

LITHOLOGY STRIP LOG

WellSight Systems

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

Well Name: KGH Federal 24-1

Location: NENE, Sec. 24, T1S, R104W, 6th PM, Rio Blanco County, Colorado

Licence Number: API# 050-103-10783-00

Region: GILSONITE RIDGE

Spud Date: 08/01/2006

Drilling Completed: 08/06/06

Surface Coordinates: NENE, 119' FEL X 648' FNL, Sec 24-T1S-R104W
39.952194 X 109.008097

Bottom Hole Coordinates: SAME

Ground Elevation (ft): 6183'

K.B. Elevation (ft): 6194'

Logged Interval (ft): 600' To: 4692' Total Depth (ft): 4692'

Formation: MESAVERDE, SEGO, BUCK TONGUE, CASTLEGATE, MANCOS A & B

Type of Drilling Fluid: FRESH WATER, GEL/CHEM MUD

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: KGH OPERATING COMPANY

Address: PO BOX 2235

BILLINGS, MT 59103

GEOLOGIST

Name: MARK DULETSKY P.G.

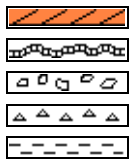
Company: WILDCAT EXPLORATION WELLOGGING CO.

Address: P.O. BOX 186

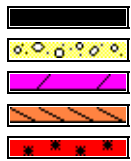
THERMOPOLIS, WYOMING

82443

ROCK TYPES



Anhy
Bent
Brec
Cht
Clyst



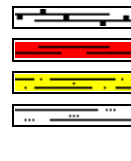
Coal
Congl
Dol
Gyp
Igne



Lmst
Meta
Mrlst
Salt
Shale



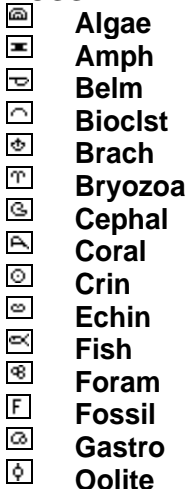
Shcol
Shgy
Sltst
Ss
Till



carb sh
red sh
shlyss
Sltly sh

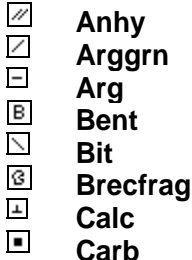
ACCESSORIES

FOSSIL



Ostra
Pelec
Pellet
Pisolite
Plant
Strom

MINERAL



Chtdk
Chtlt
Dol
Feldspar
Ferrpel
Ferr
Glau
Gyp
Hvymin
Kaol
Marl
Minxl
Nodule
Phos
Pyr
Salt



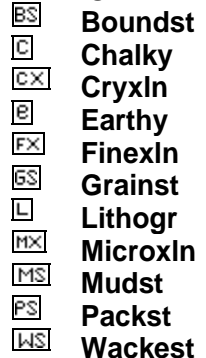
Sandy
Silt
Sil
Sulphur
Tuff

STRINGER



Ssstrg

TEXTURE



OTHER SYMBOLS

INTERVALS

- Core
- Dst
- Midnight

EVENTS

- ▤ Rft
- ▤ Sidewall

POROSITY TYPE

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



Vuggy

SORTING

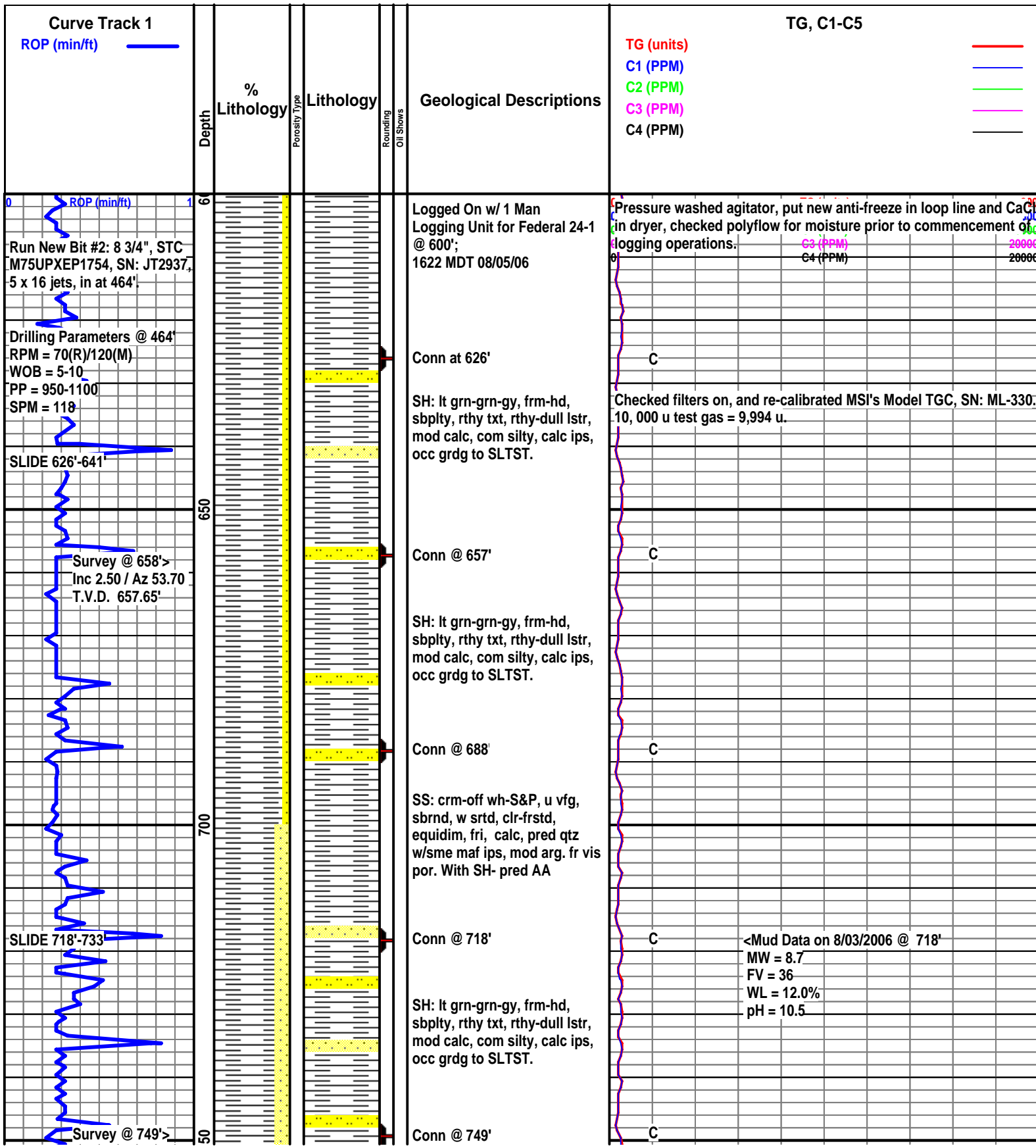
- ▤ Well
- ▤ Moderate
- ▤ Poor

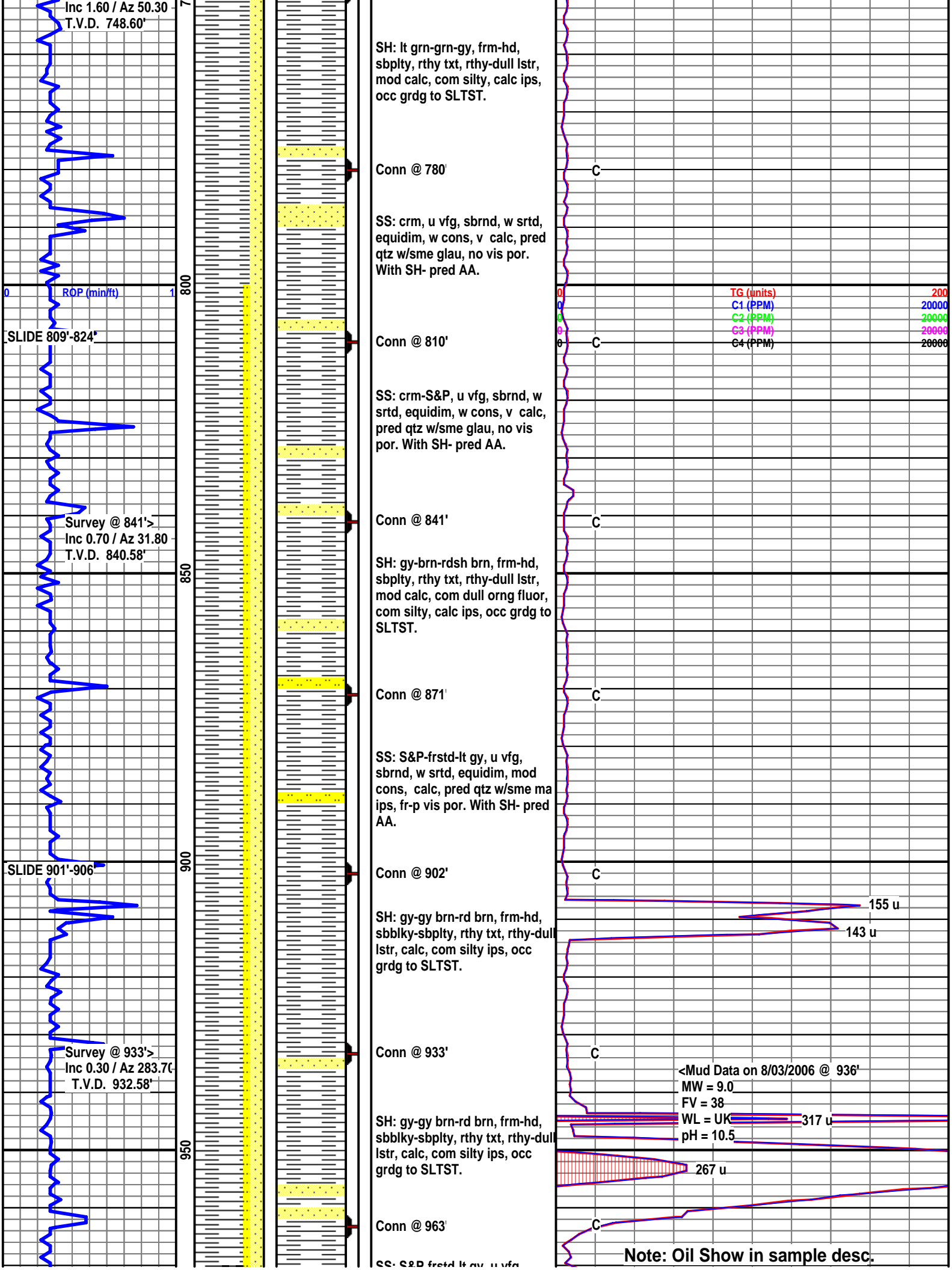
ROUNDING

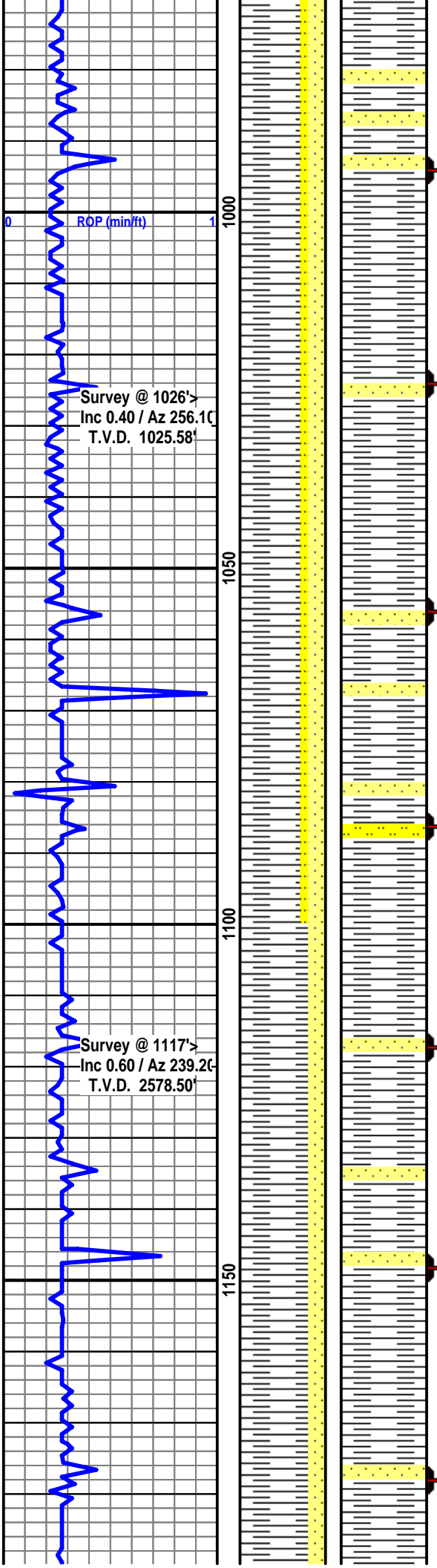
- ▤ Rounded
- ▤ Subrnd
- ▤ Subang
- ▤ Angular
- ▤ Conn
- ▤ Survey
- ▤ bit

OIL SHOWS

- ▤ Even
- ▤ Spotted
- ▤ Ques
- ▤ Dead
- ▤ gas show







SS: S&P-frstd-lt gy, u vfg, sbrnd, w srtd, equidim, mod cons, calc, pred qtz w/sme ma ips, fr-p vis por, gd grn fluor, p cut, gd fluor blue-grn ring stn. With SH- pred AA.

Conn @ 994'

SH: gy-gy brn-rd brn, frm-hd, sbblky-sbplty, rthy txt, rthy-dul lstr, calc, com silty ips, occ grdg to SLTST.

Conn @ 1024'

SS: S&P-frstd-lt gy, u vfg, sbrnd, w srtd, equidim, mod cons, calc, pred qtz w/sme ma ips, fr-p vis por. With SH- pred AA.

Conn @ 1056'

SS: S&P-frstd-lt gy, u vfg, sbrnd, w srtd, equidim, mod cons, calc, pred qtz w/sme ma ips, fr-p vis por. With SH- pred AA.

Conn @ 1086'

SH: gy-gy brn-rd brn, frm-hd, sbblky-sbplty, rthy txt, rthy-dul lstr, calc, com silty ips, occ grdg to SLTST.

Conn @ 1117'

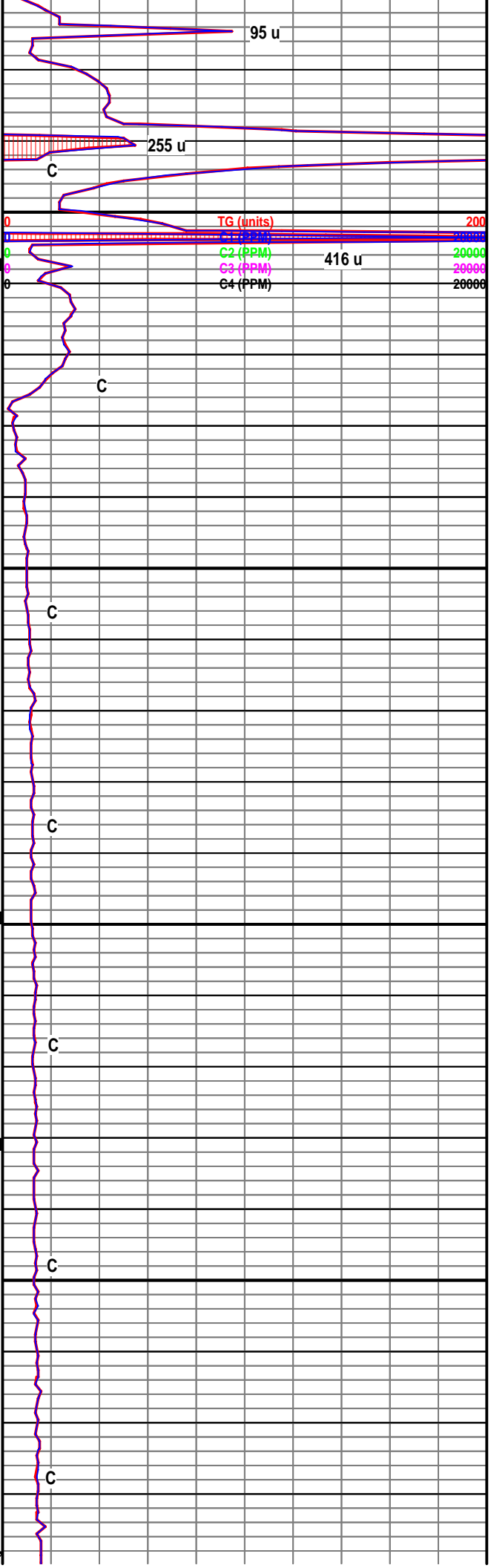
SH: gy-gy brn-rd brn, frm-hd, sbblky-sbplty, rthy txt, rthy-dul lstr, n calc, com silty ips, occ grdg to SLTST.

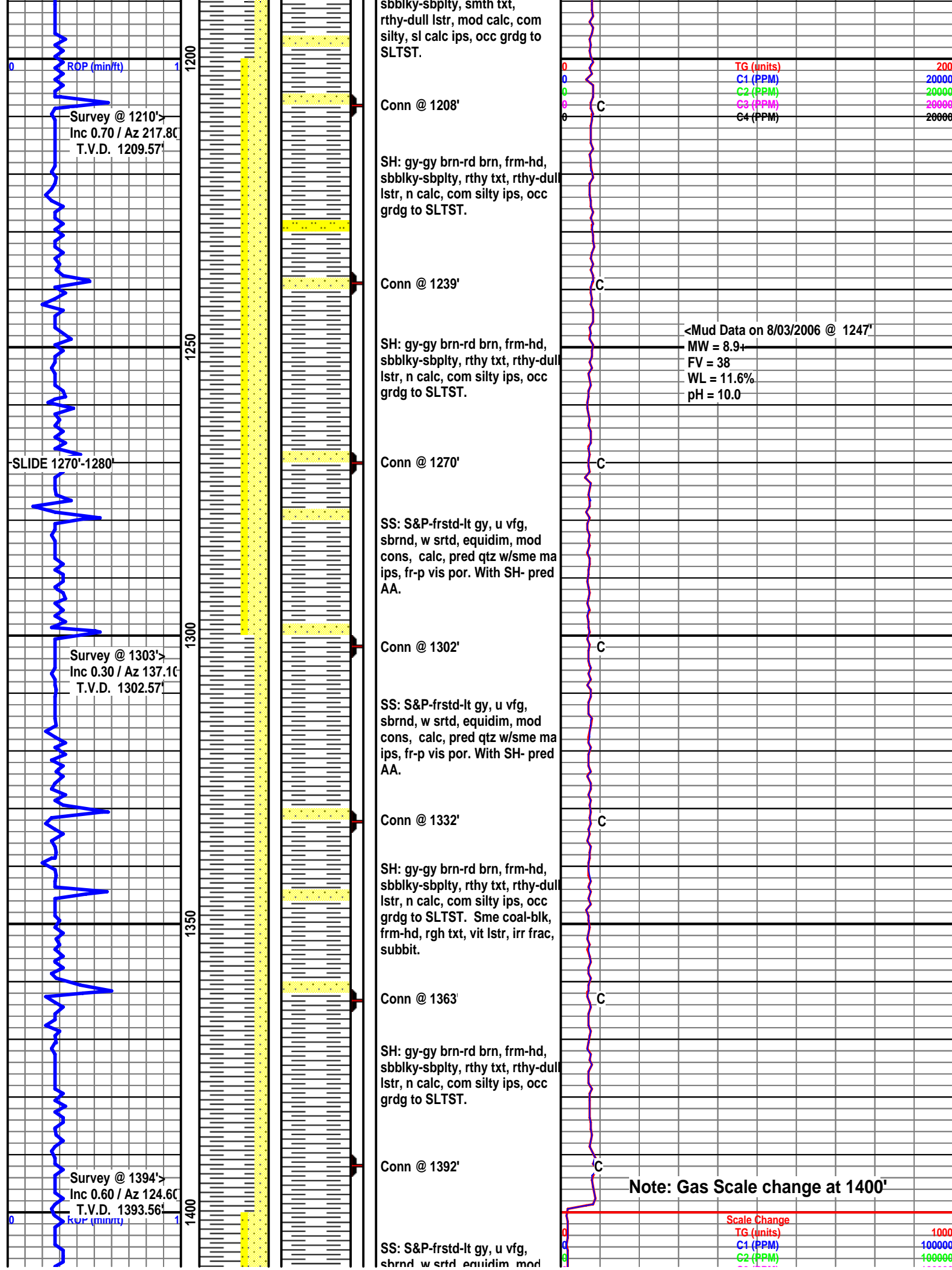
Conn @ 1148'

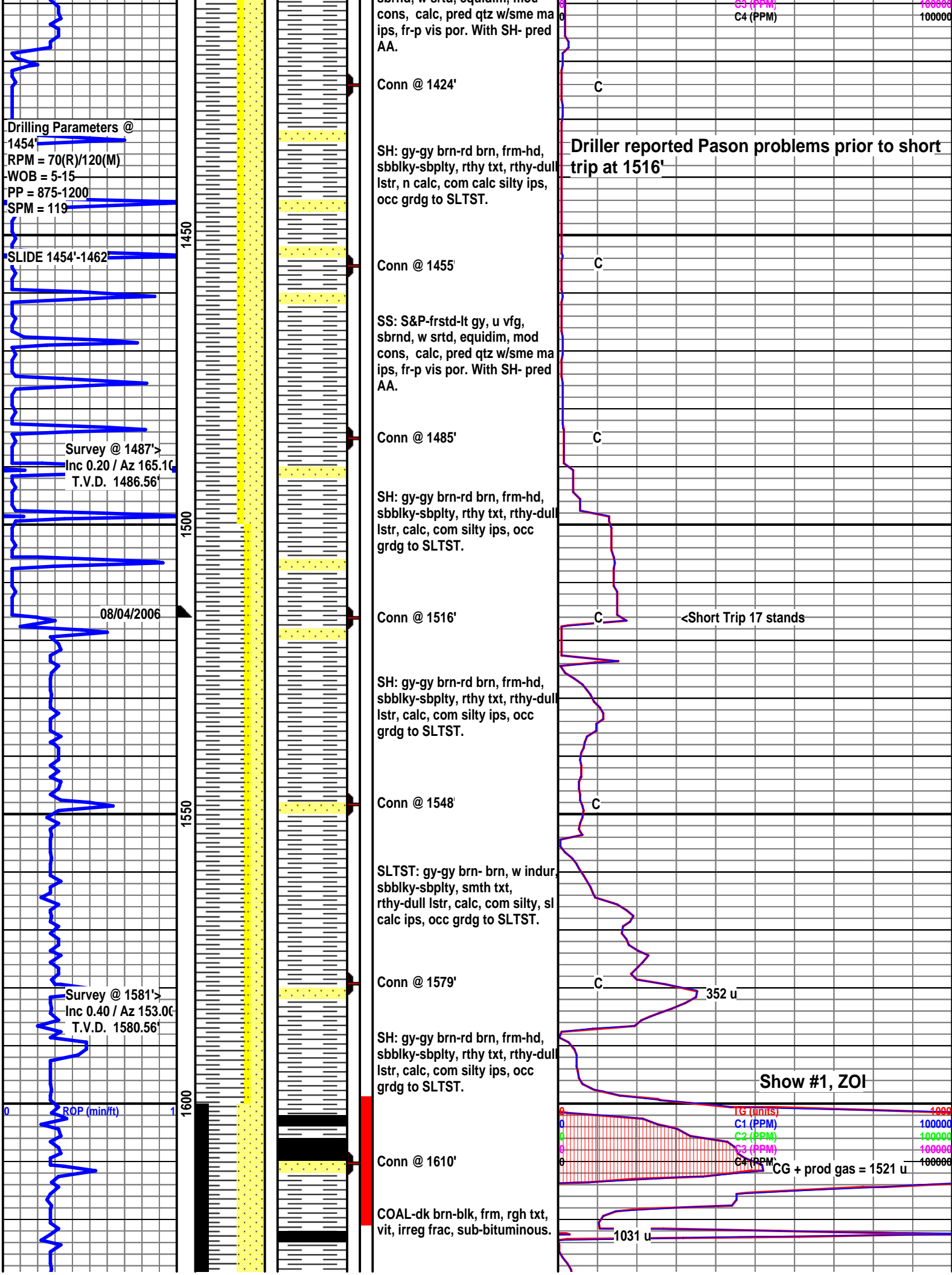
SS: S&P-frstd-lt gy, u vfg, sbrnd, w srtd, equidim, mod cons, calc, pred qtz w/sme ma ips, fr-p vis por. With SH- pred AA.

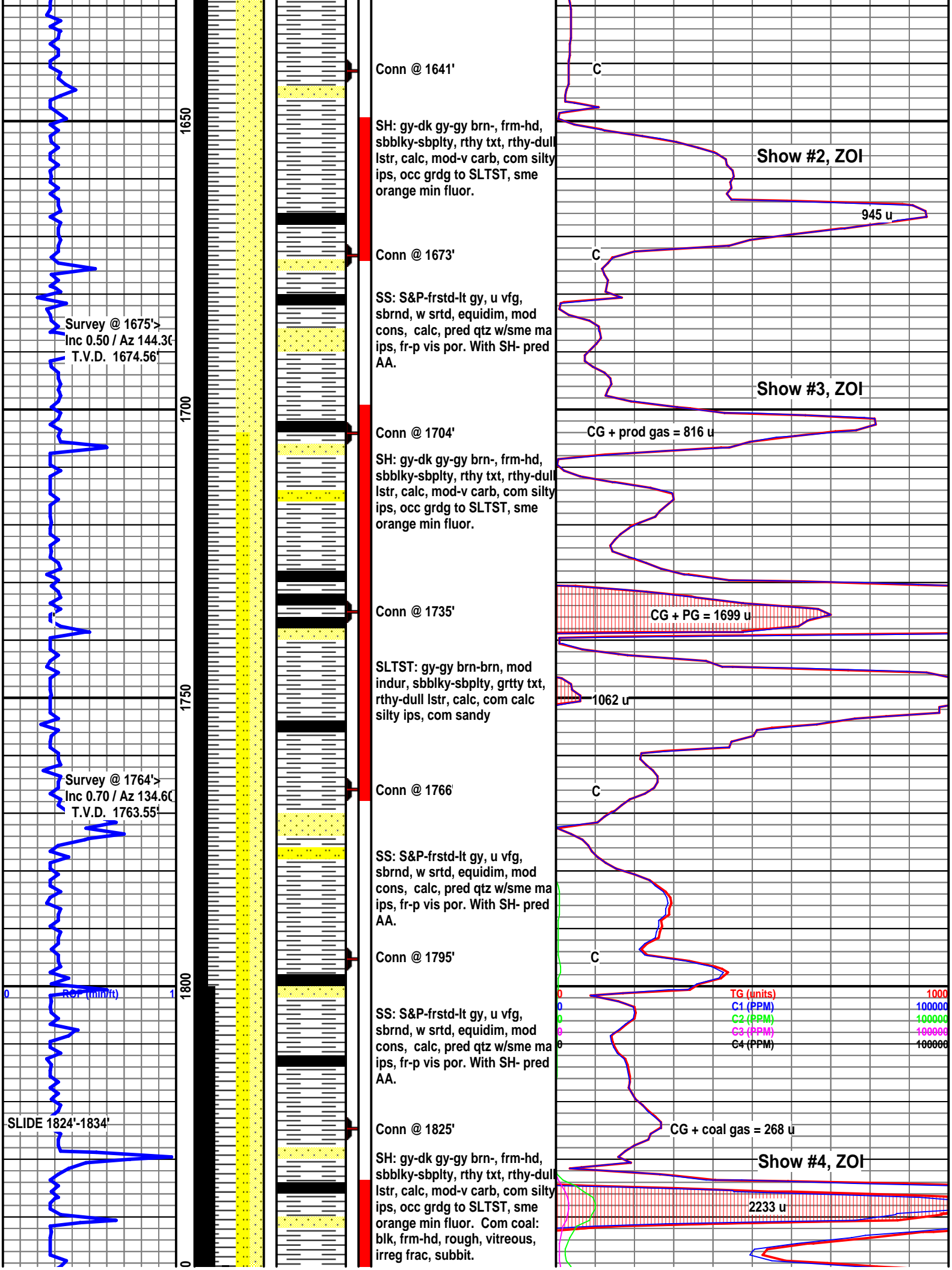
Conn @ 1178'

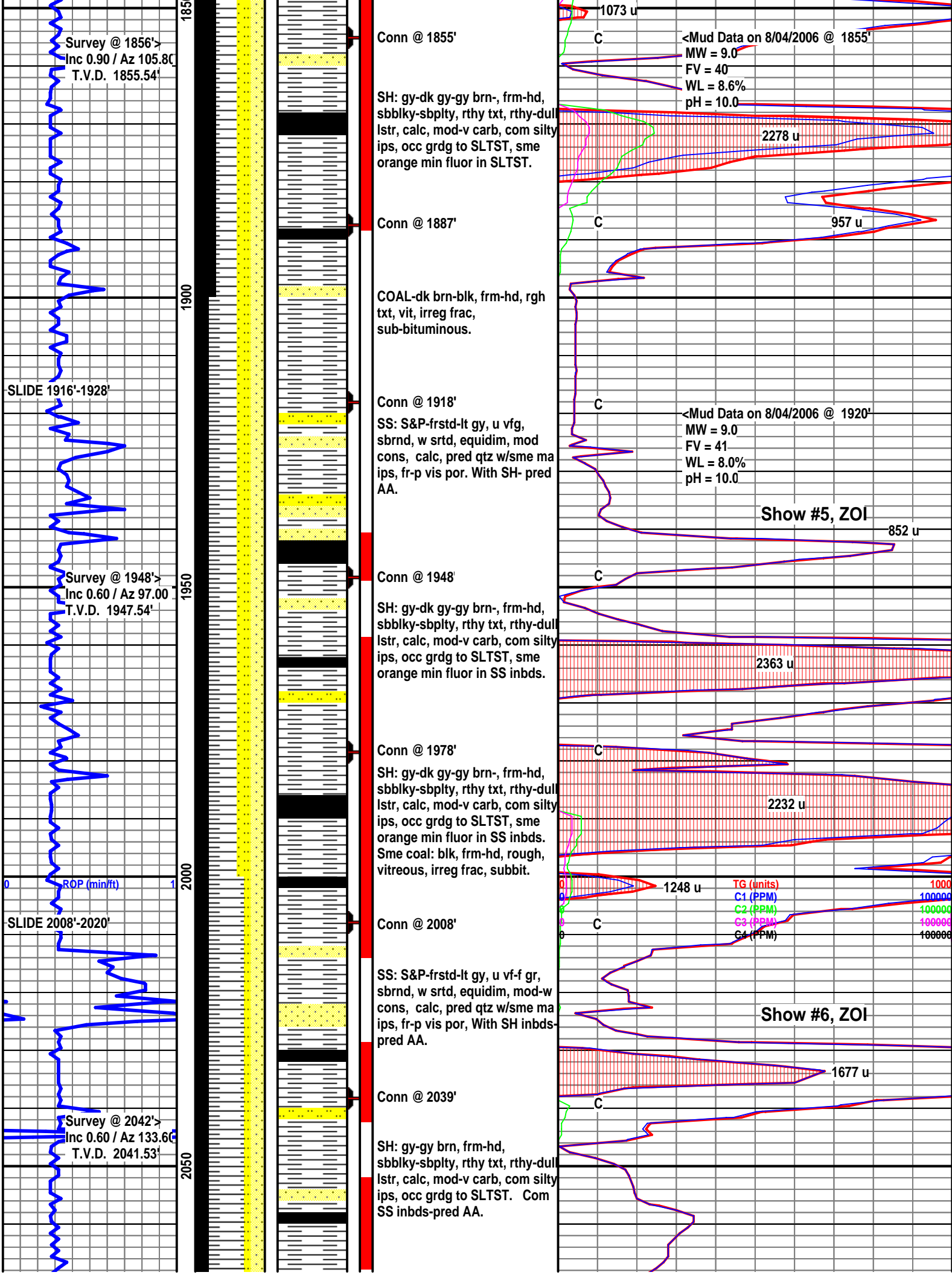
SLTST: gy-gy brn- brn, w indur,











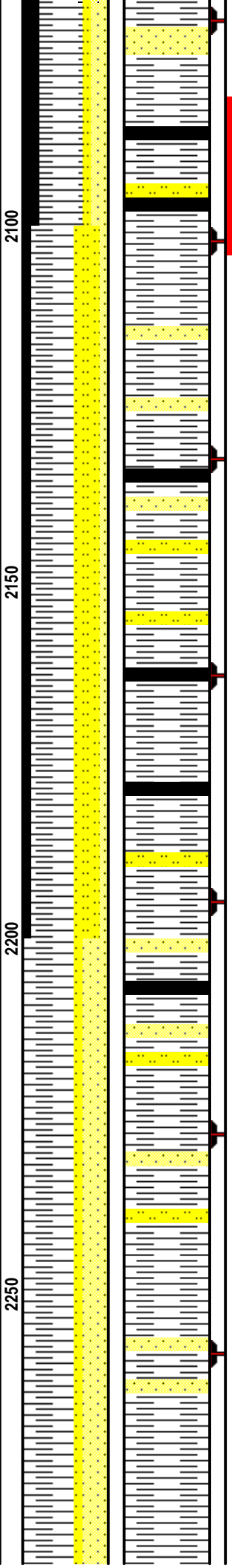
Drilling Parameters @ 2070'
RPM = 90(R)/120(M)
WOB = 5-15
PP = 900-1200
SPM = 118

SLIDE 2102'-2117'

Survey @ 2134'
Inc 0.70 / Az 231.70
T.V.D. 2133.53'

SLIDE 2194'-2204'

Survey @ 2229'
Inc 0.30 / Az 337.70
T.V.D. 2228.53'



Conn @ 2071'

SS: S&P-frstd-lt gy, u vf-f gr, sbrnd, w srtd, equidim, mod-w cons, calc, pred qtz w/sme ma ips, fr-p vis por. With SH- pred AA.

Conn @ 2102'

SH: gy-gy brn-, frm-hd, sbblky-sbplty, rthy txt, rthy-dull lstr, n calc, mod carb, com silty ips, com grdg to SLTST, occ coal-blk, frm, rough, vit, irreg frac.

Conn @ 2133'

SS: S&P-frstd-lt gy, u vf-f gr, sbrnd, w srtd, equidim, mod-w cons, calc, pred qtz w/sme ma ips, fr-p vis por. With SH- pred AA.

Conn @ 2163'

SH: gy-gy brn-sme dk gy, frm-hd, sbblky-sbplty, rthy txt, rthy-dull lstr, calc, mod carb, com silty ips, occ grdg to SLTST. Sme SS inbds-pred AA.

Conn @ 2195'

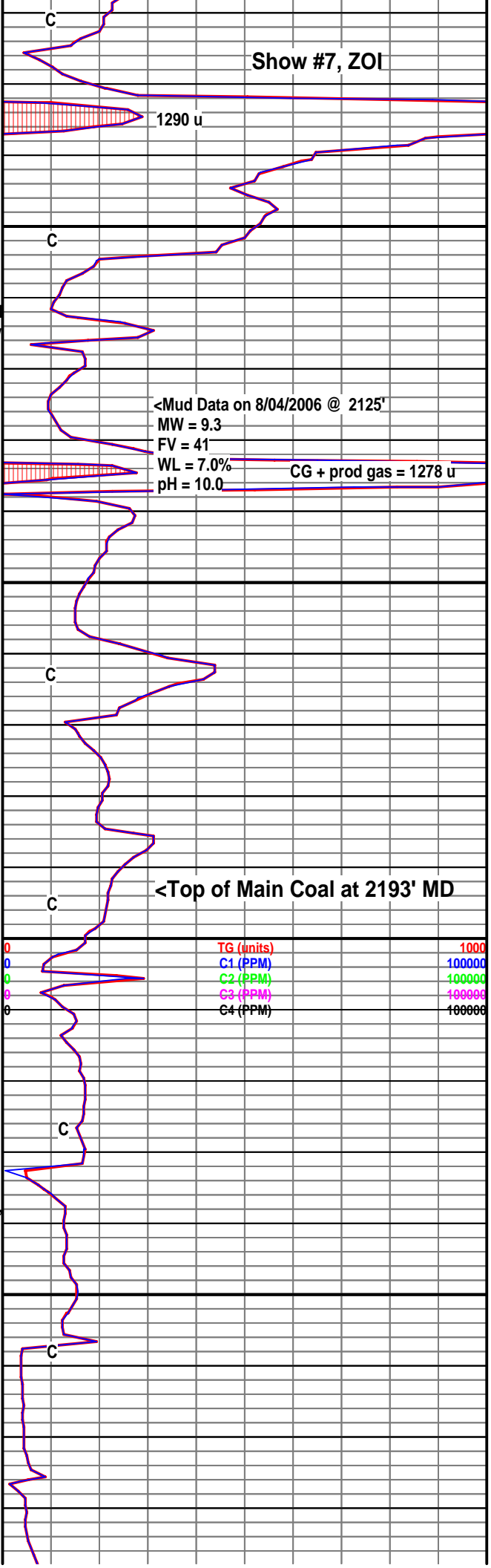
SS: S&P-frstd-lt gy, u vf-f gr, sbrnd, w srtd, equidim, mod-w cons, calc, pred qtz w/sme ma ips, fr-p vis por.

Conn @ 2227'

SLTST: gy-gy brn- brn, w indur, sbblky-sbplty, smth txt, rthy-dull lstr, calc, com silty, sl calc ips.

Conn @ 2258'

SS: S&P-frstd-lt gy, u vf-f gr, sbrnd, w srtd, equidim, mod-w cons, calc, pred qtz w/sme ma ips, fr-p vis por. With SH inbds- pred AA.



SLIDE 2289'-2294'

Drilling Parameters @ 2289'
RPM = 90(R)/120(M)
WOB = 5-15
PP = 900-1200
SPM = 118

Survey @ 2320'
Inc 0.70 / Az 3.40
T.V.D. 2319.52'

SLIDE 2380'-2388'

Survey @ 2414'
Inc 0.80 / Az 325.70
T.V.D. 2413.51'

SLIDE 2474'-2479'

Drilling Parameters @ 2505'
RPM = 90(R)/120(M)
WOB = 5-15
PP = 1000-1200
SPM = 118

Conn @ 2289'

SS: S&P-frstd-lt gy-sme lt brn, u vf-f gr, sbrnd, w srtd, equidim, mod-un cons, calc, pred qtz w/sme maf ips, fr-p vis por.

Conn @ 2320'

SH: gy-dk gy-gy brn-, frm-hd, sbblky-sbplty, rthy txt, rthy-dull lstr, calc, mod-v carb, com silty ips, occ grdg to SLTST. Occ SS inbds-S&P-lt gy, vf-fg, sbrnd, calc.

Conn @ 2350'

SLTST: gy-gy brn- brn, w indur, sbblky-sbplty, smth txt, rthy-dull lstr, calc, com silty, sl calc ips.

Conn @ 2381'

SH: gy-dk gy-gy brn-, frm-hd, sbblky-sbplty, rthy txt, rthy-dull lstr, calc, mod-v carb, com silty ips, com grdg to SLTST. Com SS inbds-pred AA.

Conn @ 2412'

SH: dk brn-dk rdsh brn-dk gy, frm-hd, sbplty-sbblky, rthy txt, rthy lstr, v carb, n calc. Sme coals-blk, frm, rough, vit, subbit.

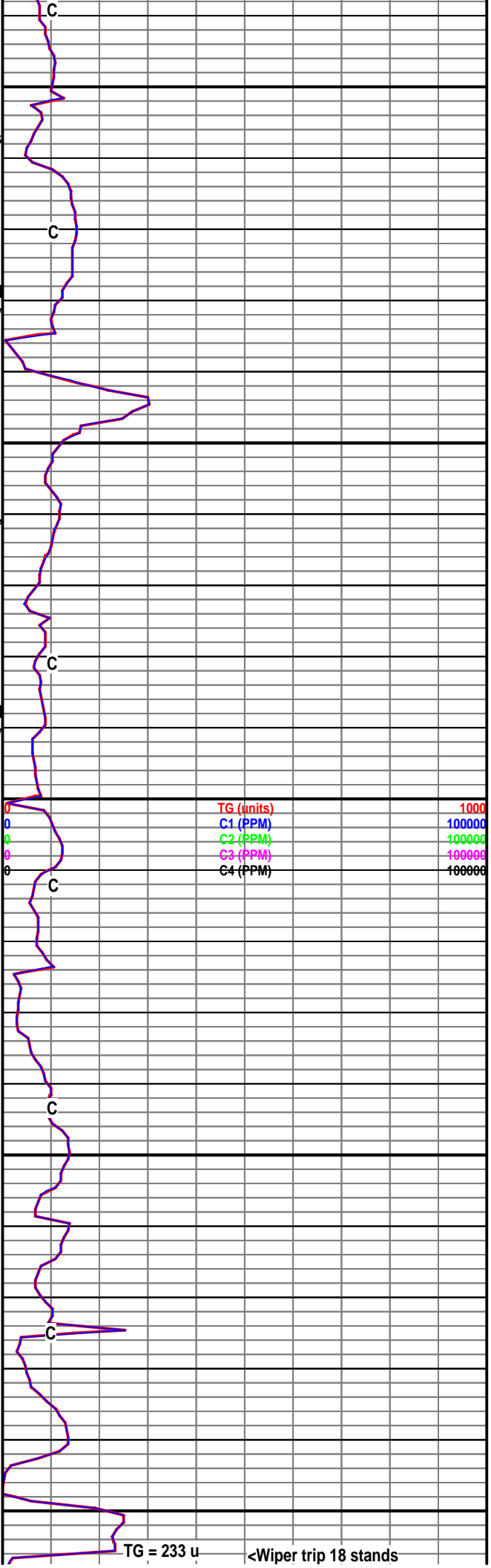
Conn @ 2443'

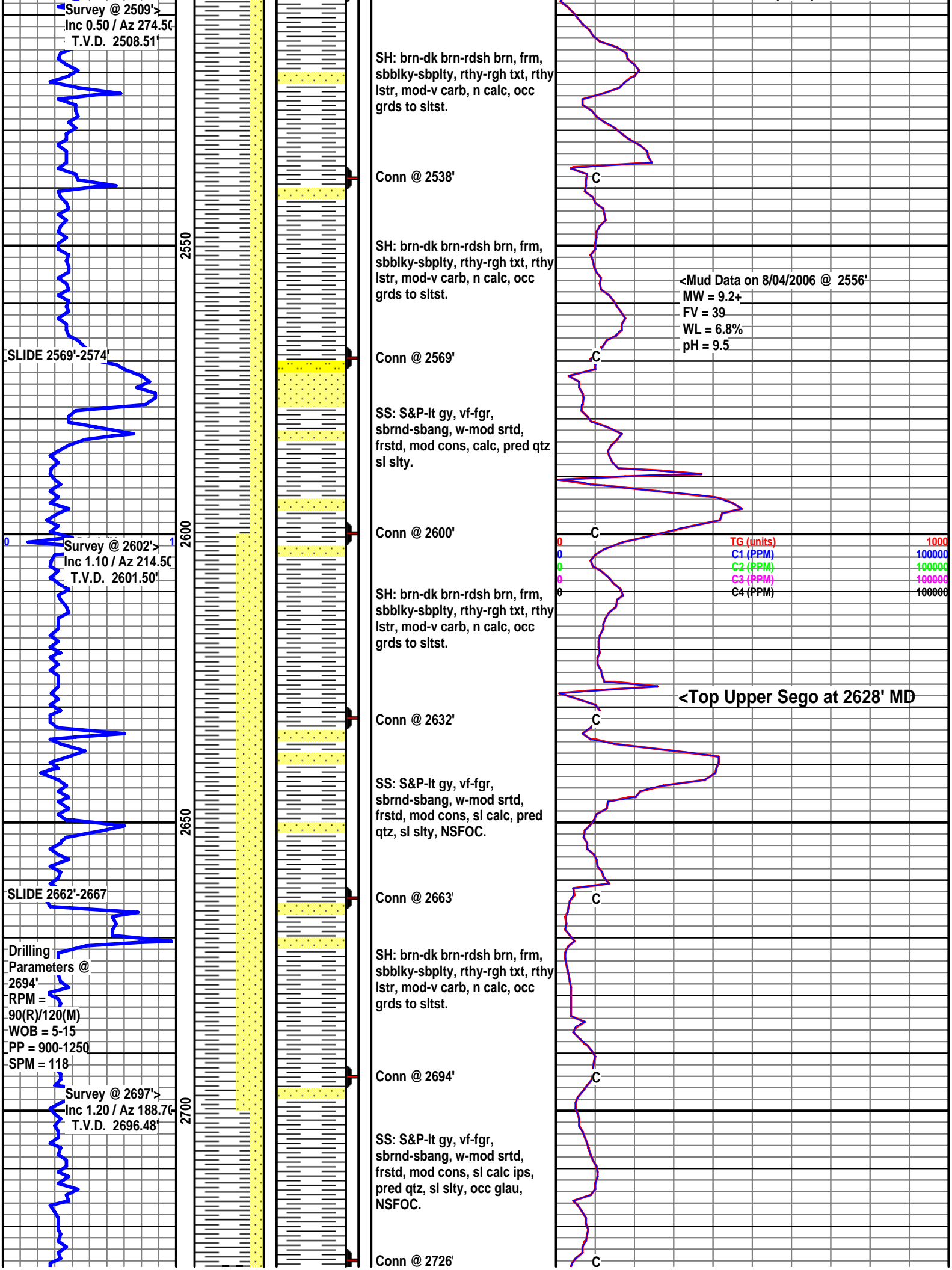
SLTST: dk brn-gy brn- rdsh brn, w indur, sbblky-sbplty, smth txt, rthy-dull lstr, n calc, com silty, sl calc ips

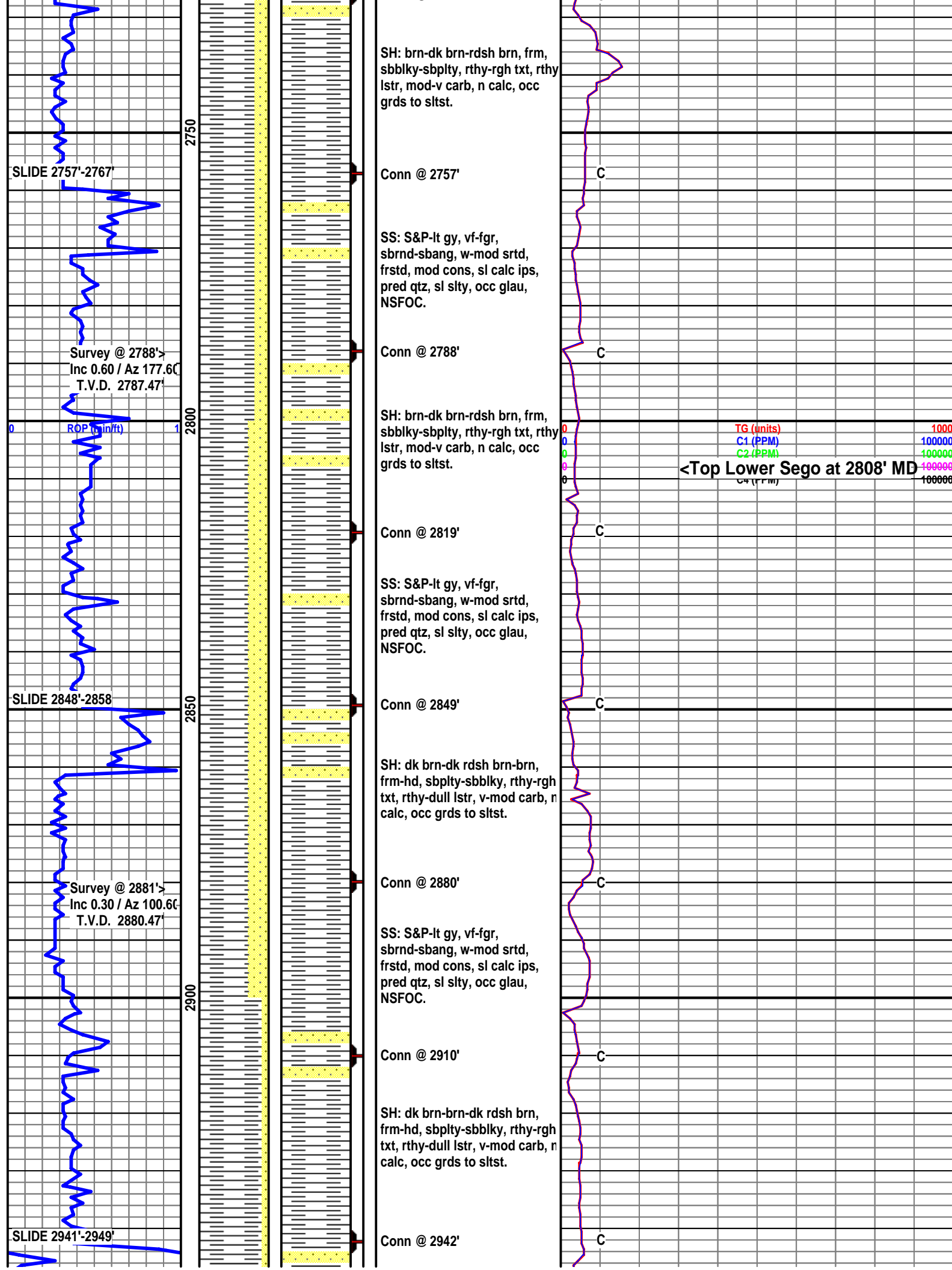
Conn @ 2475'

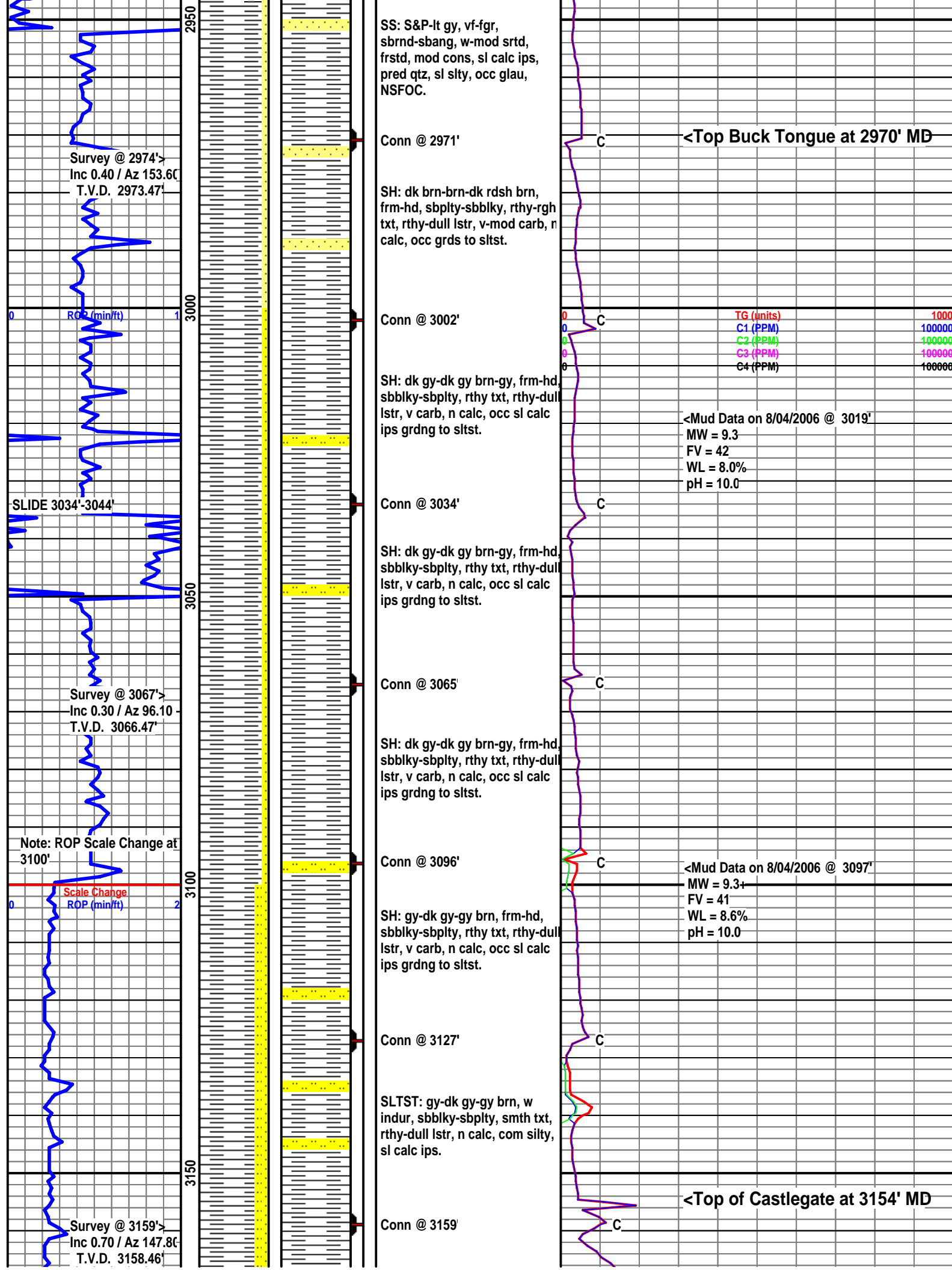
SS: S&P-lt gy, vf-fgr, sbrnd-sbang, w-mod srtd, frstd, mod cons, calc, pred qtz, sl slty.

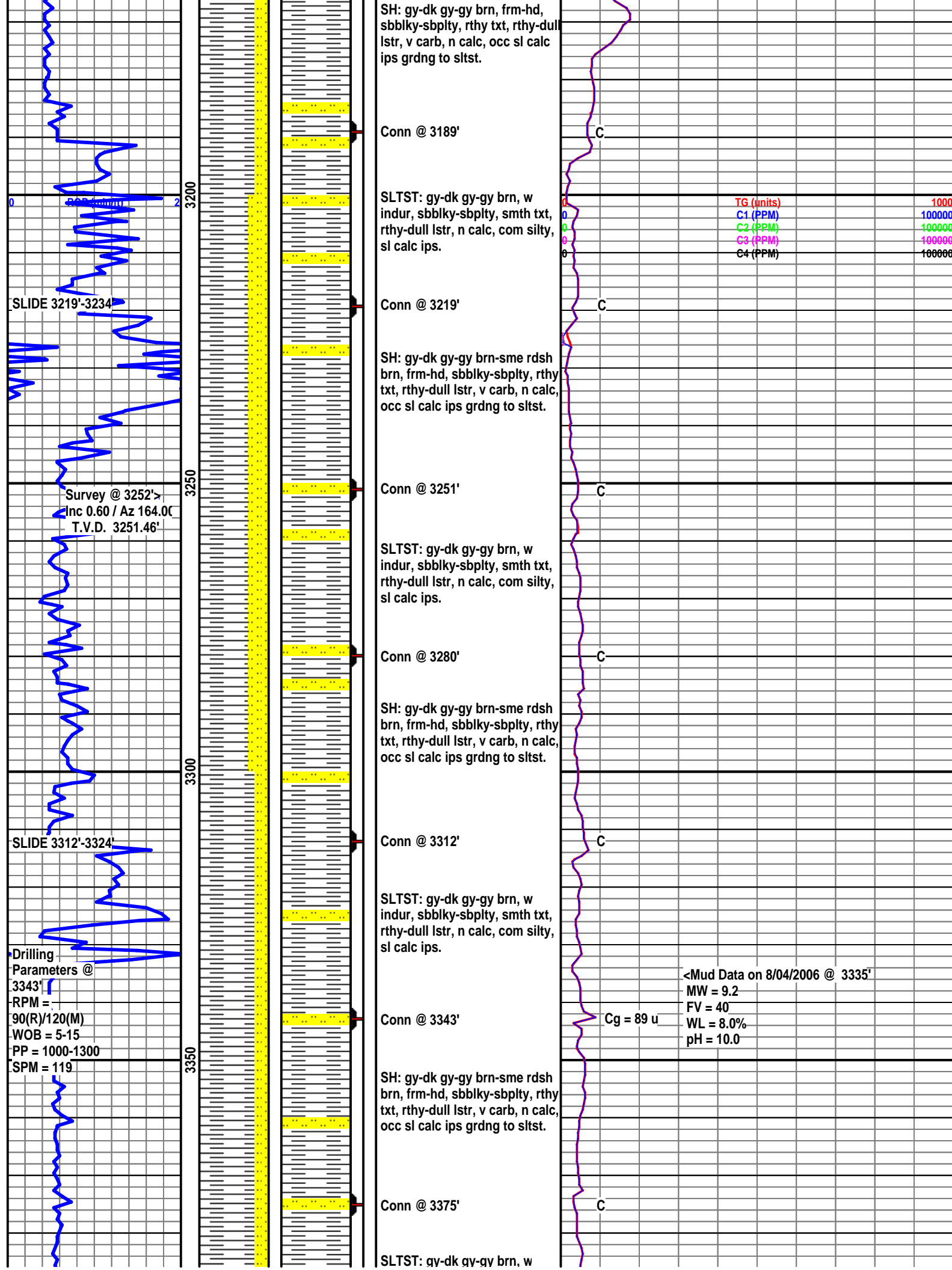
Conn @ 2506'

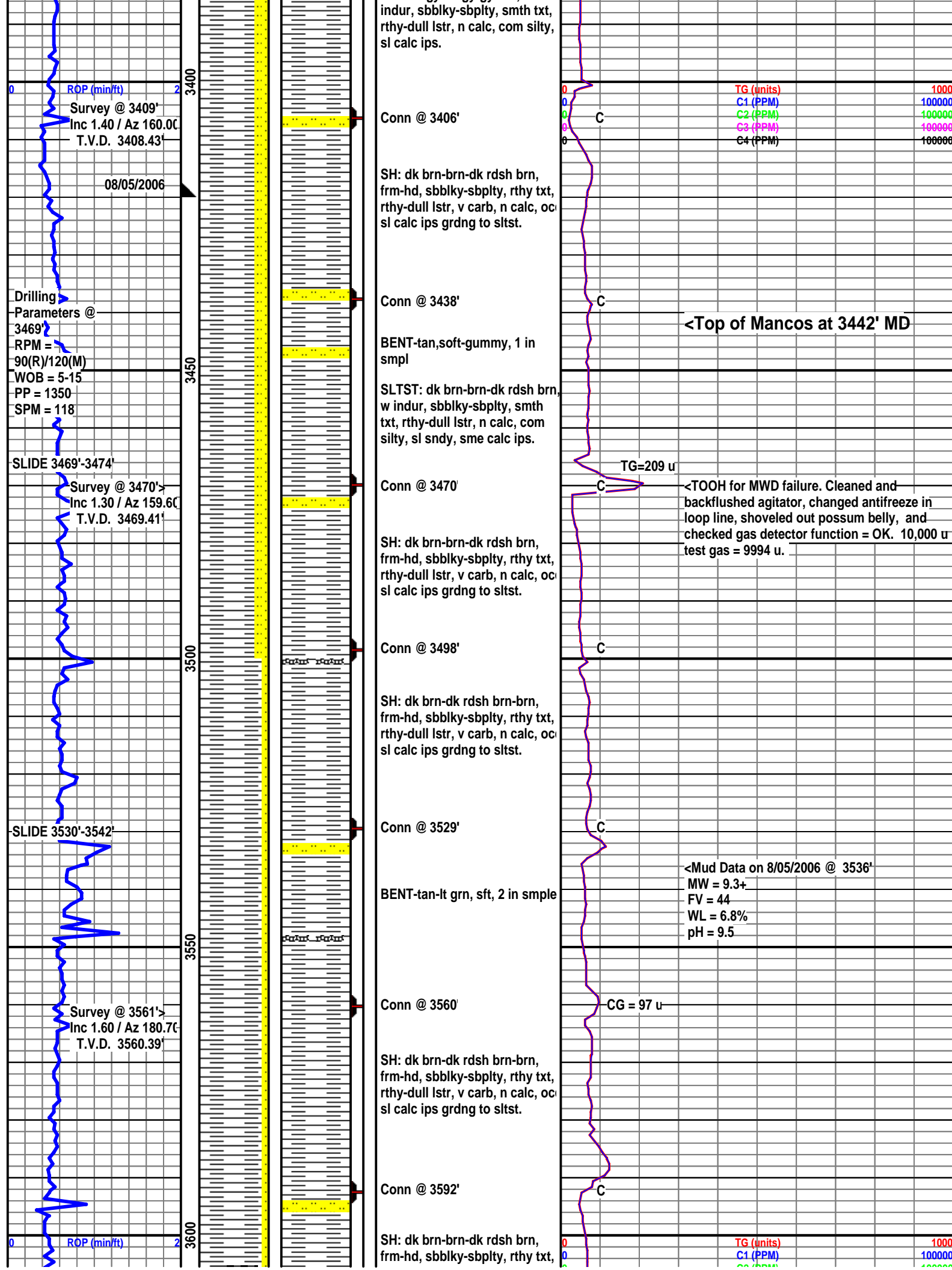


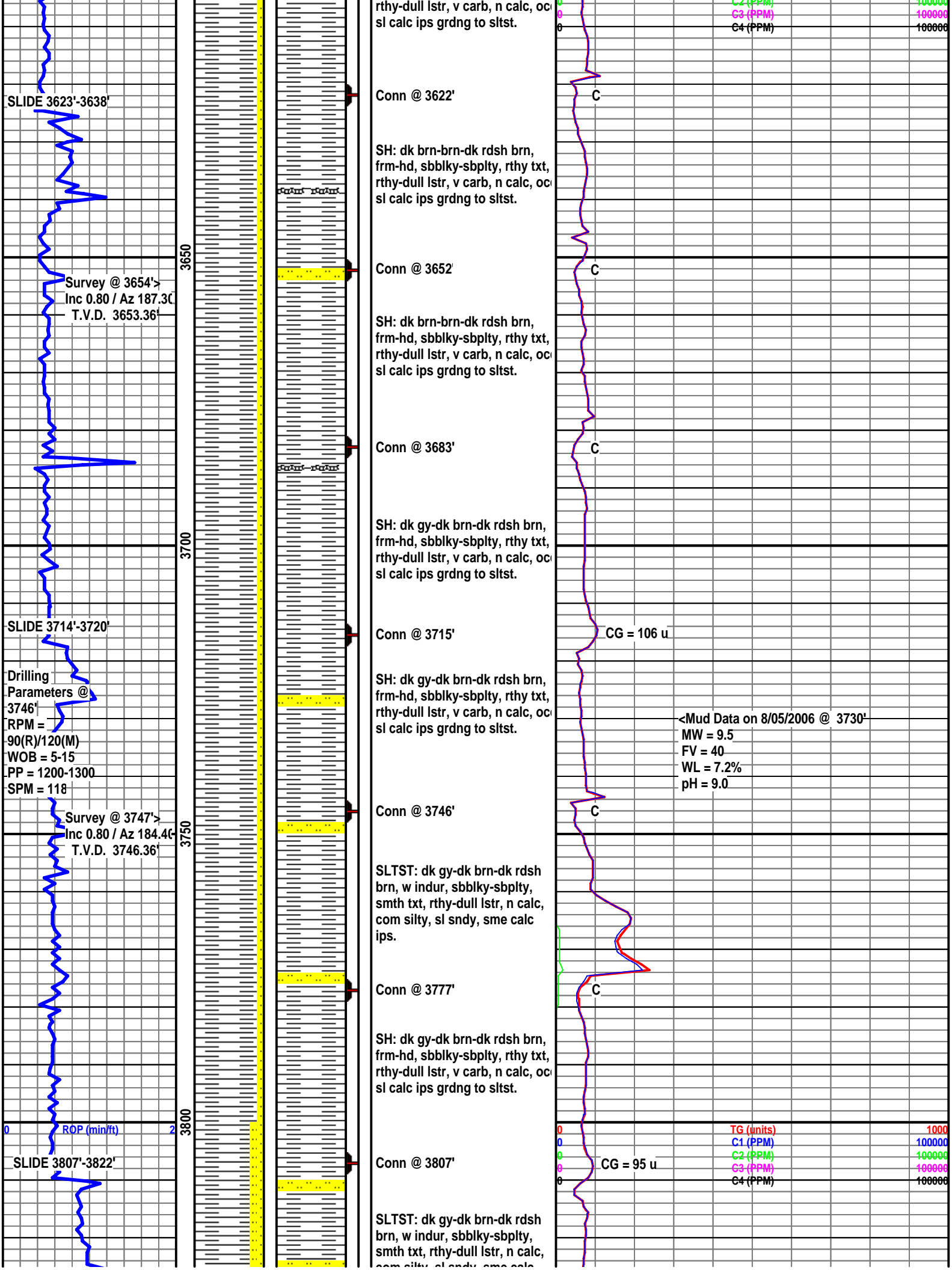


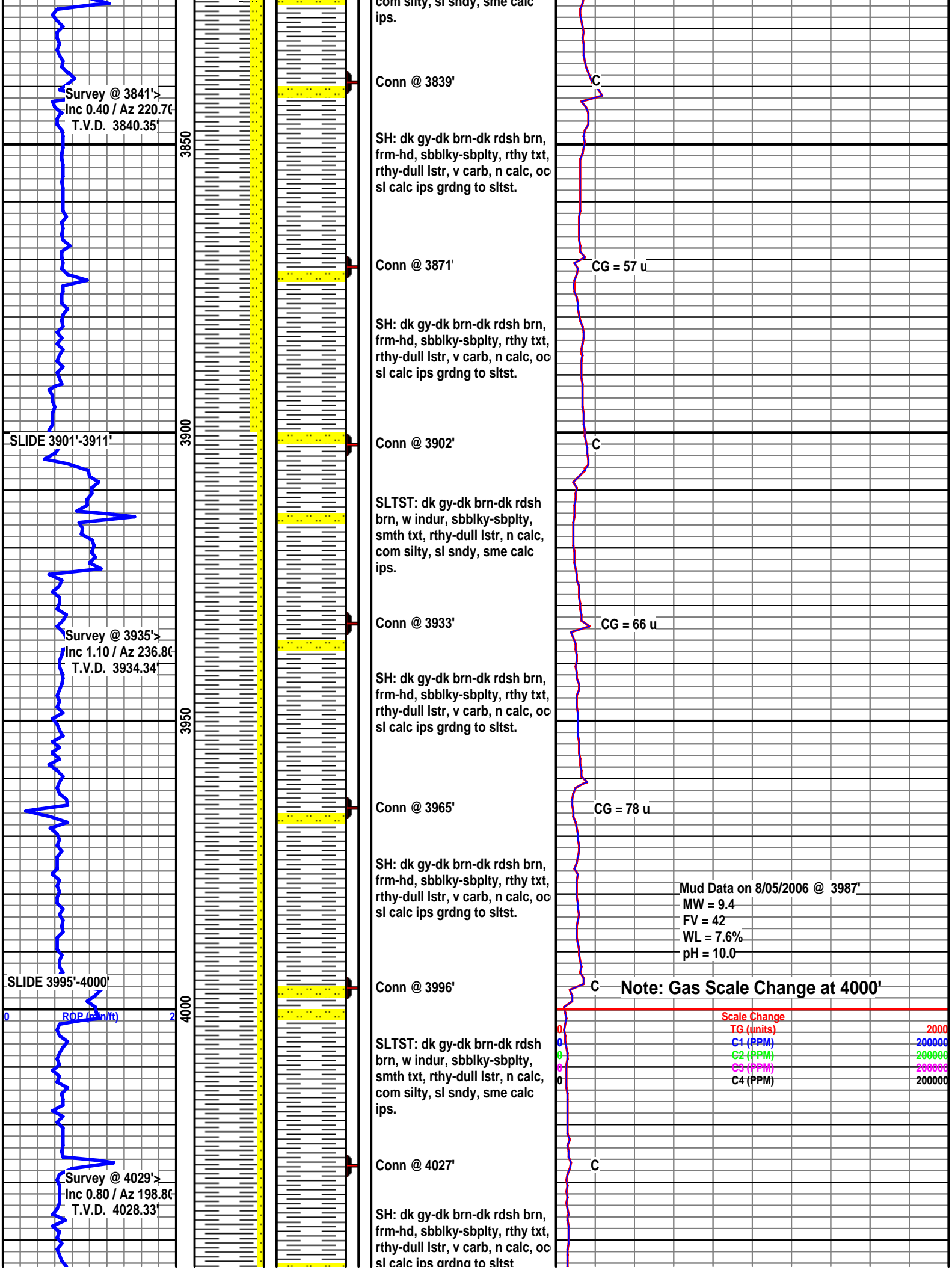


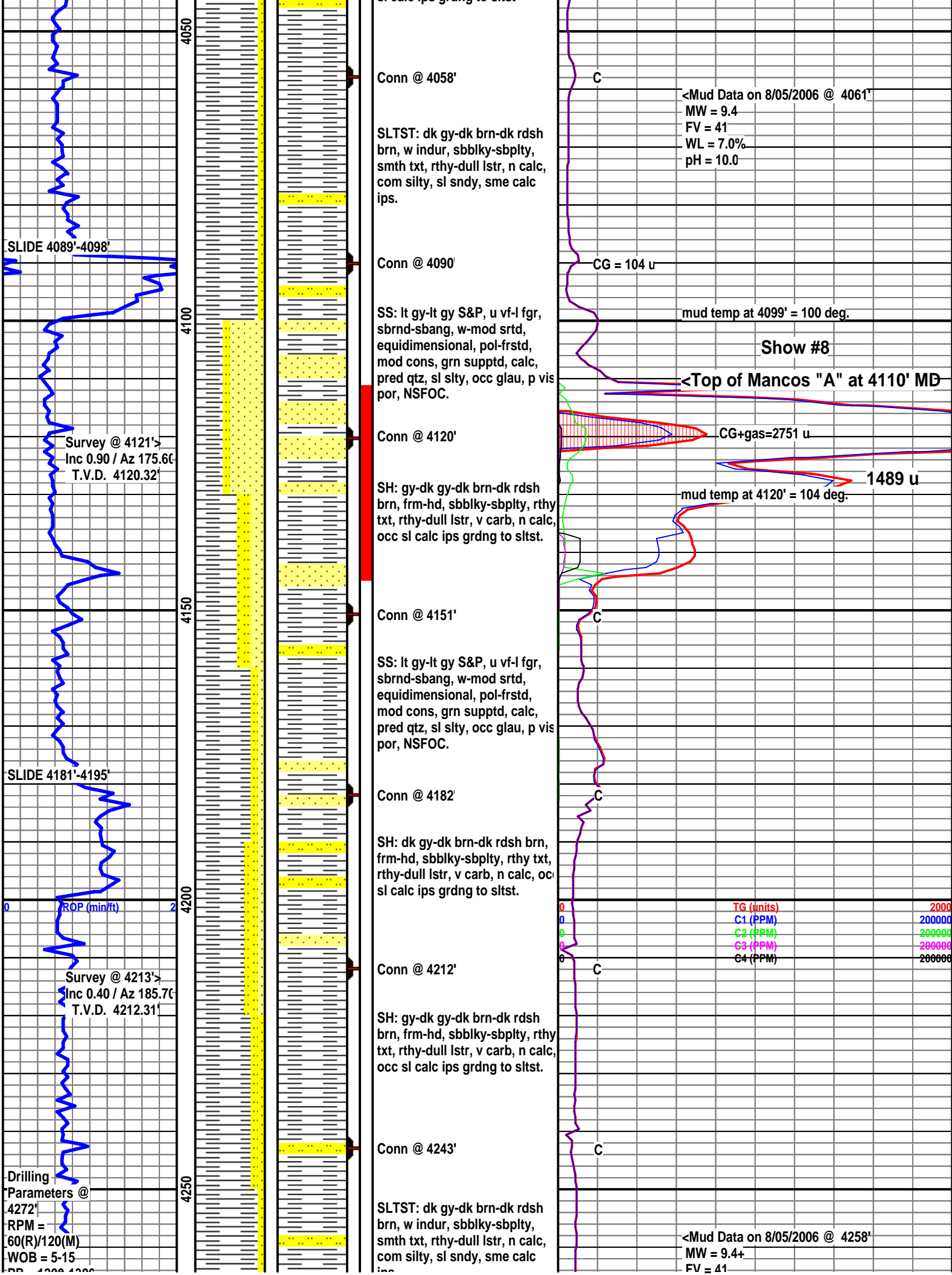












PP = 1200-1300
SPM = 118

SLIDE 4273'-4283'

Survey @ 4308'
Inc 0.50 / Az 146.10
T.V.D. 4307.31'

08/06/2006

SLIDE 4368'-4378'

Survey @ 4400'
Inc 0.50 / Az 208.70
T.V.D. 4399.31'

SLIDE 4460'-4470'

4300

4350

4400

4450

Conn @ 4274'

SH: gy-dk gy-dk brn-dk rdsh
brn, frm-hd, sbblky-sbplty, rthy
txt, rthy-dull lstr, v carb, n calc,
occ sl calc ips grdng to sltst.

Conn @ 4305'

SS: lt gy-lt gy S&P, u vf-l fgr,
sbrnd-sbang, w-mod srtd,
equidimensional, pol-frstd,
mod cons, grn supptd, calc,
pred qtz, sl slty, occ glau, p vis
por, sl yel grn fluor, p cut, v sl
ring stn.

Conn @ 4337'

SS: lt gy-lt gy S&P, u vf-l fgr,
sbrnd-sbang, w-mod srtd,
equidimensional, pol-frstd,
mod cons, grn supptd, calc,
pred qtz, sl slty, occ glau, p vis
por, gd yel-grn fluor, fr cut, v
gd fluor yel-grn ring stn.

Conn @ 4369'

SS: lt gy-lt gy S&P, u vf-l fgr,
sbrnd-sbang, w-mod srtd,
equidimensional, pol-frstd,
mod cons, grn supptd, calc,
pred qtz, sl slty, occ glau, p vis
por, gd yel-grn fluor, fr cut, v
gd fluor yel-grn ring stn.

Conn @ 4399'

SS: lt gy-lt gy S&P, u vf-l fgr,
sbrnd-sbang, w-mod srtd,
equidimensional, pol-frstd,
mod cons, grn supptd, calc,
pred qtz, sl slty, occ glau, p vis
por, gd yel-grn fluor, fr cut, v
gd fluor yel-grn ring stn.

Conn @ 4430'

SH: gy-dk gy-dk brn-dk rdsh
brn, frm-hd, sbblky-sbplty, rthy
txt, rthy-dull lstr, v carb, n calc,
occ sl calc ips grdng to sltst.

Conn @ 4460'

SS: lt gy-lt gy S&P, u vf-l fgr,
sbrnd-sbang, w-mod srtd,
equidimensional, pol-frstd,
mod cons, grn supptd, calc,
pred qtz, sl slty, occ glau, p vis
por, gd yel-grn fluor, fr cut, v
gd fluor yel-grn ring stn.

WL = 7.0%
pH = 9.5

C

C

Show #9

<Top of Mancos "B" at 4324' MD

320 u

CG+gas = 360 u

387 u

C

C

406 u

410 u

C

C

408 u

TG (units) 2000
C1 (PPM) 200000
C2 (PPM) 200000
C3 (PPM) 200000
C4 (PPM) 200000

