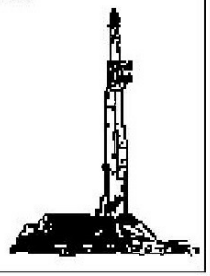
GOOLSBY BROTHERS
and associates, inc.
575 Union Blvd, Suite 208
Lakewood, CO 80228
303-945-2860 Office
Geological Wellsite
Supervision
www.goolsbybrothers.com
PETCOM



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

Well Name:	**HOOD 25C-22-M**
API:	**051234437200**
Location:	**SE/SE Section 20 T6N R66W Weld County, CO.**
License Number:	
Region:	**Wattenberg**
Spud Date:	**May 24, 2017**
Drilling Completed:	**May 27, 2017**
Surface Coordinates:	**745 FSL 1122 FEL Sec. 20 T6N R66W**
	Lat/Long: 40.468411/-104.796423
Bottom Hole Coordinates:	**Planned: 2278 FSL 2611 FWL Sec: 22 T6N R66W**
	Projected: 2282 FSL 2619 FWL Sec: 22 T6N R66W
Ground Elevation (ft):	**4,734'**
K.B. Elevation (ft):	**4,759'**
Logged Interval (ft):	**6800'** **To: 15,615'**
Total Depth (ft):	**15,615' DMTD**
Formation:	**Codell Sandstone**
Type of Drilling Fluid:	**OBM (LSND Surface).**

OPERATOR

Company: **SRC Energy, Inc**
Address: **1675 Broadway, Suite 2600**
Denver, Colorado 80202
(720) 616-4300

GEOLOGIST

Name: **Dallan Gardner & Blake Stacey**
Company: **Goolsby Brothers & Assoc. (GBA), Inc. (www.goolsbybrothers.com)**
Address: **575 Union Blvd. Suite 208,**
Lakewood CO. 80228
Tel 303-618-7736

E-logs

MWD GR from S.C. to 15,601' MD

Casing

9 5/8" Surface Casing pre set @ 1,756' MD.

Comments

1) Drilling Contractor: Precision Drilling, Rig #562
Pumps 1&2: Rostell F-1600 5" x 12" (.0692 Bbls./stroke)
Toolpusher: Michael Ellingsworth, James Gardner.

2) Company Man: Kent Priddy
Kevin Brakovec
Tim Jones

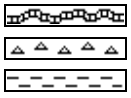
3) Mud Comapny : Reliable Drilling Fluids
Engineer: Wally Yates, Scott Allen

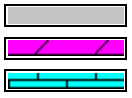
4) Directional Drilling: Baker Hughes
Drillers: Aaron Herskind, Jeremiah Samson
MWD: Carlos Lopez, Matthew, Leopold Baker Remote Field Operations.

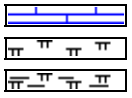
5) Gas Equipment: Pason Gas Analyzer (Spectrometer)

6) Wellsite Geologist: Dallan Gardner, & Blake Stacey

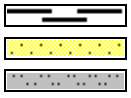
ROCK TYPES


Bent
Cht
Clyst


Oil sat.
Dol
Lmst


Chalk
Mrlst
Mrlst_sh (intbdd)


Shale
Shgy
Slty sh


Carb sh
Ss
Sltst

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

- Chlkstg
- Arg
- Bent
- Dol
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

OIL SHOWS

- Even
- Spotted
- Ques
- Dead
- Vspotty
- near even

POROSITY TYPE

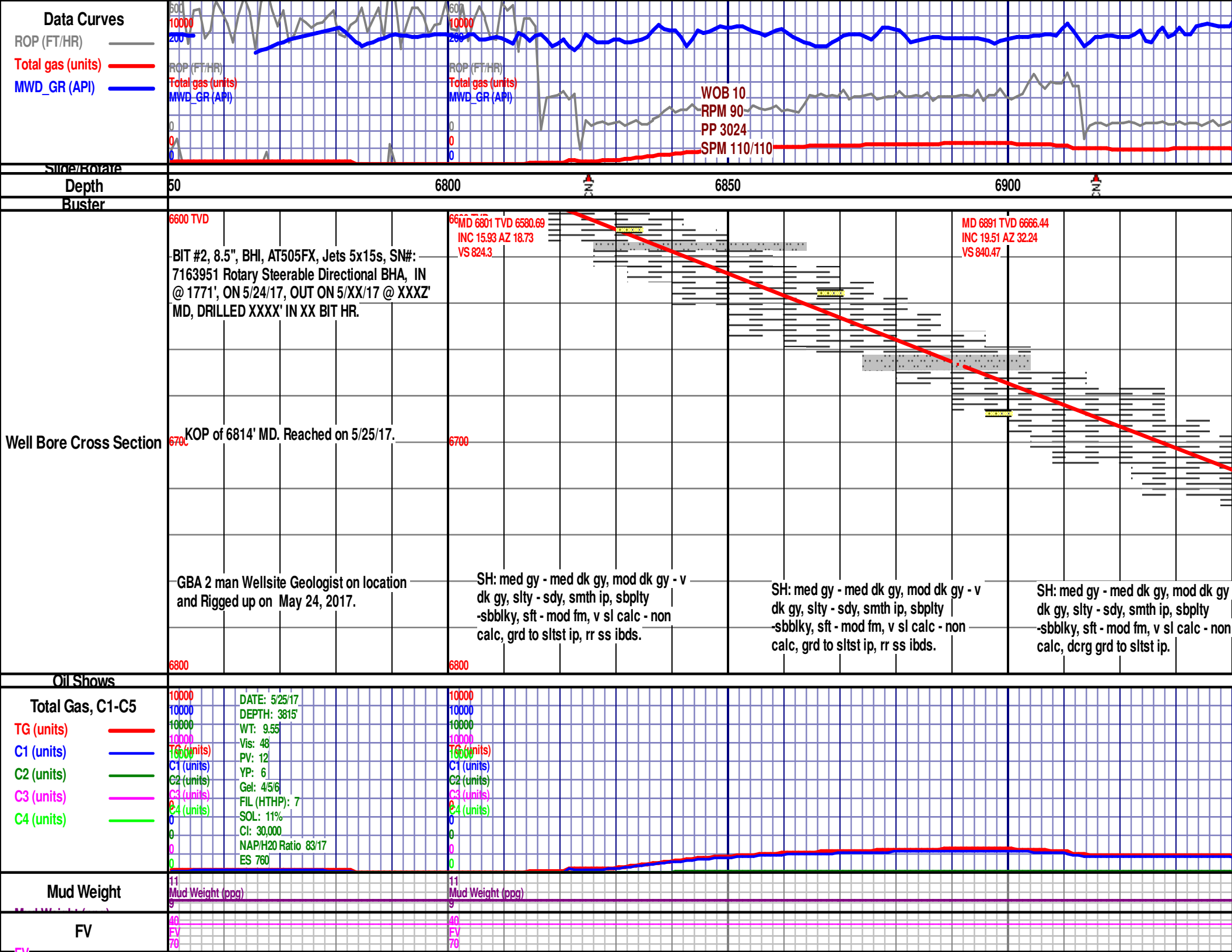
- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint
- Vuggy

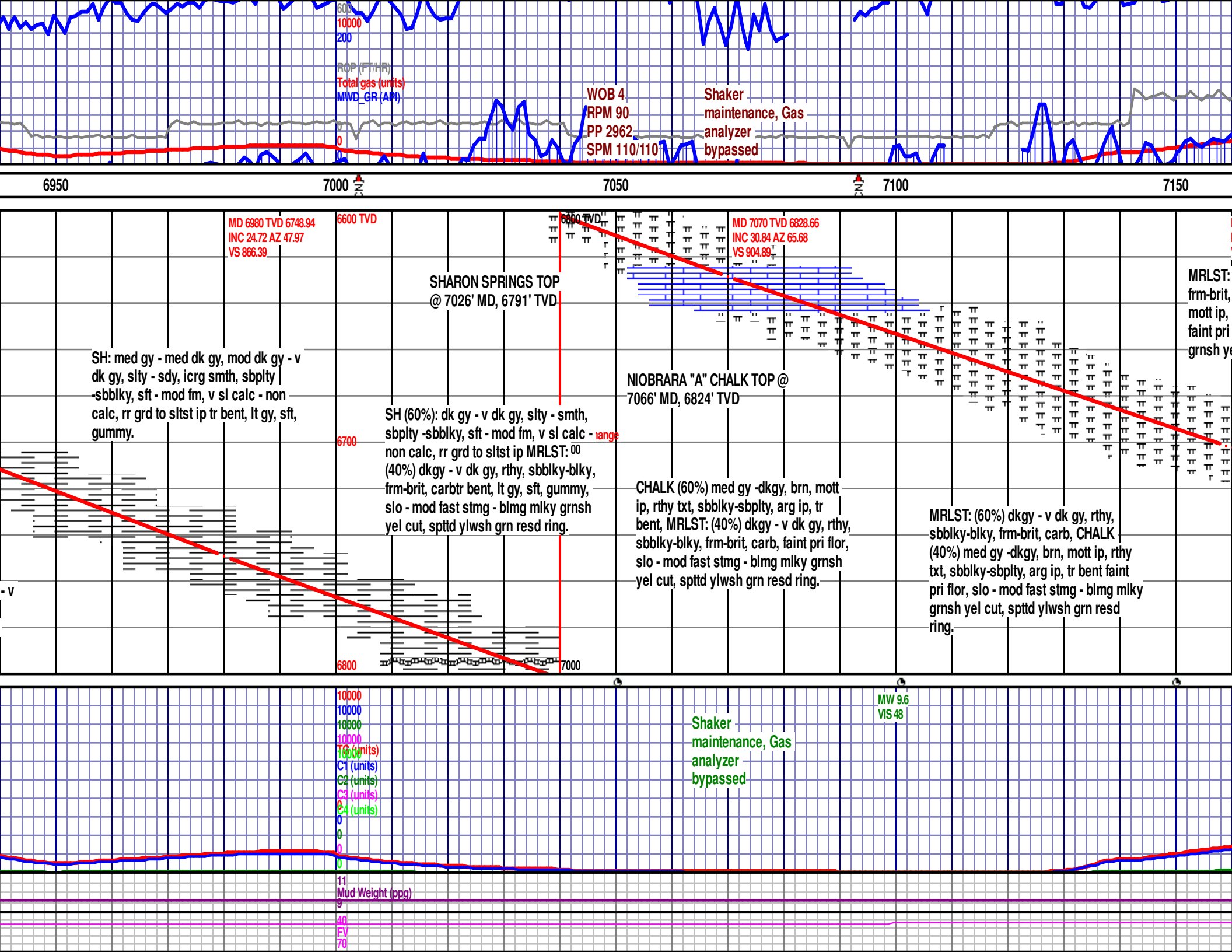
ROUNDING

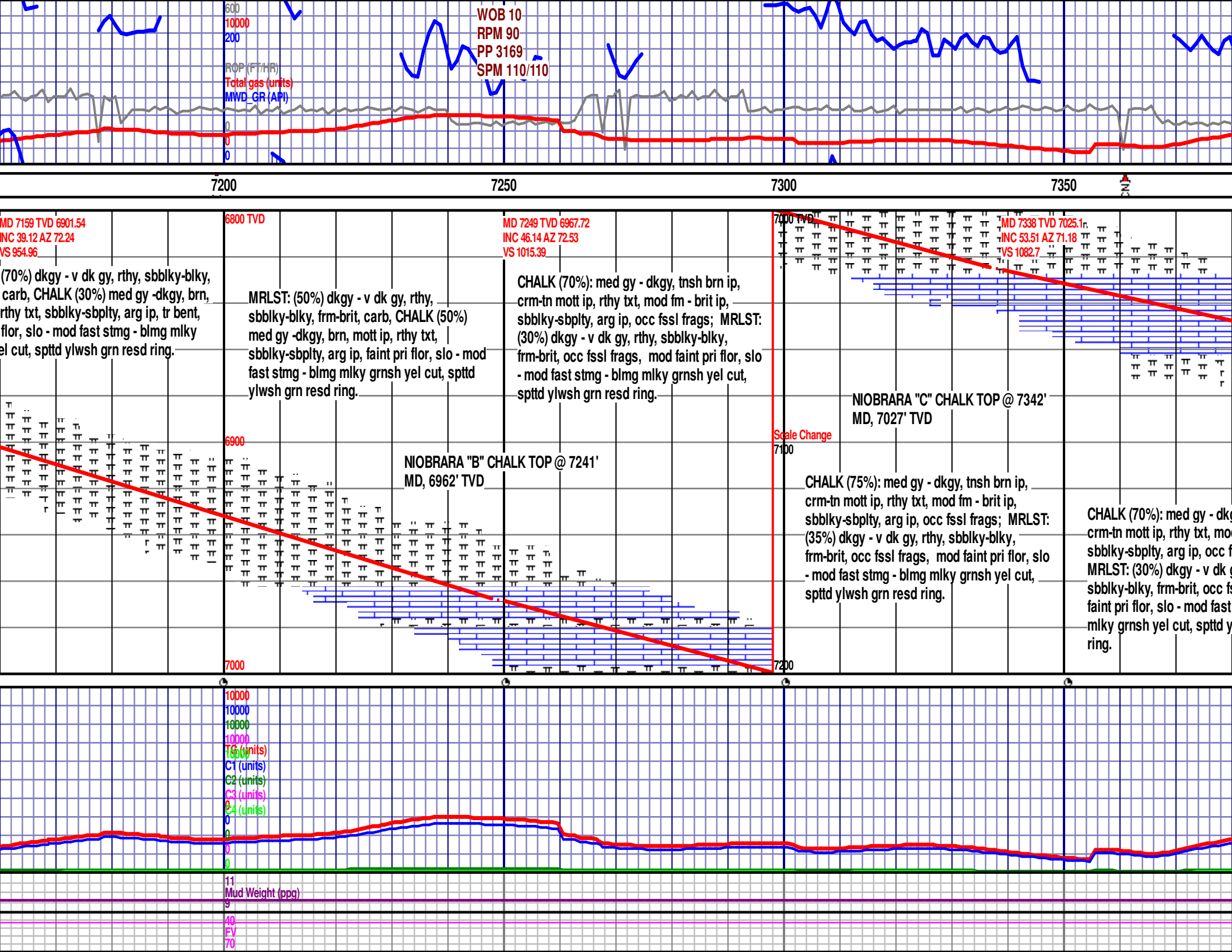
- Rounded
- Subrnd
- Subang
- Angular

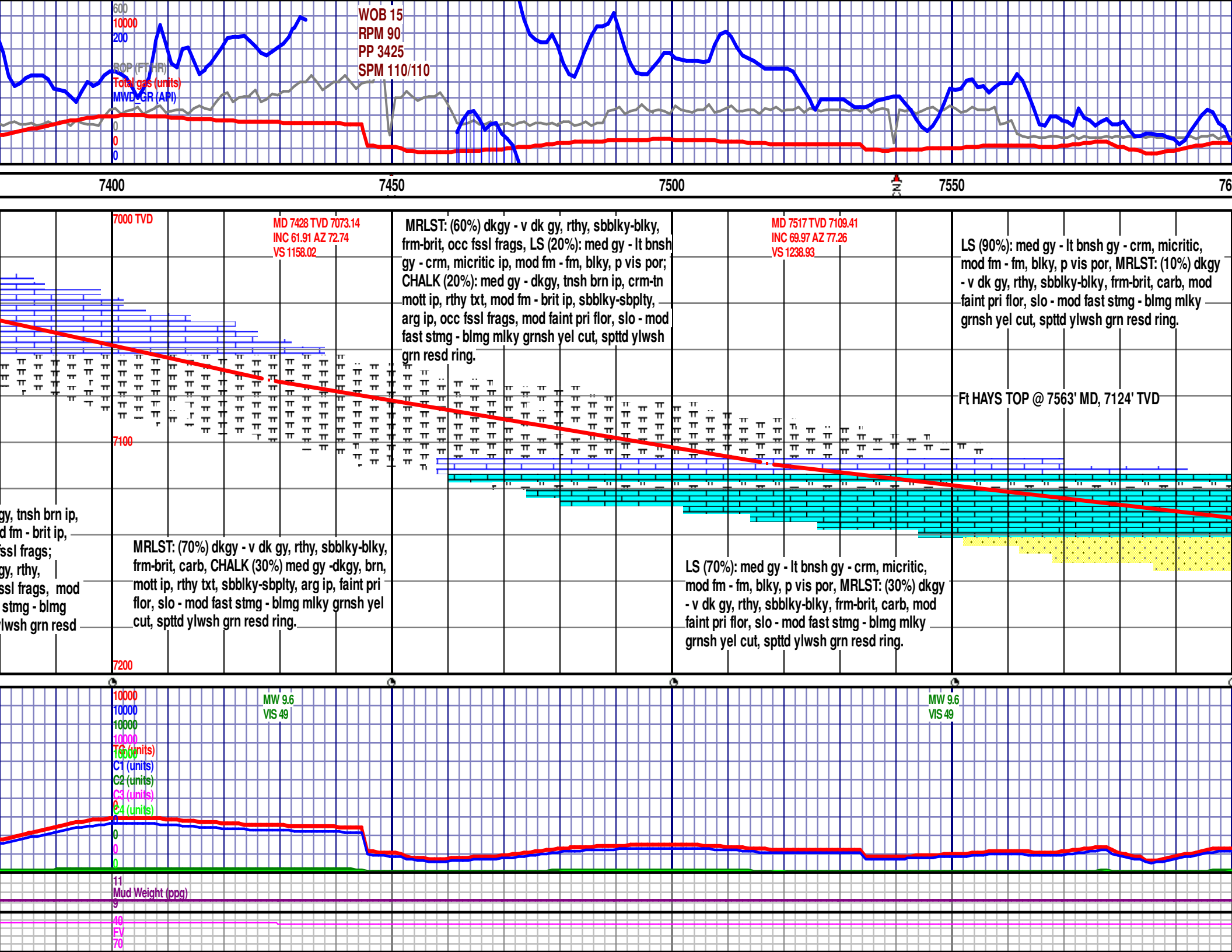
SORTING

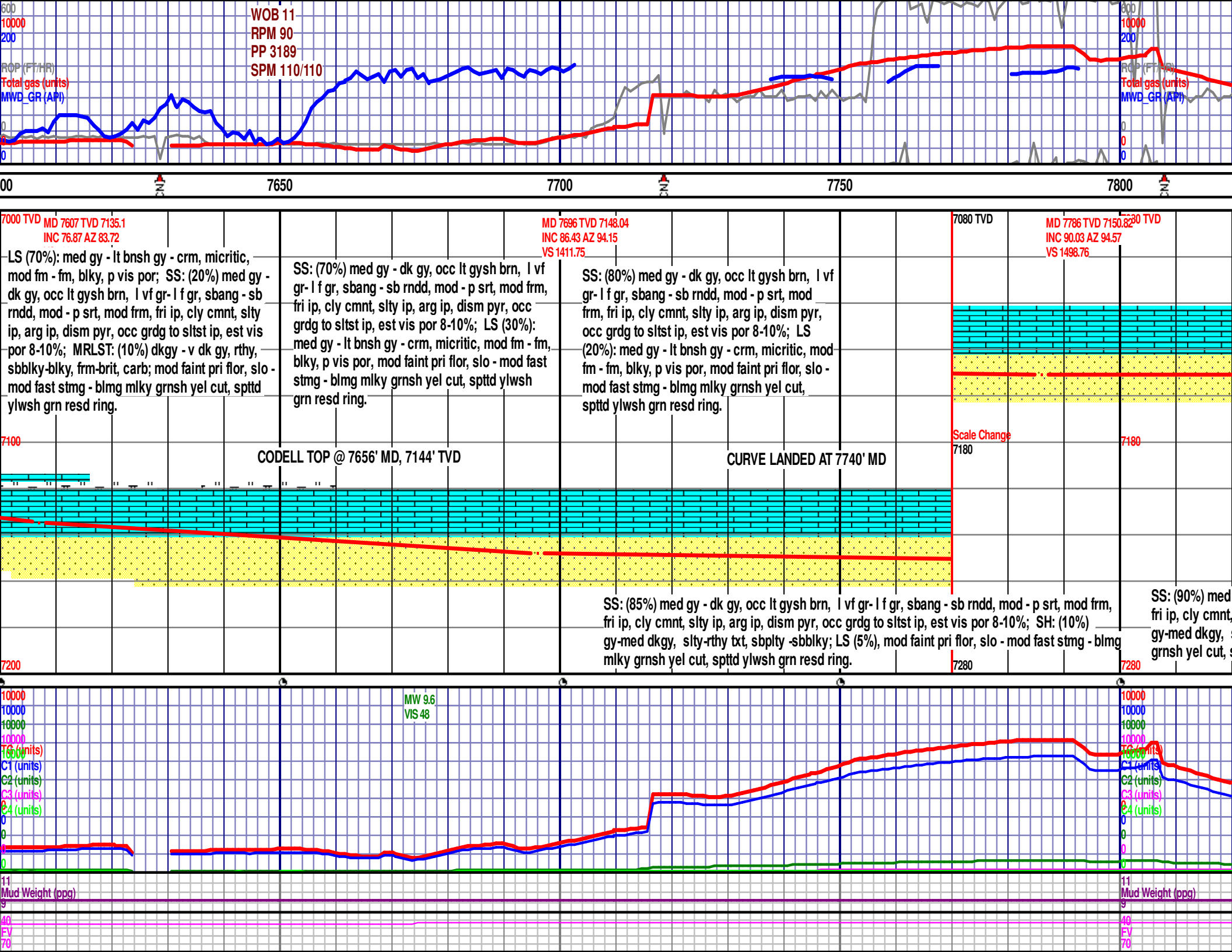
- Well
- Moderate
- Poor

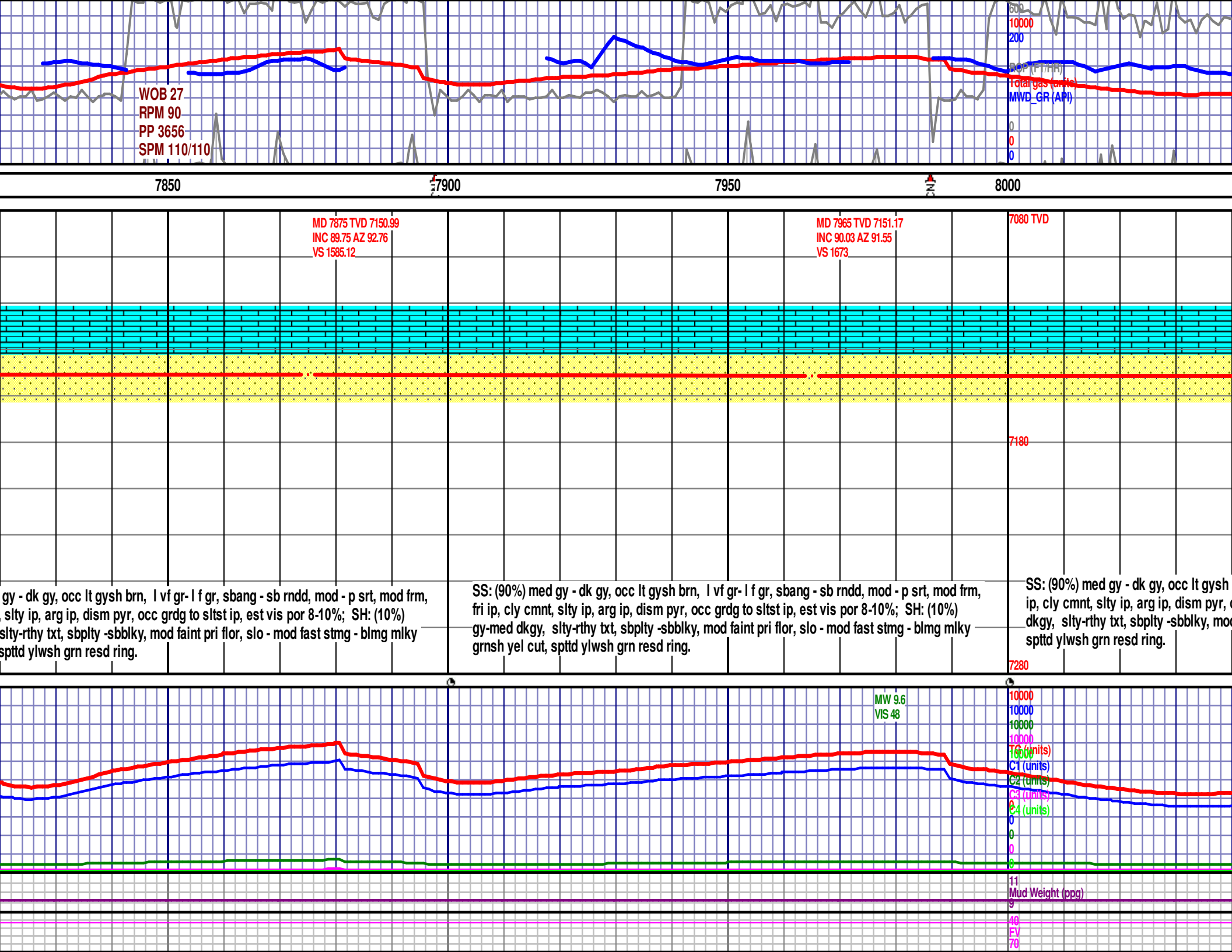

Data Curves
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
WOB 10
RPM 90
PP 3024
SPM 110/110
Slide/Rotate
Depth
50
6800
6850
6900
Buster
Well Bore Cross Section
6600 TVD
BIT #2, 8.5", BHI, AT505FX, Jets 5x15s, SN#: 7163951 Rotary Steerable Directional BHA, IN @ 1771', ON 5/24/17, OUT ON 5/XX/17 @ XXXZ' MD, DRILLED XXXX' IN XX BIT HR.
MD 6801 TVD 6580.69
INC 15.93 AZ 18.73
VS 824.3
MD 6891 TVD 6666.44
INC 19.51 AZ 32.24
VS 840.47
KOP of 6814' MD. Reached on 5/25/17.
GBA 2 man Wellsite Geologist on location and Rigged up on May 24, 2017.
SH: med gy - med dk gy, mod dk gy - v dk gy, slty - sdy, smth ip, sbplty -sbblky, sft - mod fm, v sl calc - non calc, grd to sltst ip, rr ss ibds.
SH: med gy - med dk gy, mod dk gy - v dk gy, slty - sdy, smth ip, sbplty -sbblky, sft - mod fm, v sl calc - non calc, grd to sltst ip, rr ss ibds.
SH: med gy - med dk gy, mod dk gy dk gy, slty - sdy, smth ip, sbplty -sbblky, sft - mod fm, v sl calc - non calc, dcrg grd to sltst ip.
Oil Shows
Total Gas, C1-C5
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
DATE: 5/25/17
DEPTH: 3815'
WT: 9.55
Vis: 48
PV: 12
YP: 6
Gel: 4/5/6
FIL (HTHP): 7
SOL: 11%
CI: 30,000
NAP/H20 Ratio 83/17
ES 760
Mud Weight
Mud Weight (ppg)
FV

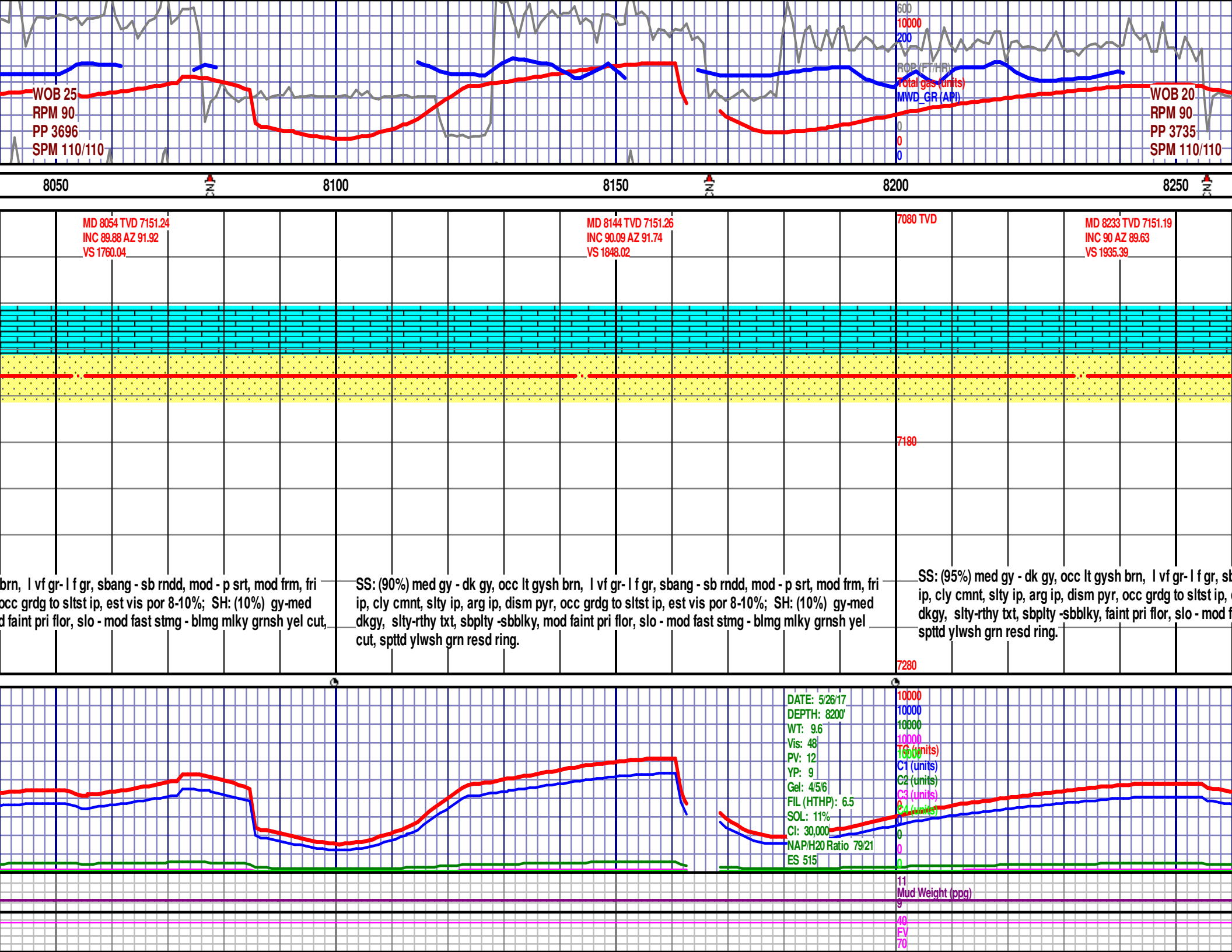

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
WOB 4
RPM 90
PP 2962
SPM 110/110
Shaker
maintenance, Gas
analyzer
bypassed
6950
7000
7050
7100
7150
MD 6980 TVD 6748.94
INC 24.72 AZ 47.97
VS 866.39
6600 TVD
6800 TVD
MD 7070 TVD 6828.66
INC 30.84 AZ 65.68
VS 904.89
SHARON SPRINGS TOP
@ 7026' MD, 6791' TVD
SH: med gy - med dk gy, mod dk gy - v dk gy, slty - sdy, icrg smth, sbplty -sbblky, sft - mod fm, v sl calc - non calc, rr grd to sltst ip tr bent, lt gy, sft, gummy.
SH (60%): dk gy - v dk gy, slty - smth, sbplty -sbblky, sft - mod fm, v sl calc - non calc, rr grd to sltst ip MRLST: (40%) dkgy - v dk gy, rthy, sbblky-blky, frm-brit, carbtr bent, lt gy, sft, gummy, slo - mod fast stmg - blmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
NIOBRARA "A" CHALK TOP @
7066' MD, 6824' TVD
CHALK (60%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbplty, arg ip, tr bent, MRLST: (40%) dkgy - v dk gy, rthy, sbblky-blky, frm-brit, carb, faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
MRLST: (60%) dkgy - v dk gy, rthy, sbblky-blky, frm-brit, carb, CHALK (40%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbplty, arg ip, tr bent faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
MRLST:
frm-brit,
mott ip,
faint pri
grnsh ye
6700
6800
7000
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
MW 9.6
VIS 48
Shaker
maintenance, Gas
analyzer
bypassed
11
Mud Weight (ppg)
9
40
FV
70

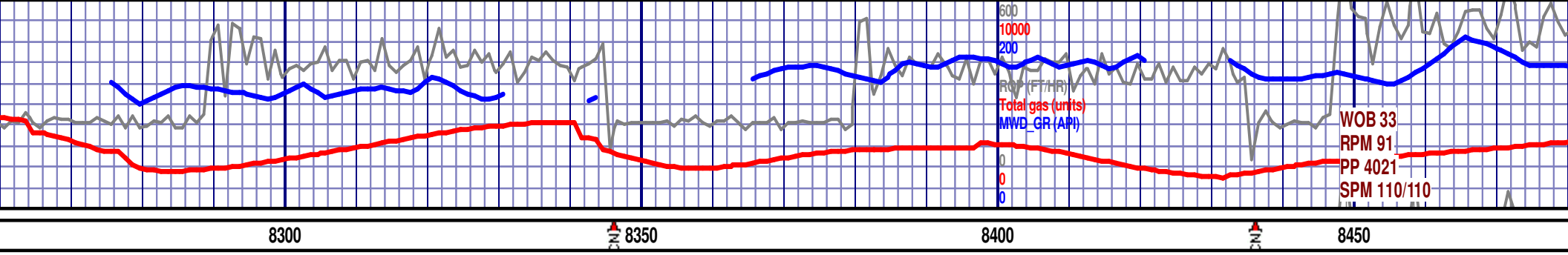

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 10
RPM 90
PP 3169
SPM 110/110
7200
7250
7300
7350
MD 7159 TVD 6901.54
INC 39.12 AZ 72.24
VS 954.96
(70%) dkgy - v dk gy, rthy, sbblky-blky,
carb, CHALK (30%) med gy -dkgy, brn,
rthy txt, sbblky-sbplty, arg ip, tr bent,
flor, slo - mod fast stmg - blmg mlky
el cut, spttd ylwsh grn resd ring.
6800 TVD
MRLST: (50%) dkgy - v dk gy, rthy,
sbblky-blky, frm-brit, carb, CHALK (50%)
med gy -dkgy, brn, mott ip, rthy txt,
sbblky-sbplty, arg ip, faint pri flor, slo - mod
fast stmg - blmg mlky grnsh yel cut, spttd
ylwsh grn resd ring.
MD 7249 TVD 6967.72
INC 46.14 AZ 72.53
VS 1015.39
CHALK (70%): med gy - dkgy, tnsh brn ip,
crm-tn mott ip, rthy txt, mod fm - brit ip,
sbblky-sbplty, arg ip, occ fssl frags; MRLST:
(30%) dkgy - v dk gy, rthy, sbblky-blky,
frm-brit, occ fssl frags, mod faint pri flor, slo
- mod fast stmg - blmg mlky grnsh yel cut,
spttd ylwsh grn resd ring.
7000 TVD
MD 7338 TVD 7025.1
INC 53.51 AZ 71.18
VS 1082.7
NIOBRARA "C" CHALK TOP @ 7342'
MD, 7027' TVD
6900
NIOBRARA "B" CHALK TOP @ 7241'
MD, 6962' TVD
Scale Change
7100
CHALK (75%): med gy - dkgy, tnsh brn ip,
crm-tn mott ip, rthy txt, mod fm - brit ip,
sbblky-sbplty, arg ip, occ fssl frags; MRLST:
(35%) dkgy - v dk gy, rthy, sbblky-blky,
frm-brit, occ fssl frags, mod faint pri flor, slo
- mod fast stmg - blmg mlky grnsh yel cut,
spttd ylwsh grn resd ring.
CHALK (70%): med gy - dk
crm-tn mott ip, rthy txt, mo
sbblky-sbplty, arg ip, occ f
MRLST: (30%) dkgy - v dk
sbblky-blky, frm-brit, occ f
faint pri flor, slo - mod fast
mlky grnsh yel cut, spttd y
ring.
7000
7200
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70


600
10000
200
BOP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 15
RPM 90
PP 3425
SPM 110/110
7400
7450
7500
7550
76
7000 TVD
MD 7428 TVD 7073.14
INC 61.91 AZ 72.74
VS 1158.02
MD 7517 TVD 7109.41
INC 69.97 AZ 77.26
VS 1238.93
MRLST: (60%) dkgy - v dk gy, rthy, sbblky-blky, frm-brit, occ fssl frags, LS (20%): med gy - lt bnsh gy - crm, micritic ip, mod fm - fm, blky, p vis por; CHALK (20%): med gy - dkgy, tnsh brn ip, crm-tn mott ip, rthy txt, mod fm - brit ip, sbblky-sbplty, arg ip, occ fssl frags, mod faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
LS (90%): med gy - lt bnsh gy - crm, micritic, mod fm - fm, blky, p vis por, MRLST: (10%) dkgy - v dk gy, rthy, sbblky-blky, frm-brit, carb, mod faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
Ft HAYS TOP @ 7563' MD, 7124' TVD
7100
gy, tnsh brn ip,
d fm - brit ip,
fssl frags;
gy, rthy,
ssl frags, mod
stmg - blmg
lwsh grn resd
MRLST: (70%) dkgy - v dk gy, rthy, sbblky-blky, frm-brit, carb, CHALK (30%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbplty, arg ip, faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
LS (70%): med gy - lt bnsh gy - crm, micritic, mod fm - fm, blky, p vis por, MRLST: (30%) dkgy - v dk gy, rthy, sbblky-blky, frm-brit, carb, mod faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
7200
10000
10000
10000
10000
10000
T6 (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
MW 9.6
VIS 49
MW 9.6
VIS 49
0
0
0
11
Mud Weight (ppg)
9
40
FV
70


WOB 11
RPM 90
PP 3189
SPM 110/110
600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
7650
7700
7750
7800
7000 TVD
MD 7607 TVD 7135.1
INC 76.87 AZ 83.72
LS (70%): med gy - lt bnsh gy - crm, micritic, mod fm - fm, blky, p vis por; SS: (20%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; MRLST: (10%) dkgy - v dk gy, rthy, sbblky-blky, frm-brit, carb; mod faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (70%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; LS (30%): med gy - lt bnsh gy - crm, micritic, mod fm - fm, blky, p vis por, mod faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
MD 7696 TVD 7148.04
INC 86.43 AZ 94.15
VS 1411.75
SS: (80%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; LS (20%): med gy - lt bnsh gy - crm, micritic, mod fm - fm, blky, p vis por, mod faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
7080 TVD
MD 7786 TVD 7150.82
INC 90.03 AZ 94.57
VS 1498.76
7100
CODELL TOP @ 7656' MD, 7144' TVD
CURVE LANDED AT 7740' MD
Scale Change
7180
7200
SS: (85%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (10%) gy-med dkgy, slty-rthy txt, sbplty -sbblky; LS (5%), mod faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
7280
SS: (90%) med
fri ip, cly cmnt,
gy-med dkgy,
grnsh yel cut,
MW 9.6
VIS 48
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
Mud Weight (ppg)
FV


WOB 27
RPM 90
PP 3656
SPM 110/110
600
10000
200
ROP (FT/HR)
Totalgas (units)
MWD_GR (API)
0
0
0
7850
7900
7950
8000
MD 7875 TVD 7150.99
INC 89.75 AZ 92.76
VS 1585.12
MD 7965 TVD 7151.17
INC 90.03 AZ 91.55
VS 1673
7080 TVD
7180
7280
gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm,
slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (10%)
slty-rthy txt, sbplty -sbblky, mod faint pri flor, slo - mod fast stmg - blmg mlky
spttd ylwsh grn resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm,
fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (10%)
gy-med dkgy, slty-rthy txt, sbplty -sbblky, mod faint pri flor, slo - mod fast stmg - blmg mlky
grnsh yel cut, spttd ylwsh grn resd ring.
SS: (90%) med gy - dk gy, occ lt gysh
ip, cly cmnt, slty ip, arg ip, dism pyr,
dkgy, slty-rthy txt, sbplty -sbblky, mod
spttd ylwsh grn resd ring.
MW 9.6
VIS 48
10000
10000
10000
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70


WOB 25
RPM 90
PP 3696
SPM 110/110
600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 20
RPM 90
PP 3735
SPM 110/110
8050
8100
8150
8200
8250
MD 8054 TVD 7151.24
INC 89.88 AZ 91.92
VS 1760.04
MD 8144 TVD 7151.26
INC 90.09 AZ 91.74
VS 1848.02
7080 TVD
MD 8233 TVD 7151.19
INC 90 AZ 89.63
VS 1935.39
7180
7280
brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri
occ grdg to sltst ip, est vis por 8-10%; SH: (10%) gy-med
d faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut,
SS: (90%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri
ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (10%) gy-med
dkgy, slty-rthy txt, sbplty -sbblky, mod faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel
cut, sptd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sb
ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip,
dkgy, slty-rthy txt, sbplty -sbblky, faint pri flor, slo - mod f
sptd ylwsh grn resd ring.
DATE: 5/26/17
DEPTH: 8200'
WT: 9.6
Vis: 48
PV: 12
YP: 9
Gel: 4/5/6
FIL (HTHP): 6.5
SOL: 11%
Cl: 30,000
NAP/H20 Ratio 79/21
ES 515
10000
10000
10000
10000
T6 (units)
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
11
Mud Weight (ppg)
9
40
FV
70



8300 | 8350 | 8400 | 8450

MD 8323 TVD 7151.24
INC 89.94 AZ 87.92
VS 2024.25

MD 8412 TVD 7151.35
INC 89.91 AZ 88.33
VS 2112.29

7080 TVD

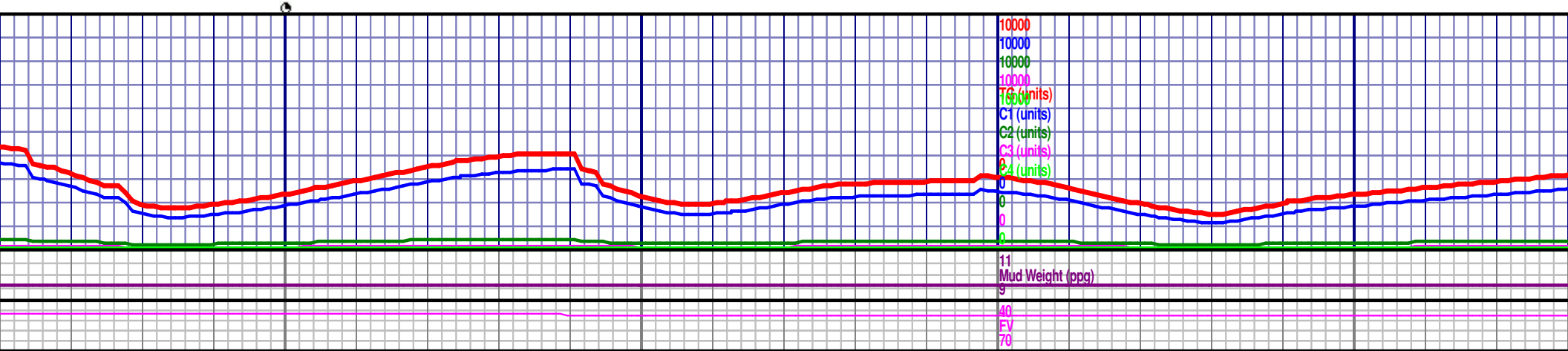
7180

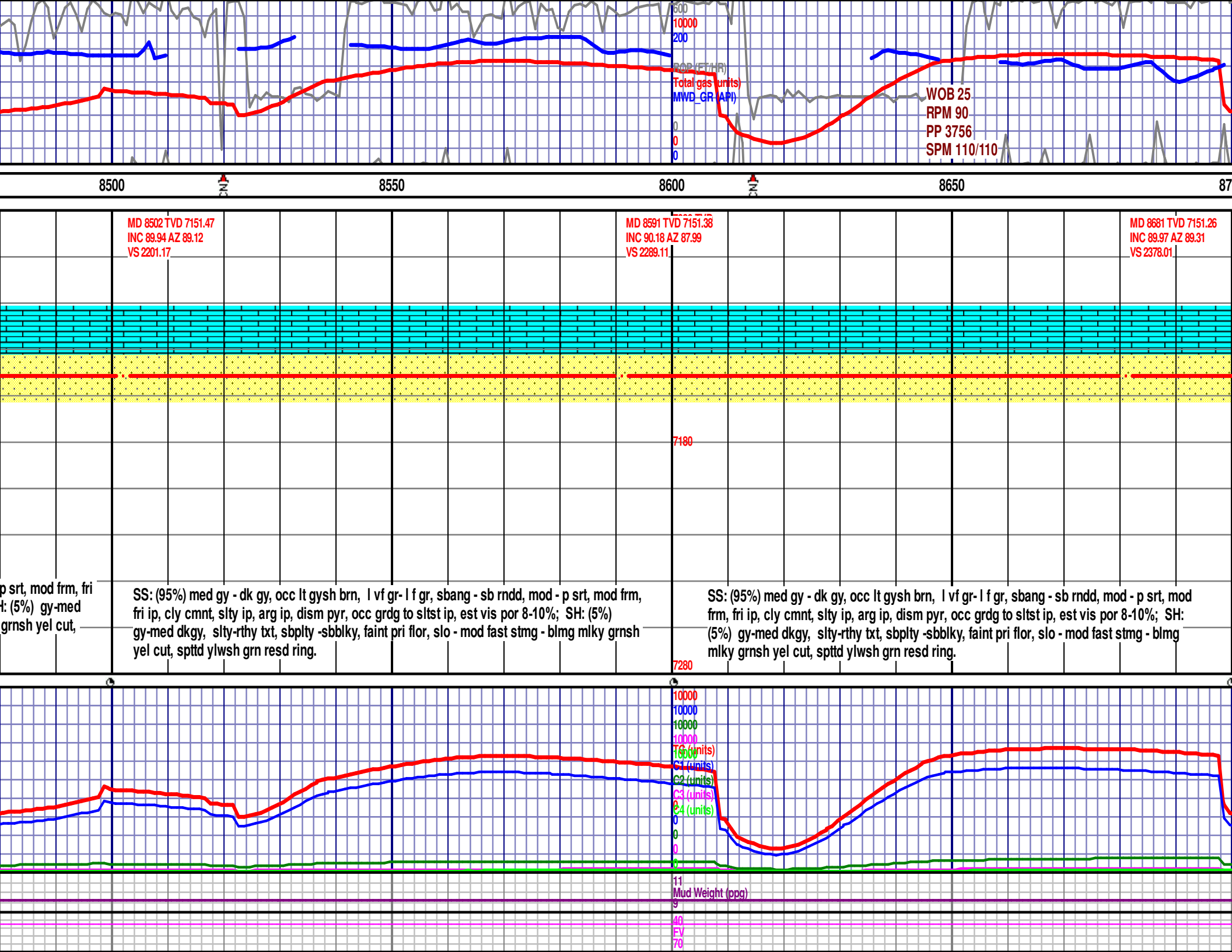
7280

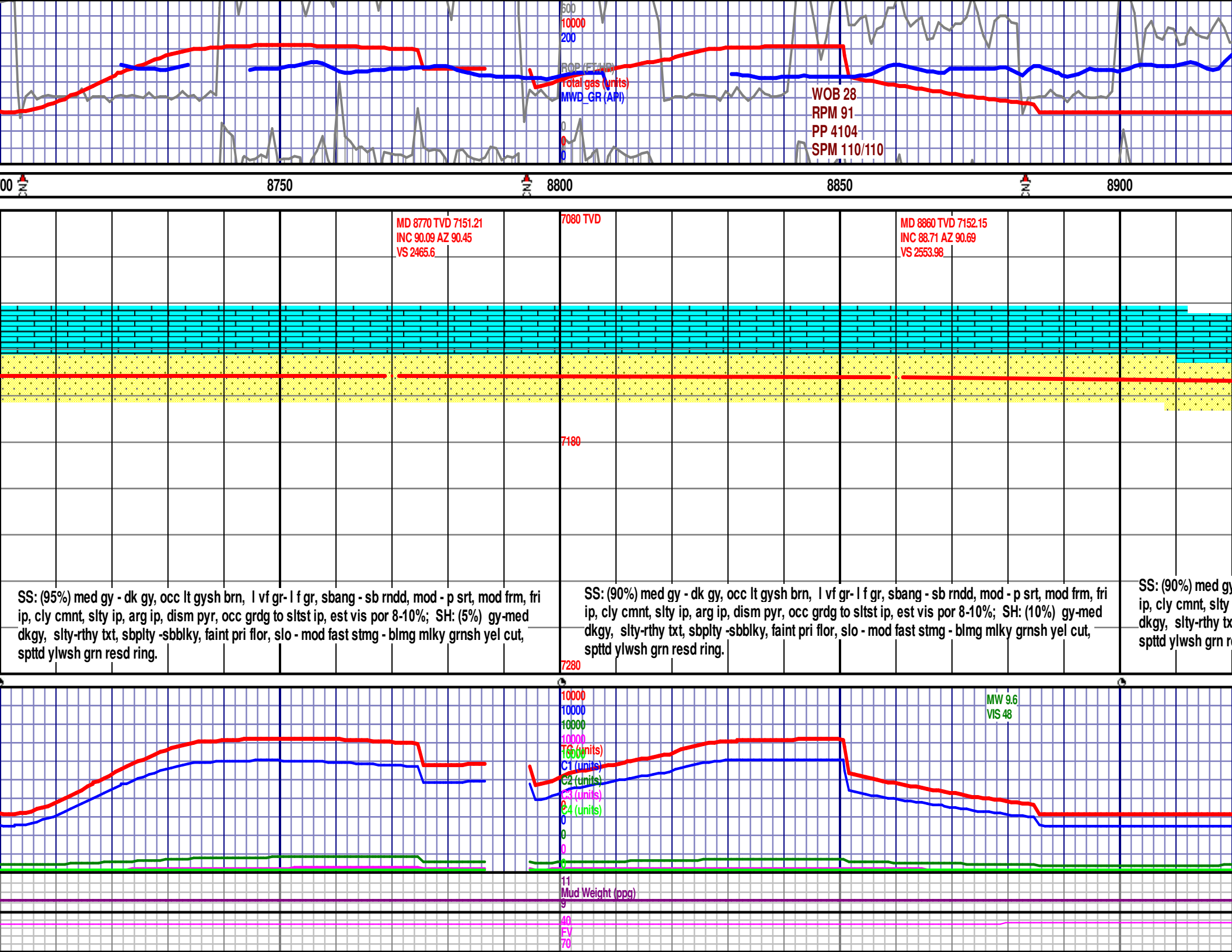
bang - sb rndd, mod - p srt, mod frm, fri
est vis por 8-10%; SH: (5%) gy-med
fast stmg - blmg mlky grnsh yel cut,

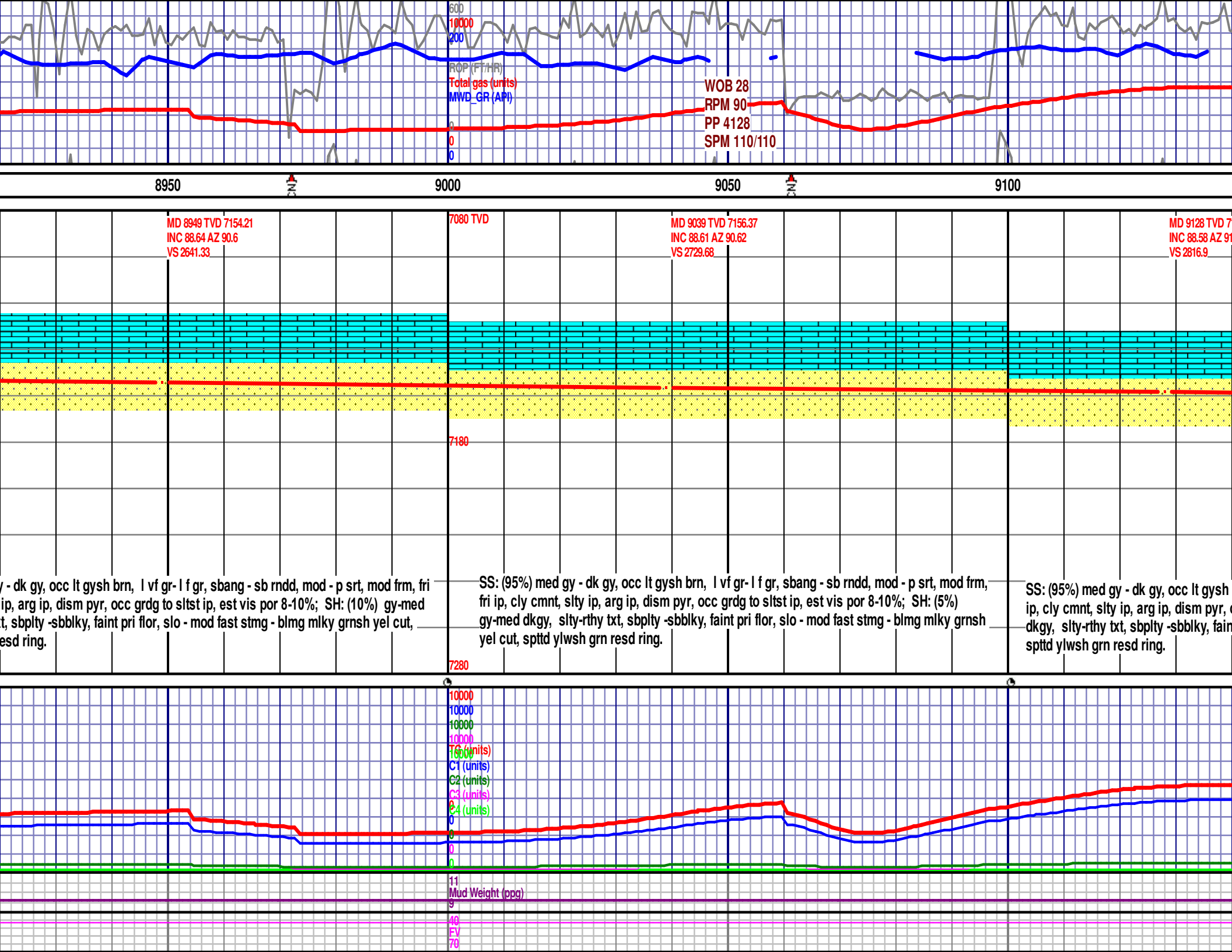
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (5%) gy-med dkgy, slty-rthy txt, sbplty -sbblky, faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, spttd ylwsh grn resd ring.

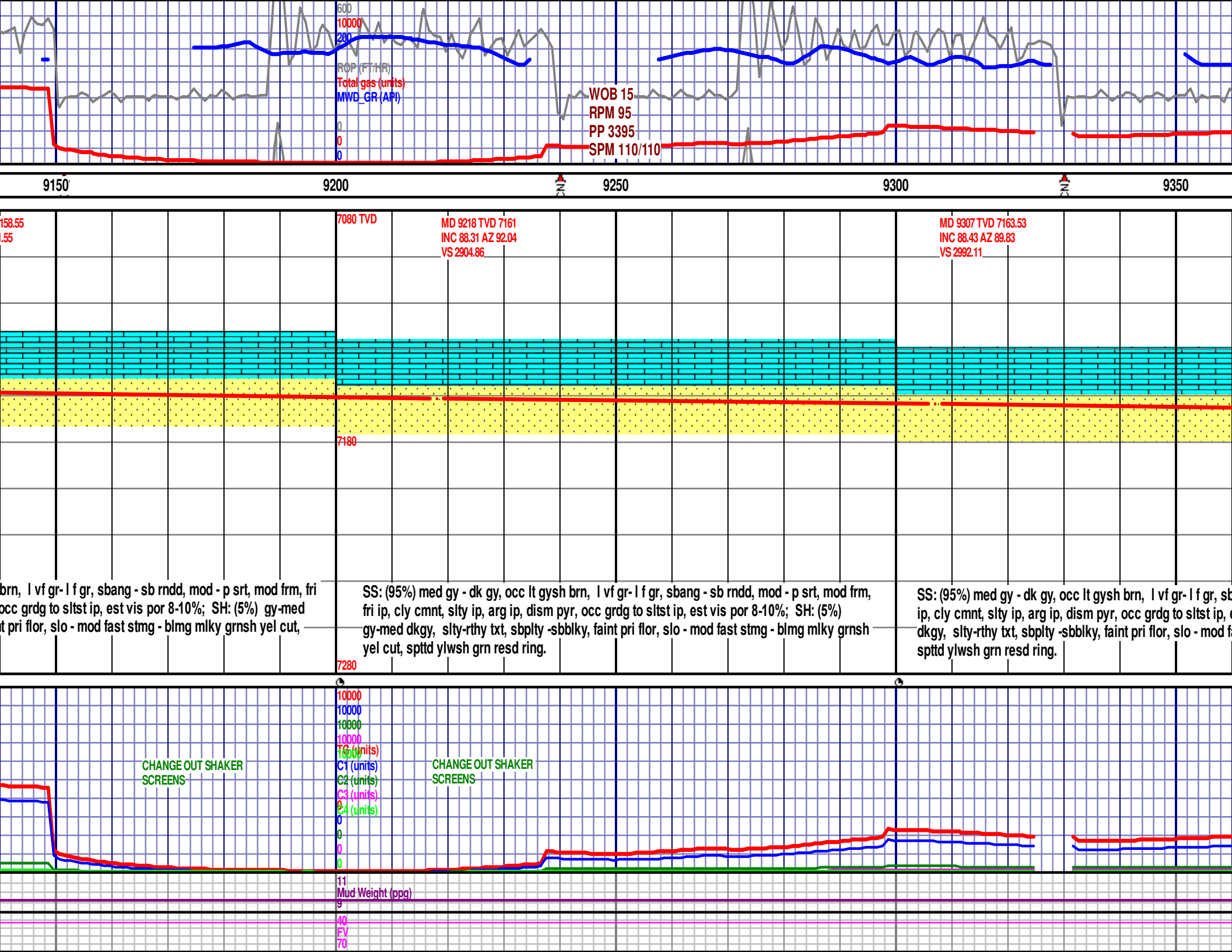
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH dkgy, slty-rthy txt, sbplty -sbblky, faint pri flor, slo - mod fast stmg - blmg mlky spttd ylwsh grn resd ring.

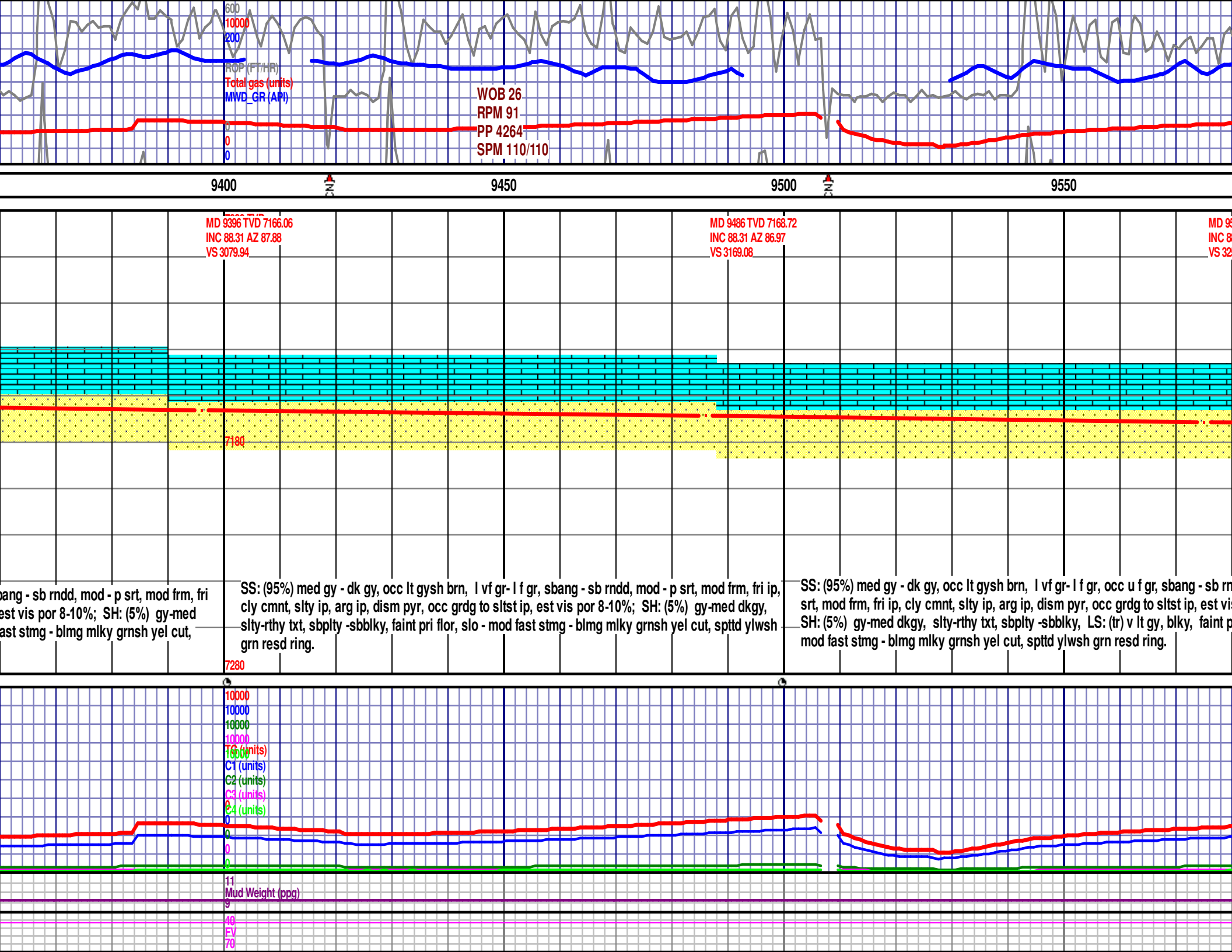


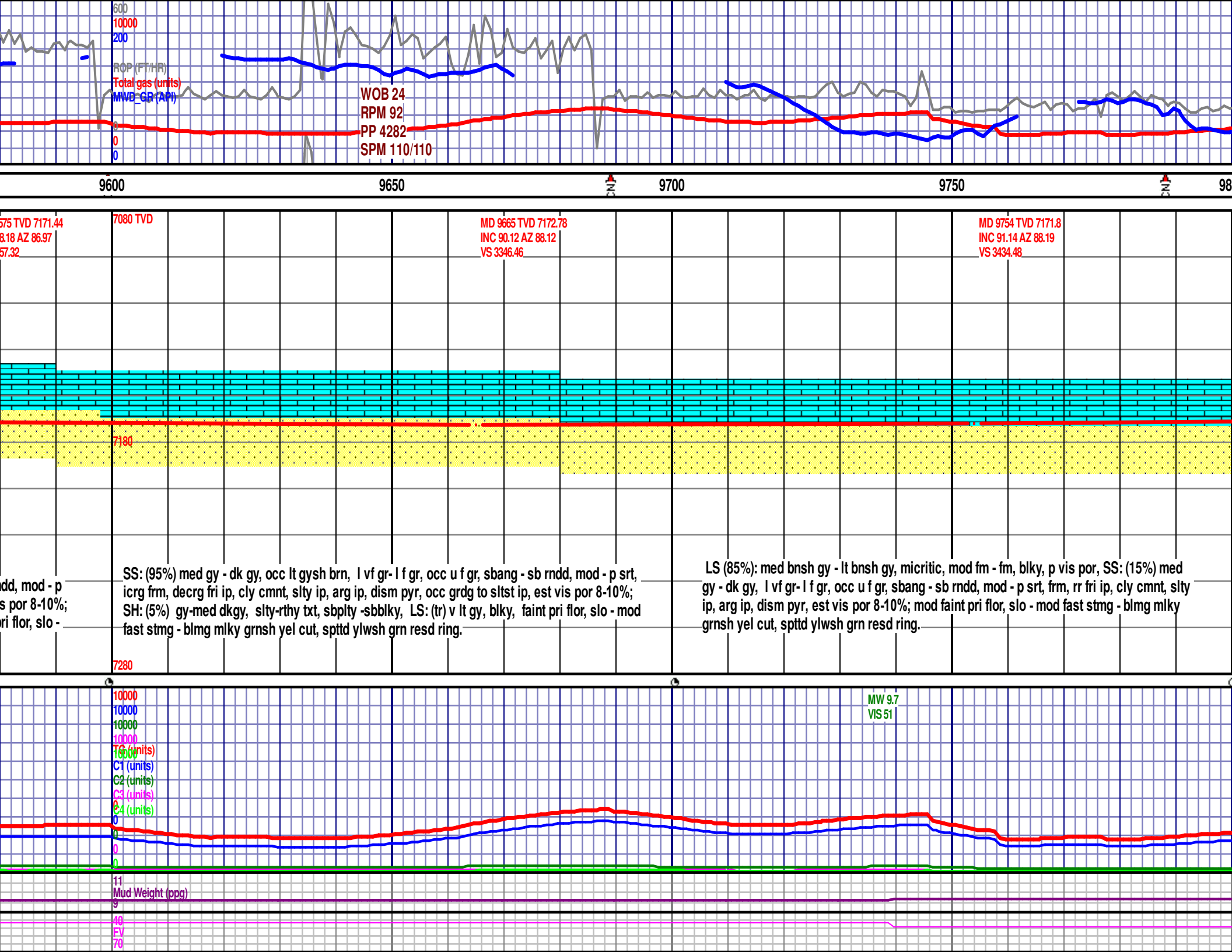

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 25
RPM 90
PP 3756
SPM 110/110
8500
8550
8600
8650
87
MD 8502 TVD 7151.47
INC 89.94 AZ 89.12
VS 2201.17
MD 8591 TVD 7151.38
INC 90.18 AZ 87.99
VS 2289.11
MD 8681 TVD 7151.26
INC 89.97 AZ 89.31
VS 2378.01
7180
p srt, mod frm, fri
H: (5%) gy-med
grnsh yel cut,
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (5%) gy-med dkgy, slty-rthy txt, sbplty -sbblky, faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, sptted ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (5%) gy-med dkgy, slty-rthy txt, sbplty -sbblky, faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, sptted ylwsh grn resd ring.
7280
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

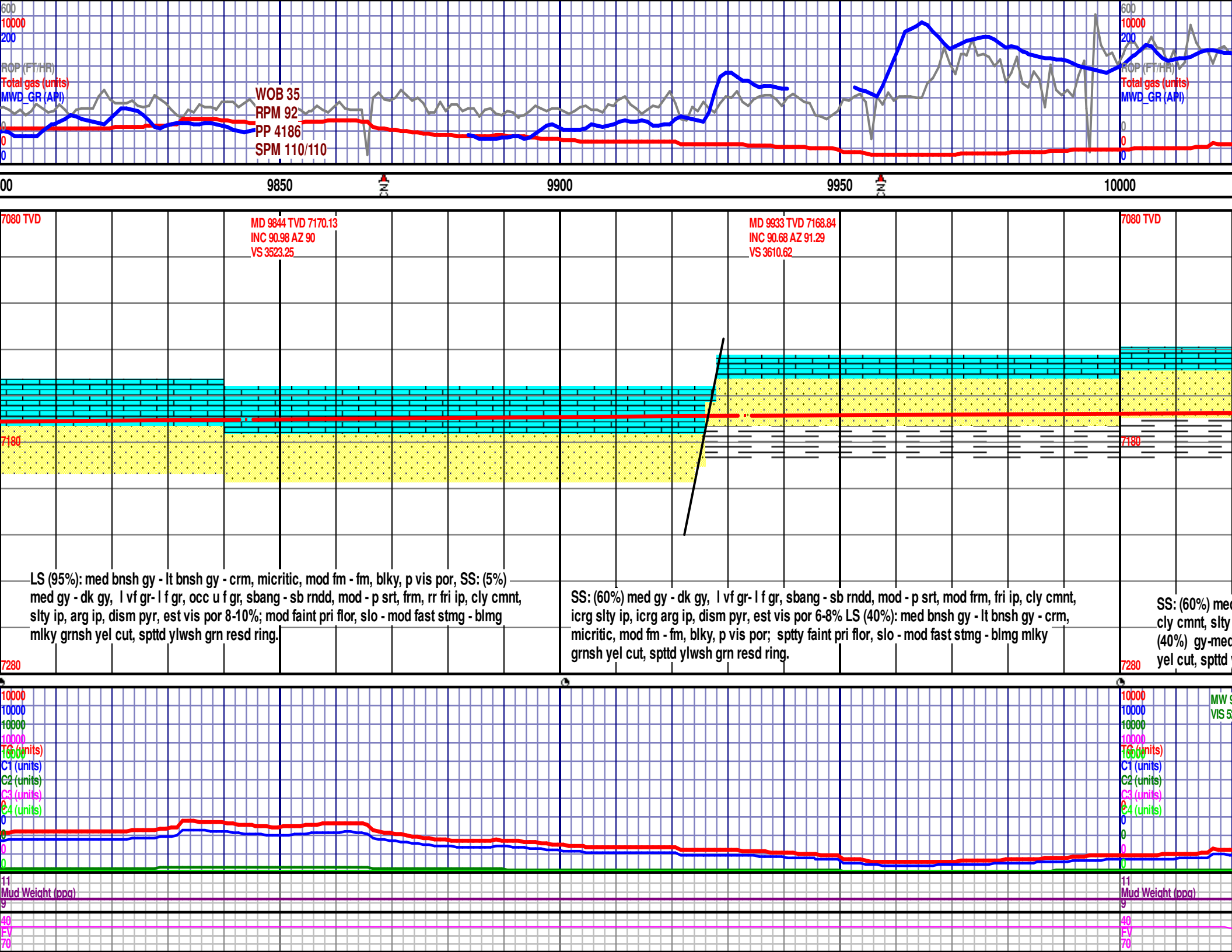

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 28
RPM 91
PP 4104
SPM 110/110
00
8750
8800
8850
8900
MD 8770 TVD 7151.21
INC 90.09 AZ 90.45
VS 2465.6
7080 TVD
MD 8860 TVD 7152.15
INC 88.71 AZ 90.69
VS 2553.98
7180
7280
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (5%) gy-med dkgy, slty-rthy txt, sbplty -sbblky, faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (10%) gy-med dkgy, slty-rthy txt, sbplty -sbblky, faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (90%) med gy
ip, cly cmnt, slty
dkgy, slty-rthy tx
spttd ylwsh grn r
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
MW 9.6
VIS 48
11
Mud Weight (ppg)
9
40
FV
70

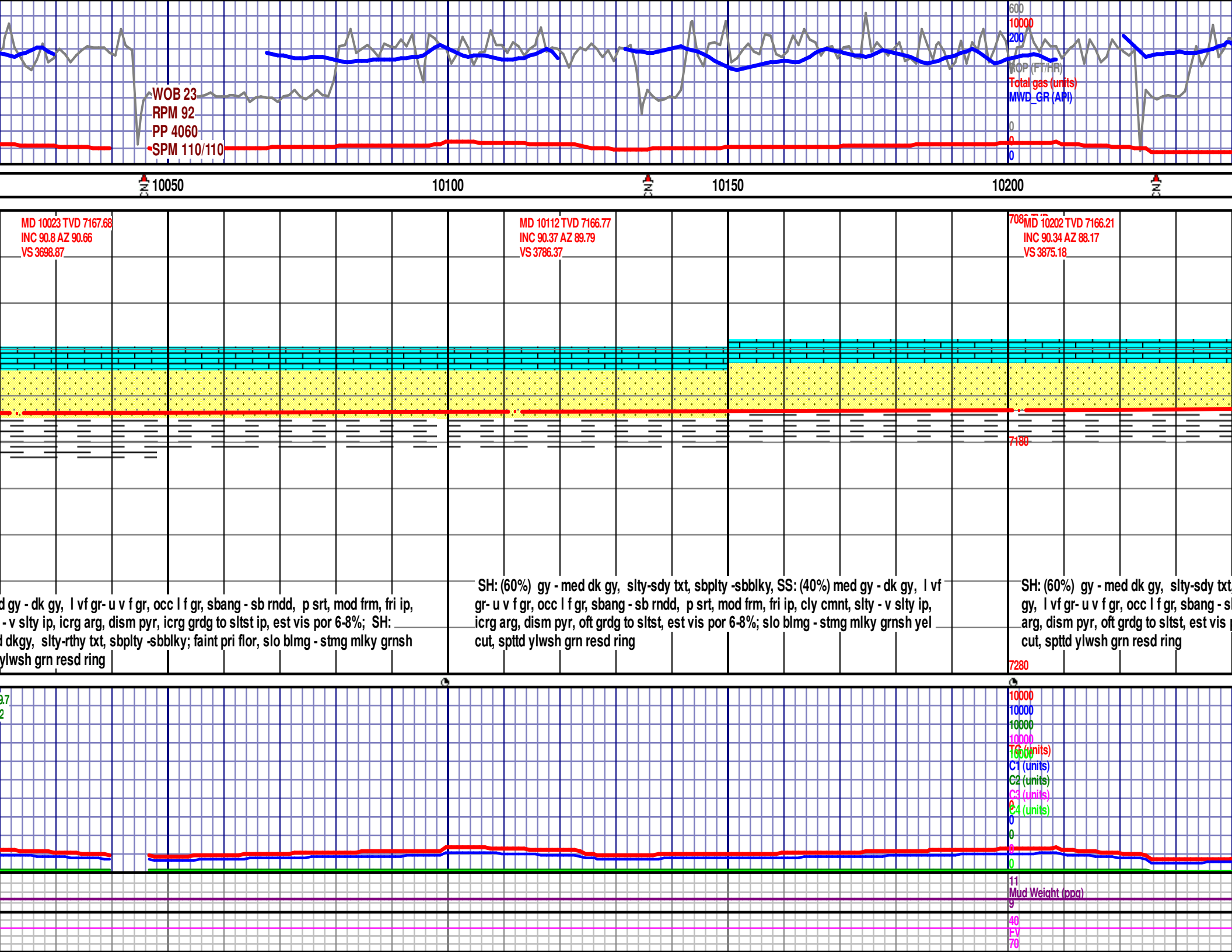

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 28
RPM 90
PP 4128
SPM 110/110
8950
CN
9000
9050
CN
9100
MD 8949 TVD 7154.21
INC 88.64 AZ 90.6
VS 2641.33
7080 TVD
MD 9039 TVD 7156.37
INC 88.61 AZ 90.62
VS 2729.68
MD 9128 TVD 7
INC 88.58 AZ 91
VS 2816.9
7180
7280
- dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri
ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (10%) gy-med
t, sbplty -sbblky, faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut,
esd ring.
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm,
fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (5%)
gy-med dkgy, slty-rthy txt, sbplty -sbblky, faint pri flor, slo - mod fast stmg - blmg mlky grnsh
yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt gysh
ip, cly cmnt, slty ip, arg ip, dism pyr,
dkgy, slty-rthy txt, sbplty -sbblky, fain
spttd ylwsh grn resd ring.
10000
10000
10000
10000
T6 (units)
1000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

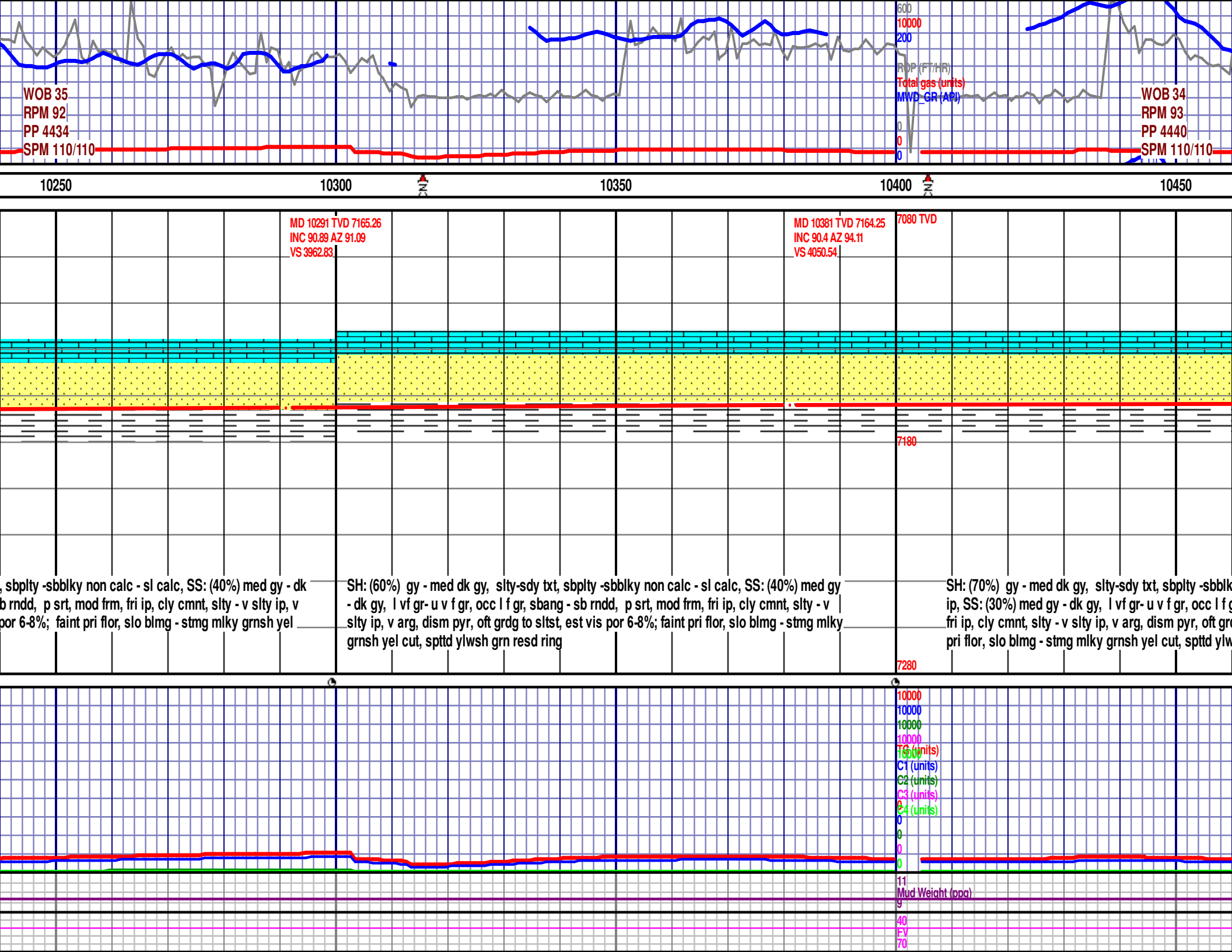

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 15
RPM 95
PP 3395
SPM 110/110
9150
9200
9250
9300
9350
158.55
1.55
7080 TVD
MD 9218 TVD 7161
INC 88.31 AZ 92.04
VS 2904.86
MD 9307 TVD 7163.53
INC 88.43 AZ 89.83
VS 2992.11
7180
7280
brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri
occ grdg to sltst ip, est vis por 8-10%; SH: (5%) gy-med
t pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut,
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm,
fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (5%)
gy-med dkgy, slty-rthy txt, sbplty -sbblky, faint pri flor, slo - mod fast stmg - blmg mlky grnsh
yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sb
ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip,
dkgy, slty-rthy txt, sbplty -sbblky, faint pri flor, slo - mod f
spttd ylwsh grn resd ring.
CHANGE OUT SHAKER
SCREENS
CHANGE OUT SHAKER
SCREENS
10000
10000
10000
10000
TG (units)
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

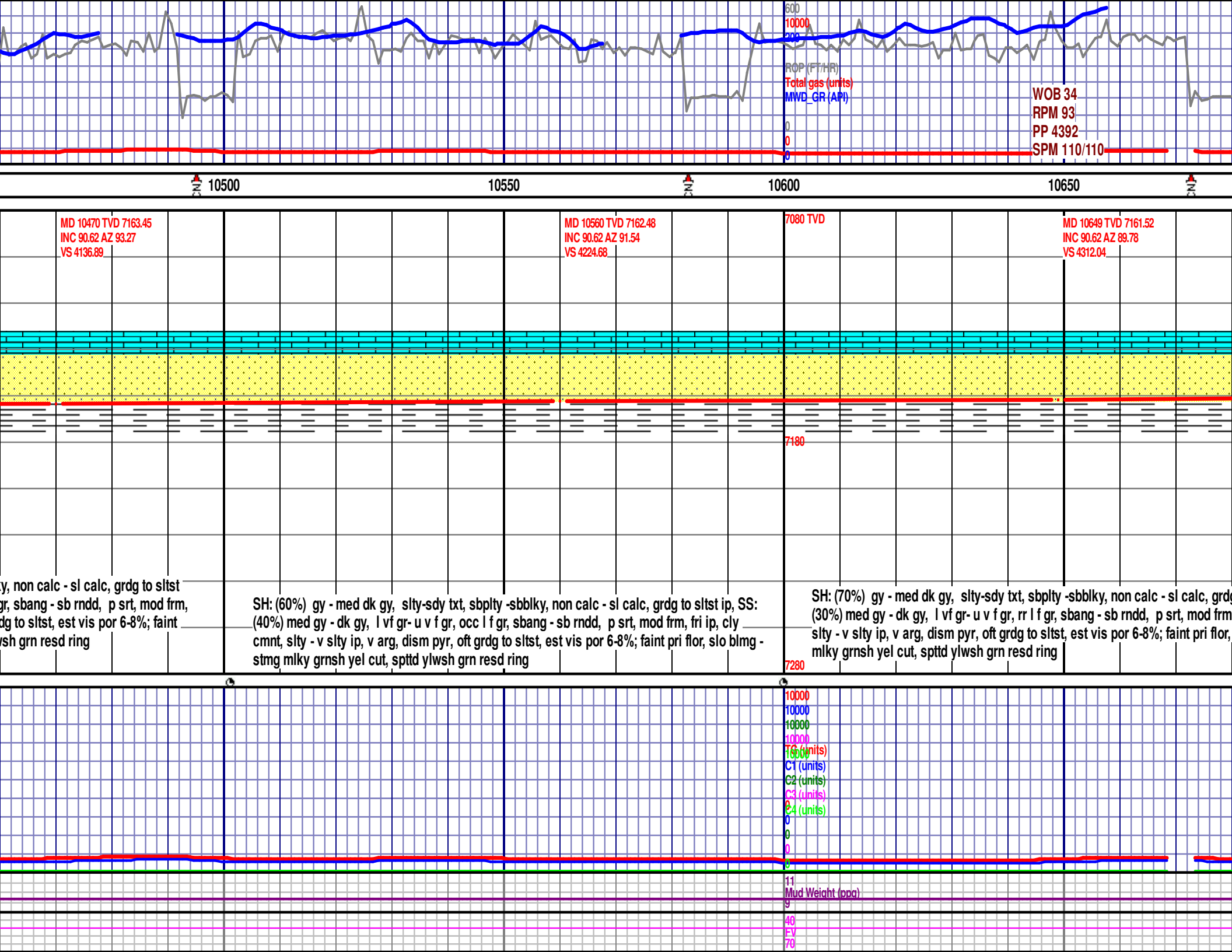

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 26
RPM 91
PP 4264
SPM 110/110
9400
9450
9500
9550
MD 9396 TVD 7166.06
INC 88.31 AZ 87.88
VS 3079.94
MD 9486 TVD 7168.72
INC 88.31 AZ 86.97
VS 3169.08
7180
bang - sb rndd, mod - p srt, mod frm, fri
est vis por 8-10%; SH: (5%) gy-med
ast stmg - blmg mlky grnsh yel cut,
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (5%) gy-med dkgy, slty-rthy txt, sbplty -sbblky, faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, occ u f gr, sbang - sb rn
srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vi
SH: (5%) gy-med dkgy, slty-rthy txt, sbplty -sbblky, LS: (tr) v lt gy, blky, faint p
mod fast stmg - blmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
7280
10000
10000
10000
10000
TG (units)
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

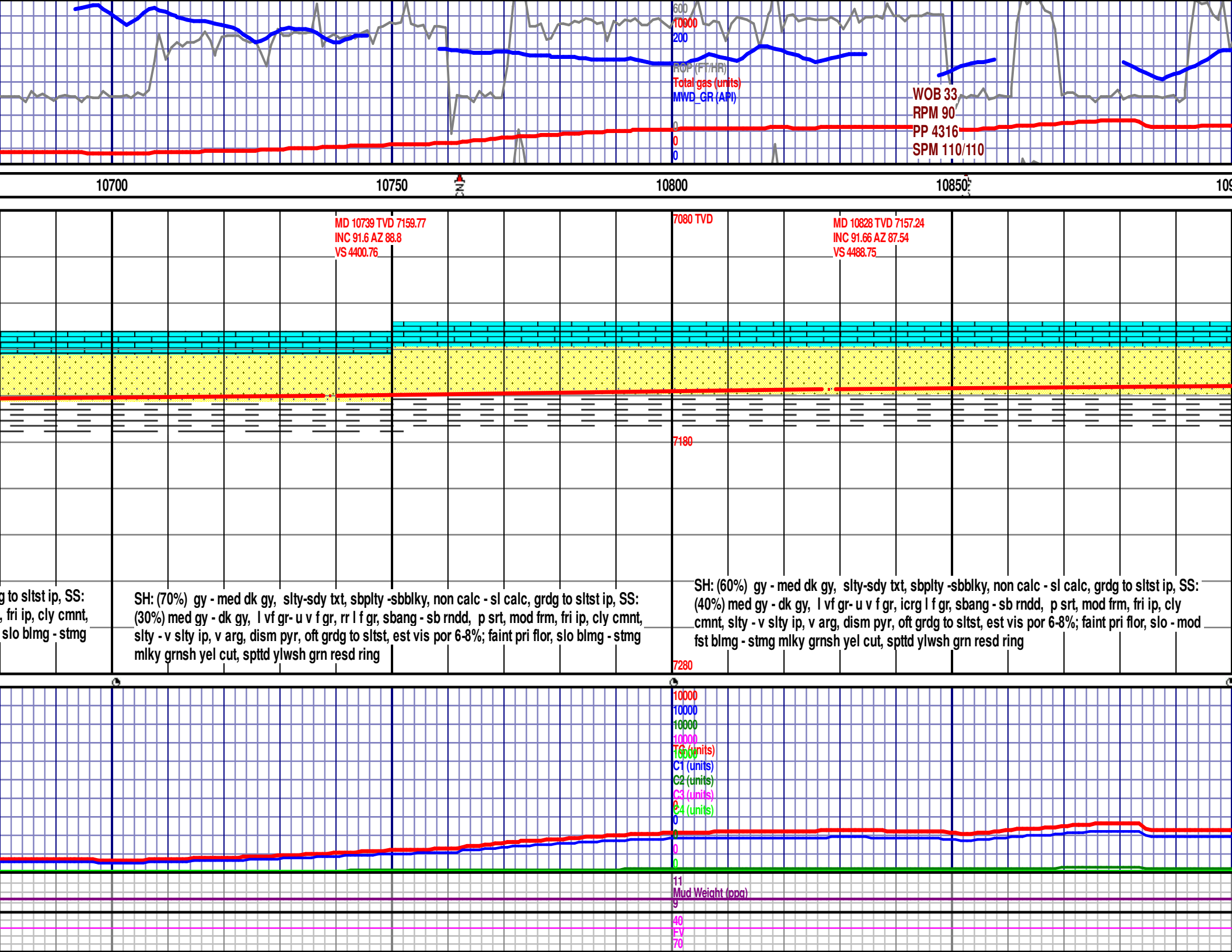

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
WOB 24
RPM 92
PP 4282
SPM 110/110
9600
9650
9700
9750
575 TVD 7171.44
8.18 AZ 86.97
57.32
7080 TVD
MD 9665 TVD 7172.78
INC 90.12 AZ 88.12
VS 3346.46
MD 9754 TVD 7171.8
INC 91.14 AZ 88.19
VS 3434.48
7180
dd, mod - p
s por 8-10%;
ri flor, slo -
SS: (95%) med gy - dk gy, occ lt gysh brn, l vf gr- l f gr, occ u f gr, sbang - sb rndd, mod - p srt, icrg frm, decrg fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst ip, est vis por 8-10%; SH: (5%) gy-med dkgy, slty-rthy txt, sbplty -sbblky, LS: (tr) v lt gy, blky, faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
LS (85%): med bnsh gy - lt bnsh gy, micritic, mod fm - fm, blky, p vis por, SS: (15%) med gy - dk gy, l vf gr- l f gr, occ u f gr, sbang - sb rndd, mod - p srt, frm, rr fri ip, cly cmnt, slty ip, arg ip, dism pyr, est vis por 8-10%; mod faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
7280
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
MW 9.7
VIS 51
11
Mud Weight (ppg)
9
40
FV
70

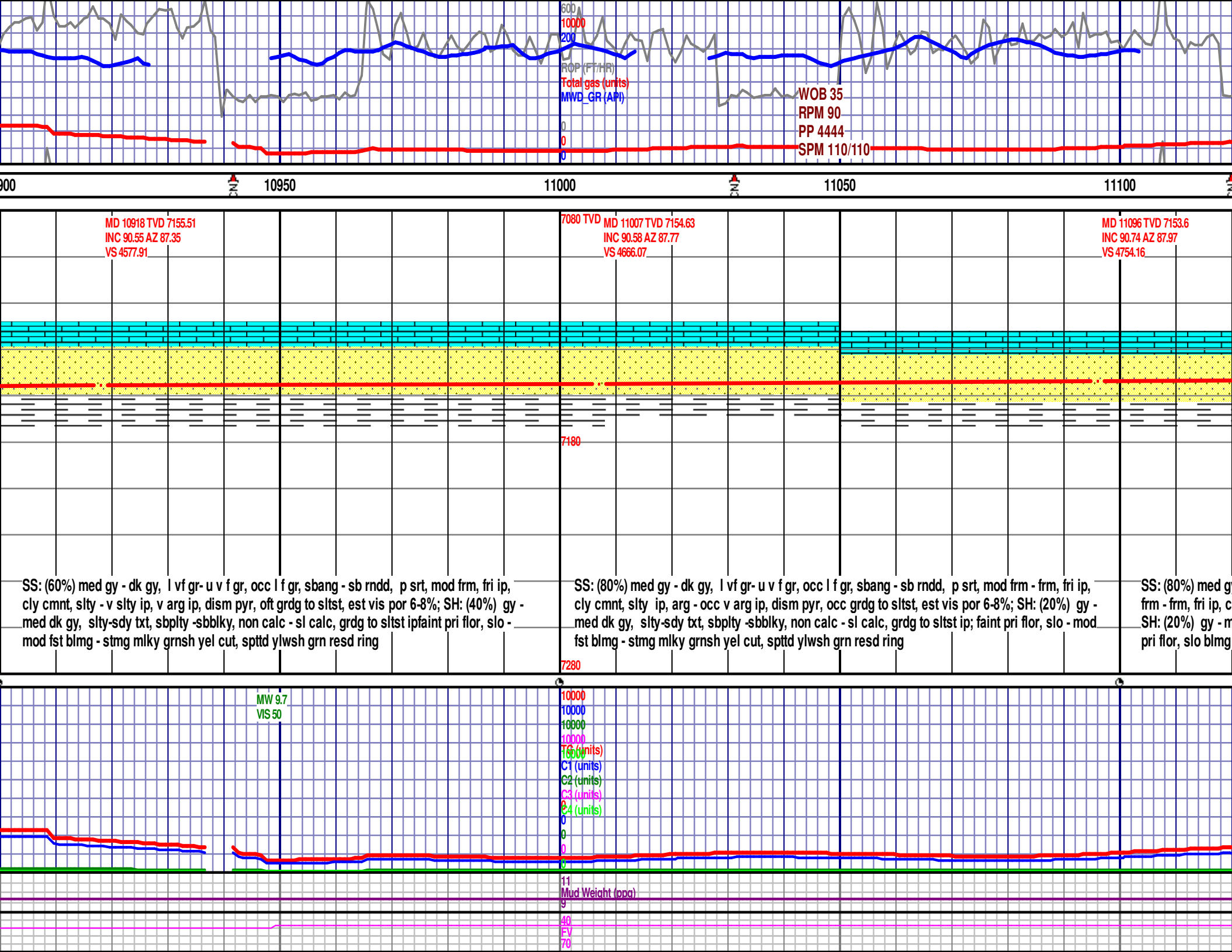

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 35
RPM 92
PP 4186
SPM 110/110
9850
9900
9950
10000
7080 TVD
MD 9844 TVD 7170.13
INC 90.98 AZ 90
VS 3523.25
MD 9933 TVD 7168.84
INC 90.68 AZ 91.29
VS 3610.62
7180
7280
LS (95%): med bnsh gy - lt bnsh gy - crm, micritic, mod fm - fm, blky, p vis por, SS: (5%) med gy - dk gy, l vf gr- l f gr, occ u f gr, sbang - sb rndd, mod - p srt, frm, rr fri ip, cly cmnt, slty ip, arg ip, dism pyr, est vis por 8-10%; mod faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
SS: (60%) med gy - dk gy, l vf gr- l f gr, sbang - sb rndd, mod - p srt, mod frm, fri ip, cly cmnt, icrg slty ip, icrg arg ip, dism pyr, est vis por 6-8% LS (40%): med bnsh gy - lt bnsh gy - crm, micritic, mod fm - fm, blky, p vis por; sptty faint pri flor, slo - mod fast stmg - blmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
SS: (60%) med
cly cmnt, slty
(40%) gy-med
yel cut, sptd
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
11
Mud Weight (ppg)
9
40
FV
70

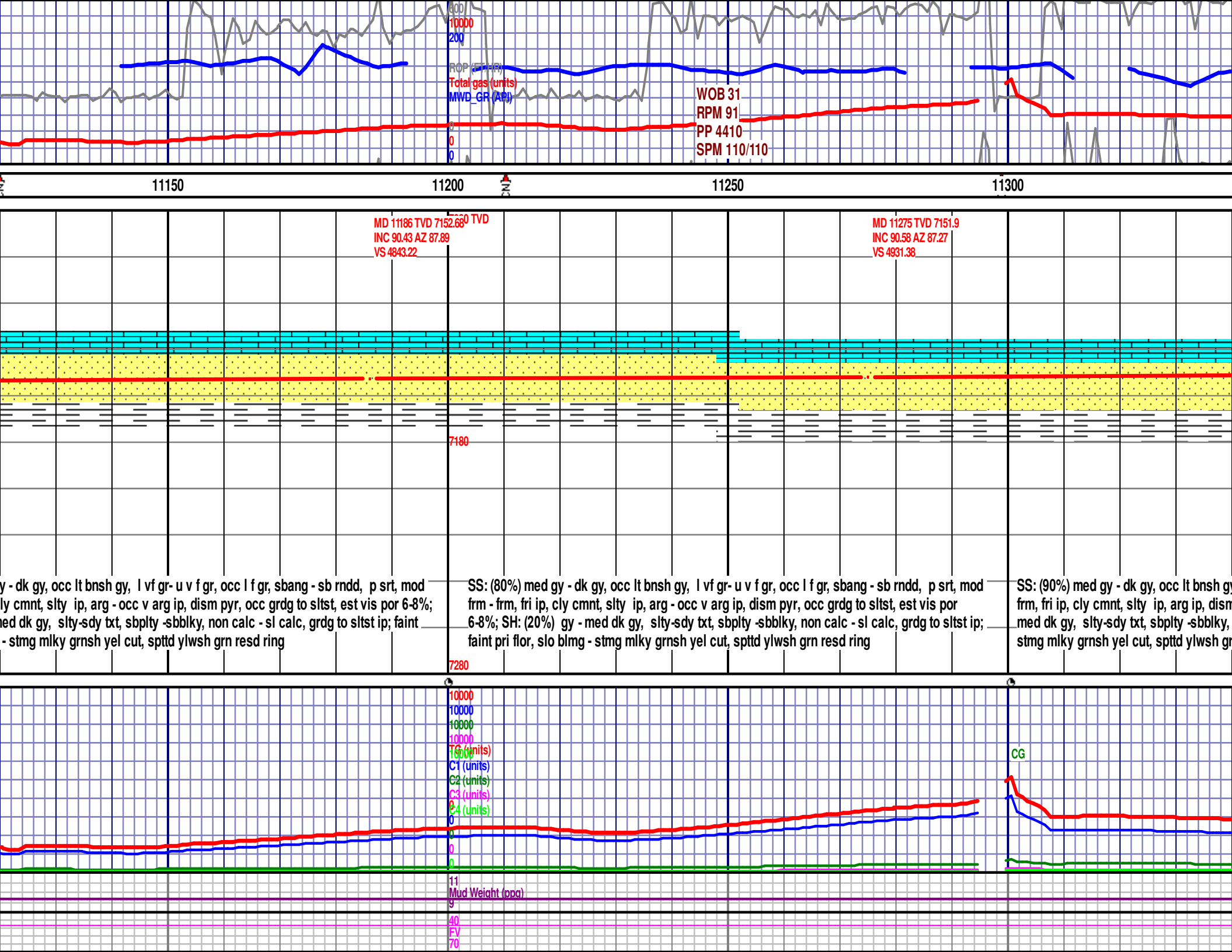

WOB 23
RPM 92
PP 4060
SPM 110/110
600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
10050
10100
10150
10200
MD 10023 TVD 7167.68
INC 90.8 AZ 90.66
VS 3698.87
MD 10112 TVD 7166.77
INC 90.37 AZ 89.79
VS 3786.37
MD 10202 TVD 7166.21
INC 90.34 AZ 88.17
VS 3875.18
7180
d gy - dk gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm, fri ip,
- v slty ip, icrg arg, dism pyr, icrg grdg to sltst ip, est vis por 6-8%; SH:
d dkgy, slty-rthy txt, sbplty -sbblky; faint pri flor, slo blmg - stmg mlky grnsh
ylwsh grn resd ring
SH: (60%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, SS: (40%) med gy - dk gy, l vf
gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm, fri ip, cly cmnt, slty - v slty ip,
icrg arg, dism pyr, oft grdg to sltst, est vis por 6-8%; slo blmg - stmg mlky grnsh yel
cut, spttd ylwsh grn resd ring
SH: (60%) gy - med dk gy, slty-sdy txt
gy, l vf gr- u v f gr, occ l f gr, sbang - s
arg, dism pyr, oft grdg to sltst, est vis
cut, spttd ylwsh grn resd ring
7280
10000
10000
10000
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

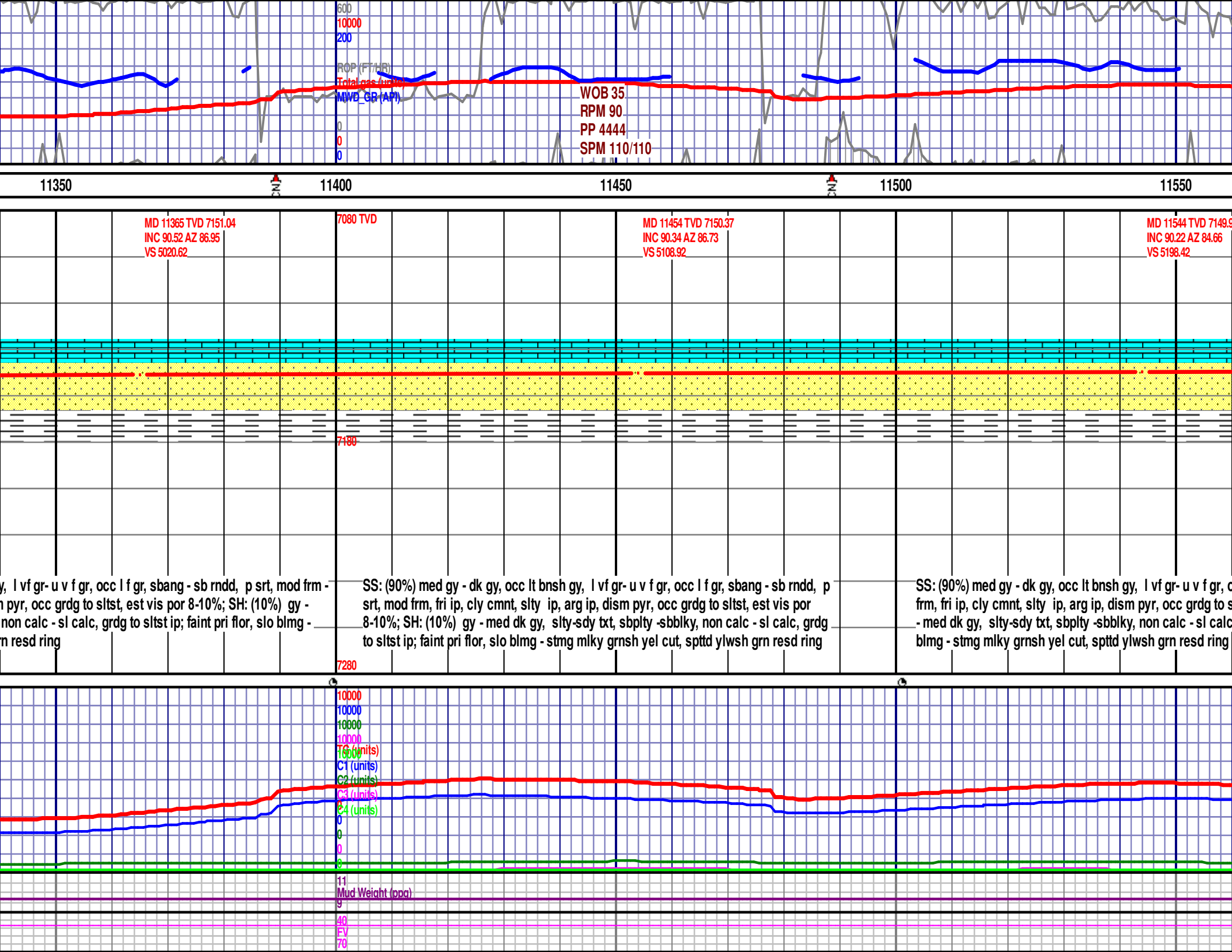

WOB 35
RPM 92
PP 4434
SPM 110/110
600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 34
RPM 93
PP 4440
SPM 110/110
10250
10300
FN
10350
10400
FN
10450
MD 10291 TVD 7165.26
INC 90.89 AZ 91.09
VS 3962.83
MD 10381 TVD 7164.25
INC 90.4 AZ 94.11
VS 4050.54
7080 TVD
7180
7280
, sbplty -sbblky non calc - sl calc, SS: (40%) med gy - dk
b rndd, p srt, mod frm, fri ip, cly cmnt, slty - v slty ip, v
por 6-8%; faint pri flor, slo blmg - stmg mlky grnsh yel
SH: (60%) gy - med dk gy, slty-sdy txt, sbplty -sbblky non calc - sl calc, SS: (40%) med gy
- dk gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm, fri ip, cly cmnt, slty - v
slty ip, v arg, dism pyr, oft grdg to sltst, est vis por 6-8%; faint pri flor, slo blmg - stmg mlky
grnsh yel cut, spttd ylwsh grn resd ring
SH: (70%) gy - med dk gy, slty-sdy txt, sbplty -sbblk
ip, SS: (30%) med gy - dk gy, l vf gr- u v f gr, occ l f g
fri ip, cly cmnt, slty - v slty ip, v arg, dism pyr, oft gr
pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylw
10000
10000
10000
10000
TG (units)
1000
C1 (units)
C2 (units)
C3 (units)
0
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

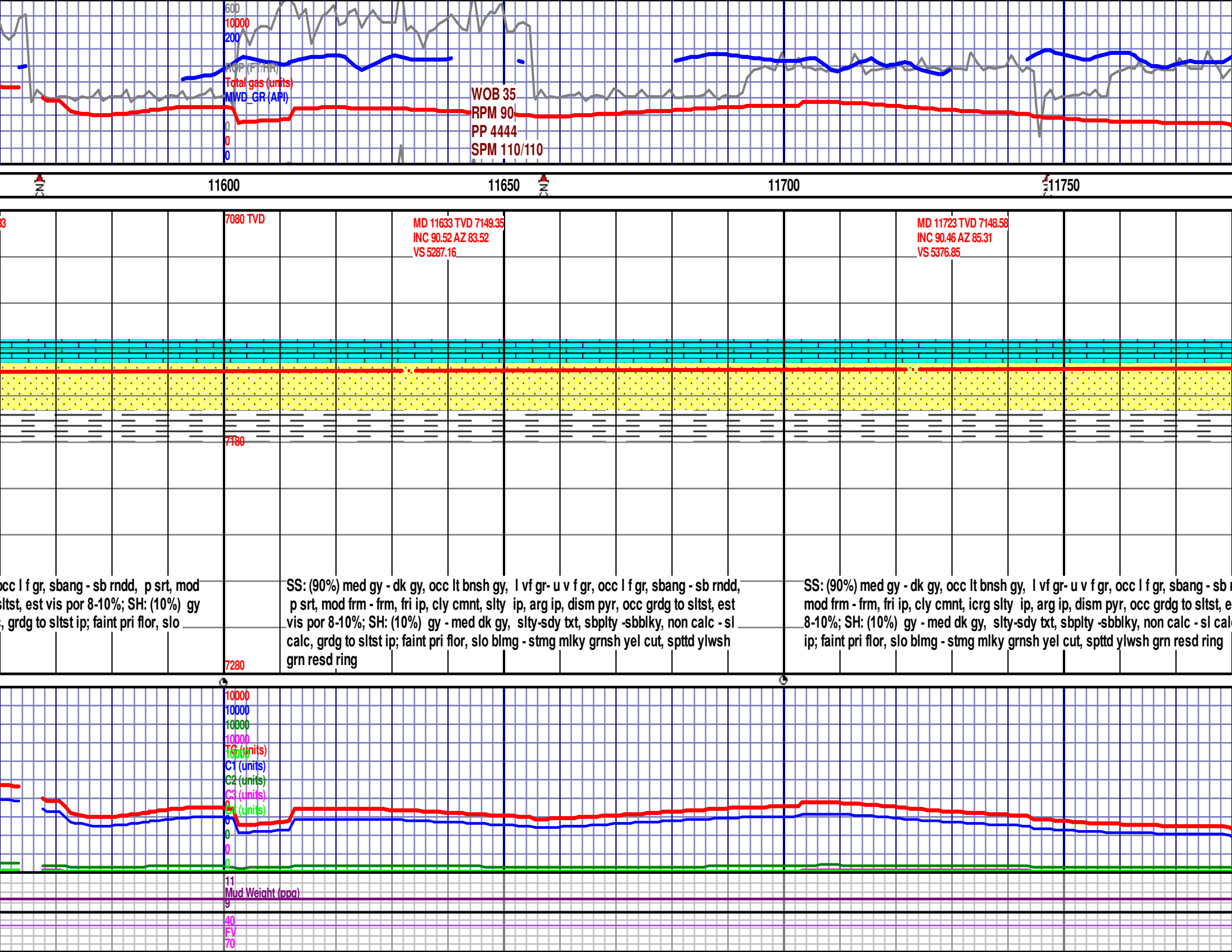

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 34
RPM 93
PP 4392
SPM 110/110
10500
10550
10600
10650
MD 10470 TVD 7163.45
INC 90.62 AZ 93.27
VS 4136.89
MD 10560 TVD 7162.48
INC 90.62 AZ 91.54
VS 4224.68
7080 TVD
MD 10649 TVD 7161.52
INC 90.62 AZ 89.78
VS 4312.04
7180
7280
ky, non calc - sl calc, grdg to sltst
gr, sbang - sb rndd, p srt, mod frm,
dg to sltst, est vis por 6-8%; faint
wsh grn resd ring
SH: (60%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip, SS:
(40%) med gy - dk gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm, fri ip, cly
cmnt, slty - v slty ip, v arg, dism pyr, oft grdg to sltst, est vis por 6-8%; faint pri flor, slo blmg -
stmg mlky grnsh yel cut, spttd ylwsh grn resd ring
SH: (70%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg
(30%) med gy - dk gy, l vf gr- u v f gr, rr l f gr, sbang - sb rndd, p srt, mod frm
slty - v slty ip, v arg, dism pyr, oft grdg to sltst, est vis por 6-8%; faint pri flor,
mlky grnsh yel cut, spttd ylwsh grn resd ring
10000
10000
10000
10000
TG (units)
10000
C1 (units)
C2 (units)
C3 (units)
0
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

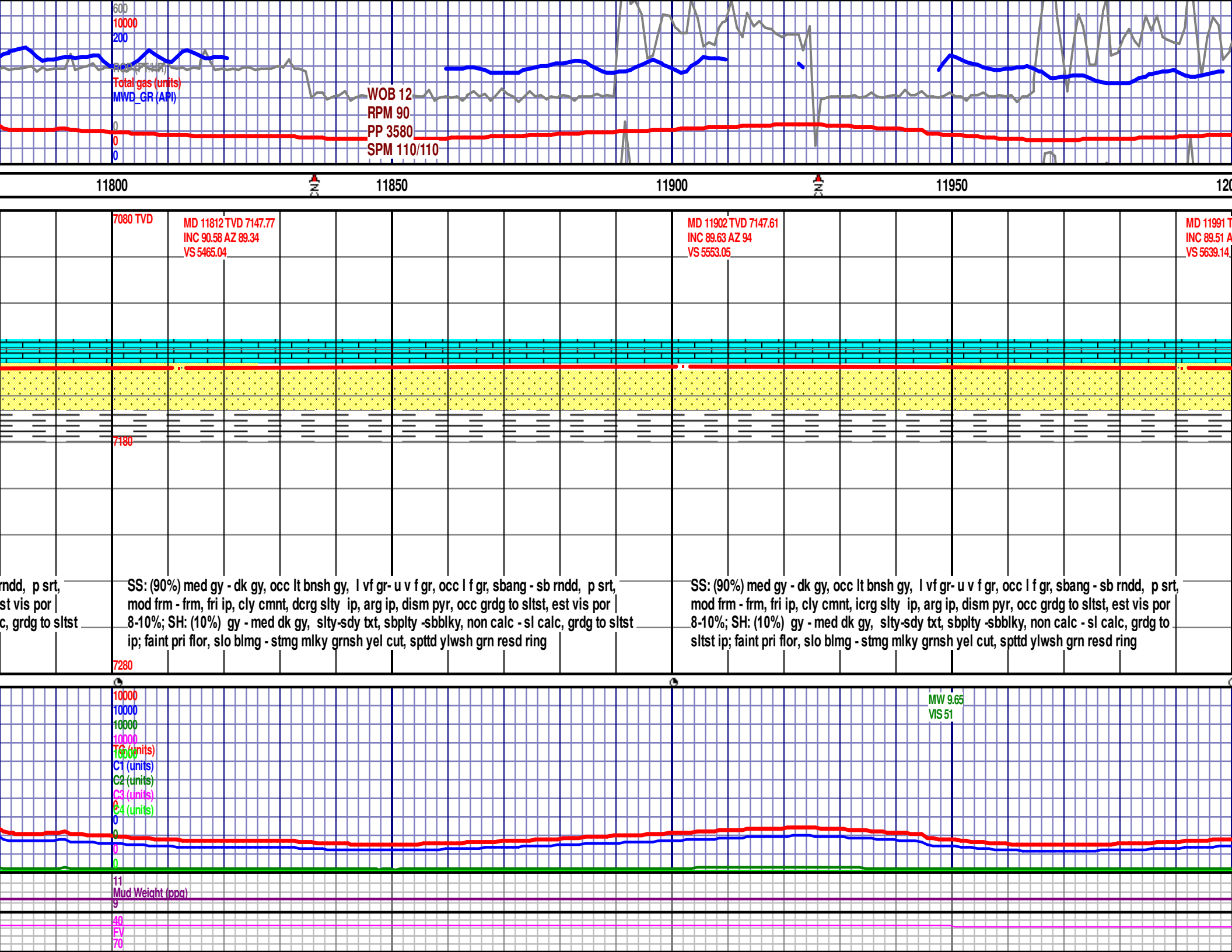

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 33
RPM 90
PP 4316
SPM 110/110
10700
10750
10800
10850
MD 10739 TVD 7159.77
INC 91.6 AZ 88.8
VS 4400.76
7080 TVD
MD 10828 TVD 7157.24
INC 91.66 AZ 87.54
VS 4488.75
7180
g to sltst ip, SS:
, fri ip, cly cmnt,
slo blmg - stmg
SH: (70%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip, SS: (30%) med gy - dk gy, l vf gr- u v f gr, rr l f gr, sbang - sb rndd, p srt, mod frm, fri ip, cly cmnt, slty - v slty ip, v arg, dism pyr, oft grdg to sltst, est vis por 6-8%; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring
SH: (60%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip, SS: (40%) med gy - dk gy, l vf gr- u v f gr, icrg l f gr, sbang - sb rndd, p srt, mod frm, fri ip, cly cmnt, slty - v slty ip, v arg, dism pyr, oft grdg to sltst, est vis por 6-8%; faint pri flor, slo - mod fst blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring
7280
10000
10000
10000
10000
TG (units)
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

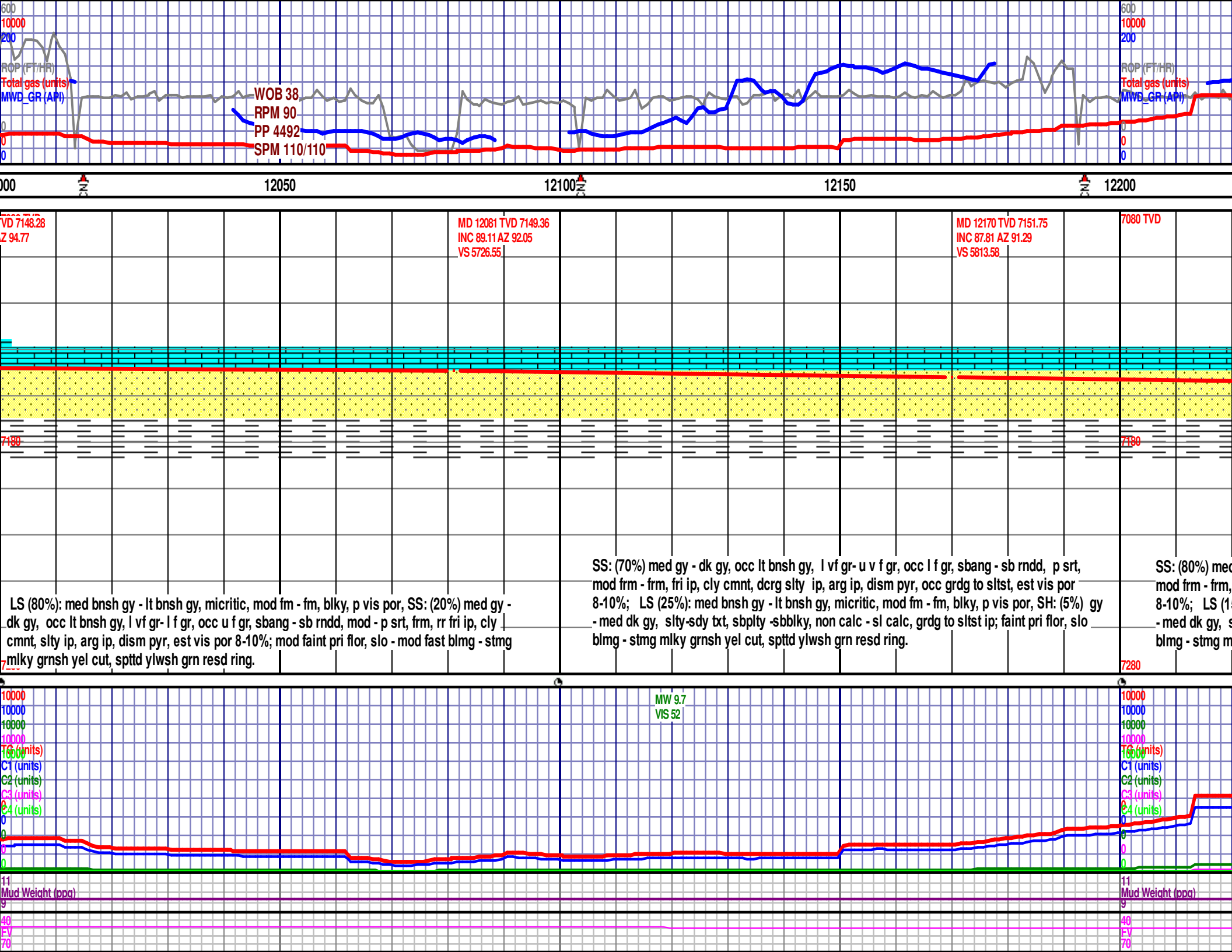

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 35
RPM 90
PP 4444
SPM 110/110
900
10950
11000
11050
11100
MD 10918 TVD 7155.51
INC 90.55 AZ 87.35
VS 4577.91
7080 TVD
MD 11007 TVD 7154.63
INC 90.58 AZ 87.77
VS 4666.07
MD 11096 TVD 7153.6
INC 90.74 AZ 87.97
VS 4754.16
7180
7280
SS: (60%) med gy - dk gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm, fri ip, cly cmnt, slty - v slty ip, v arg ip, dism pyr, oft grdg to sltst, est vis por 6-8%; SH: (40%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ipfaint pri flor, slo - mod fst blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring
SS: (80%) med gy - dk gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, slty ip, arg - occ v arg ip, dism pyr, occ grdg to sltst, est vis por 6-8%; SH: (20%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo - mod fst blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring
SS: (80%) med g
frm - frm, fri ip, c
SH: (20%) gy - m
pri flor, slo blmg
MW 9.7
VIS 50
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

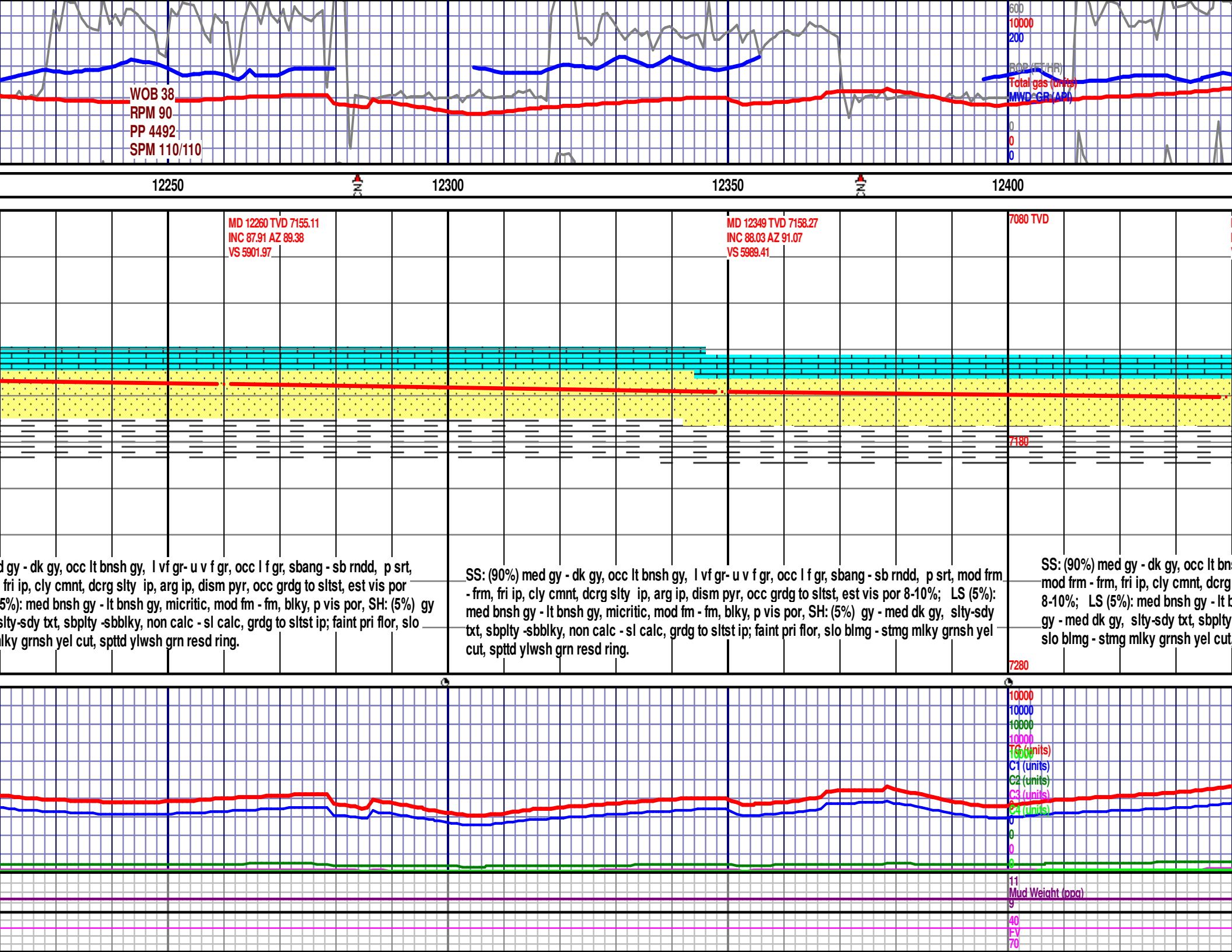

800
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 31
RPM 91
PP 4410
SPM 110/110
11150
11200
11250
11300
MD 11186 TVD 7152.68
INC 90.43 AZ 87.89
VS 4843.22
MD 11275 TVD 7151.9
INC 90.58 AZ 87.27
VS 4931.38
7180
7280
y - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod
ly cmnt, slty ip, arg - occ v arg ip, dism pyr, occ grdg to sltst, est vis por 6-8%;
ed dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint
- stmg mlky grnsh yel cut, spttd ylwsh grn resd ring
SS: (80%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod
frm - frm, fri ip, cly cmnt, slty ip, arg - occ v arg ip, dism pyr, occ grdg to sltst, est vis por
6-8%; SH: (20%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip;
faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring
SS: (90%) med gy - dk gy, occ lt bnsh gy
frm, fri ip, cly cmnt, slty ip, arg ip, dism
med dk gy, slty-sdy txt, sbplty -sbblky,
stmg mlky grnsh yel cut, spttd ylwsh gr
10000
10000
10000
10000
TG (units)
1000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
CG
11
Mud Weight (ppg)
9
40
FV
70

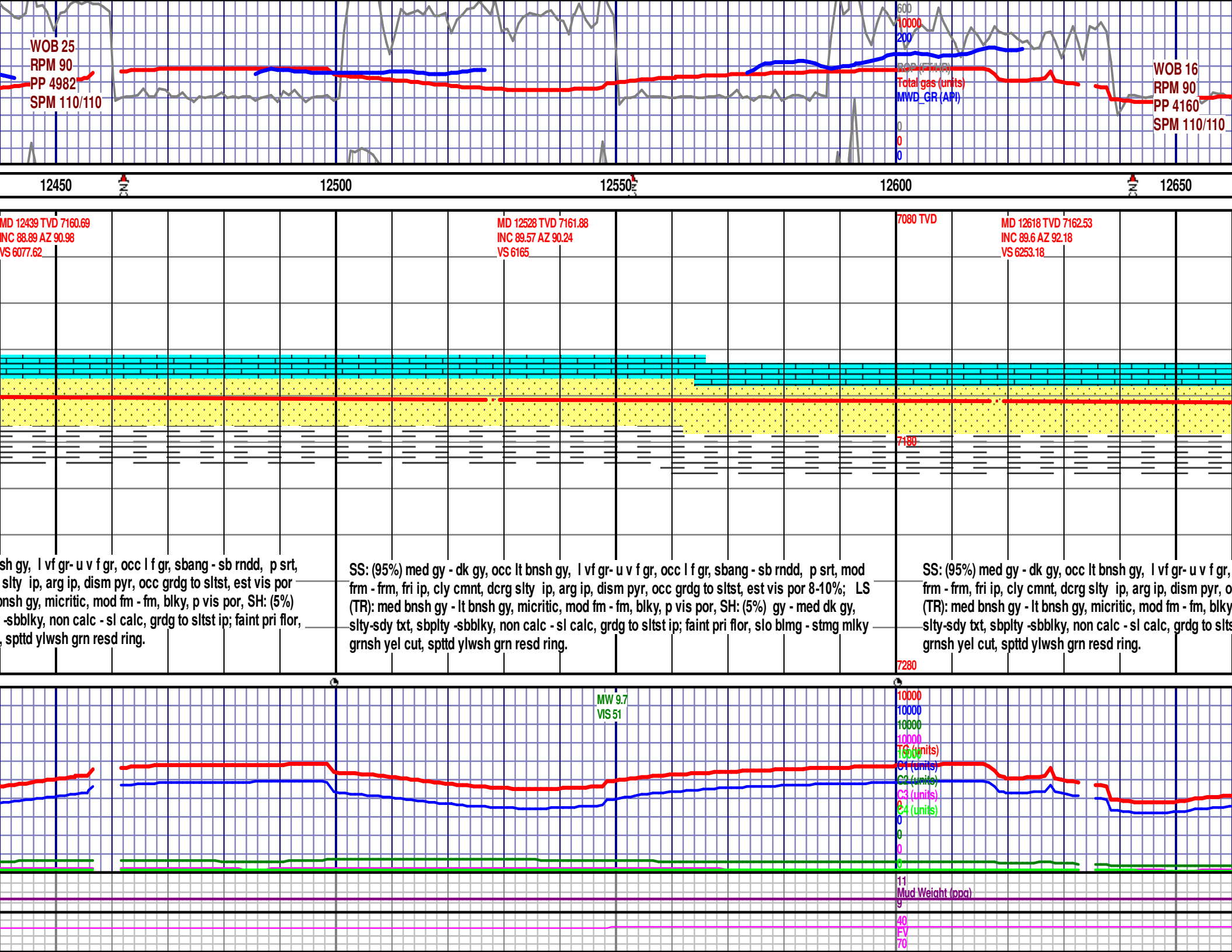

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 35
RPM 90
PP 4444
SPM 110/110
11350
11400
11450
11500
11550
MD 11365 TVD 7151.04
INC 90.52 AZ 86.95
VS 5020.62
7080 TVD
MD 11454 TVD 7150.37
INC 90.34 AZ 86.73
VS 5108.92
MD 11544 TVD 7149.9
INC 90.22 AZ 84.66
VS 5198.42
7180
y, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm -
n pyr, occ grdg to sltst, est vis por 8-10%; SH: (10%) gy -
non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg -
rn resd ring
SS: (90%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (10%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring
SS: (90%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, c
frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to s
- med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc
blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring
7280
10000
10000
10000
10000
TG (units)
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

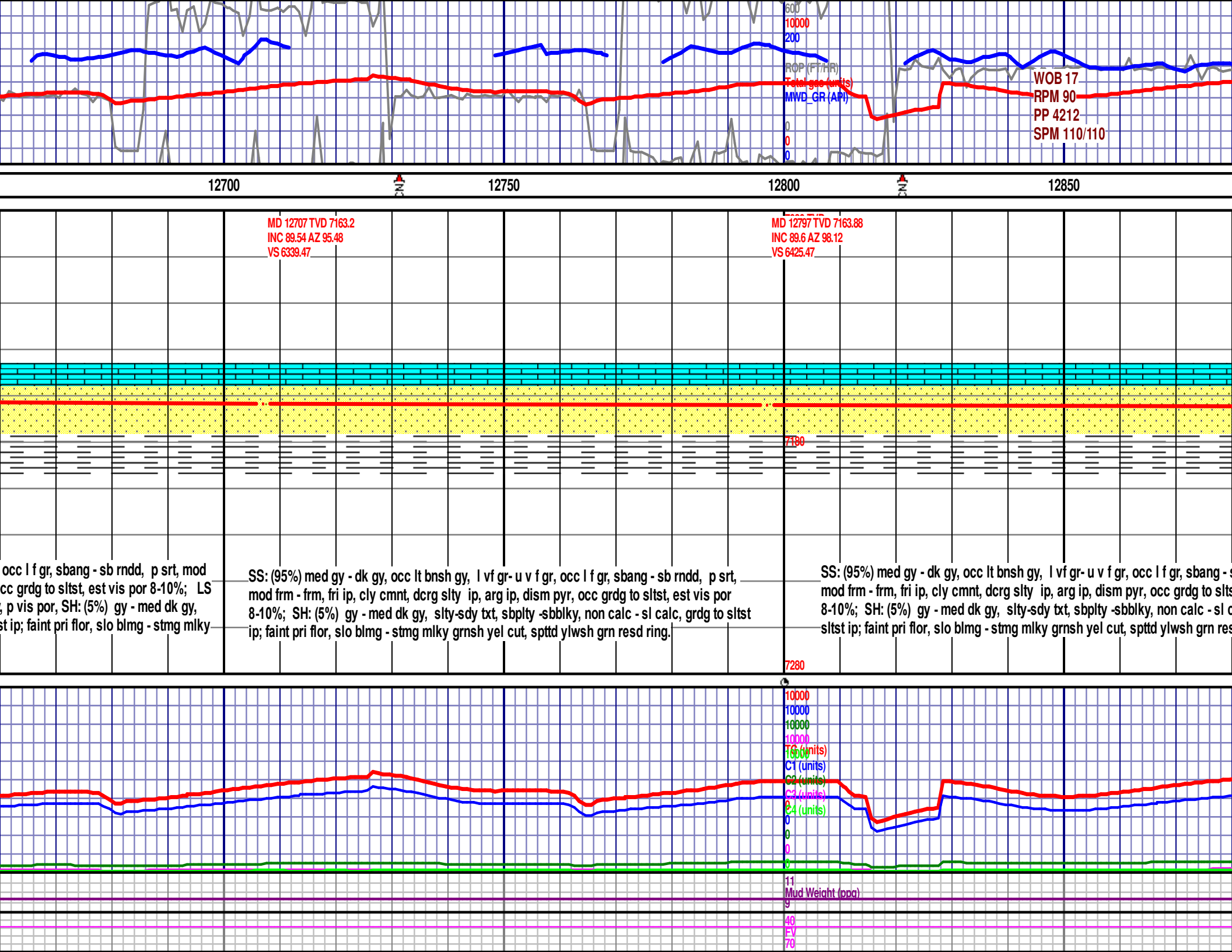

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 35
RPM 90
PP 4444
SPM 110/110
11600
11650
11700
11750
7080 TVD
MD 11633 TVD 7149.35
INC 90.52 AZ 83.52
VS 5287.16
MD 11723 TVD 7148.58
INC 90.46 AZ 85.31
VS 5376.85
7180
7280
SS: (90%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (10%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring
SS: (90%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb
mod frm - frm, fri ip, cly cmnt, icrg slty ip, arg ip, dism pyr, occ grdg to sltst, e
8-10%; SH: (10%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl cal
ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring
10000
10000
10000
10000
TG (units)
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

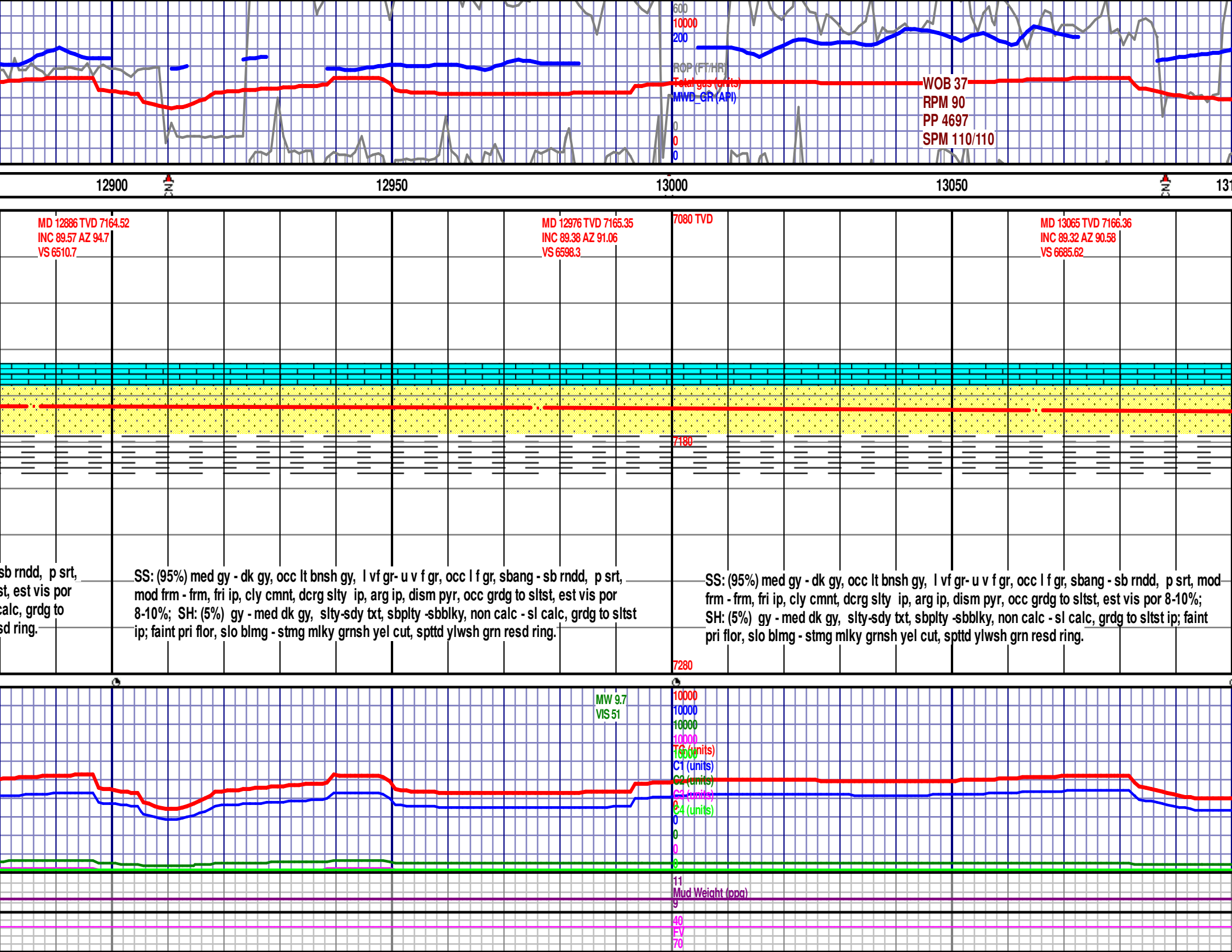

600
10000
200
Total gas (units)
MWD_GR (API)
0
0
0
WOB 12
RPM 90
PP 3580
SPM 110/110
11800
11850
11900
11950
7080 TVD
MD 11812 TVD 7147.77
INC 90.58 AZ 89.34
VS 5465.04
MD 11902 TVD 7147.61
INC 89.63 AZ 94
VS 5553.05
MD 11991 T
INC 89.51 A
VS 5639.14
7180
rndd, p srt,
st vis por
c, grdg to sltst
SS: (90%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (10%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, sptd ylwsh grn resd ring
SS: (90%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, icrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (10%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, sptd ylwsh grn resd ring
7280
10000
10000
10000
10000
TG (units)
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
MW 9.65
VIS 51
11
Mud Weight (ppg)
9
40
FV
70

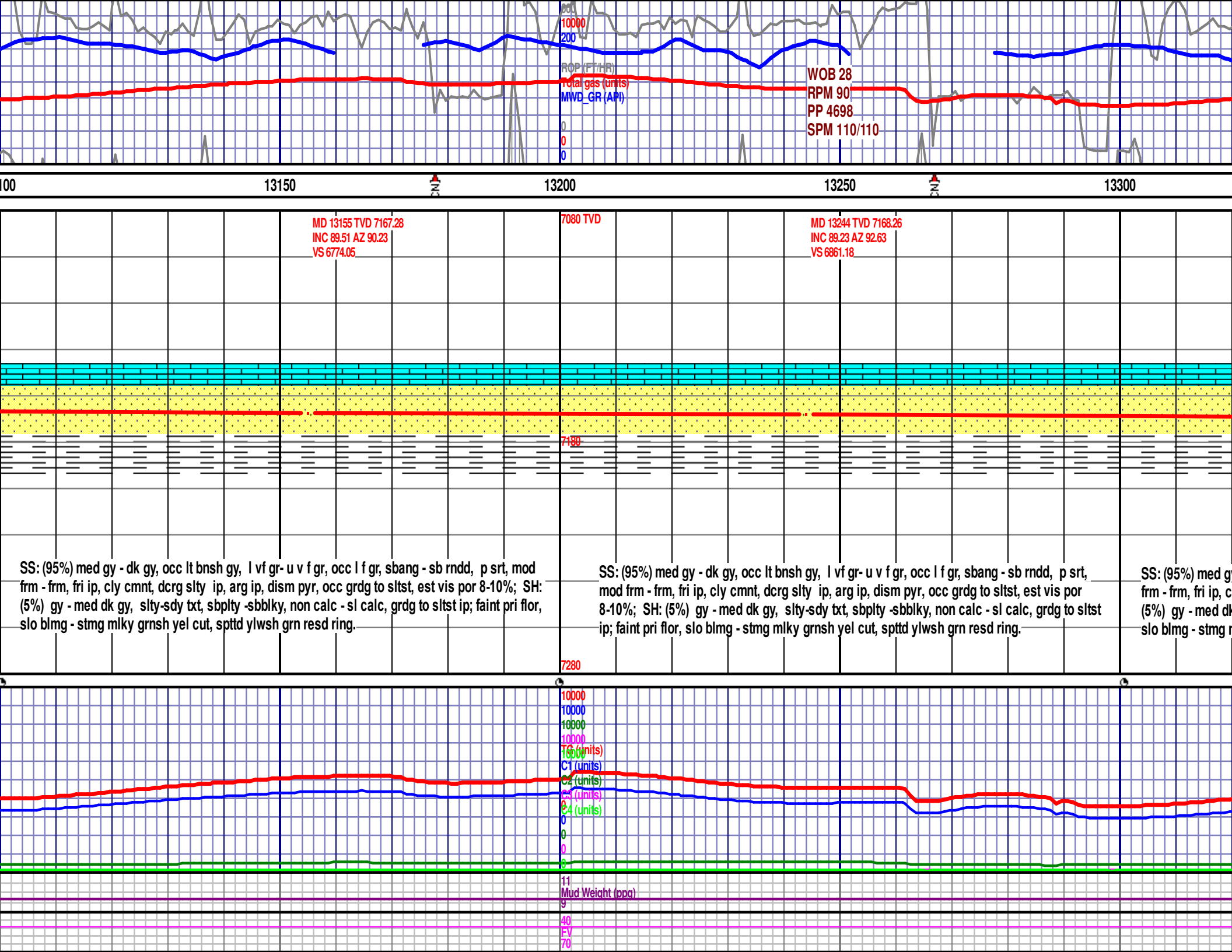

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 38
RPM 90
PP 4492
SPM 110/110
000
12050
12100
12150
12200
VD 7148.28
Z 94.77
MD 12081 TVD 7149.36
INC 89.11 AZ 92.05
VS 5726.55
MD 12170 TVD 7151.75
INC 87.81 AZ 91.29
VS 5813.58
7080 TVD
7180
7180
LS (80%): med bnsh gy - lt bnsh gy, micritic, mod fm - fm, blky, p vis por, SS: (20%) med gy - dk gy, occ lt bnsh gy, l vf gr- l f gr, occ u f gr, sbang - sb rndd, mod - p srt, frm, rr fri ip, cly cmnt, slty ip, arg ip, dism pyr, est vis por 8-10%; mod faint pri flor, slo - mod fast blmg - stmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
SS: (70%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; LS (25%): med bnsh gy - lt bnsh gy, micritic, mod fm - fm, blky, p vis por, SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
SS: (80%) med
mod frm - frm,
8-10%; LS (1
- med dk gy,
blmg - stmg m
7280
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
MW 9.7
VIS 52
11
Mud Weight (ppg)
9
40
FV
70

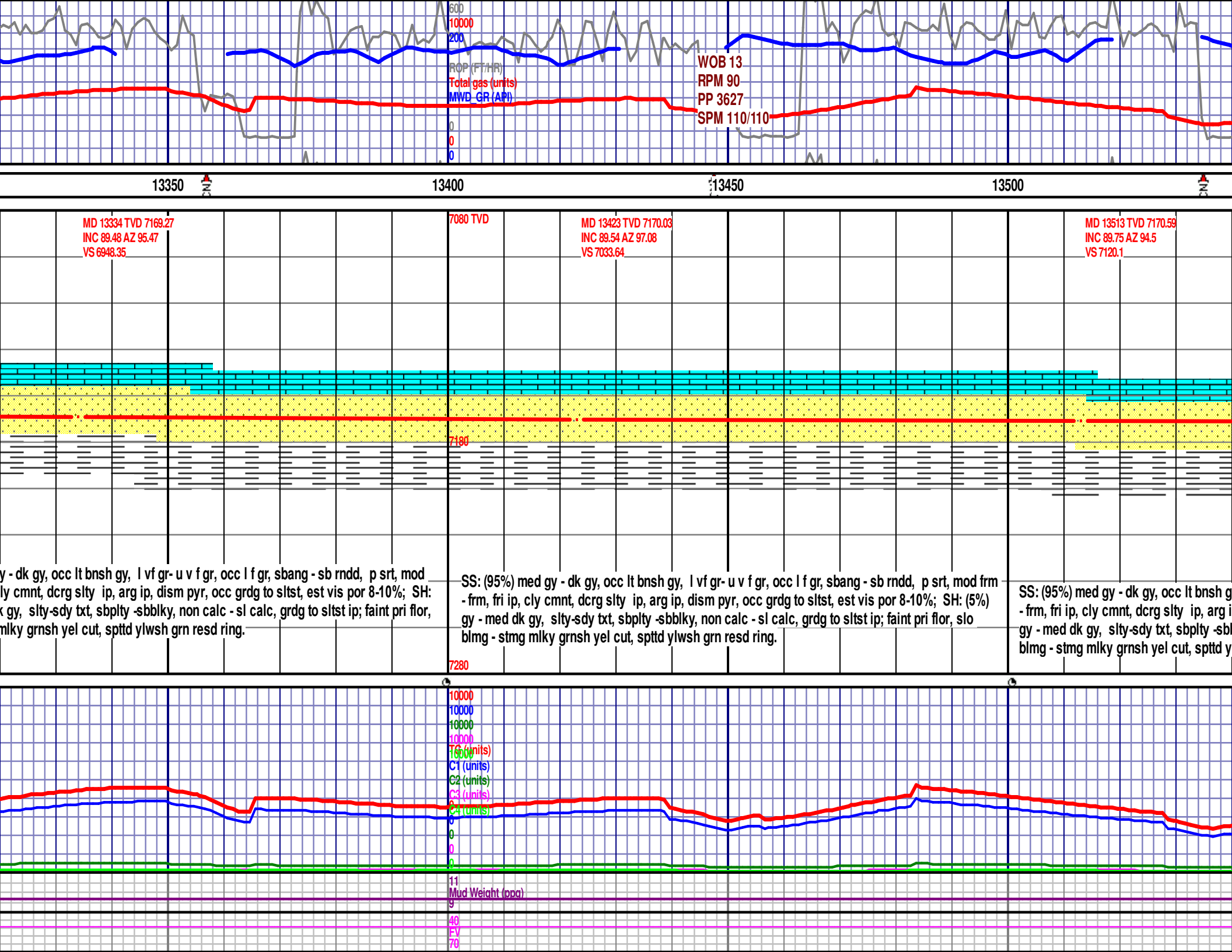

WOB 38
RPM 90
PP 4492
SPM 110/110
600
10000
200
ROP (FT/HR)
Total gas (units)
MWD GR (API)
0
0
0
12250
12300
12350
12400
MD 12260 TVD 7155.11
INC 87.91 AZ 89.38
VS 5901.97
MD 12349 TVD 7158.27
INC 88.03 AZ 91.07
VS 5989.41
7080 TVD
7180
7280
d gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt,
fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por
5%): med bnsh gy - lt bnsh gy, micritic, mod fm - fm, blky, p vis por, SH: (5%) gy
slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo
lky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (90%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; LS (5%): med bnsh gy - lt bnsh gy, micritic, mod fm - fm, blky, p vis por, SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (90%) med gy - dk gy, occ lt bns
mod frm - frm, fri ip, cly cmnt, dcrg
8-10%; LS (5%): med bnsh gy - lt b
gy - med dk gy, slty-sdy txt, sbplty
slo blmg - stmg mlky grnsh yel cut
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

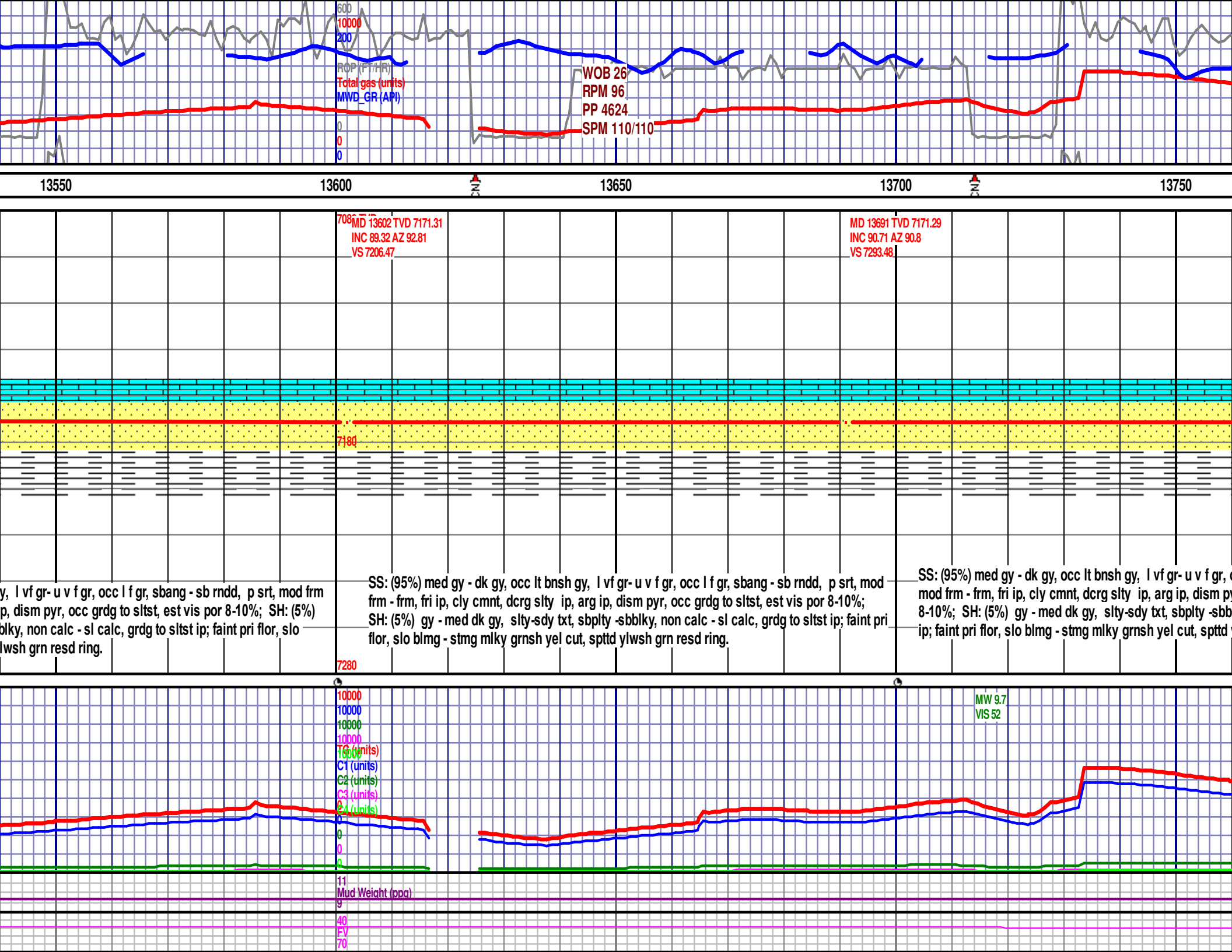

WOB 25
RPM 90
PP 4982
SPM 110/110
600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 16
RPM 90
PP 4160
SPM 110/110
12450
12500
12550
12600
12650
MD 12439 TVD 7160.69
INC 88.89 AZ 90.98
VS 6077.62
MD 12528 TVD 7161.88
INC 89.57 AZ 90.24
VS 6165
7080 TVD
MD 12618 TVD 7162.53
INC 89.6 AZ 92.18
VS 6253.18
7180
sh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt,
slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por
nsh gy, micritic, mod fm - fm, blky, p vis por, SH: (5%)
-sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor,
, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod
frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; LS
(TR): med bnsh gy - lt bnsh gy, micritic, mod fm - fm, blky, p vis por, SH: (5%) gy - med dk gy,
slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky
grnsh yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr,
frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, o
(TR): med bnsh gy - lt bnsh gy, micritic, mod fm - fm, blky
slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to slts
grnsh yel cut, spttd ylwsh grn resd ring.
7280
MW 9.7
VIS 51
10000
10000
10000
10000
T6 (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

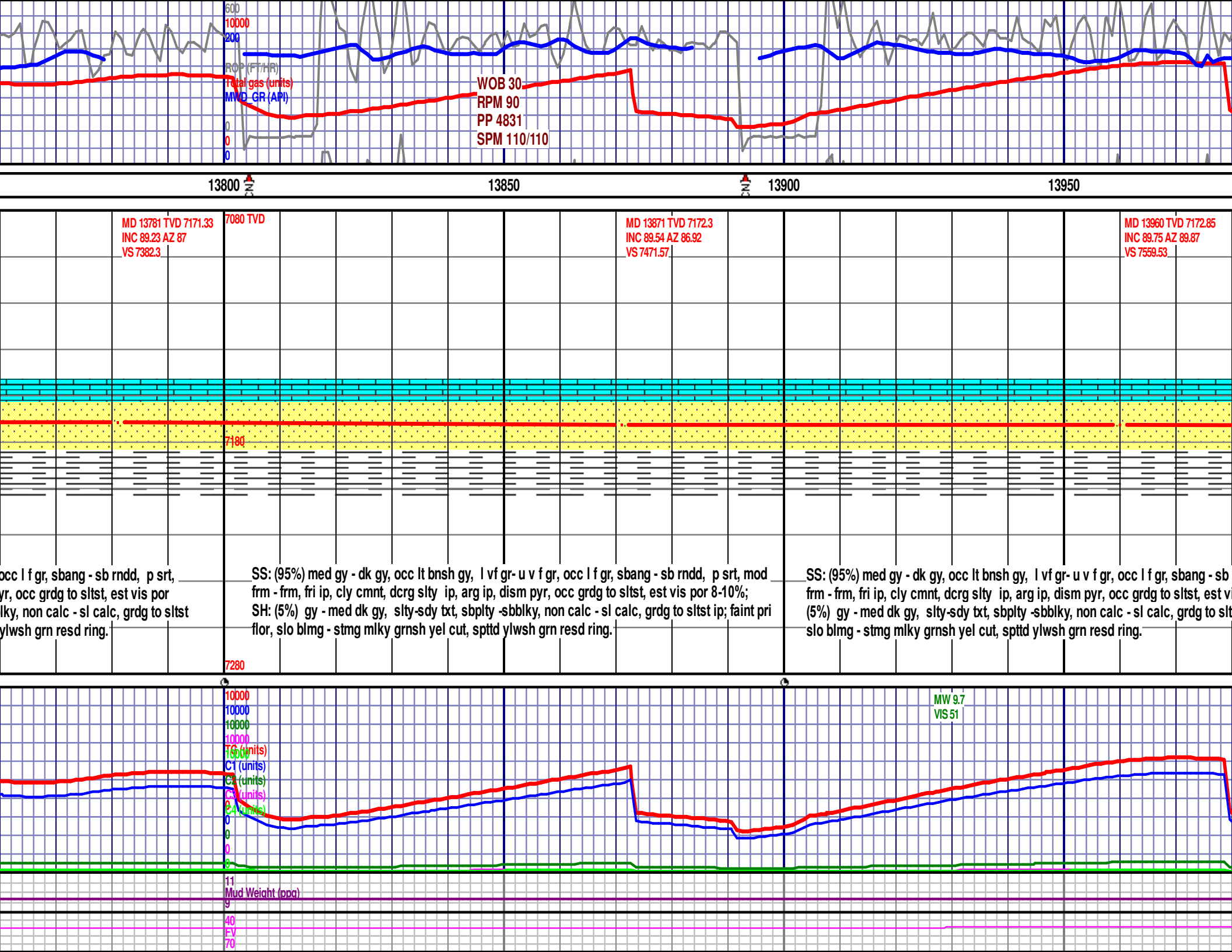

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 17
RPM 90
PP 4212
SPM 110/110
12700
CN
12750
12800
CN
12850
MD 12707 TVD 7163.2
INC 89.54 AZ 95.48
VS 6339.47
MD 12797 TVD 7163.88
INC 89.6 AZ 98.12
VS 6425.47
7180
occ l f gr, sbang - sb rndd, p srt, mod
cc grdg to sltst, est vis por 8-10%; LS
, p vis por, SH: (5%) gy - med dk gy,
st ip; faint pri flor, slo blmg - stmg mlky
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - s
mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to slts
8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl c
sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn res
7280
10000
10000
10000
10000
TG (units)
1000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

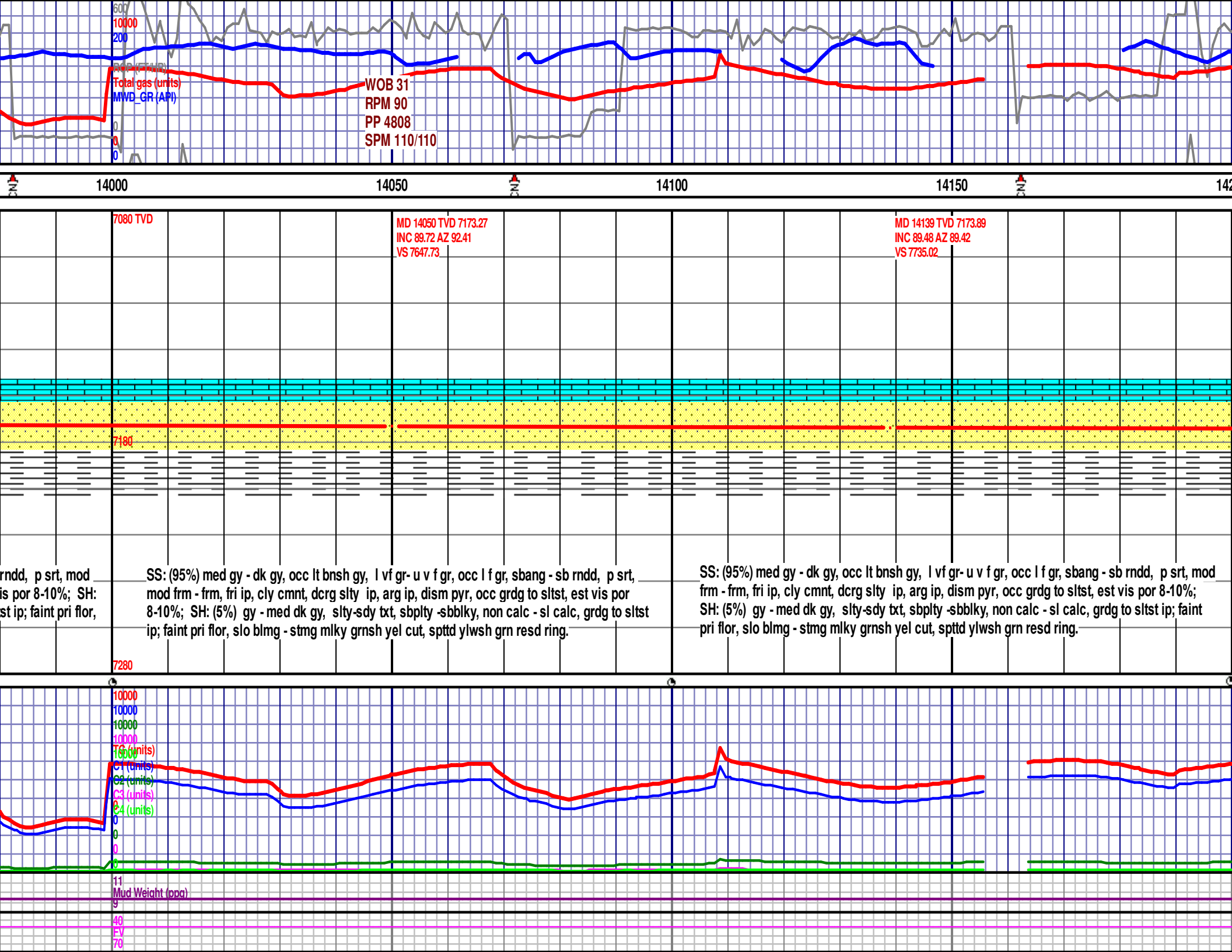

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 37
RPM 90
PP 4697
SPM 110/110
12900
12950
13000
13050
MD 12886 TVD 7164.52
INC 89.57 AZ 94.7
VS 6510.7
MD 12976 TVD 7165.35
INC 89.38 AZ 91.06
VS 6598.3
7080 TVD
MD 13065 TVD 7166.36
INC 89.32 AZ 90.58
VS 6685.62
7180
sb rndd, p srt,
st, est vis por
calc, grdg to
sd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
7280
MW 9.7
VIS 51
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

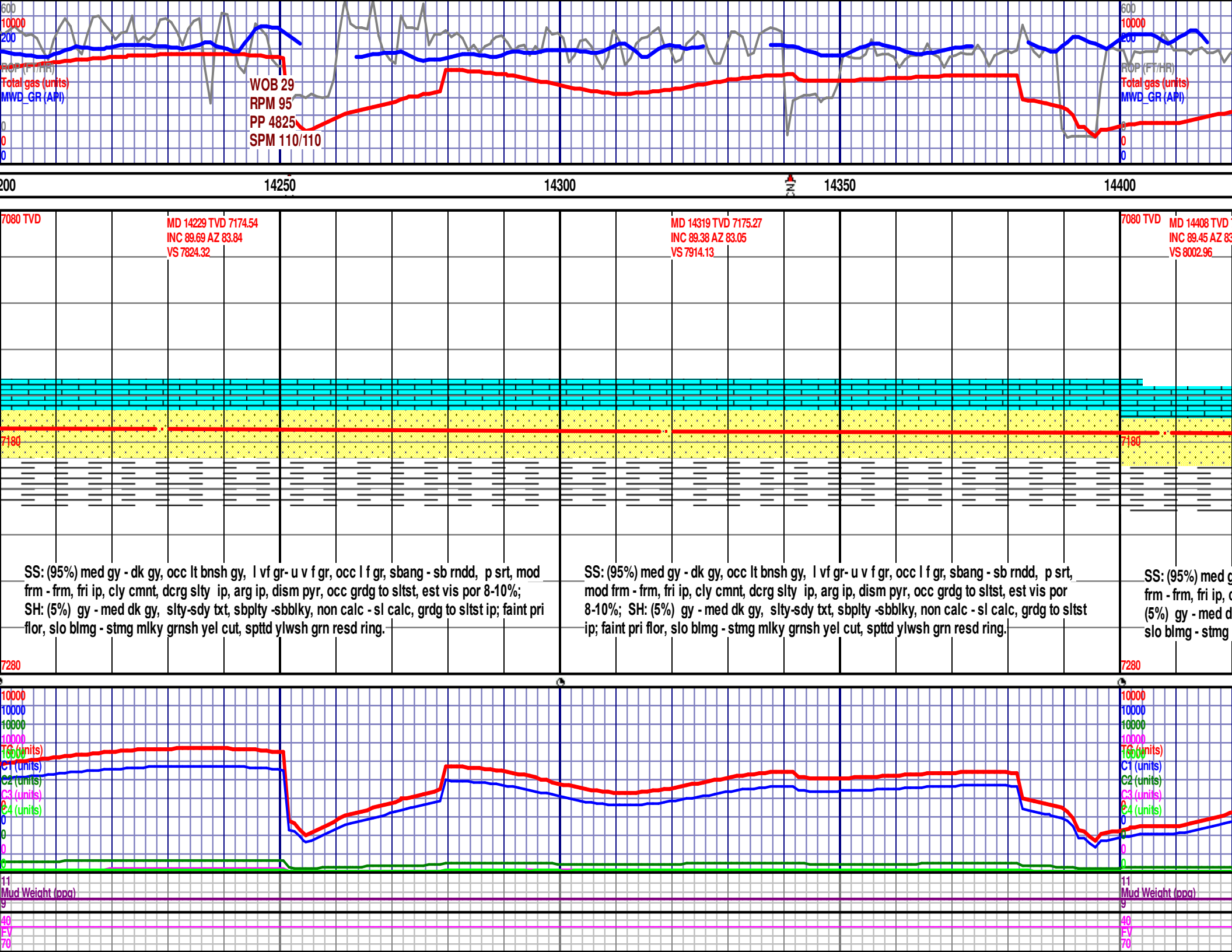

10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 28
RPM 90
PP 4698
SPM 110/110
100
13150
13200
13250
13300
MD 13155 TVD 7167.28
INC 89.51 AZ 90.23
VS 6774.05
7080 TVD
MD 13244 TVD 7168.26
INC 89.23 AZ 92.63
VS 6861.18
7180
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
7280
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

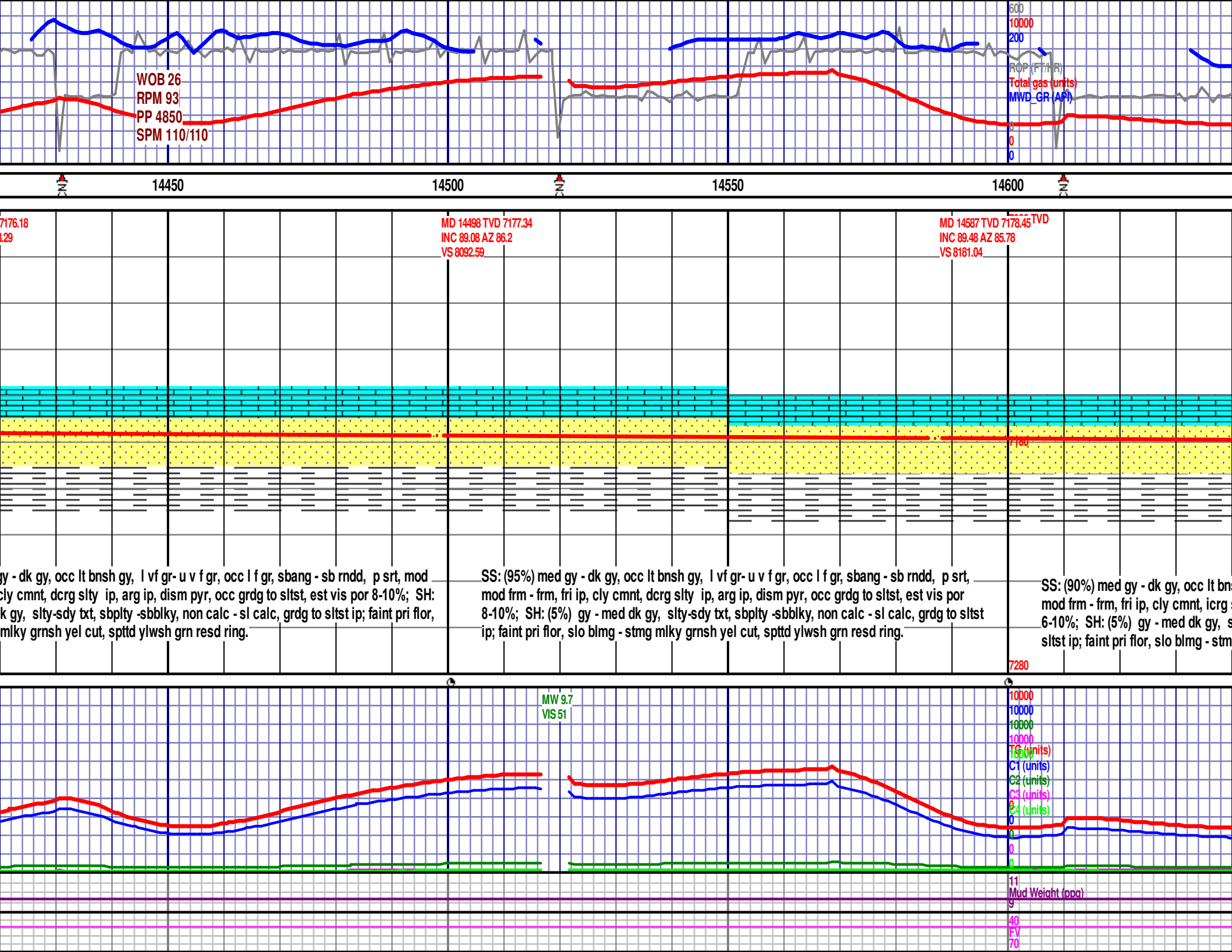

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 13
RPM 90
PP 3627
SPM 110/110
13350
13400
13450
13500
MD 13334 TVD 7169.27
INC 89.48 AZ 95.47
VS 6948.35
7080 TVD
MD 13423 TVD 7170.03
INC 89.54 AZ 97.08
VS 7033.64
MD 13513 TVD 7170.59
INC 89.75 AZ 94.5
VS 7120.1
7180
y - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod
ly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH:
k gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor,
mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm
- frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (5%)
gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo
blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh g
- frm, fri ip, cly cmnt, dcrg slty ip, arg i
gy - med dk gy, slty-sdy txt, sbplty -sbl
blmg - stmg mlky grnsh yel cut, spttd y
7280
10000
10000
10000
10000
T6 (units)
1000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

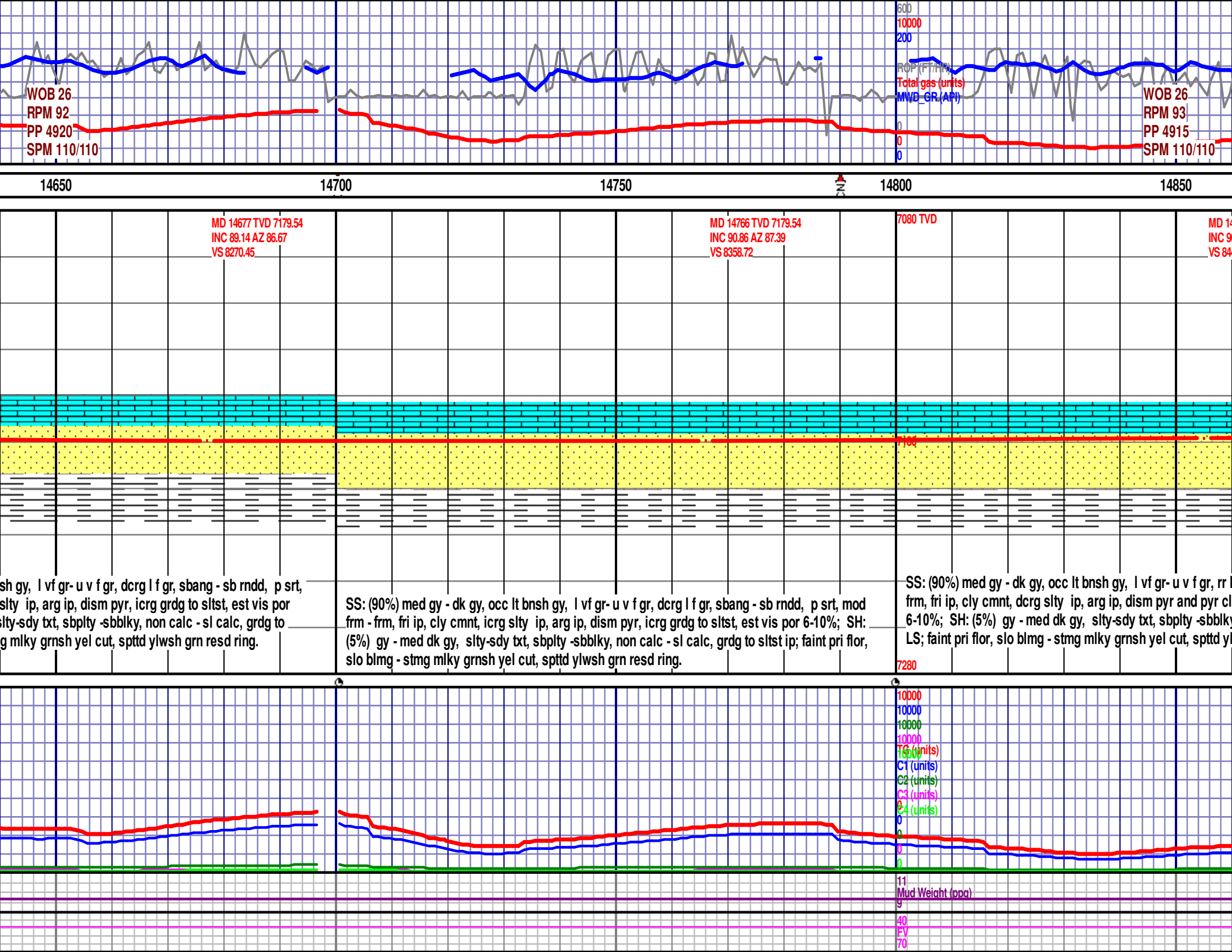

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 26
RPM 96
PP 4624
SPM 110/110
13550
13600
13650
13700
13750
MD 13602 TVD 7171.31
INC 89.32 AZ 92.81
VS 7206.47
MD 13691 TVD 7171.29
INC 90.71 AZ 90.8
VS 7293.48
7180
y, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm
p, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (5%)
blky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo
lwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod
frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%;
SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri
flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr,
mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism py
8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbb
ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd
7280
10000
10000
10000
10000
TG (units)
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
MW 9.7
VIS 52
11
Mud Weight (ppg)
9
40
FV
70

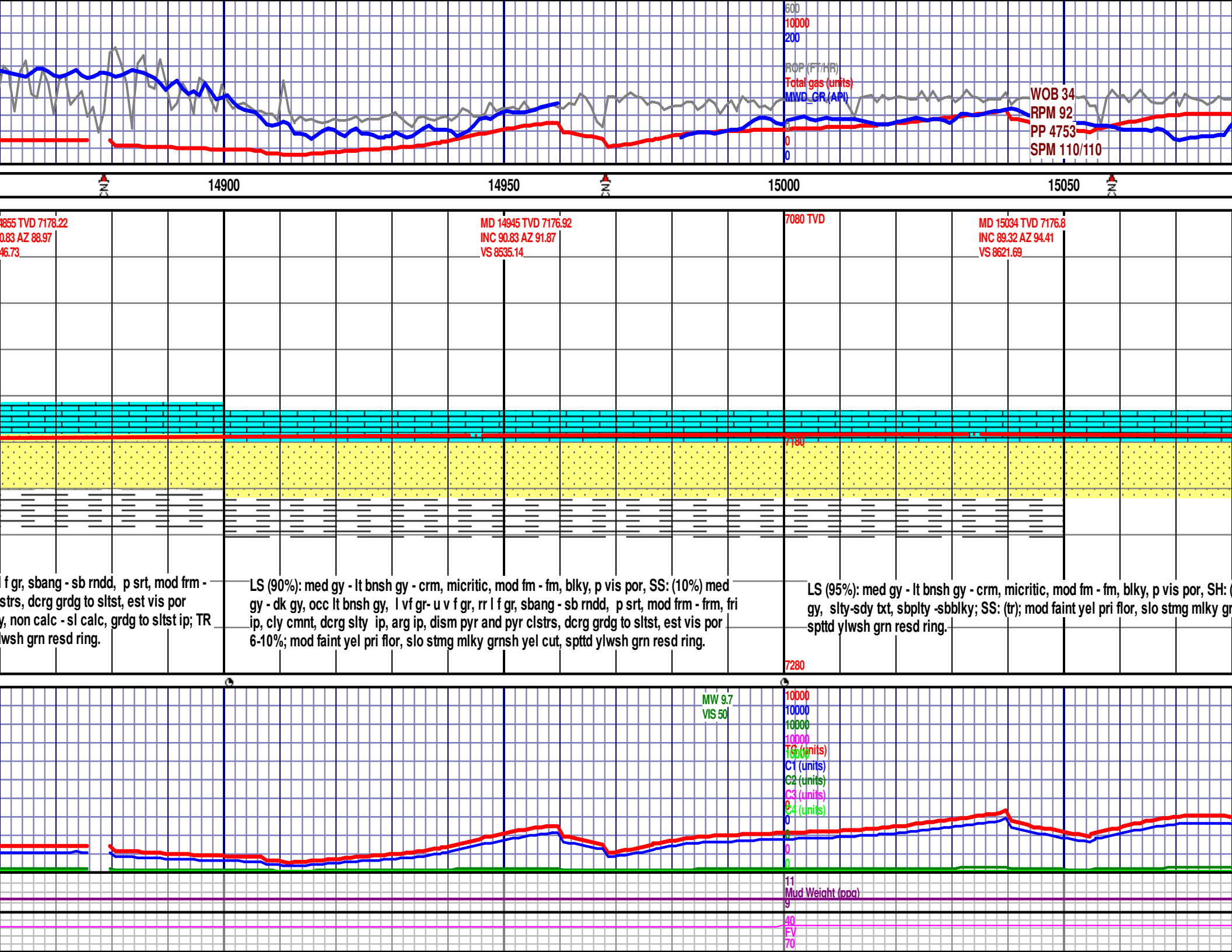

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 30
RPM 90
PP 4831
SPM 110/110
13800
13850
13900
13950
MD 13781 TVD 7171.33
INC 89.23 AZ 87
VS 7382.3
7080 TVD
MD 13871 TVD 7172.3
INC 89.54 AZ 86.92
VS 7471.57
MD 13960 TVD 7172.85
INC 89.75 AZ 89.87
VS 7559.53
7180
occ l f gr, sbang - sb rndd, p srt,
yr, occ grdg to sltst, est vis por
lky, non calc - sl calc, grdg to sltst
ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod
frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%;
SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri
flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb
frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vi
(5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to slt
slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
7280
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
MW 9.7
VIS 51
11
Mud Weight (ppg)
9
40
FV
70

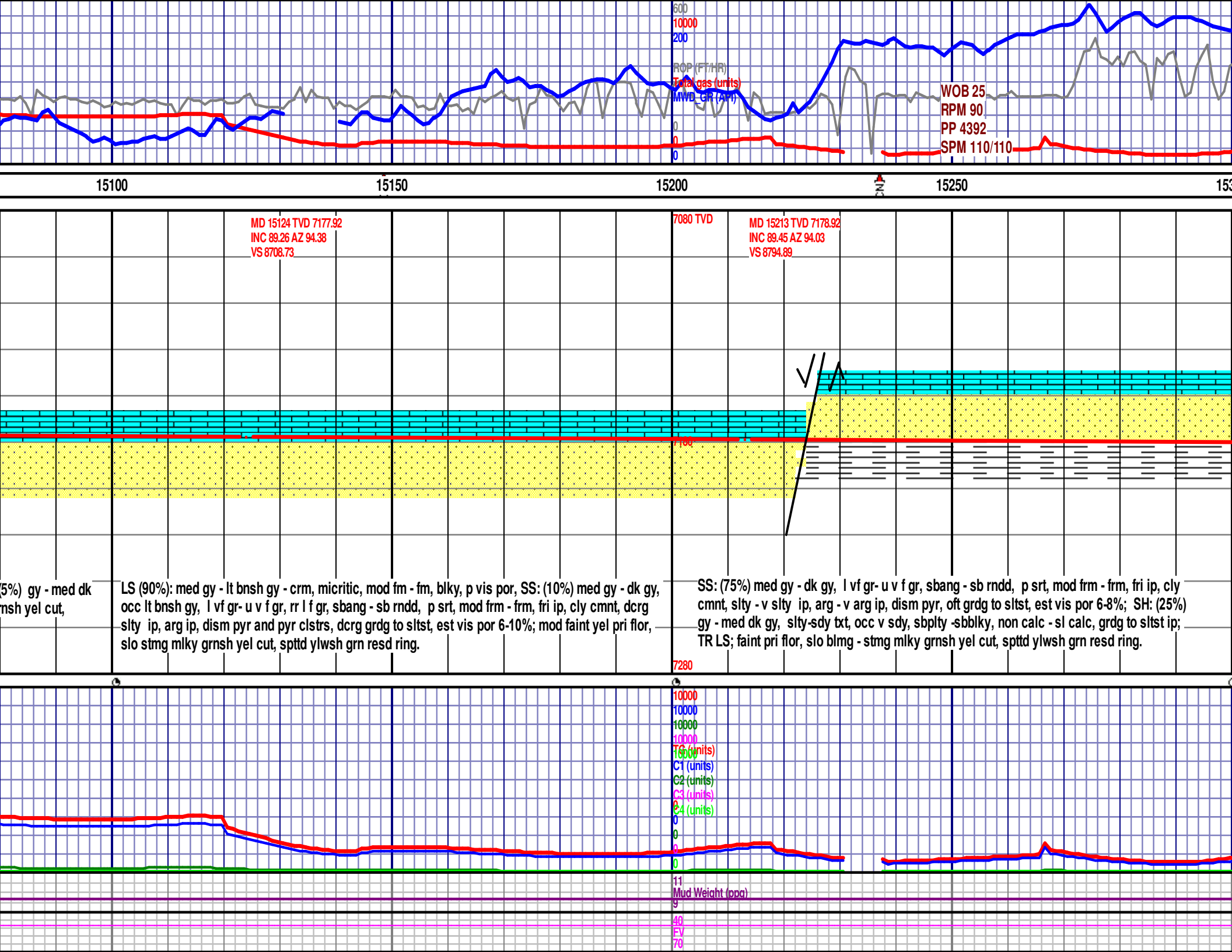

600
10000
200
Total gas (units)
MWD_GR (API)
0
0
0
WOB 31
RPM 90
PP 4808
SPM 110/110
14000
14050
14100
14150
7080 TVD
MD 14050 TVD 7173.27
INC 89.72 AZ 92.41
VS 7647.73
MD 14139 TVD 7173.89
INC 89.48 AZ 89.42
VS 7735.02
7180
rndd, p srt, mod
is por 8-10%; SH:
st ip; faint pri flor,
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
7280
10000
10000
10000
10000
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

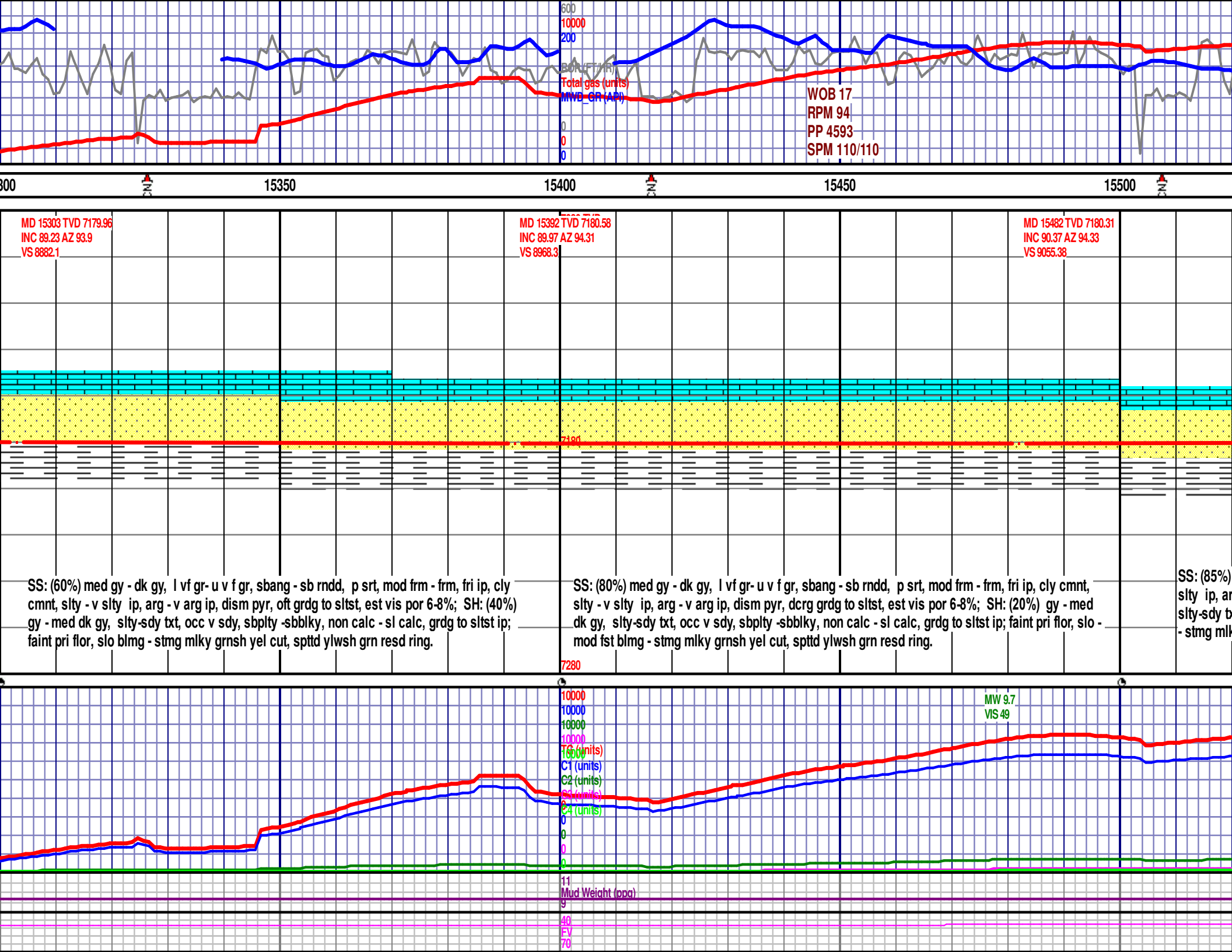

600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 29
RPM 95
PP 4825
SPM 110/110
14250
14300
14350
14400
7080 TVD
MD 14229 TVD 7174.54
INC 89.69 AZ 83.84
VS 7824.32
MD 14319 TVD 7175.27
INC 89.38 AZ 83.05
VS 7914.13
MD 14408 TVD
INC 89.45 AZ 83
VS 8002.96
7180
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (95%) med g
frm - frm, fri ip, c
(5%) gy - med d
slo blmg - stmg
7280
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70

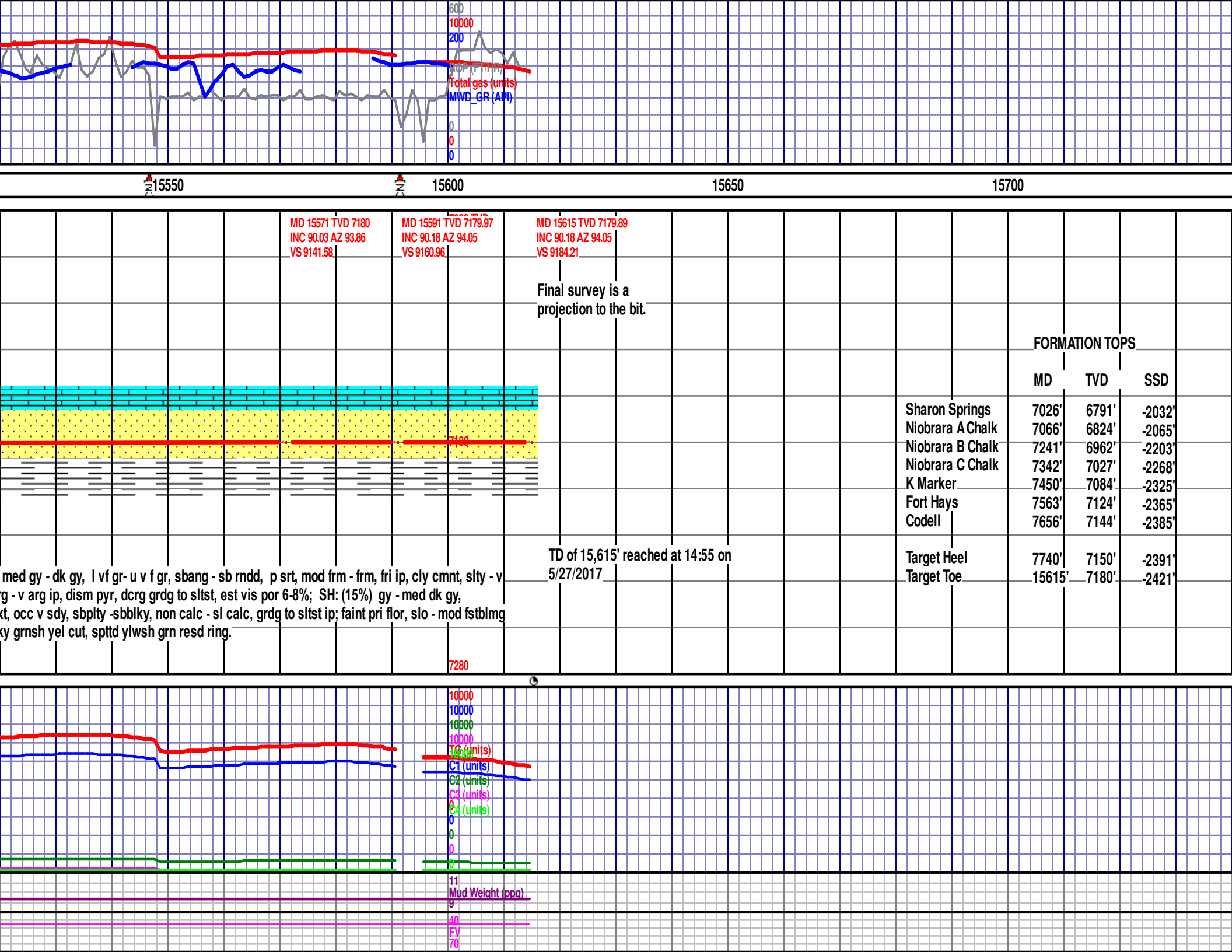

WOB 26
RPM 93
PP 4850
SPM 110/110
600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
14450
14500
14550
14600
7176.18
MD 14498 TVD 7177.34
INC 89.08 AZ 86.2
VS 8092.59
MD 14587 TVD 7178.45 TVD
INC 89.48 AZ 85.78
VS 8181.04
7180
gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt, mod
cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por 8-10%; SH:
k gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor,
mlky grnsh yel cut, sptd ylwsh grn resd ring.
SS: (95%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, occ l f gr, sbang - sb rndd, p srt,
mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr, occ grdg to sltst, est vis por
8-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst
ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, sptd ylwsh grn resd ring.
SS: (90%) med gy - dk gy, occ lt bns
mod frm - frm, fri ip, cly cmnt, icrg
6-10%; SH: (5%) gy - med dk gy, s
sltst ip; faint pri flor, slo blmg - stm
7280
MW 9.7
VIS 51
10000
10000
10000
10000
TG (units)
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70


WOB 26
RPM 92
PP 4920
SPM 110/110
600
10000
200
ROP (F/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 26
RPM 93
PP 4915
SPM 110/110
14650
14700
14750
14800
14850
MD 14677 TVD 7179.54
INC 89.14 AZ 86.67
VS 8270.45
MD 14766 TVD 7179.54
INC 90.86 AZ 87.39
VS 8358.72
7080 TVD
7180
7280
sh gy, l vf gr- u v f gr, dcrg l f gr, sbang - sb rndd, p srt,
slty ip, arg ip, dism pyr, icrg grdg to sltst, est vis por
slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to
g mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (90%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, dcrg l f gr, sbang - sb rndd, p srt, mod
frm - frm, fri ip, cly cmnt, icrg slty ip, arg ip, dism pyr, icrg grdg to sltst, est vis por 6-10%; SH:
(5%) gy - med dk gy, slty-sdy txt, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor,
slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (90%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, rr
frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr and pyr cl
6-10%; SH: (5%) gy - med dk gy, slty-sdy txt, sbplty -sbblk
LS; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd yl
10000
10000
10000
10000
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70


600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
WOB 34
RPM 92
PP 4753
SPM 110/110
14900
14950
15000
15050
4855 TVD 7178.22
0.83 AZ 88.97
46.73
MD 14945 TVD 7176.92
INC 90.83 AZ 91.87
VS 8535.14
7080 TVD
MD 15034 TVD 7176.8
INC 89.32 AZ 94.41
VS 8621.69
7180
7280
l f gr, sbang - sb rndd, p srt, mod frm - strs, dcrg grdg to sltst, est vis por y, non calc - sl calc, grdg to sltst ip; TR lwsh grn resd ring.
LS (90%): med gy - lt bnsh gy - crm, micritic, mod fm - fm, blky, p vis por, SS: (10%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, rr l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr and pyr clstrs, dcrg grdg to sltst, est vis por 6-10%; mod faint yel pri flor, slo stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
LS (95%): med gy - lt bnsh gy - crm, micritic, mod fm - fm, blky, p vis por, SH: (gy, slty-sdy txt, sbplty -sbblky; SS: (tr); mod faint yel pri flor, slo stmg mlky gr spttd ylwsh grn resd ring.
MW 9.7
VIS 50
10000
10000
10000
10000
TG (units)
1000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70


600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 25
RPM 90
PP 4392
SPM 110/110
15100
15150
15200
15250
MD 15124 TVD 7177.92
INC 89.26 AZ 94.38
VS 8708.73
7080 TVD
MD 15213 TVD 7178.92
INC 89.45 AZ 94.03
VS 8794.89
7280
(5%) gy - med dk
rnsh yel cut,
LS (90%): med gy - lt bnsh gy - crm, micritic, mod fm - fm, blky, p vis por, SS: (10%) med gy - dk gy, occ lt bnsh gy, l vf gr- u v f gr, rr l f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, dcrg slty ip, arg ip, dism pyr and pyr clstrs, dcrg grdg to sltst, est vis por 6-10%; mod faint yel pri flor, slo stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (75%) med gy - dk gy, l vf gr- u v f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, slty - v slty ip, arg - v arg ip, dism pyr, oft grdg to sltst, est vis por 6-8%; SH: (25%) gy - med dk gy, slty-sdy txt, occ v sdy, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; TR LS; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
10000
10000
10000
10000
TG (units)
10000
C1 (units)
C2 (units)
C3 (units)
0
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70


600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
WOB 17
RPM 94
PP 4593
SPM 110/110
300
15350
15400
15450
15500
MD 15303 TVD 7179.96
INC 89.23 AZ 93.9
VS 8882.1
MD 15392 TVD 7180.58
INC 89.97 AZ 94.31
VS 8968.3
MD 15482 TVD 7180.31
INC 90.37 AZ 94.33
VS 9055.38
7180
SS: (60%) med gy - dk gy, l vf gr- u v f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, slty - v slty ip, arg - v arg ip, dism pyr, oft grdg to sltst, est vis por 6-8%; SH: (40%) gy - med dk gy, slty-sdy txt, occ v sdy, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (80%) med gy - dk gy, l vf gr- u v f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, slty - v slty ip, arg - v arg ip, dism pyr, dcrg grdg to sltst, est vis por 6-8%; SH: (20%) gy - med dk gy, slty-sdy txt, occ v sdy, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo - mod fst blmg - stmg mlky grnsh yel cut, spttd ylwsh grn resd ring.
SS: (85%)
slty ip, ar
slty-sdy t
- stmg mlk
7280
10000
10000
10000
10000
TG (units)
1000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
MW 9.7
VIS 49
11
Mud Weight (ppg)
9
40
FV
70


600
10000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
0
0
0
15550
15600
15650
15700
MD 15571 TVD 7180
INC 90.03 AZ 93.86
VS 9141.58
MD 15591 TVD 7179.97
INC 90.18 AZ 94.05
VS 9160.96
MD 15615 TVD 7179.89
INC 90.18 AZ 94.05
VS 9184.21
Final survey is a projection to the bit.
FORMATION TOPS
MD TVD SSD
Sharon Springs 7026' 6791' -2032'
Niobrara A Chalk 7066' 6824' -2065'
Niobrara B Chalk 7241' 6962' -2203'
Niobrara C Chalk 7342' 7027' -2268'
K Marker 7450' 7084' -2325'
Fort Hays 7563' 7124' -2365'
Codell 7656' 7144' -2385'
Target Heel 7740' 7150' -2391'
Target Toe 15615' 7180' -2421'
7180
TD of 15,615' reached at 14:55 on 5/27/2017
med gy - dk gy, l vf gr- u v f gr, sbang - sb rndd, p srt, mod frm - frm, fri ip, cly cmnt, slty - v
rg - v arg ip, dism pyr, dcrg grdg to sltst, est vis por 6-8%; SH: (15%) gy - med dk gy,
xt, occ v sdy, sbplty -sbblky, non calc - sl calc, grdg to sltst ip; faint pri flor, slo - mod fstblmg
ky grnsh yel cut, sptd ylwsh grn resd ring.
7280
10000
10000
10000
10000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
11
Mud Weight (ppg)
9
40
FV
70