BLANCO

Geological Services LLC

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

Well Name: Michelle 31-25
Location: NW/NE Sec 25 T32S R68W
Licence Number: 05-071-08475
Region: Las Animas Co.
Spud Date: 08/19/05
Drilling Completed: 08/21/05
Surface Coordinates: 422' FNL 1522' FEL

Bottom Hole Coordinates:

Ground Elevation (ft): 8206'
K.B. Elevation (ft): 8210'
Logged Interval (ft): 1412' To: 3065'
Total Depth (ft): 3065'
Formation: Raton, Vermejo, Trinidad
Type of Drilling Fluid: Air

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

CORE

Contractor:
Core #:
Formation:
Core Interval: From: Cut:
To: Recovered:
Bit type:
Size:
Coring Time:

OPERATOR

Company: Pioneer Natural Resources USA Inc
Address: 1401 17th street Suite 1200
Denver CO 80202

GEOLOGIST

Name: Mehdi Paknahad / Bob Wick
Company: BLANCO Geological Services LLC
Address: 806 East Robinson
Trinidad, Colorado 81082

Comments

8 5/8" Surface Casing set to 1405'

ROCK TYPES

Anhy	Clyst	Gyp	Mrlst	Shgy
Bent	Coal	Igne	Salt	Sltst
Brec	Congl	Lmst	Shale	Ss
Cht	Dol	Meta	Shcol	Till

ACCESSORIES

MINERAL
- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brecfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau
- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

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

STRINGER
- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE
- Boundst
- Chalky
- CryxIn
- Earthy
- FinexIn
- Grainst
- Lithogr
- MicroxIn
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

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

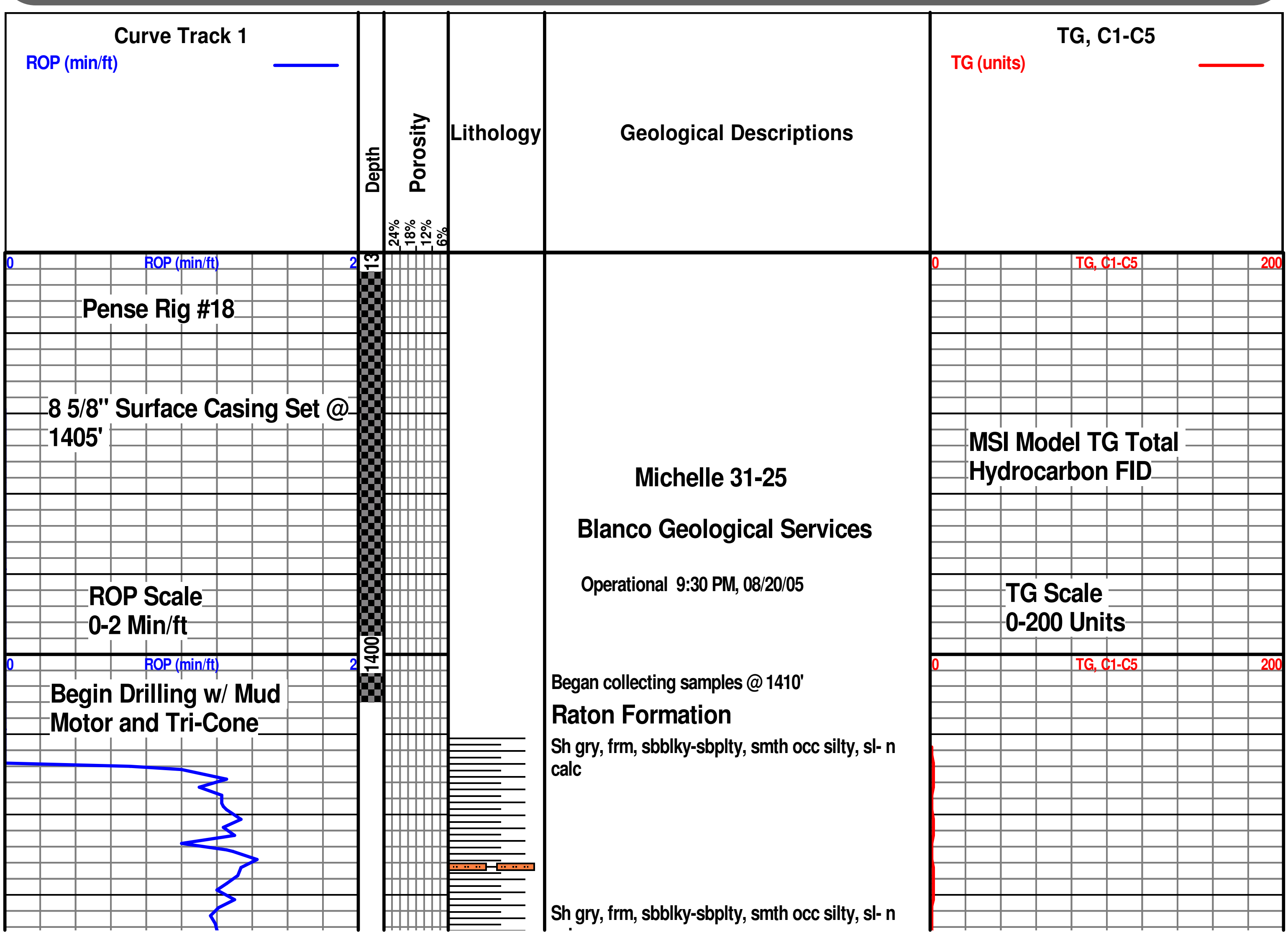
SORTING
- Well
- Moderate
- Poor

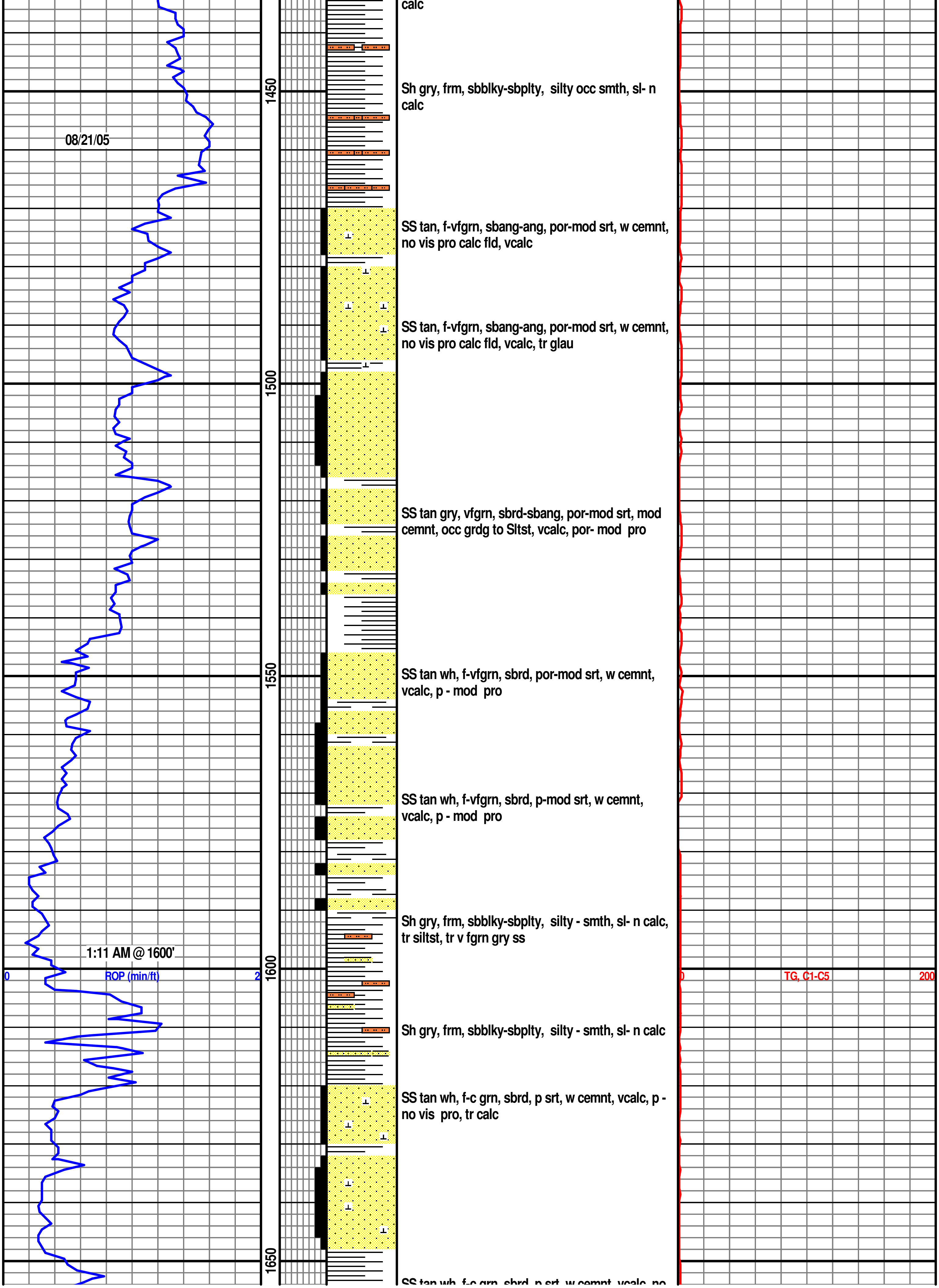
ROUNDING
- Rounded
- Subrnd
- Subang
- Angular

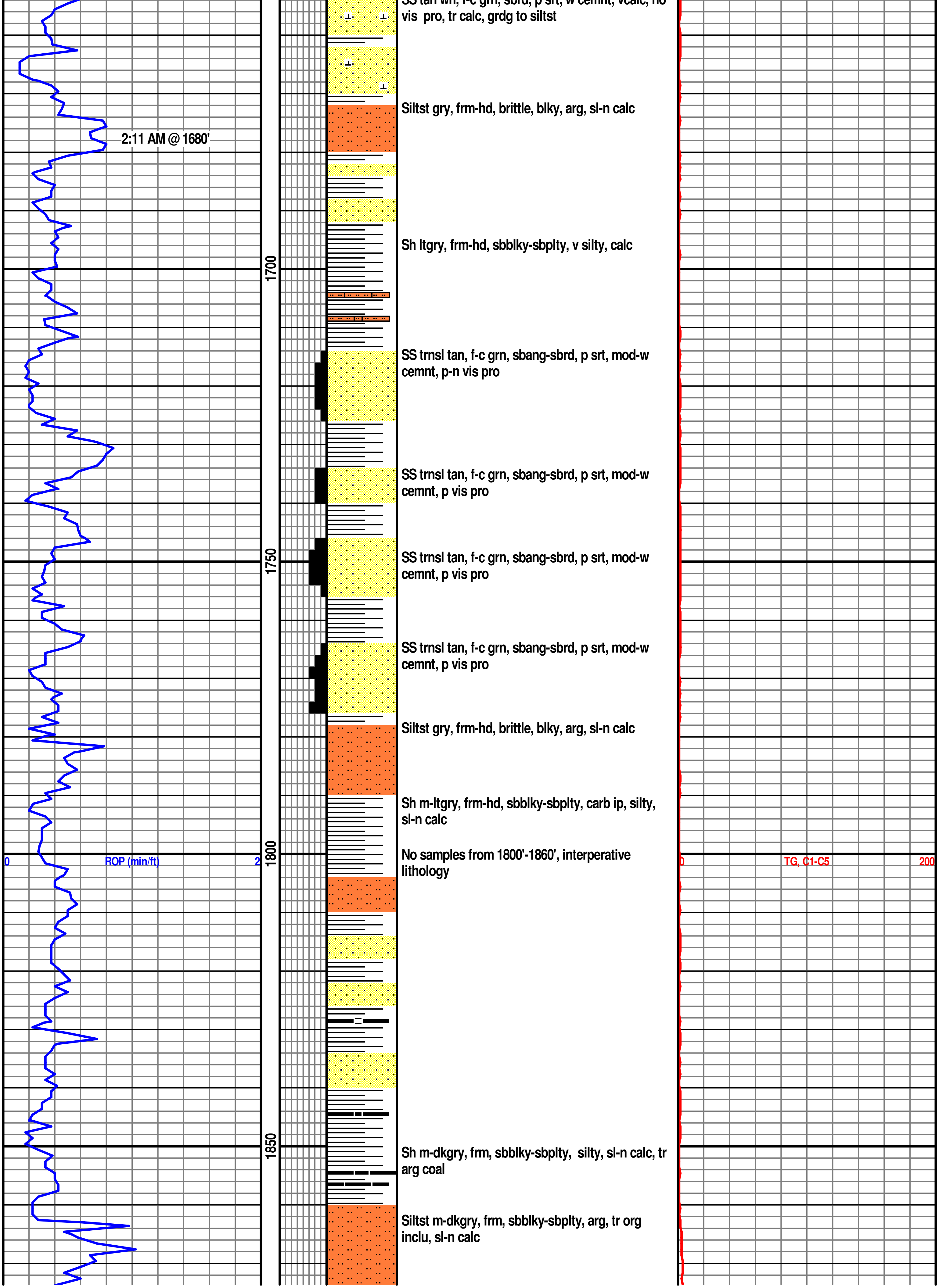
OIL SHOWS
- Even
- Spotted
- Ques
- Dead

INTERVALS
- Core
- Dst
- Srfscsg

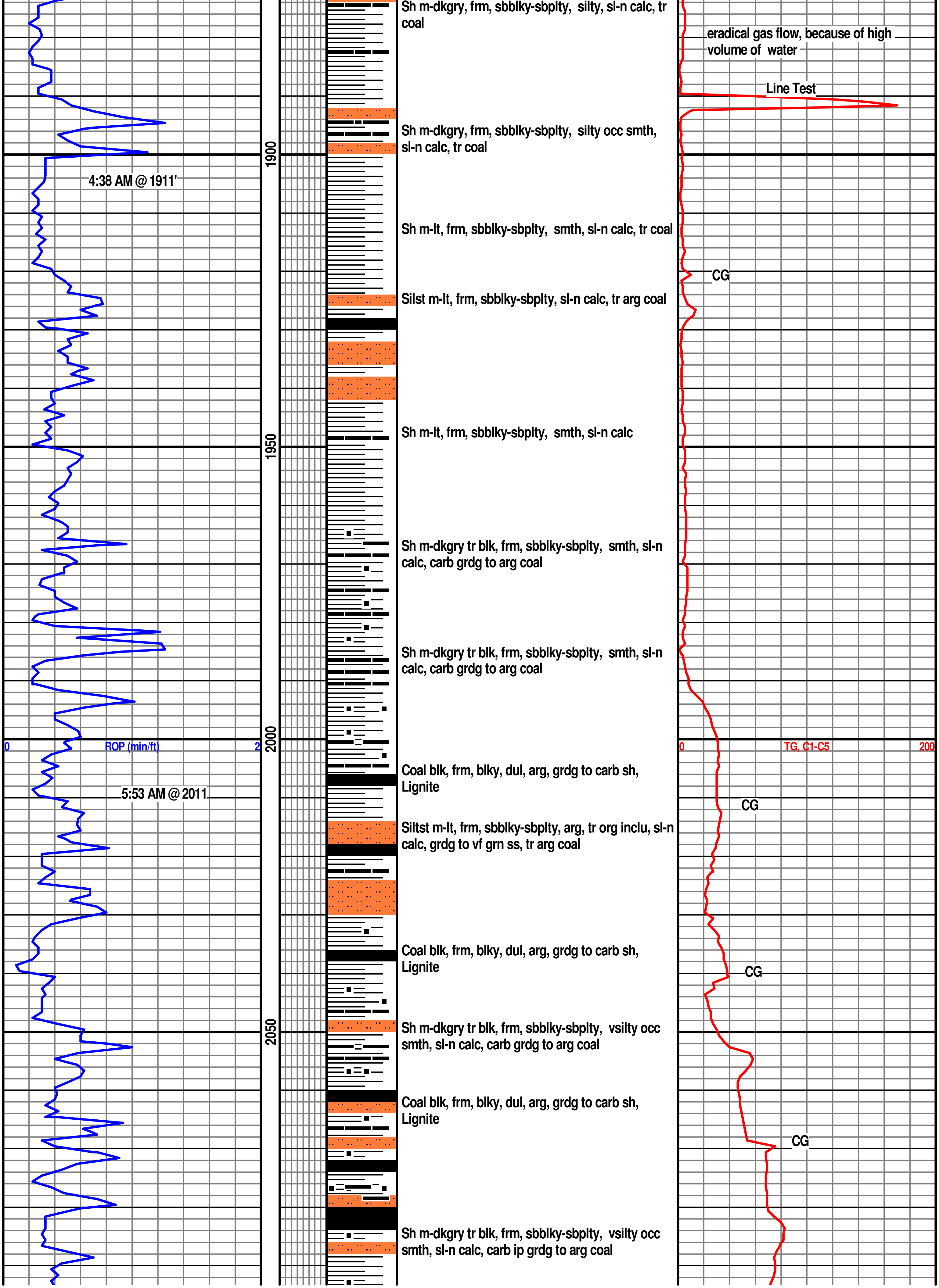
EVENTS
- Rft
- Sidewall
- Cv



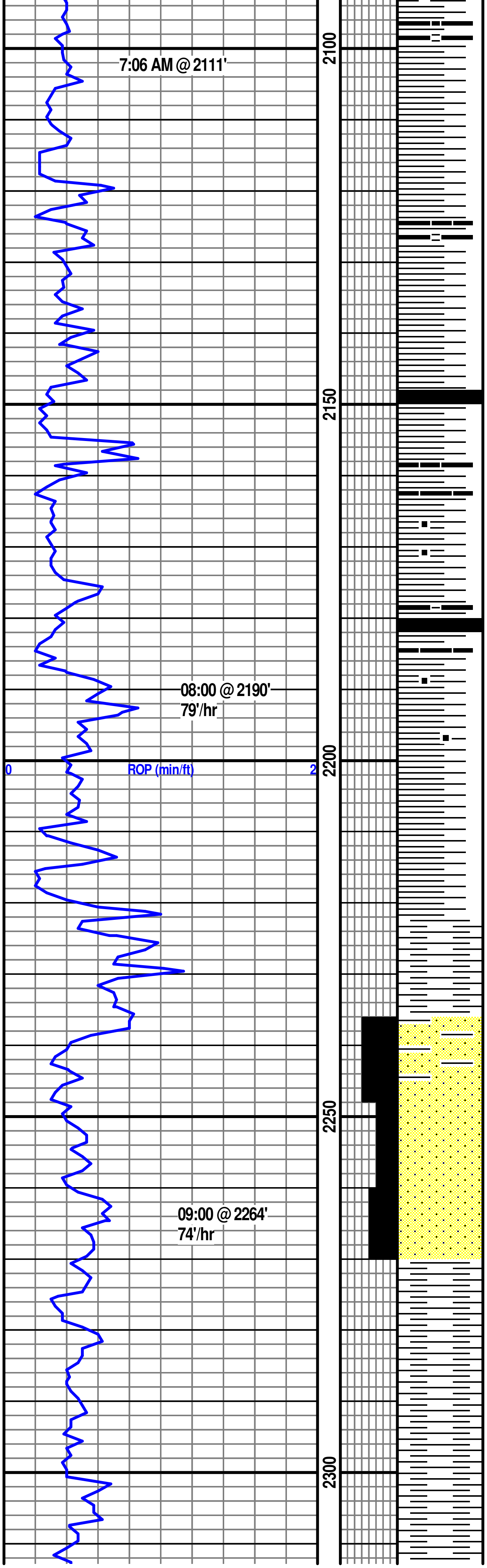

calc
1450
Sh gry, frm, sbblky-sbplty, silty occ smth, sl- n calc
08/21/05
SS tan, f-vfgrn, sbang-ang, por-mod srt, w cemnt, no vis pro calc fld, vcalc
SS tan, f-vfgrn, sbang-ang, por-mod srt, w cemnt, no vis pro calc fld, vcalc, tr glau
1500
SS tan gry, vfgrn, sbrd-sbang, por-mod srt, mod cemnt, occ grdg to Sltst, vcalc, por- mod pro
SS tan wh, f-vfgrn, sbrd, por-mod srt, w cemnt, vcalc, p - mod pro
1550
SS tan wh, f-vfgrn, sbrd, p-mod srt, w cemnt, vcalc, p - mod pro
Sh gry, frm, sbblky-sbplty, silty - smth, sl- n calc, tr siltst, tr v fgrn gry ss
1:11 AM @ 1600'
0
ROP (min/ft)
2
1600
0
TG, C1-C5
200
Sh gry, frm, sbblky-sbplty, silty - smth, sl- n calc
SS tan wh, f-c grn, sbrd, p srt, w cemnt, vcalc, p - no vis pro, tr calc
1650
SS tan wh, f-c grn, sbrd, p srt, w cemnt, vcalc, no



SS tan wh, f-c grn, sbrd, p srt, w cemnt, vcalc, no vis pro, tr calc, grdg to siltst
Siltst gry, frm-hd, brittle, blky, arg, sl-n calc
2:11 AM @ 1680'
Sh ltgry, frm-hd, sbblky-sbplty, v silty, calc
1700
SS trnsl tan, f-c grn, sbang-sbrd, p srt, mod-w cemnt, p-n vis pro
SS trnsl tan, f-c grn, sbang-sbrd, p srt, mod-w cemnt, p vis pro
1750
SS trnsl tan, f-c grn, sbang-sbrd, p srt, mod-w cemnt, p vis pro
SS trnsl tan, f-c grn, sbang-sbrd, p srt, mod-w cemnt, p vis pro
Siltst gry, frm-hd, brittle, blky, arg, sl-n calc
Sh m-ltgry, frm-hd, sbblky-sbplty, carb ip, silty, sl-n calc
0
ROP (min/ft)
2
1800
No samples from 1800'-1860', interperative lithology
0
TG, C1-C5
200
1850
Sh m-dkgry, frm, sbblky-sbplty, silty, sl-n calc, tr arg coal
Siltst m-dkgry, frm, sbblky-sbplty, arg, tr org inclu, sl-n calc



Sh m-dkgry, frm, sbblky-sbplty, silty, sl-n calc, tr coal
eradical gas flow, because of high volume of water
Line Test
Sh m-dkgry, frm, sbblky-sbplty, silty occ smth, sl-n calc, tr coal
1900
4:38 AM @ 1911'
Sh m-lt, frm, sbblky-sbplty, smth, sl-n calc, tr coal
CG
Silst m-lt, frm, sbblky-sbplty, sl-n calc, tr arg coal
Sh m-lt, frm, sbblky-sbplty, smth, sl-n calc
1950
Sh m-dkgry tr blk, frm, sbblky-sbplty, smth, sl-n calc, carb grdg to arg coal
Sh m-dkgry tr blk, frm, sbblky-sbplty, smth, sl-n calc, carb grdg to arg coal
0
ROP (min/ft)
2
2000
0
TG, C1-C5
200
Coal blk, frm, blky, dul, arg, grdg to carb sh, Lignite
5:53 AM @ 2011
CG
Siltst m-lt, frm, sbblky-sbplty, arg, tr org inclu, sl-n calc, grdg to vf grn ss, tr arg coal
Coal blk, frm, blky, dul, arg, grdg to carb sh, Lignite
CG
2050
Sh m-dkgry tr blk, frm, sbblky-sbplty, vsilty occ smth, sl-n calc, carb grdg to arg coal
Coal blk, frm, blky, dul, arg, grdg to carb sh, Lignite
CG
Sh m-dkgry tr blk, frm, sbblky-sbplty, vsilty occ smth, sl-n calc, carb ip grdg to arg coal



Sh m-dkgry tr blk, frm, sbblky-sbplty, smth, sl-n calc

Sh m-dkgry tr blk, frm, sbblky-sbplty, smth, sl-n calc, tr carb

Sh m-dkgry tr blk, frm, sbblky-sbplty, silty-smth, sl-n calc, tr carb

Coal blk, frm, blky, dul, arg, grdg to carb sh, Lignite

Coal blk, frm, blky, dul-sb vit, arg, grdg to carb sh, ash content, Lignite

Bob Logging

SHALE, lt-gray, firm, platey, earthy, dull

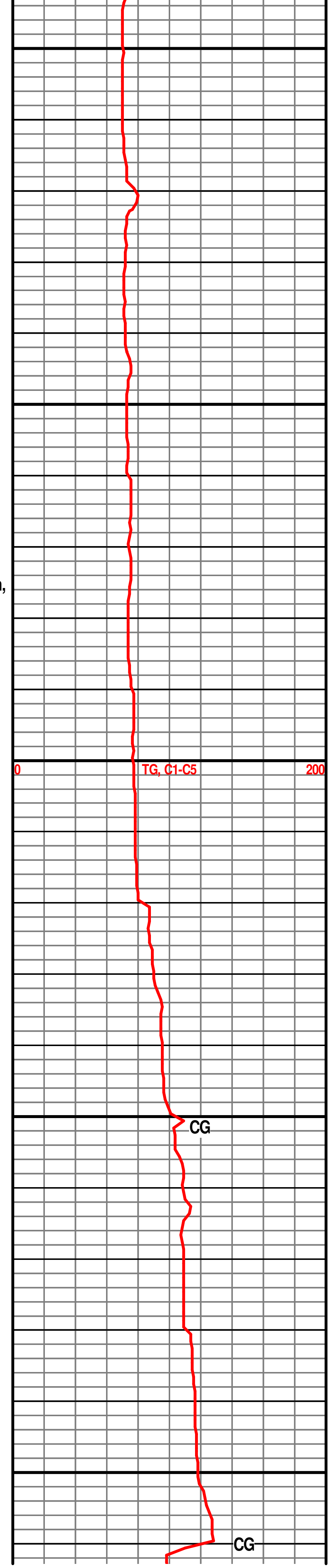
SANDSTONE, milky-white, fg, sub angular - sub rounded, well sorted, mod consolidated, mildly calcareous, SHALE stringers

SANDSTONE, milky-tan, fg - cg, sub angular, poorly sorted, poorly - un consolidated, mildly calcareous

SANDSTONE, gray, vfg, sub angular - sub rounded, well sorted, well consolidated

SHALE, gray-brown brown, firm, sub blocky - sub platey, earthy, dull

SHALE, gray-brown dk-brown, firm, blocky - sub platey, earthy, dull



Recalibrate CCD/TCD

Minor COAL, imbedded, black, firm, irregular, sub blocky, rough, waxy

10:00 @ 2340'
76'/hr

SANDSTONE, lt-gray, vfg, sub angular - sub rounded, well sorted, well consolidated, abundant MICA

2350

SANDSTONE, milky-tan clear, fg, vcg, angular - sub rounded, poorly sorted, mod consolidated, SHALE stringers

SANDSTONE, lt-gray lt-brown, vfg, sub angular - sub rounded, well sorted, well consolidated, abundant MICA, SHALE stringers, lt-gray

Line Test

SANDSTONE, milky-blue-white lt-tan, vfg - mg, angular - sub angular, mod sorted, mod consolidated, abundant MICA, SHALE stringers

2400

11:00 @ 2400'
60'/hr

0 ROP (min 2

0 TG, C1-C5 200

SHALE, lt-tan, firm, platey - blocky, earthy, dull

SANDSTONE, milky lt-gray, vfg - mg, sub angular - sub rounded, mod sorted, mod consolidated, SHALE stringers

SHALE, lt-brown, firm, flakey - platey, earthy, dull, SANDSTONE stringers

2450

SHALE, brown dk-brown, firm, sub blocky - platey, earthy - velvety, dull

12:00 @ 2460'
60'/hr

Minor COAL, black, firm, irregular, sub blocky, rough, dull-waxy

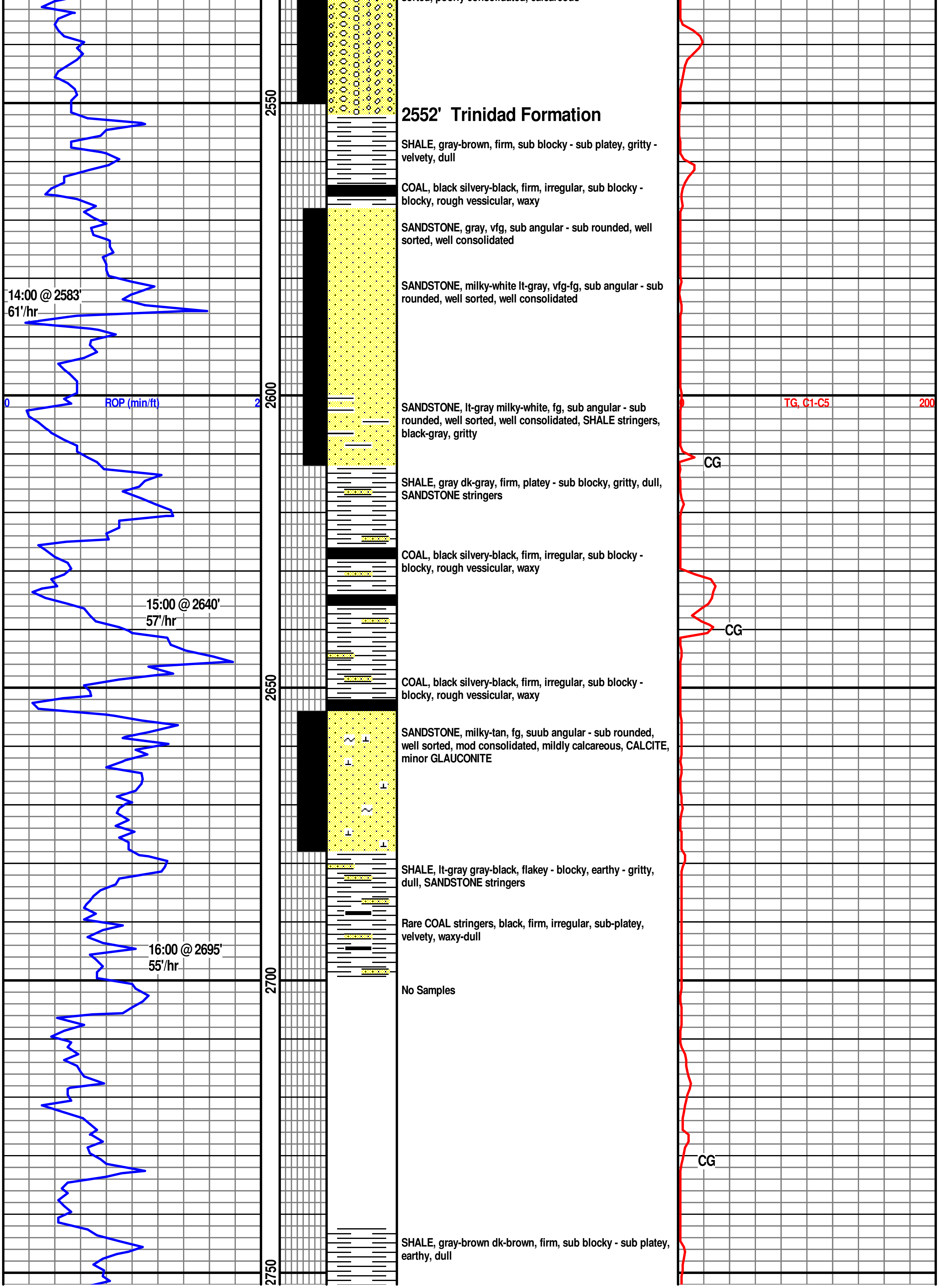
2500

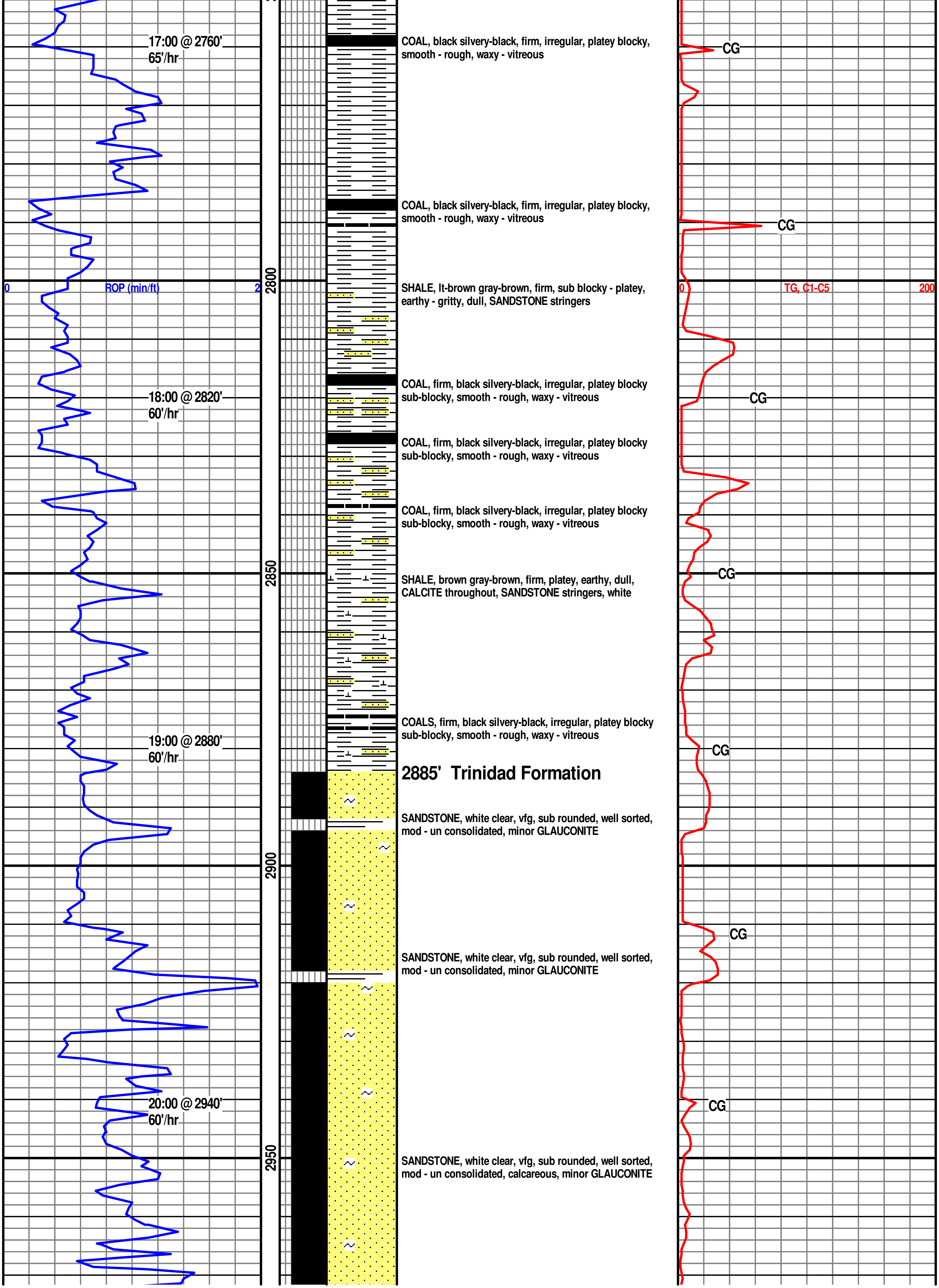
SHALE, brown black-gray, firm, flakey - sub blocky, earthy, dull

13:00 @ 2522'
62'/hr

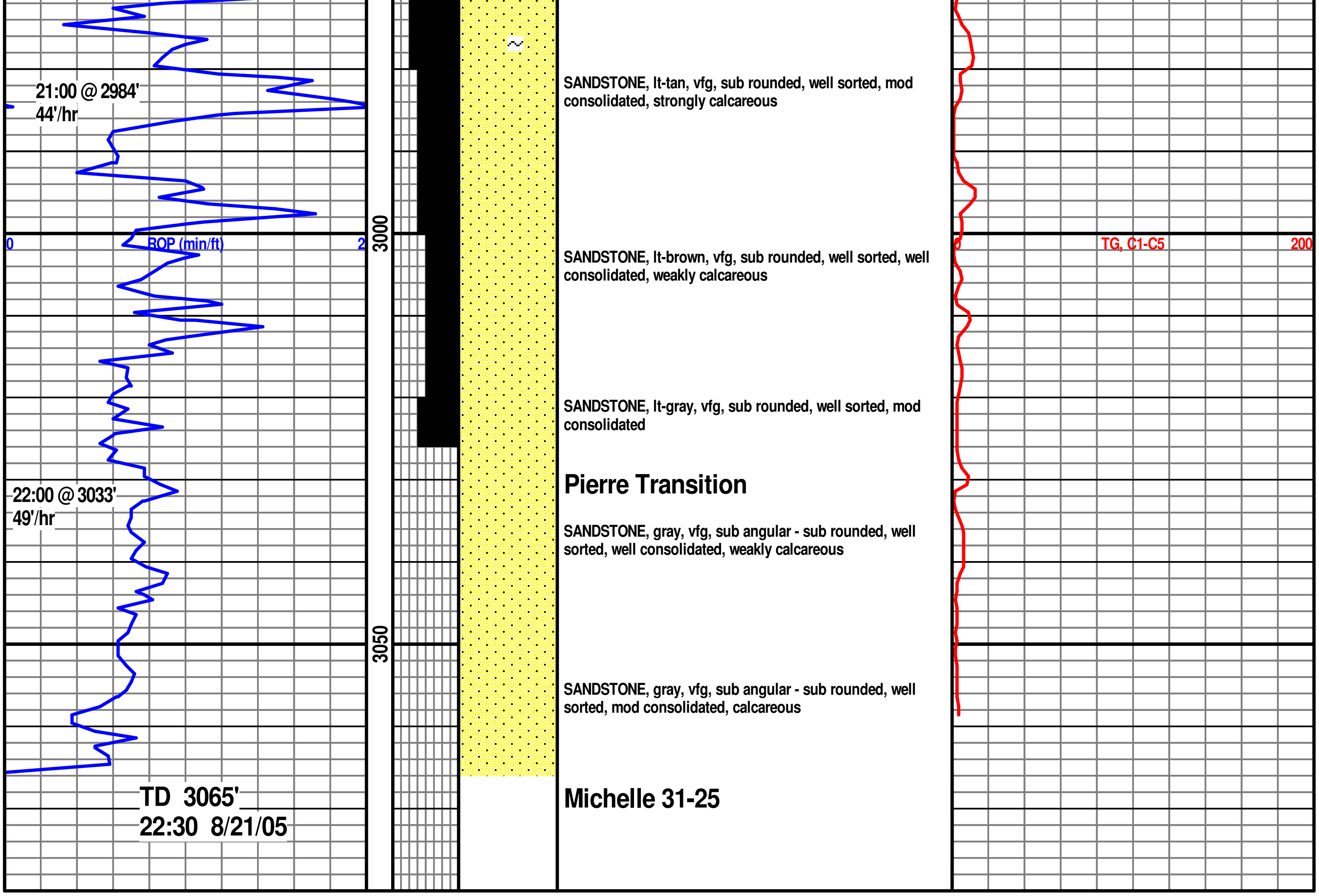
2530' Basal Conglomerate

SANDSTONE, milky-brown clear, mg-vcg, angular, mod sorted, poorly consolidated, calcareous


sorted, poorly consolidated, calcareous
2550
2552' Trinidad Formation
SHALE, gray-brown, firm, sub blocky - sub platey, gritty - velvety, dull
COAL, black silvery-black, firm, irregular, sub blocky - blocky, rough vessicular, waxy
SANDSTONE, gray, vfg, sub angular - sub rounded, well sorted, well consolidated
14:00 @ 2583'
61'/hr
SANDSTONE, milky-white lt-gray, vfg-fg, sub angular - sub rounded, well sorted, well consolidated
0
ROP (min/ft)
2
2600
0
TG, C1-C5
200
SANDSTONE, lt-gray milky-white, fg, sub angular - sub rounded, well sorted, well consolidated, SHALE stringers, black-gray, gritty
CG
SHALE, gray dk-gray, firm, platey - sub blocky, gritty, dull, SANDSTONE stringers
COAL, black silvery-black, firm, irregular, sub blocky - blocky, rough vessicular, waxy
15:00 @ 2640'
57'/hr
CG
2650
COAL, black silvery-black, firm, irregular, sub blocky - blocky, rough vessicular, waxy
SANDSTONE, milky-tan, fg, suub angular - sub rounded, well sorted, mod consolidated, mildly calcareous, CALCITE, minor GLAUCONITE
SHALE, lt-gray gray-black, flakey - blocky, earthy - gritty, dull, SANDSTONE stringers
Rare COAL stringers, black, firm, irregular, sub-platey, velvety, waxy-dull
16:00 @ 2695'
55'/hr
2700
No Samples
CG
SHALE, gray-brown dk-brown, firm, sub blocky - sub platey, earthy, dull
2750



17:00 @ 2760'
65'/hr
COAL, black silvery-black, firm, irregular, platey blocky, smooth - rough, waxy - vitreous
CG
COAL, black silvery-black, firm, irregular, platey blocky, smooth - rough, waxy - vitreous
CG
0
ROP (min/ft)
2
2800
SHALE, lt-brown gray-brown, firm, sub blocky - platey, earthy - gritty, dull, SANDSTONE stringers
0
TG, C1-C5
200
COAL, firm, black silvery-black, irregular, platey blocky sub-blocky, smooth - rough, waxy - vitreous
18:00 @ 2820'
60'/hr
CG
COAL, firm, black silvery-black, irregular, platey blocky sub-blocky, smooth - rough, waxy - vitreous
COAL, firm, black silvery-black, irregular, platey blocky sub-blocky, smooth - rough, waxy - vitreous
2850
SHALE, brown gray-brown, firm, platey, earthy, dull, CALCITE throughout, SANDSTONE stringers, white
CG
COALS, firm, black silvery-black, irregular, platey blocky sub-blocky, smooth - rough, waxy - vitreous
19:00 @ 2880'
60'/hr
CG
2885' Trinidad Formation
SANDSTONE, white clear, vfg, sub rounded, well sorted, mod - un consolidated, minor GLAUCONITE
2900
CG
SANDSTONE, white clear, vfg, sub rounded, well sorted, mod - un consolidated, minor GLAUCONITE
20:00 @ 2940'
60'/hr
CG
2950
SANDSTONE, white clear, vfg, sub rounded, well sorted, mod - un consolidated, calcareous, minor GLAUCONITE


21:00 @ 2984'
44'/hr
0
ROP (min/ft)
2
3000
SANDSTONE, lt-tan, vfg, sub rounded, well sorted, mod consolidated, strongly calcareous
SANDSTONE, lt-brown, vfg, sub rounded, well sorted, well consolidated, weakly calcareous
SANDSTONE, lt-gray, vfg, sub rounded, well sorted, mod consolidated
Pierre Transition
SANDSTONE, gray, vfg, sub angular - sub rounded, well sorted, well consolidated, weakly calcareous
SANDSTONE, gray, vfg, sub angular - sub rounded, well sorted, mod consolidated, calcareous
Michelle 31-25
0
TG, C1-C5
200
22:00 @ 3033'
49'/hr
3050
TD 3065'
22:30 8/21/05