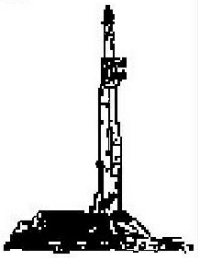
GOOLSBY BROTHERS
and associates, inc.
575 Union Blvd, Suite 208
Lakewood, CO 80228
303-945-2860 Office
Geological Wellsite
Supervision
www.goolsbybrothers.com
PETCOM



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

Well Name:	**Troudt 41C-23-M**
API:	**051234624600**
Location:	**NE/NW Section 27 T6N R66W Weld County, CO.**
License Number:	**Region: Wattenberg**
Spud Date:	**August 24, 2018 Drilling Completed: August 27, 2018**
Surface Coordinates:	**760 FNL 1684 FWL NE/NW Sec. 27 T6N R66W**
	Lat/Long: 40.464592 N -104.767315 W
Bottom Hole Coordinates:	**Planned: 1214' FSL 510' FEL SE/SE Sec. 23 T6N R66W**
Ground Elevation (ft):	**4,720' K.B. Elevation (ft): 4,744'**
Logged Interval (ft):	**7100' To: 15,292' Total Depth (ft): 15,292' DMTD**
Formation:	**Codell Sand**
Type of Drilling Fluid:	**OBM (LSND Surface).**

Printed by HORIZONTAL.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

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

GEOLOGIST

Name: Tekabe Gedamu & 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 15,279' MD

Casing

9 5/8" Surface Casing pre set @ 1,851' MD.
5 1/2" Production Liner set @ 15,271' on 08/28/2018.

Comments

1) Drilling Contractor: Precision Drilling, Rig #562
Pumps 1&2: Rostell F-1600 5" x 12" (.0692 Bbls./stroke)
Toolpusher: John Martin Meyers, Tyson Westgard.

2) Company Man: Kent Priddy
Kevin Brakovec
Tim Jones
Kalib Ford

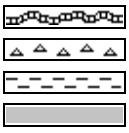
3) Mud Comapny : Anchor USA
Engineer: Joseph Wood, David Owen

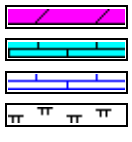
4) Directional Drilling: Baker Hughes
Drillers: Ryan Killian, Jeremiah Samson
MWD: Shawn McCaffery, Baker Remote Field Operations.

5) Gas Equipment: Pason Gas Analyzer (Spectrometer)

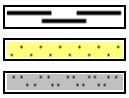
6) Wellsite Geologist: Tekabe Gedamu & Robin Brackman

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

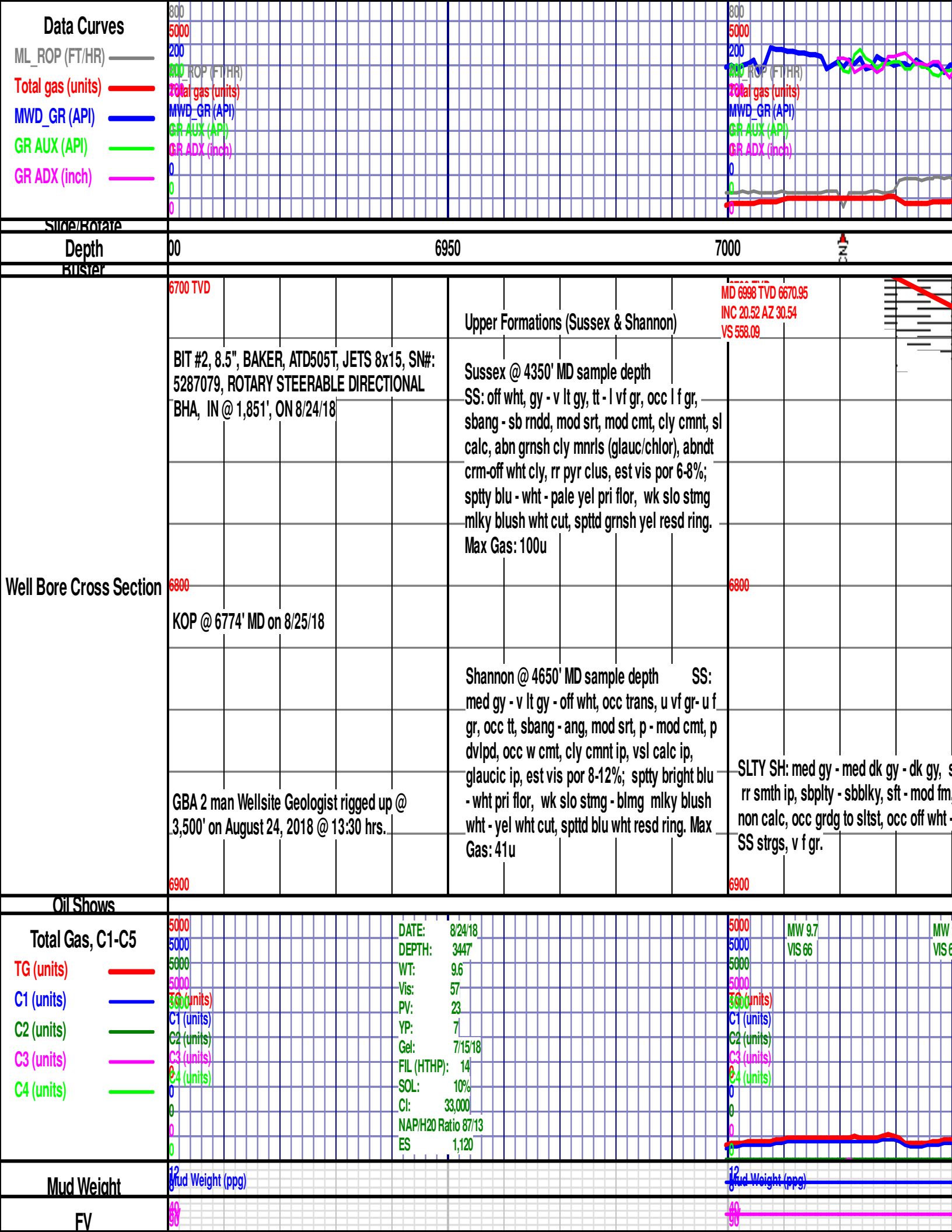
- E Earthy
- Fenest
- F Fracture
- Inter
- Moldic
- Organic
- P Pinpoint
- V Vuggy

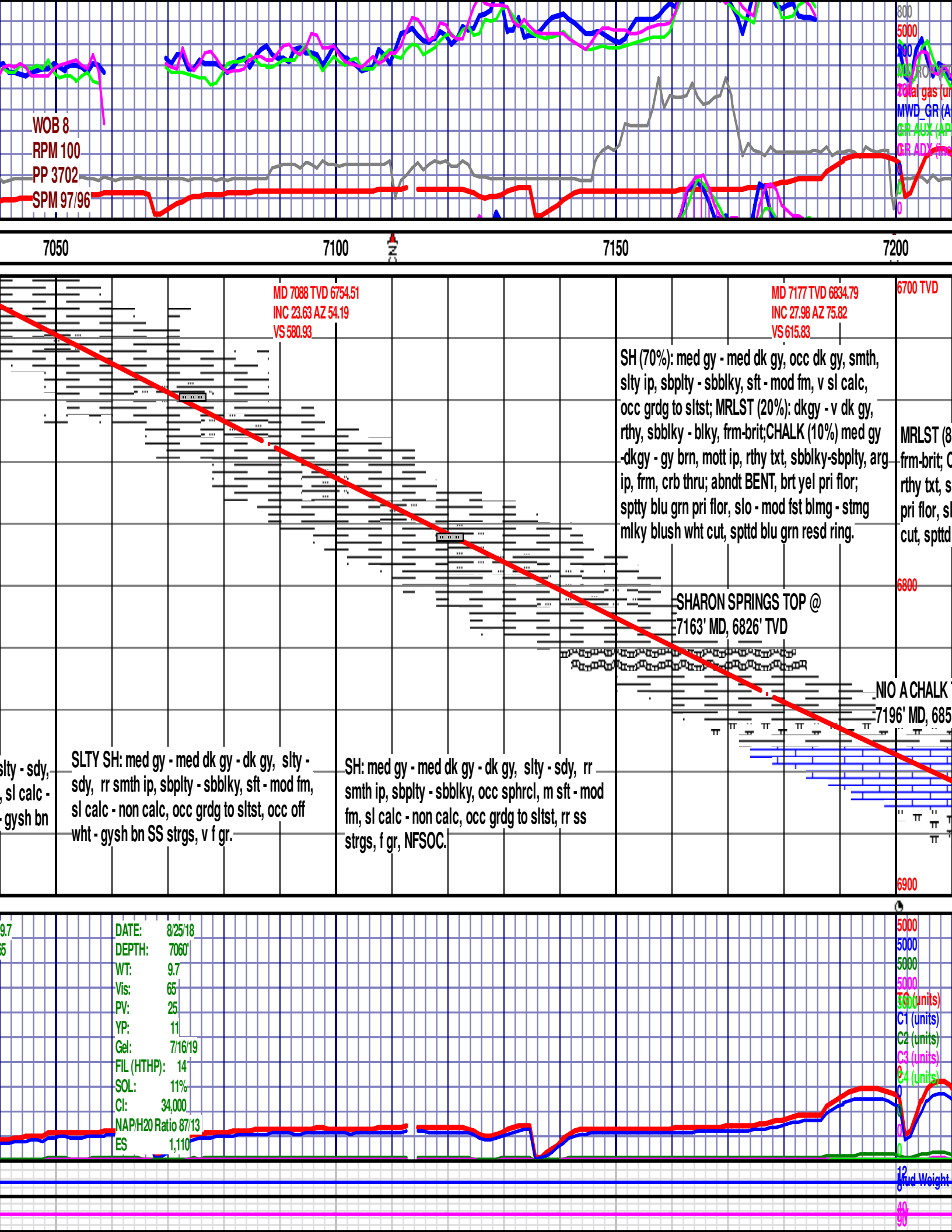
ROUNDING

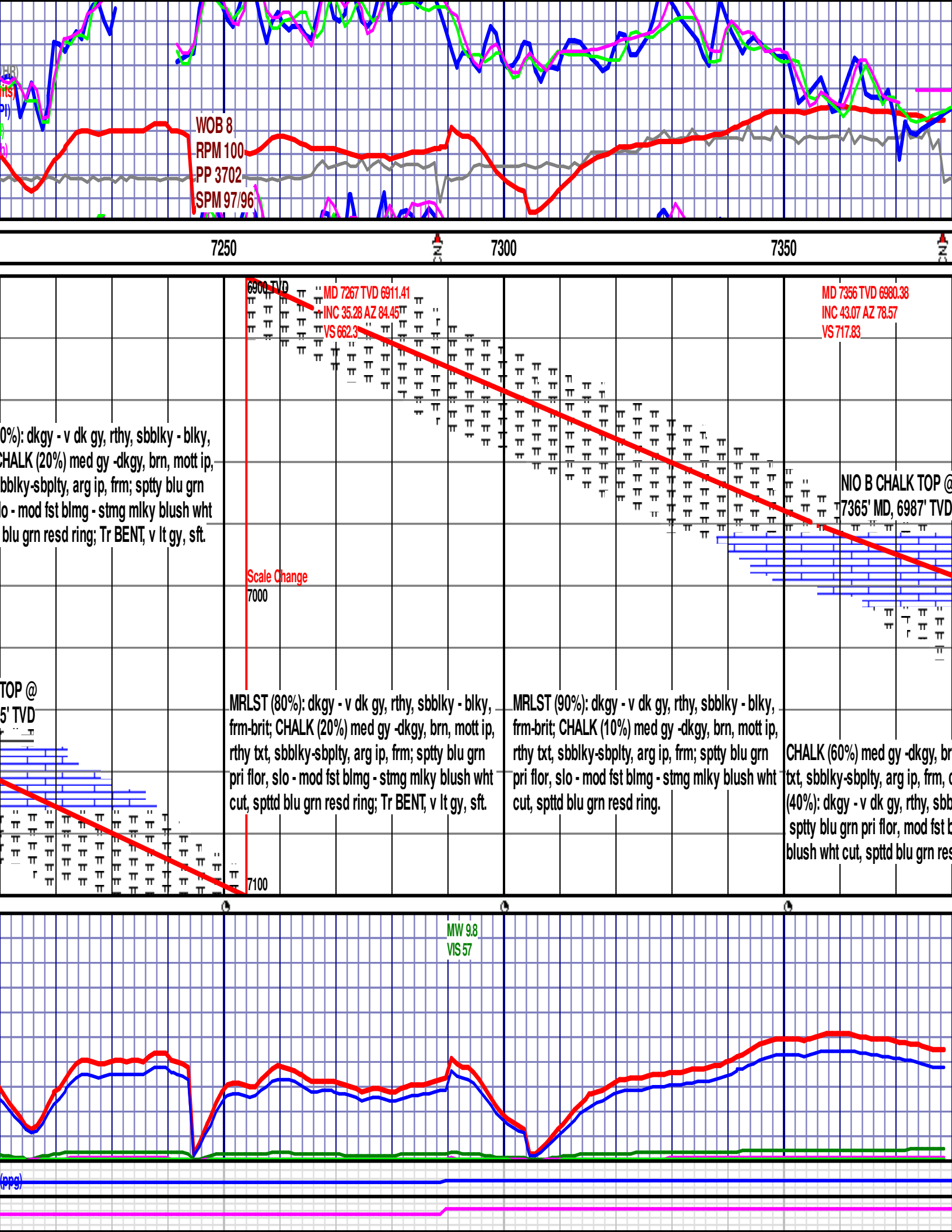
- R Rounded
- r Subrnd
- a Subang
- A Angular

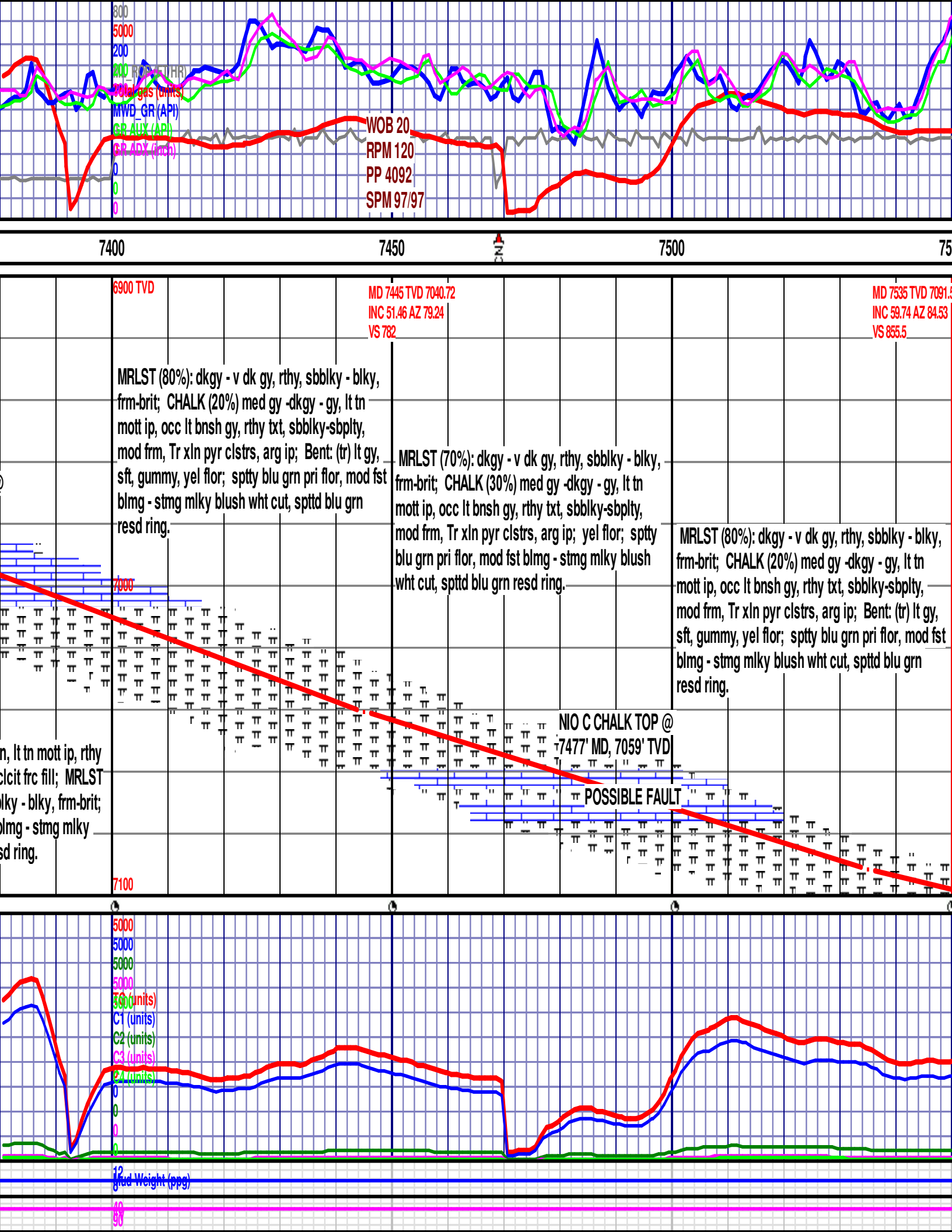
SORTING

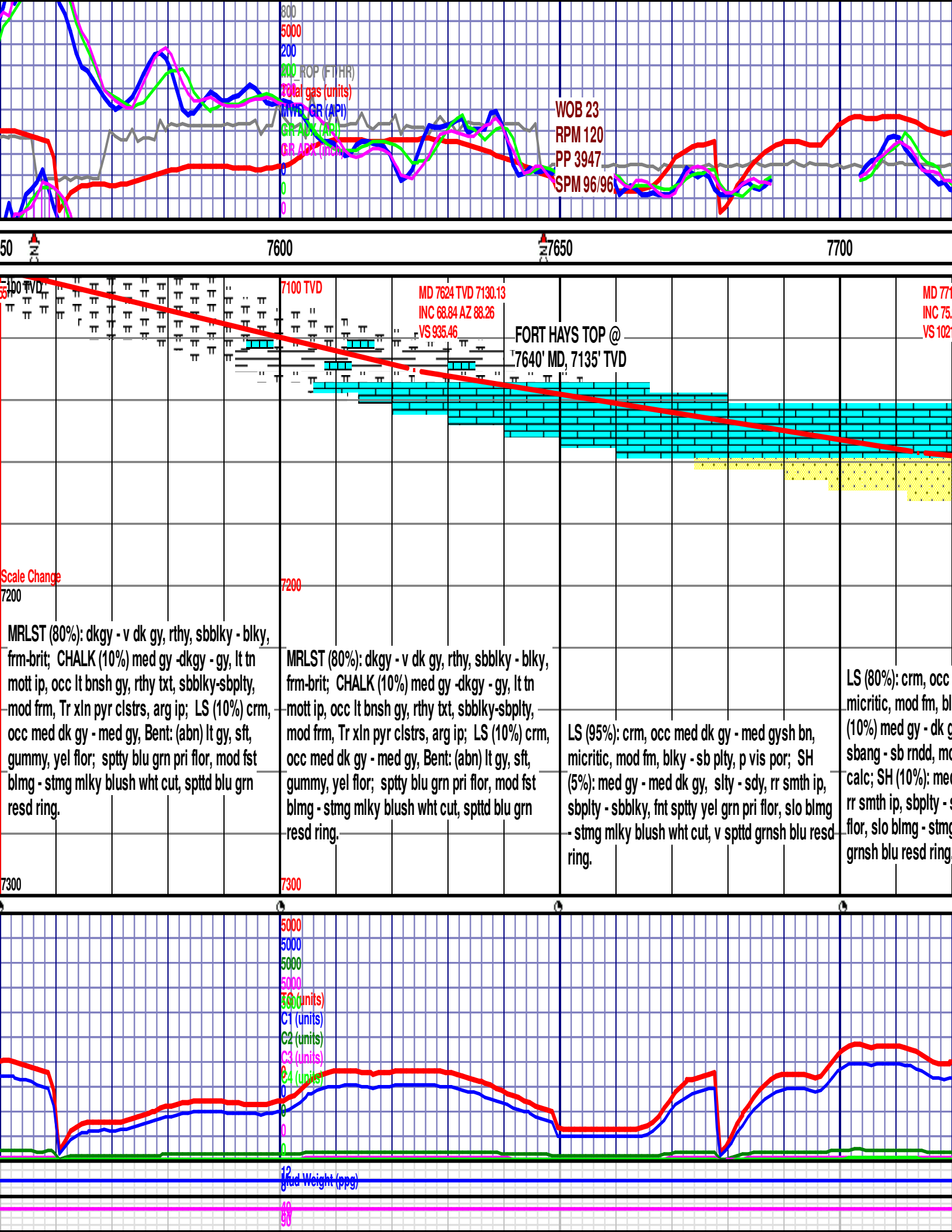
- W Well
- M Moderate
- P Poor

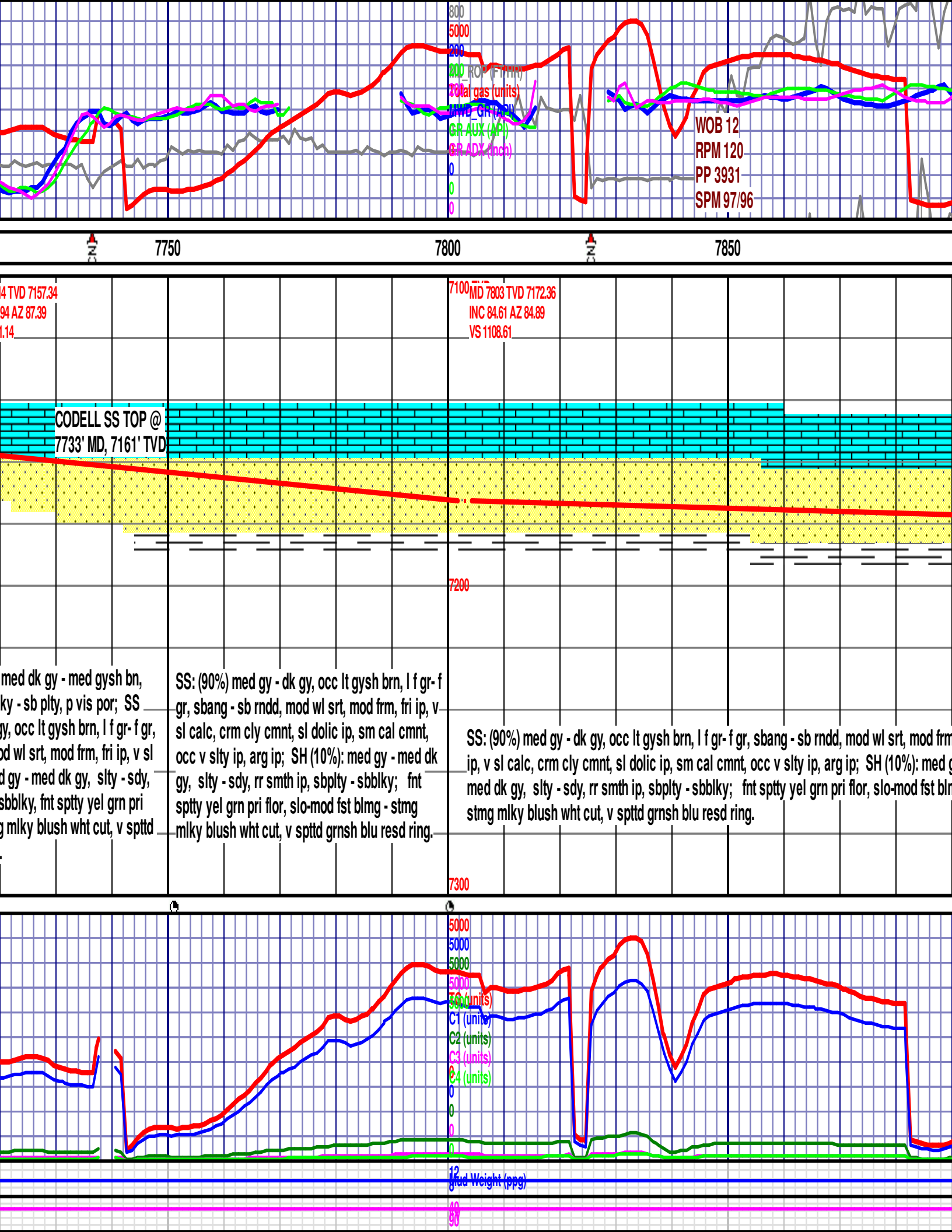

Data Curves
ML_ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
800
5000
200
0
Slide/Rotate
Depth
6950
7000
Buster
6700 TVD
MD 6998 TVD 6670.95
INC 20.52 AZ 30.54
VS 558.09
Upper Formations (Sussex & Shannon)
BIT #2, 8.5", BAKER, ATD505T, JETS 8x15, SN#: 5287079, ROTARY STEERABLE DIRECTIONAL BHA, IN @ 1,851', ON 8/24/18
Sussex @ 4350' MD sample depth
SS: off wht, gy - v lt gy, tt - l vf gr, occ l f gr, sbang - sb rndd, mod srt, mod cmt, cly cmnt, sl calc, abn grnsh cly mnrls (glauc/chlor), abndt crm-off wht cly, rr pyr clus, est vis por 6-8%; sptty blu - wht - pale yel pri flor, wk slo stmg mlky blush wht cut, sptd grnsh yel resd ring. Max Gas: 100u
6800
KOP @ 6774' MD on 8/25/18
Shannon @ 4650' MD sample depth SS: med gy - v lt gy - off wht, occ trans, u vf gr- u f gr, occ tt, sbang - ang, mod srt, p - mod cmt, p dvlpd, occ w cmt, cly cmnt ip, vsl calc ip, glaucic ip, est vis por 8-12%; sptty bright blu - wht pri flor, wk slo stmg - blmg mlky blush wht - yel wht cut, sptd blu wht resd ring. Max Gas: 41u
SLTY SH: med gy - med dk gy - dk gy, s
rr smth ip, sbplty - sbblky, sft - mod fm
non calc, occ grdg to sltst, occ off wht -
SS strgs, v f gr.
6900
Well Bore Cross Section
Oil Shows
Total Gas, C1-C5
TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
DATE: 8/24/18
DEPTH: 3447'
WT: 9.6
Vis: 57
PV: 23
YP: 7
Gel: 7/15/18
FIL (HTHP): 14
SOL: 10%
CI: 33,000
NAP/H20 Ratio 87/13
ES 1,120
MW 9.7
VIS 66
MW
VIS 6
Mud Weight
Mud Weight (ppg)
FV
40
90

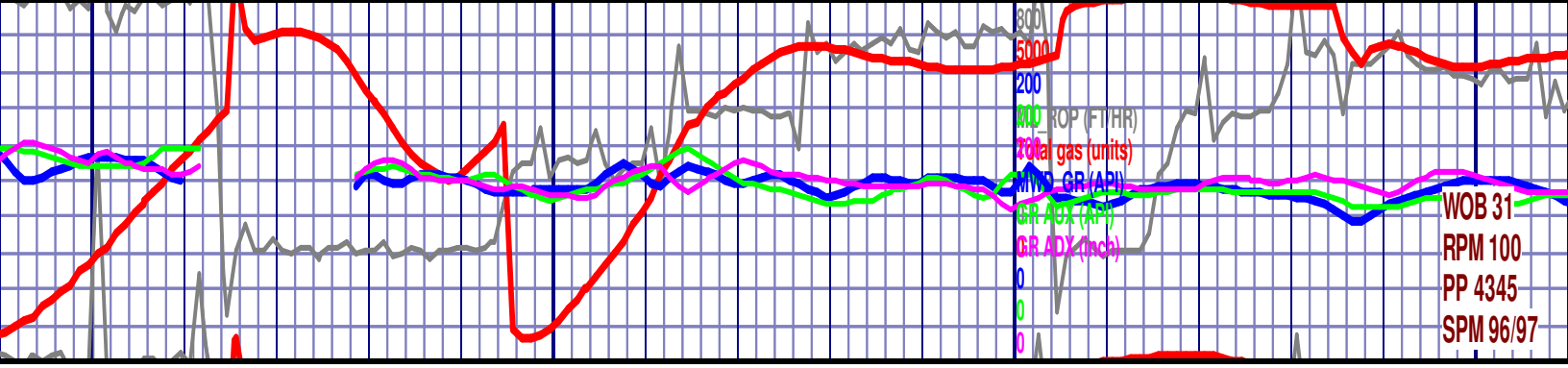

WOB 8
RPM 100
PP 3702
SPM 97/96
800
5000
MWD_GR (A
GR AUX (AP
0
7050
7100
7150
7200
MD 7088 TVD 6754.51
INC 23.63 AZ 54.19
VS 580.93
MD 7177 TVD 6834.79
INC 27.98 AZ 75.82
VS 615.83
6700 TVD
SH (70%): med gy - med dk gy, occ dk gy, smth, slty ip, sbplty - sbblky, sft - mod fm, v sl calc, occ grdg to sltst; MRLST (20%): dkgy - v dk gy, rthy, sbblky - blky, frm-brit;CHALK (10%) med gy -dkgy - gy brn, mott ip, rthy txt, sbblky-sbplty, arg ip, frm, crb thru; abndt BENT, brt yel pri flor; sptty blu grn pri flor, slo - mod fst blmg - stmg mlky blush wht cut, sptd blu grn resd ring.
MRLST (8
frm-brit; C
rthy txt, s
pri flor, sl
cut, sptd
6800
SHARON SPRINGS TOP @
7163' MD, 6826' TVD
NIO A CHALK
7196' MD, 685
6900
slty - sdy,
sl calc -
gysh bn
SLTY SH: med gy - med dk gy - dk gy, slty - sdy, rr smth ip, sbplty - sbblky, sft - mod fm, sl calc - non calc, occ grdg to sltst, occ off wht - gysh bn SS strgs, v f gr.
SH: med gy - med dk gy - dk gy, slty - sdy, rr smth ip, sbplty - sbblky, occ sphrcl, m sft - mod fm, sl calc - non calc, occ grdg to sltst, rr ss strgs, f gr, NFSOC.
9.7
65
DATE: 8/25/18
DEPTH: 7060'
WT: 9.7
Vis: 65
PV: 25
YP: 11
Gel: 7/16/19
FIL (HTHP): 14
SOL: 11%
Cl: 34,000
NAP/H20 Ratio 87/13
ES 1,110
5000
5000
5000
5000
5000
Total gas (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
Mud Weight
12
8
40
90


WOB 8
RPM 100
PP 3702
SPM 97/96
7250
7300
7350
MD 7267 TVD 6911.41
INC 35.28 AZ 84.45
VS 662.3
MD 7356 TVD 6980.38
INC 43.07 AZ 78.57
VS 717.83
6900 TVD
Scale Change
7000
7100
0%): dkgy - v dk gy, rthy, sbblky - blky,
CHALK (20%) med gy -dkgy, brn, mott ip,
bblky-sbplty, arg ip, frm; sptty blu grn
lo - mod fst blmg - stmg mlky blush wht
blu grn resd ring; Tr BENT, v lt gy, sft.
TOP @
5' TVD
MRLST (80%): dkgy - v dk gy, rthy, sbblky - blky, frm-brit; CHALK (20%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbplty, arg ip, frm; sptty blu grn pri flor, slo - mod fst blmg - stmg mlky blush wht cut, spttd blu grn resd ring; Tr BENT, v lt gy, sft.
MRLST (90%): dkgy - v dk gy, rthy, sbblky - blky, frm-brit; CHALK (10%) med gy -dkgy, brn, mott ip, rthy txt, sbblky-sbplty, arg ip, frm; sptty blu grn pri flor, slo - mod fst blmg - stmg mlky blush wht cut, spttd blu grn resd ring.
NIO B CHALK TOP @
7365' MD, 6987' TVD
CHALK (60%) med gy -dkgy, br
txt, sbblky-sbplty, arg ip, frm,
(40%): dkgy - v dk gy, rthy, sbb
sptty blu grn pri flor, mod fst b
blush wht cut, spttd blu grn res
MW 9.8
VIS 57
(PPG)


800
5000
200
200 ROP (FT/HR)
total gas (units)
MWD_GR (API)
GR_AUX (API)
GR_ADX (inch)
0
0
0
WOB 20
RPM 120
PP 4092
SPM 97/97
7400
7450
7500
75
6900 TVD
MD 7445 TVD 7040.72
INC 51.46 AZ 79.24
VS 782
MD 7535 TVD 7091.5
INC 59.74 AZ 84.53
VS 855.5
MRLST (80%): dkgy - v dk gy, rthy, sbblky - blky, frm-brit; CHALK (20%) med gy -dkgy - gy, lt tn mott ip, occ lt bnsh gy, rthy txt, sbblky-sbplty, mod frm, Tr xln pyr clstrs, arg ip; Bent: (tr) lt gy, sft, gummy, yel flor; sptty blu grn pri flor, mod fst blmg - stmg mlky blush wht cut, sptd blu grn resd ring.
MRLST (70%): dkgy - v dk gy, rthy, sbblky - blky, frm-brit; CHALK (30%) med gy -dkgy - gy, lt tn mott ip, occ lt bnsh gy, rthy txt, sbblky-sbplty, mod frm, Tr xln pyr clstrs, arg ip; yel flor; sptty blu grn pri flor, mod fst blmg - stmg mlky blush wht cut, sptd blu grn resd ring.
MRLST (80%): dkgy - v dk gy, rthy, sbblky - blky, frm-brit; CHALK (20%) med gy -dkgy - gy, lt tn mott ip, occ lt bnsh gy, rthy txt, sbblky-sbplty, mod frm, Tr xln pyr clstrs, arg ip; Bent: (tr) lt gy, sft, gummy, yel flor; sptty blu grn pri flor, mod fst blmg - stmg mlky blush wht cut, sptd blu grn resd ring.
n, lt tn mott ip, rthy
clcit frc fill; MRLST
lky - blky, frm-brit;
lmg - stmg mlky
sd ring.
7000
7100
NIO C CHALK TOP @
7477' MD, 7059' TVD
POSSIBLE FAULT
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
Mud Weight (ppg)
40
90


800
5000
200
200
ROP (FT/HR)
total gas (units)
MWD GR (API)
GR ADJ (API)
GR ADJ (inch)
0
0
0
WOB 23
RPM 120
PP 3947
SPM 96/96
50
7600
7650
7700
7100 TVD
MD 7624 TVD 7130.13
INC 68.84 AZ 88.26
VS 935.46
FORT HAYS TOP @
7640' MD, 7135' TVD
MD 771
INC 75.
VS 102
Scale Change
7200
7200
MRLST (80%): dkgy - v dk gy, rthy, sbblky - blky, frm-brit; CHALK (10%) med gy -dkgy - gy, lt tn mott ip, occ lt bnsh gy, rthy txt, sbblky-sbplty, mod frm, Tr xln pyr clstrs, arg ip; LS (10%) crm, occ med dk gy - med gy, Bent: (abn) lt gy, sft, gummy, yel flor; sptty blu grn pri flor, mod fst blmg - stmg mlky blush wht cut, sptd blu grn resd ring.
MRLST (80%): dkgy - v dk gy, rthy, sbblky - blky, frm-brit; CHALK (10%) med gy -dkgy - gy, lt tn mott ip, occ lt bnsh gy, rthy txt, sbblky-sbplty, mod frm, Tr xln pyr clstrs, arg ip; LS (10%) crm, occ med dk gy - med gy, Bent: (abn) lt gy, sft, gummy, yel flor; sptty blu grn pri flor, mod fst blmg - stmg mlky blush wht cut, sptd blu grn resd ring.
LS (95%): crm, occ med dk gy - med gysh bn, micritic, mod fm, blky - sb plty, p vis por; SH (5%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky, fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
LS (80%): crm, occ micritic, mod fm, bl (10%) med gy - dk g sbang - sb rndd, mo calc; SH (10%): med rr smth ip, sbplty - s flor, slo blmg - stmg grnsh blu resd ring.
7300
7300
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
8
Mud Weight (ppg)
40
90


800
5000
200
ROP (FT/HR)
Total gas (units)
LWD_GR (API)
GR_AUX (API)
GR_ADX (inch)
0
0
0
WOB 12
RPM 120
PP 3931
SPM 97/96
7750
7800
7850
14 TVD 7157.34
94 AZ 87.39
1.14
7100
MD 7803 TVD 7172.36
INC 84.61 AZ 84.89
VS 1108.61
CODELL SS TOP @
7733' MD, 7161' TVD
7200
med dk gy - med gysh bn,
ky - sb plty, p vis por; SS
gy, occ lt gysh brn, l f gr- f gr,
od wl srt, mod frm, fri ip, v sl
d gy - med dk gy, slty - sdy,
sbblky, fnt sptty yel grn pri
g mlky blush wht cut, v sptd
SS: (90%) med gy - dk gy, occ lt gysh brn, l f gr- f gr, sbang - sb rndd, mod wl srt, mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip, arg ip; SH (10%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, l f gr- f gr, sbang - sb rndd, mod wl srt, mod frm
ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip, arg ip; SH (10%): med g
med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst bl
stmg mlky blush wht cut, v sptd grnsh blu resd ring.
7300
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
Mud Weight (ppg)



7900 | 7950 | 8000 | 8050

MD 7893 TVD 7177.24
INC 89.17 AZ 84.5
VS 1198.12

MD 7982 TVD 7178.58
INC 89.11 AZ 85.13
VS 1286.79

7100 TVD

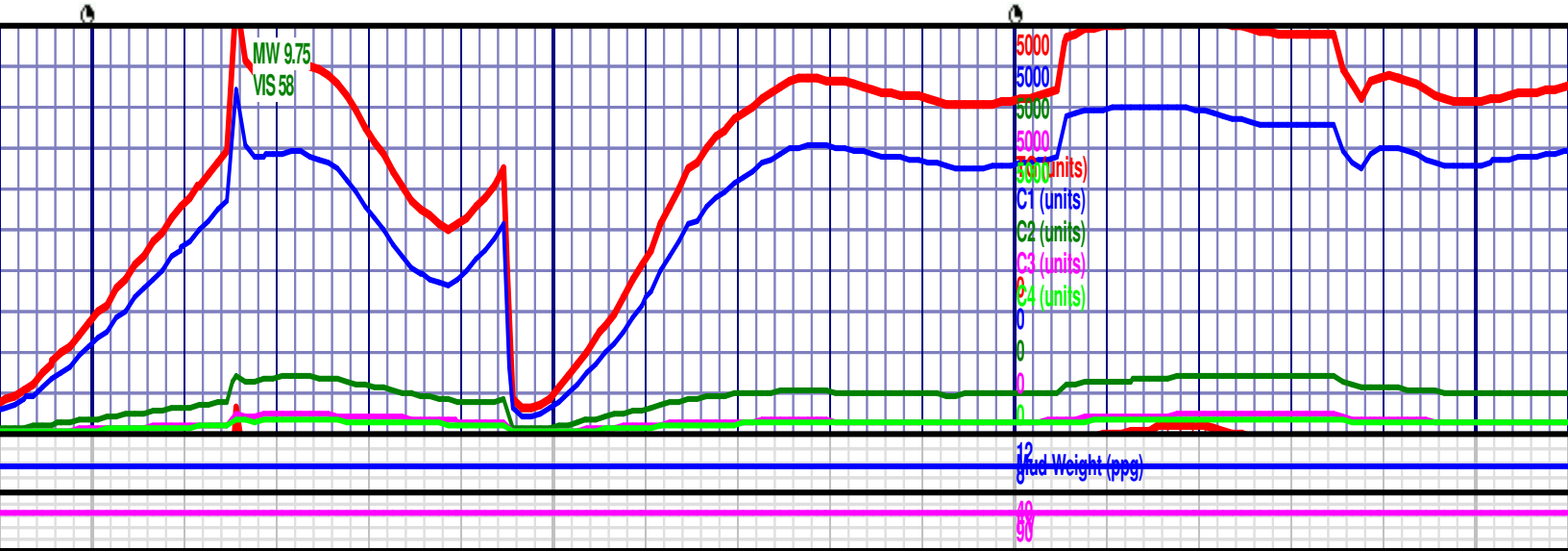
7200

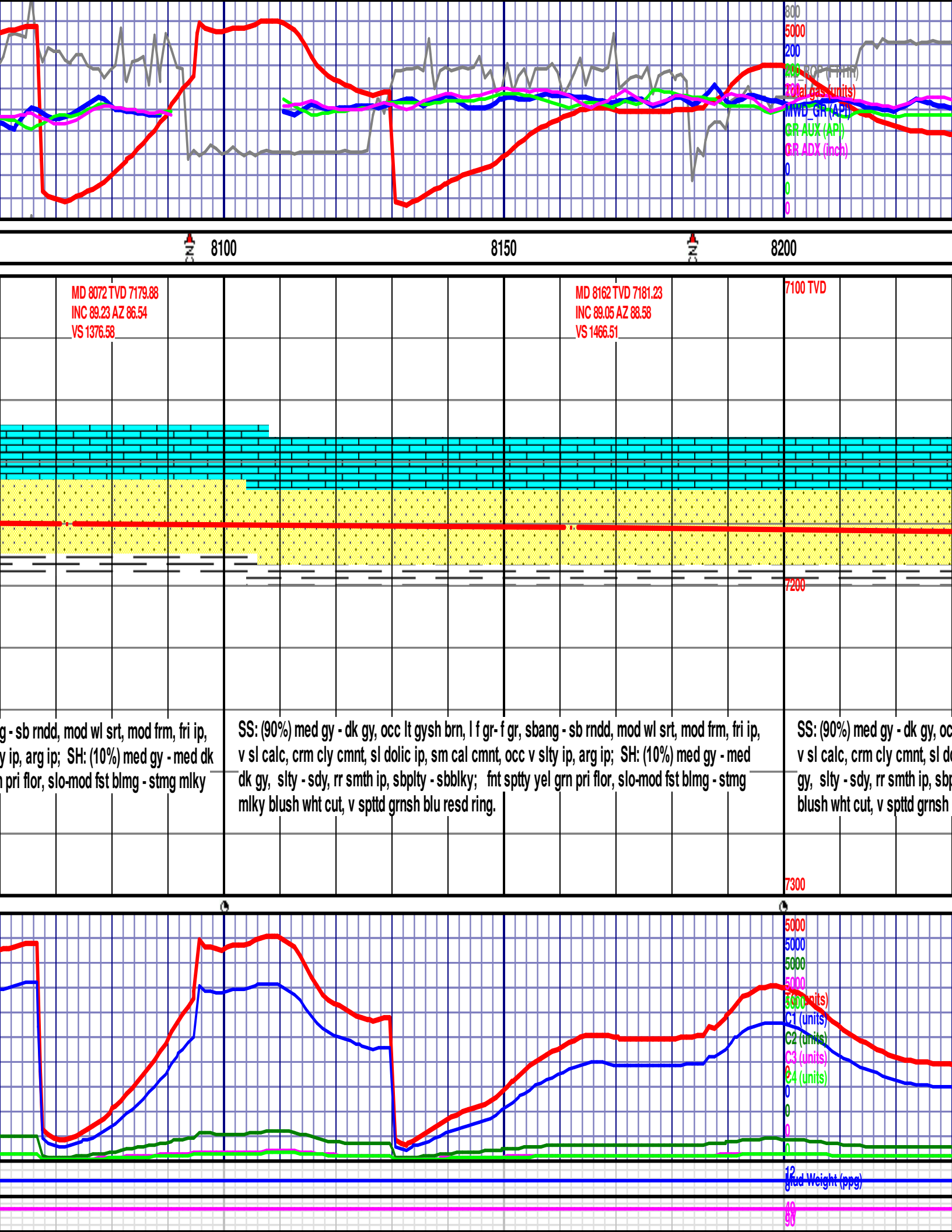
7300

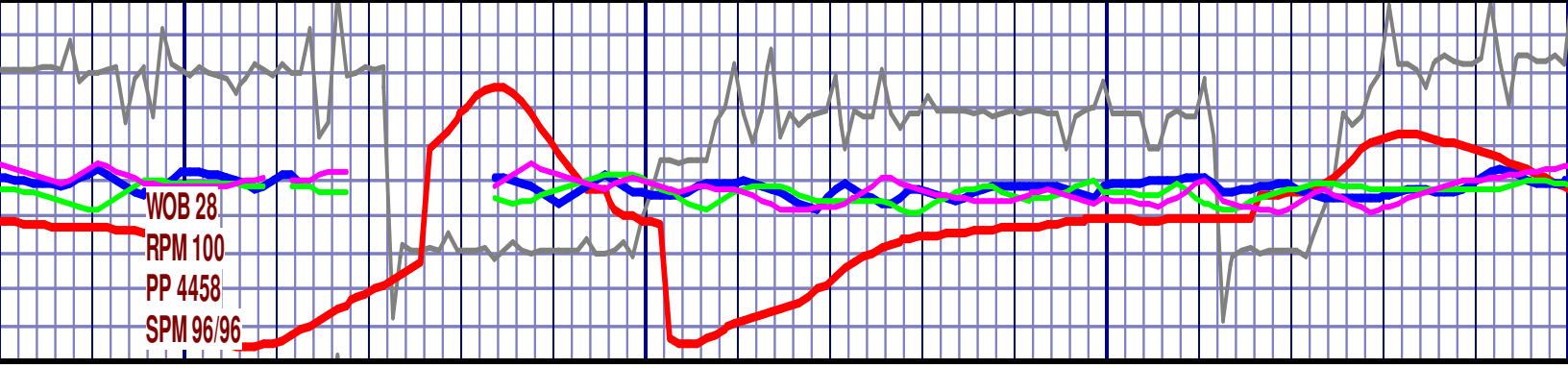
, fri
gy -
ng -

SS: (90%) med gy - dk gy, occ lt gysh brn, l f gr- f gr, sbang - sb rndd, mod wl srt, mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip, arg ip; SH (10%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.

SS: (90%) med gy - dk gy, occ lt gysh brn, l f gr- f gr, sban
v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slt
gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grr
blush wht cut, v sptd grnsh blu resd ring.




800
5000
200
ROP (F/Hr)
Total Gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
8100
8150
8200
MD 8072 TVD 7179.88
INC 89.23 AZ 86.54
VS 1376.58
MD 8162 TVD 7181.23
INC 89.05 AZ 88.58
VS 1466.51
7100 TVD
7200
7300
g - sb rndd, mod wl srt, mod frm, fri ip,
y ip, arg ip; SH: (10%) med gy - med dk
pri flor, slo-mod fst blmg - stmg mlky
SS: (90%) med gy - dk gy, occ lt gysh brn, l f gr- f gr, sbang - sb rndd, mod wl srt, mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip, arg ip; SH: (10%) med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (90%) med gy - dk gy, oc
v sl calc, crm cly cmnt, sl d
gy, slty - sdy, rr smth ip, sb
blush wht cut, v sptd grnsh
5000
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
Mud Weight (ppg)
8
40
98



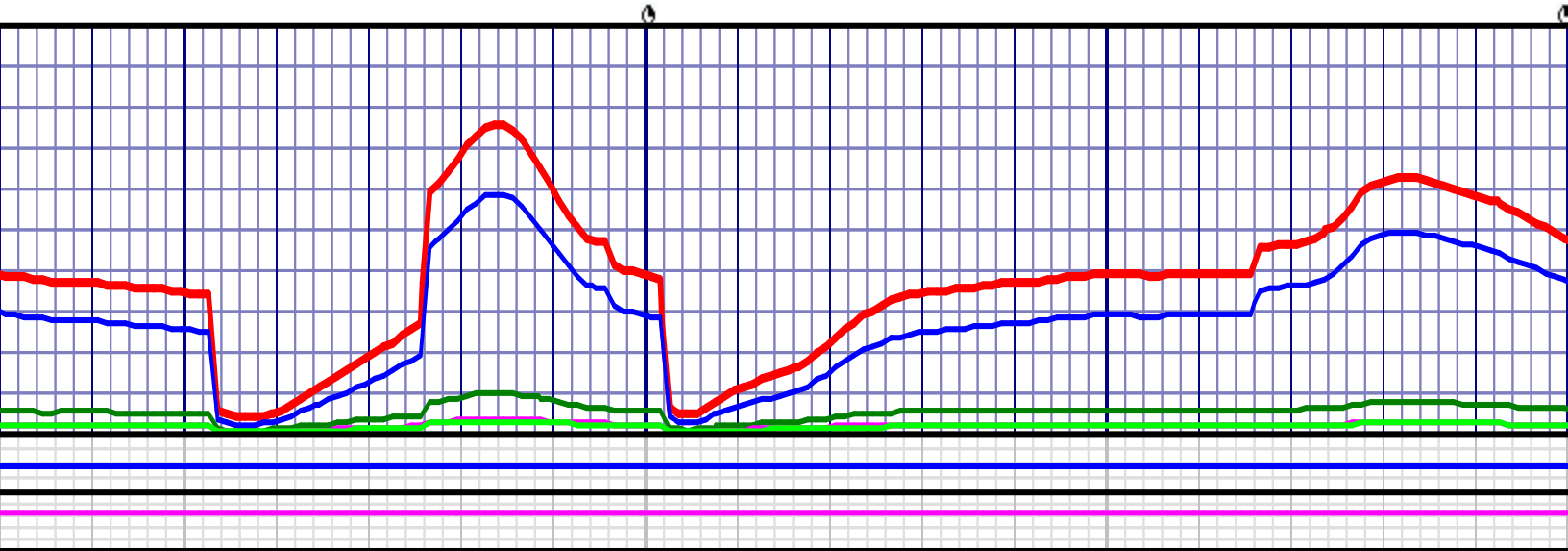
8250 8300 8350 84

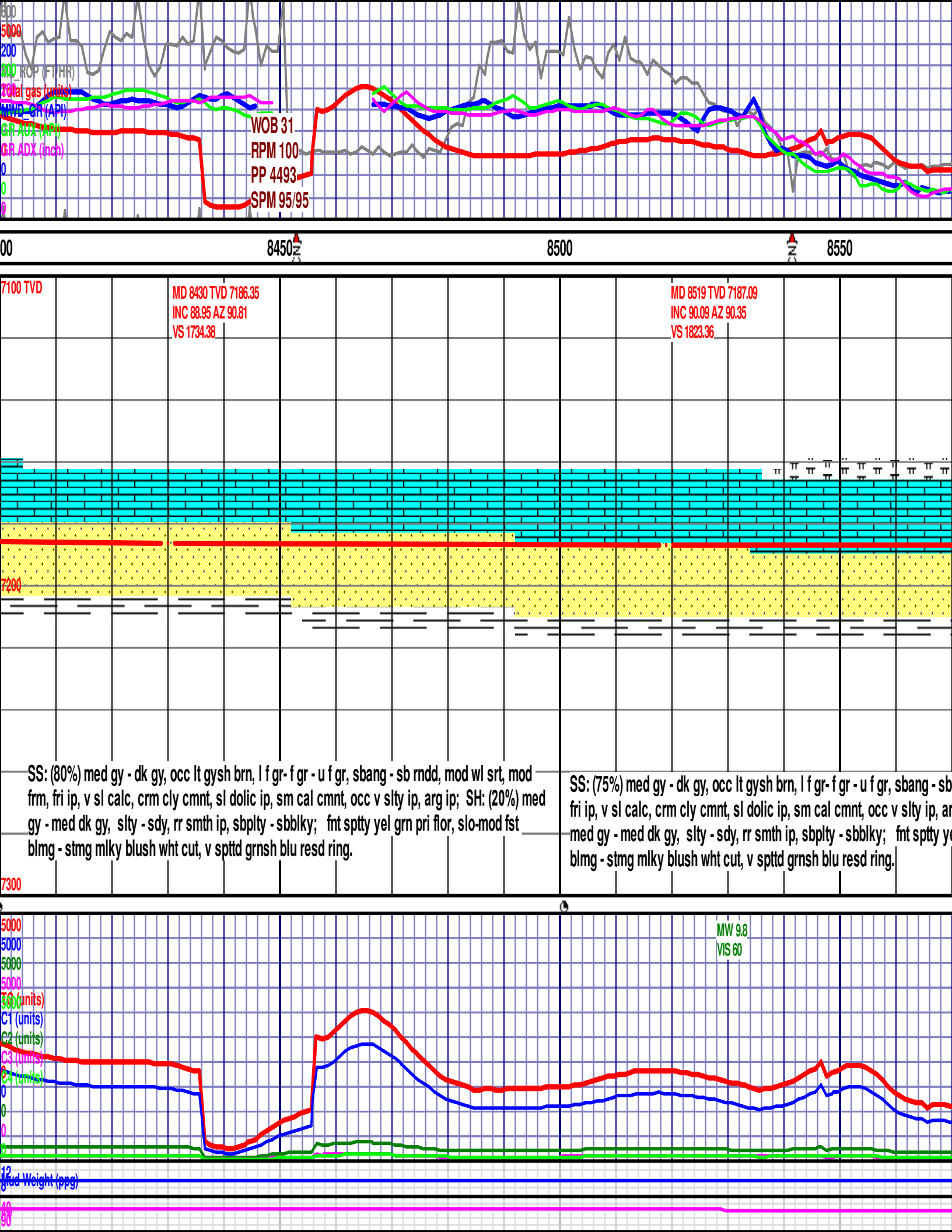
MD 8251 TVD 7182.83
INC 88.89 AZ 90.62
VS 1555.49

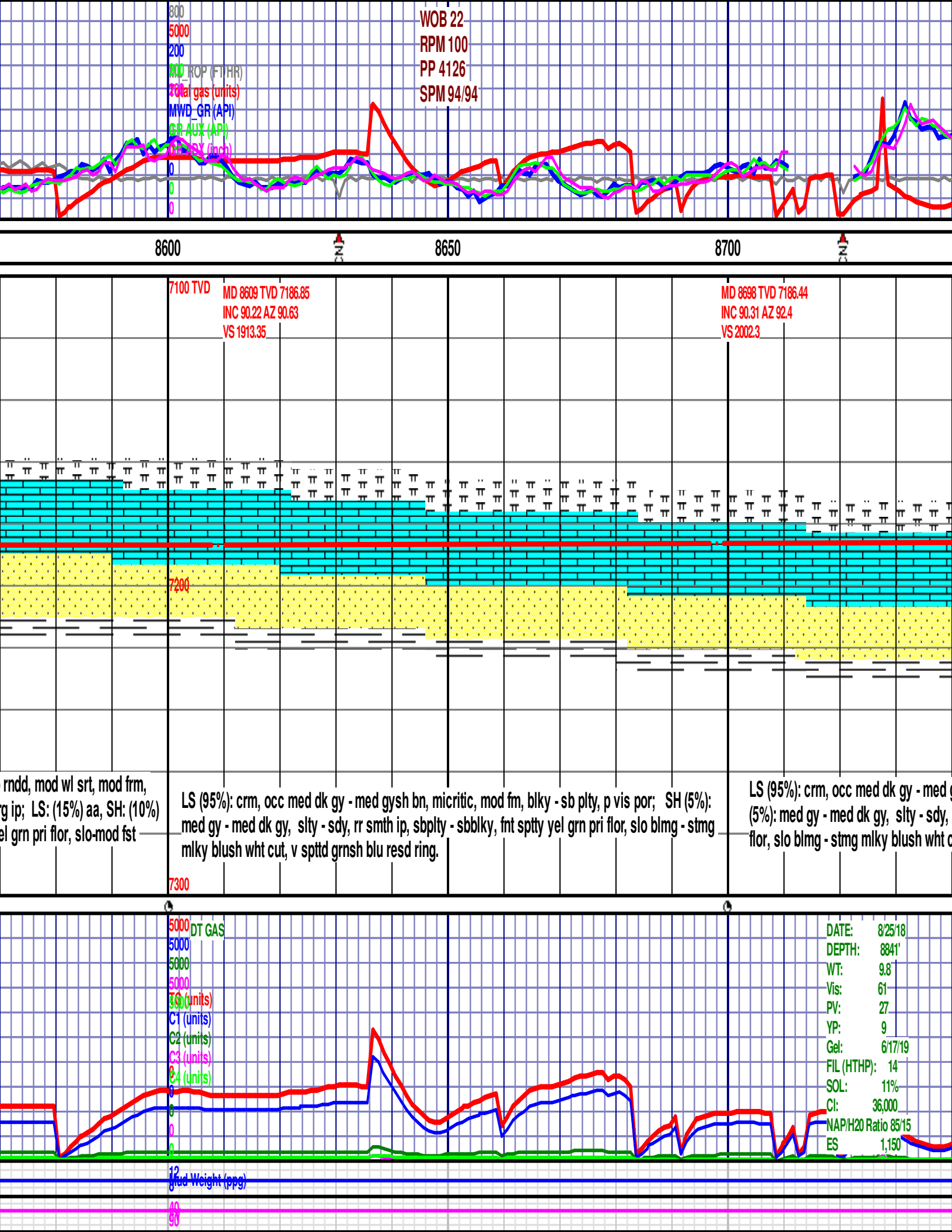
MD 8340 TVD 7184.6
INC 88.83 AZ 91.74
VS 1644.44

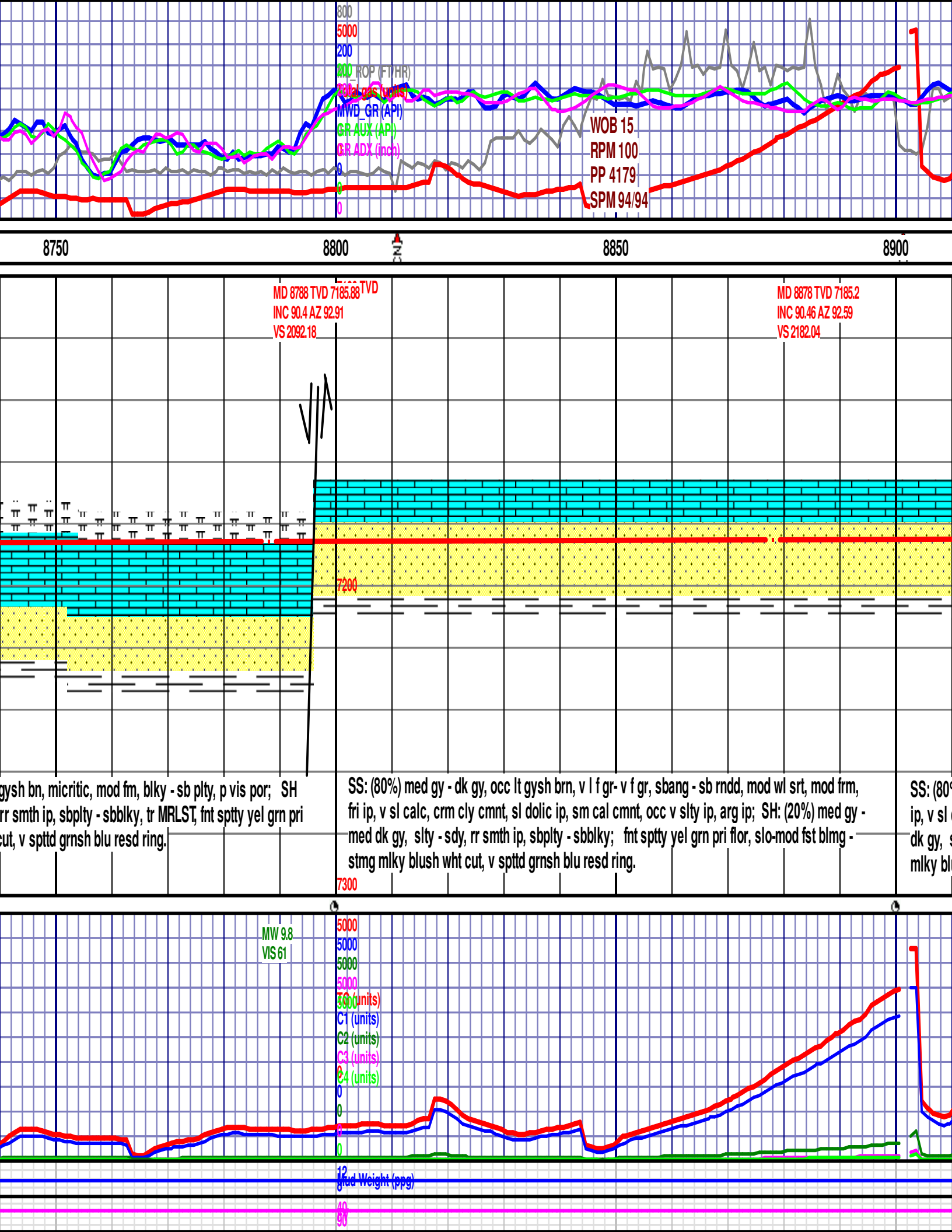
cc lt gysh brn, l f gr- f gr, sbang - sb rndd, mod wl srt, mod frm, fri ip, olic ip, sm cal cmnt, occ v slty ip, arg ip; SH: (10%) med gy - med dk lty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blu resd ring.

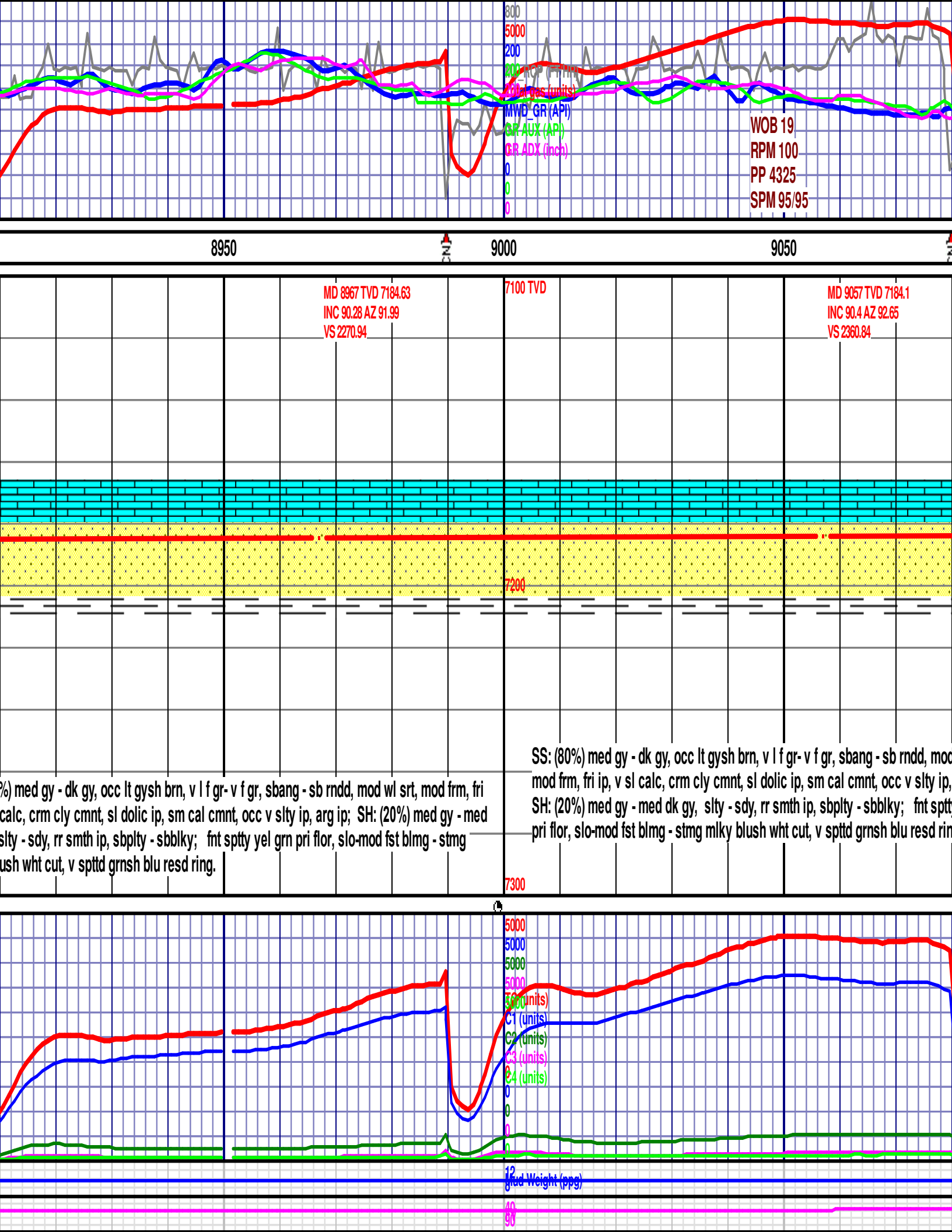
SS: (90%) med gy - dk gy, occ lt gysh brn, l f gr- f gr, sbang - sb rndd, mod wl srt, mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip, arg ip; SH: (10%) med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.

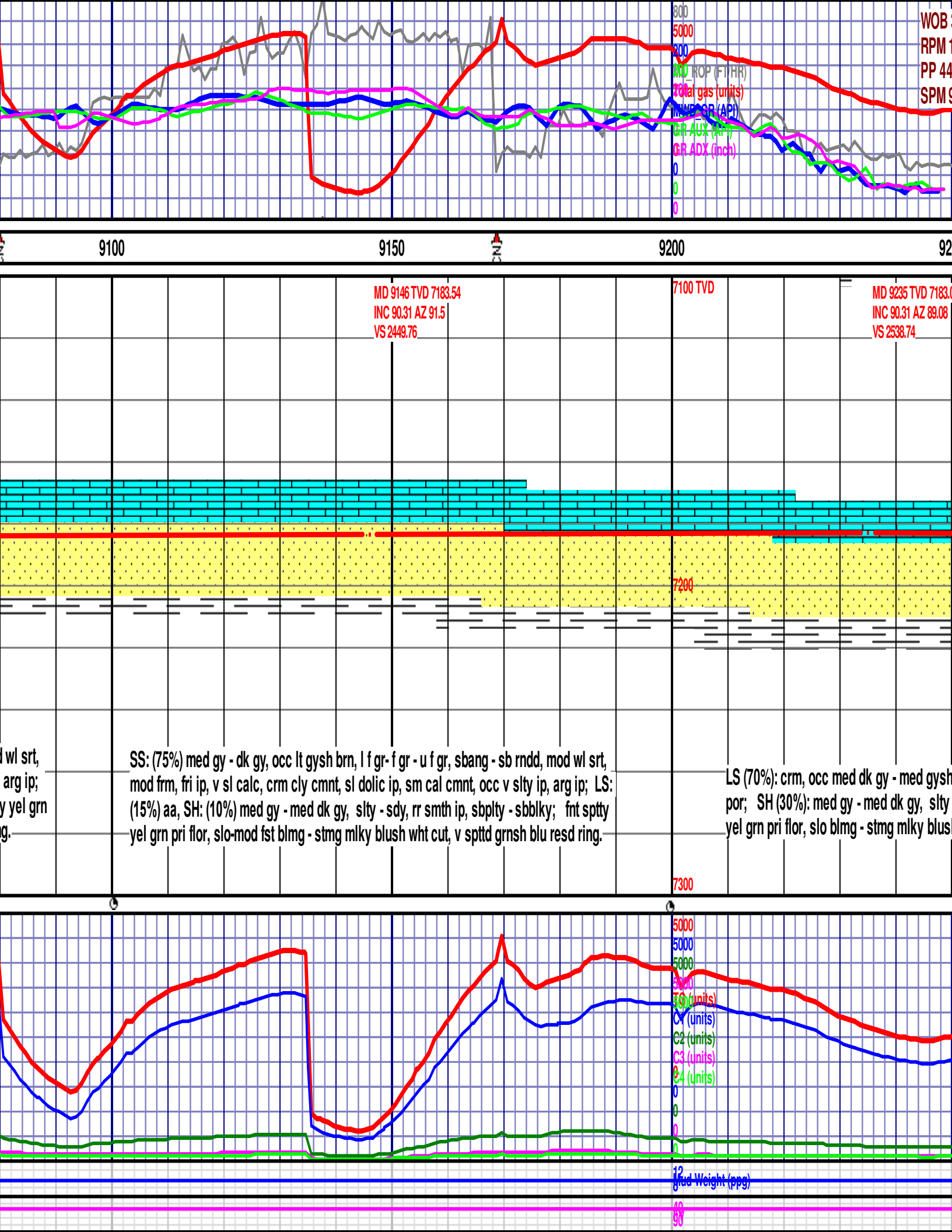


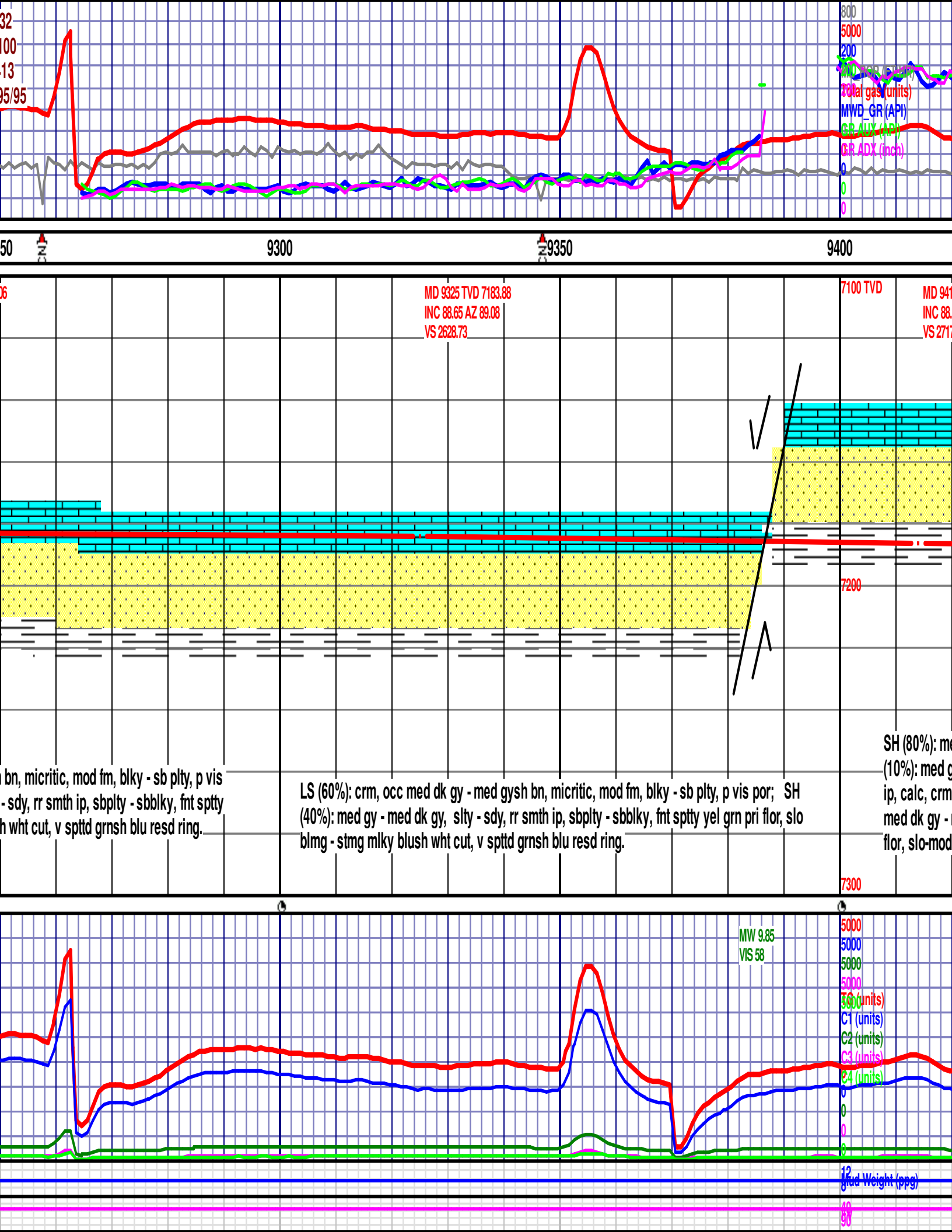

ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR ADX (API)
GR ADX (inch)
WOB 31
RPM 100
PP 4493
SPM 95/95
8450
8500
8550
7100 TVD
MD 8430 TVD 7186.35
INC 88.95 AZ 90.81
VS 1734.38
MD 8519 TVD 7187.09
INC 90.09 AZ 90.35
VS 1823.36
7200
7300
SS: (80%) med gy - dk gy, occ lt gysh brn, l f gr- f gr - u f gr, sbang - sb rndd, mod wl srt, mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip, arg ip; SH: (20%) med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (75%) med gy - dk gy, occ lt gysh brn, l f gr- f gr - u f gr, sbang - sb
fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip, ar
med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty y
blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
MW 9.8
VIS 60
C1 (units)
C2 (units)
Mud Weight (ppg)

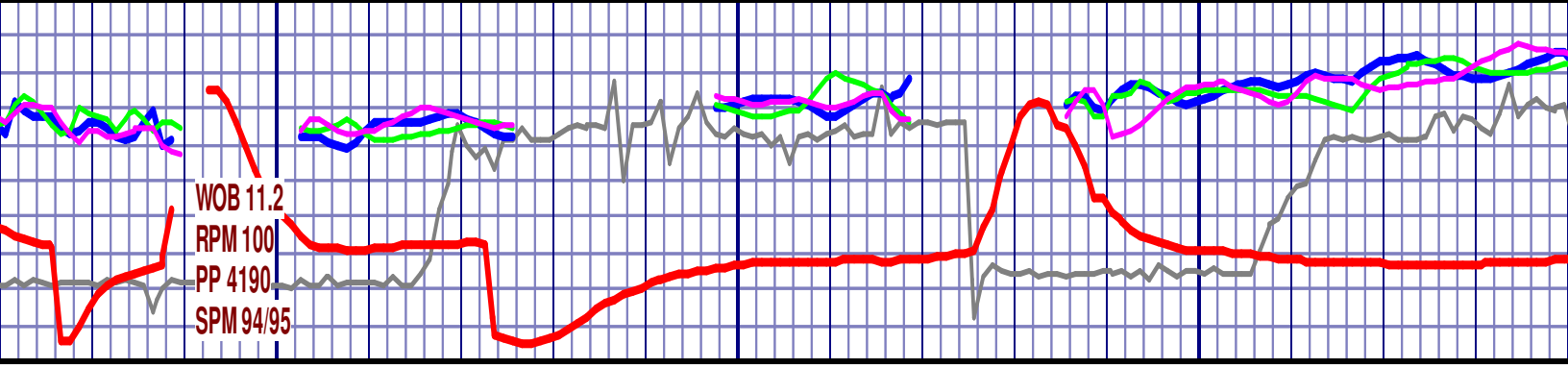

800
5000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR AUX (API)
CALI_BSX (inch)
0
0
0
WOB 22
RPM 100
PP 4126
SPM 94/94
8600
8650
8700
7100 TVD
MD 8609 TVD 7186.85
INC 90.22 AZ 90.63
VS 1913.35
MD 8698 TVD 7186.44
INC 90.31 AZ 92.4
VS 2002.3
7200
rndd, mod wl srt, mod frm,
g ip; LS: (15%) aa, SH: (10%)
el grn pri flor, slo-mod fst
LS (95%): crm, occ med dk gy - med gysh bn, micritic, mod fm, blky - sb plty, p vis por; SH (5%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky, fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
LS (95%): crm, occ med dk gy - med g
(5%): med gy - med dk gy, slty - sdy,
flor, slo blmg - stmg mlky blush wht c
7300
5000
5000
5000
5000
5000
DT GAS
Total (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
Mud Weight (ppg)
40
90
DATE: 8/25/18
DEPTH: 8841'
WT: 9.8
Vis: 61
PV: 27
YP: 9
Gel: 6/17/19
FIL (HTHP): 14
SOL: 11%
Cl: 36,000
NAP/H20 Ratio 85/15
ES 1,150


800
5000
200
200 ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 15
RPM 100
PP 4179
SPM 94/94
8750
8800
8850
8900
MD 8788 TVD 7185.88 TVD
INC 90.4 AZ 92.91
VS 2092.18
MD 8878 TVD 7185.2
INC 90.46 AZ 92.59
VS 2182.04
7200
gysh bn, micritic, mod fm, blky - sb plty, p vis por; SH
rr smth ip, sbplty - sbblky, tr MRLST, fnt sptty yel grn pri
cut, v sptd grnsh blu resd ring.
SS: (80%) med gy - dk gy, occ lt gysh brn, v l f gr- v f gr, sbang - sb rndd, mod wl srt, mod frm,
fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip, arg ip; SH: (20%) med gy -
med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg -
stmg mlky blush wht cut, v sptd grnsh blu resd ring.
7300
MW 9.8
VIS 61
5000
5000
5000
5000
5000
Total gas (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
Mud Weight (ppg)
8
40
90


800
5000
200
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 19
RPM 100
PP 4325
SPM 95/95
8950
9000
9050
MD 8967 TVD 7184.63
INC 90.28 AZ 91.99
VS 2270.94
7100 TVD
MD 9057 TVD 7184.1
INC 90.4 AZ 92.65
VS 2360.84
7200
%) med gy - dk gy, occ lt gysh brn, v l f gr- v f gr, sbang - sb rndd, mod wl srt, mod frm, fri
calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip, arg ip; SH: (20%) med gy - med
slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg
ush wht cut, v sptd grnsh blu resd ring.
SS: (80%) med gy - dk gy, occ lt gysh brn, v l f gr- v f gr, sbang - sb rndd, mod
mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip,
SH: (20%) med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptt
pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd rin
7300
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
Mud Weight (ppg)
40
90


WOB
RPM
PP
SPM
800
5000
200
200 ROP (FT/HR)
total gas (units)
GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
9100
9150
9200
92
MD 9146 TVD 7183.54
INC 90.31 AZ 91.5
VS 2449.76
7100 TVD
MD 9235 TVD 7183.0
INC 90.31 AZ 89.08
VS 2538.74
7200
7300
d wl srt,
arg ip;
y yel grn
g.
SS: (75%) med gy - dk gy, occ lt gysh brn, l f gr- f gr - u f gr, sbang - sb rndd, mod wl srt, mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip, arg ip; LS: (15%) aa, SH: (10%) med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
LS (70%): crm, occ med dk gy - med gysh
por; SH (30%): med gy - med dk gy, slty
yel grn pri flor, slo blmg - stmg mlky blus
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
8
Mud Weight (ppg)
40
90

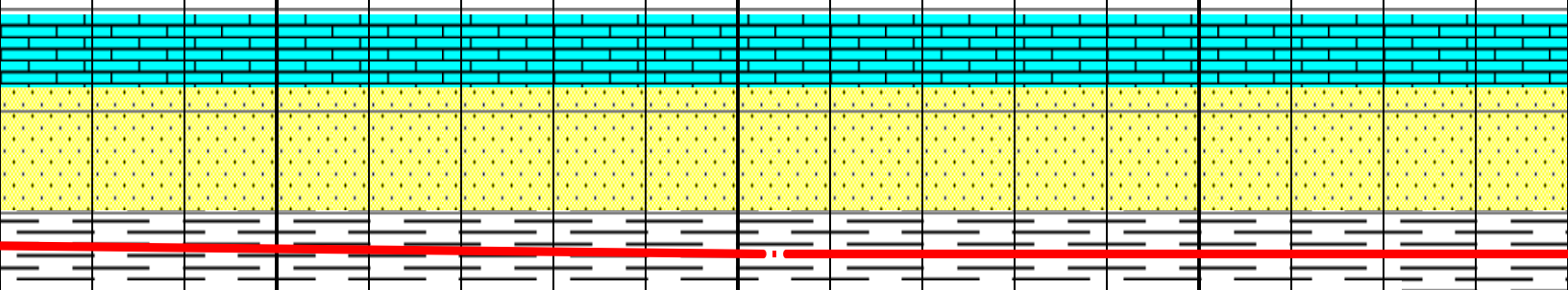

32
100
13
95/95
800
5000
200
Total gas (units)
MWD_GR (API)
GR_AUX (API)
GR_ADX (inch)
9300
9350
9400
MD 9325 TVD 7183.88
INC 88.65 AZ 89.08
VS 2628.73
7100 TVD
7200
7300
bn, micritic, mod fm, blky - sb plty, p vis
- sdy, rr smth ip, sbplty - sbblky, fnt sptty
h wht cut, v sptd grnsh blu resd ring.
LS (60%): crm, occ med dk gy - med gysh bn, micritic, mod fm, blky - sb plty, p vis por; SH (40%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky, fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SH (80%): m
(10%): med g
ip, calc, crm
med dk gy -
flor, slo-mod
MW 9.85
VIS 58
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
Mud Weight (ppg)



9450 9500 9550

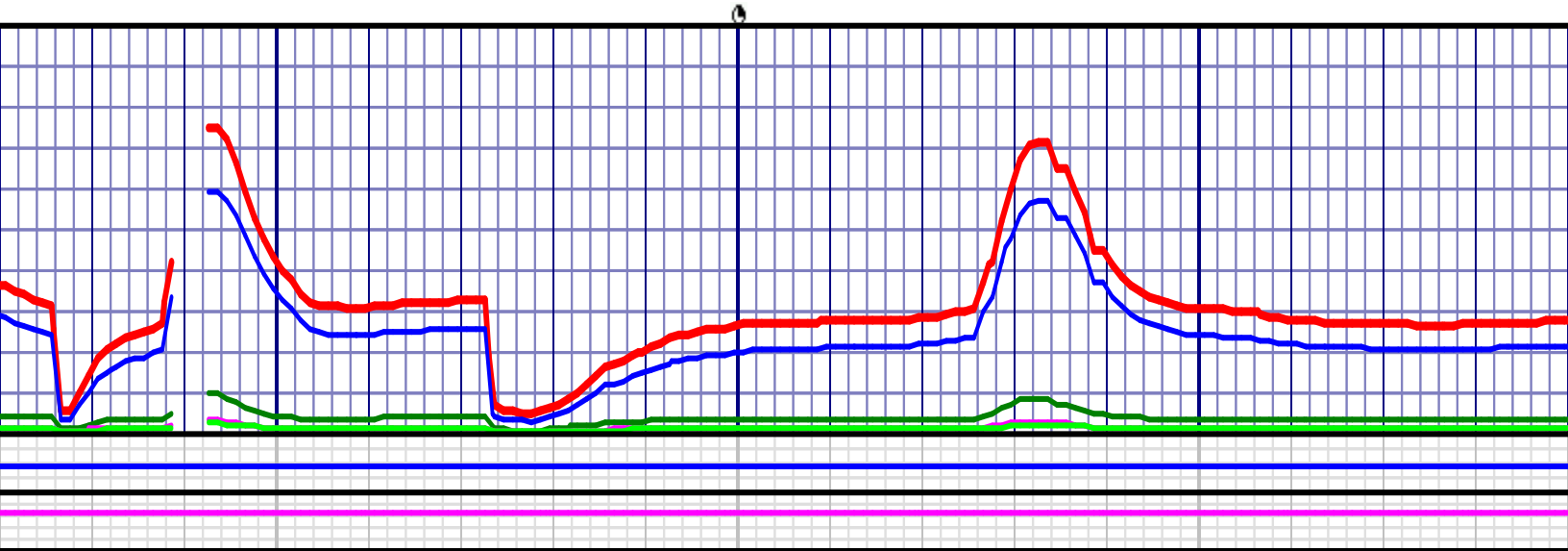
4 TVD 7186.29
24 AZ 90.99
7.69

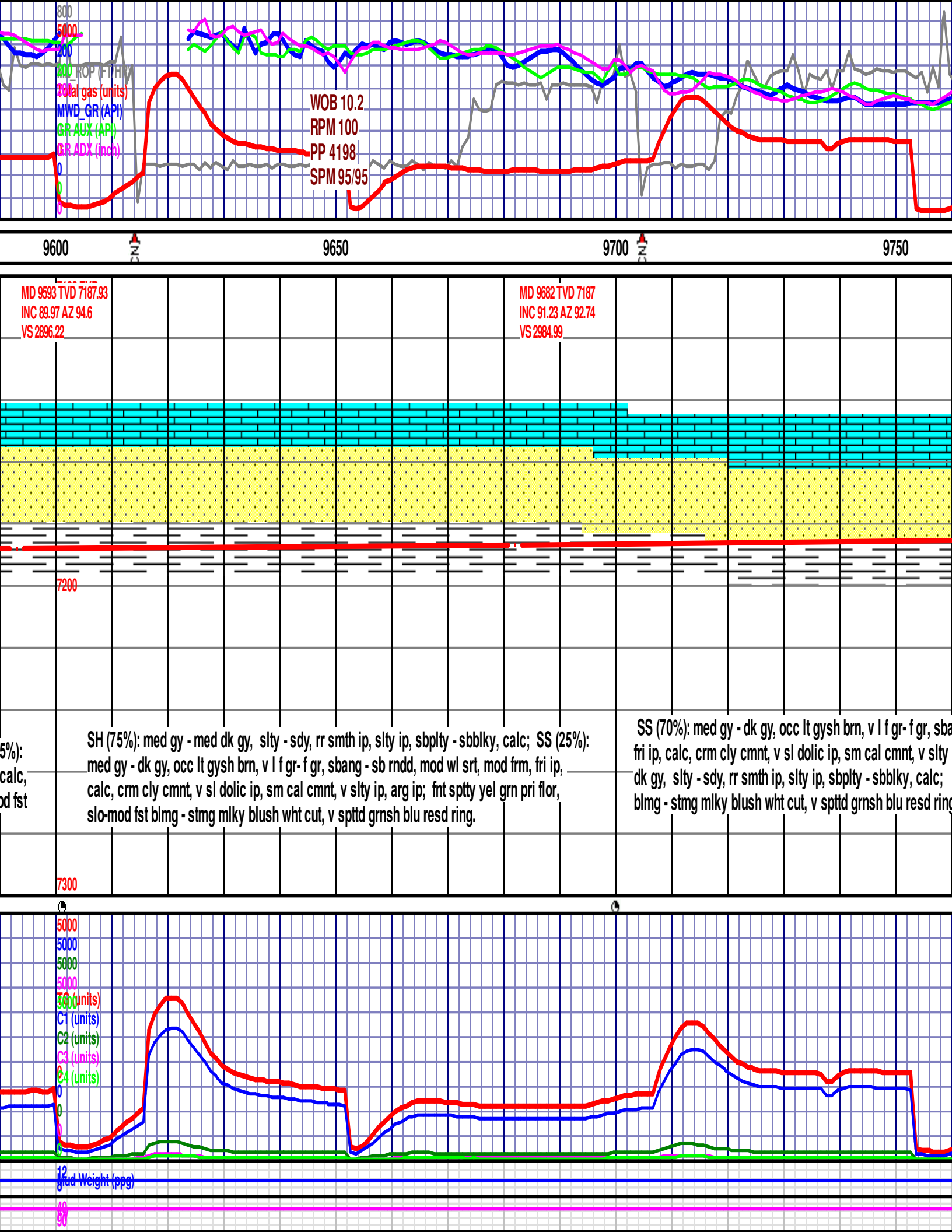
MD 9504 TVD 7187.79
INC 89.85 AZ 94.34
VS 2807.54

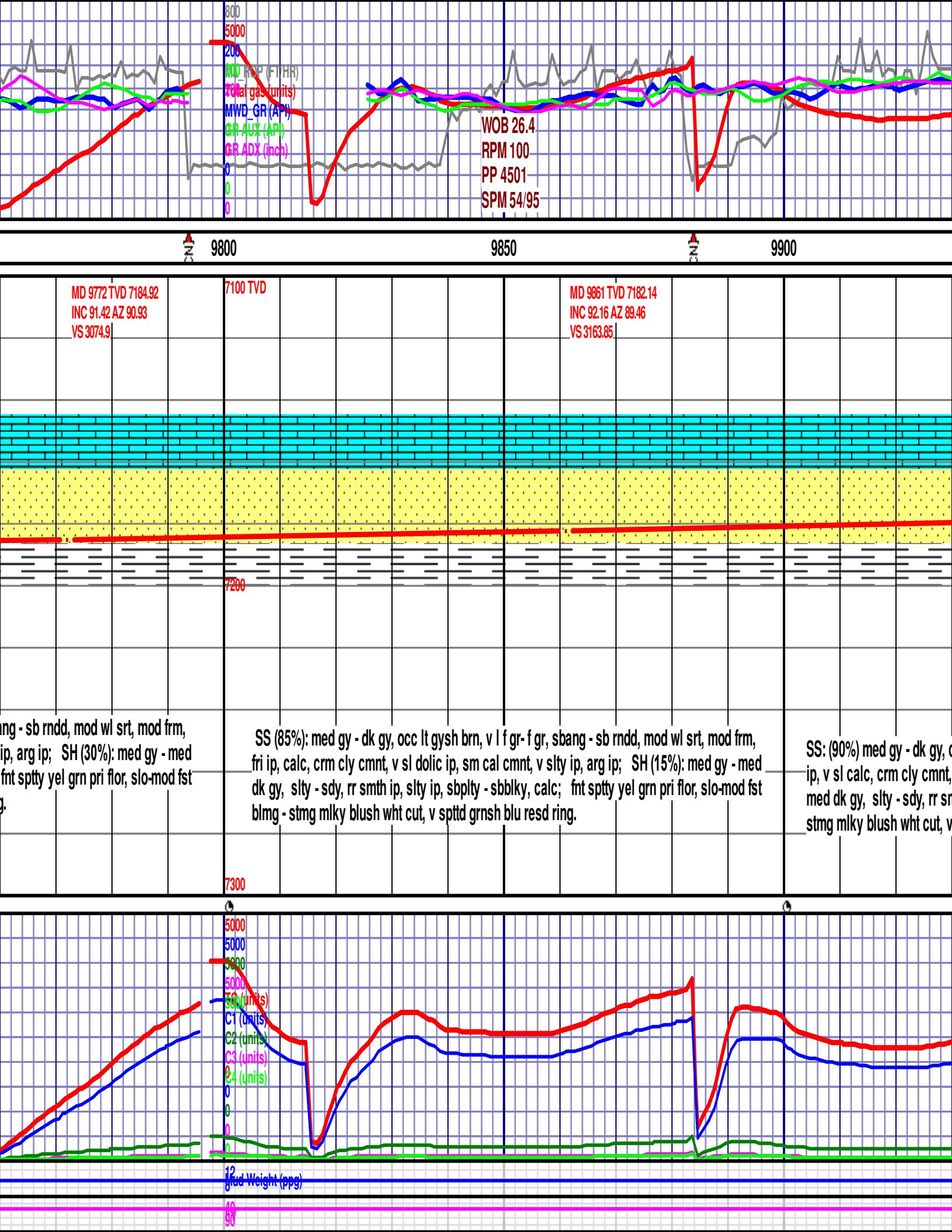


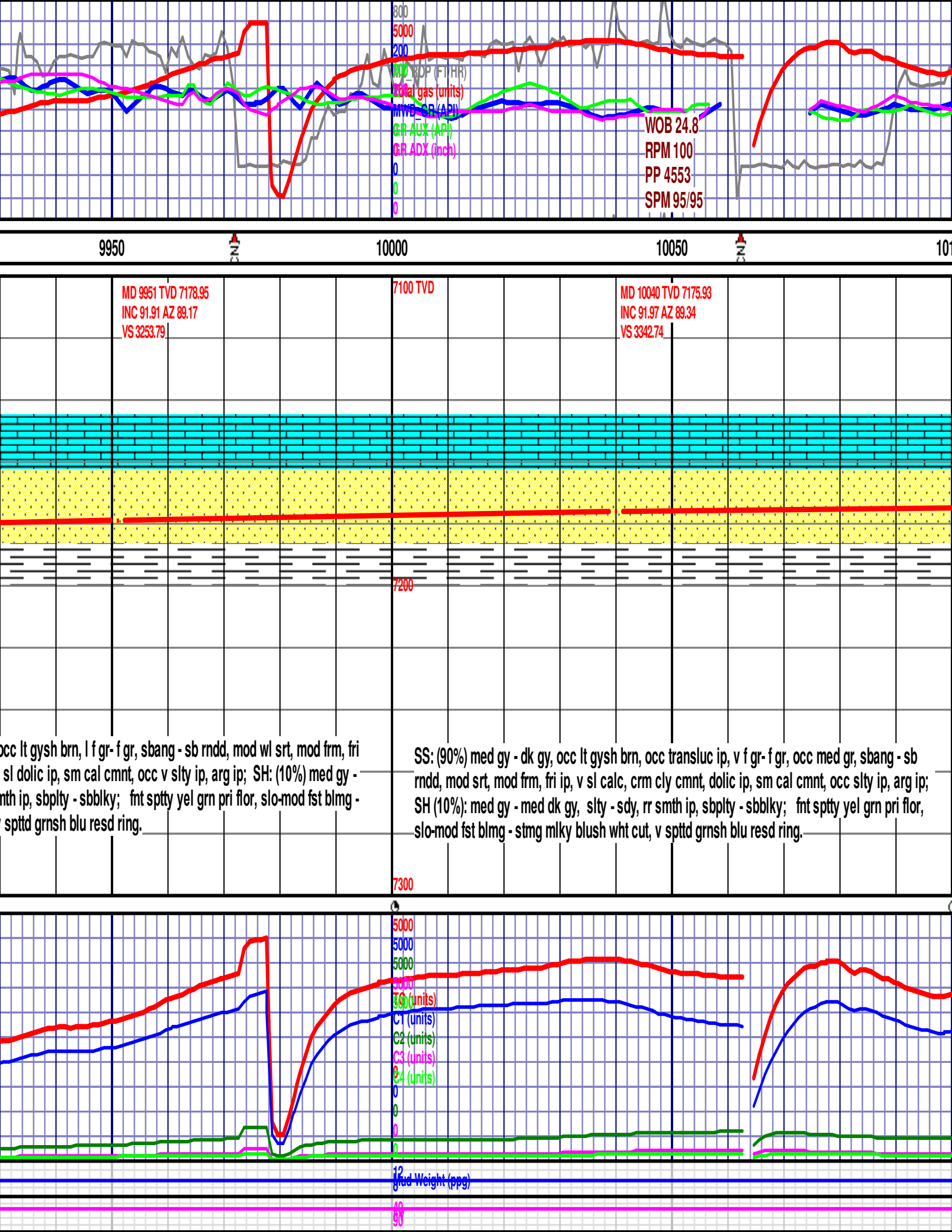
ed gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc; SS
gy - dk gy, occ lt gysh brn, l f gr- f gr, sbang - sb rndd, mod wl srt, mod frm, fri
cly cmnt, sl dolic ip, sm cal cmnt, occ v slty ip, arg ip; LS (10%): crm, occ
med gysh bn, micritic, mod fm, blky - sb plty, p vis por; fnt sptty yel grn pri
fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.

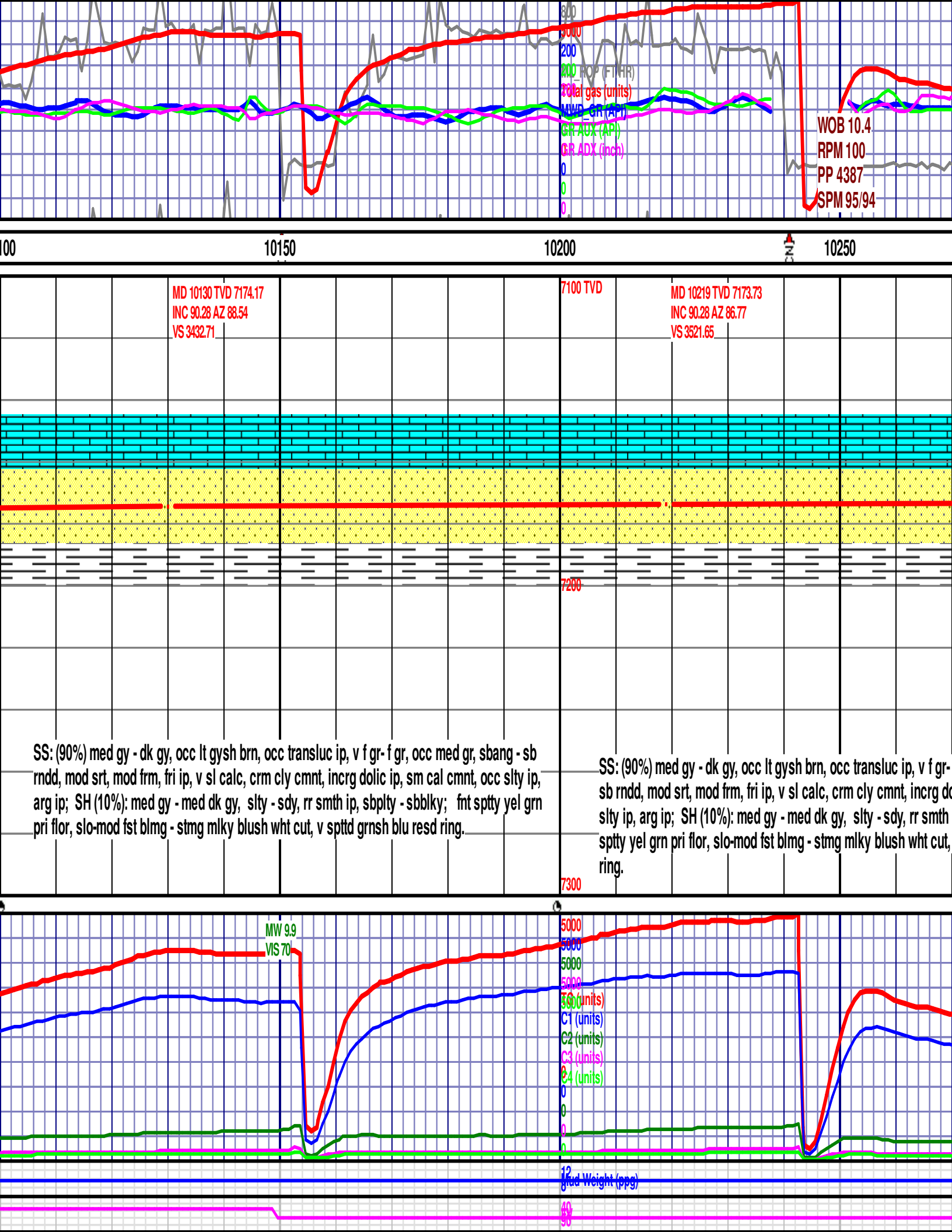
SH (85%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc; SS (1
med gy - dk gy, occ lt gysh brn, v l f gr- f gr, sbang - sb rndd, mod wl srt, mod frm, fri ip,
crm cly cmnt, v sl dolic ip, sm cal cmnt, v slty ip, arg ip; fnt sptty yel grn pri flor, slo-mo
blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.

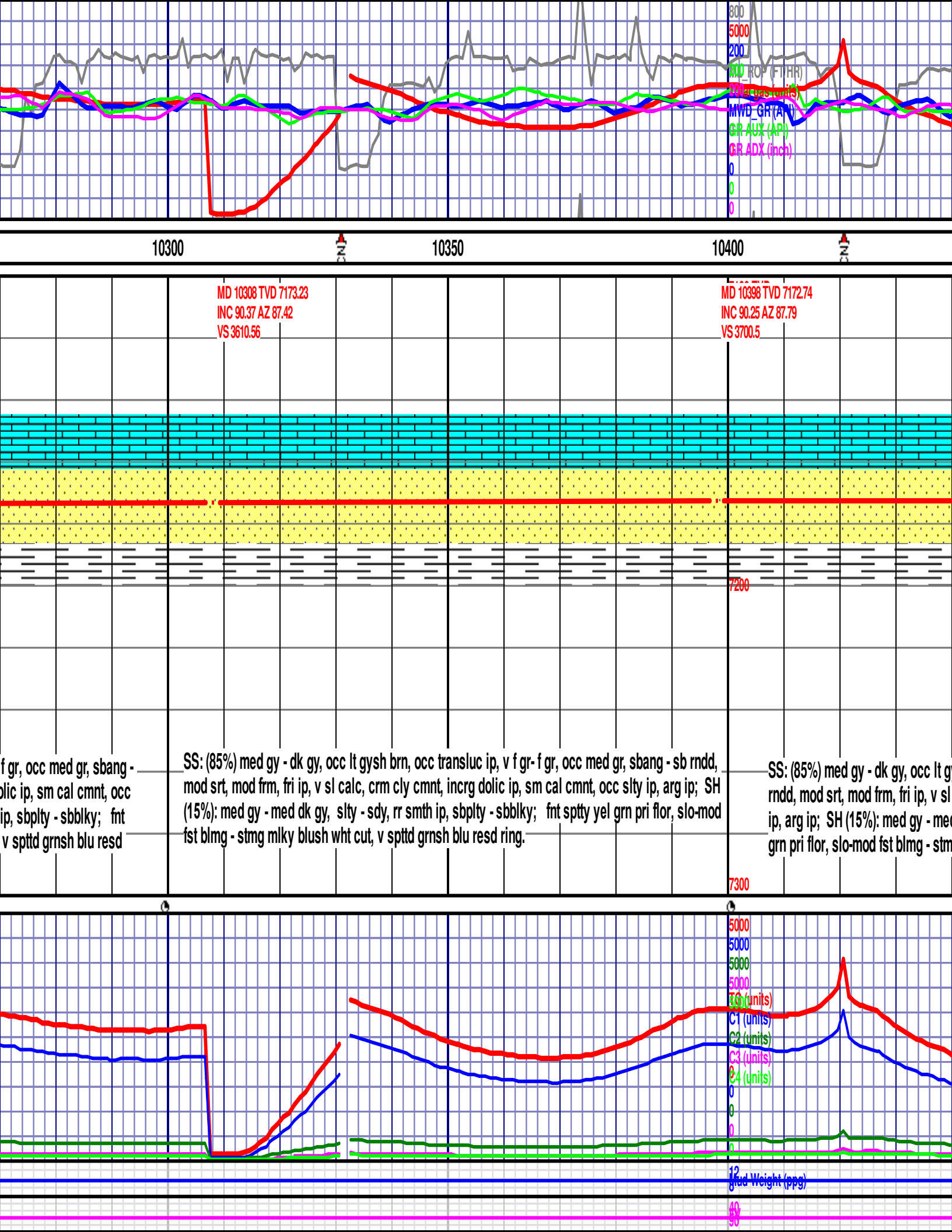


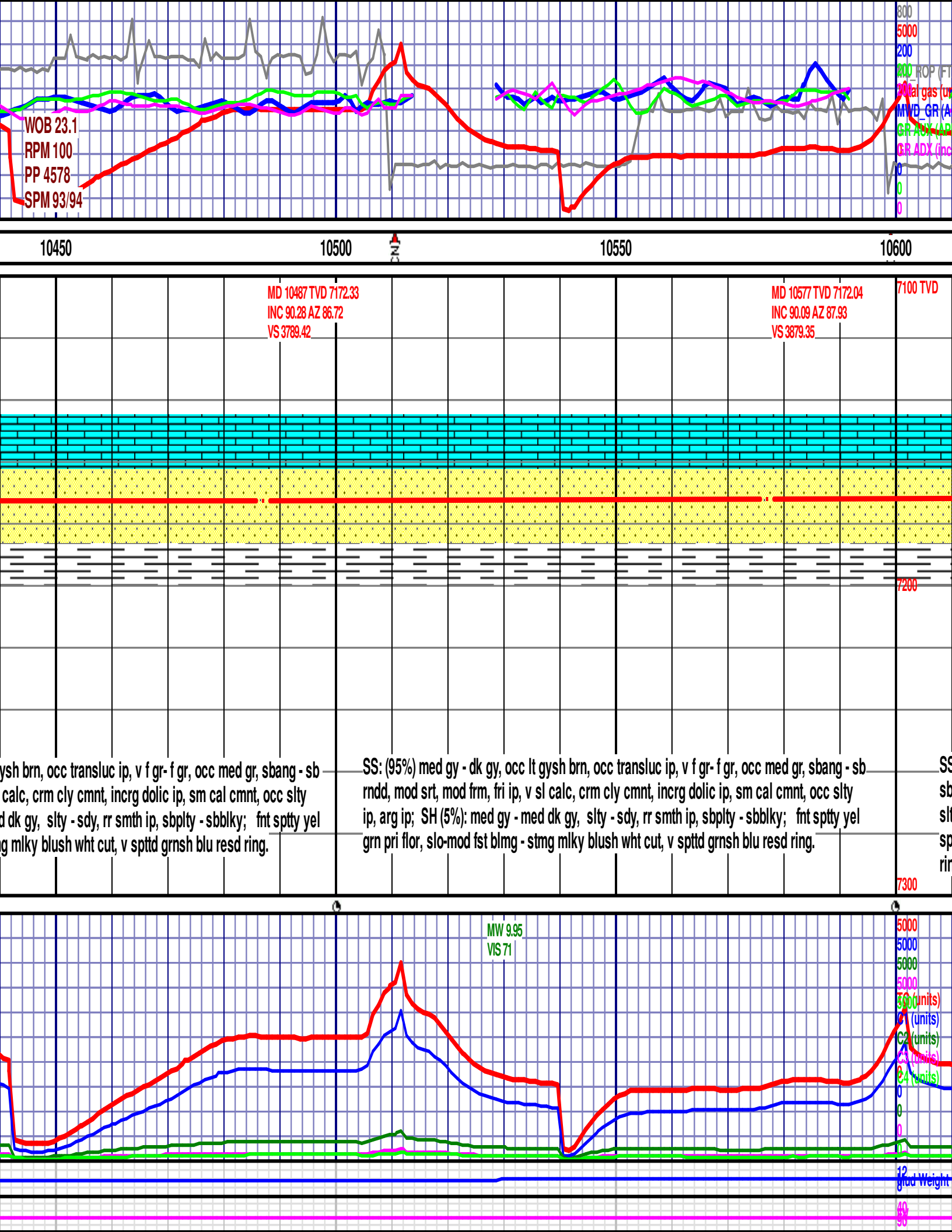

800
5000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 10.2
RPM 100
PP 4198
SPM 95/95
9600
9650
9700
9750
MD 9593 TVD 7187.93
INC 89.97 AZ 94.6
VS 2896.22
MD 9682 TVD 7187
INC 91.23 AZ 92.74
VS 2984.99
7200
7300
5%):
calc,
od fst
SH (75%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc; SS (25%): med gy - dk gy, occ lt gysh brn, v l f gr- f gr, sbang - sb rndd, mod wl srt, mod frm, fri ip, calc, crm cly cmnt, v sl dolic ip, sm cal cmnt, v slty ip, arg ip; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS (70%): med gy - dk gy, occ lt gysh brn, v l f gr- f gr, sba
fri ip, calc, crm cly cmnt, v sl dolic ip, sm cal cmnt, v slty
dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc;
blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring
5000
5000
5000
5000
Total gas (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
Mud Weight (ppg)
8
90

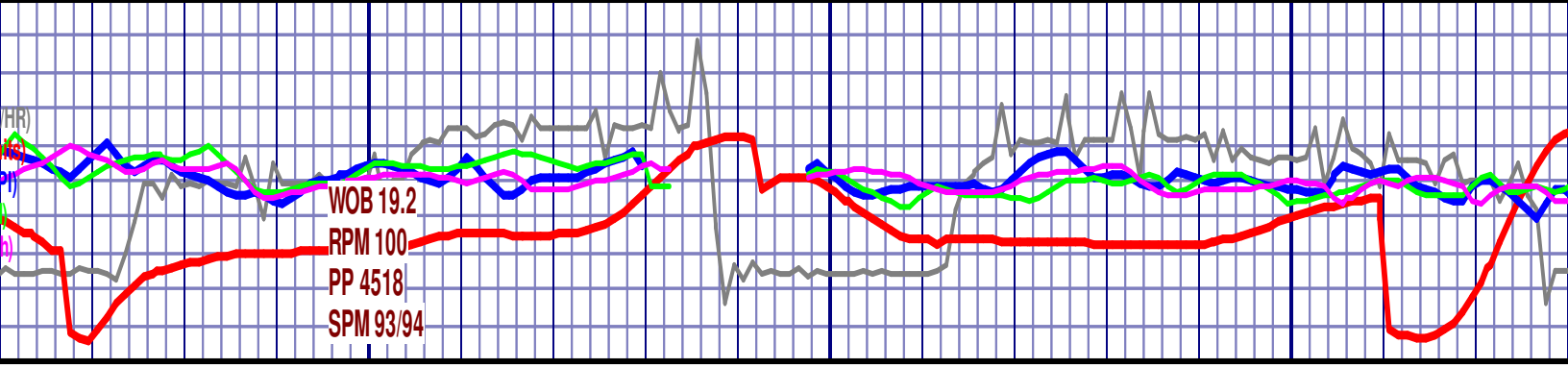

800
5000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 26.4
RPM 100
PP 4501
SPM 54/95
CN
9800
9850
CN
9900
MD 9772 TVD 7184.92
INC 91.42 AZ 90.93
VS 3074.9
7100 TVD
MD 9861 TVD 7182.14
INC 92.16 AZ 89.46
VS 3163.85
7200
ang - sb rndd, mod wl srt, mod frm,
ip, arg ip; SH (30%): med gy - med
fnt sptty yel grn pri flor, slo-mod fst
g.
SS (85%): med gy - dk gy, occ lt gysh brn, v l f gr- f gr, sbang - sb rndd, mod wl srt, mod frm, fri ip, calc, crm cly cmnt, v sl dolic ip, sm cal cmnt, v slty ip, arg ip; SH (15%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (90%) med gy - dk gy, c
ip, v sl calc, crm cly cmnt,
med dk gy, slty - sdy, rr sm
stmg mlky blush wht cut, v
7300
5000
5000
5000
5000
5000 (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
Mud Weight (ppg)
90


800
5000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 24.8
RPM 100
PP 4553
SPM 95/95
9950
10000
10050
MD 9951 TVD 7178.95
INC 91.91 AZ 89.17
VS 3253.79
7100 TVD
MD 10040 TVD 7175.93
INC 91.97 AZ 89.34
VS 3342.74
7200
7300
occ lt gysh brn, l f gr- f gr, sbang - sb rndd, mod wl srt, mod frm, fri
sl dolic ip, sm cal cmnt, occ v slty ip, arg ip; SH: (10%) med gy -
nth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg -
sptd grnsh blu resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, dolic ip, sm cal cmnt, occ slty ip, arg ip; SH (10%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
Mud Weight (ppg)
8
40
98


ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR ADX (API)
GR ADX (inch)
WOB 10.4
RPM 100
PP 4387
SPM 95/94
10150
10200
10250
MD 10130 TVD 7174.17
INC 90.28 AZ 88.54
VS 3432.71
7100 TVD
MD 10219 TVD 7173.73
INC 90.28 AZ 86.77
VS 3521.65
7200
7300
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, incrg dolic ip, sm cal cmnt, occ slty ip, arg ip; SH (10%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- sb rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, incrg do slty ip, arg ip; SH (10%): med gy - med dk gy, slty - sdy, rr smth sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, ring.
MW 9.9
VIS 70
C1 (units)
C2 (units)
C3 (units)
C4 (units)
Mud Weight (ppg)


300
5000
200
200 ROP (FT/HR)
200 Gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
10300
10350
10400
MD 10308 TVD 7173.23
INC 90.37 AZ 87.42
VS 3610.56
MD 10398 TVD 7172.74
INC 90.25 AZ 87.79
VS 3700.5
7200
7300
f gr, occ med gr, sbang -
lic ip, sm cal cmnt, occ
ip, sbplty - sbblky; fnt
v sptd grnsh blu resd
SS: (85%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, incrg dolic ip, sm cal cmnt, occ slty ip, arg ip; SH (15%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (85%) med gy - dk gy, occ lt g
rndd, mod srt, mod frm, fri ip, v sl
ip, arg ip; SH (15%): med gy - me
grn pri flor, slo-mod fst blmg - stm
5000
5000
5000
5000
Gas (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
8
Mud Weight (ppg)
40
90


WOB 23.1
RPM 100
PP 4578
SPM 93/94
800
5000
200
ROP (FT
MWD_GR (A
10450
10500
10550
10600
MD 10487 TVD 7172.33
INC 90.28 AZ 86.72
VS 3789.42
MD 10577 TVD 7172.04
INC 90.09 AZ 87.93
VS 3879.35
7100 TVD
7200
7300
ysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb
calc, crm cly cmnt, incrg dolic ip, sm cal cmnt, occ slty
d dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel
g mlky blush wht cut, v sptted grnsh blu resd ring.
SS: (95%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb
rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, incrg dolic ip, sm cal cmnt, occ slty
ip, arg ip; SH (5%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel
grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptted grnsh blu resd ring.
MW 9.95
VIS 71
5000
5000
5000
5000
(units)
(units)
(units)
(units)
(units)
0
0
0
Mud Weight
40
90



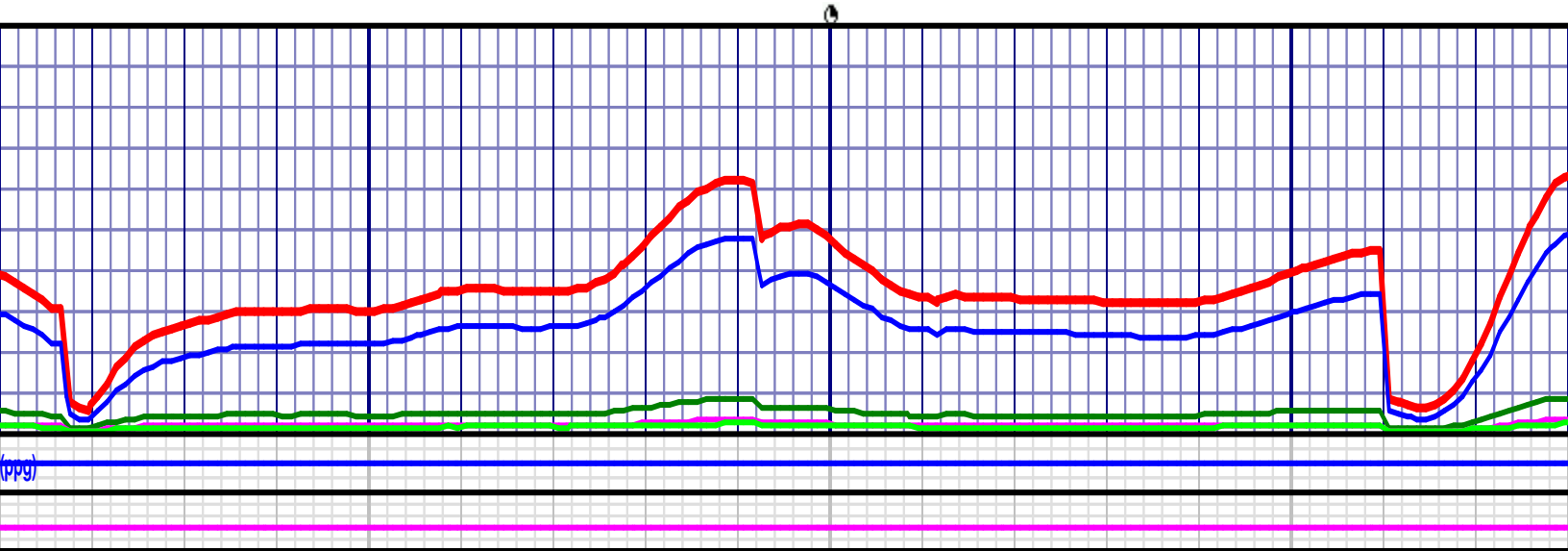
10650 10700 10750

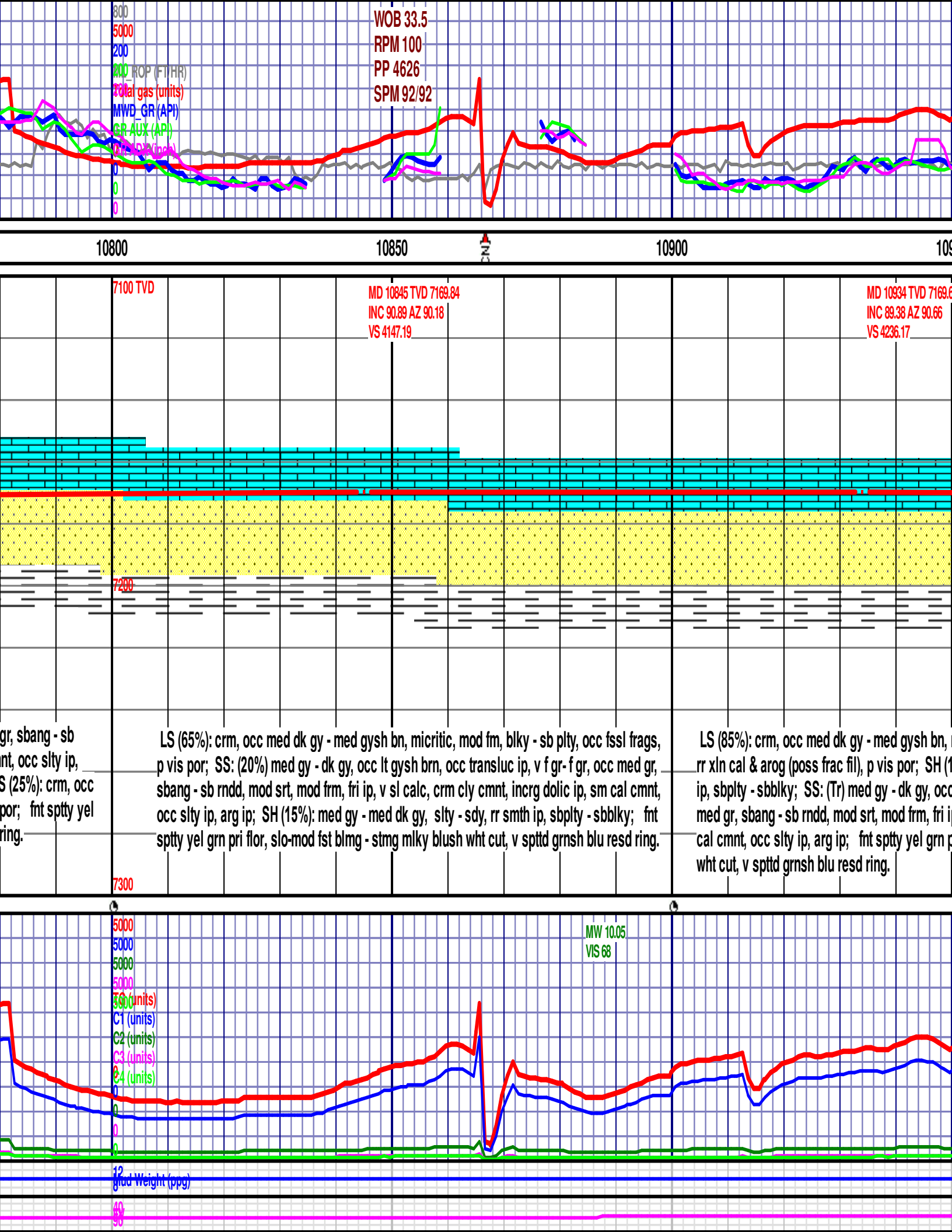
MD 10666 TVD 7171.59
INC 90.49 AZ 91.81
VS 3968.33

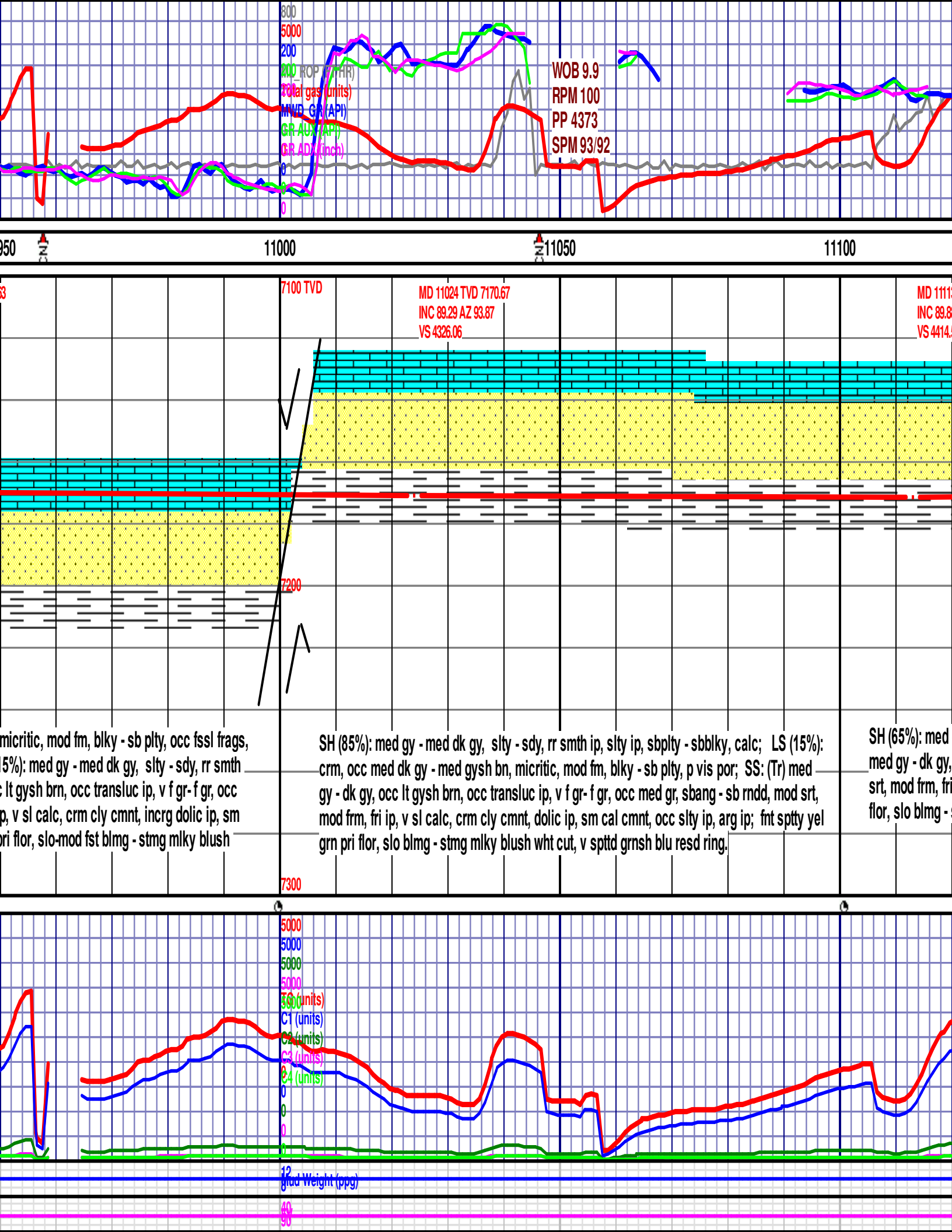
MD 10756 TVD 7170.86
INC 90.43 AZ 92.53
VS 4058.24

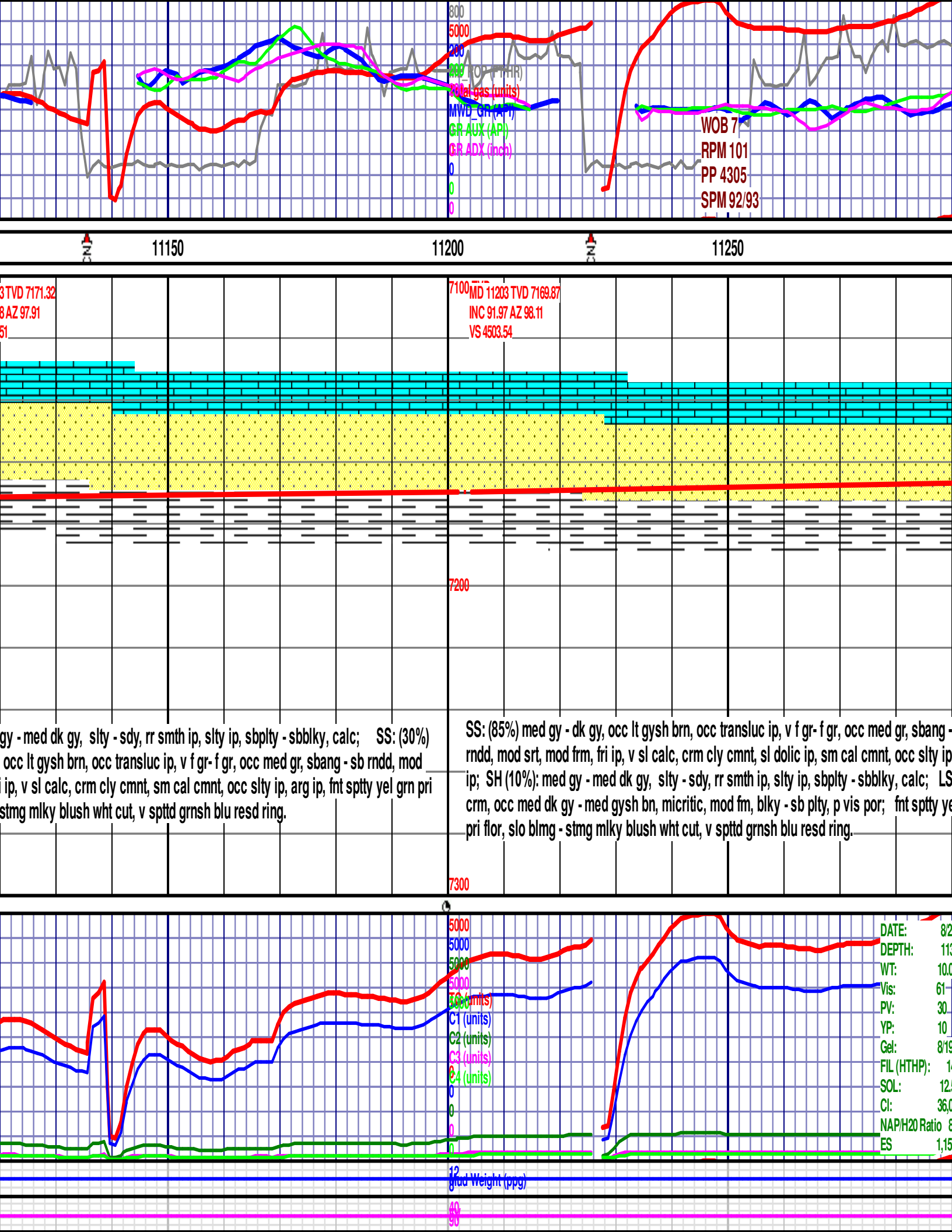
S: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, incrg dolic ip, sm cal cmnt, occ ty ip, arg ip; SH (10%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt otty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ng.

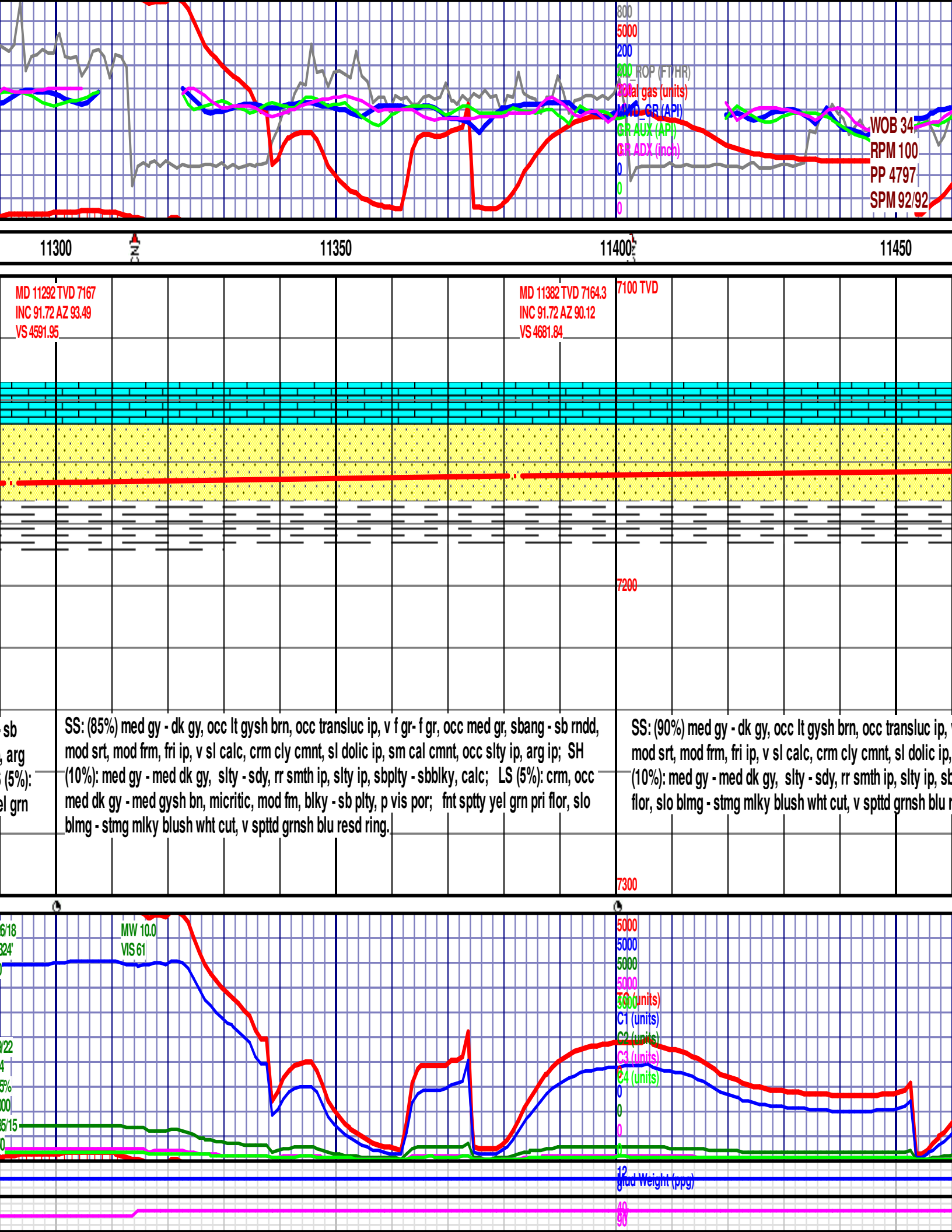
SS: (60%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, incrg dolic ip, sm cal cm arg ip; SH (15%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; L med dk gy - med gysh bn, micritic, mod fm, blky - sb plty, occ fssl frags, p vis grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd

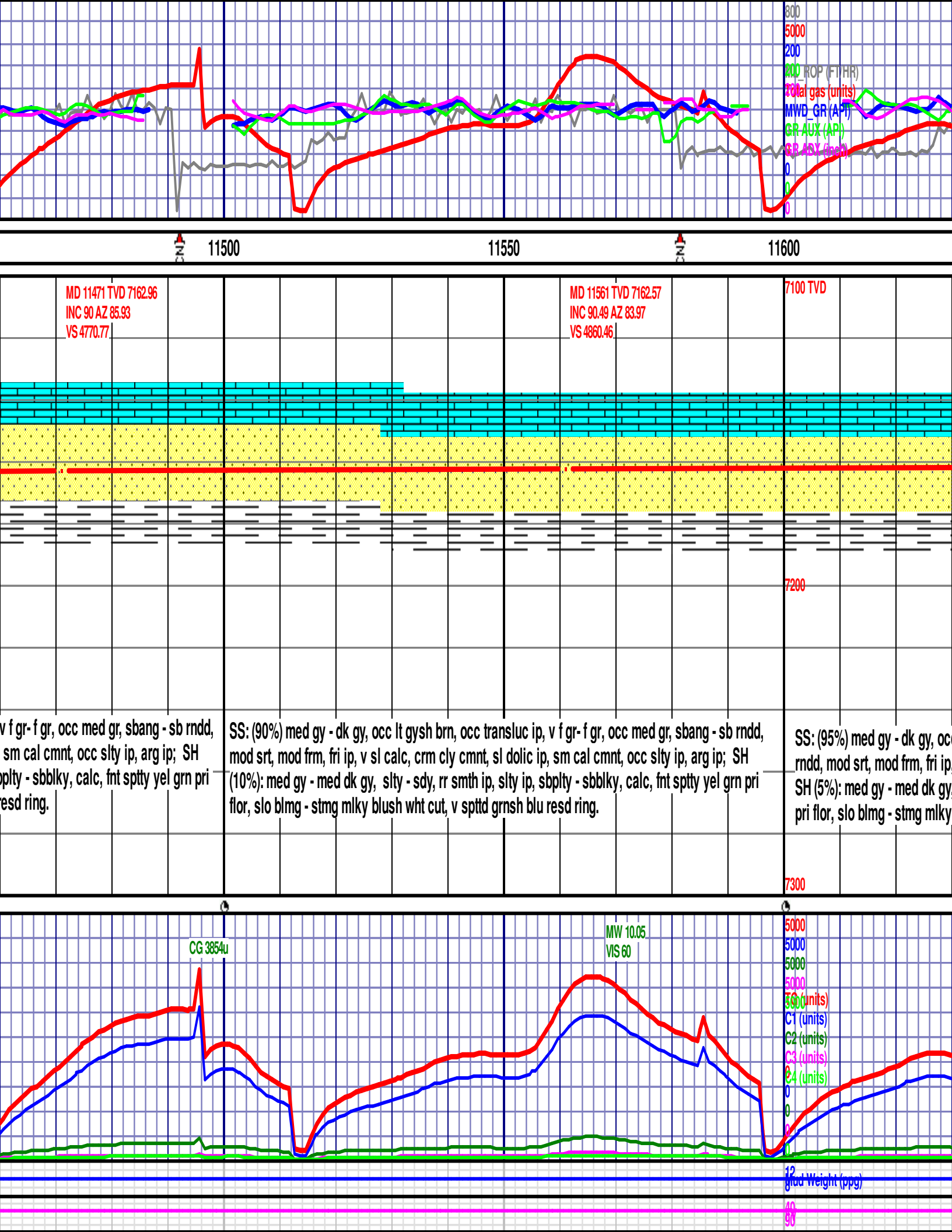


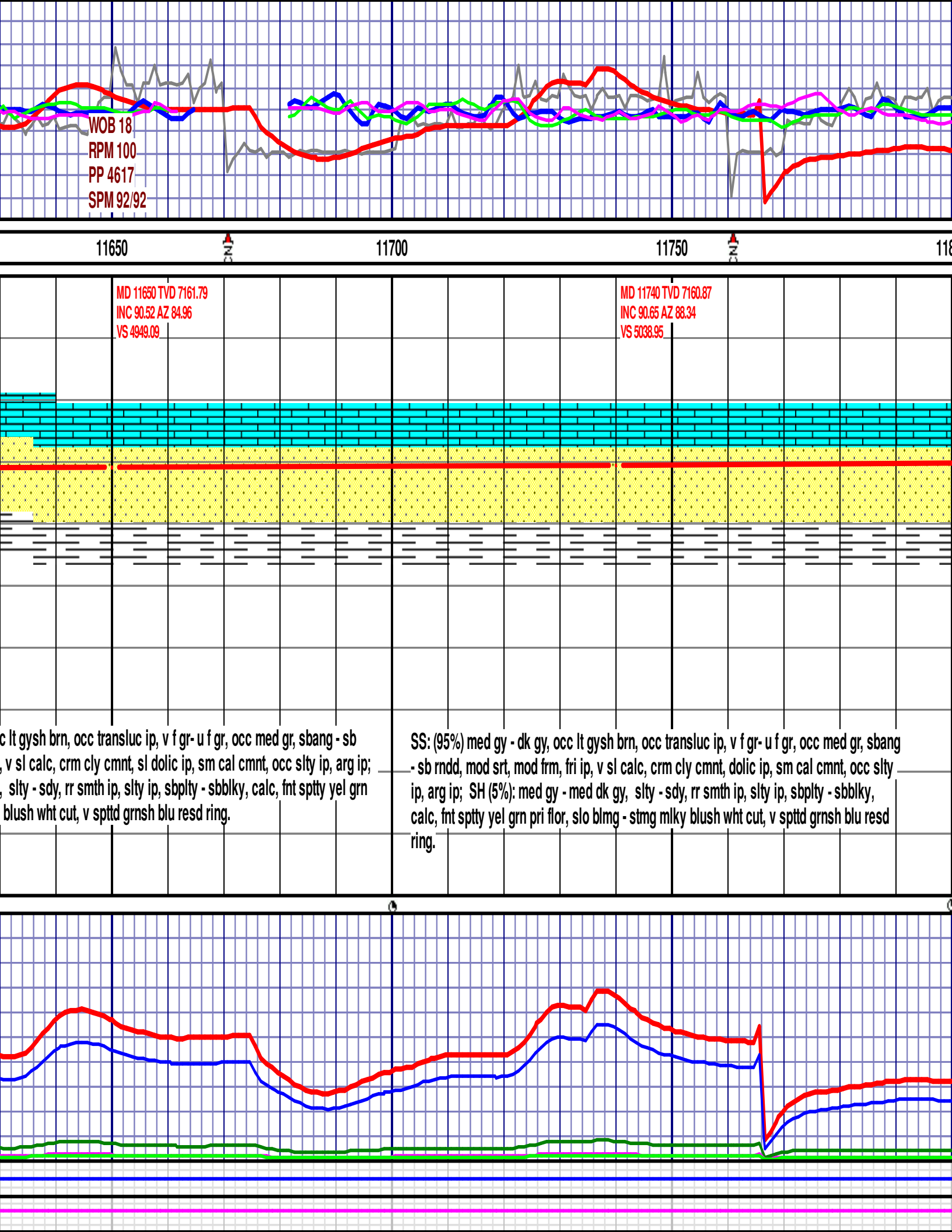

800
5000
200
200 ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR AUX (API)
0
0
0
WOB 33.5
RPM 100
PP 4626
SPM 92/92
10800
10850
10900
7100 TVD
MD 10845 TVD 7169.84
INC 90.89 AZ 90.18
VS 4147.19
MD 10934 TVD 7169.6
INC 89.38 AZ 90.66
VS 4236.17
7200
7300
gr, sbang - sb
nt, occ slty ip,
S (25%): crm, occ
por; fnt sptty yel
ring.
LS (65%): crm, occ med dk gy - med gysh bn, micritic, mod fm, blky - sb plty, occ fssl frags, p vis por; SS: (20%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, incrg dolic ip, sm cal cmnt, occ slty ip, arg ip; SH (15%): med gy - med dk gy, slty - sdy, rr smth ip, sbplty - sbblky; fnt sptty yel grn pri flor, slo-mod fst blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
LS (85%): crm, occ med dk gy - med gysh bn,
rr xln cal & arog (poss frac fil), p vis por; SH (1
ip, sbplty - sbblky; SS: (Tr) med gy - dk gy, occ
med gr, sbang - sb rndd, mod srt, mod frm, fri i
cal cmnt, occ slty ip, arg ip; fnt sptty yel grn p
wht cut, v sptd grnsh blu resd ring.
5000
5000
5000
5000
Total gas (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
MW 10.05
VIS 68
12
Mud Weight (ppg)
40
90

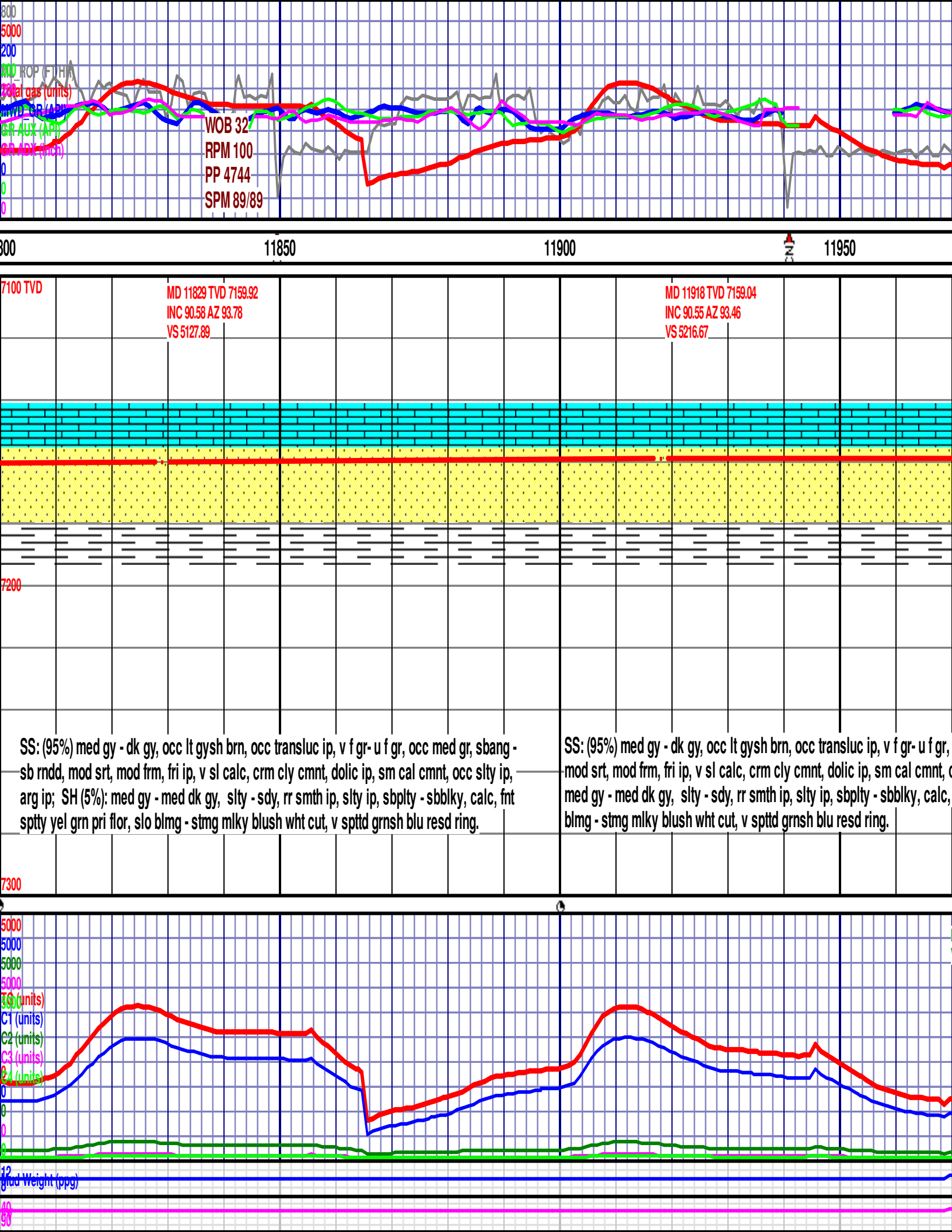

800
5000
200
200 ROP (FT/HR)
Total gas (units)
MWD GR (API)
GR AUX (API)
GR ADJ (inch)
0
0
WOB 9.9
RPM 100
PP 4373
SPM 93/92
950
CN
11000
CN
11050
11100
7100 TVD
MD 11024 TVD 7170.67
INC 89.29 AZ 93.87
VS 4326.06
MD 1111
INC 89.8
VS 4414.
7200
micritic, mod fm, blky - sb plty, occ fssl frags,
15%): med gy - med dk gy, slty - sdy, rr smth
lt gysh brn, occ transluc ip, v f gr- f gr, occ
p, v sl calc, crm cly cmnt, incrg dolic ip, sm
ri flor, slo-mod fst blmg - stmg mlky blush
SH (85%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc; LS (15%):
crm, occ med dk gy - med gysh bn, micritic, mod fm, blky - sb plty, p vis por; SS: (Tr) med
gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt,
mod frm, fri ip, v sl calc, crm cly cmnt, dolic ip, sm cal cmnt, occ slty ip, arg ip; fnt sptty yel
grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SH (65%): med
med gy - dk gy,
srt, mod frm, fri
flor, slo blmg -
7300
5000
5000
5000
5000
300 (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
12
8
Mud Weight (ppg)
40
90

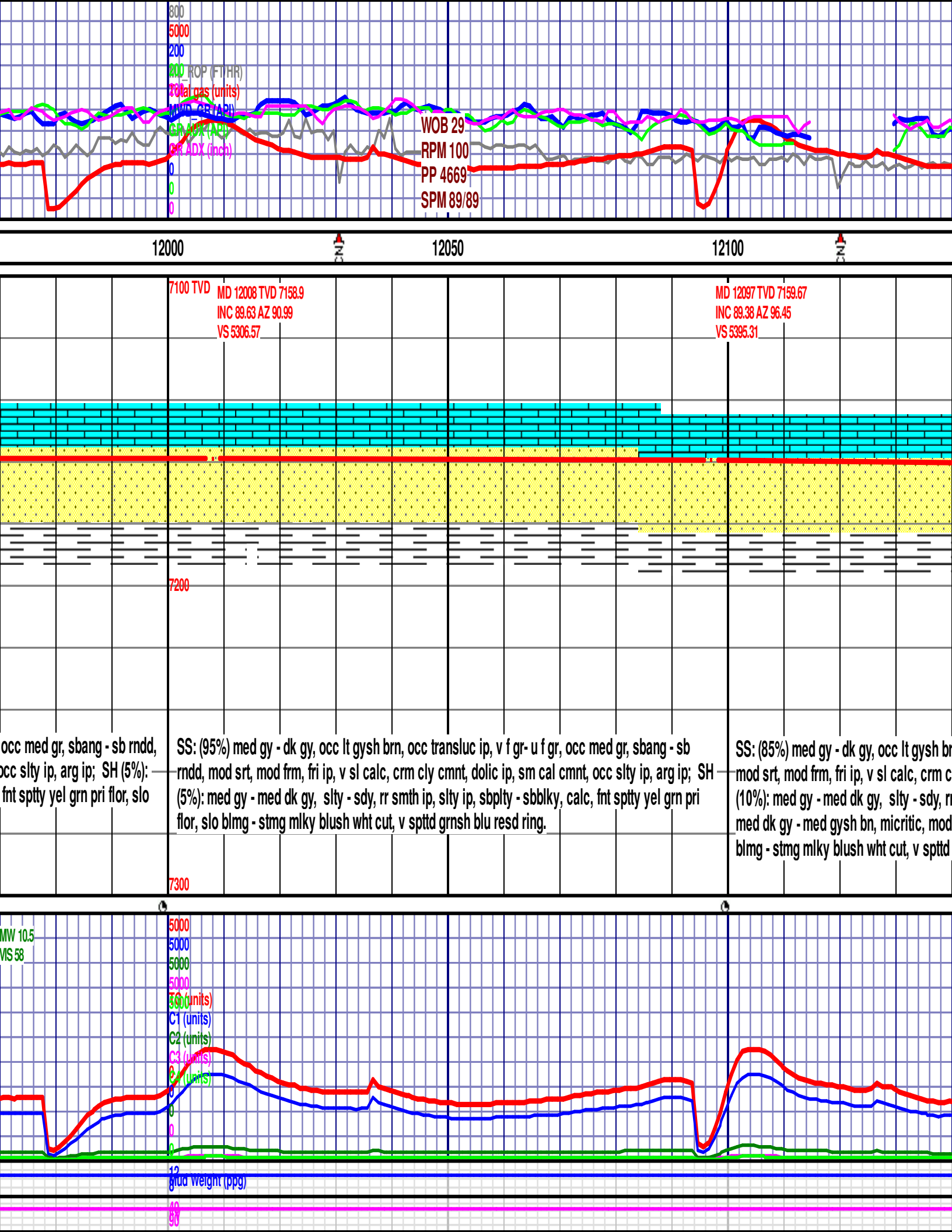

800
5000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 7
RPM 101
PP 4305
SPM 92/93
11150
11200
11250
3 TVD 7171.32
8 AZ 97.91
51
7100
MD 11203 TVD 7169.87
INC 91.97 AZ 98.11
VS 4503.54
7200
7300
gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc; SS: (30%)
occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod
i ip, v sl calc, crm cly cmnt, sm cal cmnt, occ slty ip, arg ip, fnt sptty yel grn pri
stmg mlky blush wht cut, v sptted grnsh blu resd ring.
SS: (85%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang -
rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ slty ip
ip; SH (10%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc; LS
crm, occ med dk gy - med gysh bn, micritic, mod fm, blky - sb plty, p vis por; fnt sptty ye
pri flor, slo blmg - stmg mlky blush wht cut, v sptted grnsh blu resd ring.
5000
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
Mud Weight (ppg)
DATE: 8/2
DEPTH: 11
WT: 10.0
Vis: 61
PV: 30
YP: 10
Gel: 8/19
FIL (HTHP): 1
SOL: 12.5
Cl: 36,0
NAP/H20 Ratio 8
ES 1,15

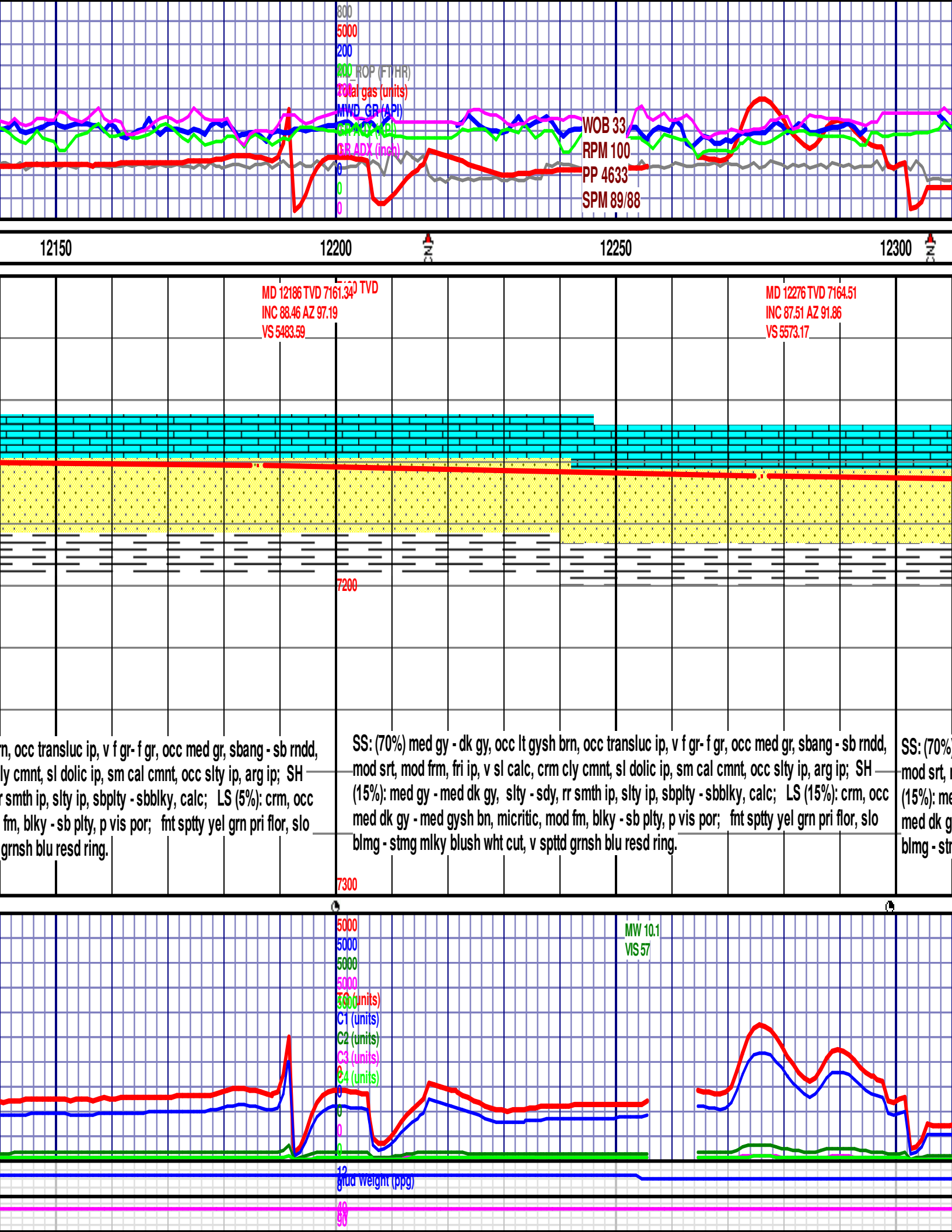

800
5000
200
ROP (FT/HR)
total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 34
RPM 100
PP 4797
SPM 92/92
11300
11350
11400
11450
MD 11292 TVD 7167
INC 91.72 AZ 93.49
VS 4591.95
MD 11382 TVD 7164.3
INC 91.72 AZ 90.12
VS 4681.84
7100 TVD
7200
7300
sb
arg
(5%):
el grn
SS: (85%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ slty ip, arg ip; SH (10%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc; LS (5%): crm, occ med dk gy - med gysh bn, micritic, mod fm, blky - sb plty, p vis por; fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip,
mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip,
(10%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sb
flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu r
6/18
324'
MW 10.0
VIS 61
22
4
5%
00
5/15
0
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
Mud Weight (ppg)
40
90

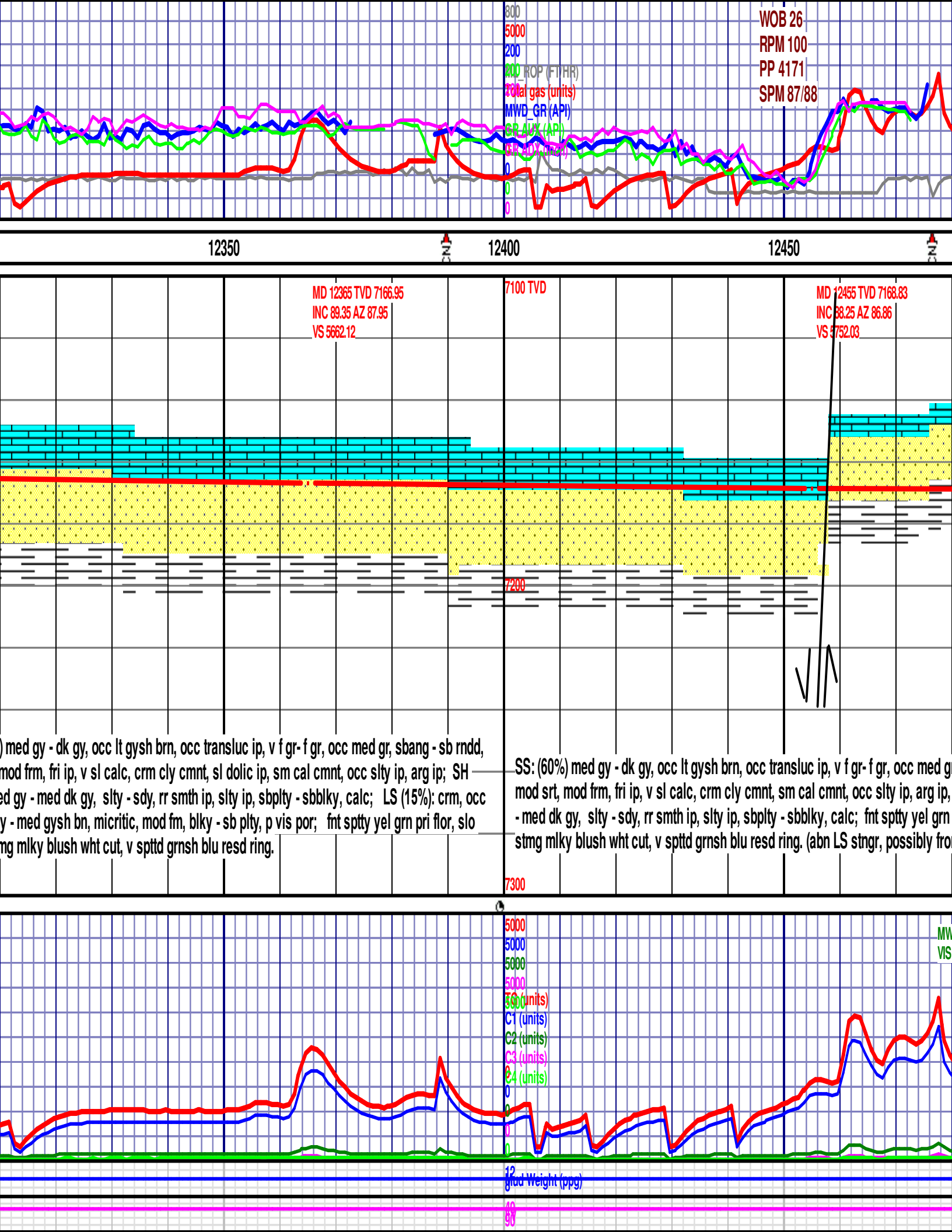

800
5000
200
200 ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
11500
11550
11600
MD 11471 TVD 7162.96
INC 90 AZ 85.93
VS 4770.77
MD 11561 TVD 7162.57
INC 90.49 AZ 83.97
VS 4860.46
7100 TVD
7200
7300
v f gr- f gr, occ med gr, sbang - sb rndd,
sm cal cmnt, occ slty ip, arg ip; SH
pplty - sbblky, calc, fnt sptty yel grn pri
esd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ slty ip, arg ip; SH (10%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc, fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (95%) med gy - dk gy, oc
rndd, mod srt, mod frm, fri ip,
SH (5%): med gy - med dk gy,
pri flor, slo blmg - stmg mlky
CG 3854u
MW 10.05
VIS 60
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
Mud Weight (ppg)
8
40
90

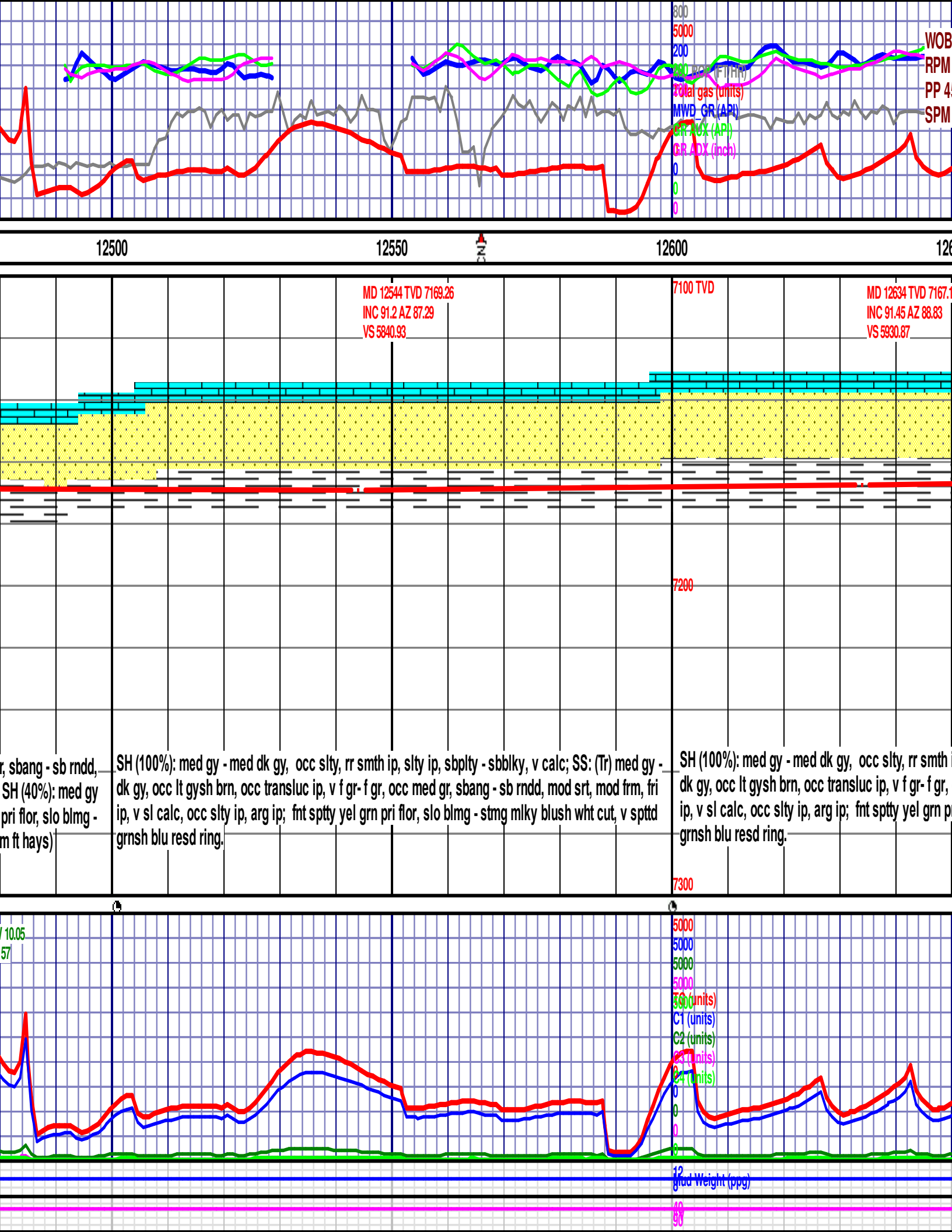

WOB 18
RPM 100
PP 4617
SPM 92/92
11650
11700
11750
MD 11650 TVD 7161.79
INC 90.52 AZ 84.96
VS 4949.09
MD 11740 TVD 7160.87
INC 90.65 AZ 88.34
VS 5038.95
c lt gysh brn, occ transluc ip, v f gr- u f gr, occ med gr, sbang - sb
, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ slty ip, arg ip;
, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc, fnt sptty yel grn
blush wht cut, v sptd grnsh blu resd ring.
SS: (95%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- u f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, dolic ip, sm cal cmnt, occ slty ip, arg ip; SH (5%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc, fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.

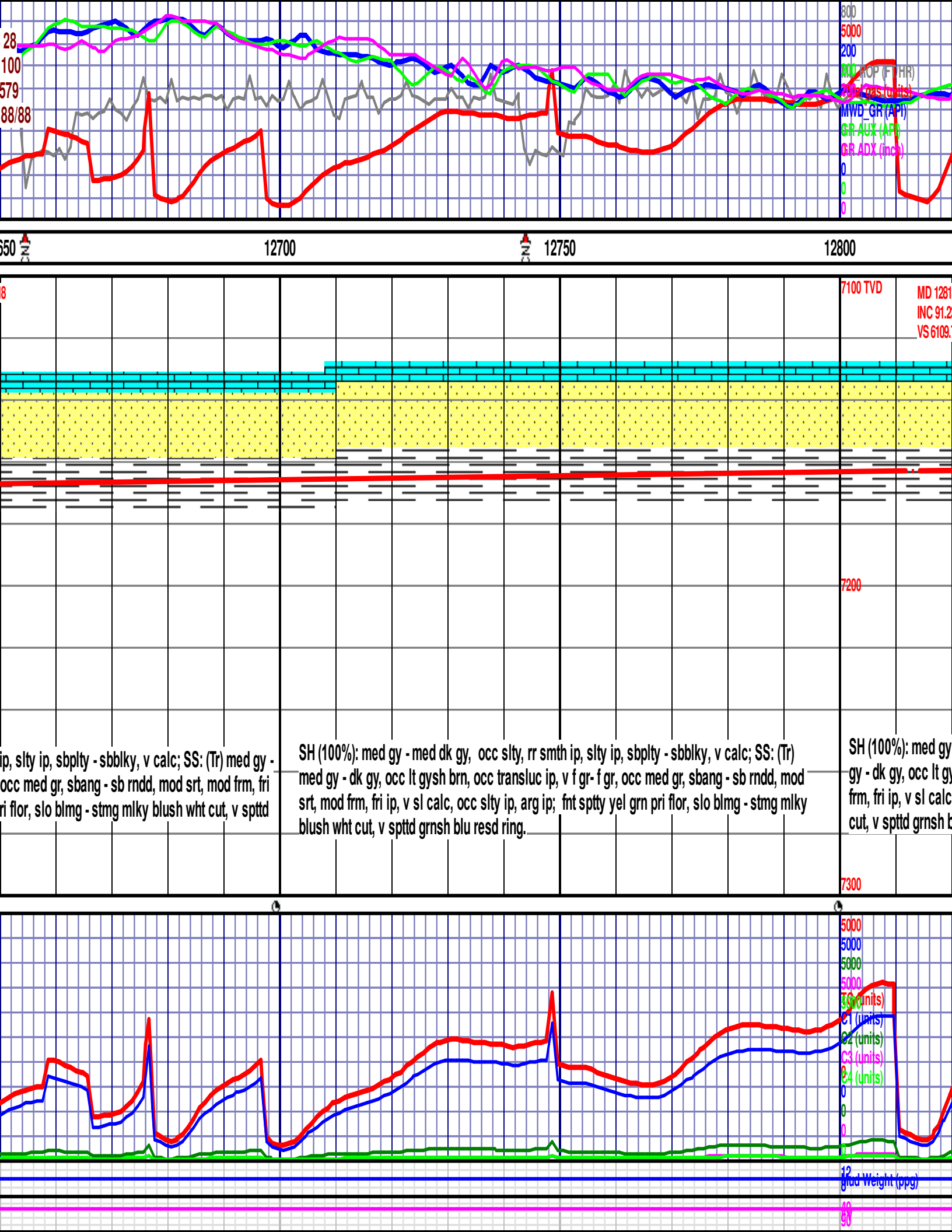

800
5000
200
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR_AUX (API)
GR_ARX (inch)
0
0
0
WOB 32
RPM 100
PP 4744
SPM 89/89
300
11850
11900
11950
7100 TVD
MD 11829 TVD 7159.92
INC 90.58 AZ 93.78
VS 5127.89
MD 11918 TVD 7159.04
INC 90.55 AZ 93.46
VS 5216.67
7200
SS: (95%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- u f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, dolic ip, sm cal cmnt, occ slty ip, arg ip; SH (5%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc, fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptted grnsh blu resd ring.
SS: (95%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- u f gr, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, dolic ip, sm cal cmnt, med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc, blmg - stmg mlky blush wht cut, v sptted grnsh blu resd ring.
7300
5000
5000
5000
5000
Total gas (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
8
Mud Weight (ppg)
40
90

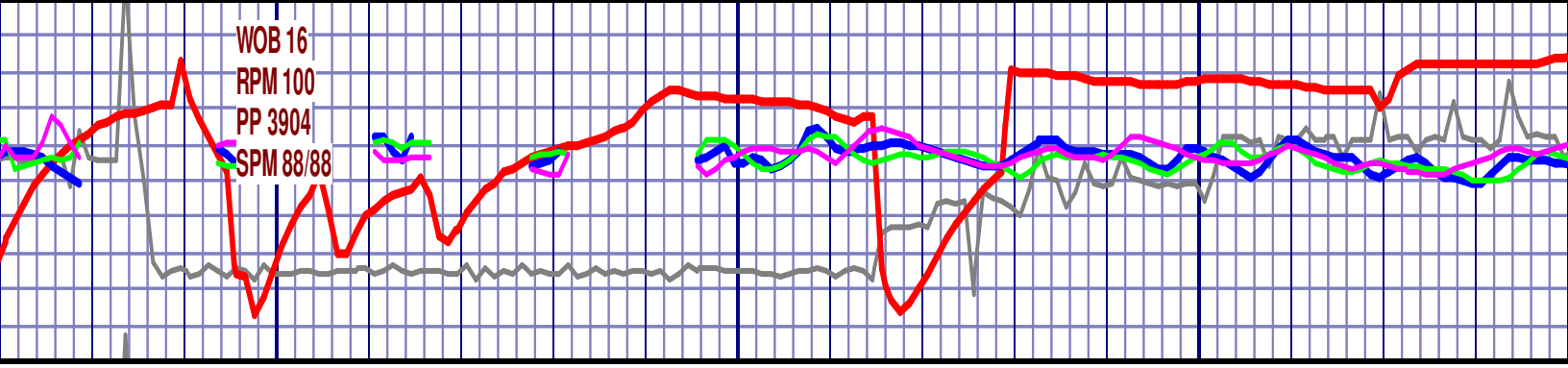

800
5000
200
ROP (FT/HR)
total gas (units)
MWD GR (API)
GR MSX (API)
CAL ADX (inch)
0
0
0
WOB 29
RPM 100
PP 4669
SPM 89/89
12000
12050
12100
7100 TVD
MD 12008 TVD 7158.9
INC 89.63 AZ 90.99
VS 5306.57
MD 12097 TVD 7159.67
INC 89.38 AZ 96.45
VS 5395.31
7200
occ med gr, sbang - sb rndd,
occ slty ip, arg ip; SH (5%):
fnt sptty yel grn pri flor, slo
SS: (95%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- u f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, dolic ip, sm cal cmnt, occ slty ip, arg ip; SH (5%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc, fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (85%) med gy - dk gy, occ lt gysh br
mod srt, mod frm, fri ip, v sl calc, crm c
(10%): med gy - med dk gy, slty - sdy, r
med dk gy - med gysh bn, micritic, mod
blmg - stmg mlky blush wht cut, v sptd
7300
MW 10.5
VIS 58
5000
5000
5000
5000
TG (units)
C1 (units)
C2 (units)
C3 (units)
iC4 (units)
0
0
0
0
12
mud weight (ppg)
40
90


300
5000
200
200 ROP (FT/HR)
Total gas (units)
MWD GR (API)
GR ADX (%)
GR ADX (inch)
0
0
0
WOB 33
RPM 100
PP 4633
SPM 89/88
12150
12200
12250
12300
MD 12186 TVD 7161.34
INC 88.46 AZ 97.19
VS 5483.59
MD 12276 TVD 7164.51
INC 87.51 AZ 91.86
VS 5573.17
7200
7300
rn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd,
ly cmnt, sl dolic ip, sm cal cmnt, occ slty ip, arg ip; SH
r smth ip, slty ip, sbplty - sbblky, calc; LS (5%): crm, occ
fm, blky - sb plty, p vis por; fnt sptty yel grn pri flor, slo
grnsh blu resd ring.
SS: (70%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ slty ip, arg ip; SH (15%): med gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc; LS (15%): crm, occ med dk gy - med gysh bn, micritic, mod fm, blky - sb plty, p vis por; fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (70%
mod srt,
(15%): me
med dk g
blmg - str
5000
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
MW 10.1
VIS 57
12
Mud Weight (ppg)
40
90


800
5000
200
200 ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR_AUX (API)
GR_AUX_Smooth
0
0
0
WOB 26
RPM 100
PP 4171
SPM 87/88
12350
12400
12450
MD 12365 TVD 7166.95
INC 89.35 AZ 87.95
VS 5662.12
7100 TVD
MD 12455 TVD 7168.83
INC 88.25 AZ 86.86
VS 5752.03
7200
) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd,
mod frm, fri ip, v sl calc, crm cly cmnt, sl dolic ip, sm cal cmnt, occ slty ip, arg ip; SH
ed gy - med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc; LS (15%): crm, occ
y - med gysh bn, micritic, mod fm, blky - sb plty, p vis por; fnt sptty yel grn pri flor, slo
mg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (60%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med g
mod srt, mod frm, fri ip, v sl calc, crm cly cmnt, sm cal cmnt, occ slty ip, arg ip,
- med dk gy, slty - sdy, rr smth ip, slty ip, sbplty - sbblky, calc; fnt sptty yel grn
stmg mlky blush wht cut, v sptd grnsh blu resd ring. (abn LS stngr, possibly fro
7300
5000
5000
5000
5000
5000
Total gas (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
MW
VIS
12
Mud Weight (ppg)
40
90


800
5000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR_ADX (API)
GR_ADX (inch)
0
0
0
WOB
RPM
PP 4
SPM
12500
12550
12600
126
MD 12544 TVD 7169.26
INC 91.2 AZ 87.29
VS 5840.93
7100 TVD
MD 12634 TVD 7167.1
INC 91.45 AZ 88.83
VS 5930.87
7200
7300
r, sbang - sb rndd,
SH (40%): med gy
pri flor, slo blmg -
m ft hays)
SH (100%): med gy - med dk gy, occ slty, rr smth ip, slty ip, sbplty - sbblky, v calc; SS: (Tr) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, occ slty ip, arg ip; fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SH (100%): med gy - med dk gy, occ slty, rr smth i
dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr,
ip, v sl calc, occ slty ip, arg ip; fnt sptty yel grn p
grnsh blu resd ring.
10.05
57
5000
5000
5000
5000
300 (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
12
Mud Weight (ppg)
8
40
90


28
100
579
88/88
800
5000
200
ROP (FTHR)
Gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
650
12700
12750
12800
7100 TVD
MD 1281
INC 91.2
VS 6109
7200
7300
ip, slty ip, sbplty - sbblky, v calc; SS: (Tr) med gy -
occ med gr, sbang - sb rndd, mod srt, mod frm, fri
ri flor, slo blmg - stmg mlky blush wht cut, v spttd
SH (100%): med gy - med dk gy, occ slty, rr smth ip, slty ip, sbplty - sbblky, v calc; SS: (Tr)
med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod
srt, mod frm, fri ip, v sl calc, occ slty ip, arg ip; fnt sptty yel grn pri flor, slo blmg - stmg mlky
blush wht cut, v spttd grnsh blu resd ring.
SH (100%): med gy
gy - dk gy, occ lt gy
frm, fri ip, v sl calc
cut, v spttd grnsh b
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
Mud Weight (ppg)



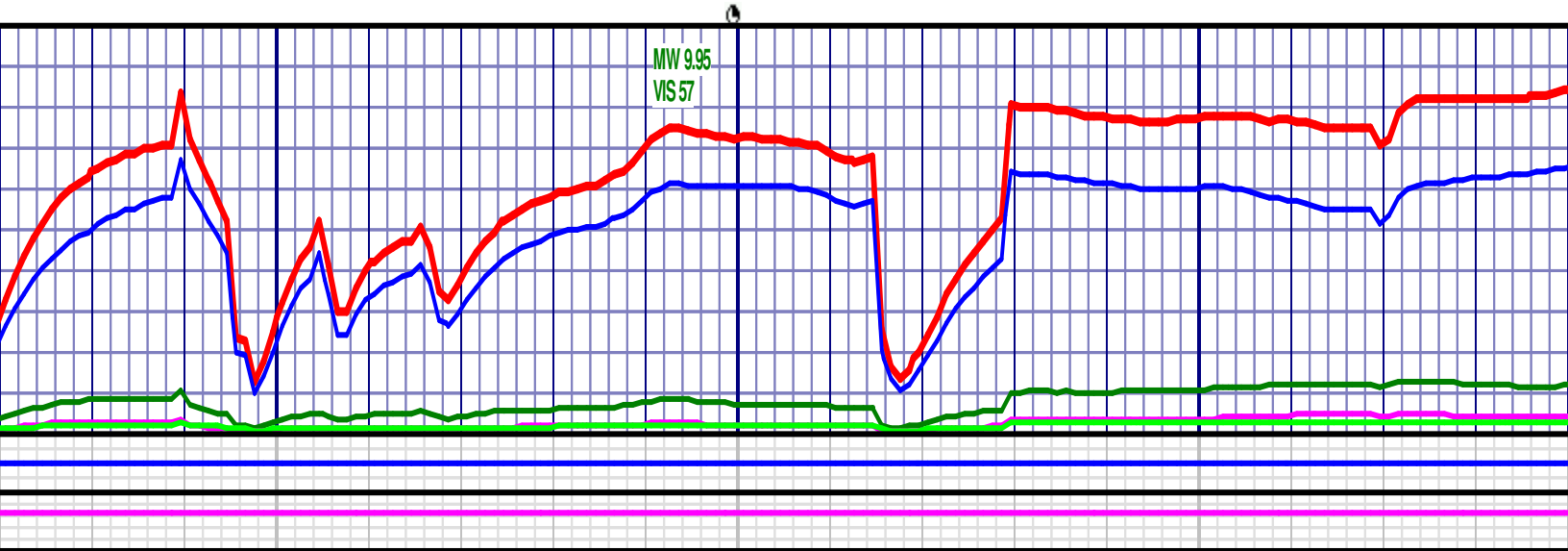
12850 12900 12950

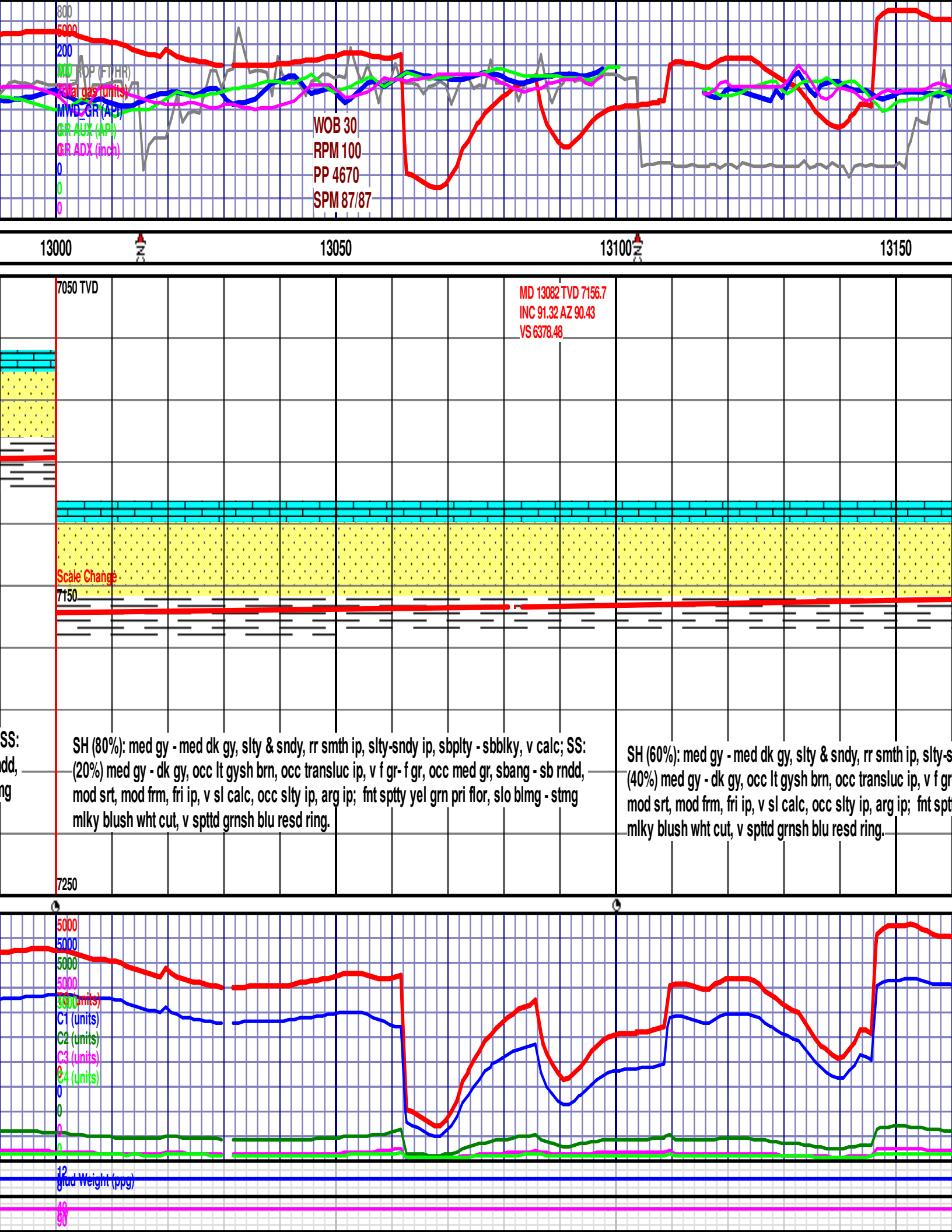
3 TVD 7162.99
3 AZ 91.94
78

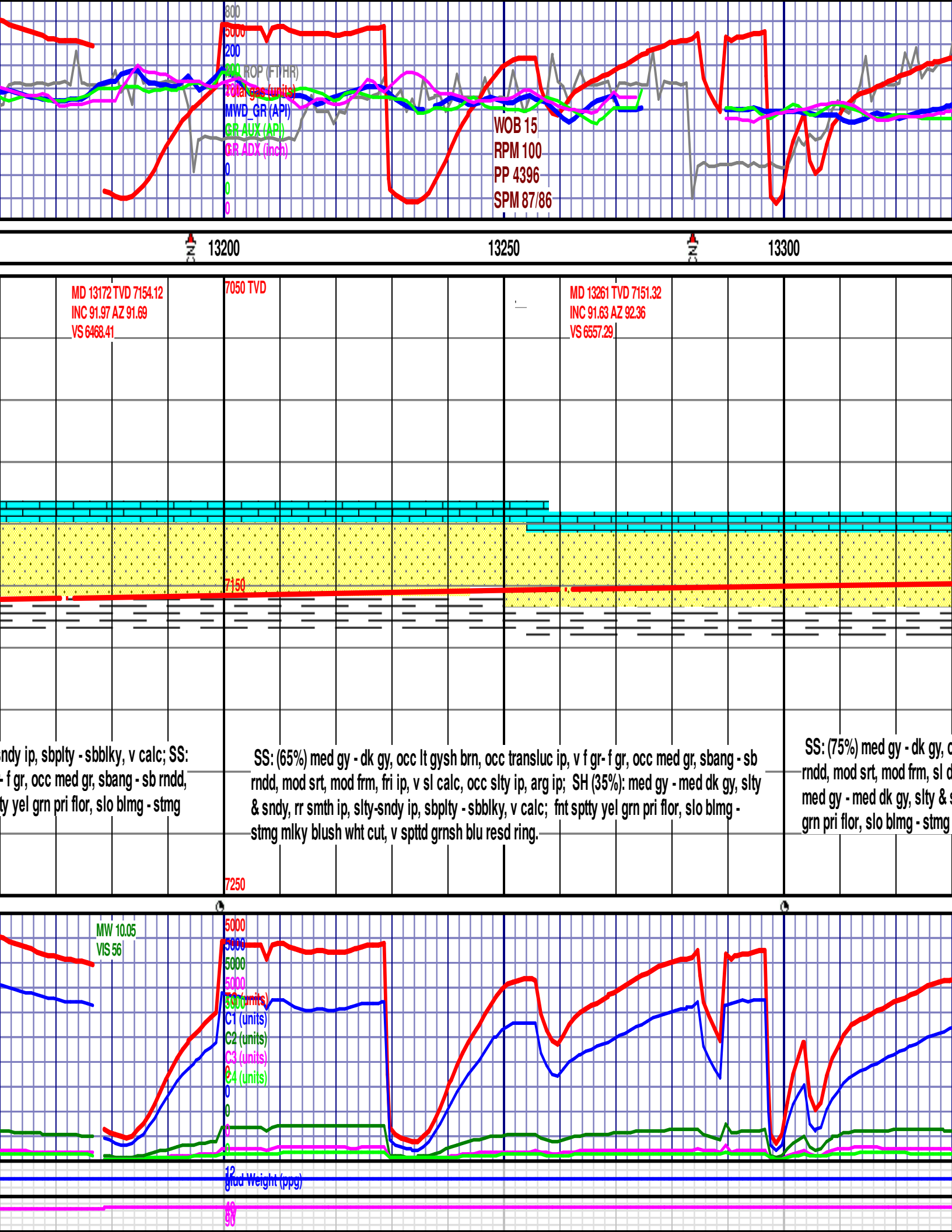
MD 12902 TVD 7160.96
INC 91.39 AZ 92.85
VS 6198.65

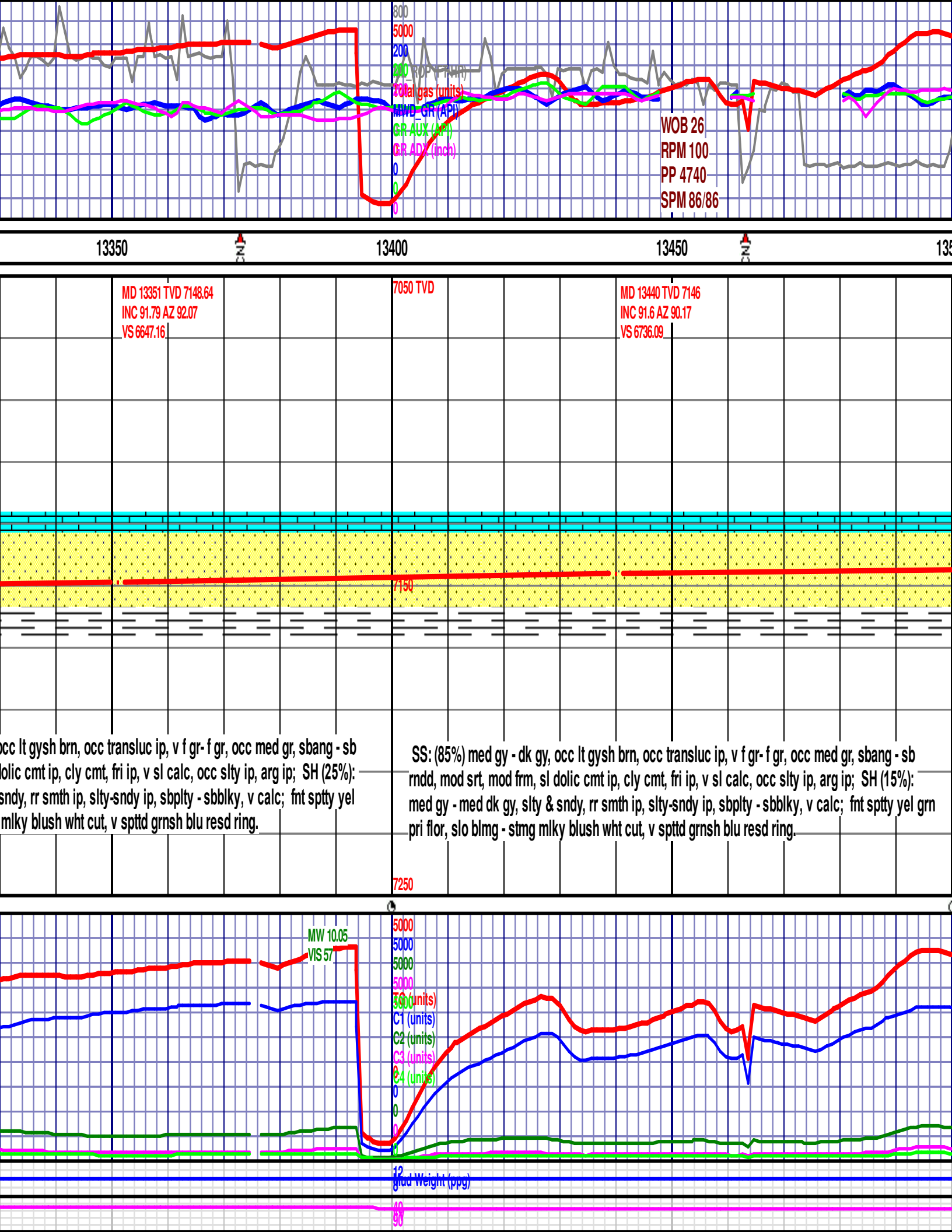
- med dk gy, occ slty, rr smth ip, slty ip, sbplty - sbblky, v calc; SS: (Tr) med
ysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod
, occ slty ip, arg ip; fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht
lu resd ring.

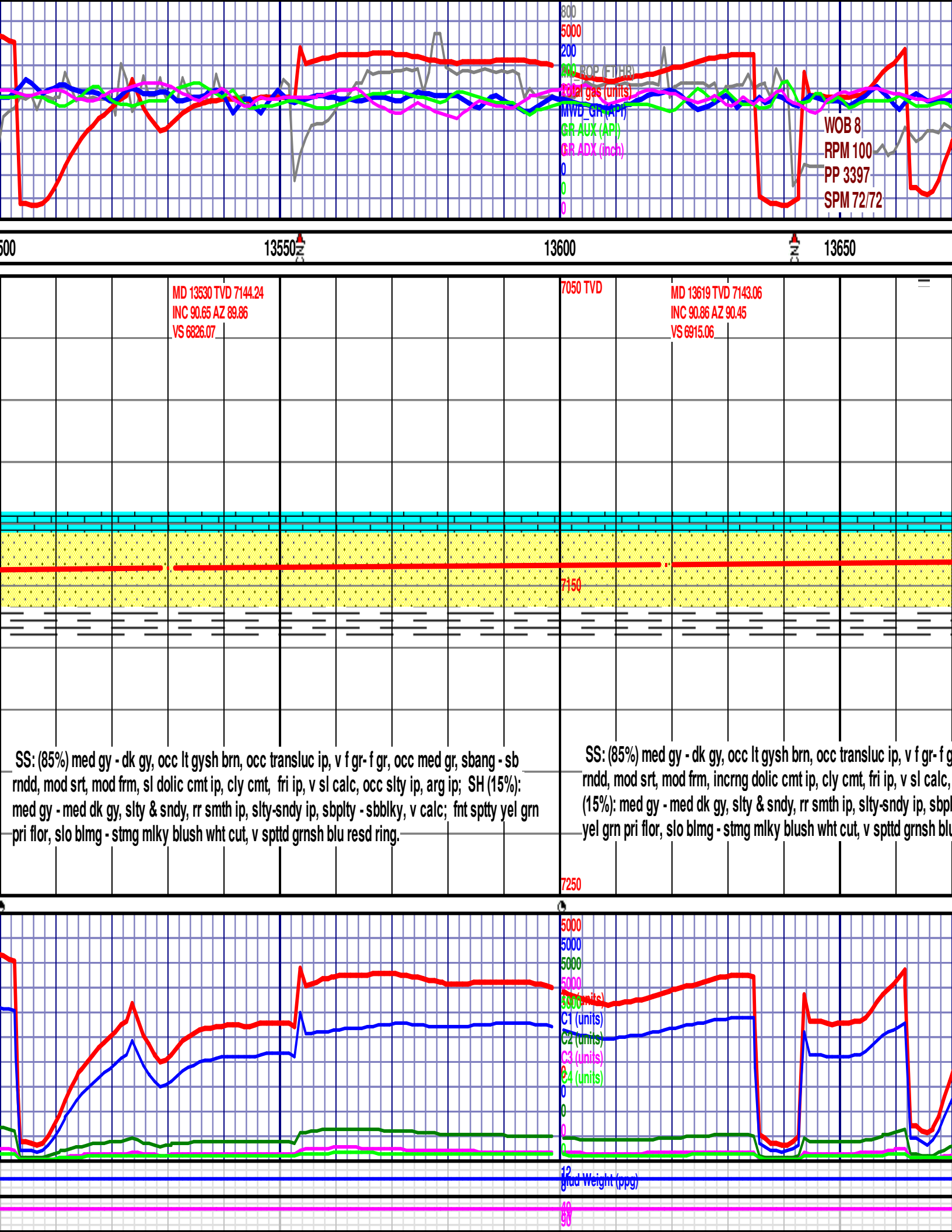
SH (90%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc;
(10%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rn
mod srt, mod frm, fri ip, v sl calc, occ slty ip, arg ip; fnt sptty yel grn pri flor, slo blmg - stm
mlky blush wht cut, v sptd grnsh blu resd ring.

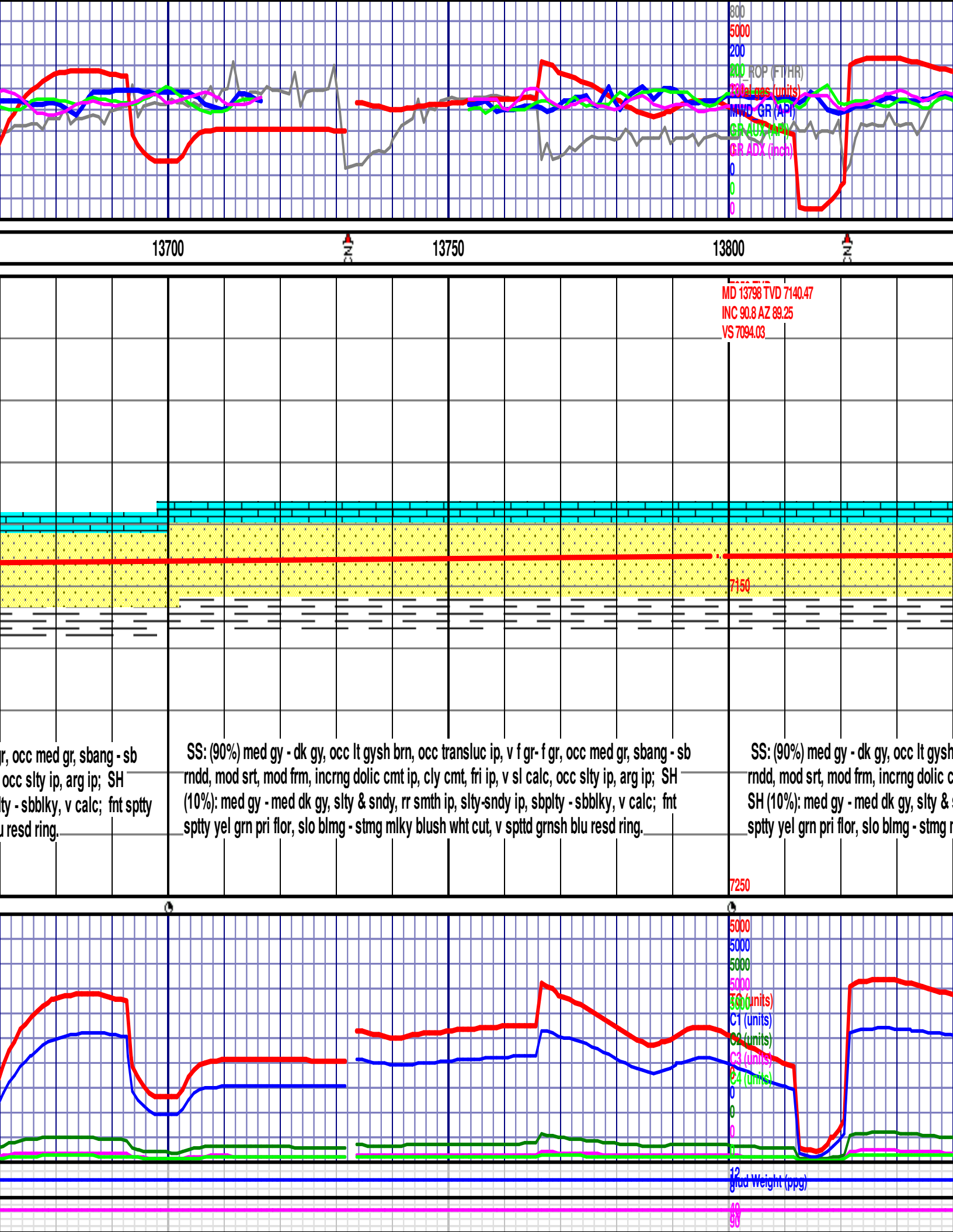


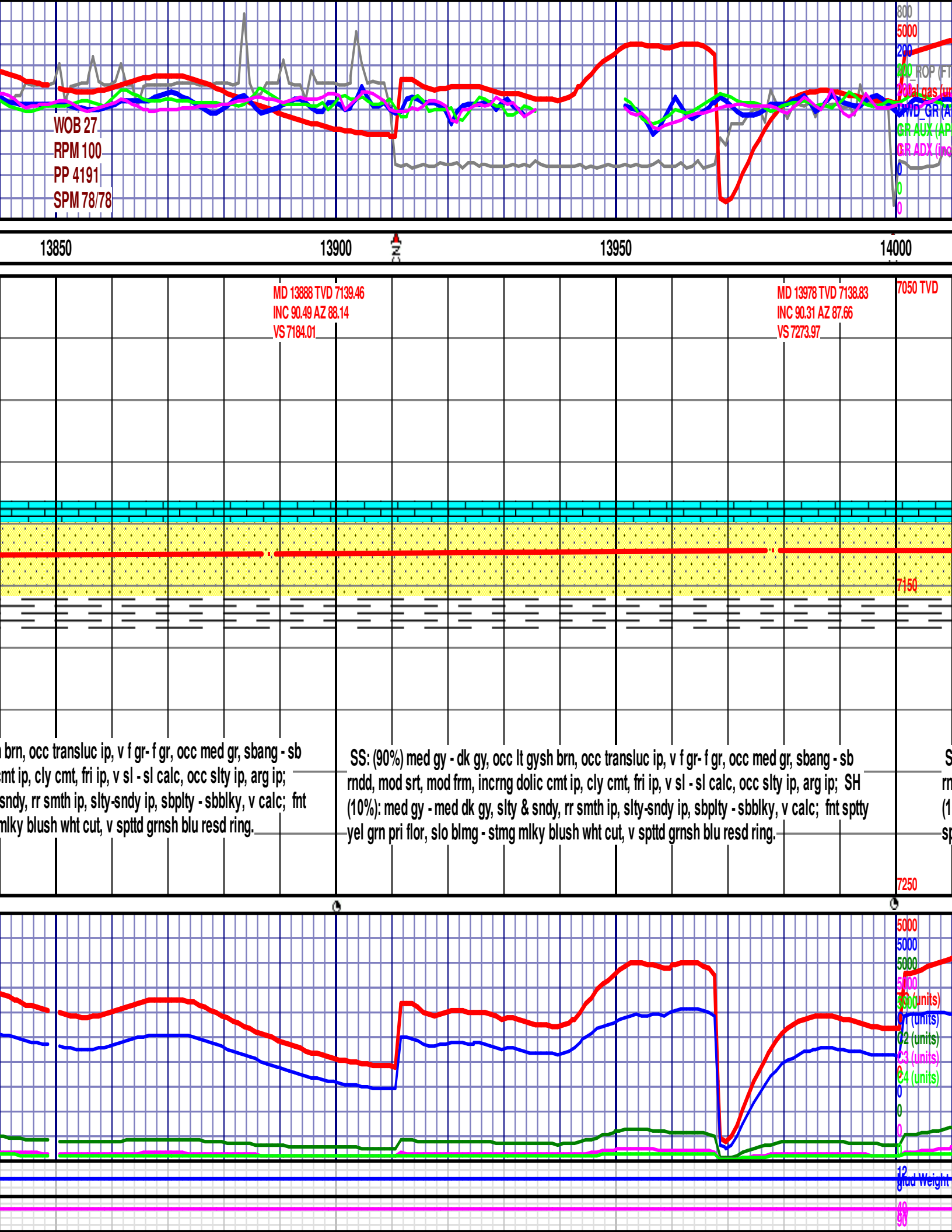

800
5000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 30
RPM 100
PP 4670
SPM 87/87
13000
13050
13100
13150
7050 TVD
MD 13082 TVD 7156.7
INC 91.32 AZ 90.43
VS 6378.48
Scale Change
7150
7250
SH (80%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; SS:
(20%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd,
mod srt, mod frm, fri ip, v sl calc, occ slty ip, arg ip; fnt sptty yel grn pri flor, slo blmg - stmg
mlky blush wht cut, v sptd grnsh blu resd ring.
SH (60%): med gy - med dk gy, slty & sndy, rr smth ip, slty-s
(40%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr
mod srt, mod frm, fri ip, v sl calc, occ slty ip, arg ip; fnt spt
mlky blush wht cut, v sptd grnsh blu resd ring.
5000
5000
5000
5000
5000 (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
Mud Weight (ppg)
8
40
90

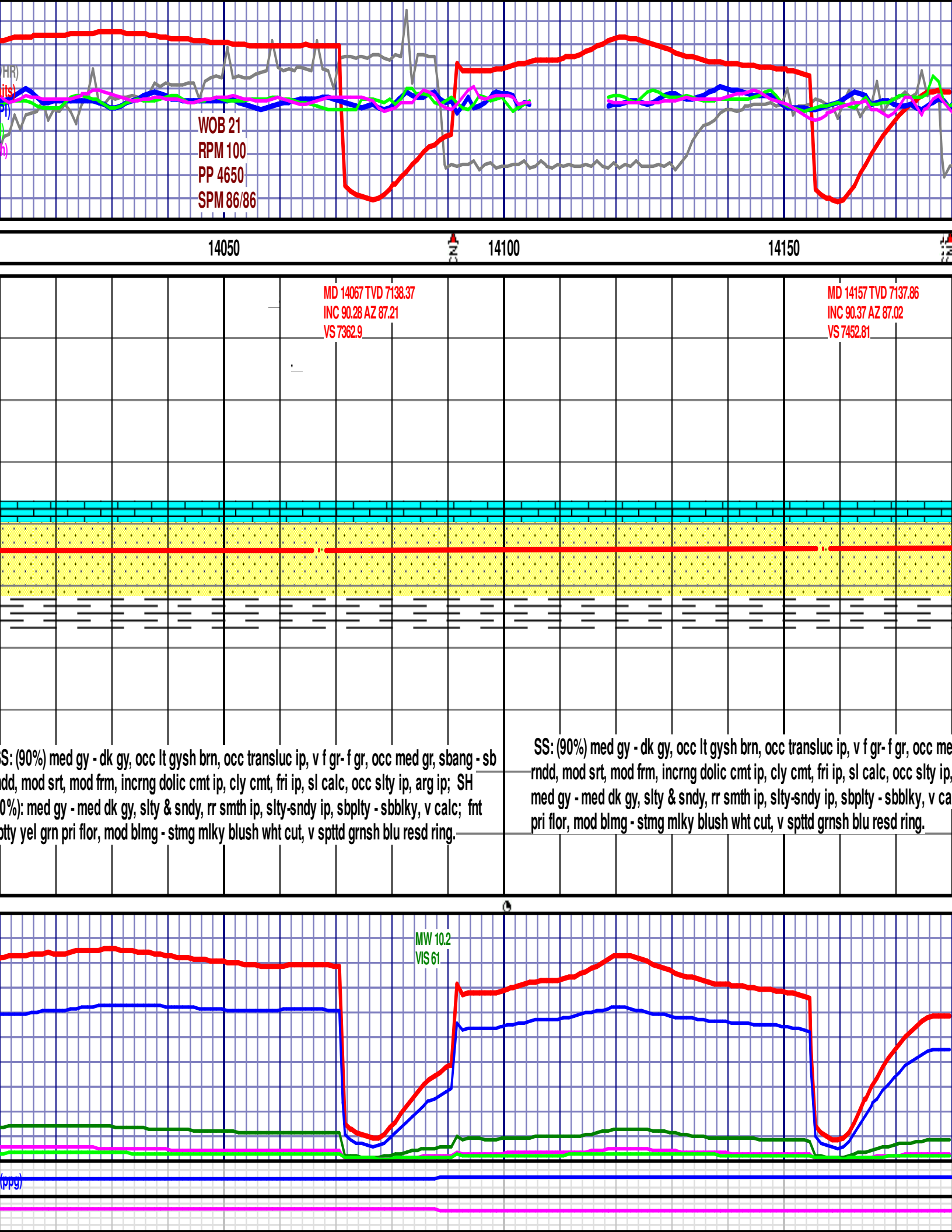

800
5000
200
ROP (FT/HR)
Total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 15
RPM 100
PP 4396
SPM 87/86
13200
13250
13300
MD 13172 TVD 7154.12
INC 91.97 AZ 91.69
VS 6468.41
7050 TVD
MD 13261 TVD 7151.32
INC 91.63 AZ 92.36
VS 6557.29
7150
ndy ip, sbplty - sbblky, v calc; SS:
- f gr, occ med gr, sbang - sb rndd,
ty yel grn pri flor, slo blmg - stmg
SS: (65%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, fri ip, v sl calc, occ slty ip, arg ip; SH (35%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (75%) med gy - dk gy, c
rndd, mod srt, mod frm, sl d
med gy - med dk gy, slty &
grn pri flor, slo blmg - stmg
7250
MW 10.05
VIS 56
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
12
Mud Weight (ppg)
90

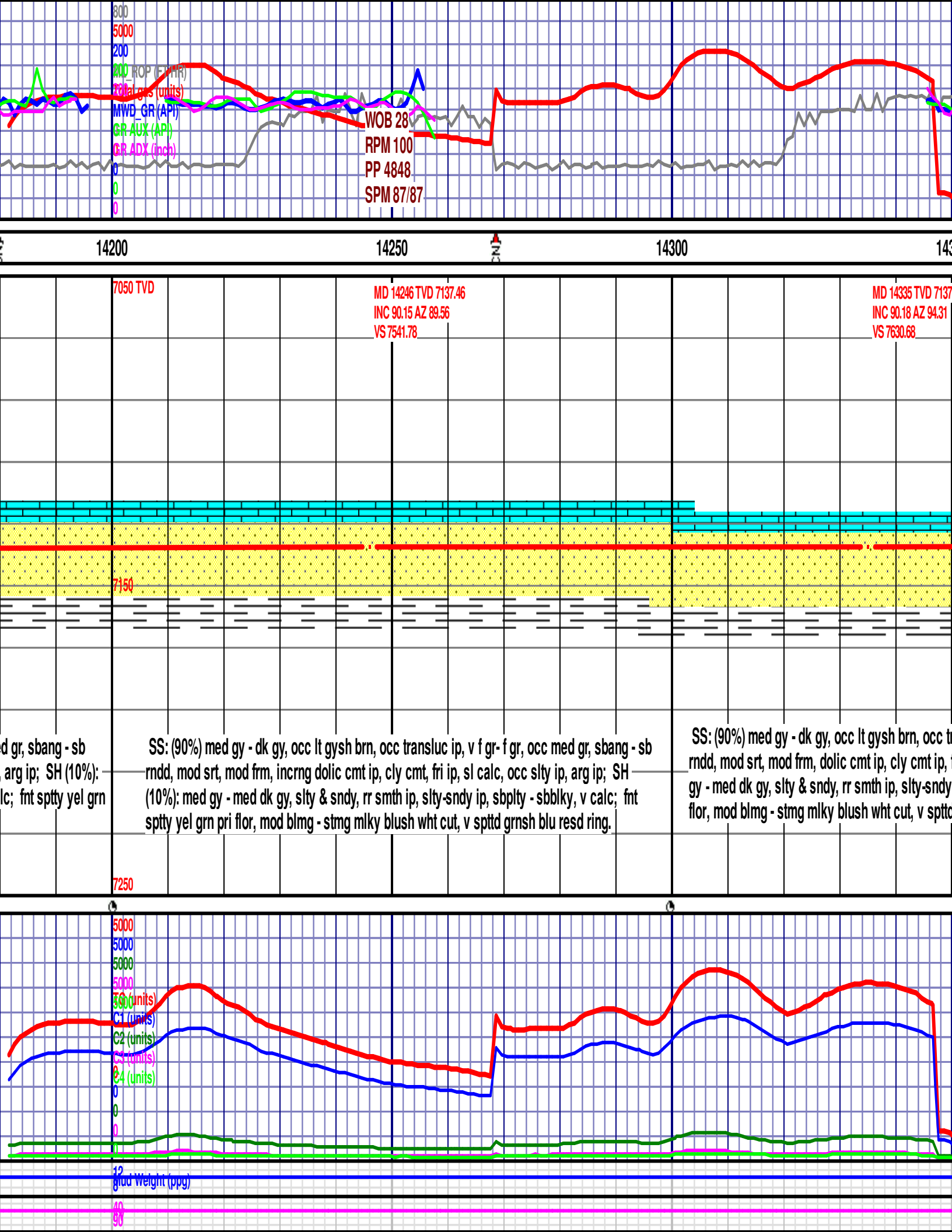

800
5000
200
200 TOP Y (ft)
Total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 26
RPM 100
PP 4740
SPM 86/86
13350
13400
13450
MD 13351 TVD 7148.64
INC 91.79 AZ 92.07
VS 6647.16
7050 TVD
MD 13440 TVD 7146
INC 91.6 AZ 90.17
VS 6736.09
7150
7250
SS: (85%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, sl dolic cmt ip, cly cmt, fri ip, v sl calc, occ slty ip, arg ip; SH (15%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
MW 10.05
VIS 57
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
8
Mud Weight (ppg)
40
98

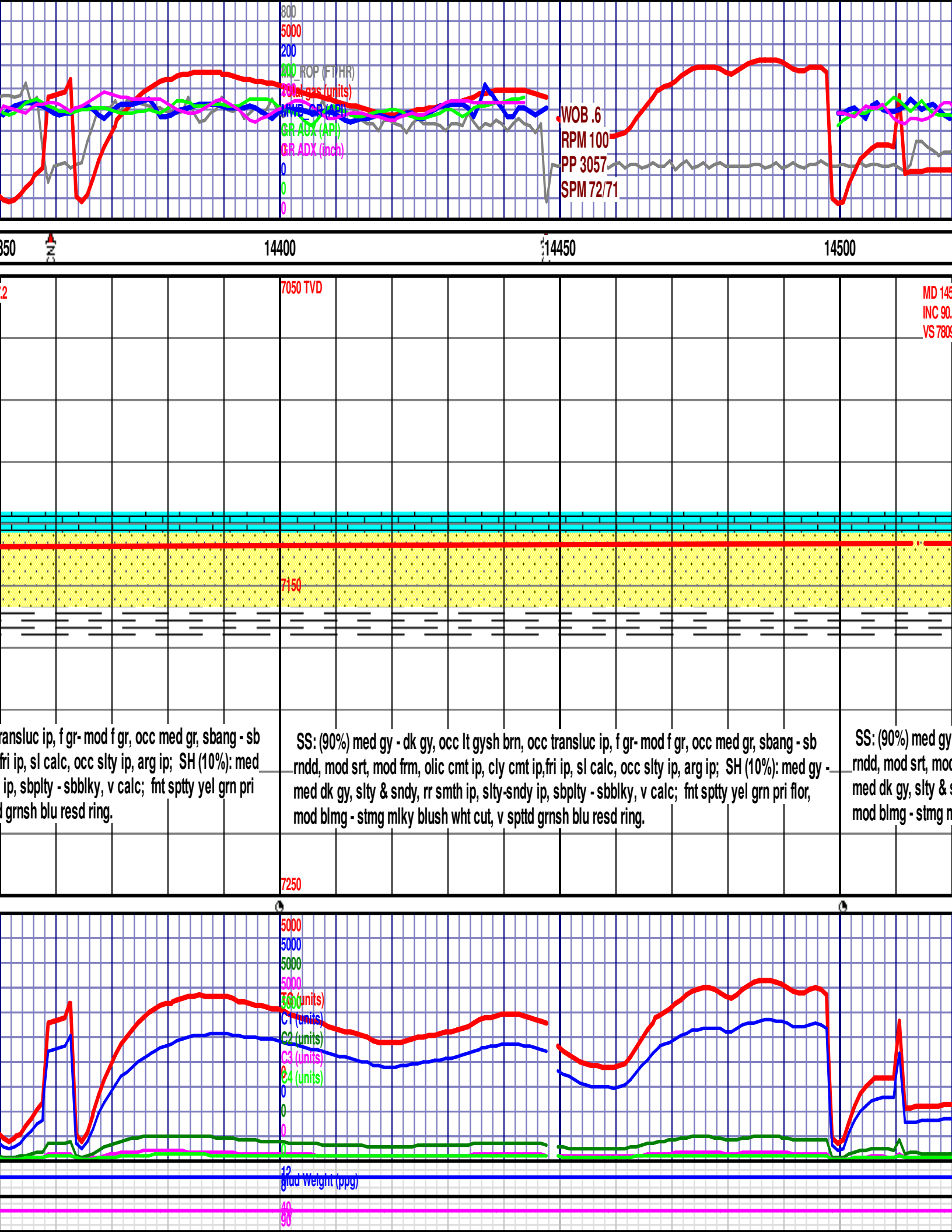

800
5000
200
ROP (FT/HR)
total gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 8
RPM 100
PP 3397
SPM 72/72
500
13550
13600
13650
MD 13530 TVD 7144.24
INC 90.65 AZ 89.86
VS 6826.07
7050 TVD
MD 13619 TVD 7143.06
INC 90.86 AZ 90.45
VS 6915.06
7150
SS: (85%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, sl dolic cmt ip, cly cmt, fri ip, v sl calc, occ slty ip, arg ip; SH (15%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (85%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f g rndd, mod srt, mod frm, incrng dolic cmt ip, cly cmt, fri ip, v sl calc, (15%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbpl yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu
7250
5000
5000
5000
5000
3300
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
Mud Weight (ppg)
40
90

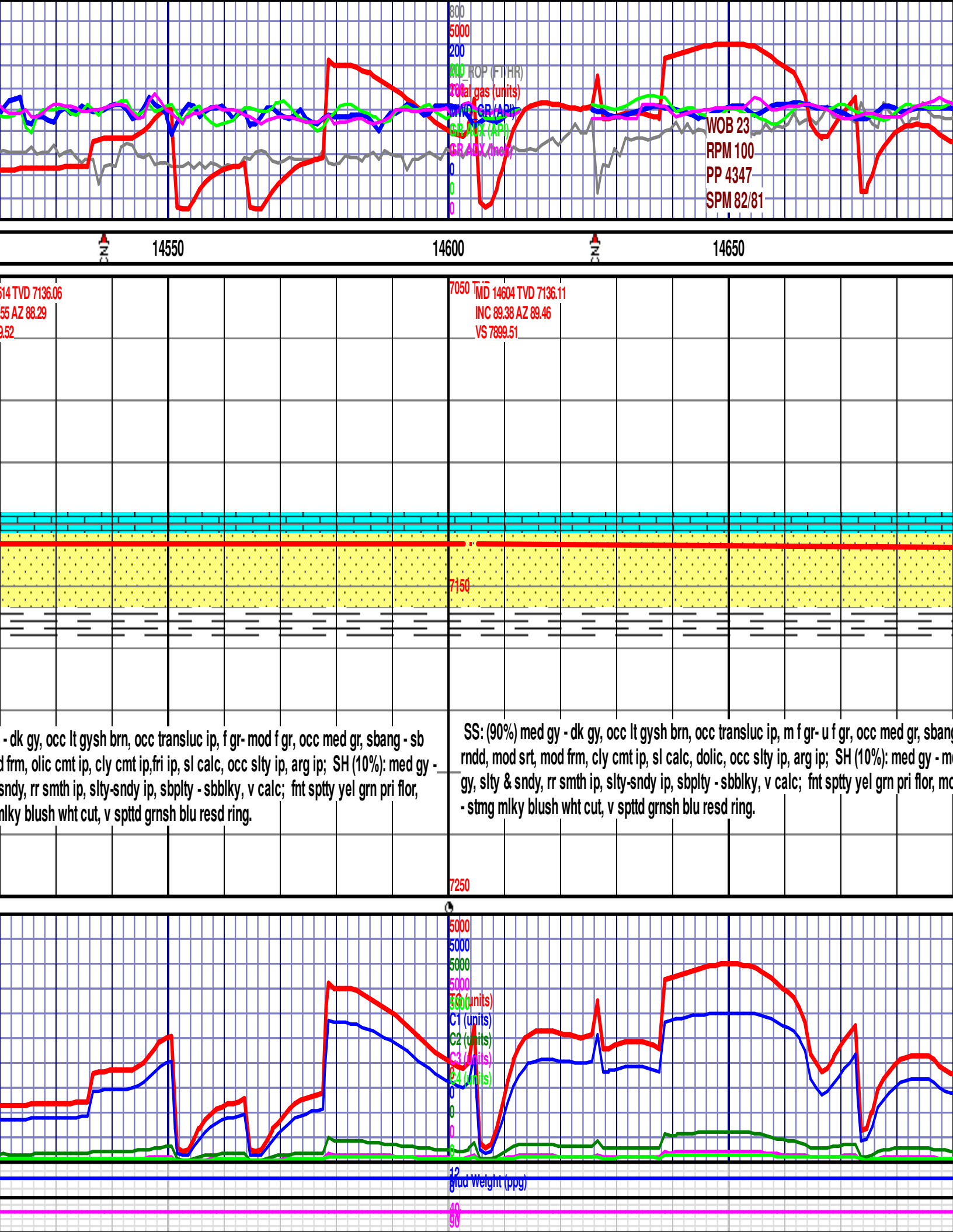

300
5000
200
200 ROP (FT/HR)
Total gas (units)
MWD GR (API)
GR ADX (API)
GR ADX (inch)
0
0
0
13700
13750
13800
MD 13798 TVD 7140.47
INC 90.8 AZ 89.25
VS 7094.03
7150
7250
r, occ med gr, sbang - sb
occ slty ip, arg ip; SH
lty - sbblky, v calc; fnt sptty
u resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb
rndd, mod srt, mod frm, incrng dolic cmt ip, cly cmt, fri ip, v sl calc, occ slty ip, arg ip; SH
(10%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt
sptty yel grn pri flor, slo blmg - stmg mlky blush wht cut, v spttd grnsh blu resd ring.
SS: (90%) med gy - dk gy, occ lt gysh
rndd, mod srt, mod frm, incrng dolic c
SH (10%): med gy - med dk gy, slty &
sptty yel grn pri flor, slo blmg - stmg
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
12
Mud Weight (ppg)
8
40
90

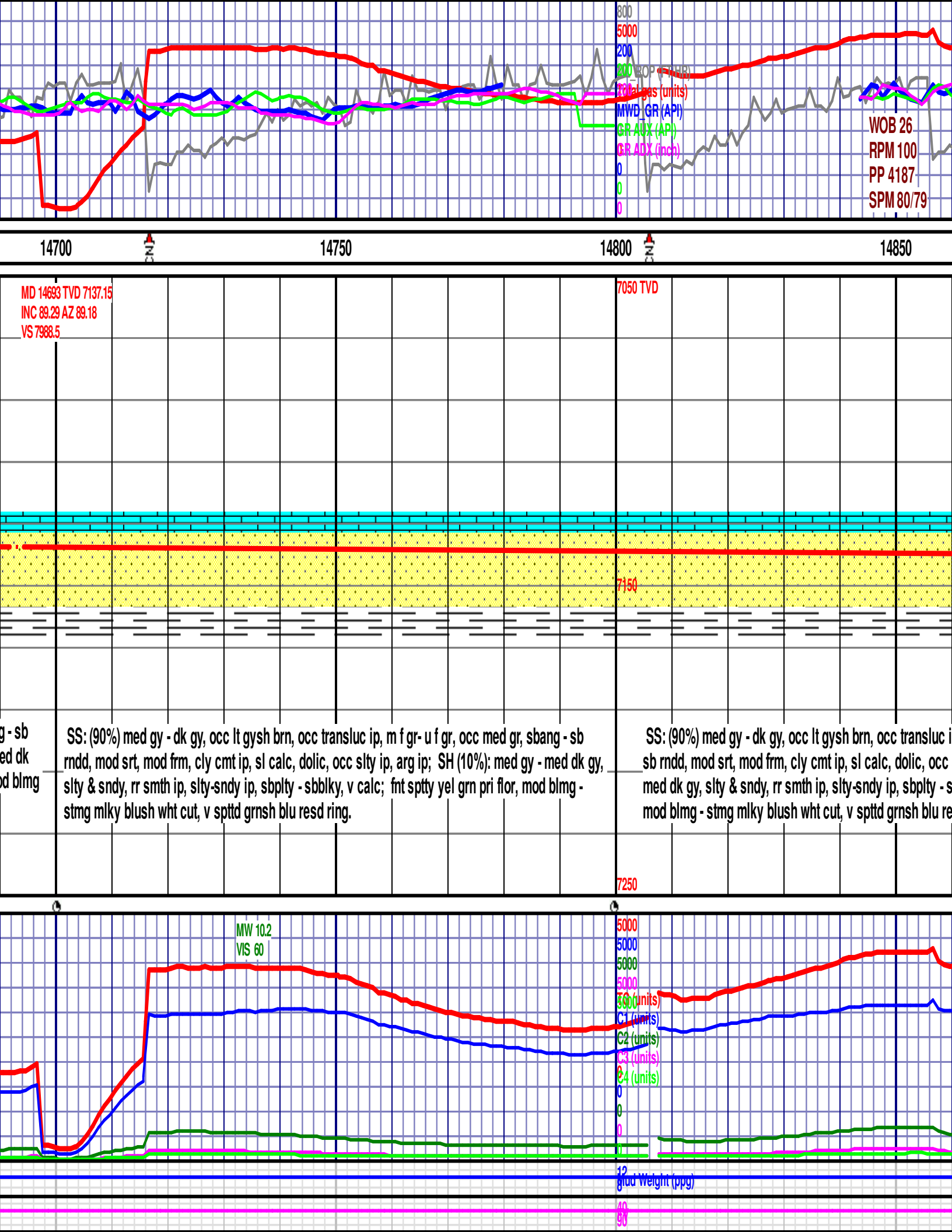

WOB 27
RPM 100
PP 4191
SPM 78/78
800
5000
200
ROP (FT
Total gas (un
LWD_GR (A
GR AUX (AP
GR ADX (inc
0
0
0
13850
13900
13950
14000
MD 13888 TVD 7139.46
INC 90.49 AZ 88.14
VS 7184.01
MD 13978 TVD 7138.83
INC 90.31 AZ 87.66
VS 7273.97
7050 TVD
7150
7250
brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb
mt ip, cly cmt, fri ip, v sl - sl calc, occ slty ip, arg ip;
sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt
mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb
rndd, mod srt, mod frm, incrng dolic cmt ip, cly cmt, fri ip, v sl - sl calc, occ slty ip, arg ip; SH
(10%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt sptty
yel grn pri flor, slo blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
5000
5000
5000
5000
300 (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
12
Mud Weight
40
90

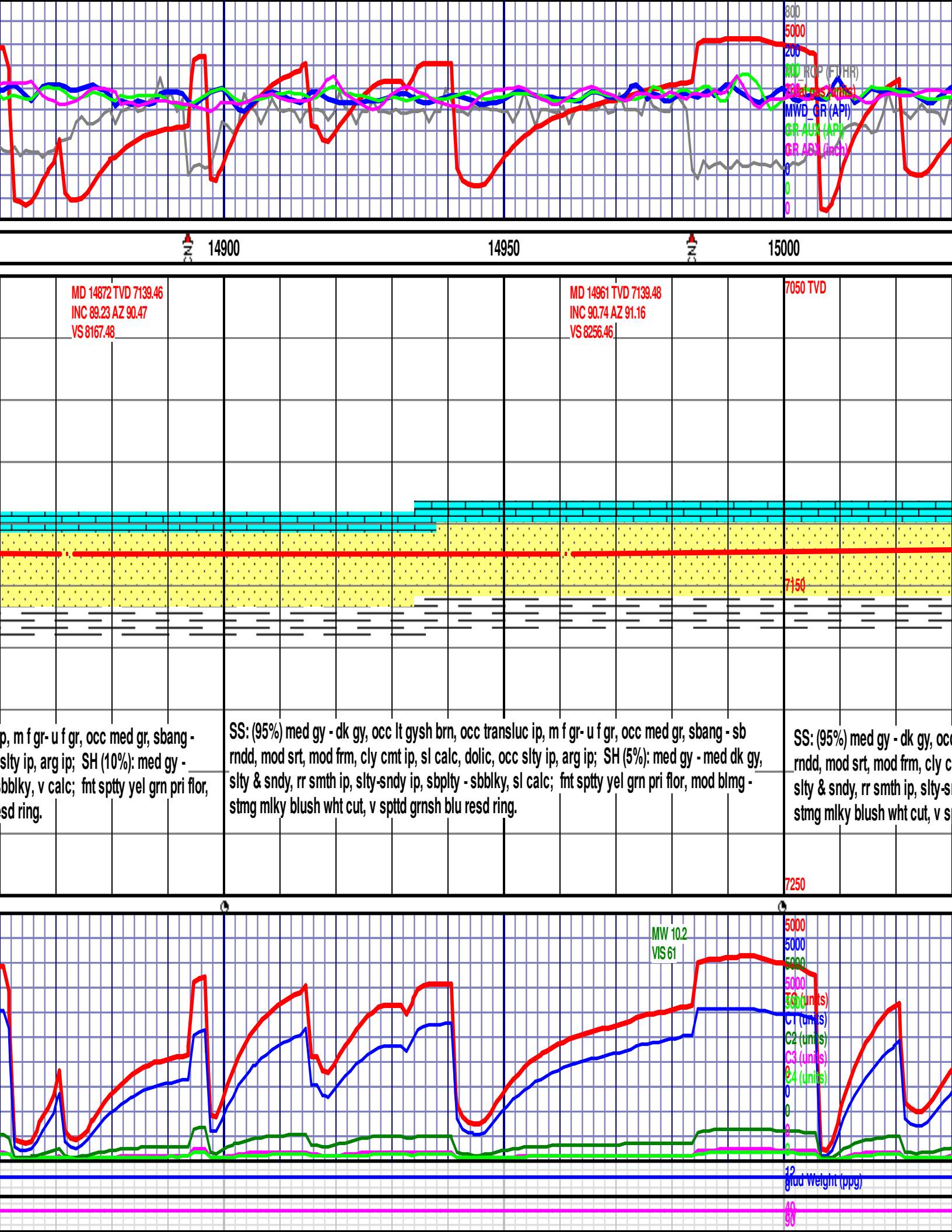

WOB 21
RPM 100
PP 4650
SPM 86/86
14050
14100
14150
MD 14067 TVD 7138.37
INC 90.28 AZ 87.21
VS 7362.9
MD 14157 TVD 7137.86
INC 90.37 AZ 87.02
VS 7452.81
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb
ndd, mod srt, mod frm, incrng dolic cmt ip, cly cmt, fri ip, sl calc, occ slty ip, arg ip; SH
0%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt
otty yel grn pri flor, mod blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ me
rndd, mod srt, mod frm, incrng dolic cmt ip, cly cmt, fri ip, sl calc, occ slty ip,
med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v ca
pri flor, mod blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
MW 10.2
VIS 61
(ppg)

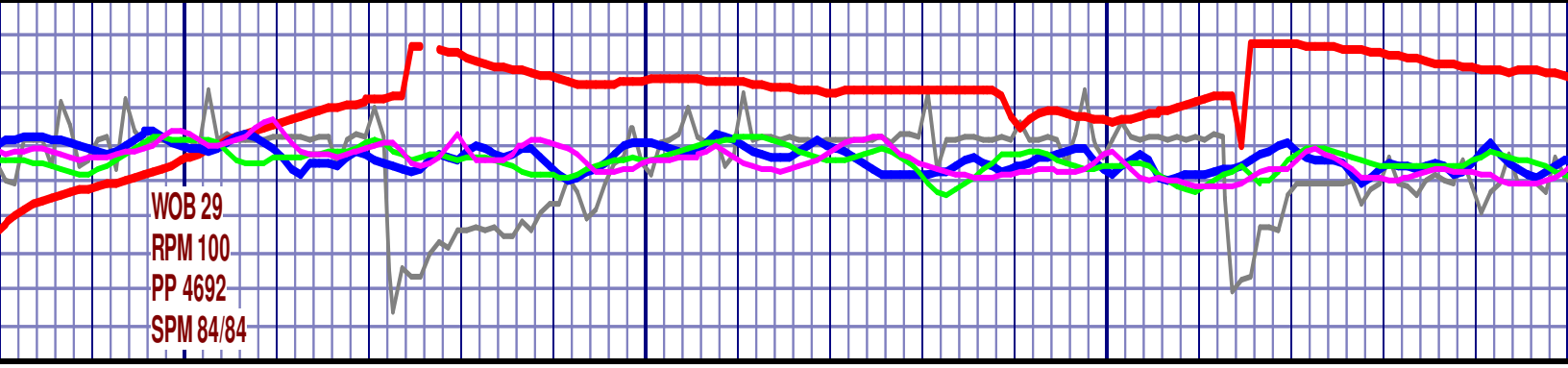

800
5000
200
200 ROP (FT/HR)
Total Gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
WOB 28
RPM 100
PP 4848
SPM 87/87
14200
14250
14300
7050 TVD
MD 14246 TVD 7137.46
INC 90.15 AZ 89.56
VS 7541.78
MD 14335 TVD 7137
INC 90.18 AZ 94.31
VS 7630.68
7150
7250
d gr, sbang - sb
arg ip; SH (10%):
lc; fnt sptty yel grn
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, v f gr- f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, incrng dolic cmt ip, cly cmt, fri ip, sl calc, occ slty ip, arg ip; SH (10%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt sptty yel grn pri flor, mod blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, occ t
rndd, mod srt, mod frm, dolic cmt ip, cly cmt ip,
gy - med dk gy, slty & sndy, rr smth ip, slty-sndy
flor, mod blmg - stmg mlky blush wht cut, v sptt
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
Mud Weight (ppg)
40
90


800
5000
200
200
ROP (FT/HR)
GR ADX (units)
GR ADX (API)
GR ADX (inch)
0
0
0
WOB .6
RPM 100
PP 3057
SPM 72/71
350
14400
14450
14500
7050 TVD
MD 145
INC 90.
VS 7809
7150
7250
ransluc ip, f gr- mod f gr, occ med gr, sbang - sb
fri ip, sl calc, occ slty ip, arg ip; SH (10%): med
ip, sbplty - sbblky, v calc; fnt sptty yel grn pri
grnsh blu resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, f gr- mod f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, olic cmt ip, cly cmt ip,fri ip, sl calc, occ slty ip, arg ip; SH (10%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt sptty yel grn pri flor, mod blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (90%) med gy
rndd, mod srt, mod
med dk gy, slty &
mod blmg - stmg
5000
5000
5000
5000
C0 (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
Mud Weight (ppg)
8
40
90

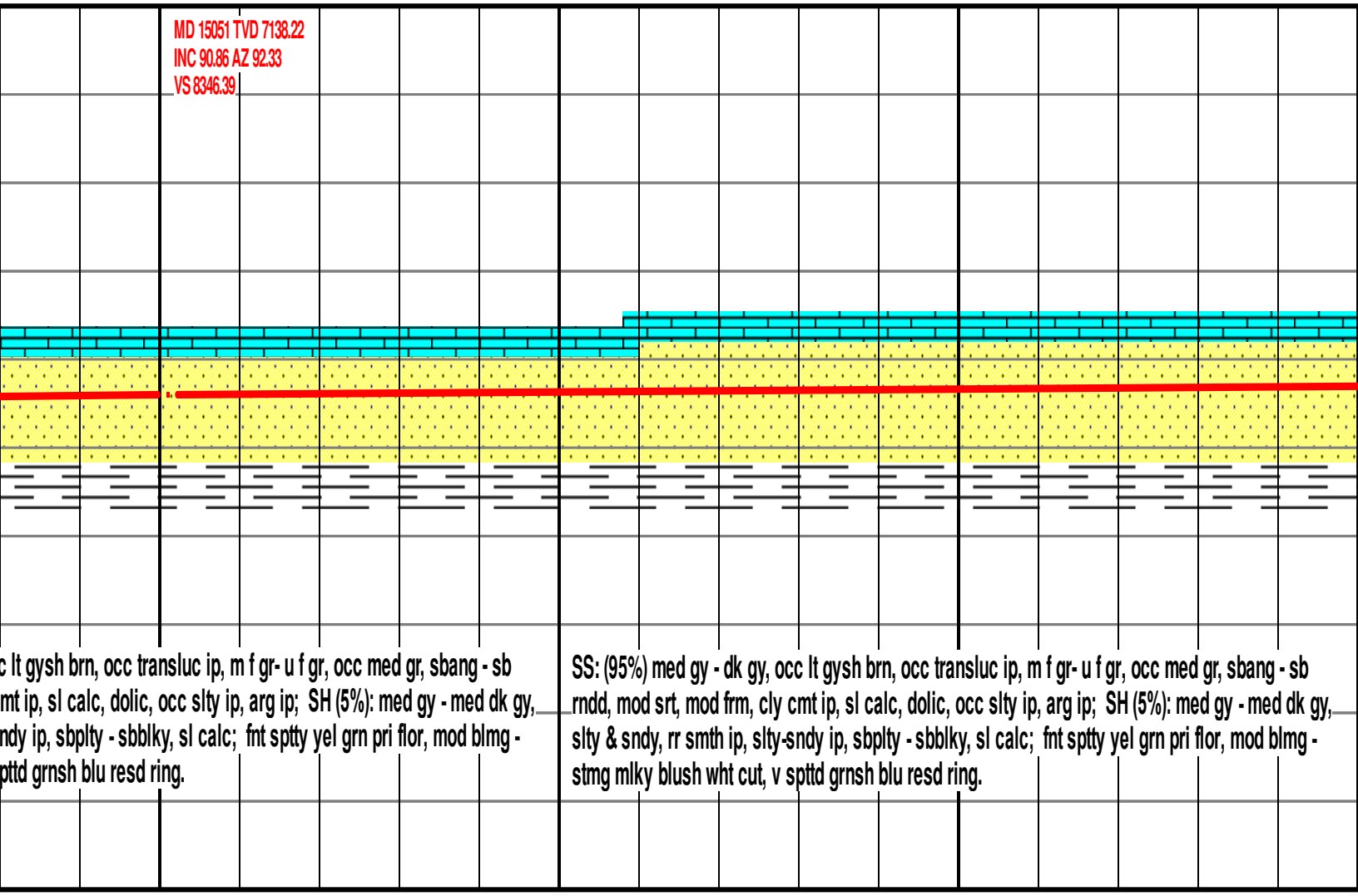

800
5000
200
ROP (FT/HR)
Total gas (units)
GR (API)
GR ADX (API)
GR ADX (mcfe)
0
0
0
WOB 23
RPM 100
PP 4347
SPM 82/81
14550
14600
14650
514 TVD 7136.06
55 AZ 88.29
9.52
MD 14604 TVD 7136.11
INC 89.38 AZ 89.46
VS 7899.51
7150
- dk gy, occ lt gysh brn, occ transluc ip, f gr- mod f gr, occ med gr, sbang - sb
d frm, olic cmt ip, cly cmt ip,fri ip, sl calc, occ slty ip, arg ip; SH (10%): med gy -
sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt sptty yel grn pri flor,
mlky blush wht cut, v sptted grnsh blu resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, m f gr- u f gr, occ med gr, sbang
rndd, mod srt, mod frm, cly cmt ip, sl calc, dolic, occ slty ip, arg ip; SH (10%): med gy - m
gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt sptty yel grn pri flor, mo
- stmg mlky blush wht cut, v sptted grnsh blu resd ring.
7250
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
Mud Weight (ppg)
90


800
5000
200
200 ROP (ft/hr)
Total Gas (units)
MWD_GR (API)
GR ADX (API)
GR ADX (inch)
0
0
0
WOB 26
RPM 100
PP 4187
SPM 80/79
14700
CN
14750
14800
CN
14850
MD 14693 TVD 7137.15
INC 89.29 AZ 89.18
VS 7988.5
7050 TVD
7150
g - sb
ed dk
od blmg
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, m f gr- u f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, cly cmt ip, sl calc, dolic, occ slty ip, arg ip; SH (10%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, v calc; fnt sptty yel grn pri flor, mod blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc i
sb rndd, mod srt, mod frm, cly cmt ip, sl calc, dolic, occ
med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - s
mod blmg - stmg mlky blush wht cut, v sptd grnsh blu re
7250
MW 10.2
VIS 60
5000
5000
5000
5000
300 (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
12
8
Mud Weight (ppg)
40
90


800
5000
200
200 ROP (FT/HR)
Total Gas (units)
MWD_GR (API)
GR AUX (API)
GR ADX (inch)
0
0
0
14900
14950
15000
MD 14872 TVD 7139.46
INC 89.23 AZ 90.47
VS 8167.48
MD 14961 TVD 7139.48
INC 90.74 AZ 91.16
VS 8256.46
7050 TVD
7150
7250
p, m f gr- u f gr, occ med gr, sbang -
slty ip, arg ip; SH (10%): med gy -
bblky, v calc; fnt sptty yel grn pri flor,
sd ring.
SS: (95%) med gy - dk gy, occ lt gysh brn, occ transluc ip, m f gr- u f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, cly cmt ip, sl calc, dolic, occ slty ip, arg ip; SH (5%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, sl calc; fnt sptty yel grn pri flor, mod blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.
SS: (95%) med gy - dk gy, occ
rndd, mod srt, mod frm, cly c
slty & sndy, rr smth ip, slty-s
stmg mlky blush wht cut, v s
MW 10.2
VIS 61
5000
5000
5000
5000
C1 (units)
C2 (units)
C3 (units)
C4 (units)
0
0
0
0
12
8
Mud Weight (ppg)
40
98

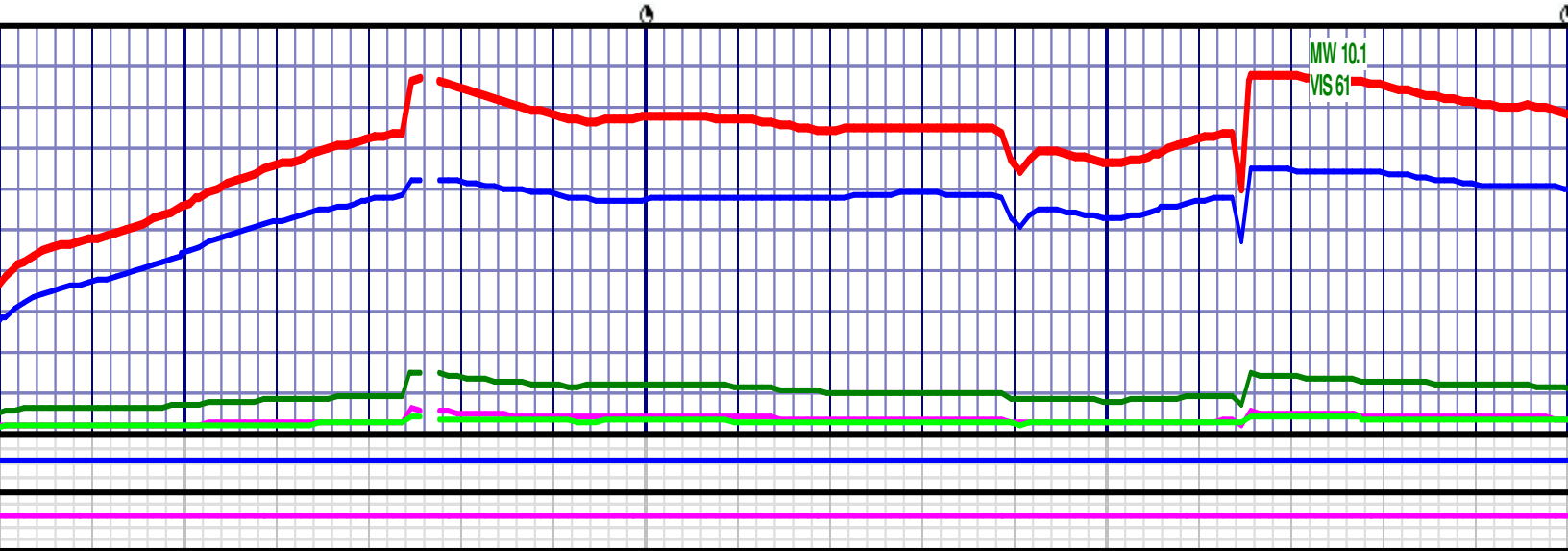


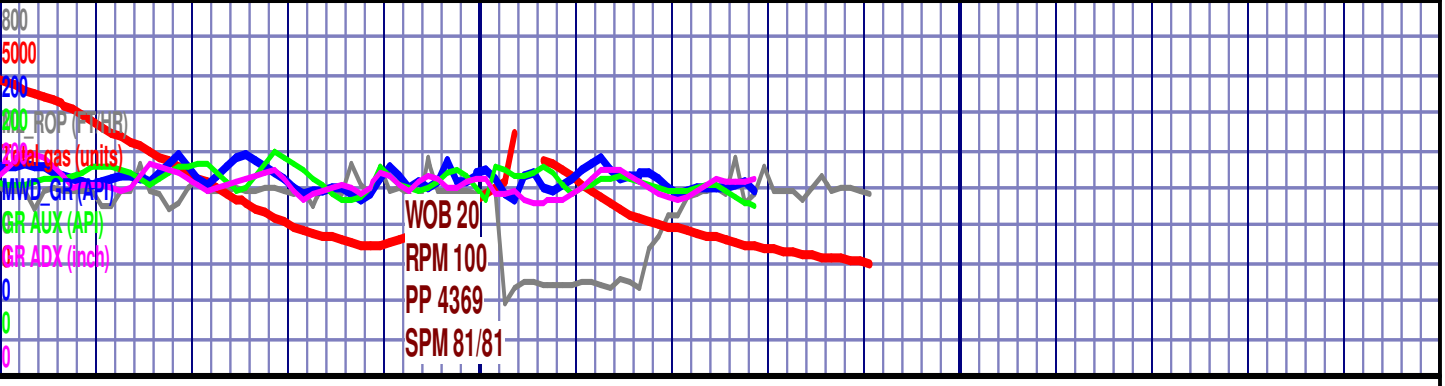
15050 15100 15150 152



c lt gysh brn, occ transluc ip, m f gr- u f gr, occ med gr, sbang - sb
mt ip, sl calc, dolic, occ slty ip, arg ip; SH (5%): med gy - med dk gy,
ndy ip, sbplty - sbblky, sl calc; fnt sptty yel grn pri flor, mod blmg -
pttd grnsh blu resd ring.

SS: (95%) med gy - dk gy, occ lt gysh brn, occ transluc ip, m f gr- u f gr, occ med gr, sbang - sb
rndd, mod srt, mod frm, cly cmt ip, sl calc, dolic, occ slty ip, arg ip; SH (5%): med gy - med dk gy,
slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, sl calc; fnt sptty yel grn pri flor, mod blmg -
stmg mlky blush wht cut, v sptted grnsh blu resd ring.





200 15250 15300 15

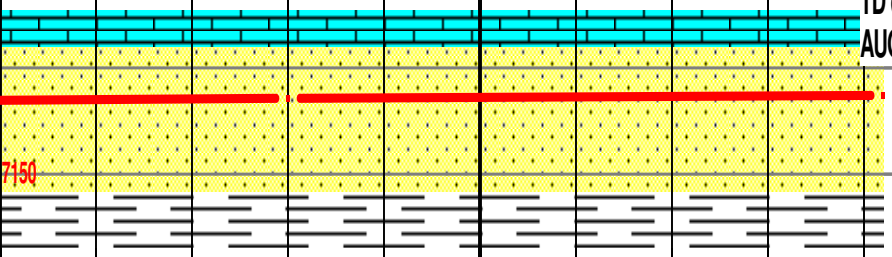
7050 TVD

MD 15230 TVD 7135.96
INC 90.59 AZ 96.81
VS 8524.67

MD 15292 TVD 7135.32
INC 90.59 AZ 96.81
VS 8586.18

BIT #2, 8.5", BAKER, ATD505T, JETS 8x15, SN#: 5287079, ROTARY STEERABLE DIRECTIONAL BHA, IN @ 1,851', ON 8/24/18, OUT @ 15,292' DRILLED 13,441' IN 42.2 BIT HR.

TD @ 15292' ON AUG. 27/18, 0840 HR.



7150

FORMATION TOP's

	MD	TVD	SSD
Sharon Springs	7163'	6826'	-2082'
Niobrara A Chalk	7196'	6855'	-2111'
Niobrara B Chalk	7365'	6987'	-2243'
Niobrara C Chalk	7477'	7059'	-2315'
Ft Hays	7640'	7135'	-2391'
Codell	7733'	7161'	-2417'
Target Heel	7845'	7175'	-2431'
Target Toe	15292'	7135'	-2391'

SS: (90%) med gy - dk gy, occ lt gysh brn, occ transluc ip, m f gr- u f gr, occ med gr, sbang - sb rndd, mod srt, mod frm, cly cmt ip, sl calc, dolic, occ slty ip, arg ip; SH (10%): med gy - med dk gy, slty & sndy, rr smth ip, slty-sndy ip, sbplty - sbblky, sl calc; fnt sptty yel grn pri flor, mod blmg - stmg mlky blush wht cut, v sptd grnsh blu resd ring.

THANK YOU
GOOLSBY BROTHERS & ASSOC. INC

7250