BLANCO

Geological Services LLC

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

Well Name:	**Winters 8-33-1**		
Location:	**Sec.08, T32S,R63W Las Animas County, CO**		
Licence Number:	**05-071-09461-00**	**Region:**	**Wildcat**
Spud Date:	**01/24/2008**	**Drilling Completed:**	**02/13/08**
Surface Coordinates:	**2475' FSL & 2226' FEL**		
Bottom Hole Coordinates:			
Ground Elevation (ft):		**K.B. Elevation (ft):**	
Logged Interval (ft):	**530' To: 5000**	**Total Depth (ft):**	**5000**
Formation:	**Pierre, Dakota, Morrison, Chinle, Glorieta, Sangre DeCristo**		
Type of Drilling Fluid:	**mud/Gel**		

OPERATOR

Company: **OWTS (USA), Inc.**
Address: **P.O. Box 265 85**
CY-1640
Nicosia Cyprus

GEOLOGIST

Name: **Leonardo Carrasco.**
Company: **Blanco Geological Services L.L.C.**
Address: **806 Robinson Avenue**
Trinidad, CO 81082
719-846-3364

General

Excell Rig #36

Lat: 39.xxxxx N
Long: 108.xxxxx W

Lease # xxxxxx

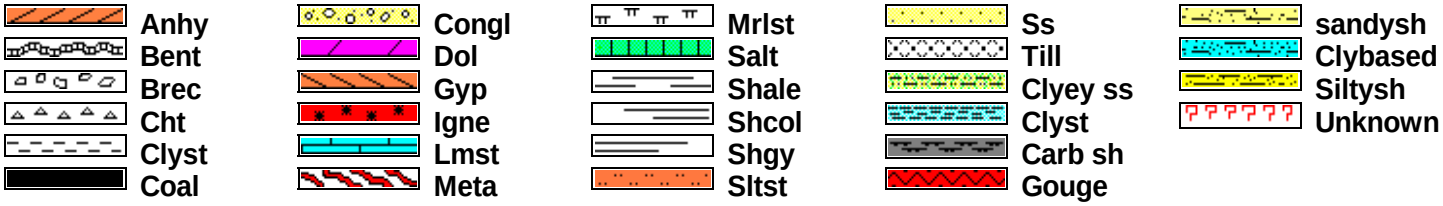
Equipment

Mudlogging Systems, Inc.
Model TGC Gas Detector and Chromatograph
Serial # ML 303

Casing

8 5/8"@ 517'

ROCK TYPES



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
- Fracfill
- lmst

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite
- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg
- Shale
- Clyst

TEXTURE

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

OTHER SYMBOLS

POROSITY TYPE

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

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

OIL SHOWS

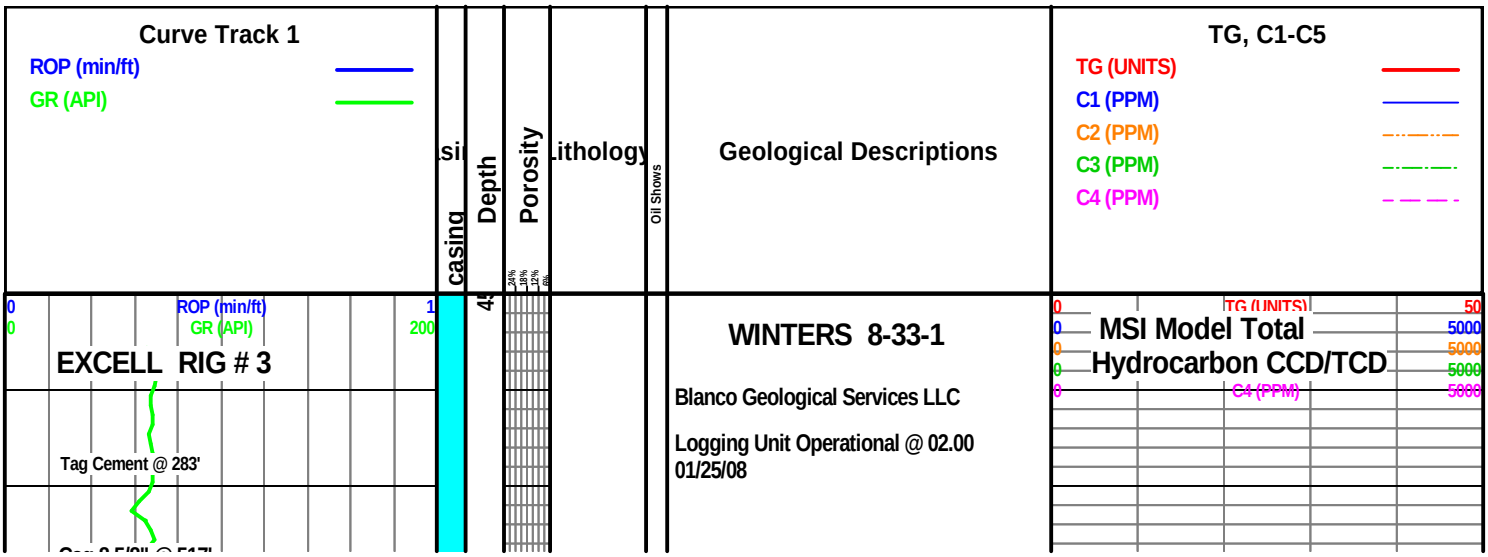
- Even
- Spotted
- Ques
- Dead
- Gashow

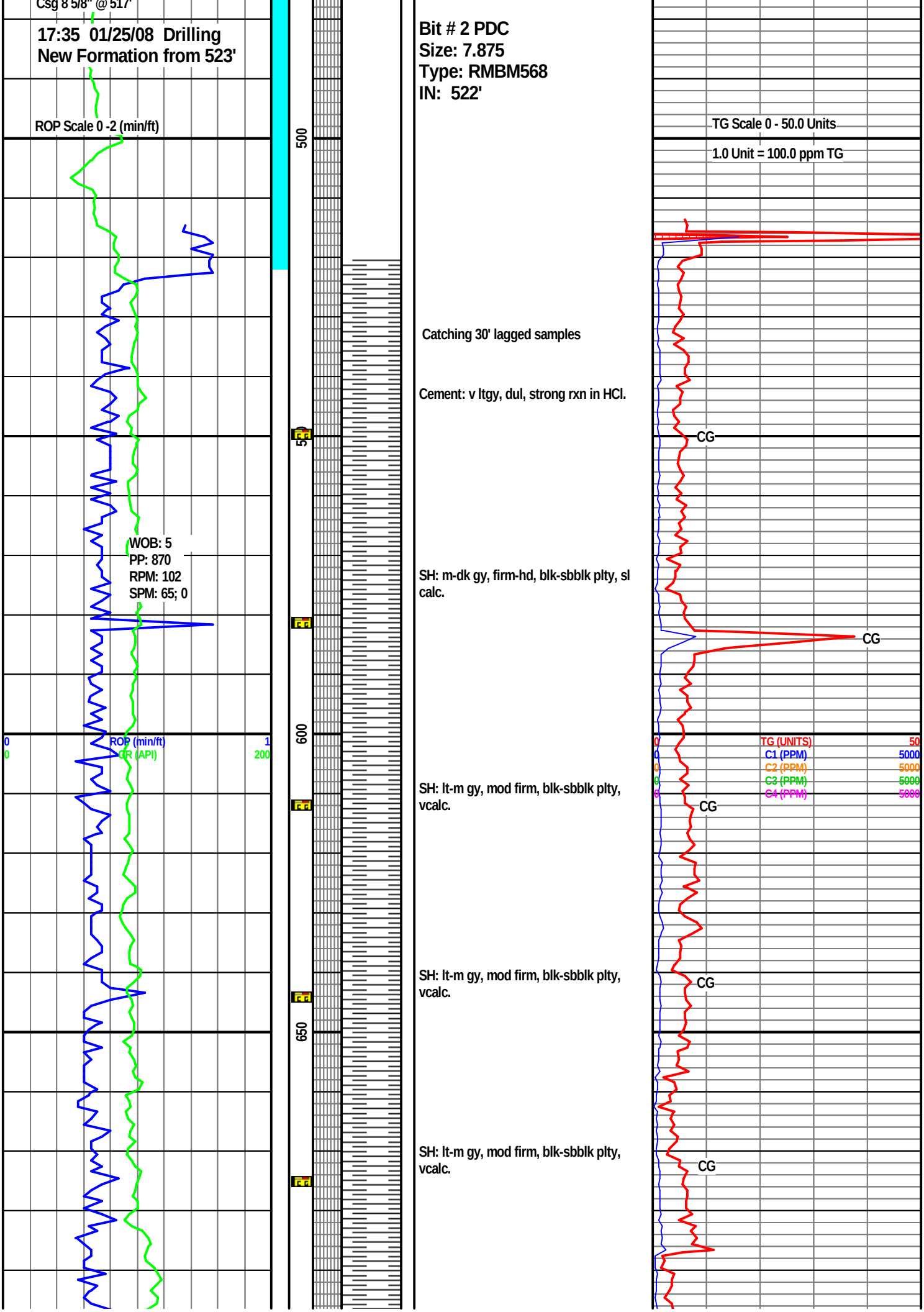
INTERVALS

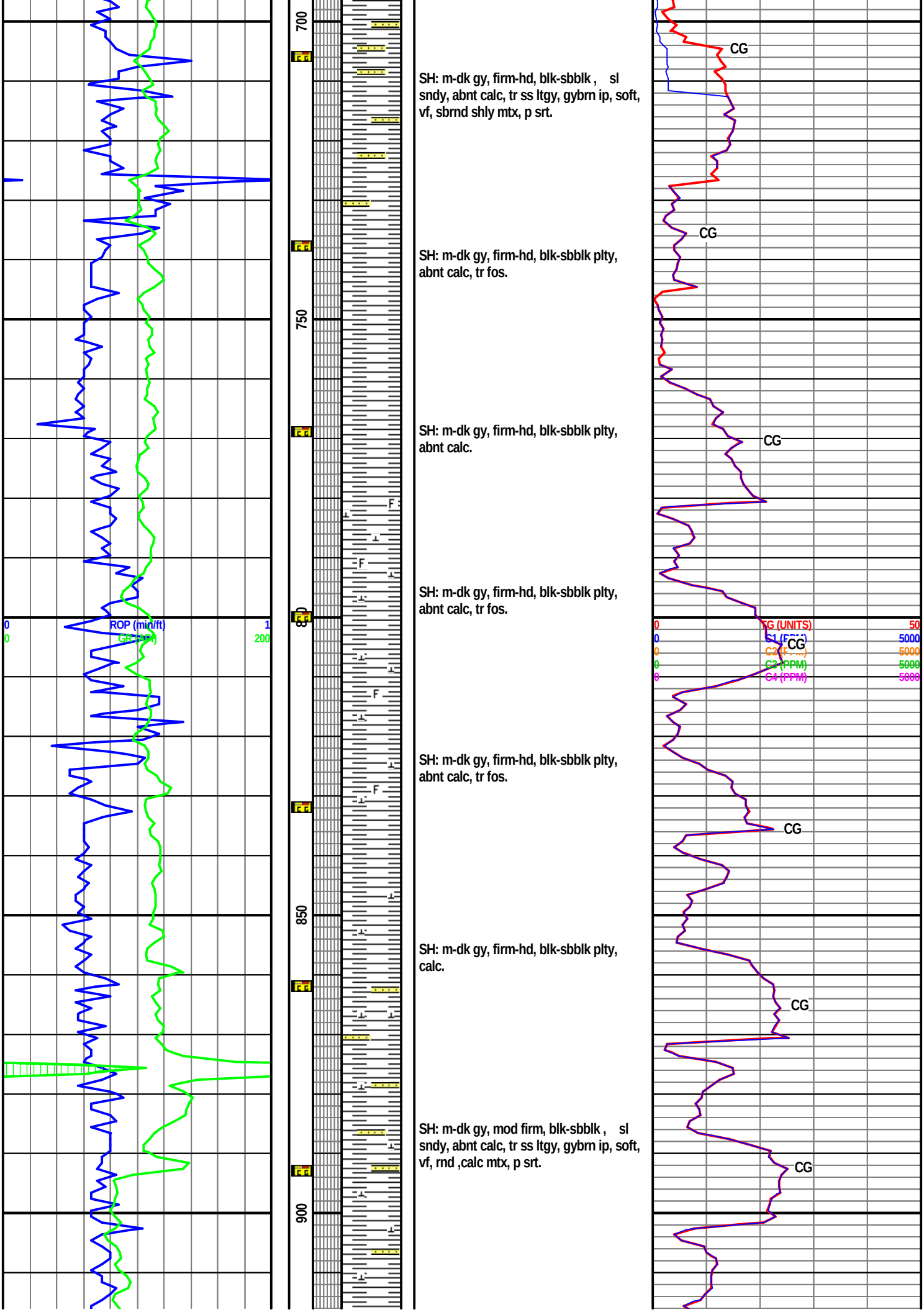
- Core
- Dst
- Sliding

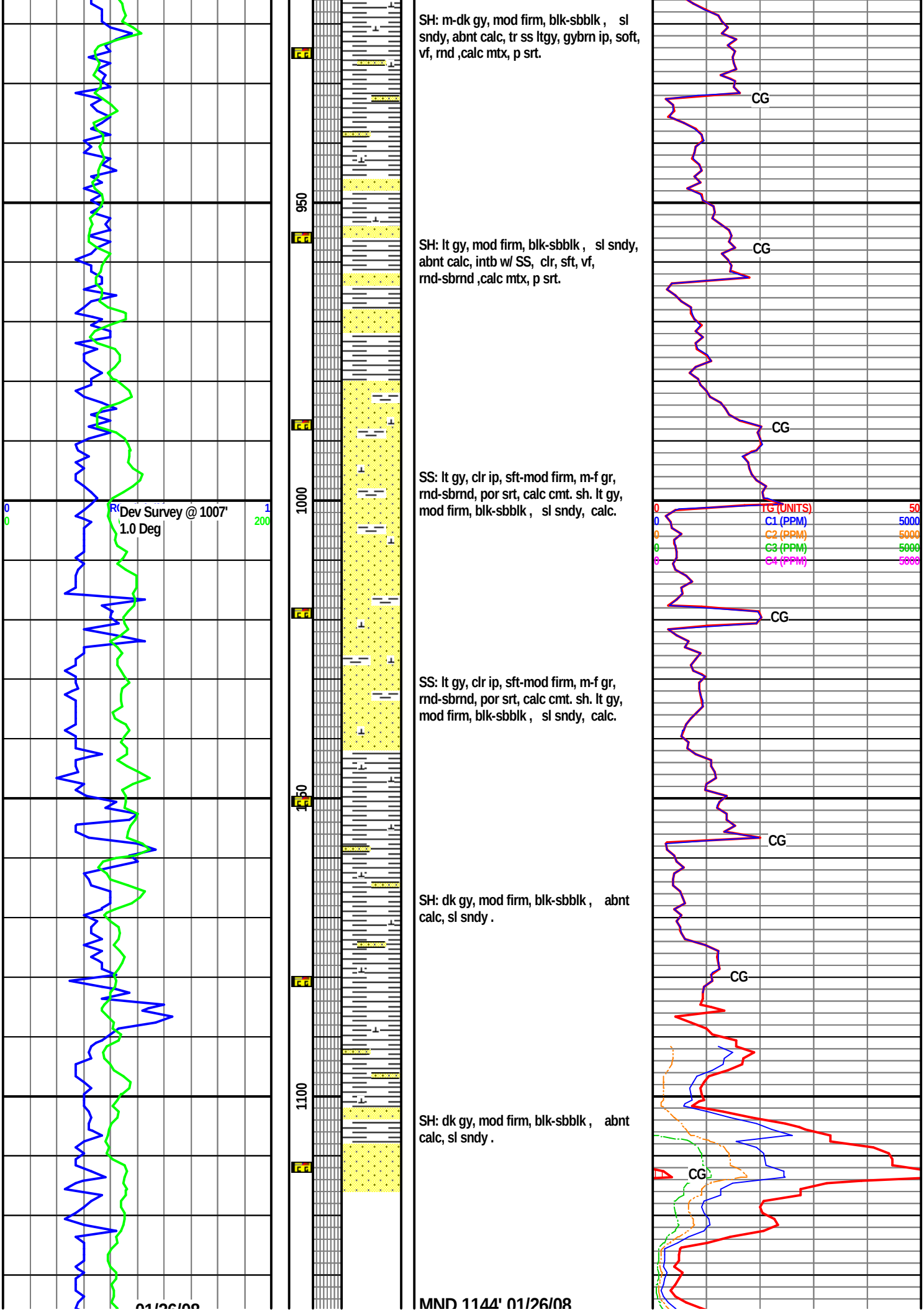
EVENTS

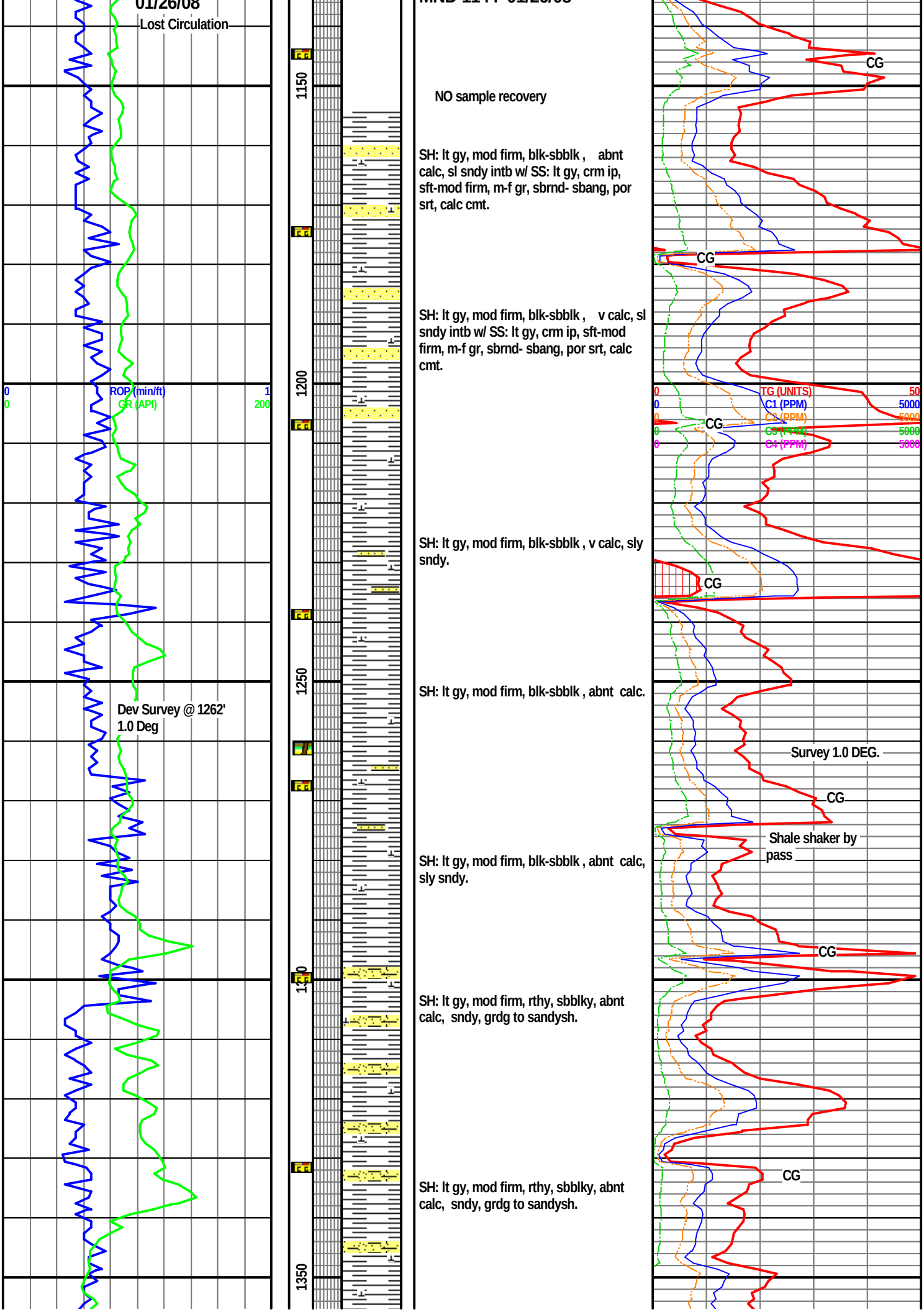
- Rft
- Sidewall
- Fracture
- Tops
- Fracfill
- Bit trip
- arrow
- 00hrs
- Conngas
- Survey

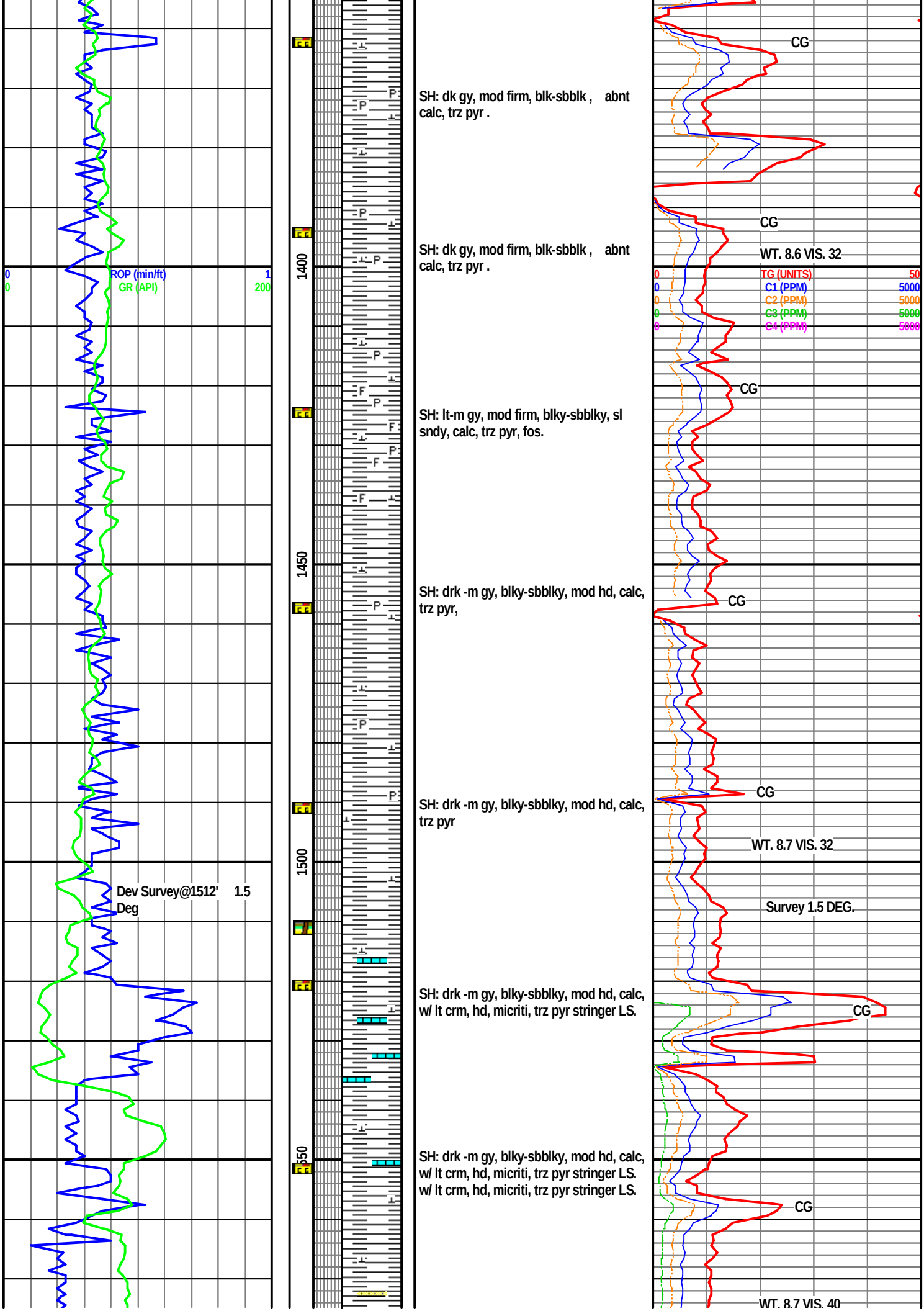


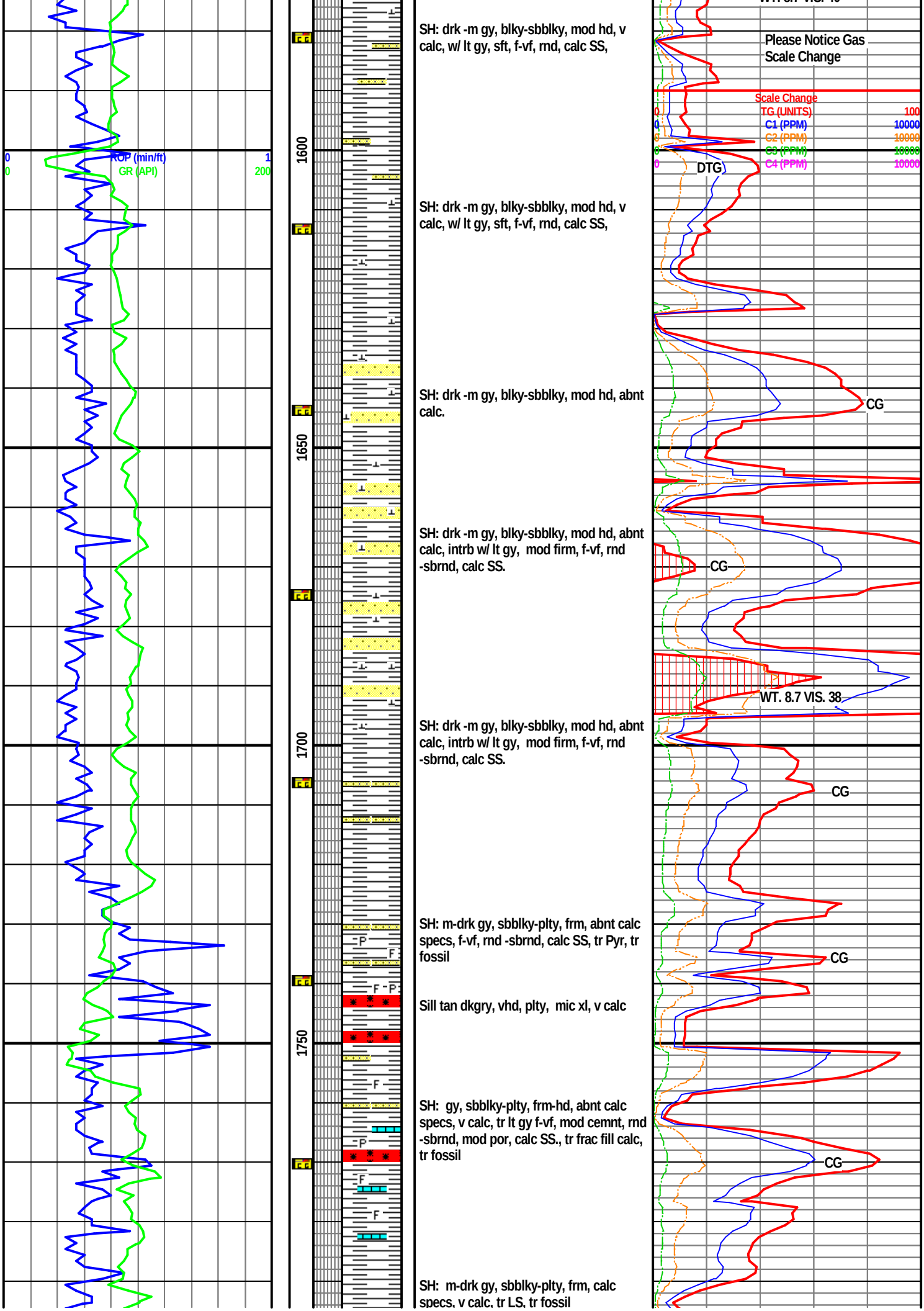

Csg 8 5/8" @ 517'
17:35 01/25/08 Drilling
New Formation from 523'
ROP Scale 0 -2 (min/ft)
WOB: 5
PP: 870
RPM: 102
SPM: 65; 0
0
ROP (min/ft)
1
0
GR (API)
200
500
550
600
650
Bit # 2 PDC
Size: 7.875
Type: RMBM568
IN: 522'
TG Scale 0 - 50.0 Units
1.0 Unit = 100.0 ppm TG
Catching 30' lagged samples
Cement: v ltgy, dul, strong rxn in HCl.
CG
SH: m-dk gy, firm-hd, blk-sbblk plty, sl calc.
CG
0
TG (UNITS)
50
0
C1 (PPM)
5000
0
C2 (PPM)
5000
0
C3 (PPM)
5000
0
C4 (PPM)
5000
SH: lt-m gy, mod firm, blk-sbblk plty, vcalc.
CG
SH: lt-m gy, mod firm, blk-sbblk plty, vcalc.
CG
SH: lt-m gy, mod firm, blk-sbblk plty, vcalc.
CG

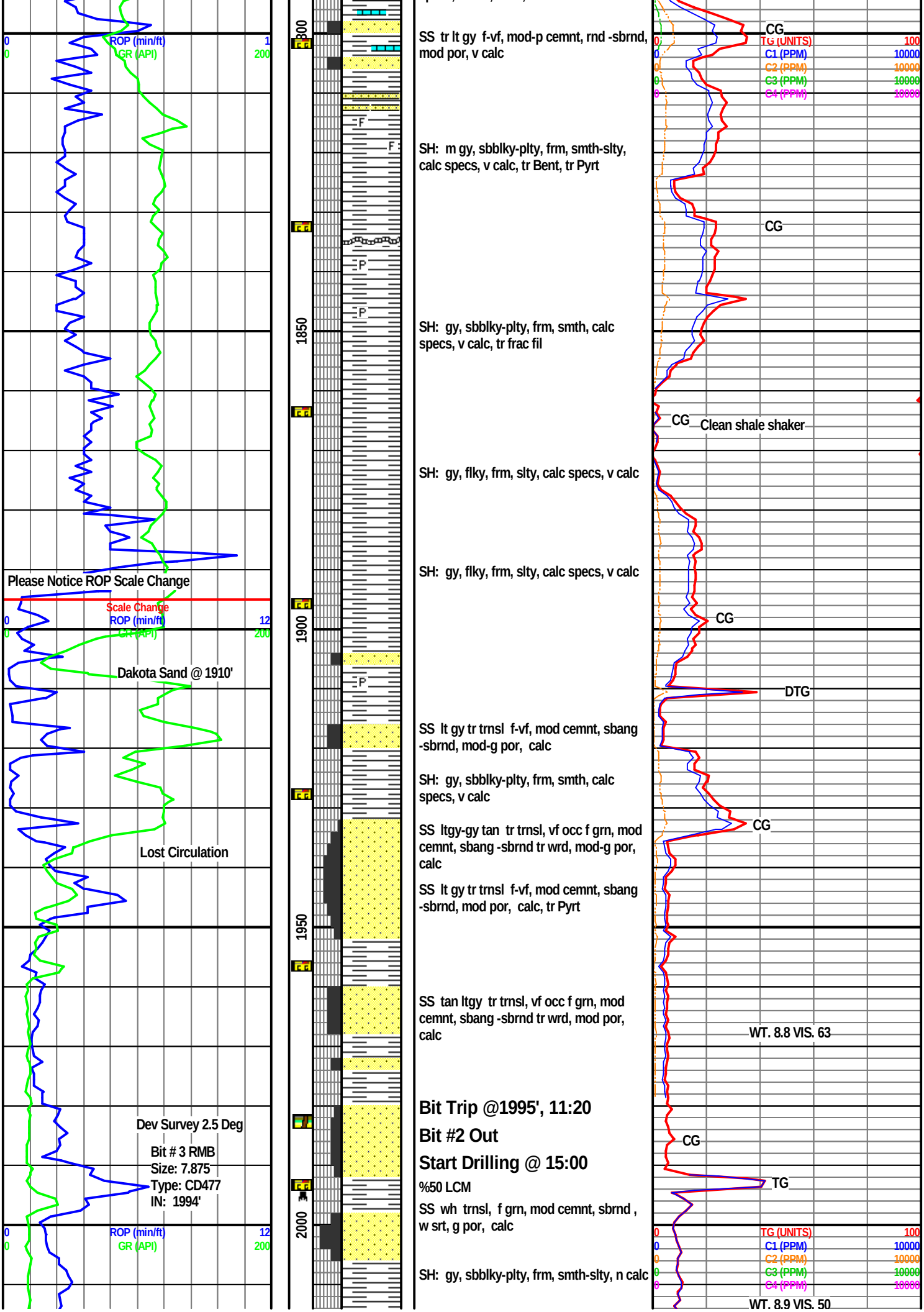

0
ROP (min/ft)
1
0
GR (API)
200
700
750
800
850
900
SH: m-dk gy, firm-hd, blk-sbblk , sl sndy, abnt calc, tr ss ltgy, gybrn ip, soft, vf, sbrnd shly mtx, p srt.
SH: m-dk gy, firm-hd, blk-sbblk plty, abnt calc, tr fos.
SH: m-dk gy, firm-hd, blk-sbblk plty, abnt calc.
SH: m-dk gy, firm-hd, blk-sbblk plty, abnt calc, tr fos.
SH: m-dk gy, firm-hd, blk-sbblk plty, abnt calc, tr fos.
SH: m-dk gy, firm-hd, blk-sbblk plty, calc.
SH: m-dk gy, mod firm, blk-sbblk , sl sndy, abnt calc, tr ss ltgy, gybrn ip, soft, vf, rnd ,calc mtx, p srt.
CG
CG
CG
CG
CG
CG
CG
0
TG (UNITS)
50
0
C1 (PPM)
5000
0
C2 (PPM)
5000
0
C3 (PPM)
5000
0
C4 (PPM)
5000

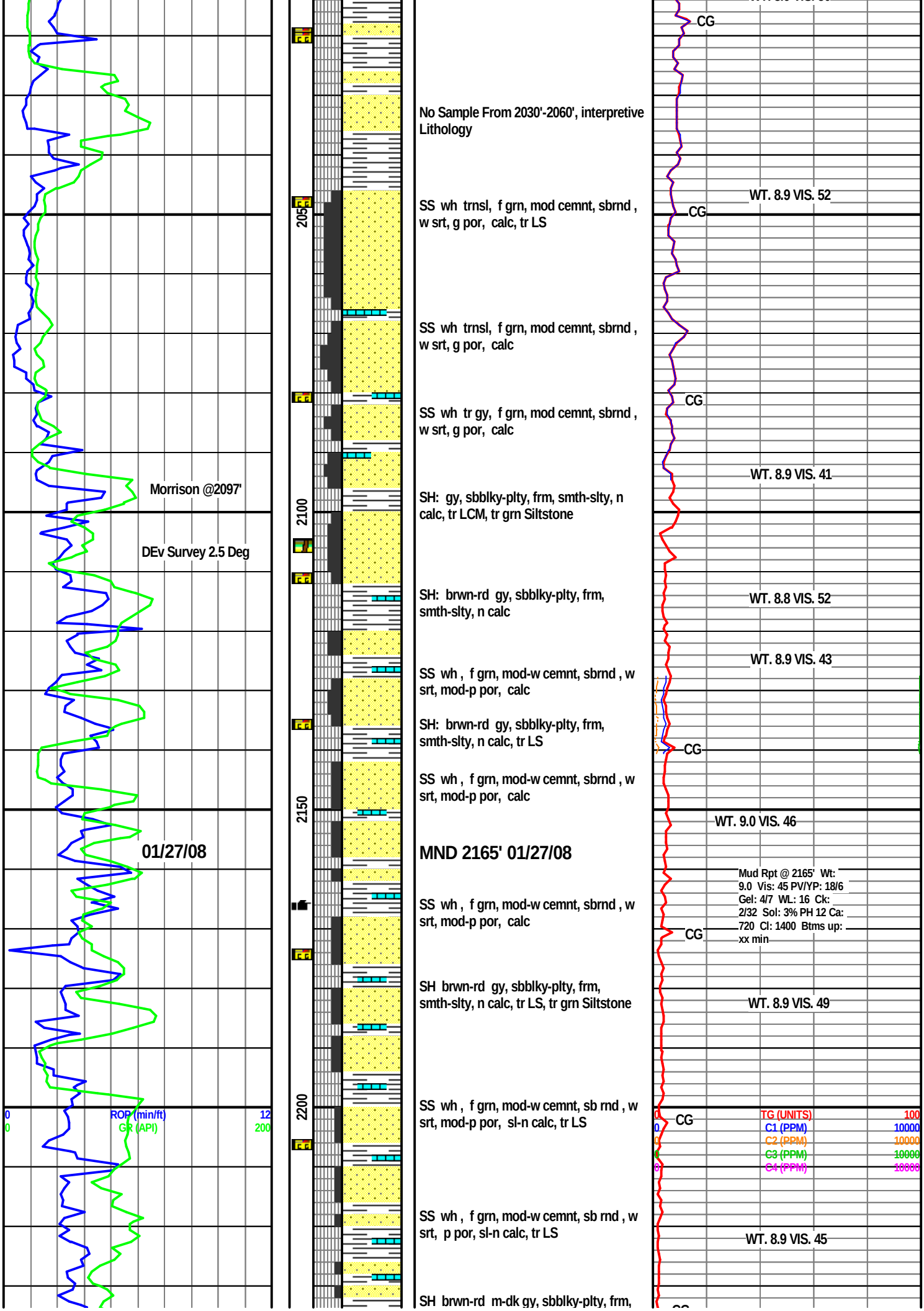

SH: m-dk gy, mod firm, blk-sbblk , sl sndy, abnt calc, tr ss ltgy, gybrn ip, soft, vf, rnd ,calc mtx, p srt.
SH: lt gy, mod firm, blk-sbblk , sl sndy, abnt calc, intb w/ SS, clr, sft, vf, rnd-sbrnd ,calc mtx, p srt.
SS: lt gy, clr ip, sft-mod firm, m-f gr, rnd-sbrnd, por srt, calc cmt. sh. lt gy, mod firm, blk-sbblk , sl sndy, calc.
SS: lt gy, clr ip, sft-mod firm, m-f gr, rnd-sbrnd, por srt, calc cmt. sh. lt gy, mod firm, blk-sbblk , sl sndy, calc.
SH: dk gy, mod firm, blk-sbblk , abnt calc, sl sndy .
SH: dk gy, mod firm, blk-sbblk , abnt calc, sl sndy .
Dev Survey @ 1007'
1.0 Deg
950
1000
1050
1100
TG (UNITS)
C1 (PPM)
C2 (PPM)
C3 (PPM)
C4 (PPM)
CG
MND 1144' 01/26/08

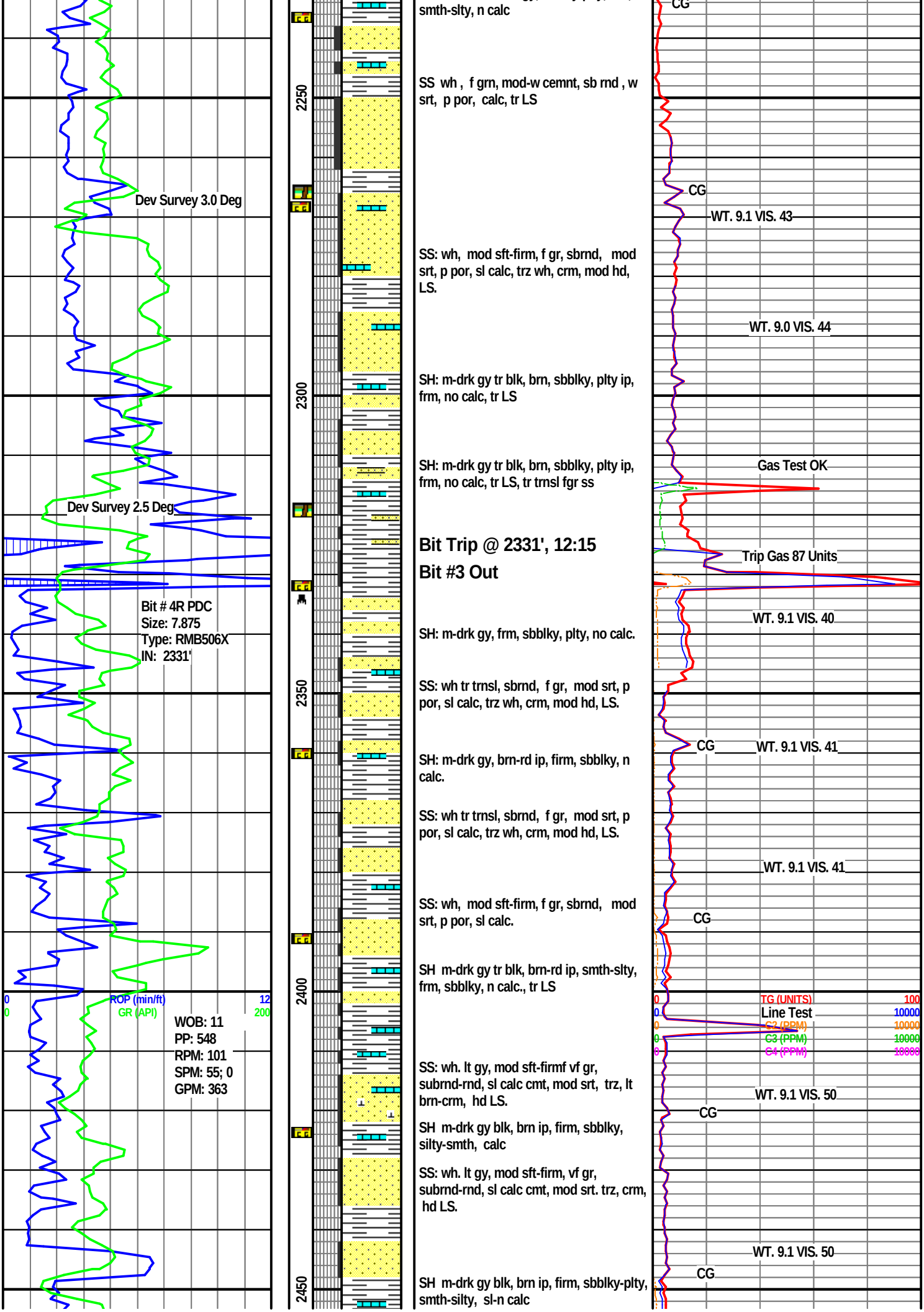

01/26/08
Lost Circulation
0
ROP (min/ft)
1
0
GR (API)
200
Dev Survey @ 1262'
1.0 Deg
1150
1200
1250
1300
1350
NO sample recovery
SH: lt gy, mod firm, blk-sbblk , abnt calc, sl sndy intb w/ SS: lt gy, crm ip, sft-mod firm, m-f gr, sbrnd- sbang, por srt, calc cmt.
SH: lt gy, mod firm, blk-sbblk , v calc, sl sndy intb w/ SS: lt gy, crm ip, sft-mod firm, m-f gr, sbrnd- sbang, por srt, calc cmt.
SH: lt gy, mod firm, blk-sbblk , v calc, sly sndy.
SH: lt gy, mod firm, blk-sbblk , abnt calc.
SH: lt gy, mod firm, blk-sbblk , abnt calc, sly sndy.
SH: lt gy, mod firm, rthy, sbblky, abnt calc, sndy, grdg to sandysh.
SH: lt gy, mod firm, rthy, sbblky, abnt calc, sndy, grdg to sandysh.
TG (UNITS)
50
C1 (PPM)
5000
C2 (PPM)
5000
C3 (PPM)
5000
C4 (PPM)
5000
CG
Survey 1.0 DEG.
Shale shaker by pass

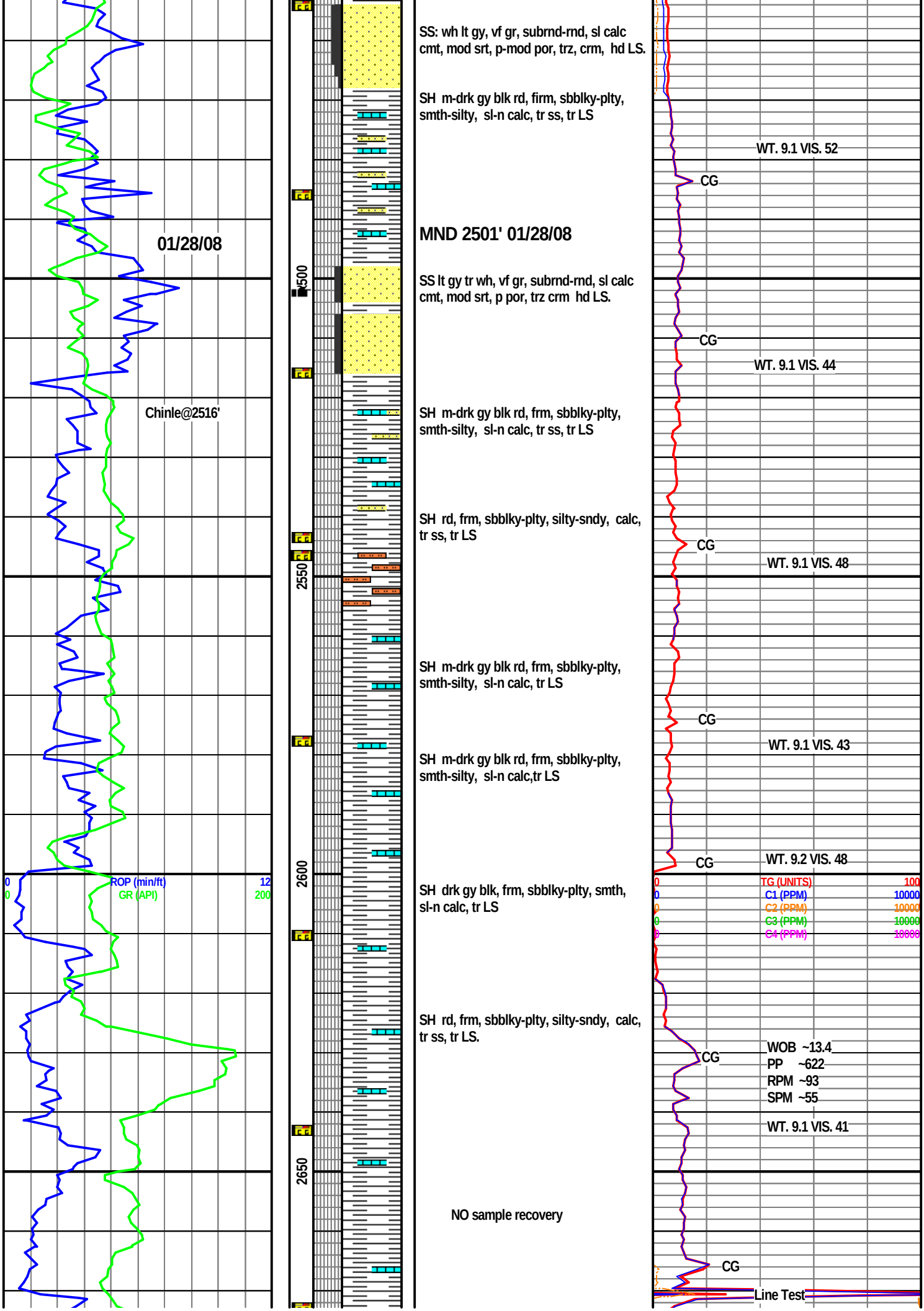

0
ROP (min/ft)
1
0
GR (API)
200
1400
1450
1500
1550
Dev Survey@1512' 1.5 Deg
SH: dk gy, mod firm, blk-sbblk , abnt calc, trz pyr .
SH: dk gy, mod firm, blk-sbblk , abnt calc, trz pyr .
SH: lt-m gy, mod firm, blky-sbblky, sl sndy, calc, trz pyr, fos.
SH: drk -m gy, blky-sbblky, mod hd, calc, trz pyr,
SH: drk -m gy, blky-sbblky, mod hd, calc, trz pyr
SH: drk -m gy, blky-sbblky, mod hd, calc, w/ lt crm, hd, micriti, trz pyr stringer LS.
SH: drk -m gy, blky-sbblky, mod hd, calc, w/ lt crm, hd, micriti, trz pyr stringer LS.
w/ lt crm, hd, micriti, trz pyr stringer LS.
CG
CG
CG
CG
CG
CG
CG
CG
WT. 8.6 VIS. 32
WT. 8.7 VIS. 32
Survey 1.5 DEG.
WT. 8.7 VIS. 40
0
TG (UNITS)
50
0
C1 (PPM)
5000
0
C2 (PPM)
5000
0
C3 (PPM)
5000
0
C4 (PPM)
5000

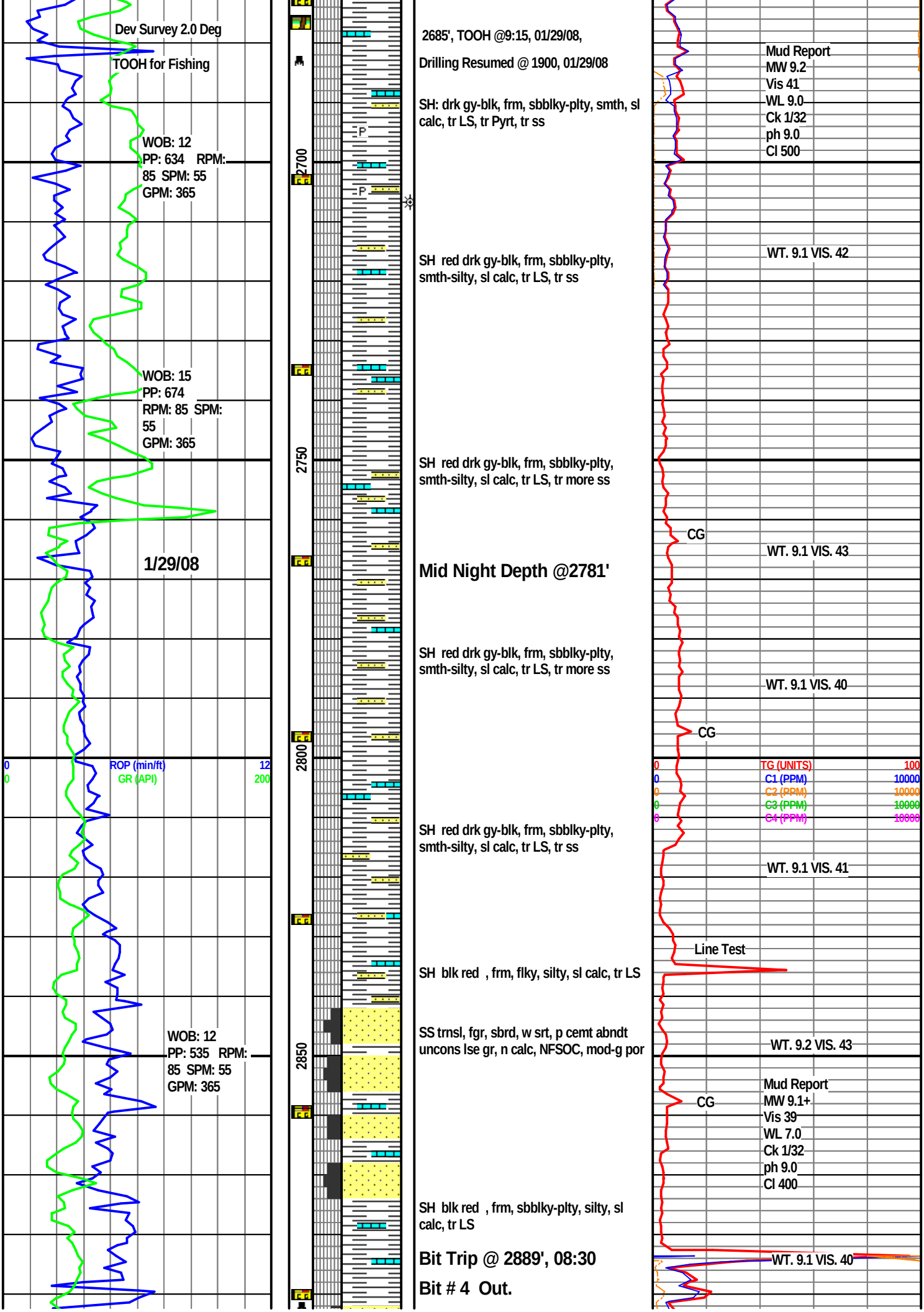

0
ROP (min/ft)
1
0
GR (API)
200
1600
1650
1700
1750
SH: drk -m gy, blky-sbblky, mod hd, v calc, w/ lt gy, sft, f-vf, rnd, calc SS,
SH: drk -m gy, blky-sbblky, mod hd, v calc, w/ lt gy, sft, f-vf, rnd, calc SS,
SH: drk -m gy, blky-sbblky, mod hd, abnt calc.
SH: drk -m gy, blky-sbblky, mod hd, abnt calc, intrb w/ lt gy, mod firm, f-vf, rnd -sbrnd, calc SS.
SH: drk -m gy, blky-sbblky, mod hd, abnt calc, intrb w/ lt gy, mod firm, f-vf, rnd -sbrnd, calc SS.
SH: m-drk gy, sbblky-plty, frm, abnt calc specs, f-vf, rnd -sbrnd, calc SS, tr Pyr, tr fossil
Sill tan dkgry, vhd, plty, mic xl, v calc
SH: gy, sbblky-plty, frm-hd, abnt calc specs, v calc, tr lt gy f-vf, mod cemnt, rnd -sbrnd, mod por, calc SS., tr frac fill calc, tr fossil
SH: m-drk gy, sbblky-plty, frm, calc specs, v calc, tr LS, tr fossil
Please Notice Gas Scale Change
Scale Change
TG (UNITS)
100
C1 (PPM)
10000
C2 (PPM)
10000
C3 (PPM)
10000
C4 (PPM)
10000
DTG
CG
CG
WT. 8.7 VIS. 38
CG
CG
CG

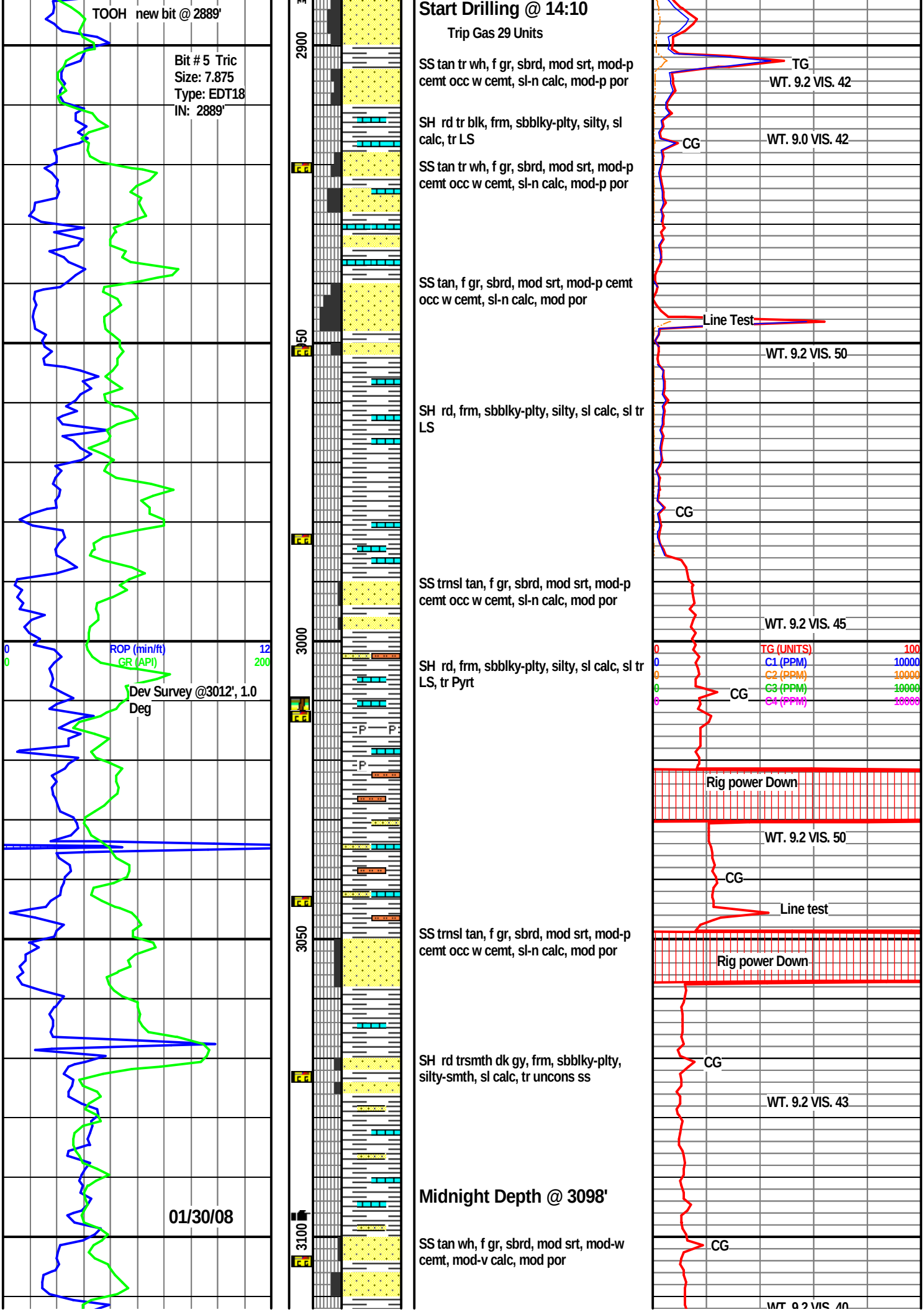

0
ROP (min/ft)
1
0
GR (API)
200
Please Notice ROP Scale Change
Scale Change
0
ROP (min/ft)
12
0
GR (API)
200
Dakota Sand @ 1910'
Lost Circulation
Dev Survey 2.5 Deg
Bit # 3 RMB
Size: 7.875
Type: CD477
IN: 1994'
0
ROP (min/ft)
12
0
GR (API)
200
1800
1850
1900
1950
2000
F
F
P
P
P
SS tr lt gy f-vf, mod-p cemnt, rnd -sbrnd, mod por, v calc
SH: m gy, sbblky-plty, frm, smth-slty, calc specs, v calc, tr Bent, tr Pyrt
SH: gy, sbblky-plty, frm, smth, calc specs, v calc, tr frac fil
SH: gy, flky, frm, slty, calc specs, v calc
SH: gy, flky, frm, slty, calc specs, v calc
SS lt gy tr trnsl f-vf, mod cemnt, sbang -sbrnd, mod-g por, calc
SH: gy, sbblky-plty, frm, smth, calc specs, v calc
SS ltgy-gy tan tr trnsl, vf occ f grn, mod cemnt, sbang -sbrnd tr wrd, mod-g por, calc
SS lt gy tr trnsl f-vf, mod cemnt, sbang -sbrnd, mod por, calc, tr Pyrt
SS tan ltgy tr trnsl, vf occ f grn, mod cemnt, sbang -sbrnd tr wrd, mod por, calc
Bit Trip @1995', 11:20
Bit #2 Out
Start Drilling @ 15:00
%50 LCM
SS wh trnsl, f grn, mod cemnt, sbrnd , w srt, g por, calc
SH: gy, sbblky-plty, frm, smth-slty, n calc
CG
0
TG (UNITS)
100
0
C1 (PPM)
10000
0
C2 (PPM)
10000
0
C3 (PPM)
10000
0
C4 (PPM)
10000
CG
CG
Clean shale shaker
CG
DTG
CG
WT. 8.8 VIS. 63
CG
TG
0
TG (UNITS)
100
0
C1 (PPM)
10000
0
C2 (PPM)
10000
0
C3 (PPM)
10000
0
C4 (PPM)
10000
WT. 8.9 VIS. 50

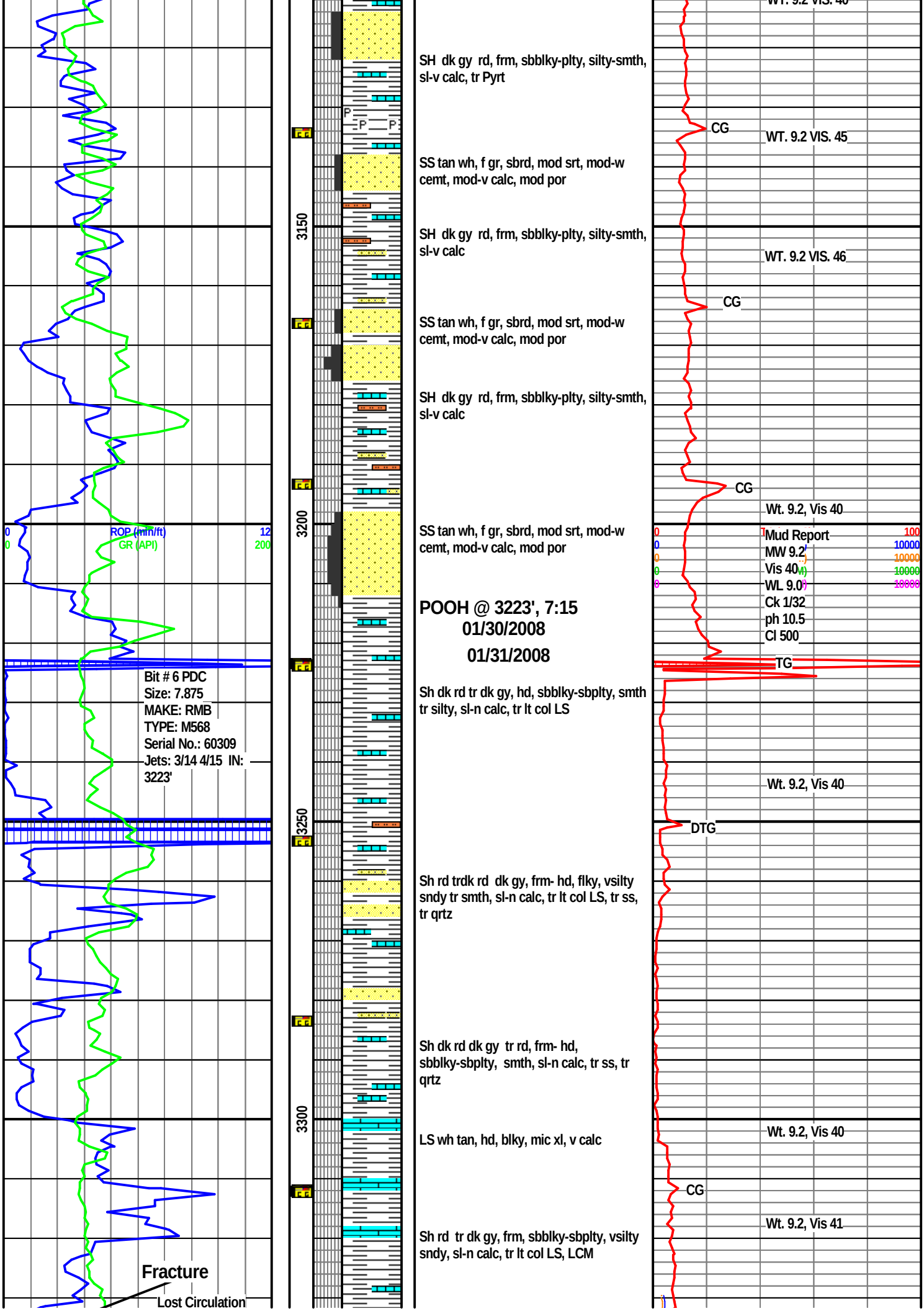

Morrison @2097'
DEv Survey 2.5 Deg
01/27/08
0
ROP (min/ft)
12
0
GR (API)
200
2050
2100
2150
2200
No Sample From 2030'-2060', interpretive Lithology
SS wh trnsl, f grn, mod cemnt, sbrnd , w srt, g por, calc, tr LS
SS wh trnsl, f grn, mod cemnt, sbrnd , w srt, g por, calc
SS wh tr gy, f grn, mod cemnt, sbrnd , w srt, g por, calc
SH: gy, sbblky-plty, frm, smth-slty, n calc, tr LCM, tr grn Siltstone
SH: brwn-rd gy, sbblky-plty, frm, smth-slty, n calc
SS wh , f grn, mod-w cemnt, sbrnd , w srt, mod-p por, calc
SH: brwn-rd gy, sbblky-plty, frm, smth-slty, n calc, tr LS
SS wh , f grn, mod-w cemnt, sbrnd , w srt, mod-p por, calc
MND 2165' 01/27/08
SS wh , f grn, mod-w cemnt, sbrnd , w srt, mod-p por, calc
SH brwn-rd gy, sbblky-plty, frm, smth-slty, n calc, tr LS, tr grn Siltstone
SS wh , f grn, mod-w cemnt, sb rnd , w srt, mod-p por, sl-n calc, tr LS
SS wh , f grn, mod-w cemnt, sb rnd , w srt, p por, sl-n calc, tr LS
SH brwn-rd m-dk gy, sbblky-plty, frm,
CG
WT. 8.9 VIS. 52
CG
CG
WT. 8.9 VIS. 41
WT. 8.8 VIS. 52
WT. 8.9 VIS. 43
CG
WT. 9.0 VIS. 46
Mud Rpt @ 2165' Wt: 9.0 Vis: 45 PV/YP: 18/6 Gel: 4/7 WL: 16 Ck: 2/32 Sol: 3% PH 12 Ca: 720 Cl: 1400 Btms up: xx min
CG
WT. 8.9 VIS. 49
0
CG
TG (UNITS)
100
0
C1 (PPM)
10000
0
C2 (PPM)
10000
0
C3 (PPM)
10000
0
C4 (PPM)
10000
WT. 8.9 VIS. 45

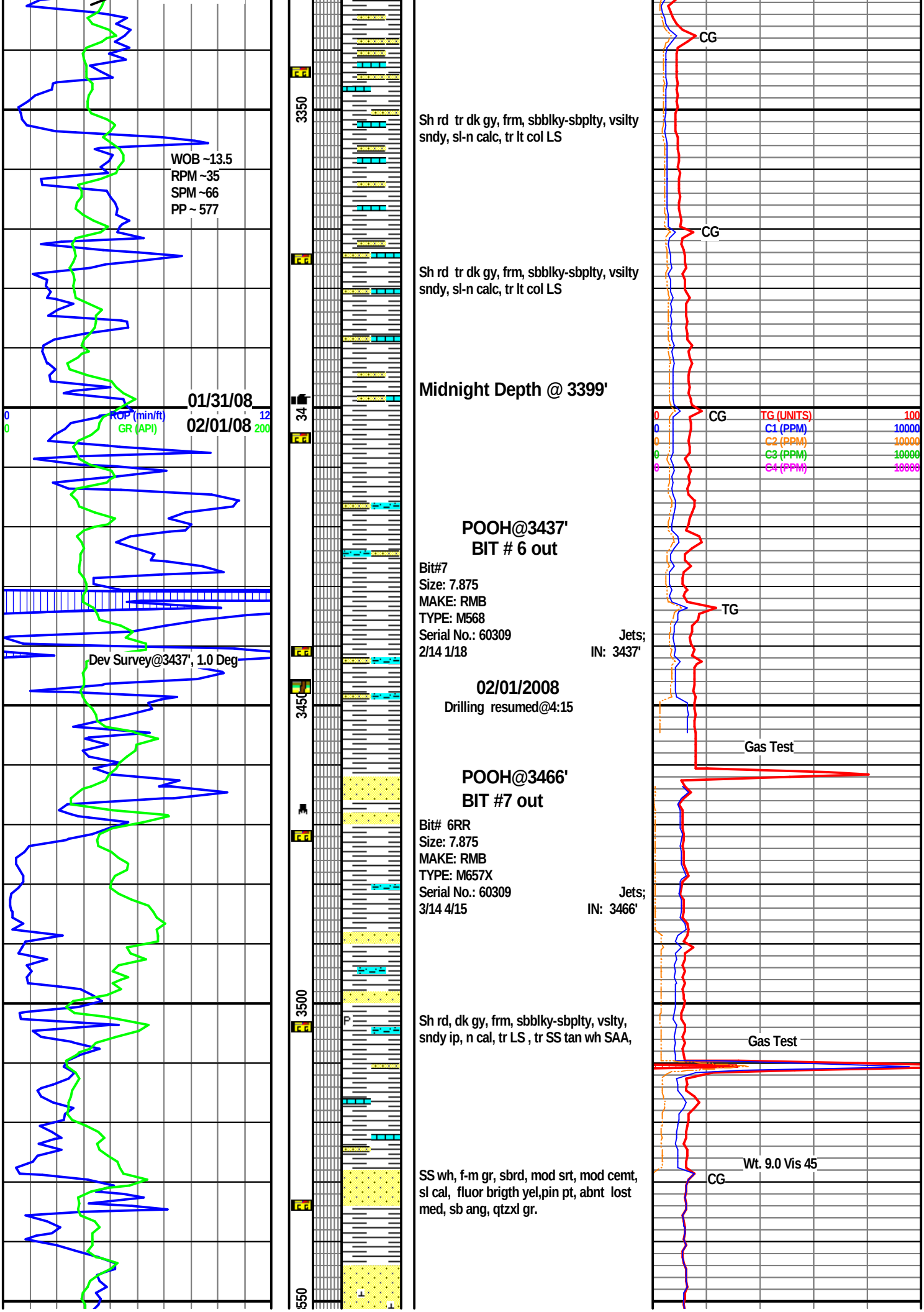

smth-slty, n calc
SS wh , f grn, mod-w cemnt, sb rnd , w srt, p por, calc, tr LS
CG
WT. 9.1 VIS. 43
SS: wh, mod sft-firm, f gr, sbrnd, mod srt, p por, sl calc, trz wh, crm, mod hd, LS.
WT. 9.0 VIS. 44
SH: m-drk gy tr blk, brn, sbblky, plty ip, frm, no calc, tr LS
SH: m-drk gy tr blk, brn, sbblky, plty ip, frm, no calc, tr LS, tr trnsl fgr ss
Gas Test OK
Bit Trip @ 2331', 12:15
Bit #3 Out
Trip Gas 87 Units
WT. 9.1 VIS. 40
SH: m-drk gy, frm, sbblky, plty, no calc.
SS: wh tr trnsl, sbrnd, f gr, mod srt, p por, sl calc, trz wh, crm, mod hd, LS.
CG
WT. 9.1 VIS. 41
SH: m-drk gy, brn-rd ip, firm, sbblky, n calc.
SS: wh tr trnsl, sbrnd, f gr, mod srt, p por, sl calc, trz wh, crm, mod hd, LS.
WT. 9.1 VIS. 41
SS: wh, mod sft-firm, f gr, sbrnd, mod srt, p por, sl calc.
CG
SH m-drk gy tr blk, brn-rd ip, smth-slty, frm, sbblky, n calc., tr LS
SS: wh. lt gy, mod sft-firmf vf gr, subrnd-rnd, sl calc cmt, mod srt, trz, lt brn-crm, hd LS.
WT. 9.1 VIS. 50
CG
SH m-drk gy blk, brn ip, firm, sbblky, silty-smth, calc
SS: wh. lt gy, mod sft-firm, vf gr, subrnd-rnd, sl calc cmt, mod srt. trz, crm, hd LS.
WT. 9.1 VIS. 50
CG
SH m-drk gy blk, brn ip, firm, sbblky-plty, smth-silty, sl-n calc
Dev Survey 3.0 Deg
Dev Survey 2.5 Deg
Bit # 4R PDC
Size: 7.875
Type: RMB506X
IN: 2331'
0
0
ROP (min/ft)
GR (API)
12
200
WOB: 11
PP: 548
RPM: 101
SPM: 55; 0
GPM: 363
TG (UNITS)
Line Test
C2 (PPM)
C3 (PPM)
C4 (PPM)
100
10000
10000
10000
10000
2250
2300
2350
2400
2450

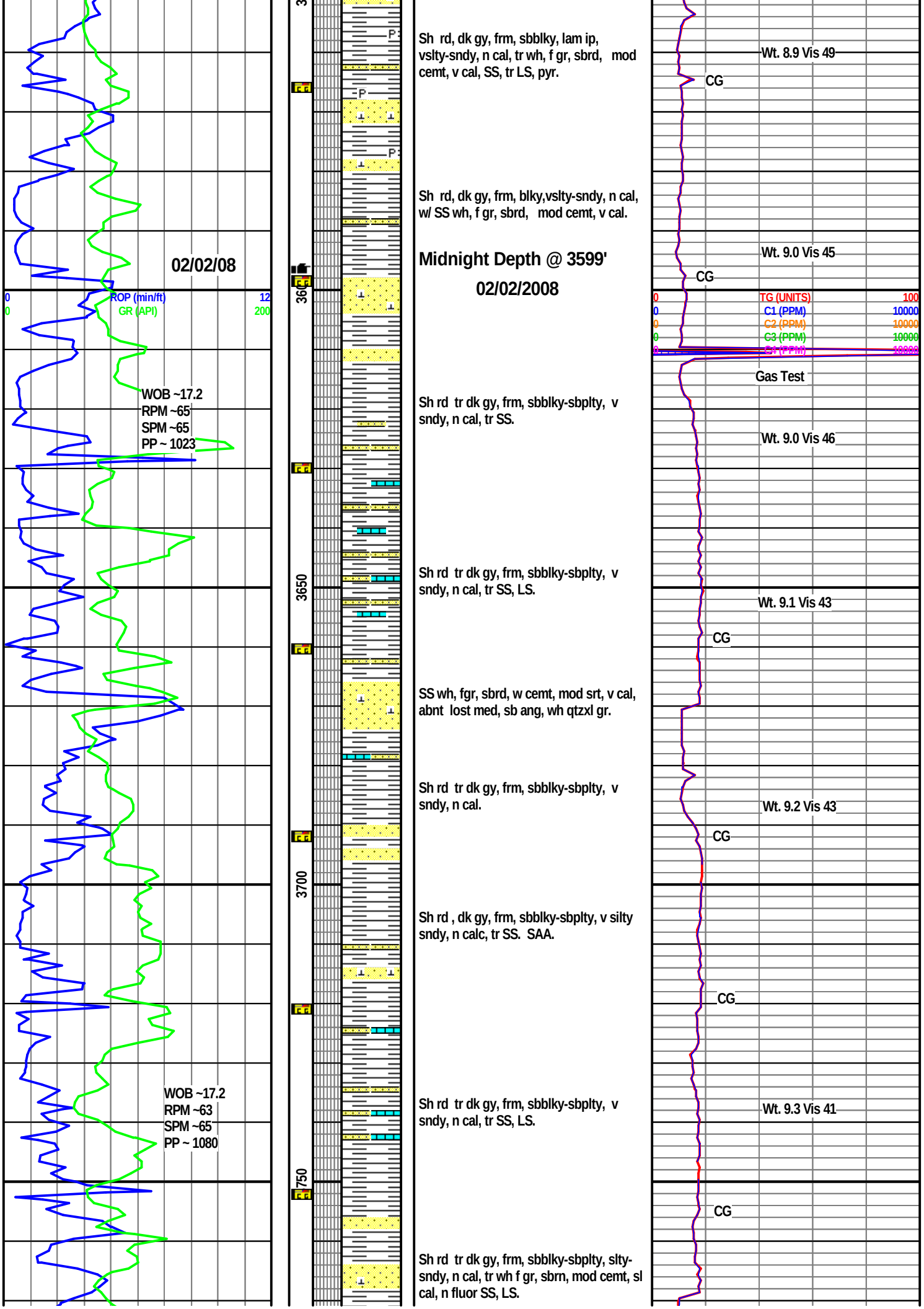

01/28/08
Chinle@2516'
0
0
ROP (min/ft)
GR (API)
12
200
2500
2550
2600
2650
SS: wh lt gy, vf gr, subrnd-rnd, sl calc cmt, mod srt, p-mod por, trz, crm, hd LS.
SH m-drk gy blk rd, firm, sbblky-plty, smth-silty, sl-n calc, tr ss, tr LS
WT. 9.1 VIS. 52
CG
MND 2501' 01/28/08
SS lt gy tr wh, vf gr, subrnd-rnd, sl calc cmt, mod srt, p por, trz crm hd LS.
CG
WT. 9.1 VIS. 44
SH m-drk gy blk rd, frm, sbblky-plty, smth-silty, sl-n calc, tr ss, tr LS
SH rd, frm, sbblky-plty, silty-sndy, calc, tr ss, tr LS
CG
WT. 9.1 VIS. 48
SH m-drk gy blk rd, frm, sbblky-plty, smth-silty, sl-n calc, tr LS
CG
WT. 9.1 VIS. 43
SH m-drk gy blk rd, frm, sbblky-plty, smth-silty, sl-n calc,tr LS
CG
WT. 9.2 VIS. 48
SH drk gy blk, frm, sbblky-plty, smth, sl-n calc, tr LS
0
TG (UNITS)
100
0
C1 (PPM)
10000
0
C2 (PPM)
10000
0
C3 (PPM)
10000
0
C4 (PPM)
10000
SH rd, frm, sbblky-plty, silty-sndy, calc, tr ss, tr LS.
CG
WOB ~13.4
PP ~622
RPM ~93
SPM ~55
WT. 9.1 VIS. 41
NO sample recovery
CG
Line Test

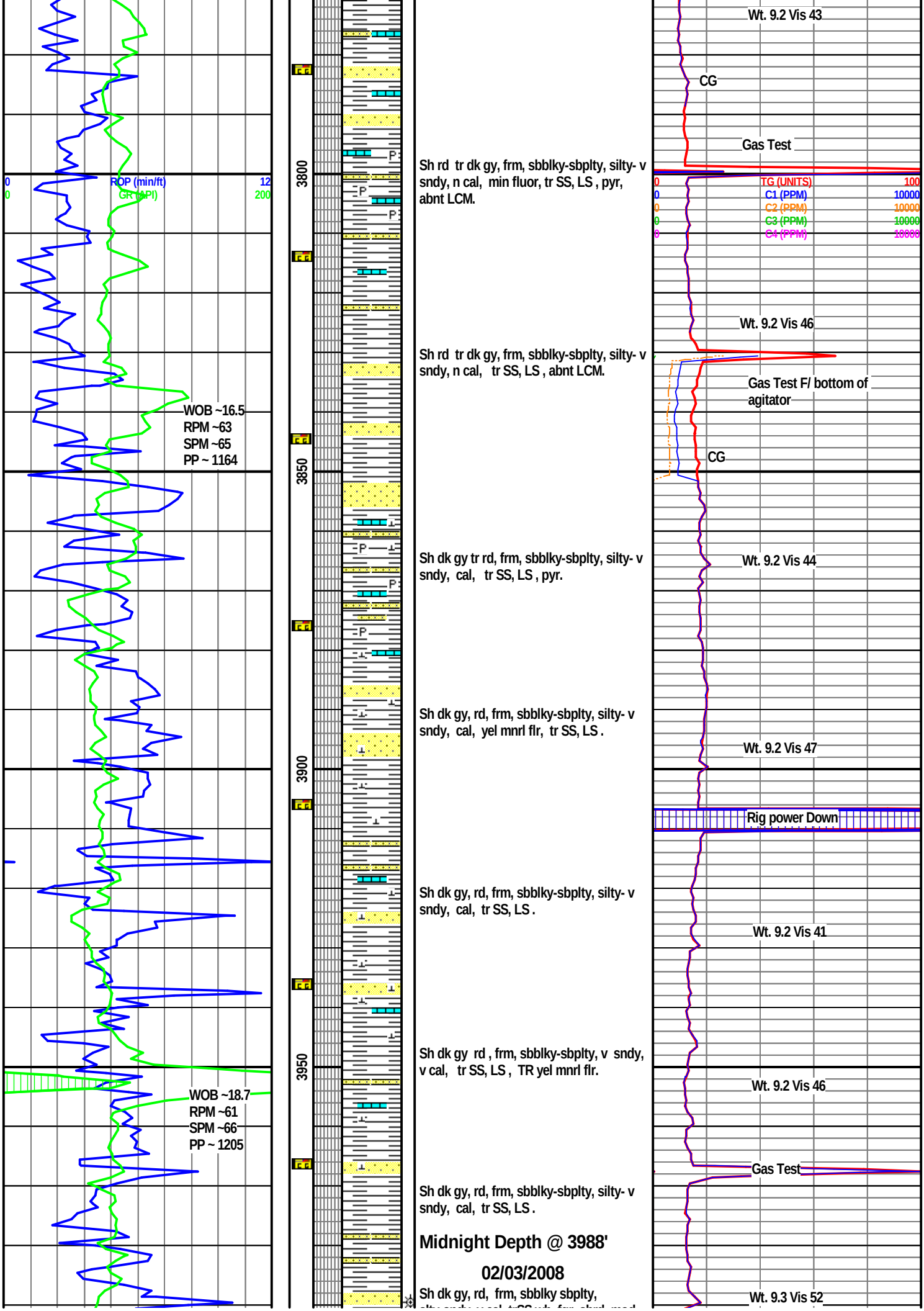

Dev Survey 2.0 Deg
TOOH for Fishing
WOB: 12
PP: 634 RPM:
85 SPM: 55
GPM: 365
WOB: 15
PP: 674
RPM: 85 SPM:
55
GPM: 365
1/29/08
0
ROP (min/ft)
12
0
GR (API)
200
WOB: 12
PP: 535 RPM:
85 SPM: 55
GPM: 365
2700
2750
2800
2850
2685', TOOH @9:15, 01/29/08,
Drilling Resumed @ 1900, 01/29/08
SH: drk gy-blk, frm, sbblky-plty, smth, sl calc, tr LS, tr Pyrt, tr ss
SH red drk gy-blk, frm, sbblky-plty, smth-silty, sl calc, tr LS, tr ss
SH red drk gy-blk, frm, sbblky-plty, smth-silty, sl calc, tr LS, tr more ss
Mid Night Depth @2781'
SH red drk gy-blk, frm, sbblky-plty, smth-silty, sl calc, tr LS, tr more ss
SH red drk gy-blk, frm, sbblky-plty, smth-silty, sl calc, tr LS, tr ss
SH blk red , frm, flky, silty, sl calc, tr LS
SS trnsl, fgr, sbrd, w srt, p cemt abndt uncons lse gr, n calc, NFSOC, mod-g por
SH blk red , frm, sbblky-plty, silty, sl calc, tr LS
Bit Trip @ 2889', 08:30
Bit # 4 Out.
Mud Report
MW 9.2
Vis 41
WL 9.0
Ck 1/32
ph 9.0
Cl 500
WT. 9.1 VIS. 42
CG
WT. 9.1 VIS. 43
WT. 9.1 VIS. 40
CG
0
TG (UNITS)
100
0
C1 (PPM)
10000
0
C2 (PPM)
10000
0
C3 (PPM)
10000
0
C4 (PPM)
10000
WT. 9.1 VIS. 41
Line Test
WT. 9.2 VIS. 43
CG
Mud Report
MW 9.1+
Vis 39
WL 7.0
Ck 1/32
ph 9.0
Cl 400
WT. 9.1 VIS. 40

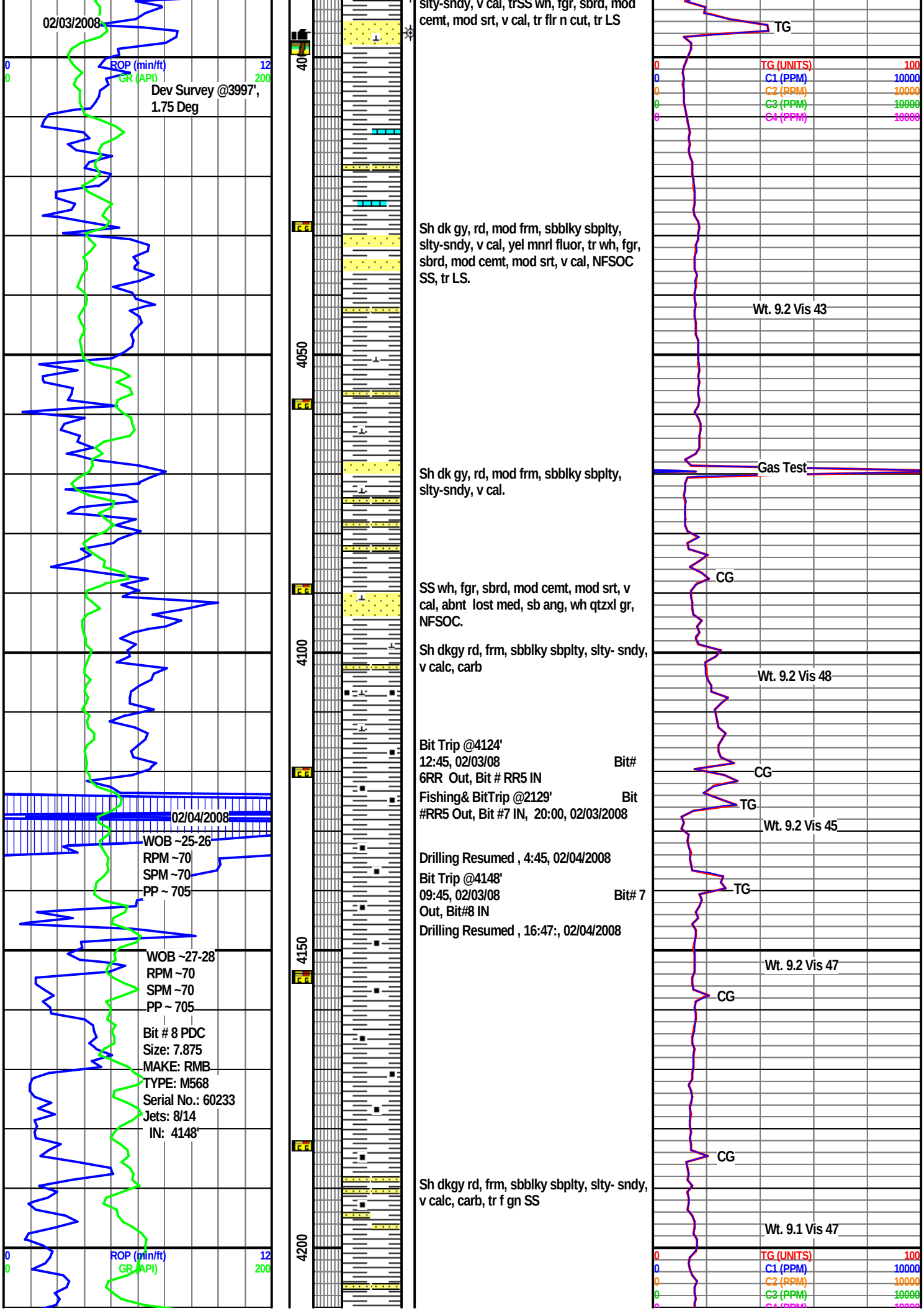

TOOH new bit @ 2889'
Bit # 5 Tric
Size: 7.875
Type: EDT18
IN: 2889'
0 ROP (min/ft) 12
0 GR (API) 200
Dev Survey @3012', 1.0 Deg
01/30/08
2900
2950
3000
3050
3100
Start Drilling @ 14:10
Trip Gas 29 Units
SS tan tr wh, f gr, sbrd, mod srt, mod-p cemt occ w cemt, sl-n calc, mod-p por
TG
WT. 9.2 VIS. 42
SH rd tr blk, frm, sbblky-plty, silty, sl calc, tr LS
CG
WT. 9.0 VIS. 42
SS tan tr wh, f gr, sbrd, mod srt, mod-p cemt occ w cemt, sl-n calc, mod-p por
SS tan, f gr, sbrd, mod srt, mod-p cemt occ w cemt, sl-n calc, mod por
Line Test
WT. 9.2 VIS. 50
SH rd, frm, sbblky-plty, silty, sl calc, sl tr LS
CG
SS trnsl tan, f gr, sbrd, mod srt, mod-p cemt occ w cemt, sl-n calc, mod por
WT. 9.2 VIS. 45
0 TG (UNITS) 100
0 C1 (PPM) 10000
0 C2 (PPM) 10000
0 C3 (PPM) 10000
0 C4 (PPM) 10000
SH rd, frm, sbblky-plty, silty, sl calc, sl tr LS, tr Pyrt
CG
Rig power Down
WT. 9.2 VIS. 50
CG
Line test
SS trnsl tan, f gr, sbrd, mod srt, mod-p cemt occ w cemt, sl-n calc, mod por
Rig power Down
SH rd trsmth dk gy, frm, sbblky-plty, silty-smth, sl calc, tr uncons ss
CG
WT. 9.2 VIS. 43
Midnight Depth @ 3098'
SS tan wh, f gr, sbrd, mod srt, mod-w cemt, mod-v calc, mod por
CG
WT. 9.2 VIS. 40

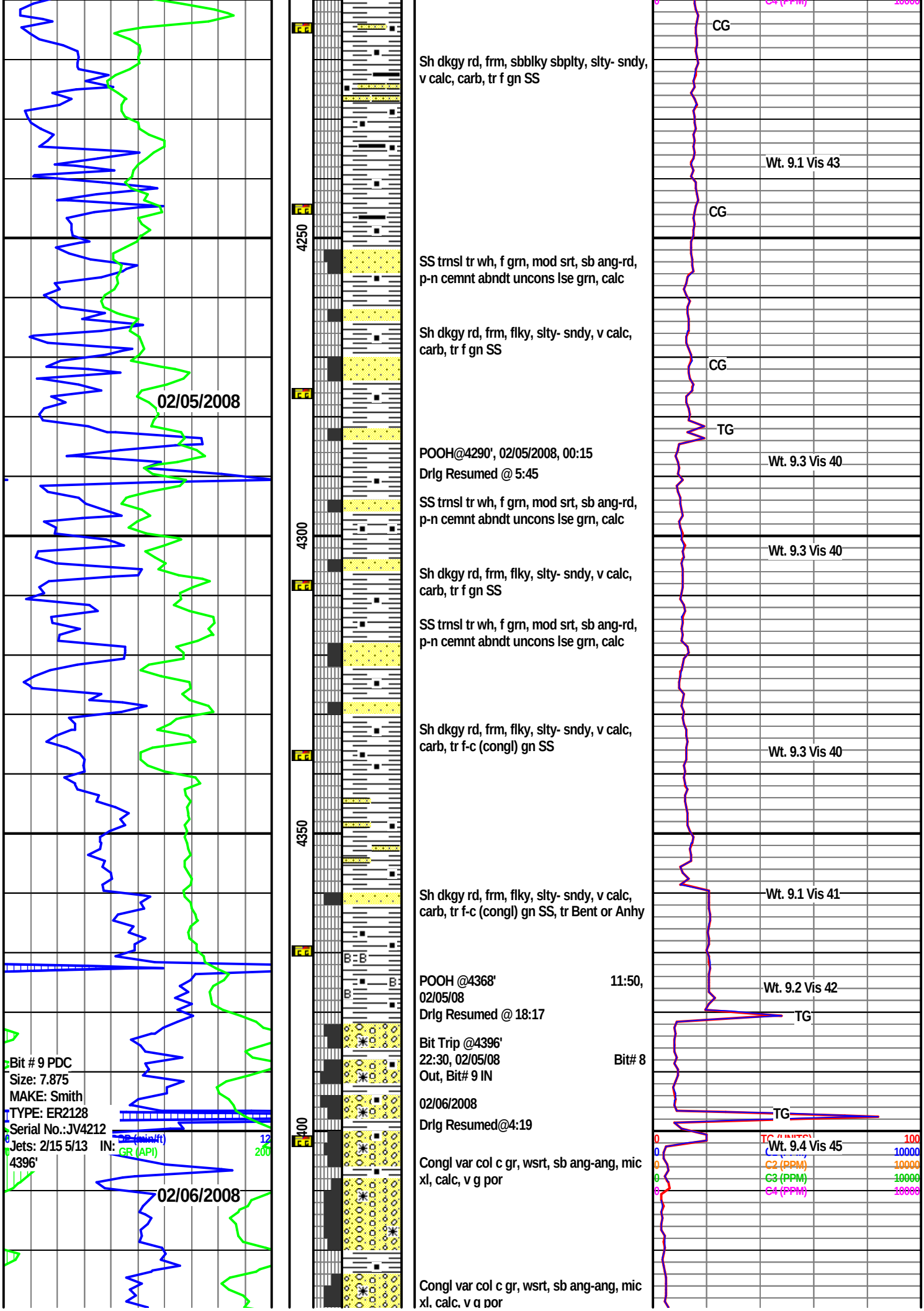

0
0
ROP (min/ft)
GR (API)
12
200
Bit # 6 PDC
Size: 7.875
MAKE: RMB
TYPE: M568
Serial No.: 60309
Jets: 3/14 4/15 IN: 3223'
Fracture
Lost Circulation
3150
3200
3250
3300
SH dk gy rd, frm, sbblky-plty, silty-smth, sl-v calc, tr Pyrt
SS tan wh, f gr, sbrd, mod srt, mod-w cemt, mod-v calc, mod por
SH dk gy rd, frm, sbblky-plty, silty-smth, sl-v calc
SS tan wh, f gr, sbrd, mod srt, mod-w cemt, mod-v calc, mod por
SH dk gy rd, frm, sbblky-plty, silty-smth, sl-v calc
SS tan wh, f gr, sbrd, mod srt, mod-w cemt, mod-v calc, mod por
POOH @ 3223', 7:15
01/30/2008
01/31/2008
Sh dk rd tr dk gy, hd, sbblky-sbplty, smth tr silty, sl-n calc, tr lt col LS
Sh rd trdk rd dk gy, frm- hd, flky, vsilty sndy tr smth, sl-n calc, tr lt col LS, tr ss, tr qrtz
Sh dk rd dk gy tr rd, frm- hd, sbblky-sbplty, smth, sl-n calc, tr ss, tr qrtz
LS wh tan, hd, blky, mic xl, v calc
Sh rd tr dk gy, frm, sbblky-sbplty, vsilty sndy, sl-n calc, tr lt col LS, LCM
WT. 9.2 VIS. 40
CG
WT. 9.2 VIS. 45
WT. 9.2 VIS. 46
CG
CG
Wt. 9.2, Vis 40
Mud Report
MW 9.2
Vis 40
WL 9.0
Ck 1/32
ph 10.5
Cl 500
TG
Wt. 9.2, Vis 40
DTG
Wt. 9.2, Vis 40
CG
Wt. 9.2, Vis 41

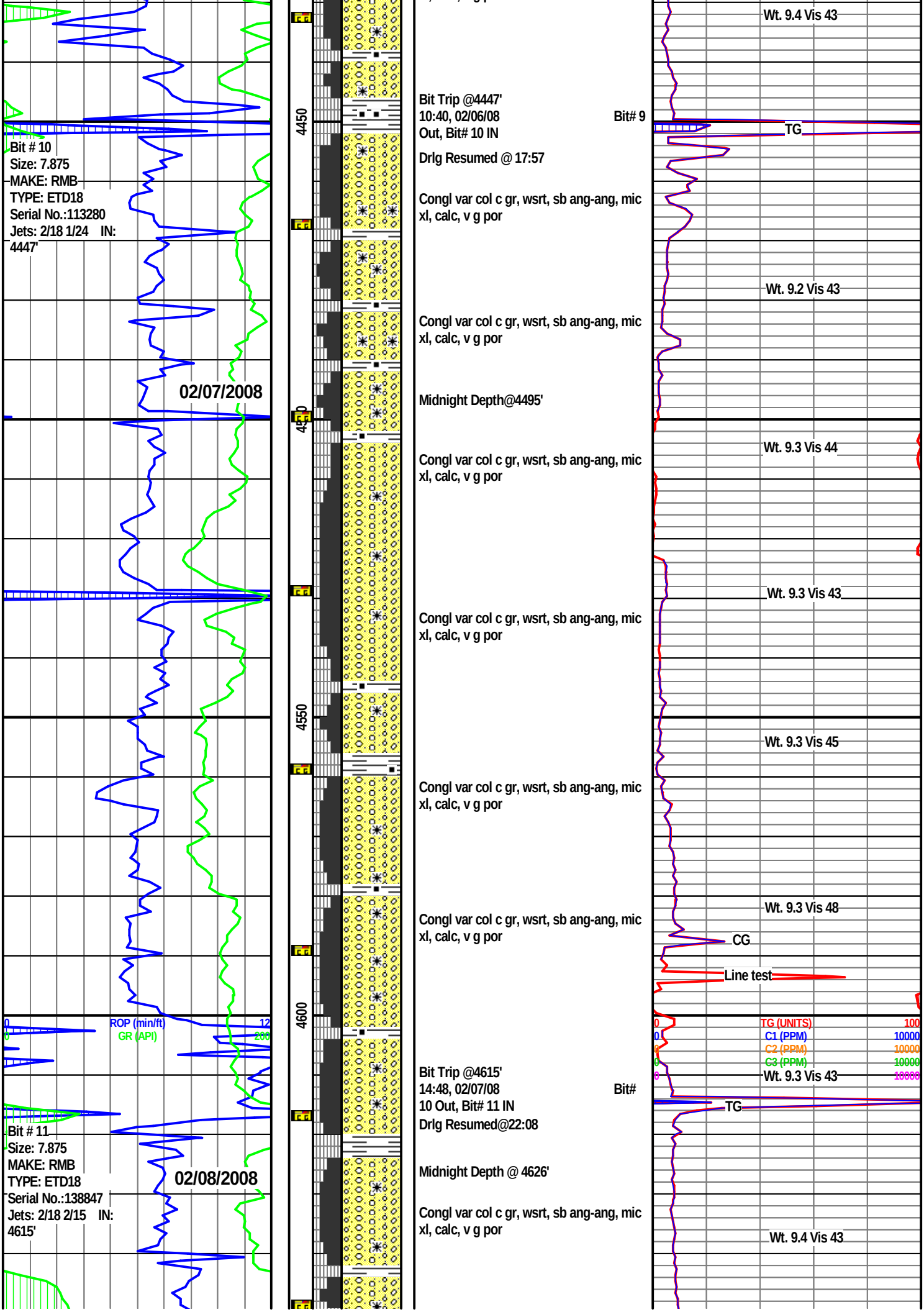

WOB ~13.5
RPM ~35
SPM ~66
PP ~ 577
01/31/08
02/01/08
ROP (min/ft)
GR (API)
Dev Survey@3437', 1.0 Deg
3350
3450
3500
3550
Sh rd tr dk gy, frm, sbblky-sbplty, vsilty sndy, sl-n calc, tr lt col LS
Sh rd tr dk gy, frm, sbblky-sbplty, vsilty sndy, sl-n calc, tr lt col LS
Midnight Depth @ 3399'
POOH@3437'
BIT # 6 out
Bit#7
Size: 7.875
MAKE: RMB
TYPE: M568
Serial No.: 60309
Jets;
2/14 1/18
IN: 3437'
02/01/2008
Drilling resumed@4:15
POOH@3466'
BIT #7 out
Bit# 6RR
Size: 7.875
MAKE: RMB
TYPE: M657X
Serial No.: 60309
Jets;
3/14 4/15
IN: 3466'
Sh rd, dk gy, frm, sbblky-sbplty, vslty, sndy ip, n cal, tr LS , tr SS tan wh SAA,
SS wh, f-m gr, sbrd, mod srt, mod cemt, sl cal, fluor brigth yel,pin pt, abnt lost med, sb ang, qtzxl gr.
CG
CG
CG
TG
Gas Test
Gas Test
Wt. 9.0 Vis 45
CG
TG (UNITS)
C1 (PPM)
C2 (PPM)
C3 (PPM)
C4 (PPM)

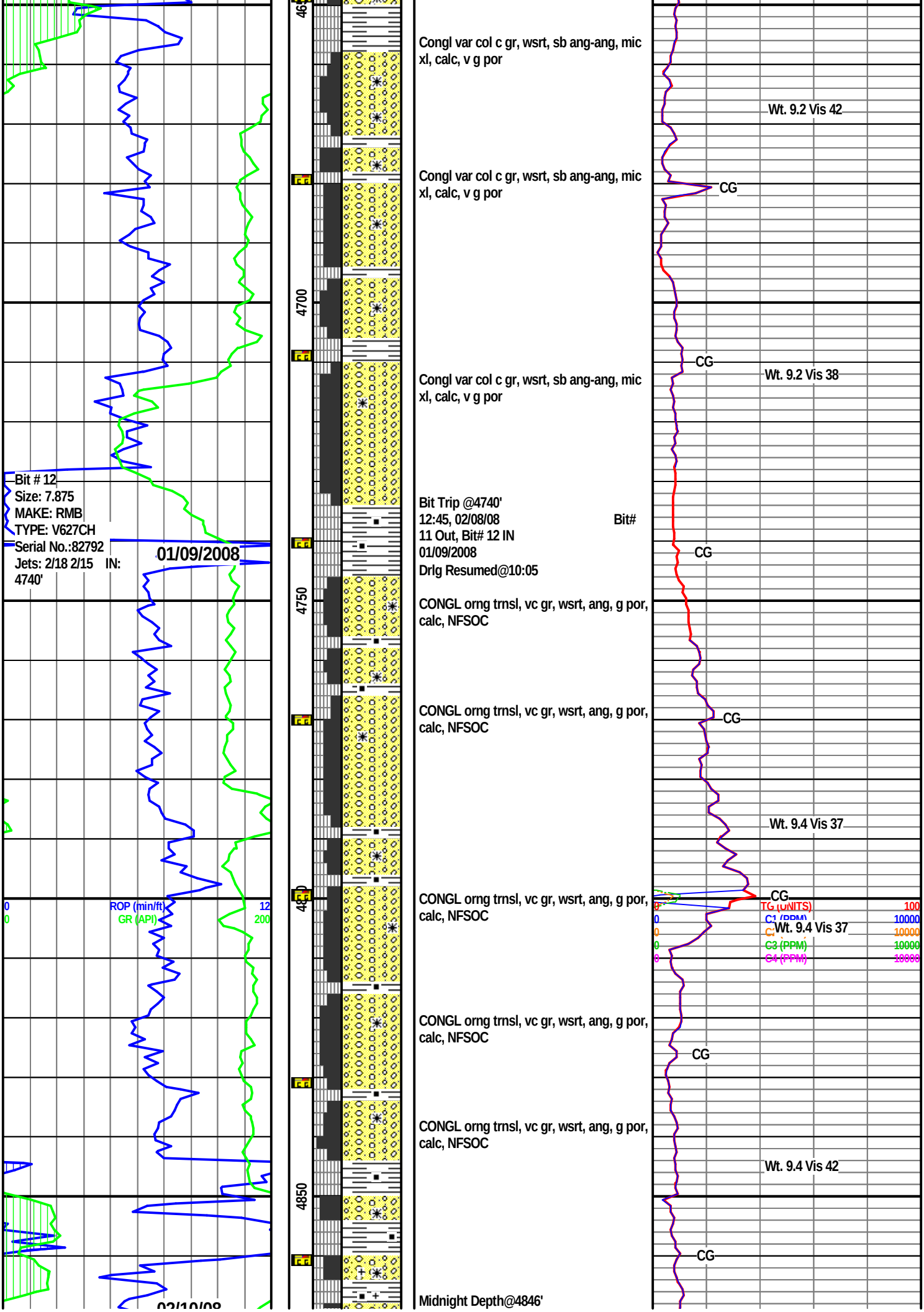

02/02/08
0
ROP (min/ft)
12
0
GR (API)
200
WOB ~17.2
RPM ~65
SPM ~65
PP ~ 1023
WOB ~17.2
RPM ~63
SPM ~65
PP ~ 1080
3600
3650
3700
3750
Sh rd, dk gy, frm, sbblky, lam ip, vslty-sndy, n cal, tr wh, f gr, sbrd, mod cemt, v cal, SS, tr LS, pyr.
Sh rd, dk gy, frm, blky,vslty-sndy, n cal, w/ SS wh, f gr, sbrd, mod cemt, v cal.
Midnight Depth @ 3599'
02/02/2008
Sh rd tr dk gy, frm, sbblky-sbplty, v sndy, n cal, tr SS.
Sh rd tr dk gy, frm, sbblky-sbplty, v sndy, n cal, tr SS, LS.
SS wh, fgr, sbrd, w cemt, mod srt, v cal, abnt lost med, sb ang, wh qtzxl gr.
Sh rd tr dk gy, frm, sbblky-sbplty, v sndy, n cal.
Sh rd , dk gy, frm, sbblky-sbplty, v silty sndy, n calc, tr SS. SAA.
Sh rd tr dk gy, frm, sbblky-sbplty, v sndy, n cal, tr SS, LS.
Sh rd tr dk gy, frm, sbblky-sbplty, slty-sndy, n cal, tr wh f gr, sbrn, mod cemt, sl cal, n fluor SS, LS.
Wt. 8.9 Vis 49
CG
Wt. 9.0 Vis 45
CG
0
TG (UNITS)
100
0
C1 (PPM)
10000
0
C2 (PPM)
10000
0
C3 (PPM)
10000
0
C4 (PPM)
10000
Gas Test
Wt. 9.0 Vis 46
Wt. 9.1 Vis 43
CG
Wt. 9.2 Vis 43
CG
CG
Wt. 9.3 Vis 41
CG

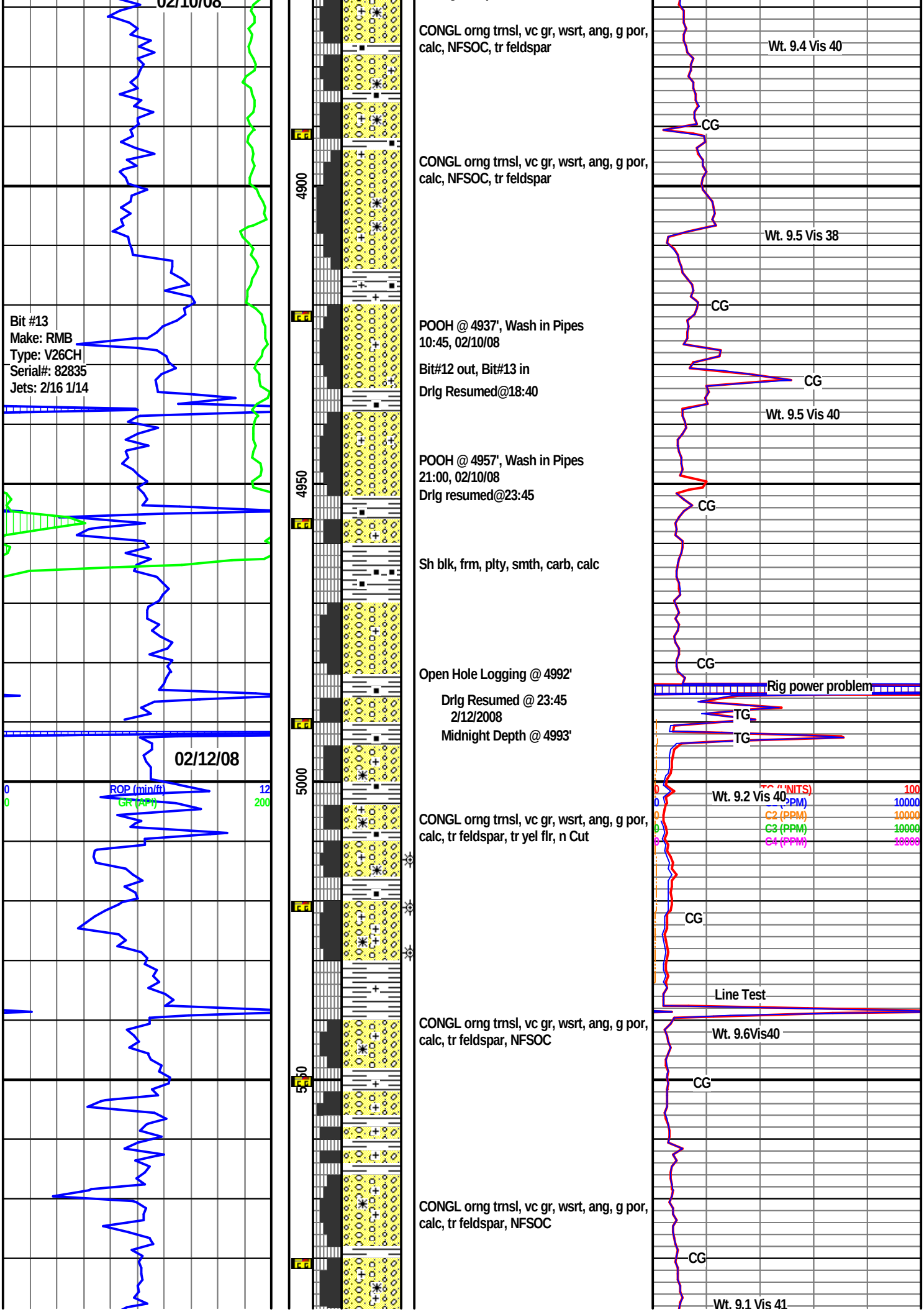

0
ROP (min/ft)
12
0
GR (API)
200
WOB ~16.5
RPM ~63
SPM ~65
PP ~ 1164
WOB ~18.7
RPM ~61
SPM ~66
PP ~ 1205
3800
3850
3900
3950
Sh rd tr dk gy, frm, sbblky-sbplty, silty- v sndy, n cal, min fluor, tr SS, LS , pyr, abnt LCM.
Sh rd tr dk gy, frm, sbblky-sbplty, silty- v sndy, n cal, tr SS, LS , abnt LCM.
Sh dk gy tr rd, frm, sbblky-sbplty, silty- v sndy, cal, tr SS, LS , pyr.
Sh dk gy, rd, frm, sbblky-sbplty, silty- v sndy, cal, yel mnrl flr, tr SS, LS .
Sh dk gy, rd, frm, sbblky-sbplty, silty- v sndy, cal, tr SS, LS .
Sh dk gy rd , frm, sbblky-sbplty, v sndy, v cal, tr SS, LS , TR yel mnrl flr.
Sh dk gy, rd, frm, sbblky-sbplty, silty- v sndy, cal, tr SS, LS .
Midnight Depth @ 3988'
02/03/2008
Sh dk gy, rd, frm, sbblky sbplty,
Wt. 9.2 Vis 43
CG
Gas Test
0
TG (UNITS)
100
0
C1 (PPM)
10000
0
C2 (PPM)
10000
0
C3 (PPM)
10000
0
C4 (PPM)
10000
Wt. 9.2 Vis 46
Gas Test F/ bottom of agitator
CG
Wt. 9.2 Vis 44
Wt. 9.2 Vis 47
Rig power Down
Wt. 9.2 Vis 41
Wt. 9.2 Vis 46
Gas Test
Wt. 9.3 Vis 52

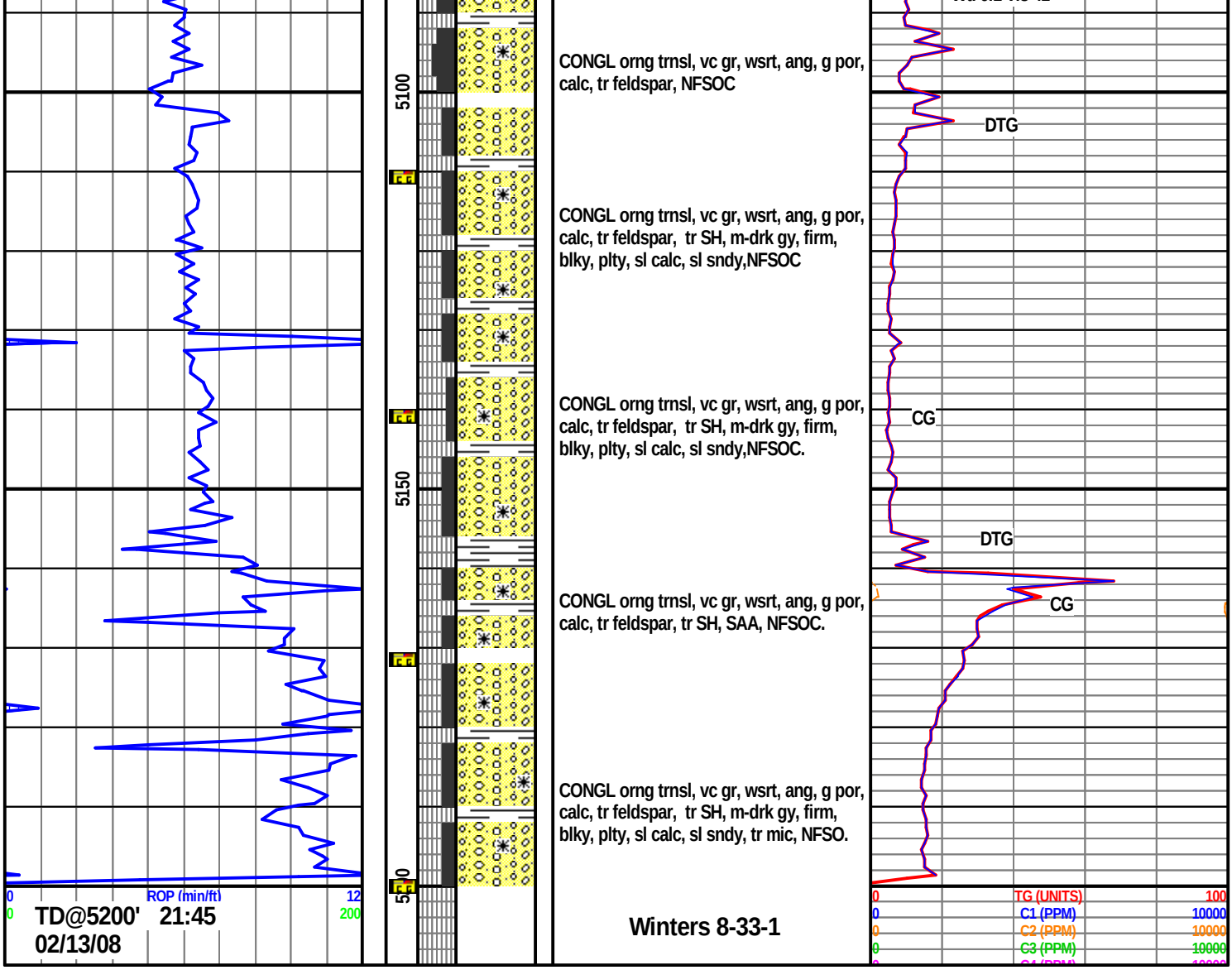

02/03/2008
0
0
ROP (min/ft)
GR (API)
12
200
Dev Survey @3997', 1.75 Deg
02/04/2008
WOB ~25-26
RPM ~70
SPM ~70
PP ~ 705
WOB ~27-28
RPM ~70
SPM ~70
PP ~ 705
Bit # 8 PDC
Size: 7.875
MAKE: RMB
TYPE: M568
Serial No.: 60233
Jets: 8/14
IN: 4148'
4000
4050
4100
4150
4200
silty-sndy, v cal, trSS wh, fgr, sbrd, mod cemt, mod srt, v cal, tr flr n cut, tr LS
Sh dk gy, rd, mod frm, sbblky sbplty, slty-sndy, v cal, yel mnrl fluor, tr wh, fgr, sbrd, mod cemt, mod srt, v cal, NFSOC SS, tr LS.
Sh dk gy, rd, mod frm, sbblky sbplty, slty-sndy, v cal.
SS wh, fgr, sbrd, mod cemt, mod srt, v cal, abnt lost med, sb ang, wh qtzxl gr, NFSOC.
Sh dkgy rd, frm, sbblky sbplty, slty- sndy, v calc, carb
Bit Trip @4124'
12:45, 02/03/08 Bit#
6RR Out, Bit # RR5 IN
Fishing& BitTrip @2129' Bit #RR5 Out, Bit #7 IN, 20:00, 02/03/2008
Drilling Resumed , 4:45, 02/04/2008
Bit Trip @4148'
09:45, 02/03/08 Bit# 7 Out, Bit#8 IN
Drilling Resumed , 16:47:, 02/04/2008
Sh dkgy rd, frm, sbblky sbplty, slty- sndy, v calc, carb, tr f gn SS
TG
TG (UNITS)
100
C1 (PPM)
10000
C2 (PPM)
10000
C3 (PPM)
10000
C4 (PPM)
10000
Wt. 9.2 Vis 43
Gas Test
CG
Wt. 9.2 Vis 48
CG
TG
Wt. 9.2 Vis 45
TG
Wt. 9.2 Vis 47
CG
CG
Wt. 9.1 Vis 47


02/05/2008
02/06/2008
Bit # 9 PDC
Size: 7.875
MAKE: Smith
TYPE: ER2128
Serial No.:JV4212
Jets: 2/15 5/13 IN:
4396'
DT (min/ft)
GR (API)
12
200
4250
4300
4350
4400
Sh dkgy rd, frm, sbblky sbplty, slty- sndy, v calc, carb, tr f gn SS
SS trnsl tr wh, f grn, mod srt, sb ang-rd, p-n cemnt abndt uncons lse grn, calc
Sh dkgy rd, frm, flky, slty- sndy, v calc, carb, tr f gn SS
POOH@4290', 02/05/2008, 00:15
Drlg Resumed @ 5:45
SS trnsl tr wh, f grn, mod srt, sb ang-rd, p-n cemnt abndt uncons lse grn, calc
Sh dkgy rd, frm, flky, slty- sndy, v calc, carb, tr f gn SS
SS trnsl tr wh, f grn, mod srt, sb ang-rd, p-n cemnt abndt uncons lse grn, calc
Sh dkgy rd, frm, flky, slty- sndy, v calc, carb, tr f-c (congl) gn SS
Sh dkgy rd, frm, flky, slty- sndy, v calc, carb, tr f-c (congl) gn SS, tr Bent or Anhy
POOH @4368' 11:50, 02/05/08
Drlg Resumed @ 18:17
Bit Trip @4396' 22:30, 02/05/08 Bit# 8 Out, Bit# 9 IN
02/06/2008
Drlg Resumed@4:19
Congl var col c gr, wsrt, sb ang-ang, mic xl, calc, v g por
Congl var col c gr, wsrt, sb ang-ang, mic xl, calc, v g por
CG
Wt. 9.1 Vis 43
CG
CG
TG
Wt. 9.3 Vis 40
Wt. 9.3 Vis 40
Wt. 9.3 Vis 40
Wt. 9.1 Vis 41
Wt. 9.2 Vis 42
TG
TG
Wt. 9.4 Vis 45
C2 (PPM)
C3 (PPM)
C4 (PPM)


Bit # 10
Size: 7.875
MAKE: RMB
TYPE: ETD18
Serial No.:113280
Jets: 2/18 1/24 IN:
4447'
02/07/2008
Bit # 11
Size: 7.875
MAKE: RMB
TYPE: ETD18
Serial No.:138847
Jets: 2/18 2/15 IN:
4615'
02/08/2008
ROP (min/ft)
GR (API)
4450
4500
4550
4600
Bit Trip @4447'
10:40, 02/06/08
Out, Bit# 10 IN
Bit# 9
Drlg Resumed @ 17:57
Congl var col c gr, wsrt, sb ang-ang, mic xl, calc, v g por
Midnight Depth@4495'
Congl var col c gr, wsrt, sb ang-ang, mic xl, calc, v g por
Congl var col c gr, wsrt, sb ang-ang, mic xl, calc, v g por
Congl var col c gr, wsrt, sb ang-ang, mic xl, calc, v g por
Bit Trip @4615'
14:48, 02/07/08
10 Out, Bit# 11 IN
Bit#
Drlg Resumed@22:08
Midnight Depth @ 4626'
Congl var col c gr, wsrt, sb ang-ang, mic xl, calc, v g por
Wt. 9.4 Vis 43
TG
Wt. 9.2 Vis 43
Wt. 9.3 Vis 44
Wt. 9.3 Vis 43
Wt. 9.3 Vis 45
Wt. 9.3 Vis 48
CG
Line test
TG (UNITS)
C1 (PPM)
C2 (PPM)
C3 (PPM)
Wt. 9.3 Vis 43
TG
Wt. 9.4 Vis 43


Bit # 12
Size: 7.875
MAKE: RMB
TYPE: V627CH
Serial No.:82792
Jets: 2/18 2/15 IN:
4740'
01/09/2008
0
0
ROP (min/ft)
GR (API)
12
200
4700
4750
4800
4850
Congl var col c gr, wsrt, sb ang-ang, mic xl, calc, v g por
Congl var col c gr, wsrt, sb ang-ang, mic xl, calc, v g por
Congl var col c gr, wsrt, sb ang-ang, mic xl, calc, v g por
Bit Trip @4740'
12:45, 02/08/08
11 Out, Bit# 12 IN
01/09/2008
Drlg Resumed@10:05
Bit#
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, NFSOC
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, NFSOC
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, NFSOC
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, NFSOC
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, NFSOC
Midnight Depth@4846'
Wt. 9.2 Vis 42
CG
CG
Wt. 9.2 Vis 38
CG
CG
Wt. 9.4 Vis 37
CG
TG (UNITS)
C1 (PPM)
C2 (PPM)
C3 (PPM)
C4 (PPM)
100
10000
10000
10000
10000
Wt. 9.4 Vis 37
CG
CG
Wt. 9.4 Vis 42
CG


02/10/08
Bit #13
Make: RMB
Type: V26CH
Serial#: 82835
Jets: 2/16 1/14
02/12/08
0
ROP (min/ft)
12
0
GR (API)
200
4900
4950
5000
5050
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, NFSOC, tr feldspar
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, NFSOC, tr feldspar
POOH @ 4937', Wash in Pipes 10:45, 02/10/08
Bit#12 out, Bit#13 in
Drlg Resumed@18:40
POOH @ 4957', Wash in Pipes 21:00, 02/10/08
Drlg resumed@23:45
Sh blk, frm, plty, smth, carb, calc
Open Hole Logging @ 4992'
Drlg Resumed @ 23:45
2/12/2008
Midnight Depth @ 4993'
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, tr feldspar, tr yel flr, n Cut
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, tr feldspar, NFSOC
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, tr feldspar, NFSOC
Wt. 9.4 Vis 40
CG
Wt. 9.5 Vis 38
CG
CG
Wt. 9.5 Vis 40
CG
CG
Rig power problem
TG
TG
Wt. 9.2 Vis 40
C2 (PPM)
C3 (PPM)
C4 (PPM)
CG
Line Test
Wt. 9.6Vis40
CG
CG
Wt. 9.1 Vis 41


5100
5150
5200
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, tr feldspar, NFSOC
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, tr feldspar, tr SH, m-drk gy, firm, blky, plty, sl calc, sl sndy,NFSOC
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, tr feldspar, tr SH, m-drk gy, firm, blky, plty, sl calc, sl sndy,NFSOC.
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, tr feldspar, tr SH, SAA, NFSOC.
CONGL orng trnsl, vc gr, wsrt, ang, g por, calc, tr feldspar, tr SH, m-drk gy, firm, blky, plty, sl calc, sl sndy, tr mic, NFSO.
DTG
CG
DTG
CG
0
ROP (min/ft)
12
0
200
TD@5200' 21:45
02/13/08
Winters 8-33-1
0
TG (UNITS)
100
0
C1 (PPM)
10000
0
C2 (PPM)
10000
0
C3 (PPM)
10000