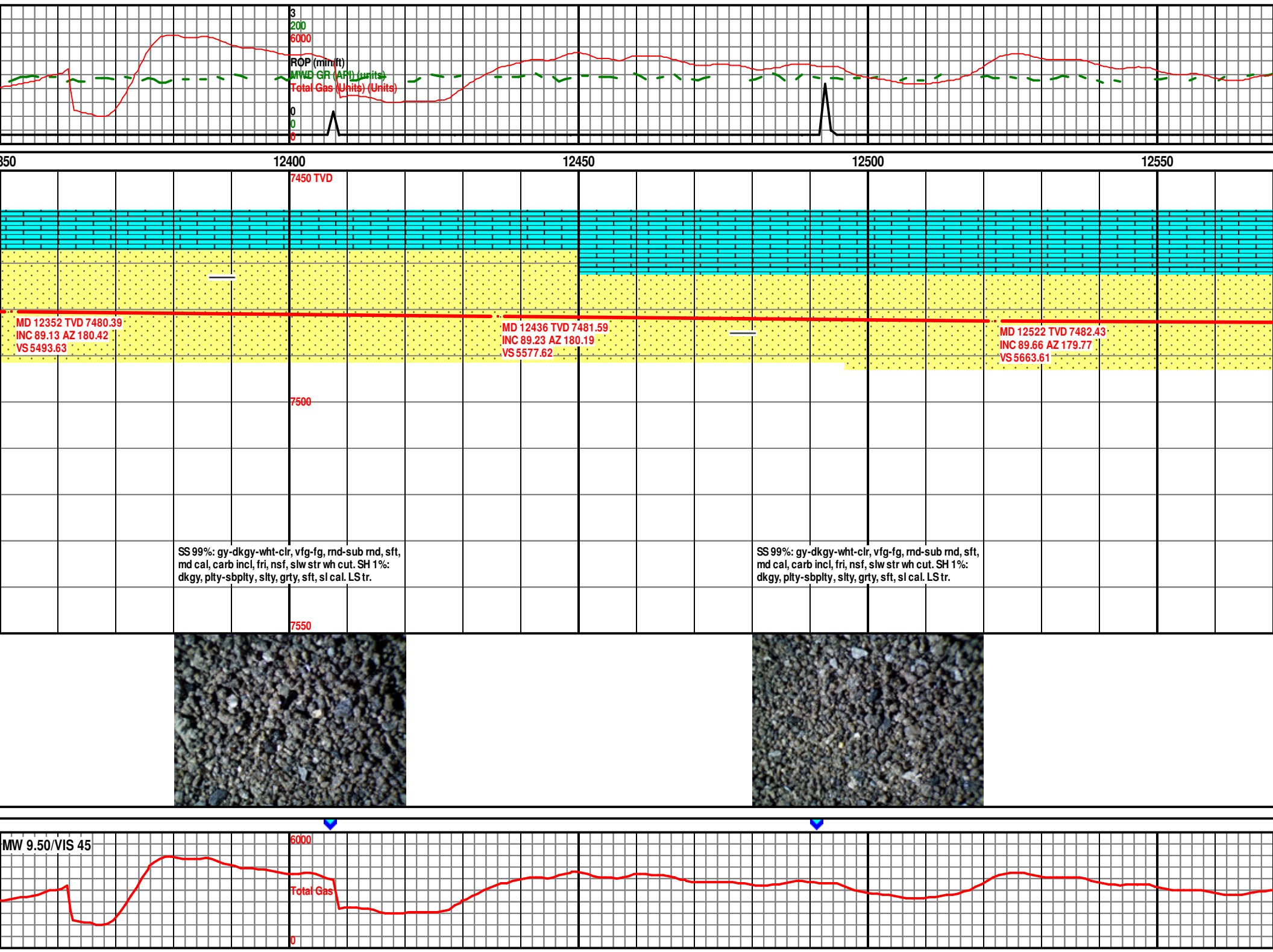

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
250
11300
11350
11400
11450
7450 TVD
MD 11293 TVD 7469.94
INC 89.32 AZ 181.42
VS 4434.75
MD 11386 TVD 7471.3
INC 89.01 AZ 180.79
VS 4527.73
7500
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
MW 9.40/VIS 49
6000
Total Gas
0
MW 9.40/VIS 50

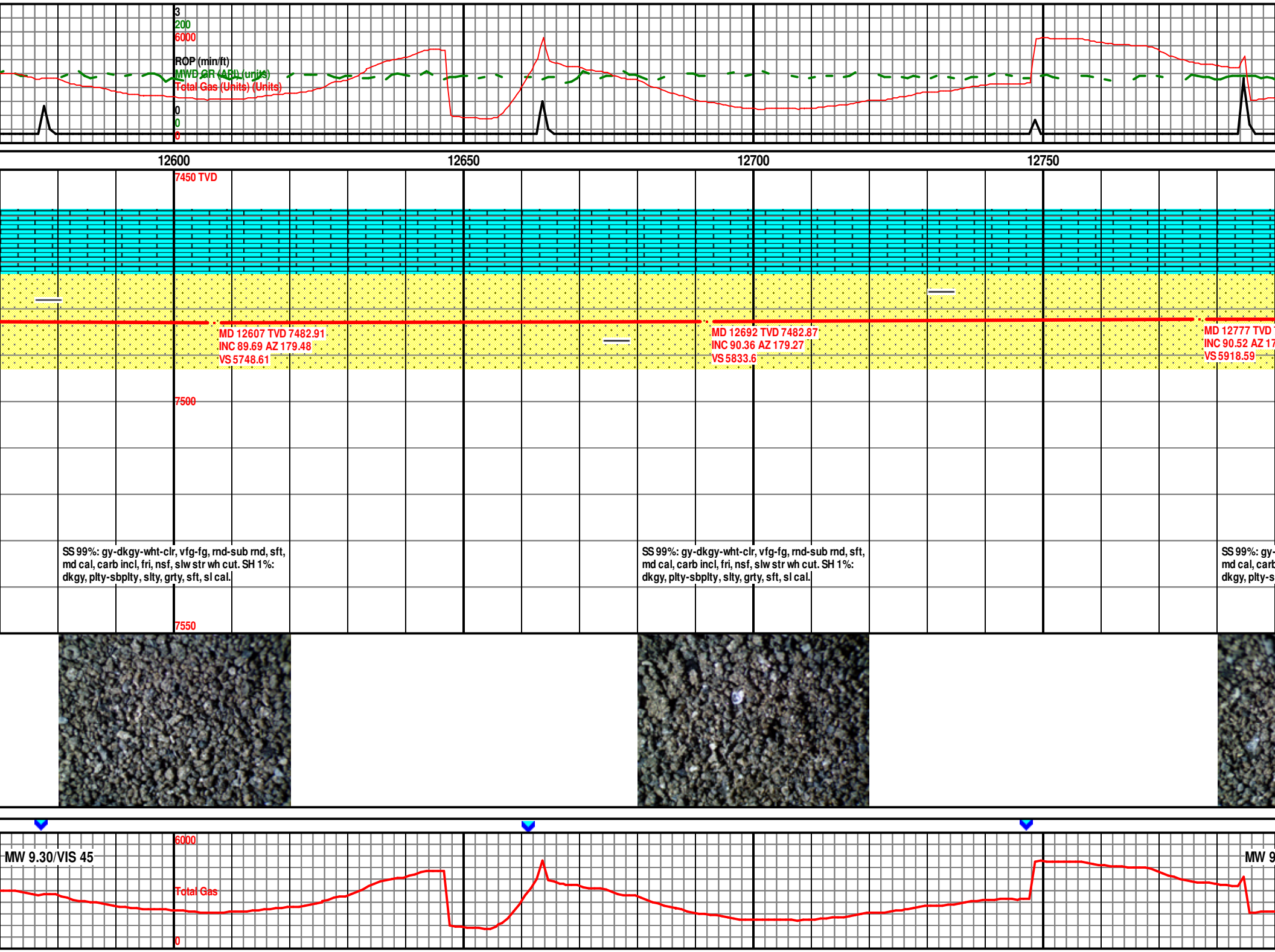

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
11500
11550
11600
11650
7450 TVD
MD 11479 TVD 7472.98
INC 88.92 AZ 180.57
VS 4620.71
MD 11573 TVD 7474.55
INC 89.16 AZ 180.29
VS 4714.69
MD 11666 TVD 7475.84
INC 89.26 AZ 180.27
VS 4807.68
7500
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
6000
Total Gas
0

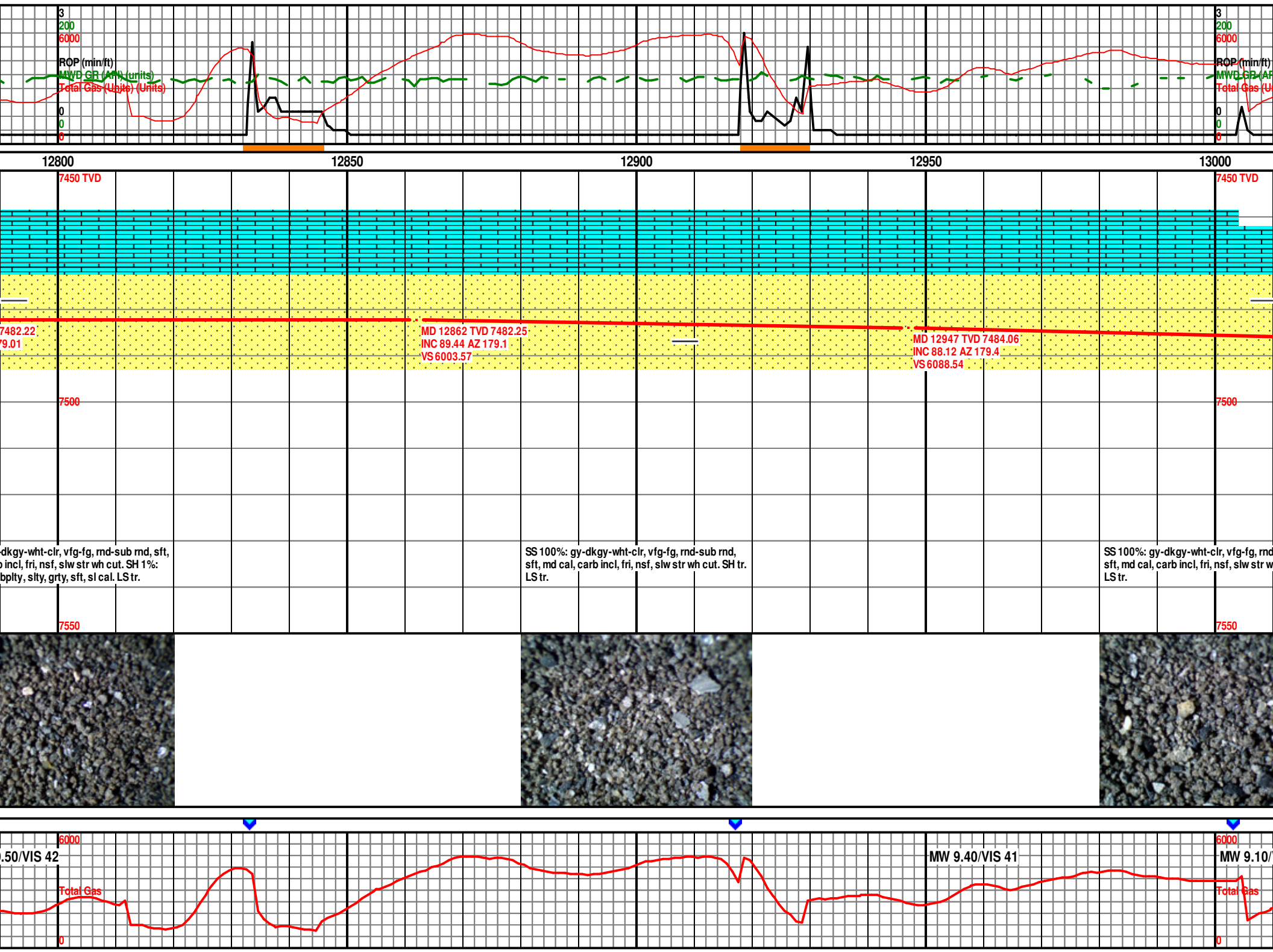

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
11700
11750
11800
11850
11900
4:00AM 1/18/2015 Depth @ 11726' MD
7450 TVD
MD 11756 TVD 7476.52
INC 89.87 AZ 179.83
VS 4897.68
MD 11841 TVD 7476.9
INC 89.62 AZ 179.34
VS 4982.68
7500
7550
-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
incl, fri, nsf, slw str wh cut. SH 1%:
bplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
md cal, carb incl, fri, nsf, slw str wh cut. SH 1%:
dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-
md cal, carb incl, fri, nsf, slw str wh cu
dkgy, plty-sbplty, slty, grty, sft, sl cal.
MW 9.45/VIS 46
6000
Total Gas
0
MW 9.3

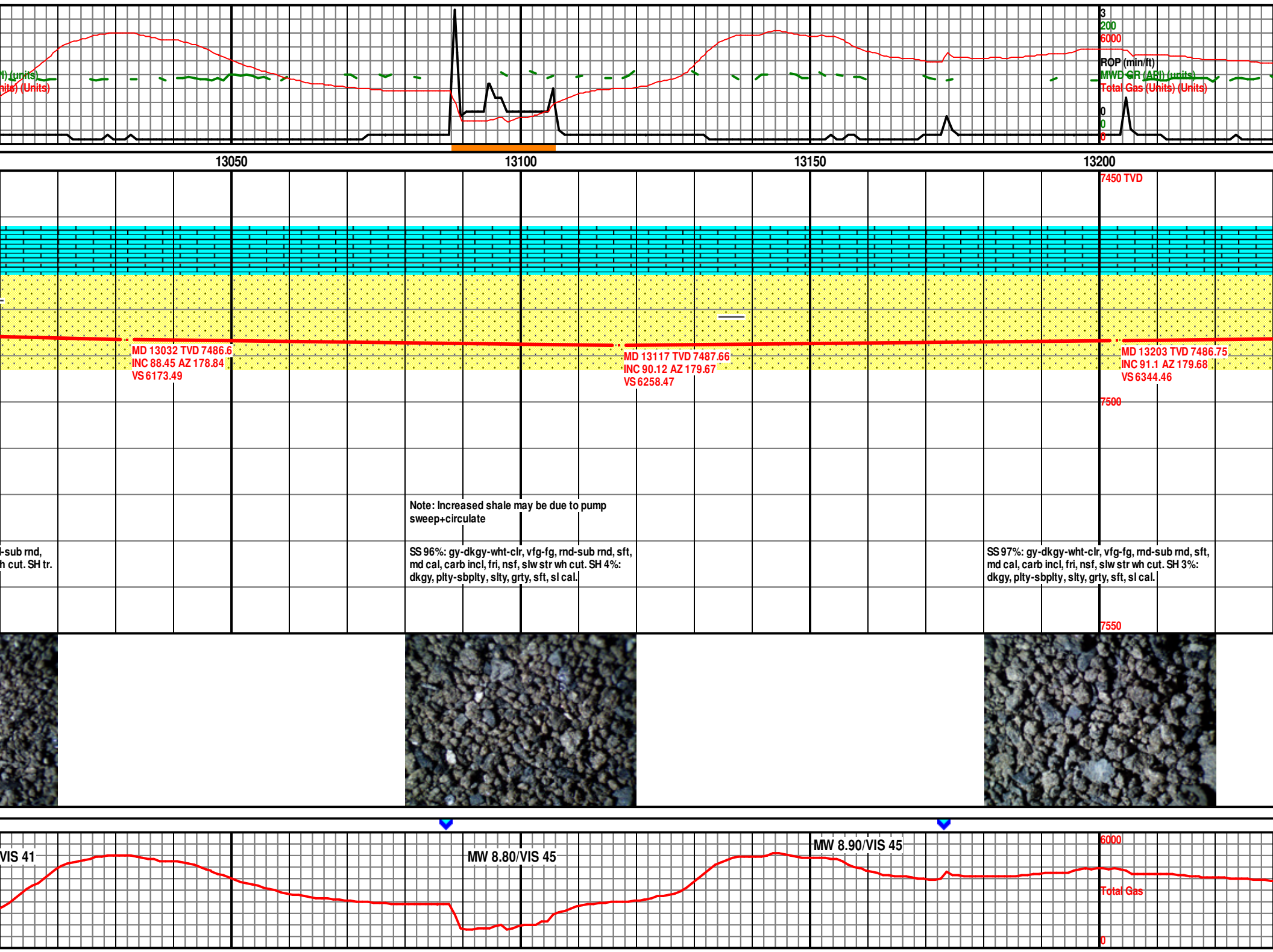

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
11950
12000
12050
12100
7450 TVD
MD 11926 TVD 7477.23
INC 89.93 AZ 179.96
VS 5067.67
MD 12011 TVD 7477.4
INC 89.84 AZ 179.6
VS 5152.67
MD 12096 TVD 7477.52
INC 90 AZ 180.35
VS 5237.67
7500
sub rnd, sft,
t. SH 1%:
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr.
7550
0/VIS 46
6000
Total Gas
0
MW 9.30/VIS 43

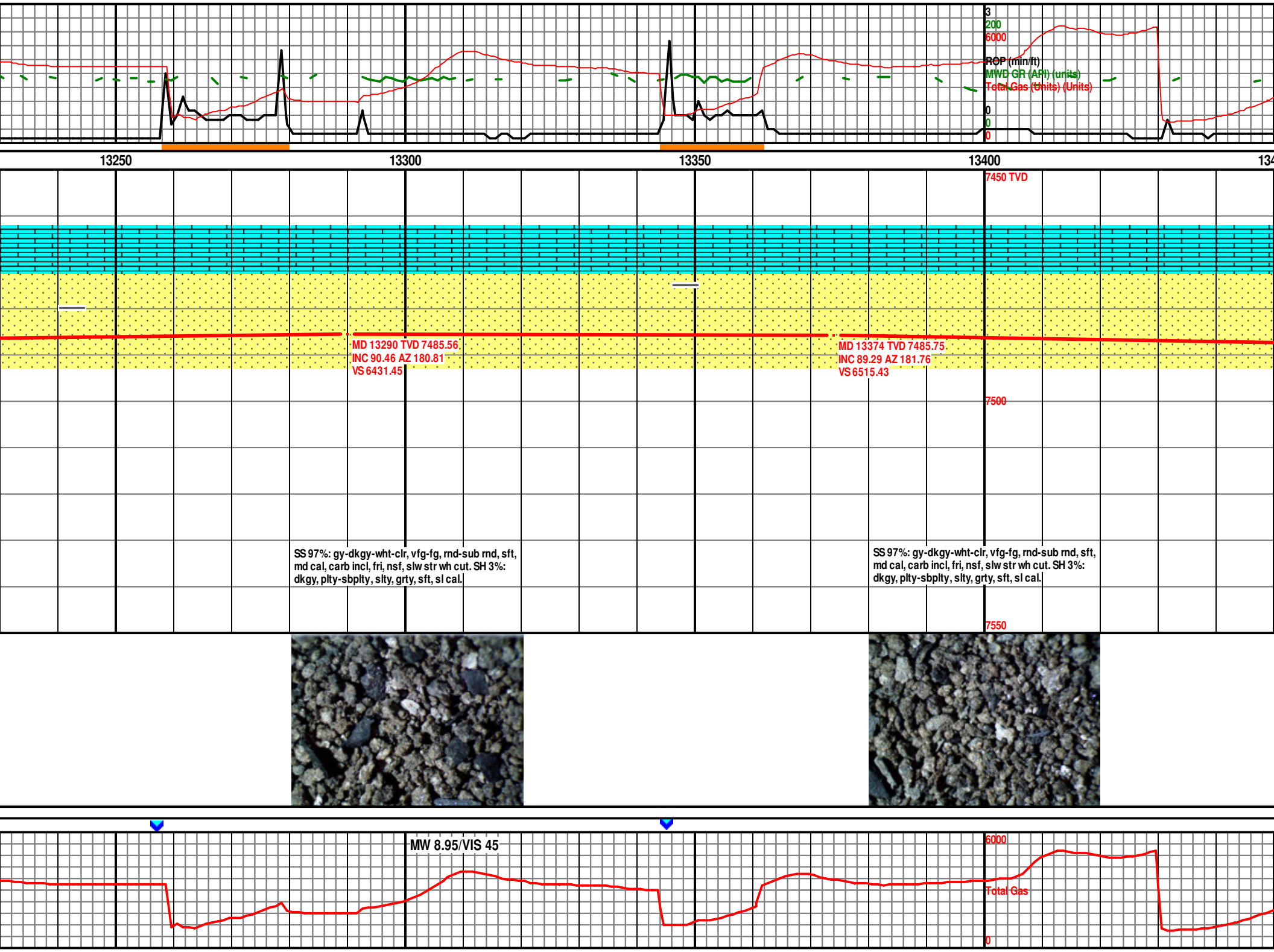

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
12150
12200
12250
12300
123
7450 TVD
MD 12181 TVD 7477.96
INC 89.41 AZ 181.14
VS 5322.66
MD 12266 TVD 7479.06
INC 89.1 AZ 181.02
VS 5407.64
7500
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr.
7550
6000
Total Gas
0

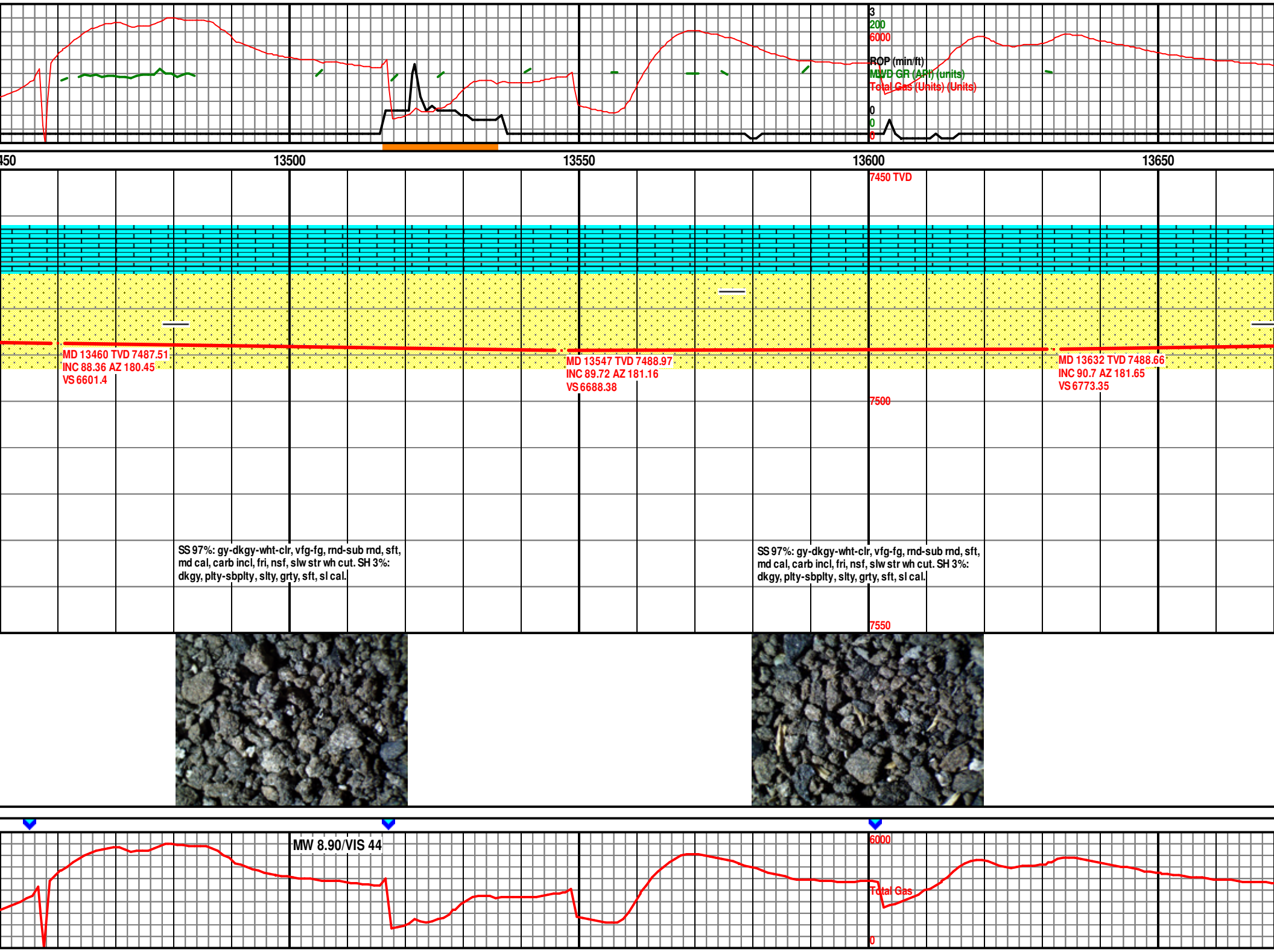

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
350
12400
12450
12500
12550
7450 TVD
MD 12352 TVD 7480.39
INC 89.13 AZ 180.42
VS 5493.63
MD 12436 TVD 7481.59
INC 89.23 AZ 180.19
VS 5577.62
MD 12522 TVD 7482.43
INC 89.66 AZ 179.77
VS 5663.61
7500
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr.
7550
MW 9.50/VIS 45
6000
Total Gas
0

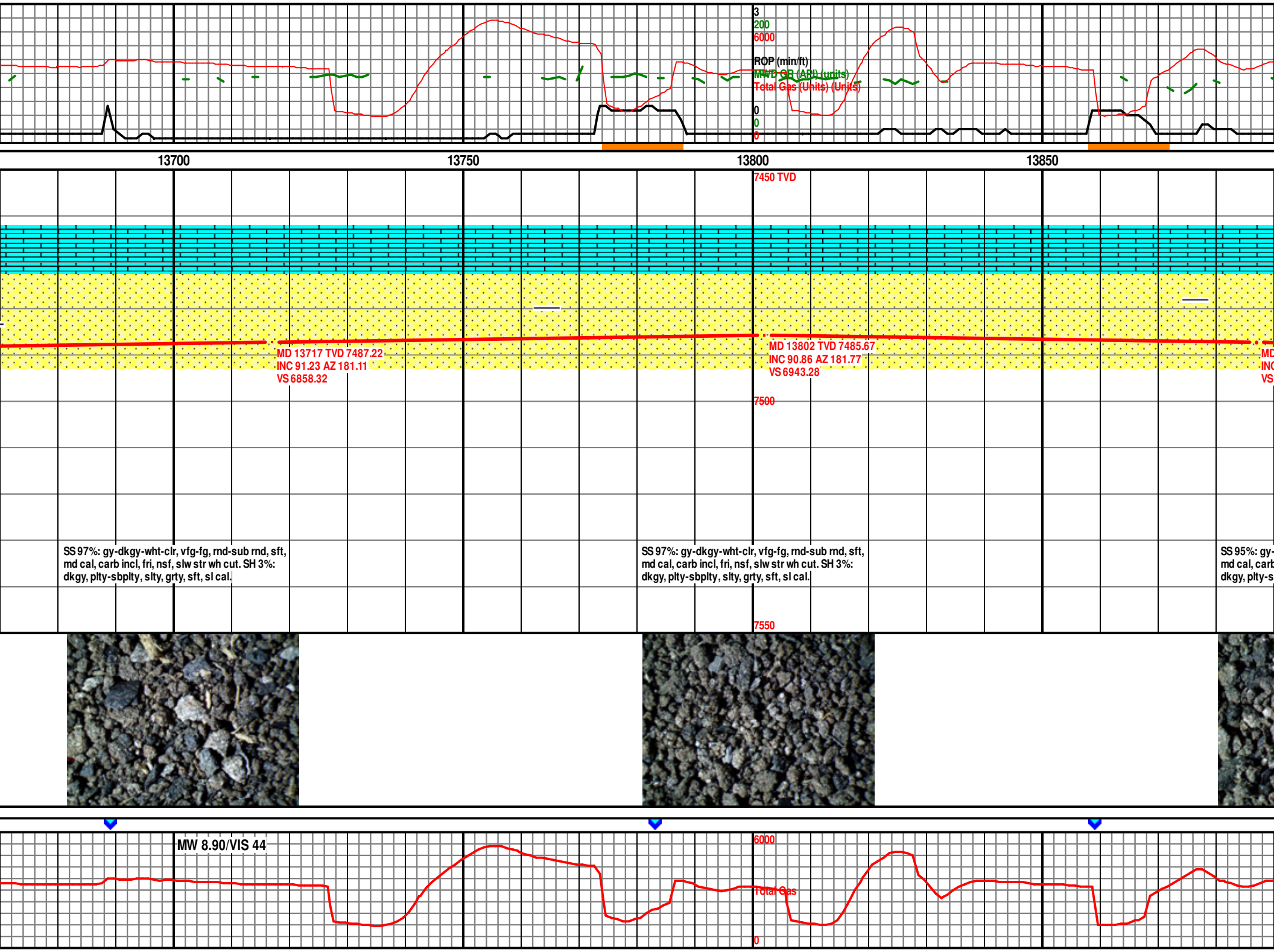

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
12600
12650
12700
12750
7450 TVD
MD 12607 TVD 7482.91
INC 89.69 AZ 179.48
VS 5748.61
MD 12692 TVD 7482.87
INC 90.36 AZ 179.27
VS 5833.6
MD 12777 TVD
INC 90.52 AZ 17
VS 5918.59
7500
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-
md cal, carb
dkgy, plty-s
7550
6000
MW 9.30/VIS 45
Total Gas
0
MW 9

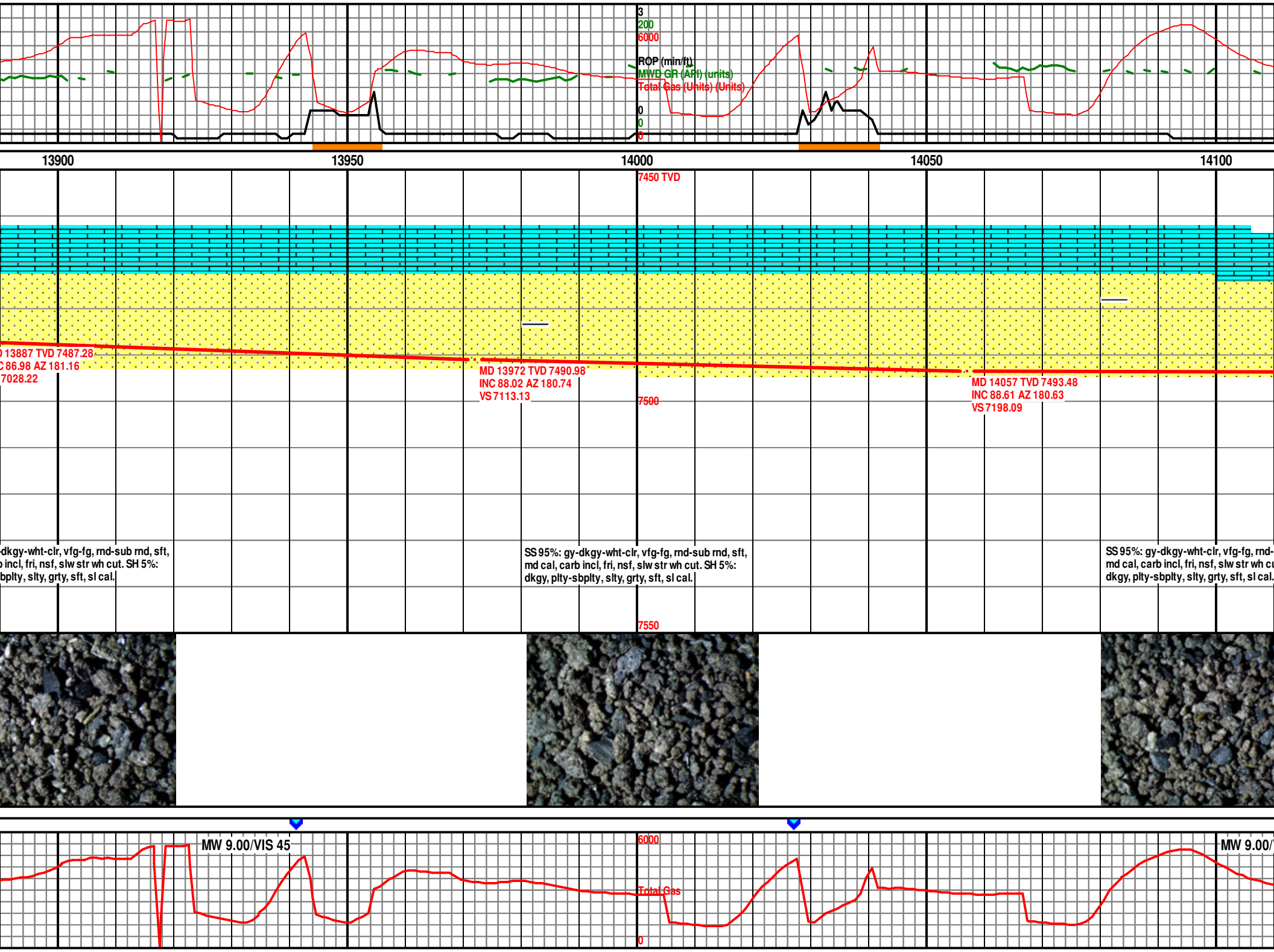

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
12800
12850
12900
12950
13000
7450 TVD
7482.22
79.01
MD 12862 TVD 7482.25
INC 89.44 AZ 179.1
VS 6003.57
MD 12947 TVD 7484.06
INC 88.12 AZ 179.4
VS 6088.54
7500
7550
-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
incl, fri, nsf, slw str wh cut. SH 1%:
bplty, slty, grty, sft, sl cal. LS tr.
SS 100%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd,
sft, md cal, carb incl, fri, nsf, slw str wh cut. SH tr.
LS tr.
SS 100%: gy-dkgy-wht-clr, vfg-fg, rnd
sft, md cal, carb incl, fri, nsf, slw str w
LS tr.
6000
.50/VIS 42
Total Gas
0
MW 9.40/VIS 41
MW 9.10/

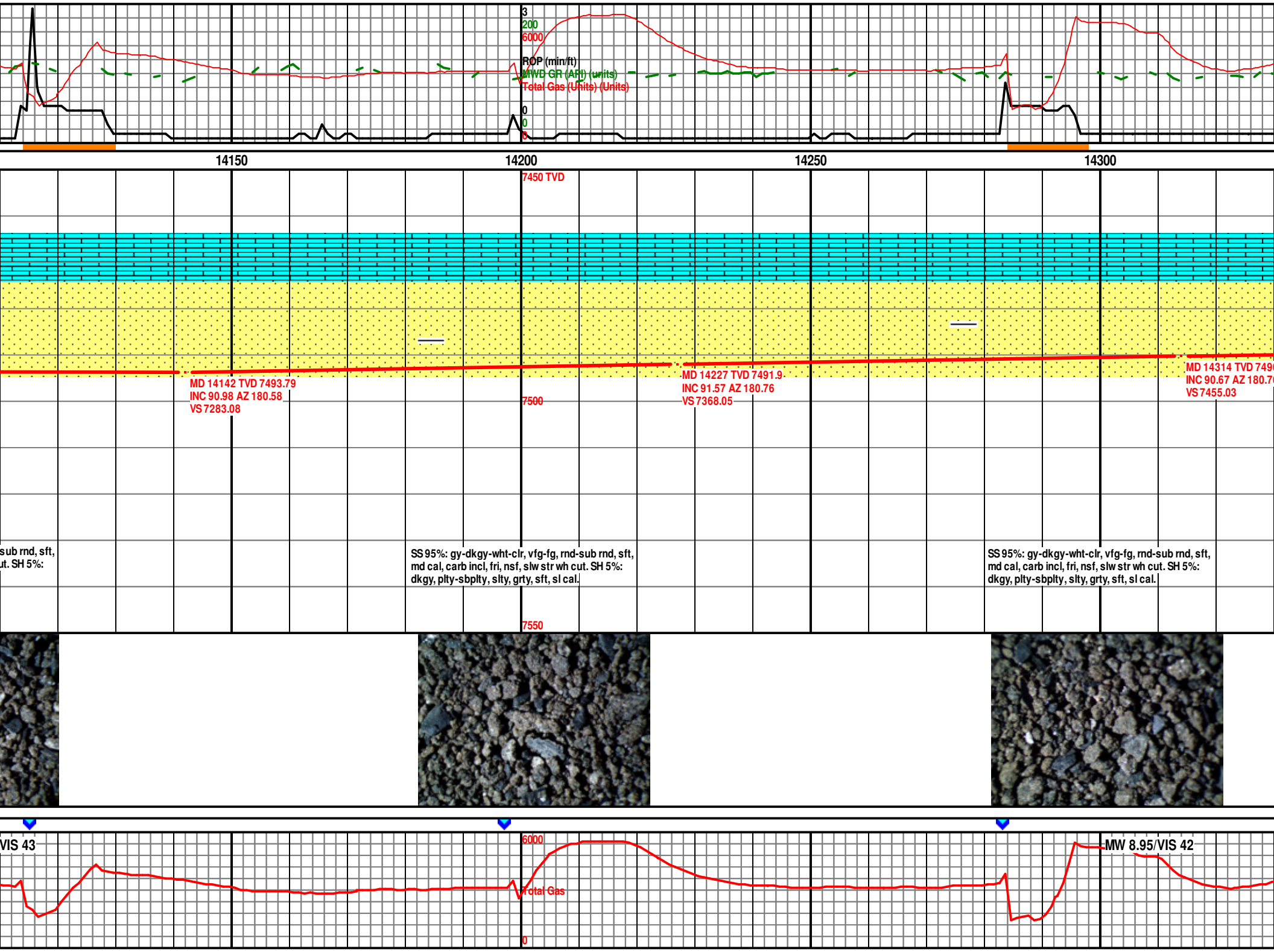

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
13050
13100
13150
13200
7450 TVD
MD 13032 TVD 7486.6
INC 88.45 AZ 178.84
VS 6173.49
MD 13117 TVD 7487.66
INC 90.12 AZ 179.67
VS 6258.47
MD 13203 TVD 7486.75
INC 91.1 AZ 179.68
VS 6344.46
7500
Note: Increased shale may be due to pump sweep+circulate
SS 96%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 4%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
VIS 41
MW 8.80/VIS 45
MW 8.90/VIS 45
6000
Total Gas
0

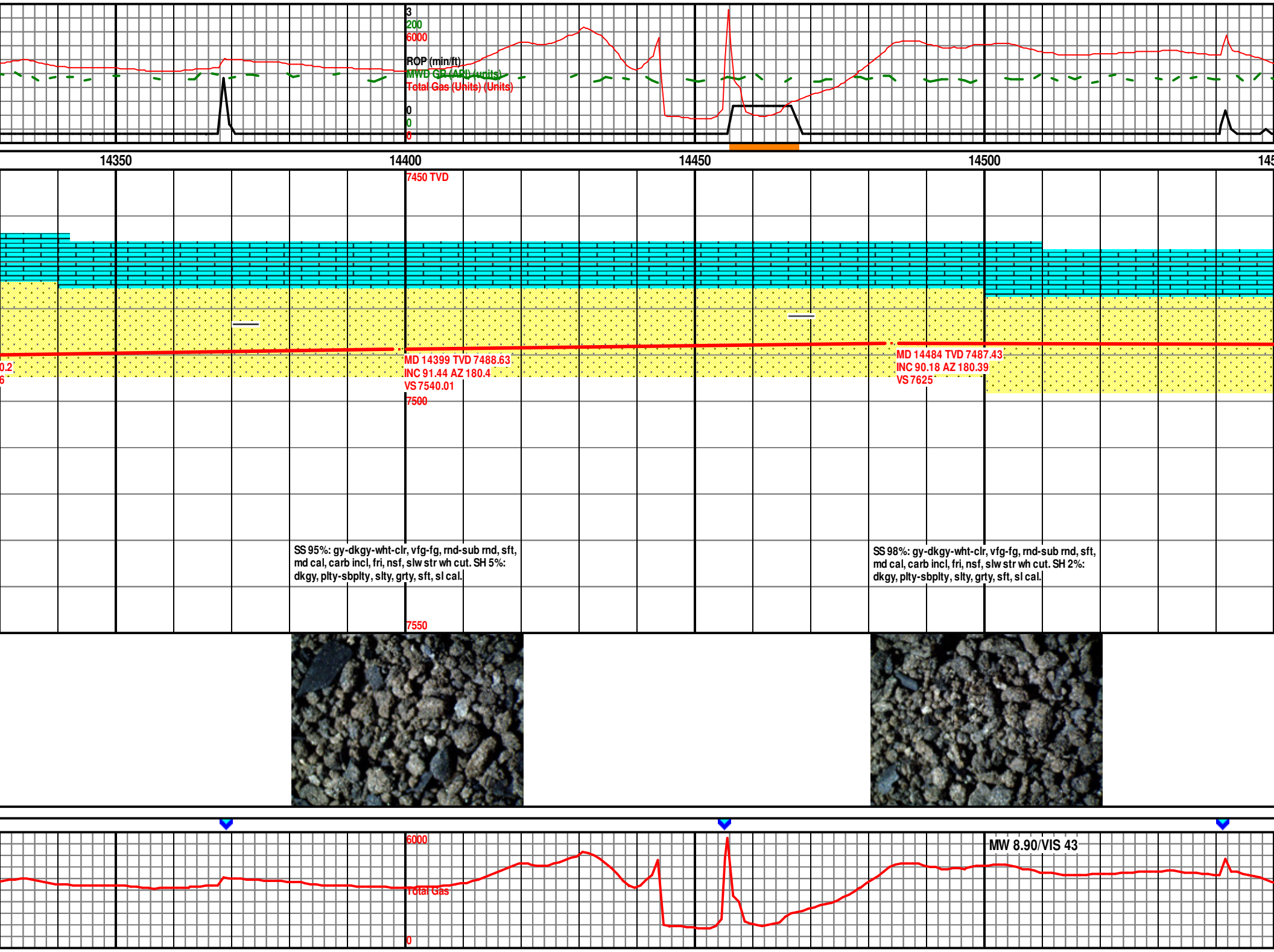

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
13250
13300
13350
13400
7450 TVD
MD 13290 TVD 7485.56
INC 90.46 AZ 180.81
VS 6431.45
MD 13374 TVD 7485.75
INC 89.29 AZ 181.76
VS 6515.43
7500
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
MW 8.95/VIS 45
6000
Total Gas
0

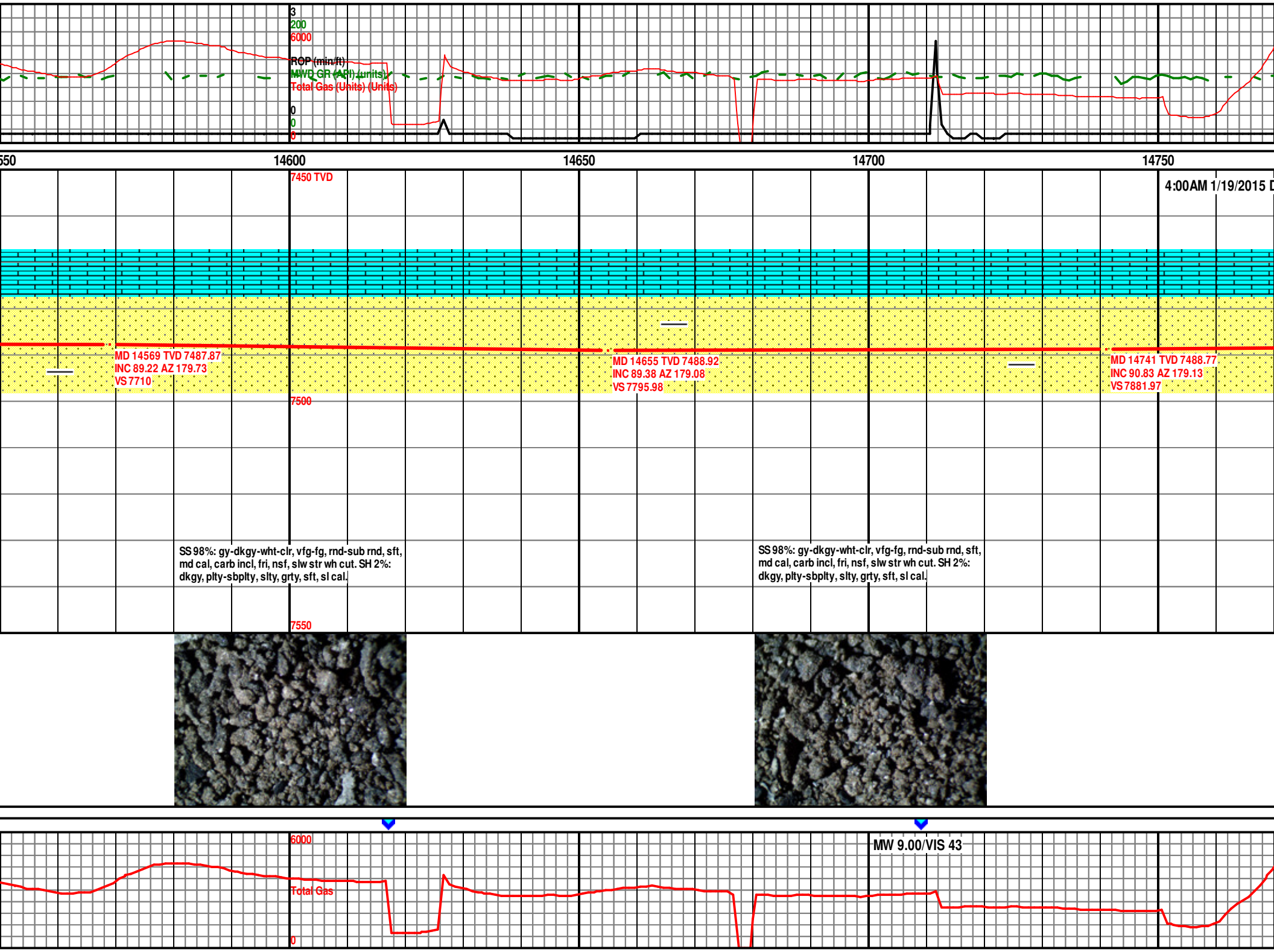

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
450
13500
13550
13600
13650
7450 TVD
MD 13460 TVD 7487.51
INC 88.36 AZ 180.45
VS 6601.4
MD 13547 TVD 7488.97
INC 89.72 AZ 181.16
VS 6688.38
MD 13632 TVD 7488.66
INC 90.7 AZ 181.65
VS 6773.35
7500
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
MW 8.90/VIS 44
6000
Total Gas
0

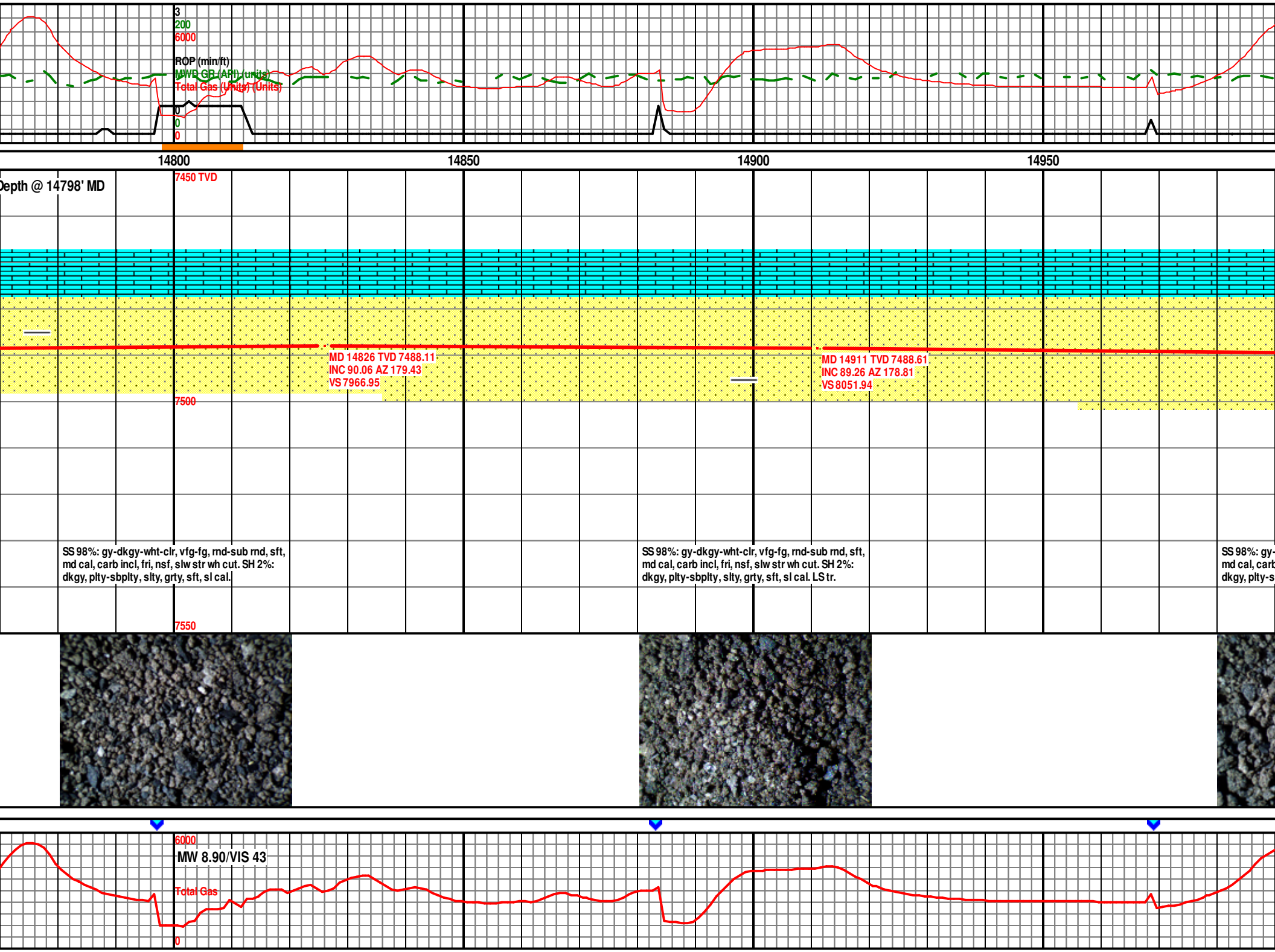

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
13700
13750
13800
13850
7450 TVD
MD 13717 TVD 7487.22
INC 91.23 AZ 181.11
VS 6858.32
MD 13802 TVD 7485.67
INC 90.86 AZ 181.77
VS 6943.28
7500
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
MW 8.90/VIS 44
6000
Total Gas
0

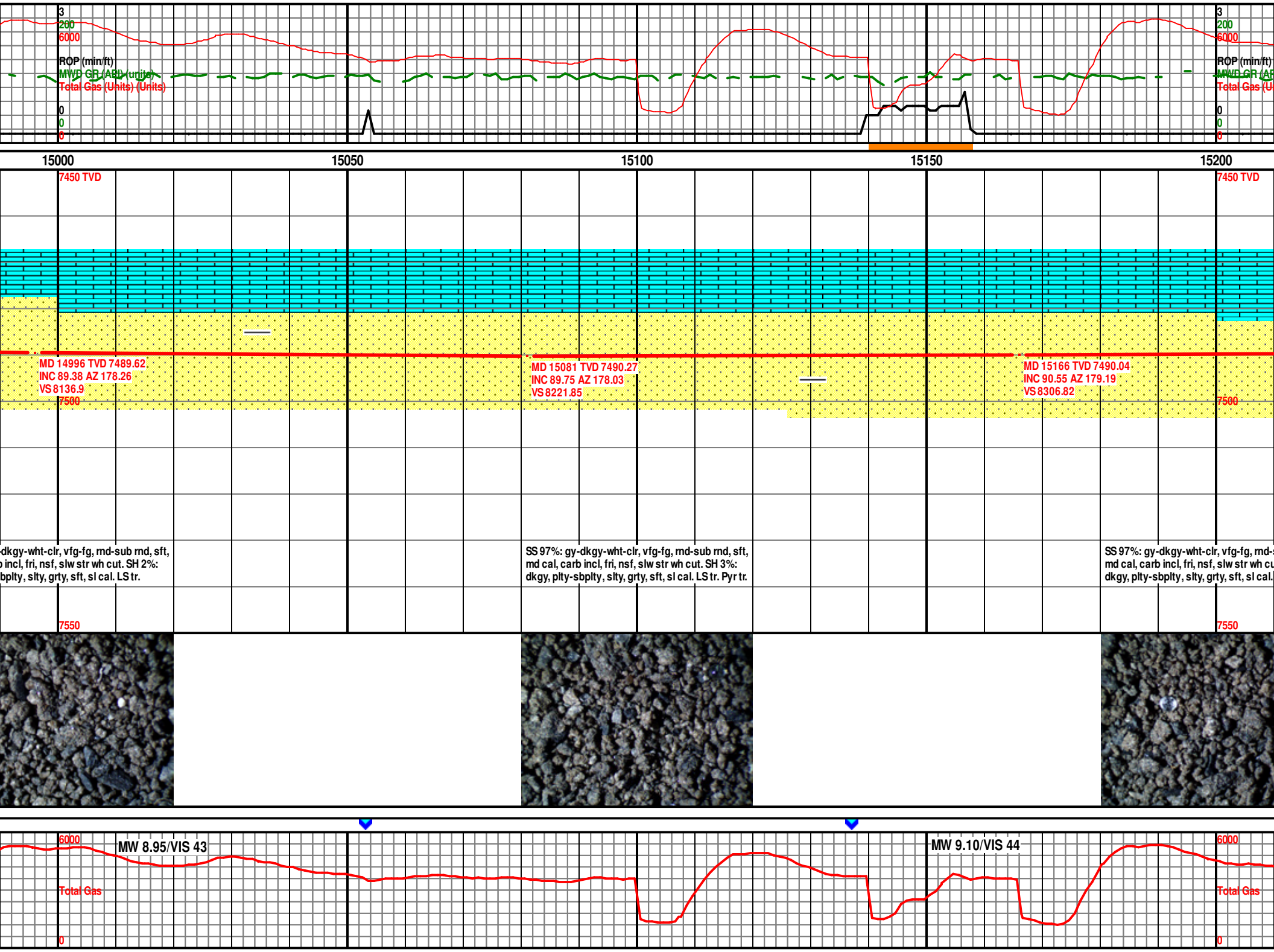

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
13900
13950
14000
14050
14100
7450 TVD
7500
7550
D 13887 TVD 7487.28
C 86.98 AZ 181.16
7028.22
MD 13972 TVD 7490.98
INC 88.02 AZ 180.74
VS 7113.13
MD 14057 TVD 7493.48
INC 88.61 AZ 180.63
VS 7198.09
-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
incl, fri, nsf, slw str wh cut. SH 5%:
bplty, slty, grty, sft, sl cal.
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
md cal, carb incl, fri, nsf, slw str wh cut. SH 5%:
dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-
md cal, carb incl, fri, nsf, slw str wh cu
dkgy, plty-sbplty, slty, grty, sft, sl cal.
MW 9.00/VIS 45
6000
Total Gas
0
MW 9.00/

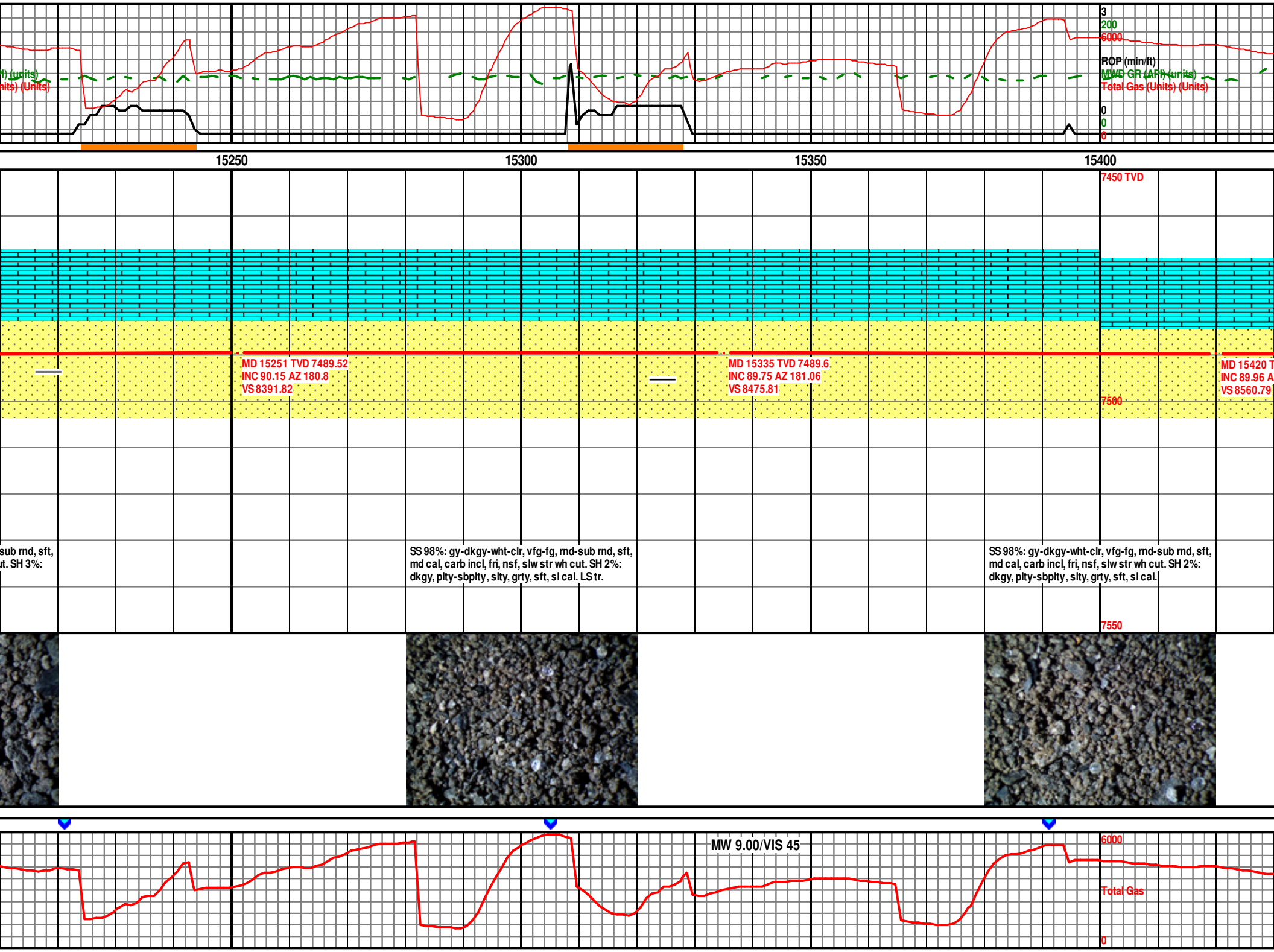

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
14150
14200
14250
14300
7450 TVD
MD 14142 TVD 7493.79
INC 90.98 AZ 180.58
VS 7283.08
7500
MD 14227 TVD 7491.9
INC 91.57 AZ 180.76
VS 7368.05
MD 14314 TVD 749
INC 90.67 AZ 180.7
VS 7455.03
sub rnd, sft,
ut. SH 5%:
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
md cal, carb incl, fri, nsf, slw str wh cut. SH 5%:
dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
md cal, carb incl, fri, nsf, slw str wh cut. SH 5%:
dkgy, plty-sbplty, slty, grty, sft, sl cal.
VIS 43
6000
Total Gas
0
MW 8.95/VIS 42

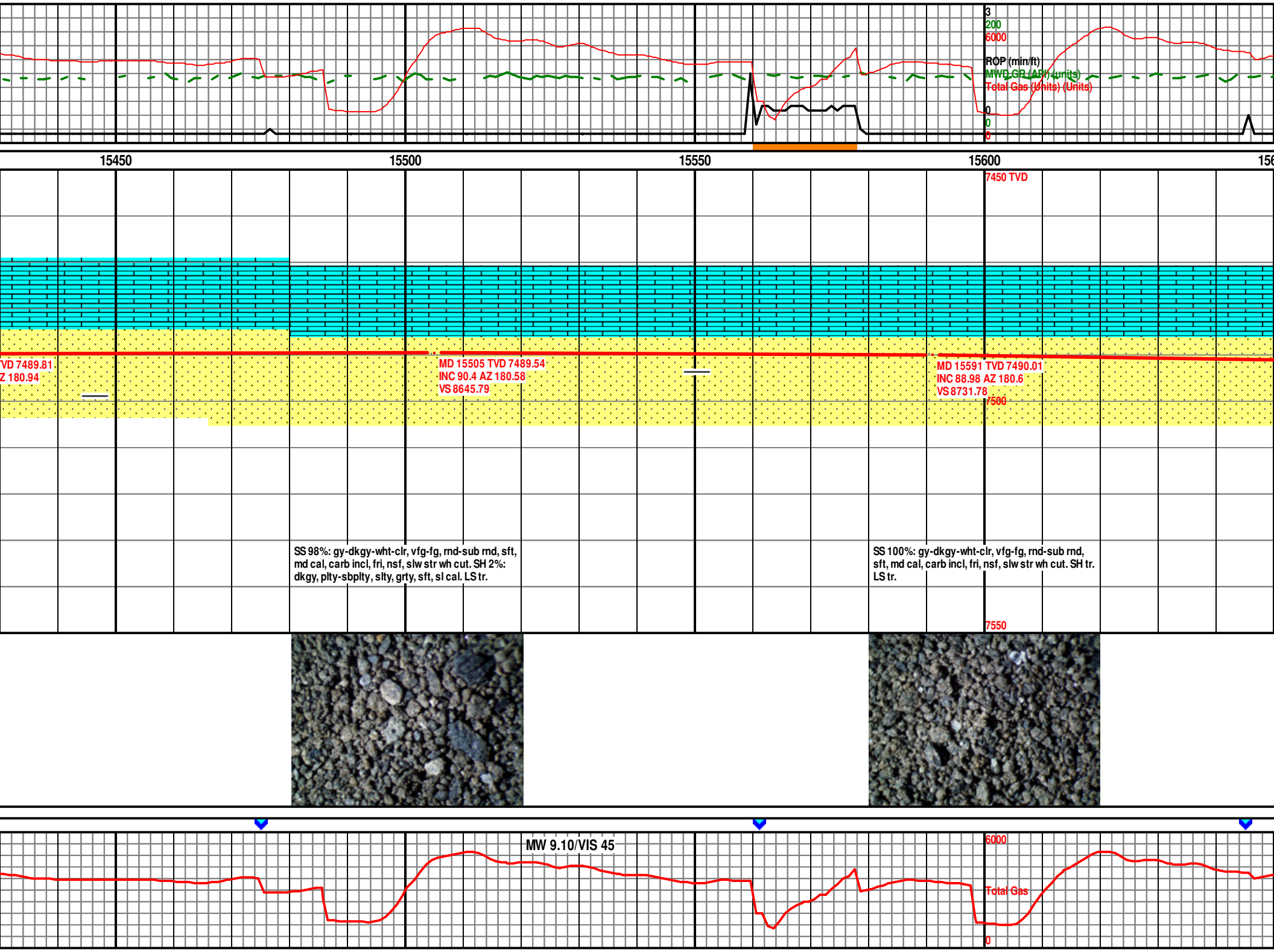

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
14350
14400
14450
14500
7450 TVD
MD 14399 TVD 7488.63
INC 91.44 AZ 180.4
VS 7540.01
MD 14484 TVD 7487.43
INC 90.18 AZ 180.39
VS 7625
7500
7550
SS 95%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 5%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
6000
Total Gas
0
MW 8.90/VIS 43

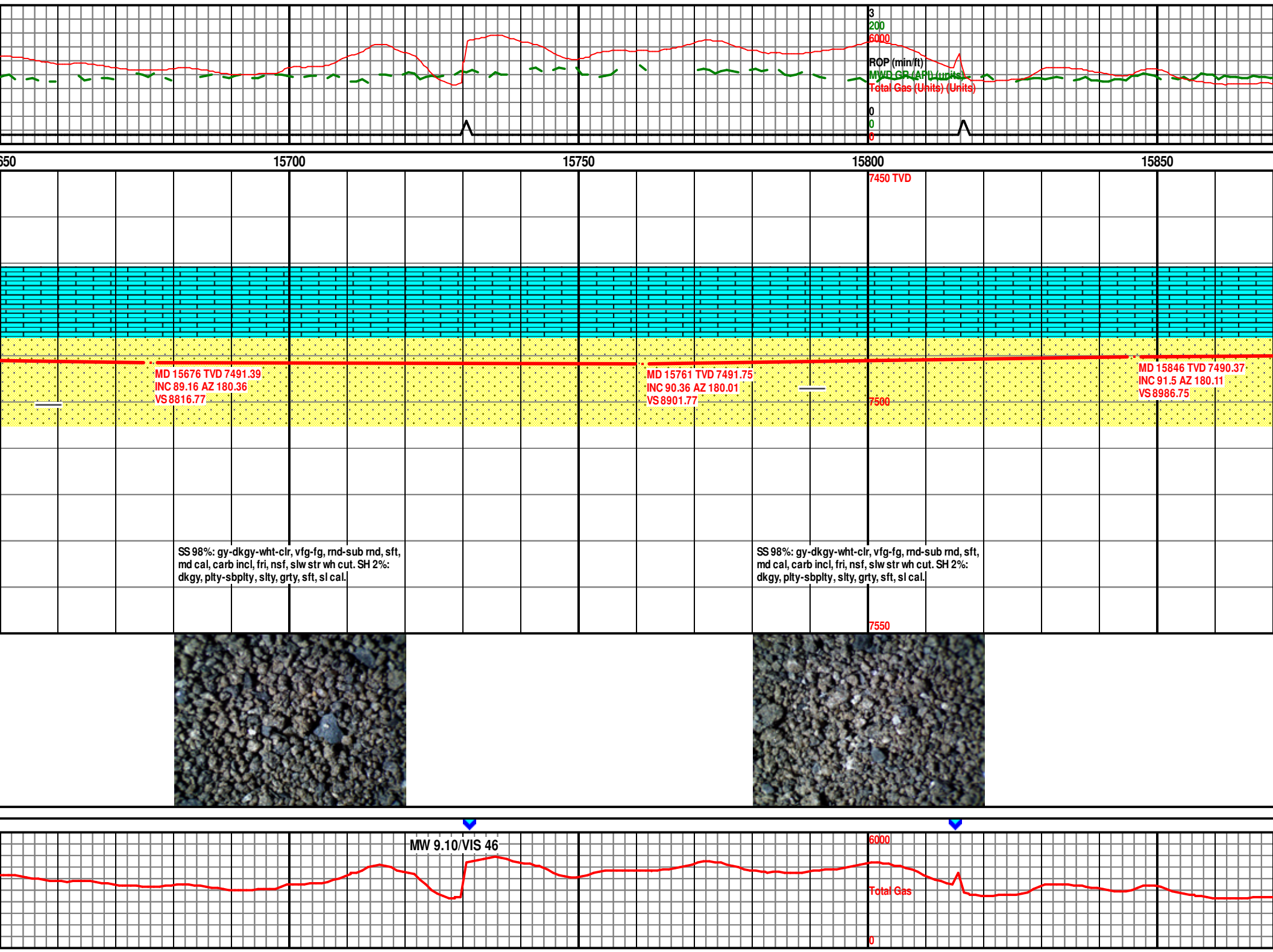

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
550
14600
14650
14700
14750
7450 TVD
4:00 AM 1/19/2015 D
MD 14569 TVD 7487.87
INC 89.22 AZ 179.73
VS 7710
MD 14655 TVD 7488.92
INC 89.38 AZ 179.08
VS 7795.98
MD 14741 TVD 7488.77
INC 90.83 AZ 179.13
VS 7881.97
7500
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
6000
Total Gas
0
MW 9.00/VIS 43

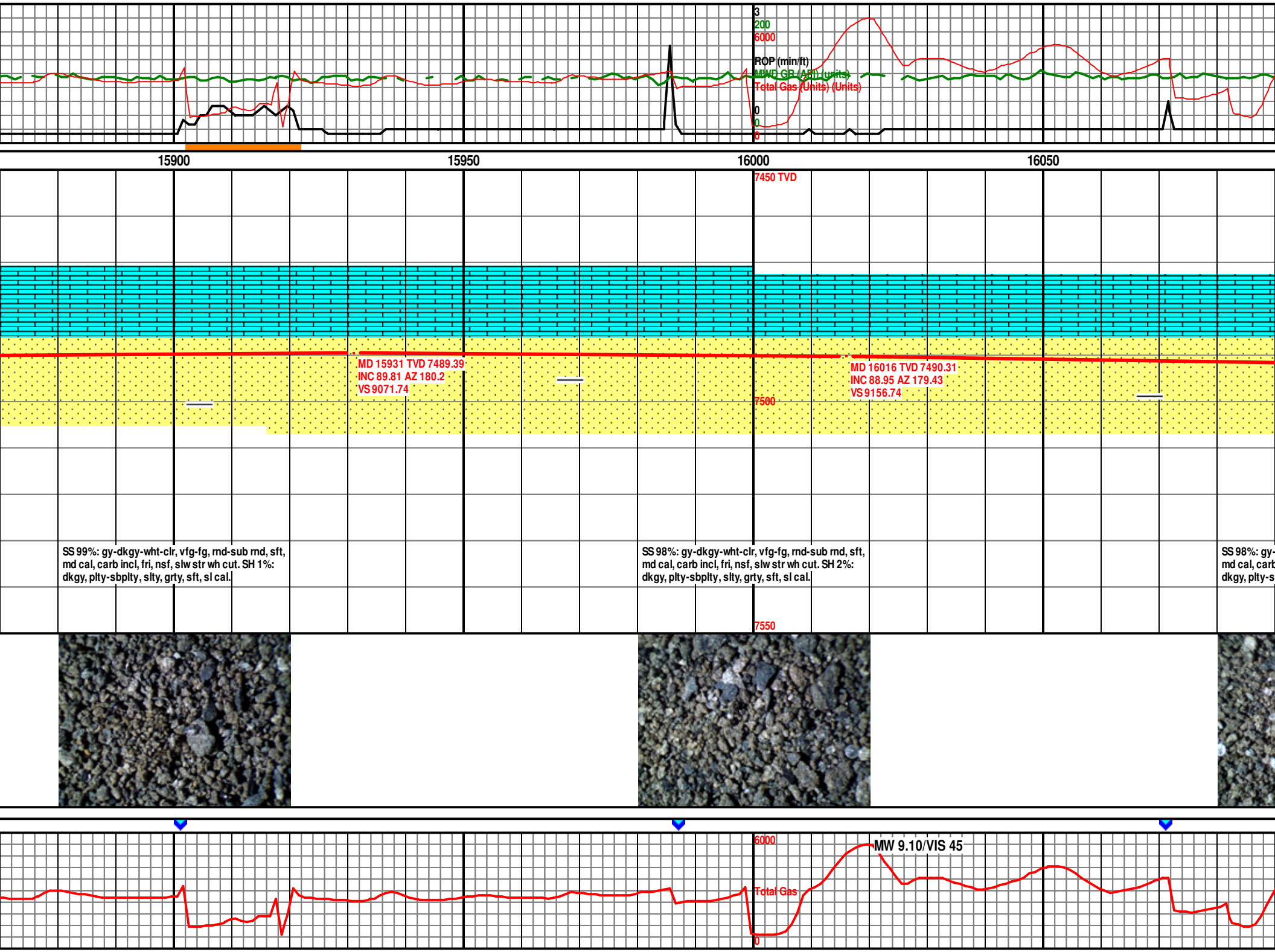

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
14800
14850
14900
14950
Depth @ 14798' MD
7450 TVD
MD 14826 TVD 7488.11
INC 90.06 AZ 179.43
VS 7966.95
MD 14911 TVD 7488.61
INC 89.26 AZ 178.81
VS 8051.94
7500
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr.
7550
6000
MW 8.90/VIS 43
Total Gas
0

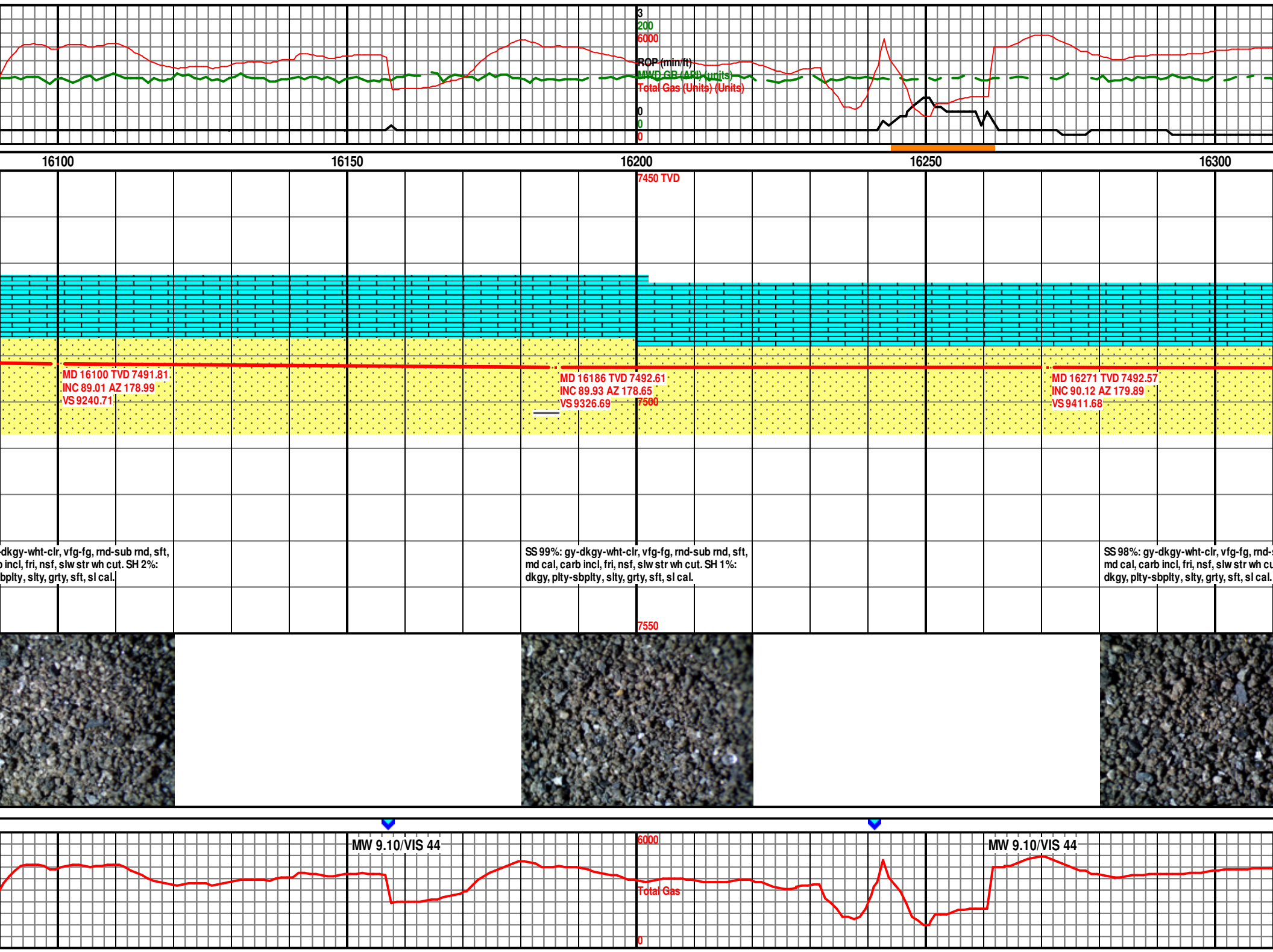

3
200
6000
ROP (min/ft)
MWD GR (ABI) (units)
Total Gas (Units) (Units)
0
0
0
15000
15050
15100
15150
15200
7450 TVD
MD 14996 TVD 7489.62
INC 89.38 AZ 178.26
VS 8136.9
7500
MD 15081 TVD 7490.27
INC 89.75 AZ 178.03
VS 8221.85
MD 15166 TVD 7490.04
INC 90.55 AZ 179.19
VS 8306.82
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr. Pyr tr.
7550
6000
Total Gas
0
MW 8.95/VIS 43
MW 9.10/VIS 44

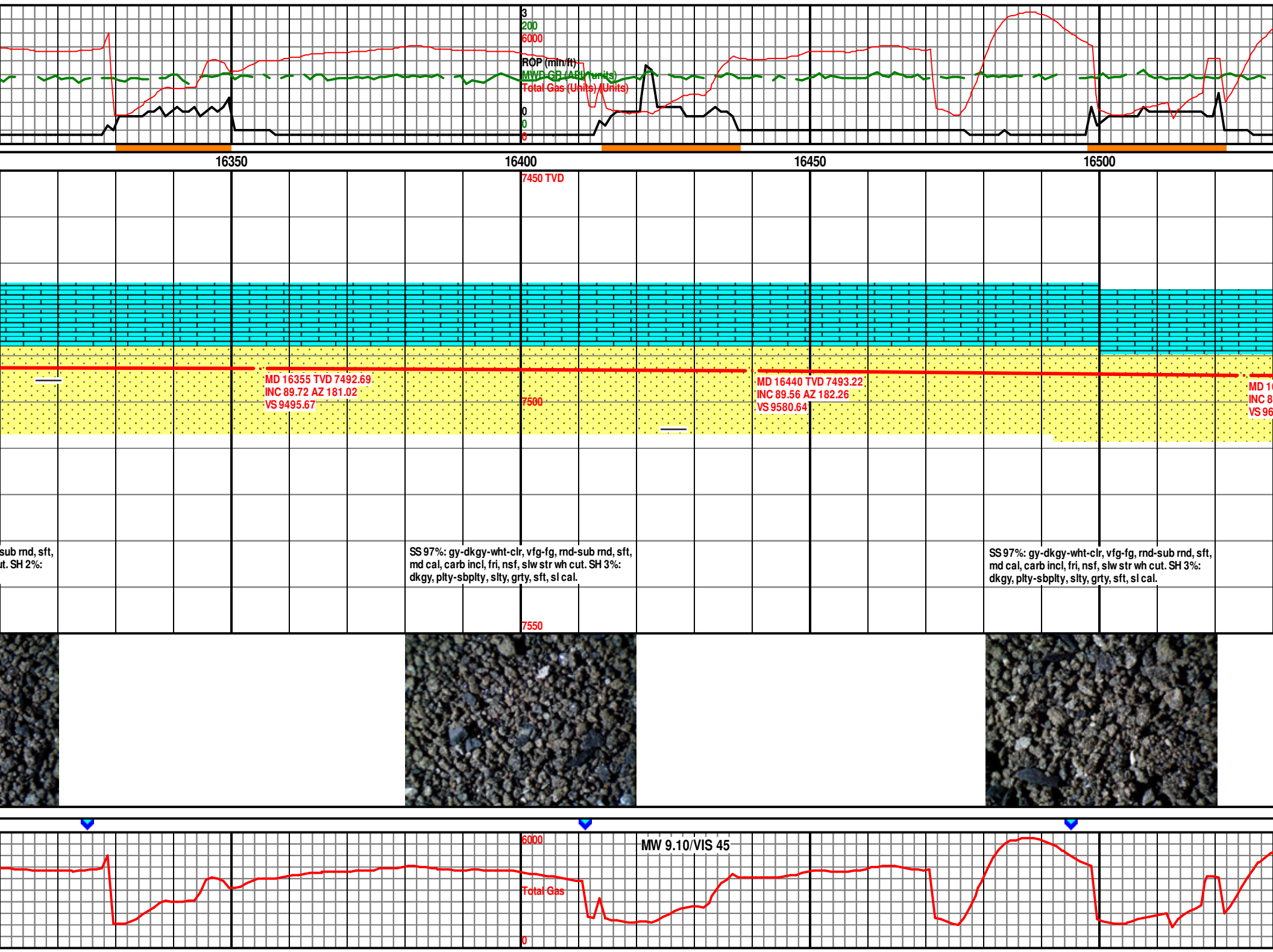

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
15250
15300
15350
15400
7450 TVD
MD 15251 TVD 7489.52
INC 90.15 AZ 180.8
VS 8391.82
MD 15335 TVD 7489.6
INC 89.75 AZ 181.06
VS 8475.81
MD 15420 T
INC 89.96 A
VS 8560.79
7500
7550
sub rnd, sft,
t. SH 3%:
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
MW 9.00/VIS 45
6000
Total Gas
0

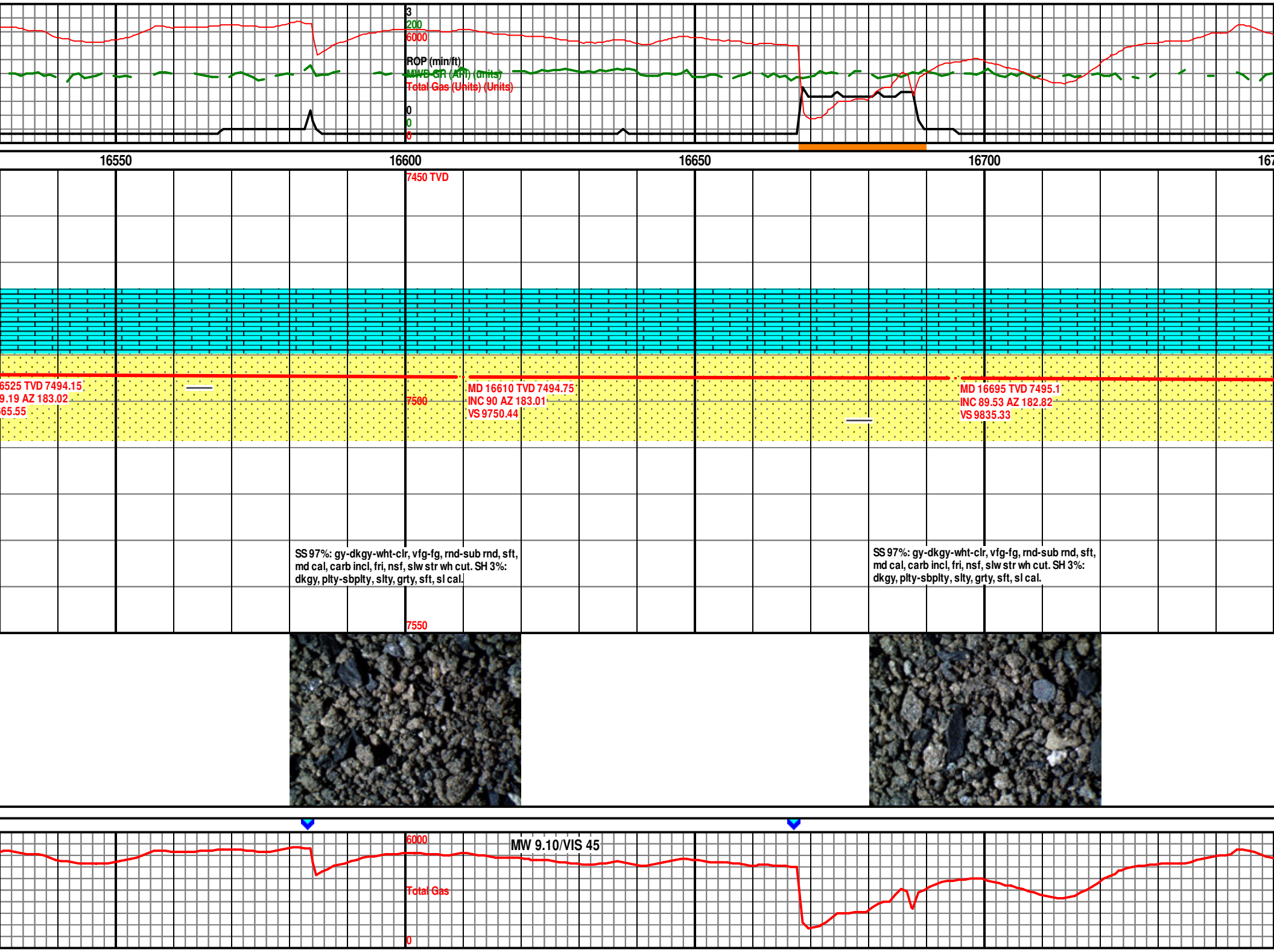

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
15450
15500
15550
15600
7450 TVD
VD 7489.81
Z 180.94
MD 15505 TVD 7489.54
INC 90.4 AZ 180.58
VS 8645.79
MD 15591 TVD 7490.01
INC 88.98 AZ 180.6
VS 8731.78
7500
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal. LS tr.
SS 100%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH tr. LS tr.
7550
MW 9.10/VIS 45
6000
Total Gas
0

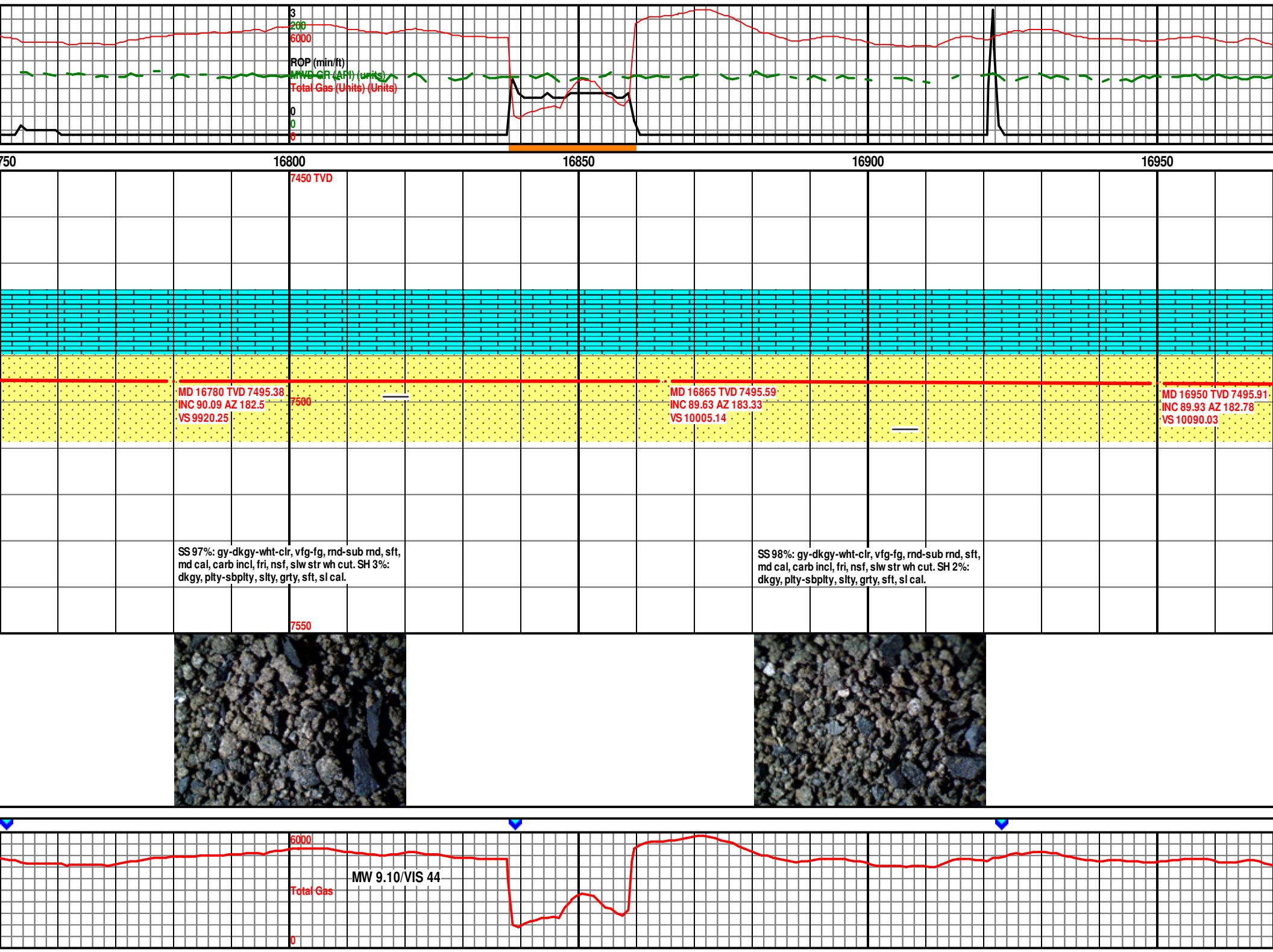

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
650
15700
15750
15800
15850
7450 TVD
MD 15676 TVD 7491.39
INC 89.16 AZ 180.36
VS 8816.77
MD 15761 TVD 7491.75
INC 90.36 AZ 180.01
VS 8901.77
MD 15846 TVD 7490.37
INC 91.5 AZ 180.11
VS 8986.75
7500
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
MW 9.10/VIS 46
6000
Total Gas
0

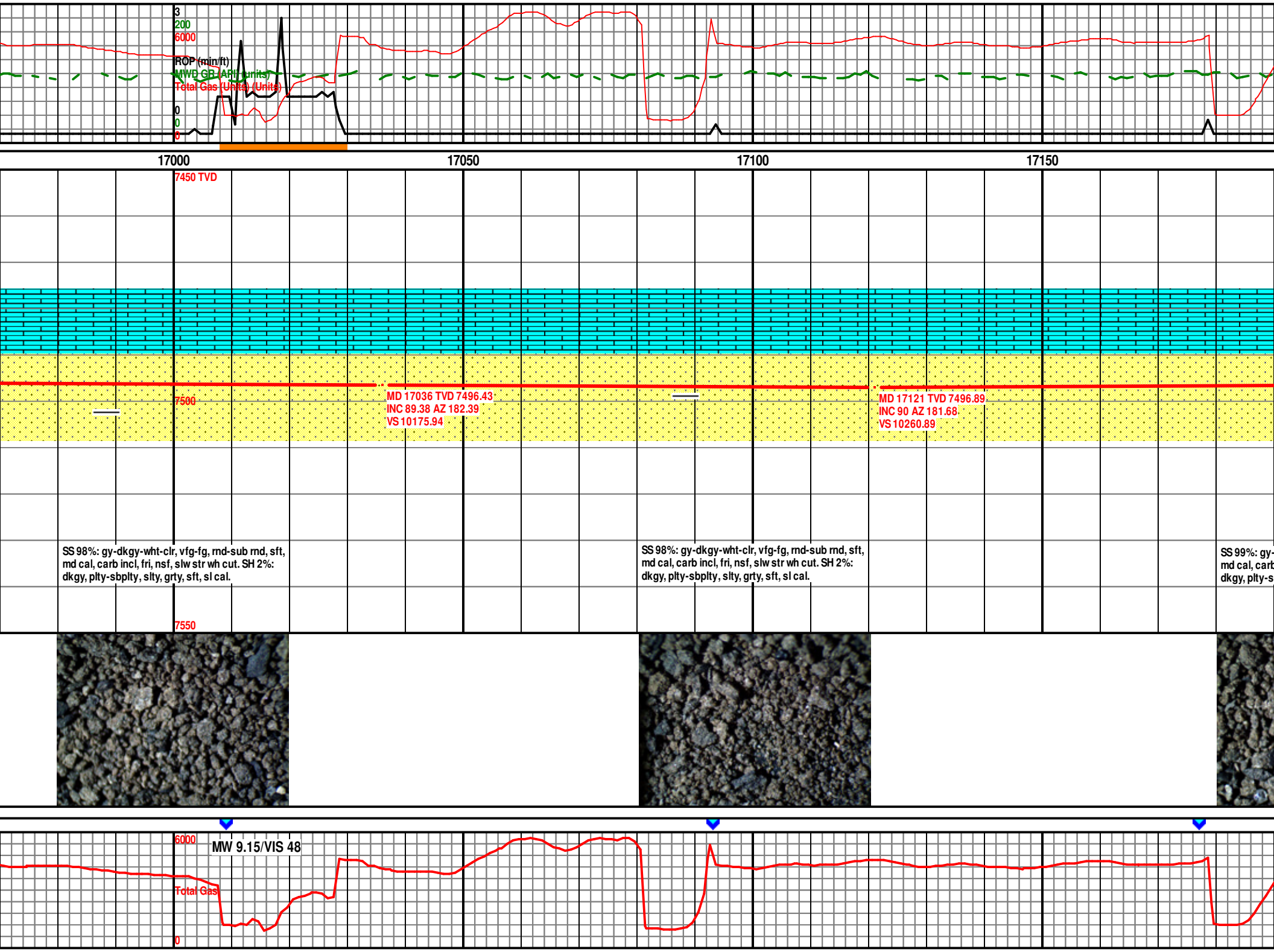

3
200
6000
ROP (min/ft)
MWD GB (API) (units)
Total Gas (Units) (Units)
0
0
0
15900
15950
16000
16050
7450 TVD
MD 15931 TVD 7489.39
INC 89.81 AZ 180.2
VS 9071.74
MD 16016 TVD 7490.31
INC 88.95 AZ 179.43
VS 9156.74
7500
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
6000
Total Gas
0
MW 9.10/VIS 45

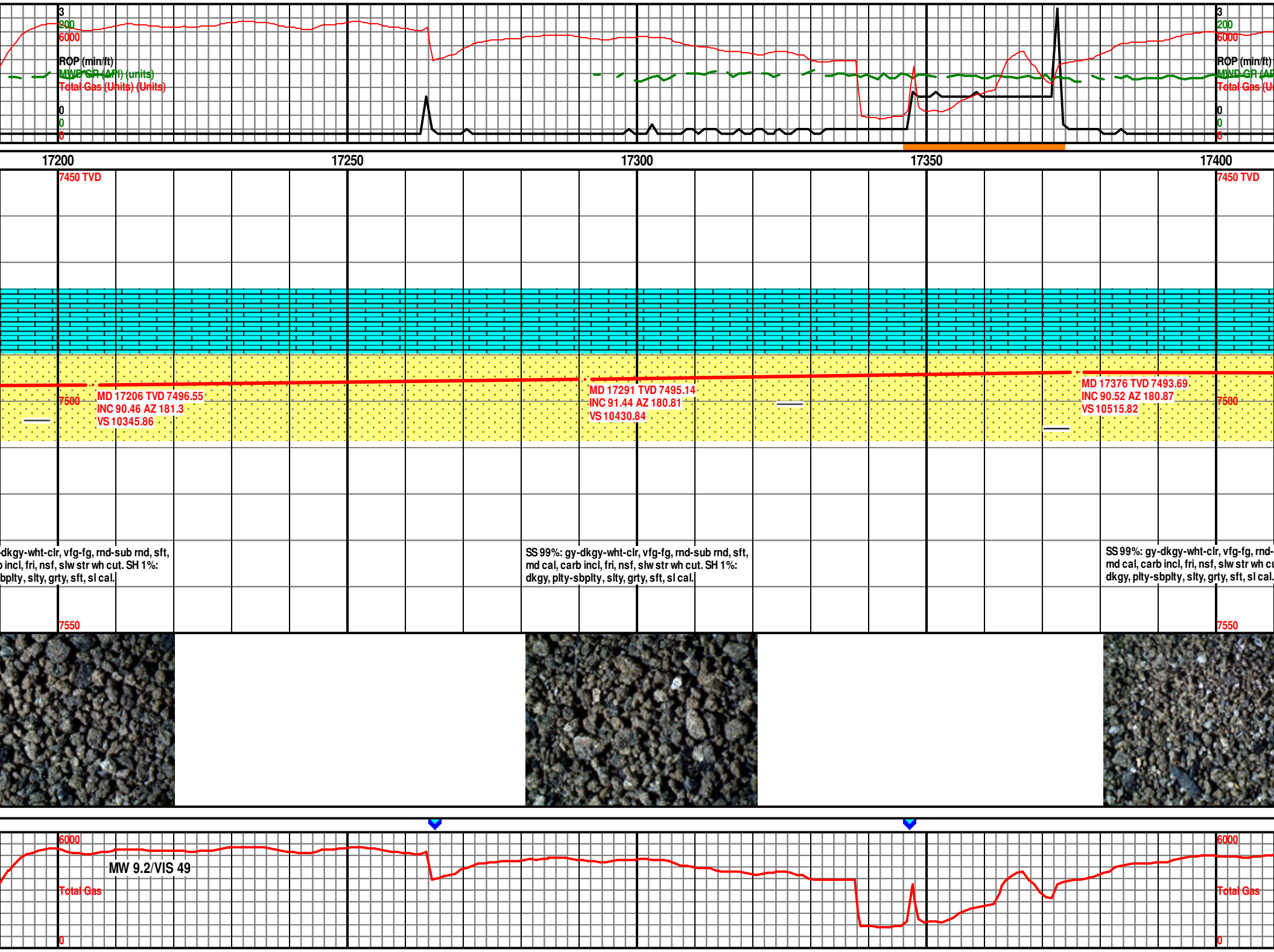

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
16100
16150
16200
16250
16300
7450 TVD
MD 16100 TVD 7491.81
INC 89.01 AZ 178.99
VS 9240.71
MD 16186 TVD 7492.61
INC 89.93 AZ 178.65
VS 9326.69
7500
MD 16271 TVD 7492.57
INC 90.12 AZ 179.89
VS 9411.68
dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
incl, fri, nsf, slw str wh cut. SH 2%:
bplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
md cal, carb incl, fri, nsf, slw str wh cut. SH 1%:
dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-
md cal, carb incl, fri, nsf, slw str wh cu
dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
MW 9.10/VIS 44
6000
Total Gas
0
MW 9.10/VIS 44

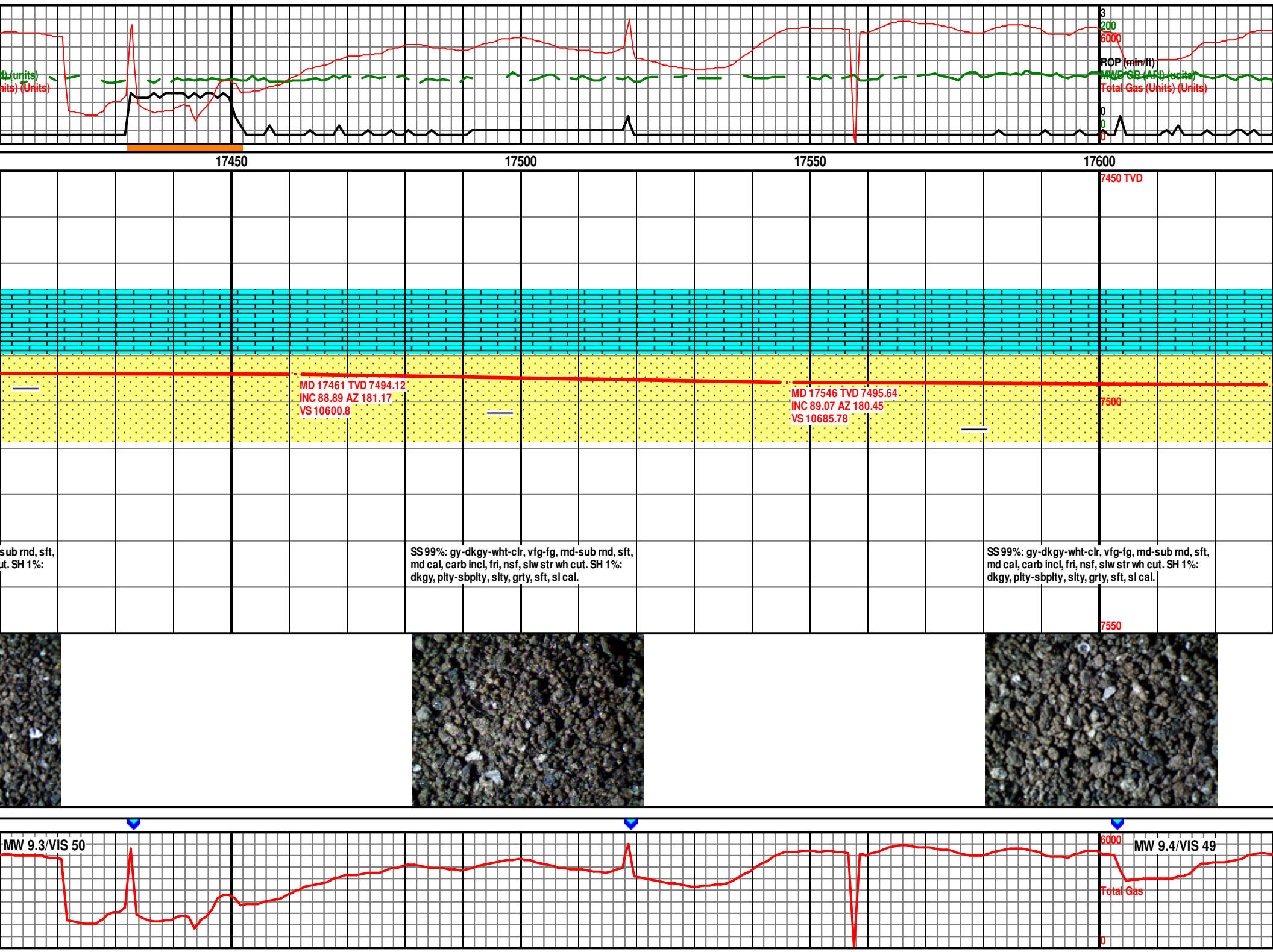

3
200
6000
ROP (min/ft)
MWD GR (API units)
Total Gas (Units) (Units)
0
0
0
16350
16400
16450
16500
7450 TVD
MD 16355 TVD 7492.69
INC 89.72 AZ 181.02
VS 9495.67
7500
MD 16440 TVD 7493.22
INC 89.56 AZ 182.26
VS 9580.64
sub rnd, sft,
ut. SH 2%:
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
6000
Total Gas
0
MW 9.10/VIS 45

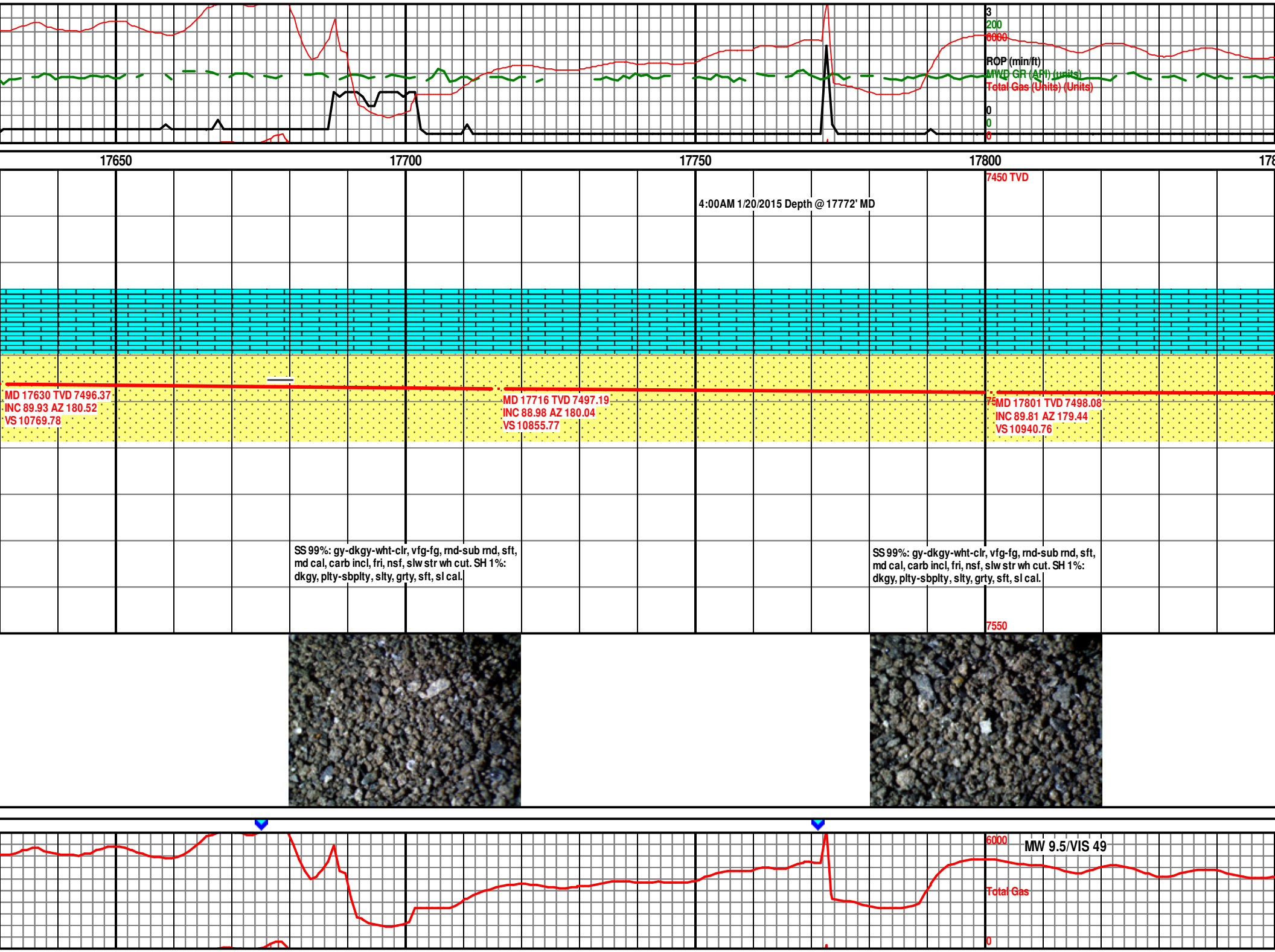

3
200
6000
ROP (min/ft)
MWD GR (API) (Units)
Total Gas (Units) (Units)
0
0
0
16550
16600
16650
16700
7450 TVD
7500
7550
6525 TVD 7494.15
9.19 AZ 183.02
65.55
MD 16610 TVD 7494.75
INC 90 AZ 183.01
VS 9750.44
MD 16695 TVD 7495.1
INC 89.53 AZ 182.82
VS 9835.33
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
6000
Total Gas
0
MW 9.10/VIS 45

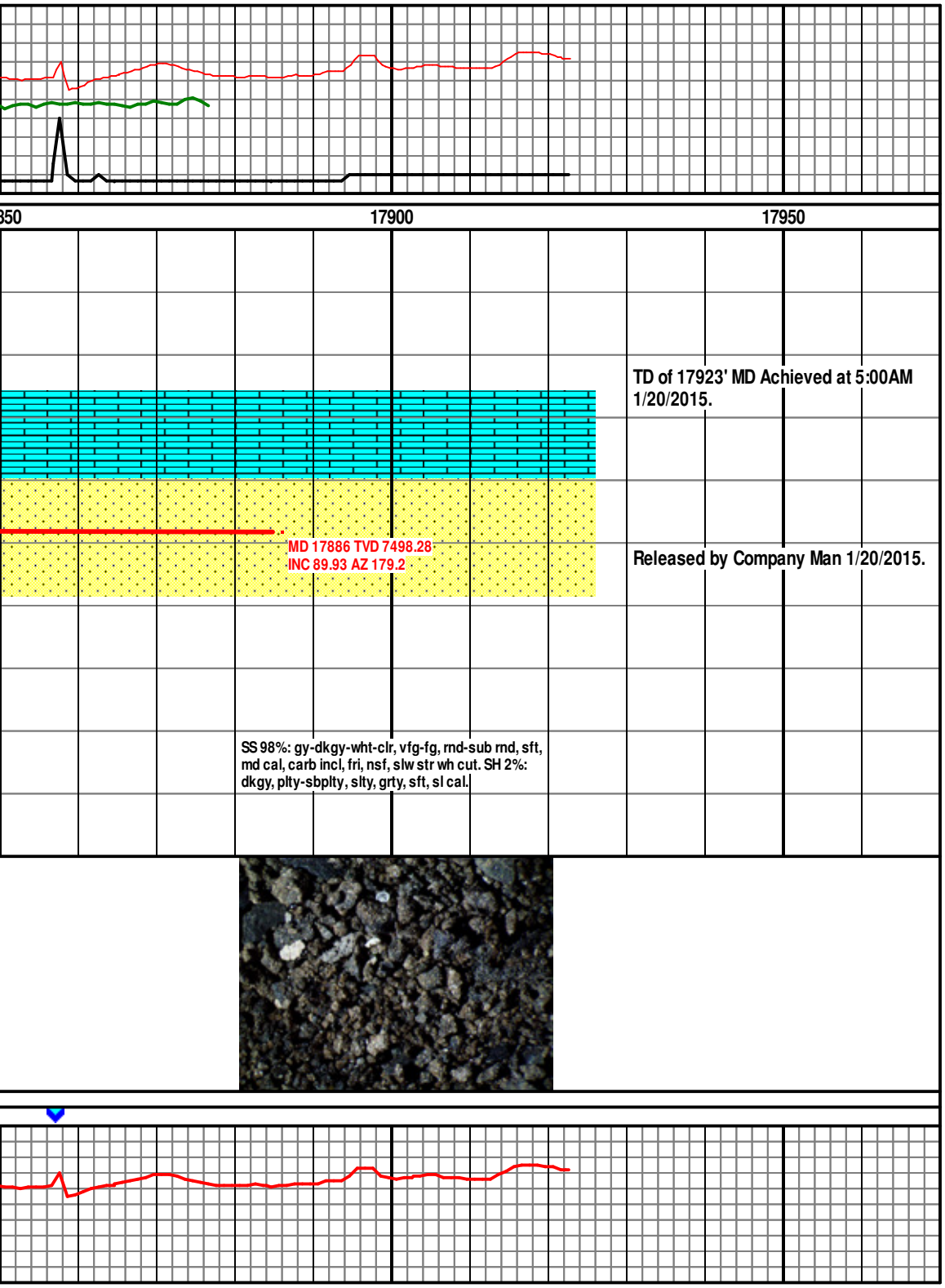

3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
750
16800
16850
16900
16950
7450 TVD
MD 16780 TVD 7495.38
INC 90.09 AZ 182.5
VS 9920.25
7500
MD 16865 TVD 7495.59
INC 89.63 AZ 183.33
VS 10005.14
MD 16950 TVD 7495.91
INC 89.93 AZ 182.78
VS 10090.03
SS 97%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 3%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
6000
MW 9.10/VIS 44
Total Gas
0


3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
17000
17050
17100
17150
7450 TVD
7500
7550
MD 17036 TVD 7496.43
INC 89.38 AZ 182.39
VS 10175.94
MD 17121 TVD 7496.89
INC 90 AZ 181.68
VS 10260.89
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-
md cal, carb
dkgy, plty-s
6000
MW 9.15/VIS 48
Total Gas
0


3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
17200
17250
17300
17350
17400
7450 TVD
7500
7550
MD 17206 TVD 7496.55
INC 90.46 AZ 181.3
VS 10345.86
MD 17291 TVD 7495.14
INC 91.44 AZ 180.81
VS 10430.84
MD 17376 TVD 7493.69
INC 90.52 AZ 180.87
VS 10515.82
-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
incl, fri, nsf, slw str wh cut. SH 1%:
bplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft,
md cal, carb incl, fri, nsf, slw str wh cut. SH 1%:
dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-
md cal, carb incl, fri, nsf, slw str wh cu
dkgy, plty-sbplty, slty, grty, sft, sl cal.
6000
MW 9.2/VIS 49
Total Gas
0


3
200
6000
ROP (min/ft)
MWD SB (API) (units)
Total Gas (Units) (Units)
0
0
0
17450
17500
17550
17600
7450 TVD
MD 17461 TVD 7494.12
INC 88.89 AZ 181.17
VS 10600.8
MD 17546 TVD 7495.64
INC 89.07 AZ 180.45
VS 10685.78
7500
sub rnd, sft,
ut. SH 1%:
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
MW 9.3/VIS 50
6000
MW 9.4/VIS 49
Total Gas
0


3
200
6000
ROP (min/ft)
MWD GR (API) (units)
Total Gas (Units) (Units)
0
0
0
17650
17700
17750
17800
7450 TVD
4:00AM 1/20/2015 Depth @ 17772' MD
MD 17630 TVD 7496.37
INC 89.93 AZ 180.52
VS 10769.78
MD 17716 TVD 7497.19
INC 88.98 AZ 180.04
VS 10855.77
MD 17801 TVD 7498.08
INC 89.81 AZ 179.44
VS 10940.76
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
SS 99%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 1%: dkgy, plty-sbplty, slty, grty, sft, sl cal.
7550
6000
MW 9.5/VIS 49
Total Gas
0


350
17900
17950
TD of 17923' MD Achieved at 5:00AM 1/20/2015.
MD 17886 TVD 7498.28
INC 89.93 AZ 179.2
Released by Company Man 1/20/2015.
SS 98%: gy-dkgy-wht-clr, vfg-fg, rnd-sub rnd, sft, md cal, carb incl, fri, nsf, slw str wh cut. SH 2%: dkgy, plty-sbplty, slty, grty, sft, sl cal.