



eog resources

600 Seventeenth Street

Suite 1000N

Denver, CO 80202

(303) 572-9000

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

Well Name: Critter Creek 02-03H, Sidetrack #1

Location: Herford Ranch Prospect (Wildcat)

License Number: API# 05-123-31047

Region: DJ Basin

Spud Date: February 28, 2010

Drilling Completed:

Surface Coordinates: SESE; 600' FSL & 600' FWL, Section 3, Township 11 North, Range 63 West, Weld County, Colorado

Bottom Hole Coordinates: SW NW, 1400' FNL & 600' FWL, Section 3, Township 11 North, Range 63 West, Weld County, Colorado

Ground Elevation (ft): 5272'

K.B. Elevation (ft): 5293'

Logged Interval (ft): 1475'

To:

Total Depth (ft):

Formation: Nibobrara Formation at TD

Type of Drilling Fluid: KCL Polymer

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

OPERATOR

Company: EOG Resources, Inc.

Address: 600 17th Street, Suite 1000
Denver, Colorado 80202

Geologists

John W. Husk

Husk Inc.

8229 E. Briarwood Avenue

Centennial, Colorado 80112-1306

Robert J. Groth

G & H Production Co, LLC

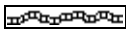
518 17th Street, Suite 1060

Denver, Colorado 80202

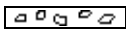
ROCK TYPES



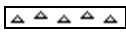
Anhy



Bent



Brec



Cht



Clyst



Coal



Congl



Dol



Gyp



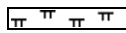
Igne



Lmst



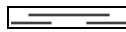
Meta



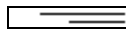
Mrlst



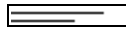
Salt



Shale



Shcol



Shgy



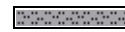
Slst



Ss



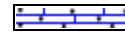
Arg_ss



Slst2



Carb sh



Carb chalk

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Brefracg
- 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

- Sltstrg1
- Anhy
- Arg
- Bent
- Coal

- Dol
- Gyp
- Ls
- Mrst
- Sltstrg
- Ssstrg

TEXTURE

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

OTHER SYMBOLS

POROSITY

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

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

OIL SHOW

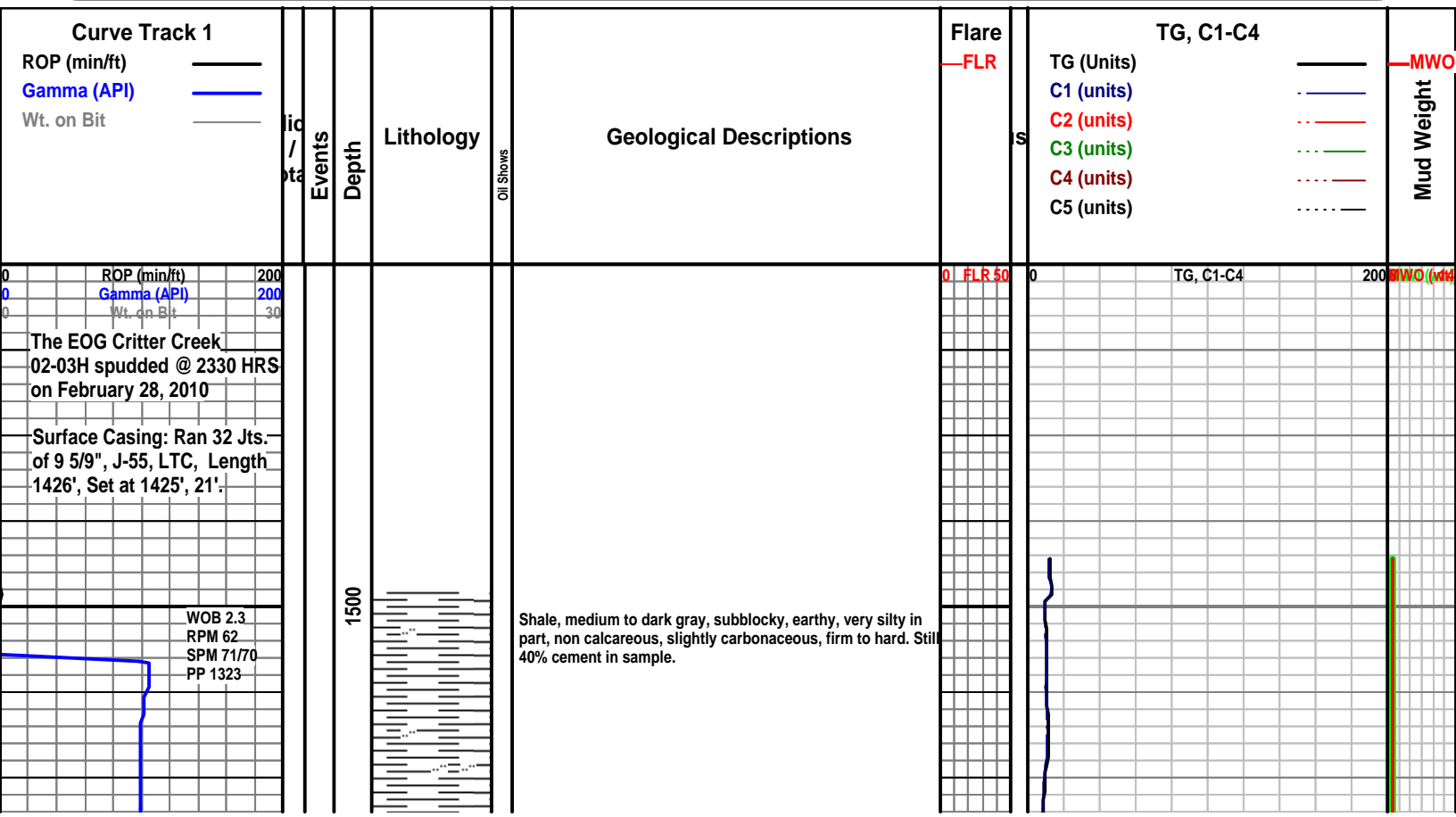
- Even
- Spotted
- Ques
- Dead

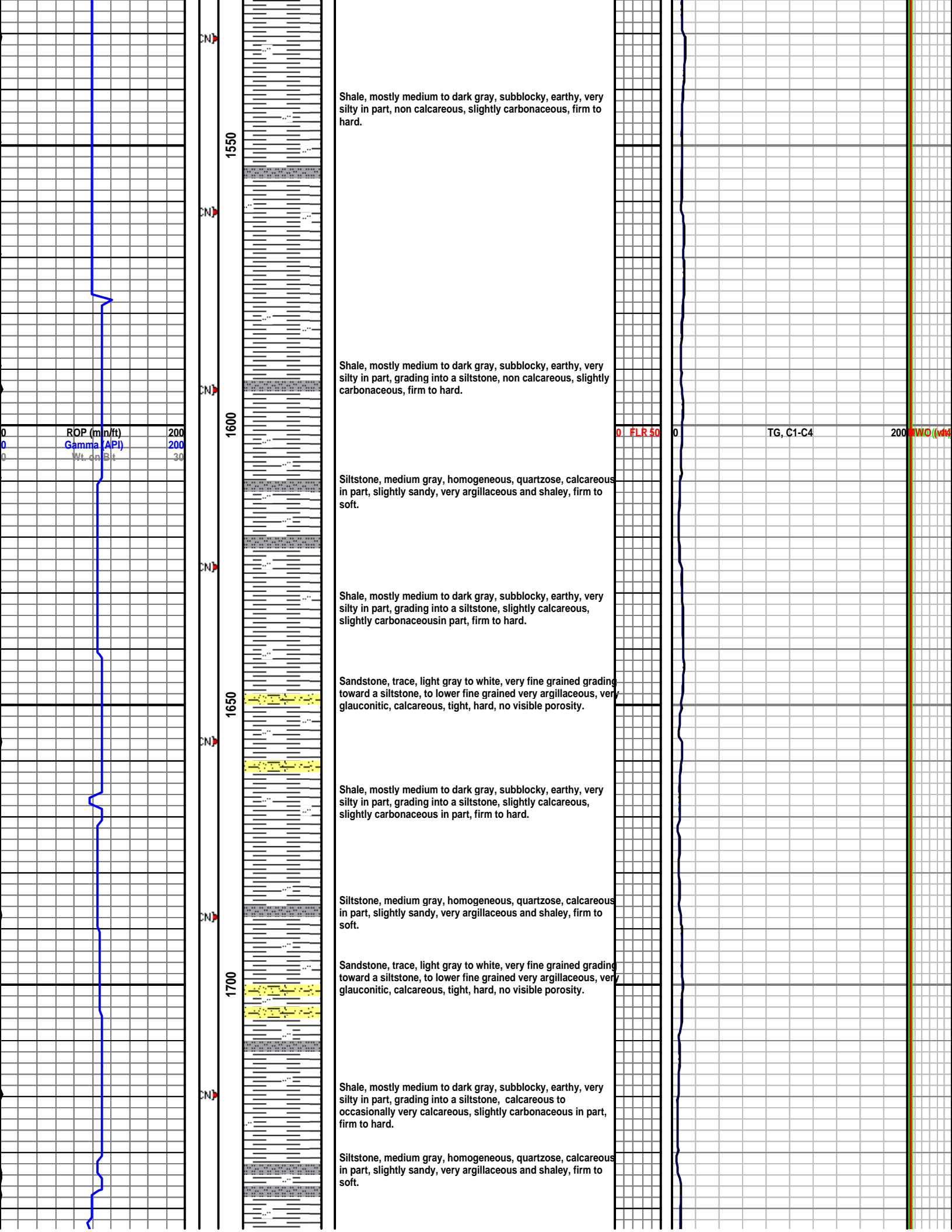
INTERVAL

- Core
- Dst

EVENT

- Rft
- Sidewall
- Connection
- New bit





Shale, mostly medium to dark gray, subblocky, earthy, very silty in part, non calcareous, slightly carbonaceous, firm to hard.

Shale, mostly medium to dark gray, subblocky, earthy, very silty in part, grading into a siltstone, non calcareous, slightly carbonaceous, firm to hard.

Siltstone, medium gray, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous and shaley, firm to soft.

Shale, mostly medium to dark gray, subblocky, earthy, very silty in part, grading into a siltstone, slightly calcareous, slightly carbonaceous in part, firm to hard.

Sandstone, trace, light gray to white, very fine grained grading toward a siltstone, to lower fine grained very argillaceous, very glauconitic, calcareous, tight, hard, no visible porosity.

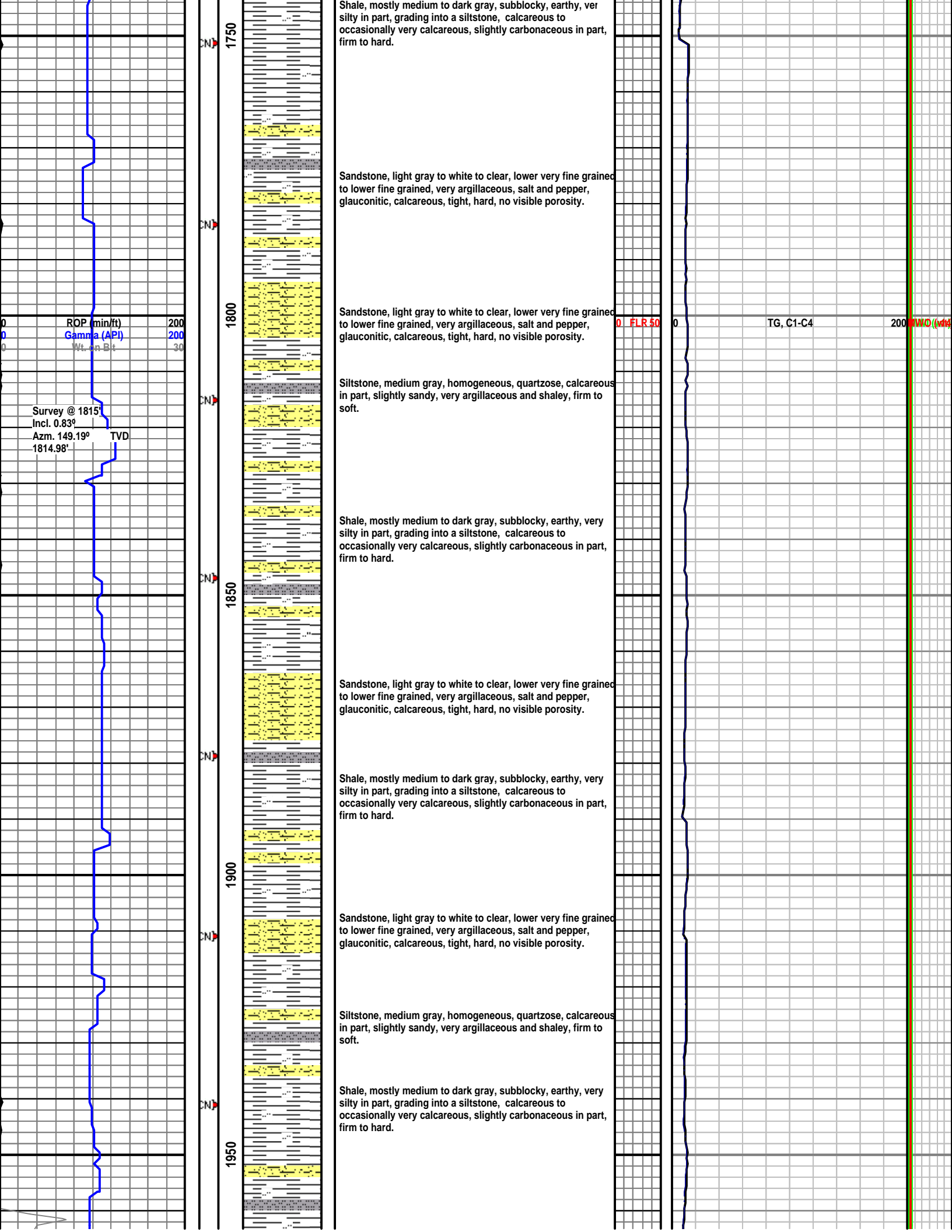
Shale, mostly medium to dark gray, subblocky, earthy, very silty in part, grading into a siltstone, slightly calcareous, slightly carbonaceous in part, firm to hard.

Siltstone, medium gray, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous and shaley, firm to soft.

Sandstone, trace, light gray to white, very fine grained grading toward a siltstone, to lower fine grained very argillaceous, very glauconitic, calcareous, tight, hard, no visible porosity.

Shale, mostly medium to dark gray, subblocky, earthy, very silty in part, grading into a siltstone, calcareous to occasionally very calcareous, slightly carbonaceous in part, firm to hard.

Siltstone, medium gray, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous and shaley, firm to soft.



Shale, mostly medium to dark gray, subblocky, earthy, very silty in part, grading into a siltstone, calcareous to occasionally very calcareous, slightly carbonaceous in part, firm to hard.

Sandstone, light gray to white to clear, lower very fine grained to lower fine grained, very argillaceous, salt and pepper, glauconitic, calcareous, tight, hard, no visible porosity.

Sandstone, light gray to white to clear, lower very fine grained to lower fine grained, very argillaceous, salt and pepper, glauconitic, calcareous, tight, hard, no visible porosity.

Siltstone, medium gray, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous and shaley, firm to soft.

Shale, mostly medium to dark gray, subblocky, earthy, very silty in part, grading into a siltstone, calcareous to occasionally very calcareous, slightly carbonaceous in part, firm to hard.

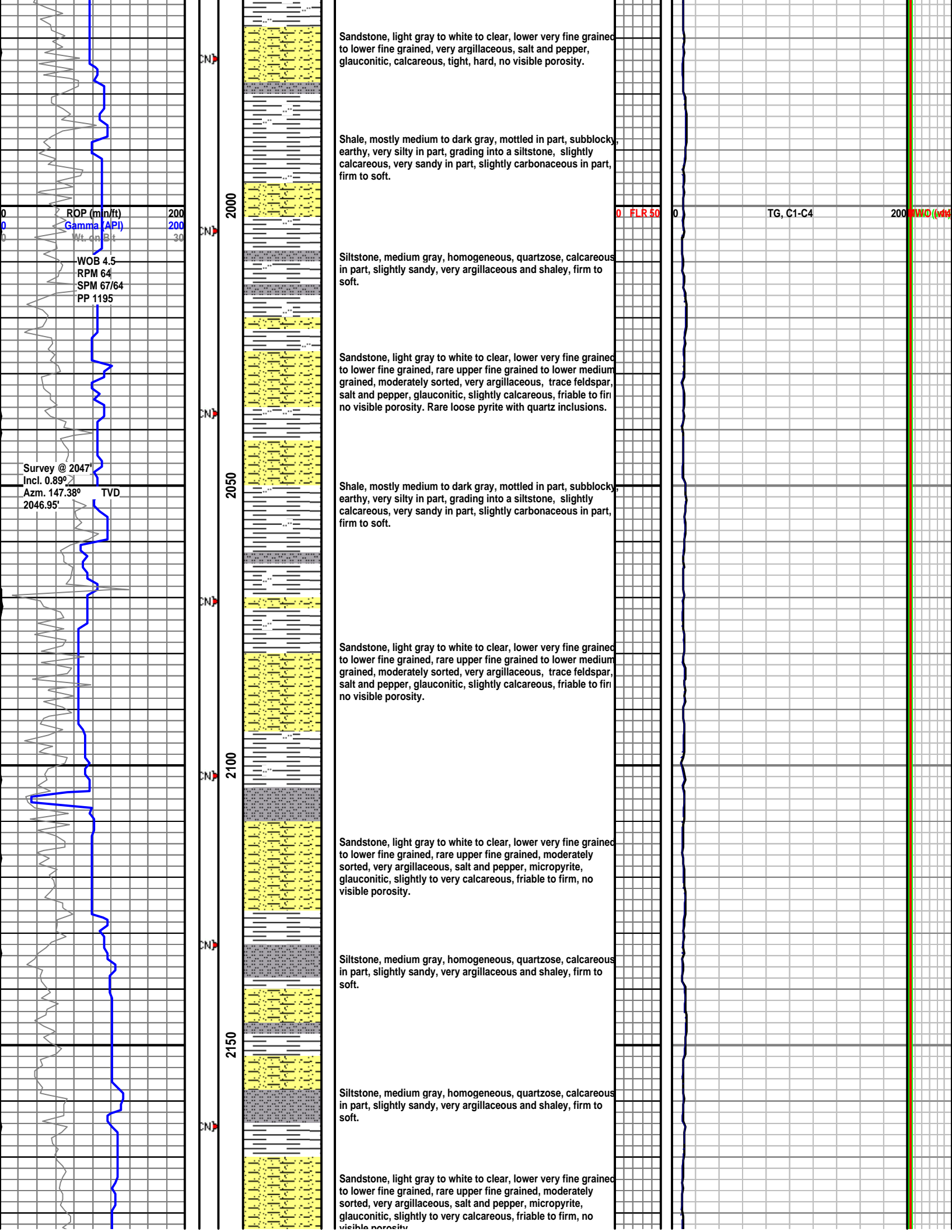
Sandstone, light gray to white to clear, lower very fine grained to lower fine grained, very argillaceous, salt and pepper, glauconitic, calcareous, tight, hard, no visible porosity.

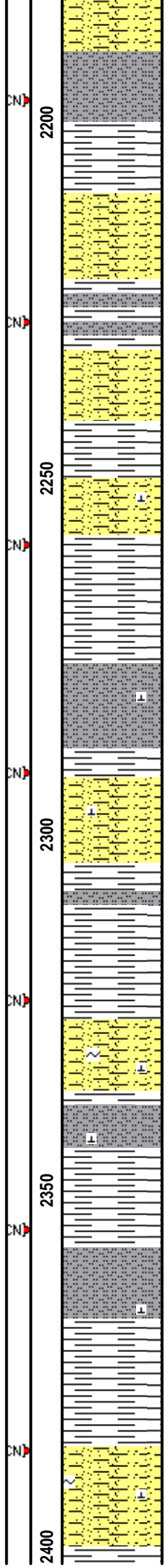
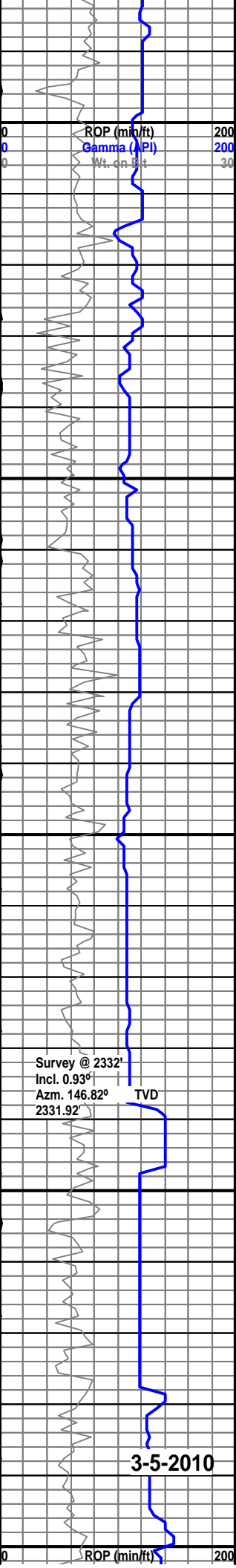
Shale, mostly medium to dark gray, subblocky, earthy, very silty in part, grading into a siltstone, calcareous to occasionally very calcareous, slightly carbonaceous in part, firm to hard.

Sandstone, light gray to white to clear, lower very fine grained to lower fine grained, very argillaceous, salt and pepper, glauconitic, calcareous, tight, hard, no visible porosity.

Siltstone, medium gray, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous and shaley, firm to soft.

Shale, mostly medium to dark gray, subblocky, earthy, very silty in part, grading into a siltstone, calcareous to occasionally very calcareous, slightly carbonaceous in part, firm to hard.





Siltstone, medium gray, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous and shaley, firm to soft.

Shale, mostly medium to dark gray, homogeneous, subblocky, earthy, very silty in part, grading into a siltstone, slightly calcareous, occasionally sandy in part, rarely carbonaceous in part, firm to soft.

Sandstone, light gray to white to clear, lower very fine grained to lower fine grained, rare upper fine grained, moderately sorted, very argillaceous, salt and pepper, micropyrrite, glauconitic, slightly to very calcareous, friable to firm, no visible porosity.

Sandstone - light gray to off white, some salt & pepper friable, very fine grained to fine grained, moderately well sorted, very argillaceous, micropyrrite, glauconitic, calcareous to very calcareous, poor porosity.

Sandstone - light gray to off white, some salt & pepper friable, very fine grained to fine grained, moderately well sorted, very argillaceous, micropyrrite, glauconitic, calcareous to very calcareous, poor porosity.

Shale - predominantly medium to dark gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, occasionally sandy in part, rarely carbonaceous in part. .

Siltstone - medium gray, soft to slightly soft, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous, tight.

Sandstone - light gray to off white, some salt & pepper friable, very fine grained to fine grained, moderately well sorted, very argillaceous, micropyrrite, glauconitic, calcareous to very calcareous, poor porosity.

Shale - predominantly medium to dark gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, occasionally sandy in part, rarely carbonaceous in part. .

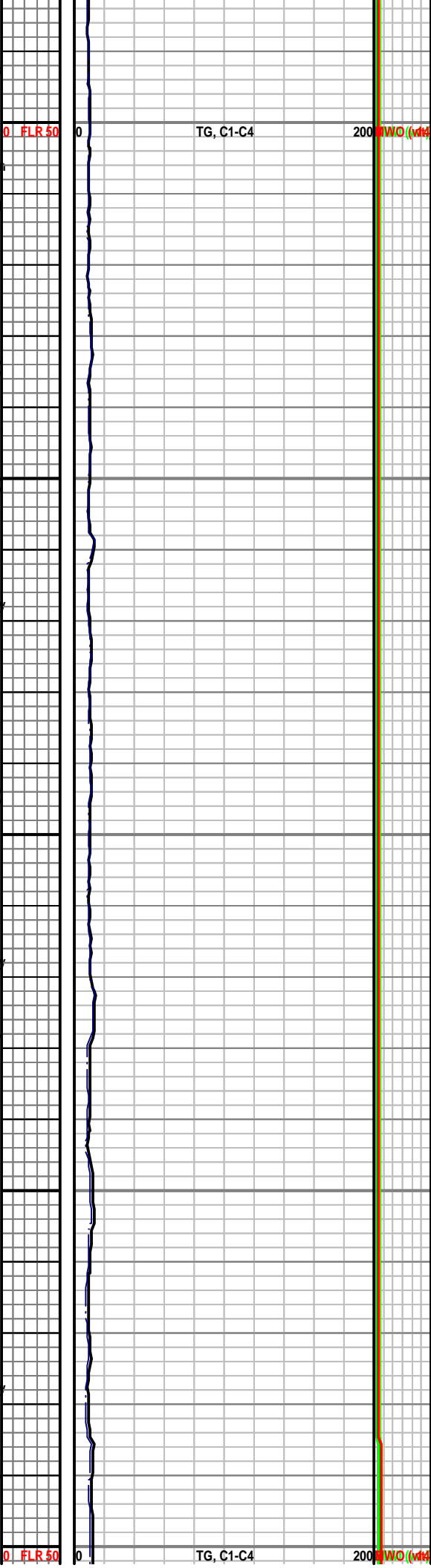
Sandstone - light gray to off white, some salt & pepper friable, very fine grained, moderately well sorted, very argillaceous, micropyrrite, glauconitic, calcareous to very calcareous, poor porosity.

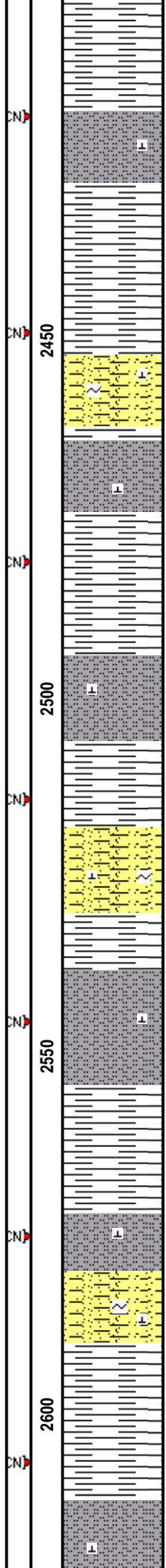
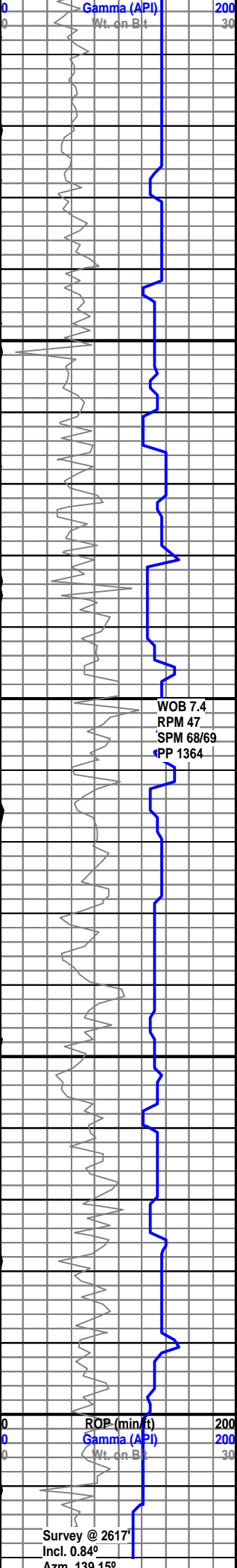
Siltstone - medium gray, soft to slightly soft, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous, tight.

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Shale - predominantly medium to dark gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, occasionally sandy in part, rarely carbonaceous in part. .

Sandstone - light gray to off white, some salt & pepper friable, very fine grained, moderately well sorted, very argillaceous, micropyrrite, glauconitic, calcareous to very calcareous, poor porosity.





Shale - medium to dark gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, occasionally sandy in part.

Siltstone - medium gray, soft to slightly soft, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous, tight.

Shale - medium to dark gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, occasionally sandy in part.

Sandstone - light gray to off white, some salt & pepper friable very fine grained, moderately well sorted, very argillaceous, microphyrite, glauconitic, calcareous to very calcareous, poor porosity.

Siltstone - medium gray, soft to slightly soft, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous, tight.

Shale - medium to dark gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, occasionally sandy in part.

Siltstone - medium gray, soft to slightly soft, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous, tight.

Shale - medium to dark gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, occasionally sandy in part.

Sandstone - light gray to off white, some salt & pepper friable very fine grained, moderately well sorted, very argillaceous, microphyrite, glauconitic, calcareous to very calcareous, poor porosity.

Siltstone - medium gray, soft to slightly soft, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous, tight.

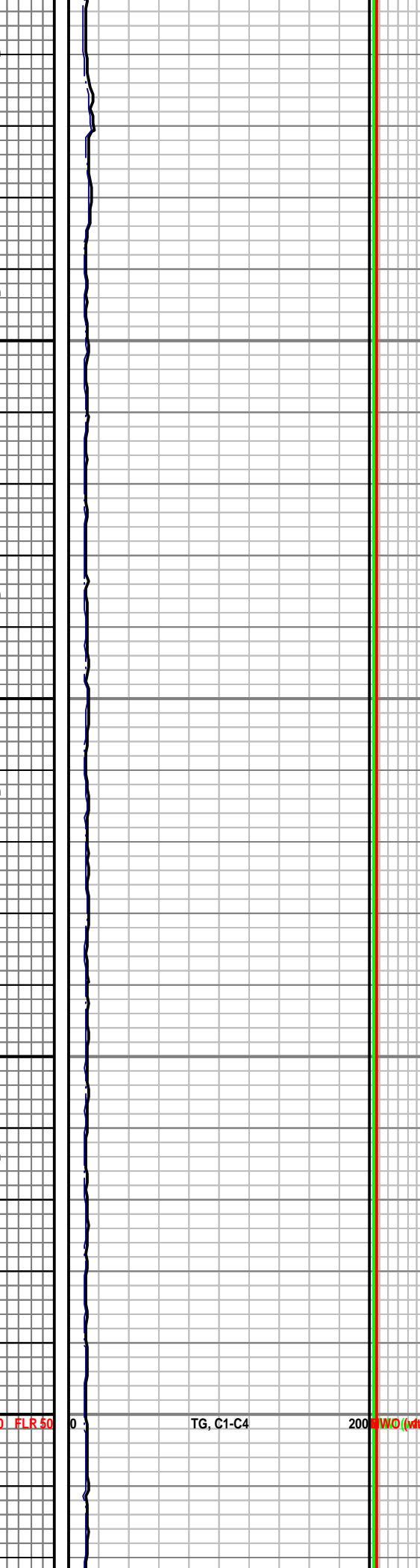
Shale - medium gray, some dark gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, occasionally sandy in part.

Siltstone - medium gray, soft to slightly soft, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous, tight.

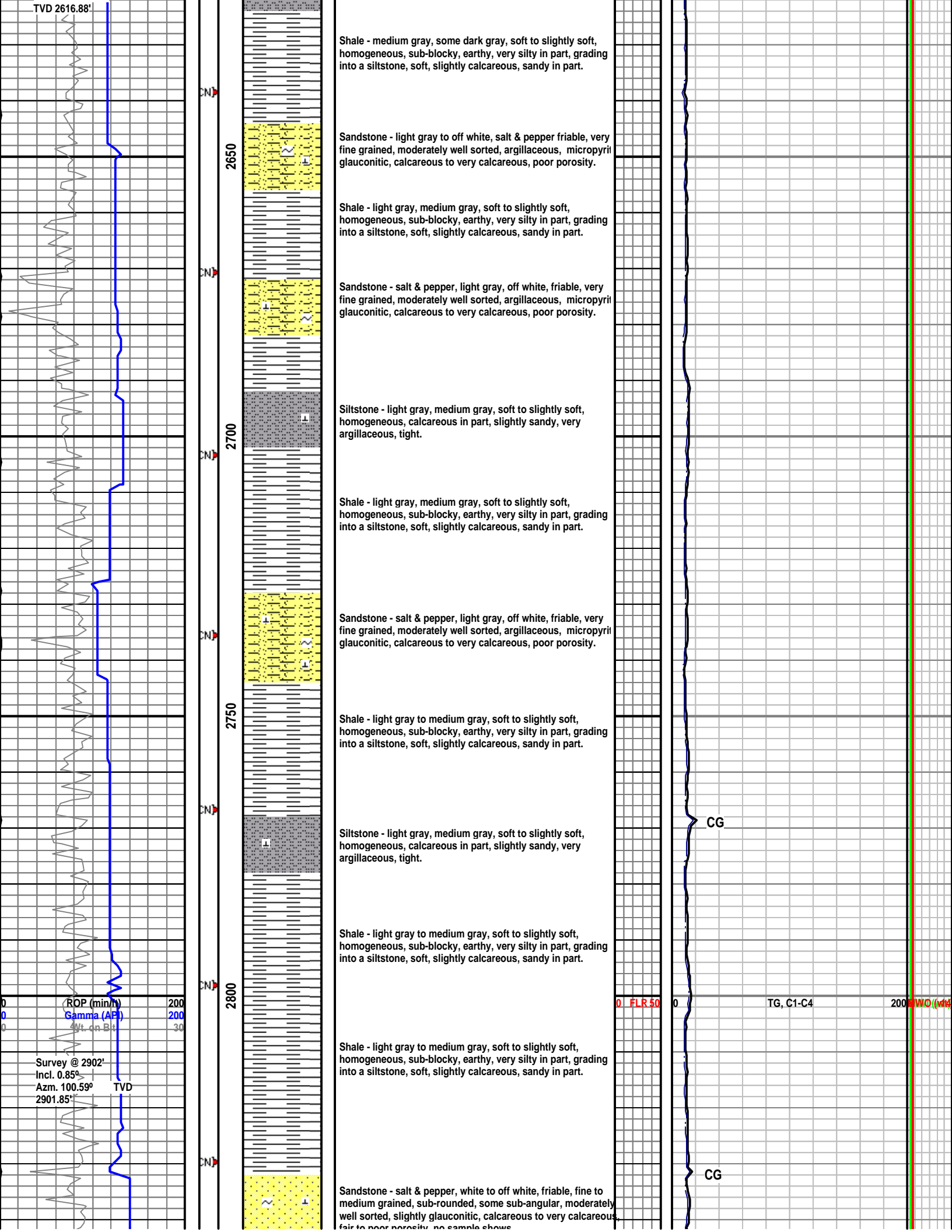
Sandstone - light gray to off white, some salt & pepper friable very fine grained, moderately well sorted, argillaceous, microphyrite, glauconitic, calcareous to very calcareous, poor porosity.

Shale - medium gray, some dark gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, sandy in part.

Siltstone - light gray, medium gray, soft to slightly soft, homogeneous, quartzose, calcareous in part, slightly sandy, very argillaceous, tight.



TVD 2616.88'



CN

2650

Shale - medium gray, some dark gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, sandy in part.

Sandstone - light gray to off white, salt & pepper friable, very fine grained, moderately well sorted, argillaceous, micropyril glauconitic, calcareous to very calcareous, poor porosity.

Shale - light gray, medium gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, sandy in part.

CN

2700

Sandstone - salt & pepper, light gray, off white, friable, very fine grained, moderately well sorted, argillaceous, micropyril glauconitic, calcareous to very calcareous, poor porosity.

Siltstone - light gray, medium gray, soft to slightly soft, homogeneous, calcareous in part, slightly sandy, very argillaceous, tight.

Shale - light gray, medium gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, sandy in part.

CN

2750

Sandstone - salt & pepper, light gray, off white, friable, very fine grained, moderately well sorted, argillaceous, micropyril glauconitic, calcareous to very calcareous, poor porosity.

Shale - light gray to medium gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, sandy in part.

CN

2800

Siltstone - light gray, medium gray, soft to slightly soft, homogeneous, calcareous in part, slightly sandy, very argillaceous, tight.

Shale - light gray to medium gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, sandy in part.

Shale - light gray to medium gray, soft to slightly soft, homogeneous, sub-blocky, earthy, very silty in part, grading into a siltstone, soft, slightly calcareous, sandy in part.

CN

Sandstone - salt & pepper, white to off white, friable, fine to medium grained, sub-rounded, some sub-angular, moderately well sorted, slightly glauconitic, calcareous to very calcareous, fair to poor porosity, no sample shows

ROP (min/h) 200
Gamma (API) 200
Wt. on Bit 30

Survey @ 2902'
Incl. 0.85°
Az. 100.59°
TVD 2901.85'

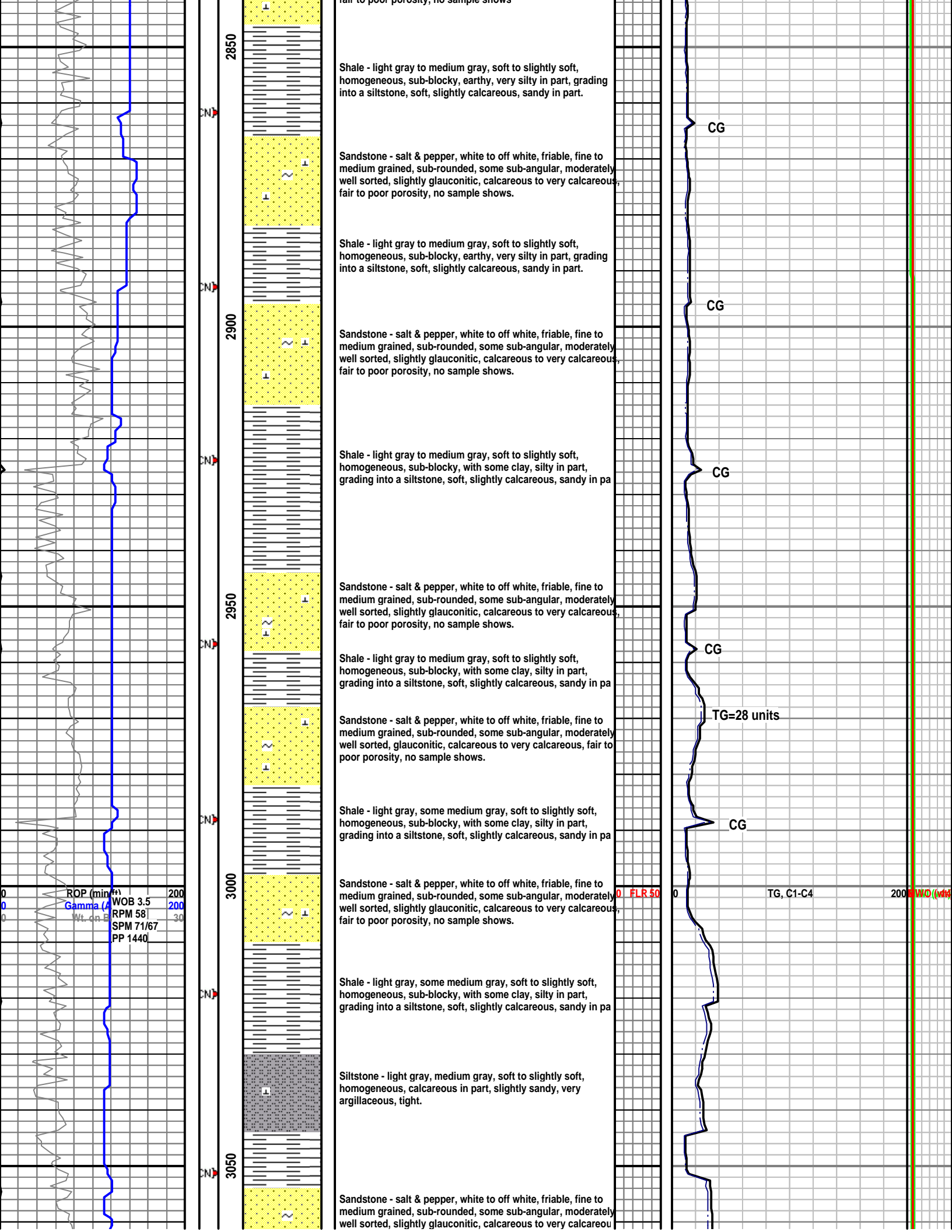
CG

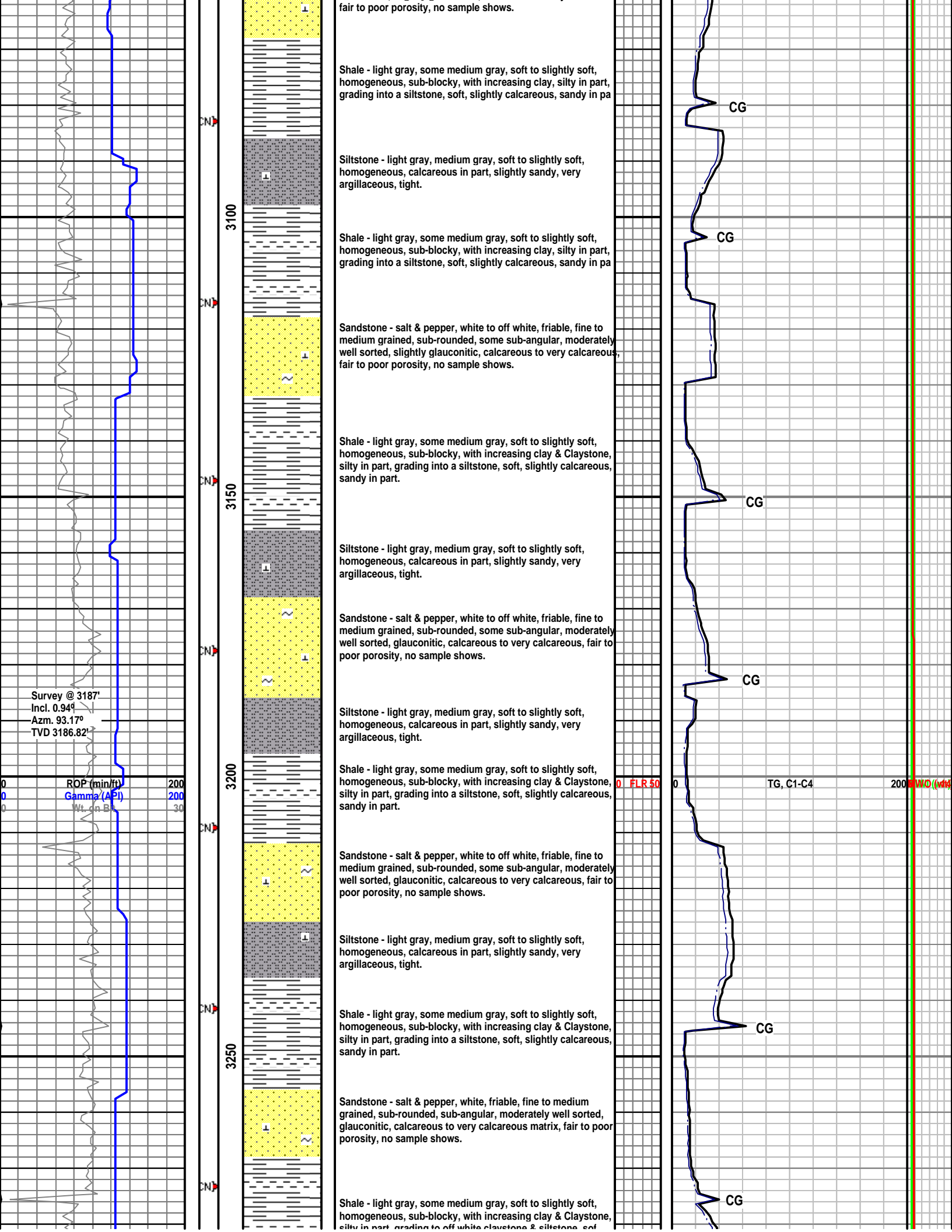
0. FLR 50

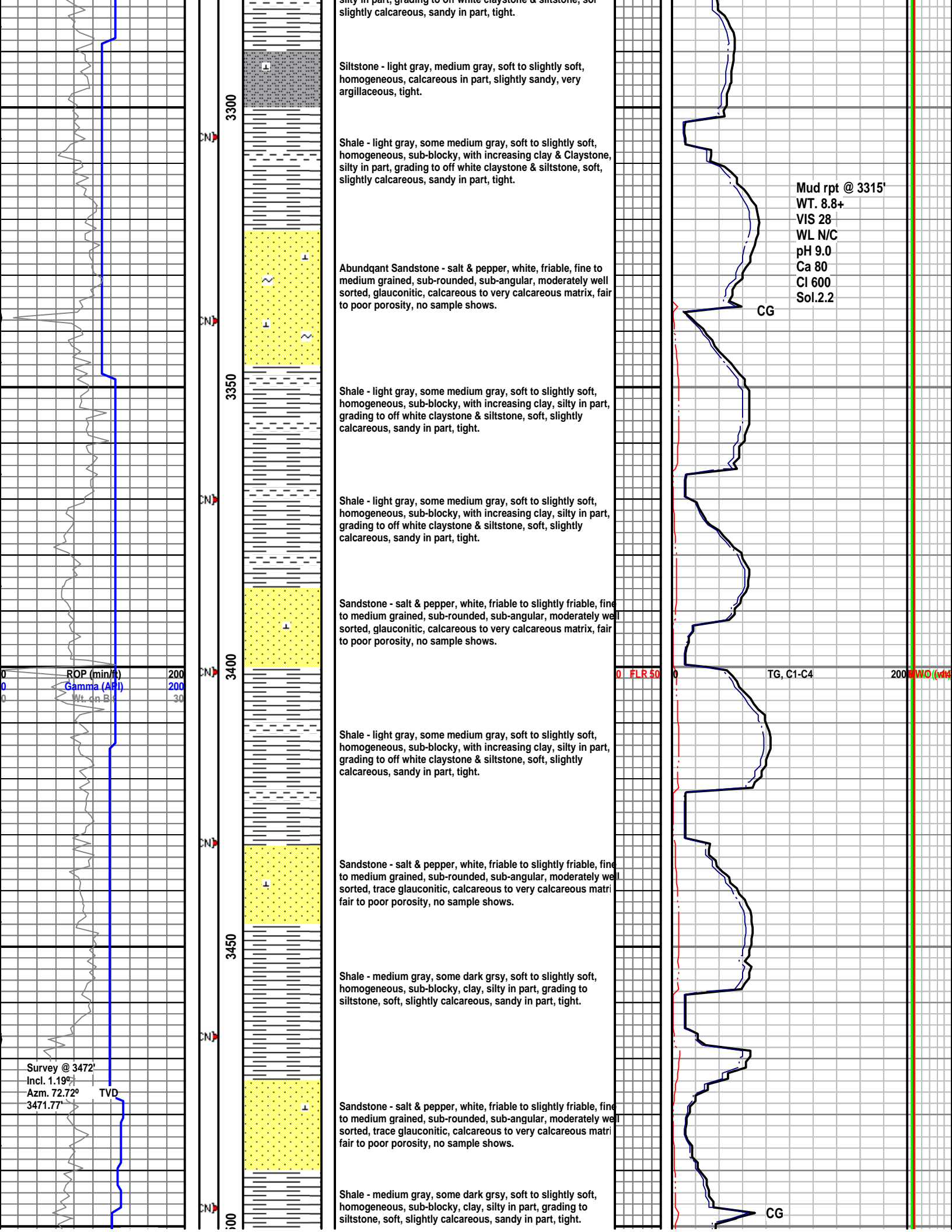
TG, C1-C4

200 W/O (wt%)

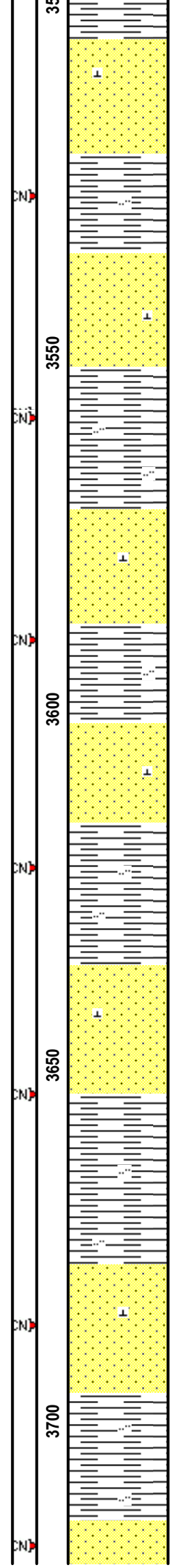
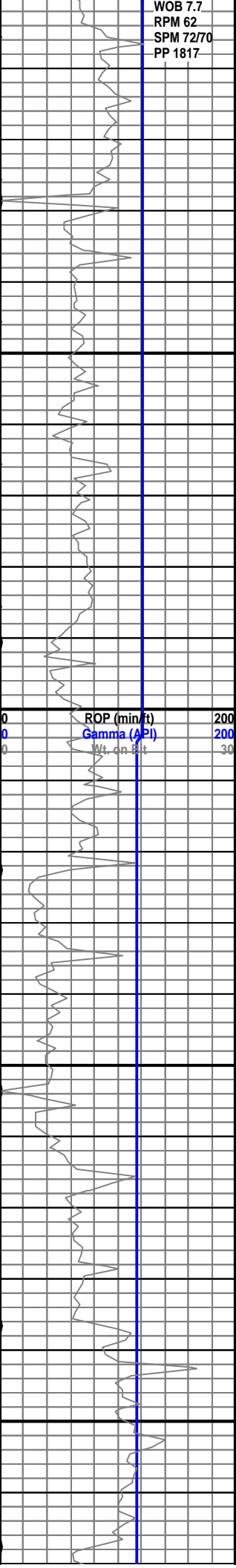
CG







WOB 7.7
RPM 62
SPM 72/70
PP 1817



Abundant Sandstone - salt & pepper, white, friable to slightly friable, fine to medium grained, sub-rounded, sub-angular, moderately well sorted, trace glauconitic, calcareous to very calcareous matrix, fair to poor porosity, no sample shows.

Shale - medium gray, some dark grsy, soft to slightly soft, homogeneous, sub-blocky, clay, silty in part, grading to siltstone, soft, slightly calcareous, sandy in part, tight.

Sandstone - salt & pepper, white, friable to slightly friable, fine to medium grained, sub-rounded, sub-angular, moderately well sorted, trace glauconitic, calcareous to very calcareous matrix, fair to poor porosity, no sample shows.

Shale - medium gray, some dark grsy, soft to slightly soft, homogeneous, sub-blocky, clay, silty in part, grading to siltstone, soft, slightly calcareous, sandy in part, tight.

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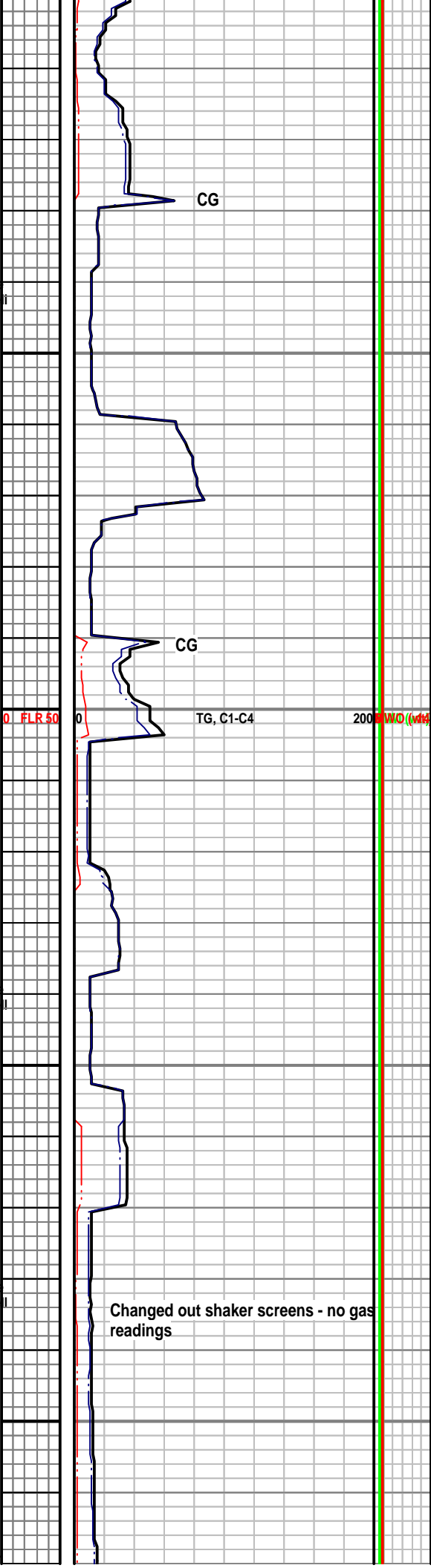
Abundant Sandstone - salt & pepper, white, friable to slightly friable, fine to medium grained, sub-rounded, sub-angular, moderately well sorted, trace glauconitic, calcareous to very calcareous matrix, fair to poor porosity, no sample shows.

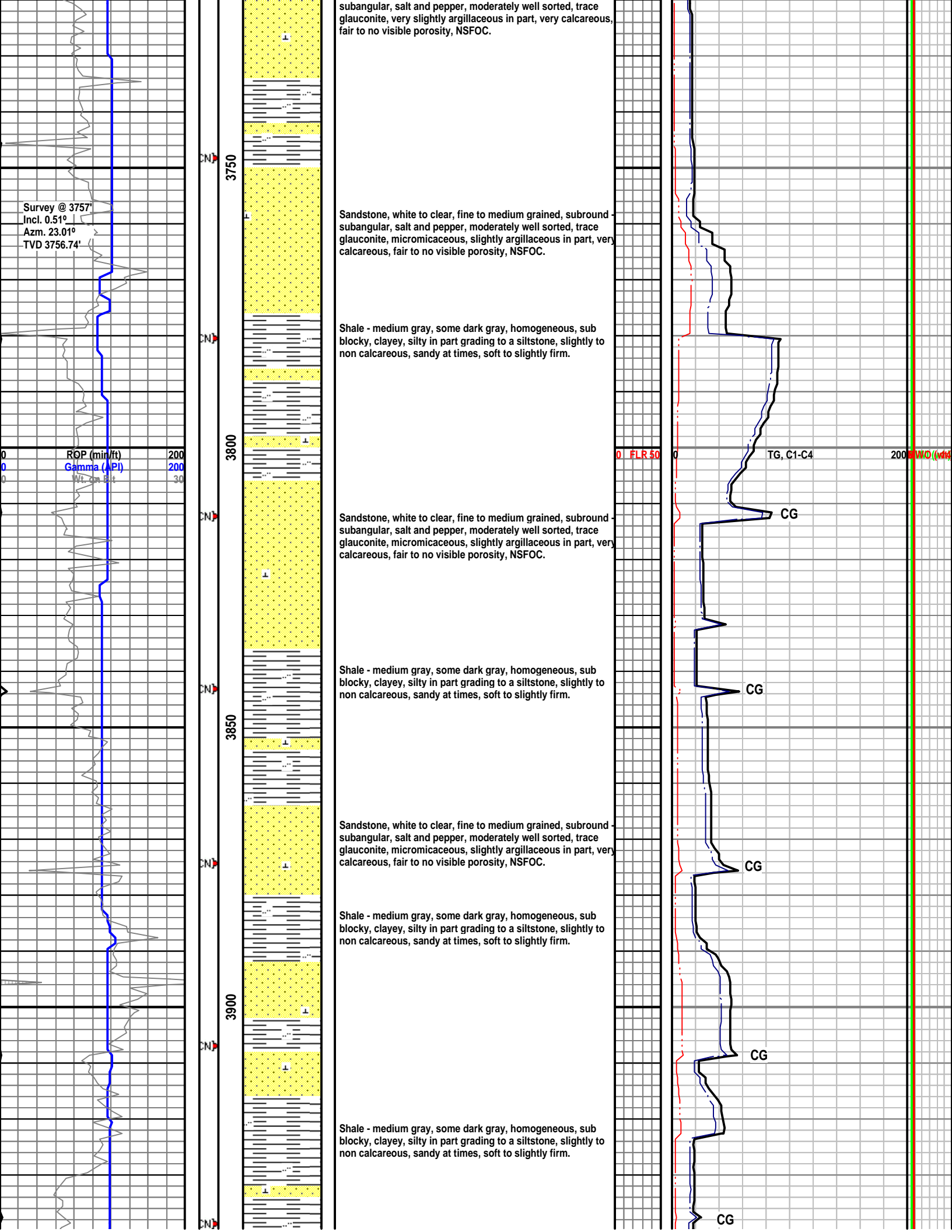
Shale - medium gray, some dark grsy, soft to slightly soft, homogeneous, sub-blocky, clay, silty in part, grading to siltstone, soft, slightly calcareous, sandy in part, tight.

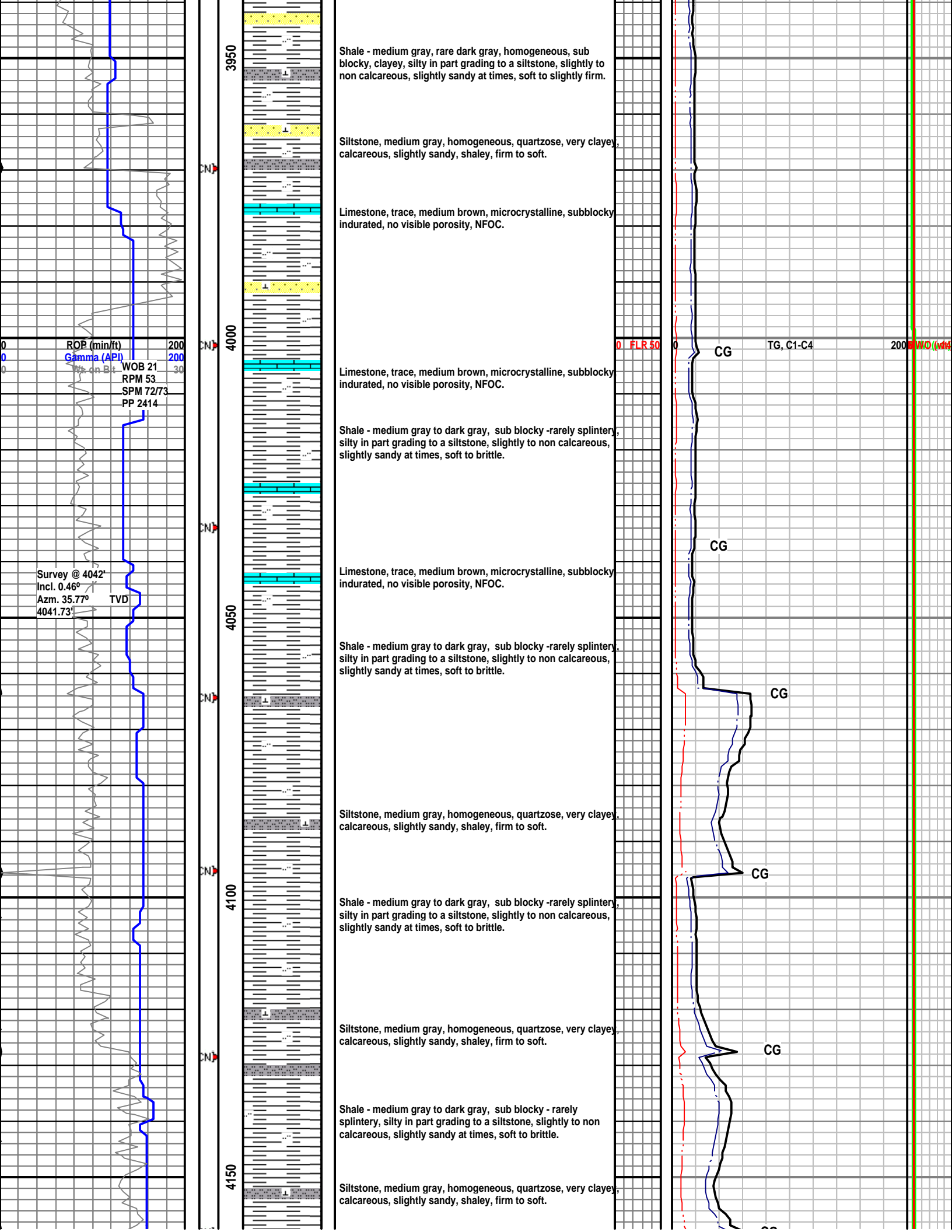
Sandstone - salt & pepper, white, friable to slightly friable, fine to medium grained, sub-rounded, sub-angular, moderately well sorted, trace glauconitic, calcareous to very calcareous matrix, fair to poor porosity, no sample shows.

Shale - medium gray, some dark gray, homogeneous, sub blocky, clayey, silty in part grading to a siltstone, slightly to non calcareous, sandy at times, soft to slightly firm.

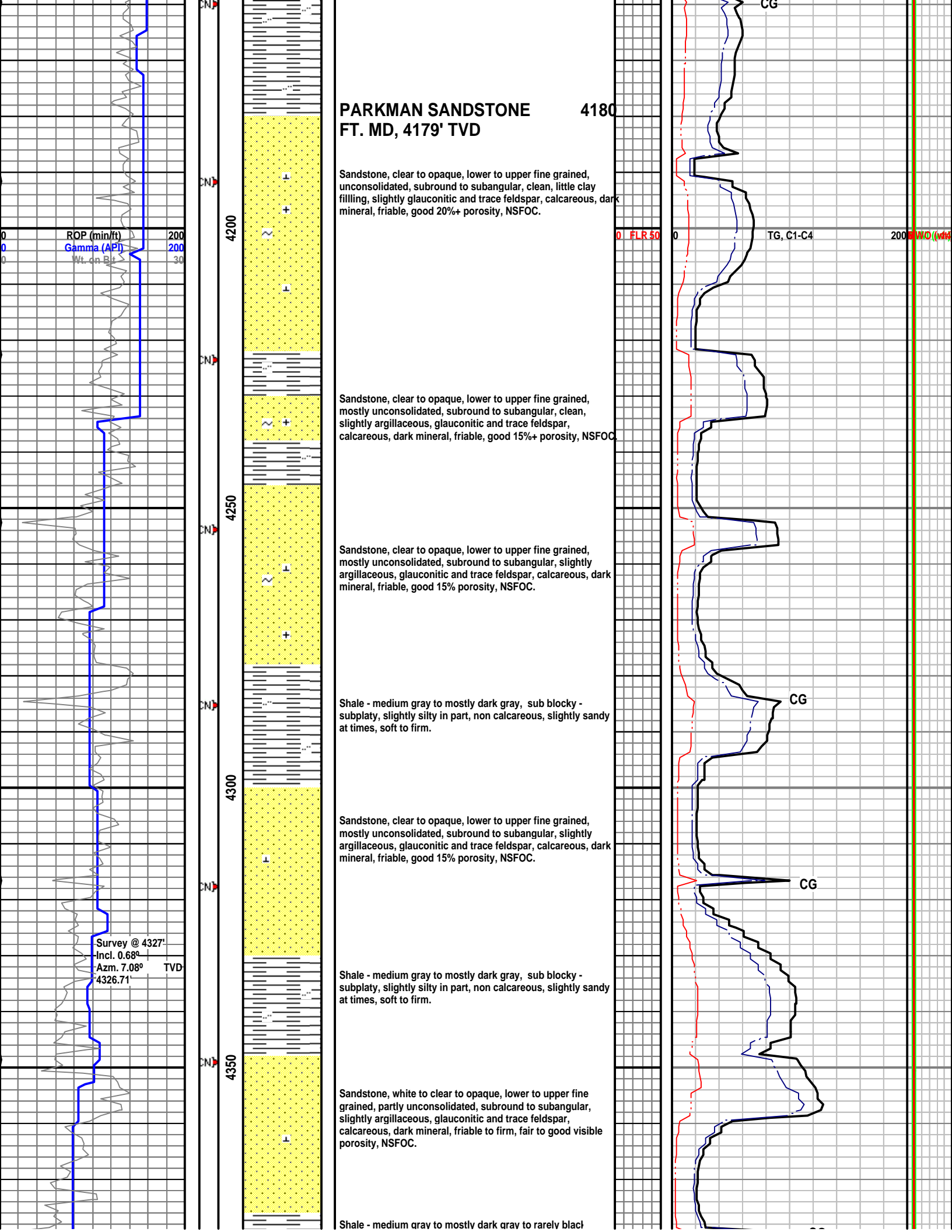
Sandstone, white to clear, fine to medium grained, subround-







PARKMAN SANDSTONE FT. MD, 4179' TVD



Sandstone, clear to opaque, lower to upper fine grained, unconsolidated, subround to subangular, clean, little clay filling, slightly glauconitic and trace feldspar, calcareous, dark mineral, friable, good 20%+ porosity, NSFOC.

Sandstone, clear to opaque, lower to upper fine grained, mostly unconsolidated, subround to subangular, clean, slightly argillaceous, glauconitic and trace feldspar, calcareous, dark mineral, friable, good 15%+ porosity, NSFOC.

Sandstone, clear to opaque, lower to upper fine grained, mostly unconsolidated, subround to subangular, slightly argillaceous, glauconitic and trace feldspar, calcareous, dark mineral, friable, good 15% porosity, NSFOC.

Shale - medium gray to mostly dark gray, sub blocky - subplaty, slightly silty in part, non calcareous, slightly sandy at times, soft to firm.

Sandstone, clear to opaque, lower to upper fine grained, mostly unconsolidated, subround to subangular, slightly argillaceous, glauconitic and trace feldspar, calcareous, dark mineral, friable, good 15% porosity, NSFOC.

Shale - medium gray to mostly dark gray, sub blocky - subplaty, slightly silty in part, non calcareous, slightly sandy at times, soft to firm.

Sandstone, white to clear to opaque, lower to upper fine grained, partly unconsolidated, subround to subangular, slightly argillaceous, glauconitic and trace feldspar, calcareous, dark mineral, friable to firm, fair to good visible porosity, NSFOC.

Shale - medium gray to mostly dark gray to rarely black

ROP (min/ft) 200
Gamma (API) 200
Wt. on Bit 30

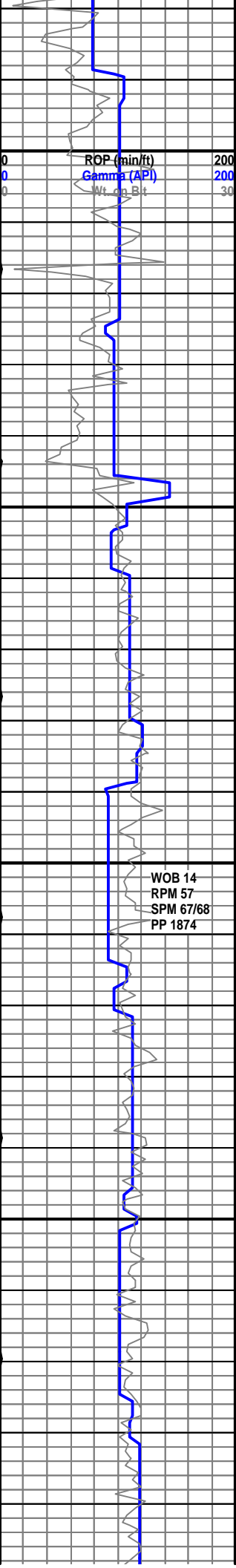
Survey @ 4327'
Incl. 0.68°
Azim. 7.08°
4326.71' TVD

0 FLR 50 0 TG, C1-C4 200 W/O (wt%)

CG

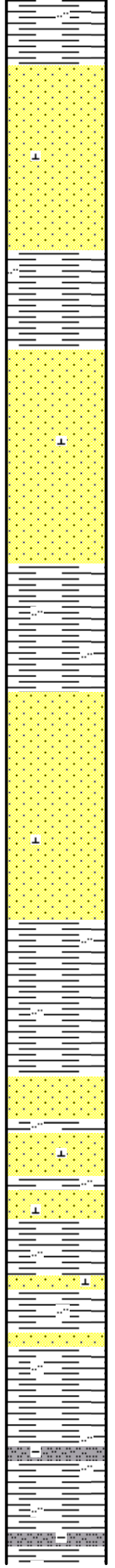
CG

CG



ROP (min/ft) 200
 Gamma (API) 200
 Wt. of Bit 30

4400
 4450
 4500
 4550



subblocky, slightly to very silty in part, non calcareous, sandy at times, soft to firm.

Sandstone, white to clear to opaque, lower to upper fine grained, partly unconsolidated, subround to subangular, slightly argillaceous, glauconitic and trace feldspar, calcareous, dark mineral, friable to firm, fair to good visible porosity, NSFOC

Shale - medium gray to mostly dark gray to rarely black, subblocky, slightly to very silty in part, non calcareous, sandy at times, soft to firm.

Sandstone, white to clear to opaque, lower to upper fine grained, partly unconsolidated, subround to subangular, slightly argillaceous, glauconitic and trace feldspar, calcareous, dark mineral, friable to firm, fair to good visible porosity, NSFOC.

Shale - medium gray to mostly dark gray to rarely black, subblocky, slightly to very silty in part, non calcareous, sandy at times, soft to firm.

Sandstone, white to clear to opaque, lower to upper fine grained, partly unconsolidated, subround to subangular, slightly argillaceous, glauconitic and trace feldspar, calcareous, dark mineral, friable to firm, fair to good visible porosity, NSFOC.

Shale - medium gray to mostly dark gray to rarely black, subblocky, slightly to very silty in part, non calcareous, sandy at times, soft to firm

Sandstone, white to clear to gray, lower to upper fine grained, rarely unconsolidated, subround to subangular, dirty in appearance in part, argillaceous, glauconitic and trace feldspar, calcareous, dark mineral, friable to firm, poor to no visible porosity, NSFOC.

Shale - medium gray to mostly dark gray to rarely black, subblocky, slightly to very silty in part, non calcareous, sandy at times, soft to firm.

Siltstone, medium gray, homogeneous, quartzose, very clayey, calcareous, slightly sandy, shaley, firm to soft.

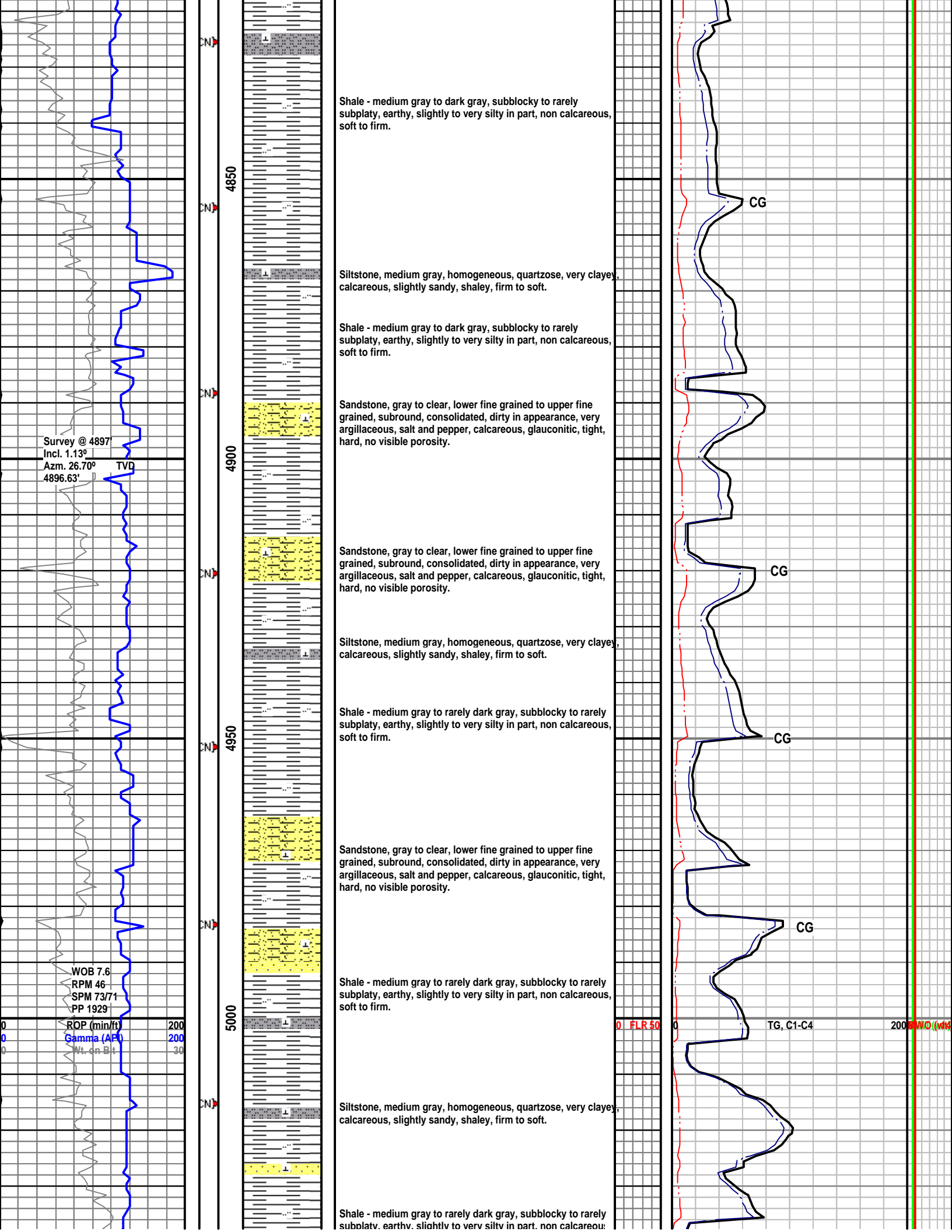


WOB 14
 RPM 57
 SPM 67/68
 PP 1874

TG, C1-C4

CG

WOB (min/ft)



Survey @ 4897
 Incl. 1.13°
 Azm. 26.70°
 4896.63' TVD

WOB 7.6
 RPM 46
 SPM 73/71
 PP 1929

ROP (min/ft) 200
 Gamma (API) 200
 Wt. on Bit 30

CN
4850
CN
4900
CN
4950
CN
5000
CN

Shale - medium gray to dark gray, subblocky to rarely subplaty, earthy, slightly to very silty in part, non calcareous, soft to firm.

Siltstone, medium gray, homogeneous, quartzose, very clayey, calcareous, slightly sandy, shaley, firm to soft.

Shale - medium gray to dark gray, subblocky to rarely subplaty, earthy, slightly to very silty in part, non calcareous, soft to firm.

Sandstone, gray to clear, lower fine grained to upper fine grained, subround, consolidated, dirty in appearance, very argillaceous, salt and pepper, calcareous, glauconitic, tight, hard, no visible porosity.

Sandstone, gray to clear, lower fine grained to upper fine grained, subround, consolidated, dirty in appearance, very argillaceous, salt and pepper, calcareous, glauconitic, tight, hard, no visible porosity.

Siltstone, medium gray, homogeneous, quartzose, very clayey, calcareous, slightly sandy, shaley, firm to soft.

Shale - medium gray to rarely dark gray, subblocky to rarely subplaty, earthy, slightly to very silty in part, non calcareous, soft to firm.

Sandstone, gray to clear, lower fine grained to upper fine grained, subround, consolidated, dirty in appearance, very argillaceous, salt and pepper, calcareous, glauconitic, tight, hard, no visible porosity.

Shale - medium gray to rarely dark gray, subblocky to rarely subplaty, earthy, slightly to very silty in part, non calcareous, soft to firm.

Siltstone, medium gray, homogeneous, quartzose, very clayey, calcareous, slightly sandy, shaley, firm to soft.

Shale - medium gray to rarely dark gray, subblocky to rarely subplaty, earthy, slightly to very silty in part, non calcareous, soft to firm.

CG

CG

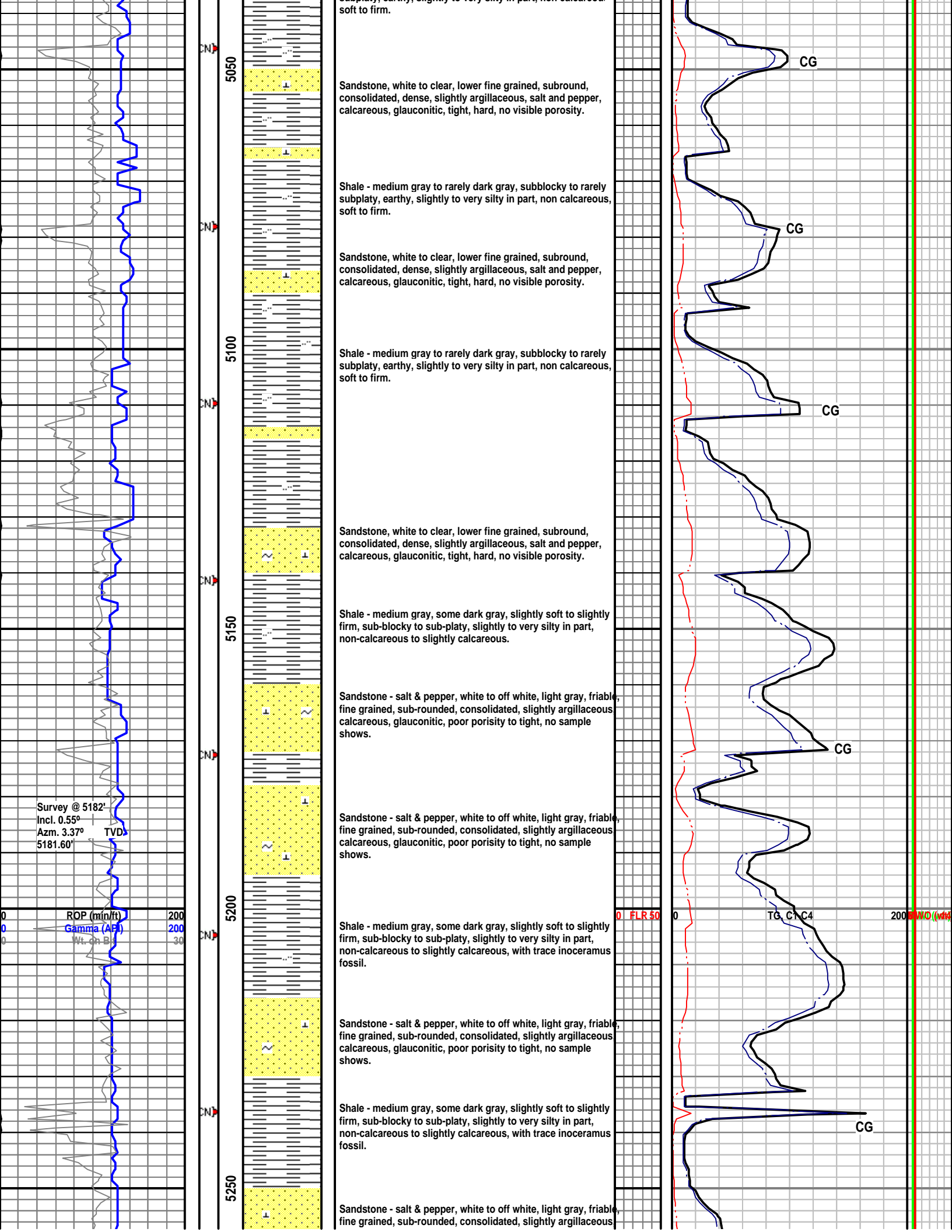
CG

CG

TG, C1-C4

FLR 50

WOB (min/ft)



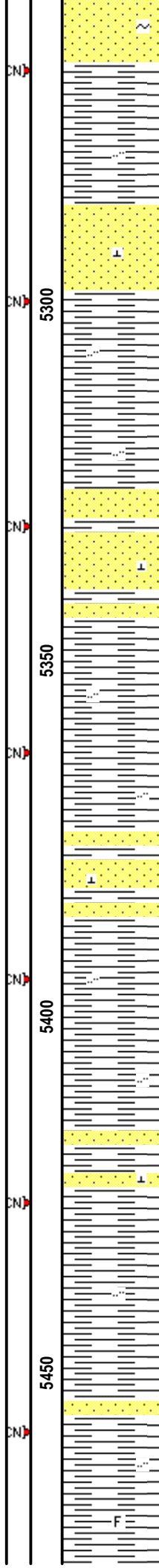
3-6-2010

WOB 15
RPM 55
SPM 70/70
PP 1950

ROP (min/ft) 200
Gamma (API) 200
Wt. on B 30

Survey @ 5467'
Incl. 0.62°
Az. 336.95°
5466.58'

TVD



calcareous, glauconitic, poor porosity to tight, no sample shows.

Shale - medium gray, some dark gray, slightly soft to slightly firm, sub-blocky to sub-platy, slightly to very silty in part, non-calcareous to slightly calcareous with trace inoceramus fossil.

Sandstone - salt & pepper, white to off white, light gray, friable, fine grained, sub-rounded, consolidated, slightly argillaceous calcareous, glauconitic, poor porosity to tight, no sample shows.

Shale - medium gray, some dark gray, slightly soft to slightly firm, sub-blocky to sub-platy, slightly to very silty in part, non-calcareous to slightly calcareous.

Sandstone - light gray, salt & pepper, off white, slightly friable very fine to fine grained, sub-angular to sub-rounded, consolidated, calcareous, poor porosity to tight, no sample shows.

Shale - medium gray, some dark gray, slightly soft to slightly firm, sub-blocky to sub-platy, slightly to very silty in part, non-calcareous to slightly calcareous

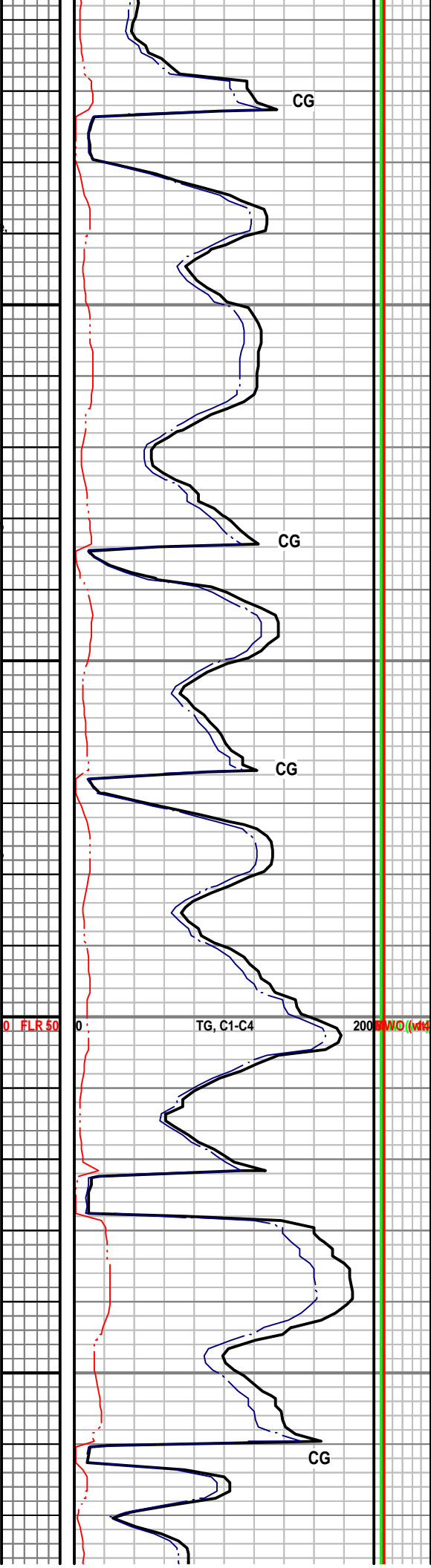
Sandstone - light gray, salt & pepper, off white, slightly friable very fine to fine grained, sub-angular to sub-rounded, consolidated, calcareous, poor porosity to tight, no sample shows.

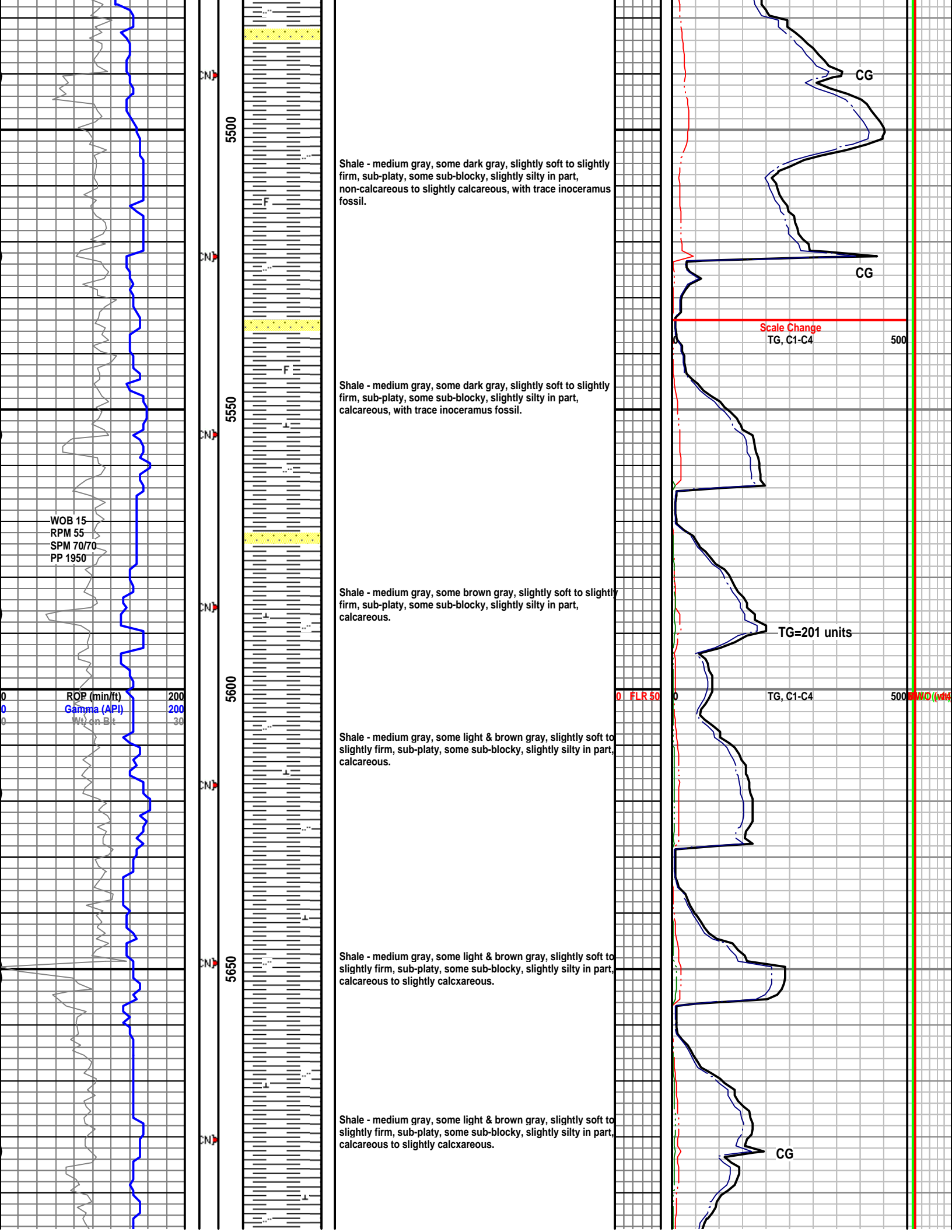
Shale - medium gray, some dark gray, slightly soft to slightly firm, sub-platy, some sub-blocky, slightly silty in part, non-calcareous to slightly calcareous.

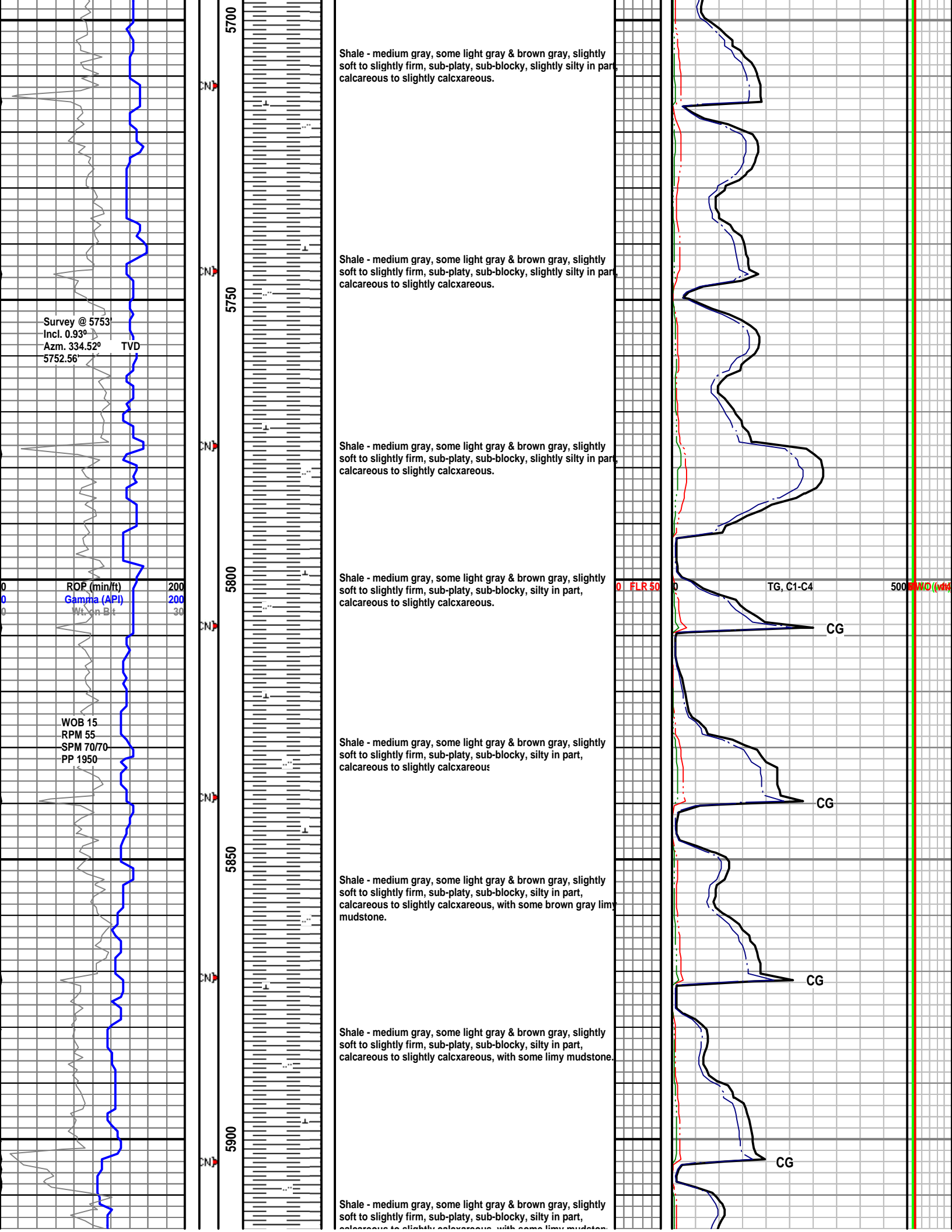
Decreasing Sandstone - light gray, salt & pepper, off white, slightly friable, very fine to fine grained, sub-angular to sub-rounded, consolidated, calcareous, poor porosity to tight, no sample shows.

Shale - medium gray, some dark gray, slightly soft to slightly firm, sub-platy, some sub-blocky, slightly silty in part, non-calcareous to slightly calcareous.

Shale - medium gray, some dark gray, slightly soft to slightly firm, sub-platy, some sub-blocky, slightly silty in part, non-calcareous to slightly calcareous, with trace inoceramus fossil, with decreasing Sandstone.







5700
CN
5750
CN
5800
CN
5850
CN
5900
CN

Shale - medium gray, some light gray & brown gray, slightly soft to slightly firm, sub-platy, sub-blocky, slightly silty in part, calcareous to slightly calcareous.

Shale - medium gray, some light gray & brown gray, slightly soft to slightly firm, sub-platy, sub-blocky, slightly silty in part, calcareous to slightly calcareous.

Shale - medium gray, some light gray & brown gray, slightly soft to slightly firm, sub-platy, sub-blocky, slightly silty in part, calcareous to slightly calcareous.

Shale - medium gray, some light gray & brown gray, slightly soft to slightly firm, sub-platy, sub-blocky, silty in part, calcareous to slightly calcareous.

Shale - medium gray, some light gray & brown gray, slightly soft to slightly firm, sub-platy, sub-blocky, silty in part, calcareous to slightly calcareous.

Shale - medium gray, some light gray & brown gray, slightly soft to slightly firm, sub-platy, sub-blocky, silty in part, calcareous to slightly calcareous, with some brown gray limy mudstone.

Shale - medium gray, some light gray & brown gray, slightly soft to slightly firm, sub-platy, sub-blocky, silty in part, calcareous to slightly calcareous, with some limy mudstone.

Shale - medium gray, some light gray & brown gray, slightly soft to slightly firm, sub-platy, sub-blocky, silty in part, calcareous to slightly calcareous, with some limy mudstone.

Survey @ 5753
Incl. 0.93°
Az. 334.52° TVD
5752.56'

ROP (min/ft) 200
Gamma (API) 200
Wt. on Bit 30

WOB 15
RPM 55
SPM 70/70
PP 1950

0 FLR 50 0 TG, C1-C4 500 WOB (min/ft)

CG

CG

CG

CG

WOB 15
RPM 55
SPM 70/70
PP 1950

CN

5950

CN

6000

CN

6050

CN

6100

CN

Shale - medium gray, some light gray & brown gray, slightly soft to slightly firm, sub-platy, sub-blocky, silty in part, calcareous to slightly calcareous, with some brown gray limy mudstone.

Shale - medium gray, some light gray, slightly soft to slightly firm, sub-platy, fissile, silty in part, calcareous to slightly calcareous, with some brown gray limy mudstone.

Shale - medium gray, dark gray, some light gray, slightly soft to slightly firm, sub-platy, fissile, micaceous, calcareous to non-calcareous, with some brown gray limy mudstone.

Plugged back to 6000 feet to sidetrack. Weight and time drilled to 6200'. New log begins at 6200 feet because sample contained varying percentages of cement.

Shale - medium gray, dark gray, some light gray, slightly soft to slightly firm, sub-platy, fissile, micaceous, calcareous to non-calcareous, with some brown gray limy mudstone.

Shale - medium gray, dark gray, some light gray, slightly soft to slightly firm, sub-platy, fissile, micaceous, calcareous to non-calcareous, slightly carbonaceous, with some brown gray limy mudstone.

Shale - medium gray, dark gray, some light gray, slightly soft to slightly firm, sub-platy, fissile, micaceous, calcareous to non-calcareous, slightly carbonaceous, with some brown gray limy mudstone.

Shale - medium gray, dark gray, some light gray, slightly soft to slightly firm, sub-platy, fissile, micaceous, calcareous to non-calcareous, slightly carbonaceous, with some brown gray limy mudstone.

WOB 10.3
RPM 60
SPM 72/73
PP 1695

ROP (min/ft) 200
Gamma (API) 200
SidetrackSurvey @ 30
6008'
Incl. 0.76°
Az. 335.84°
6007.53' TVD

SidetrackSurvey @
6039'
Incl. 0.92°
Az. 325.90°
6038.53' TVD

SidetrackSurvey @
6071'
Incl. 0.72°
Az. 305.91°
6070.53' TVD

SidetrackSurvey @
6101'
Incl. 1.43°
Az. 208.91°
6100.52' TVD

SidetrackSurvey @
6135'

0 FLR 50

TG, C1-C4

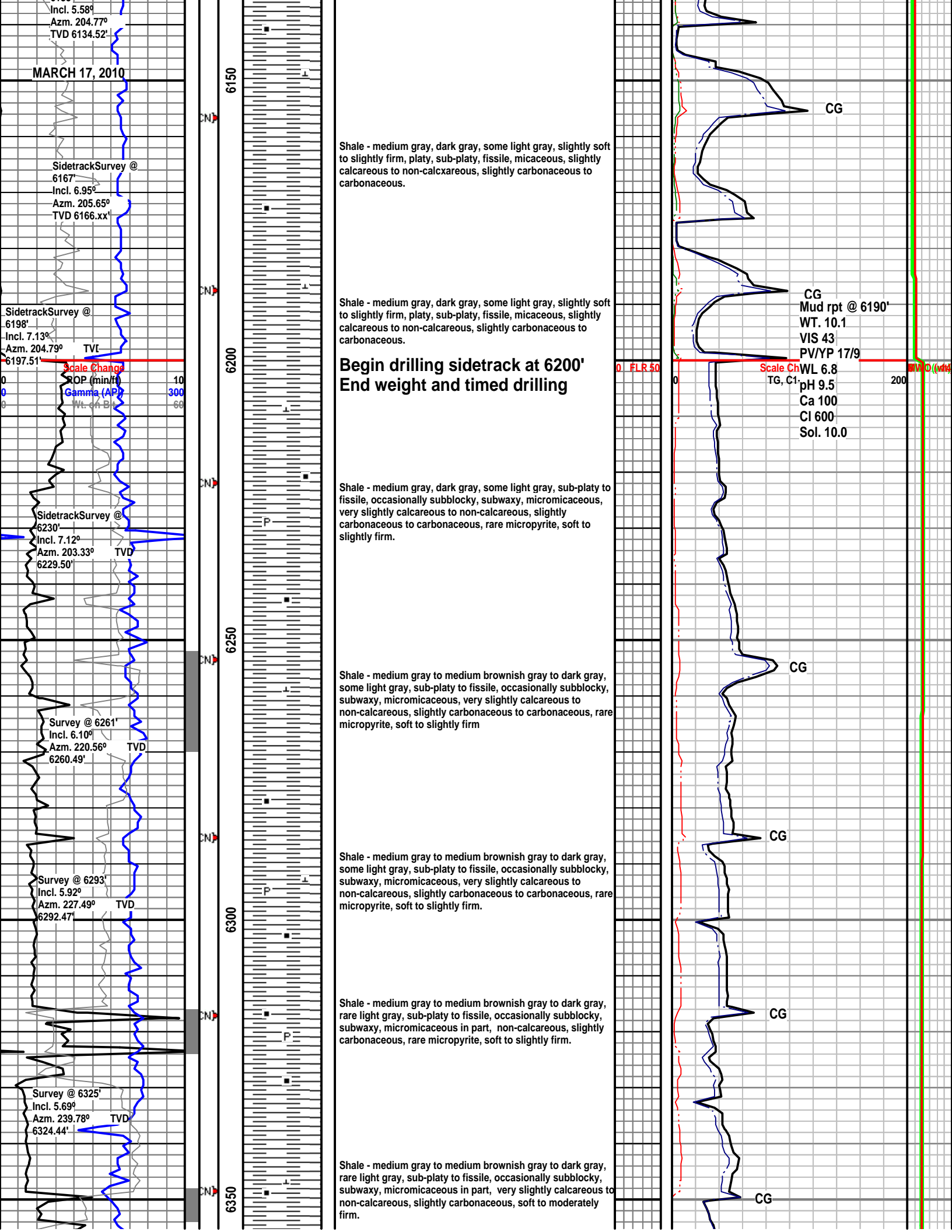
500 WOB (min/ft)

CG

CG

CG

CG



MARCH 17, 2010

Incl. 5.58°
Az. 204.77°
TVD 6134.52'

SidetrackSurvey @
6167'
Incl. 6.95°
Az. 205.65°
TVD 6166.xx'

SidetrackSurvey @
6198'
Incl. 7.13°
Az. 204.79°
TVD 6197.51'

Scale Change

ROP (min/ft) 10
Gamma (API) 300
Wt. on Bit 60

SidetrackSurvey @
6230'
Incl. 7.12°
Az. 203.33°
TVD 6229.50'

Survey @ 6261'
Incl. 6.10°
Az. 220.56°
TVD 6260.49'

Survey @ 6293'
Incl. 5.92°
Az. 227.49°
TVD 6292.47'

Survey @ 6325'
Incl. 5.69°
Az. 239.78°
TVD 6324.44'

Shale - medium gray, dark gray, some light gray, slightly soft to slightly firm, platy, sub-platy, fissile, micaceous, slightly calcareous to non-calcareous, slightly carbonaceous to carbonaceous.

Shale - medium gray, dark gray, some light gray, slightly soft to slightly firm, platy, sub-platy, fissile, micaceous, slightly calcareous to non-calcareous, slightly carbonaceous to carbonaceous.

Begin drilling sidetrack at 6200'
End weight and timed drilling

Shale - medium gray, dark gray, some light gray, sub-platy to fissile, occasionally subblocky, subwaxy, micromicaceous, very slightly calcareous to non-calcareous, slightly carbonaceous to carbonaceous, rare micropyrrite, soft to slightly firm.

Shale - medium gray to medium brownish gray to dark gray, some light gray, sub-platy to fissile, occasionally subblocky, subwaxy, micromicaceous, very slightly calcareous to non-calcareous, slightly carbonaceous to carbonaceous, rare micropyrrite, soft to slightly firm.

Shale - medium gray to medium brownish gray to dark gray, some light gray, sub-platy to fissile, occasionally subblocky, subwaxy, micromicaceous, very slightly calcareous to non-calcareous, slightly carbonaceous to carbonaceous, rare micropyrrite, soft to slightly firm.

Shale - medium gray to medium brownish gray to dark gray, rare light gray, sub-platy to fissile, occasionally subblocky, subwaxy, micromicaceous in part, non-calcareous, slightly carbonaceous, rare micropyrrite, soft to slightly firm.

Shale - medium gray to medium brownish gray to dark gray, rare light gray, sub-platy to fissile, occasionally subblocky, subwaxy, micromicaceous in part, very slightly calcareous to non-calcareous, slightly carbonaceous, soft to moderately firm.

CG

CG
Mud rpt @ 6190'
WT. 10.1
VIS 43
PV/YP 17/9
WL 6.8
pH 9.5
Ca 100
Cl 600
Sol. 10.0

CG

CG

CG

CG

0. FLR 50

Scale Ch

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

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Scale Ch

TG, C1

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TG, C1

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TG, C1

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TG, C1

0. FLR 50

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TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50

Scale Ch

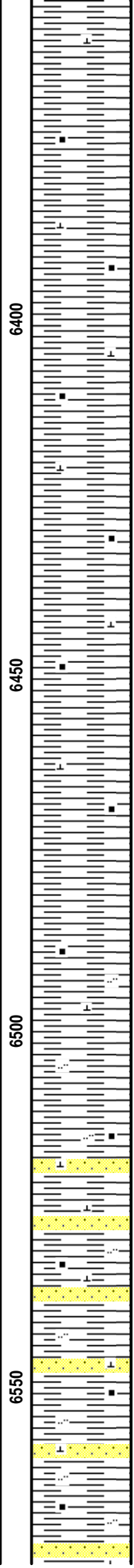
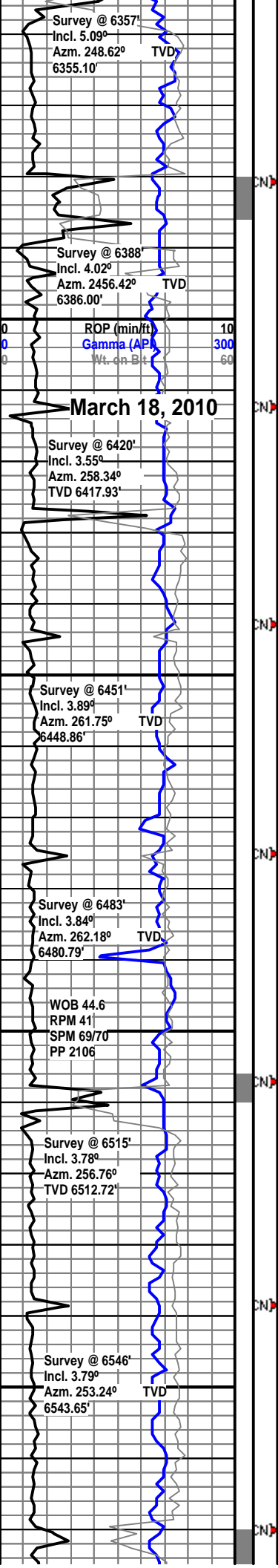
TG, C1

0. FLR 50

Scale Ch

TG, C1

0. FLR 50



Shale - medium gray to medium brownish gray to dark gray, rare light gray, sub-platy to fissile, occasionally subblocky, subwaxy, micaceous in part, very slightly calcareous to non-calcareous, slightly carbonaceous, soft to moderately firm

Shale - medium gray to medium brownish gray to dark gray, rare light gray, sub-platy to platy, fissile, some sub-blocky, micaceous in part, slightly calcareous to non-calcareous, slightly carbonaceous in part, soft to slightly firm.

Shale - medium gray to medium brownish gray to dark gray, rare light gray, sub-platy to platy, fissile, some sub-blocky, micaceous in part, slightly calcareous to non-calcareous, slightly carbonaceous in part, soft to slightly firm.

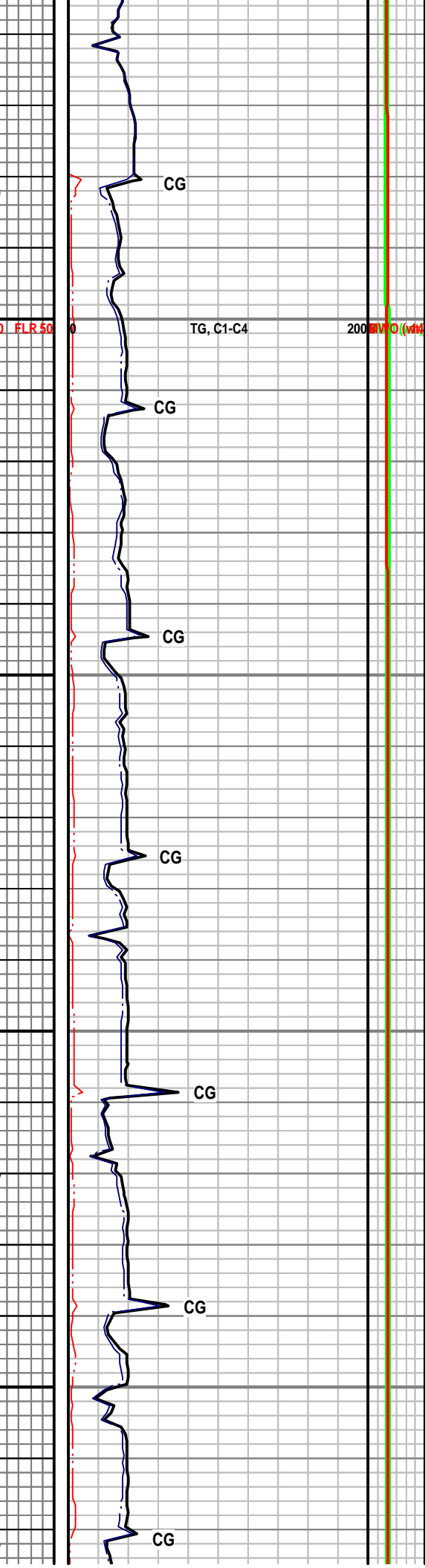
Shale - medium gray to medium brownish gray to dark gray, rare light gray, sub-platy to platy, fissile, some sub-blocky, micaceous in part, slightly calcareous to non-calcareous, slightly carbonaceous, slightly soft to slightly firm.

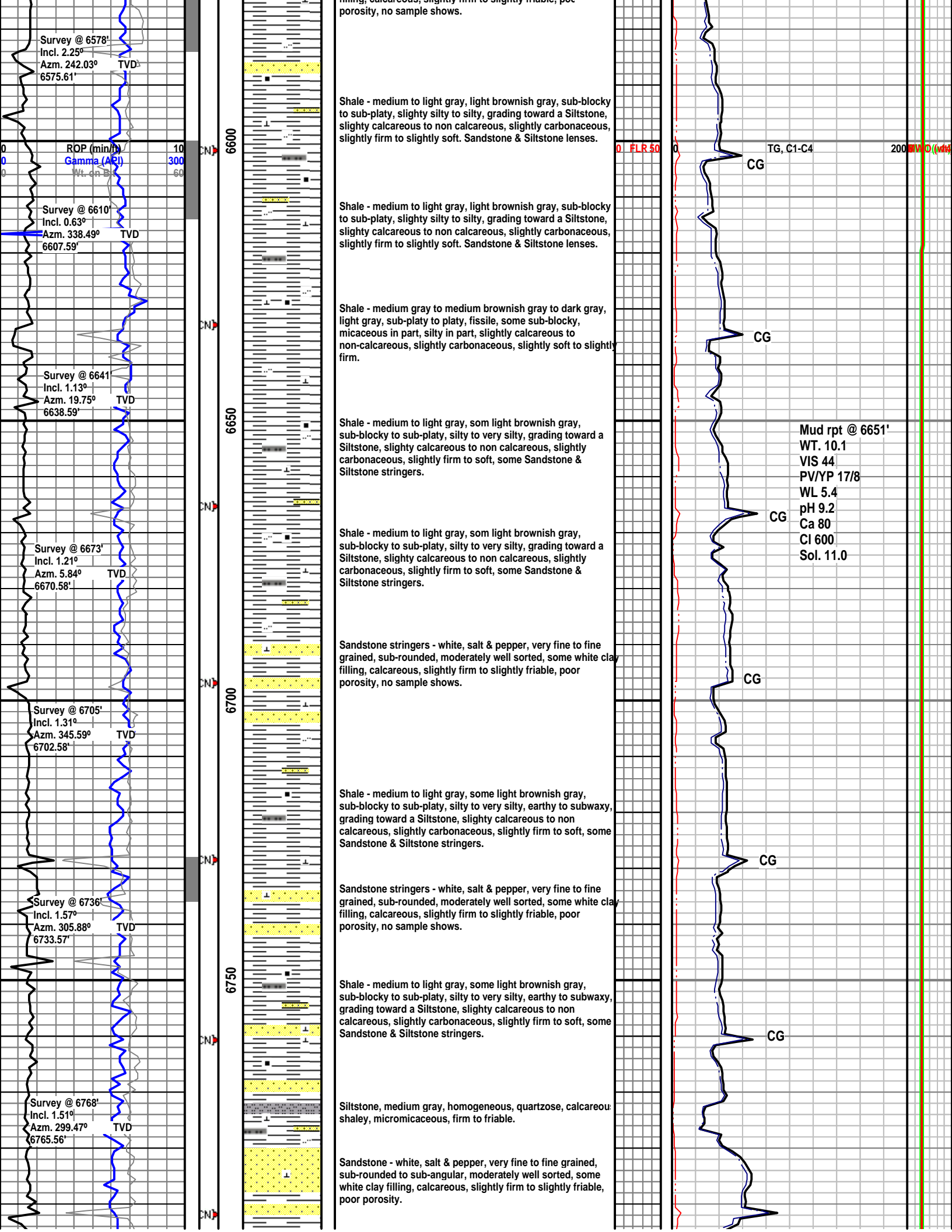
Shale - medium gray to medium brownish gray to dark gray, rare light gray, sub-platy to platy, fissile, some sub-blocky, micaceous in part, silty in part, slightly calcareous to non-calcareous, slightly carbonaceous, slightly soft to slightly firm.

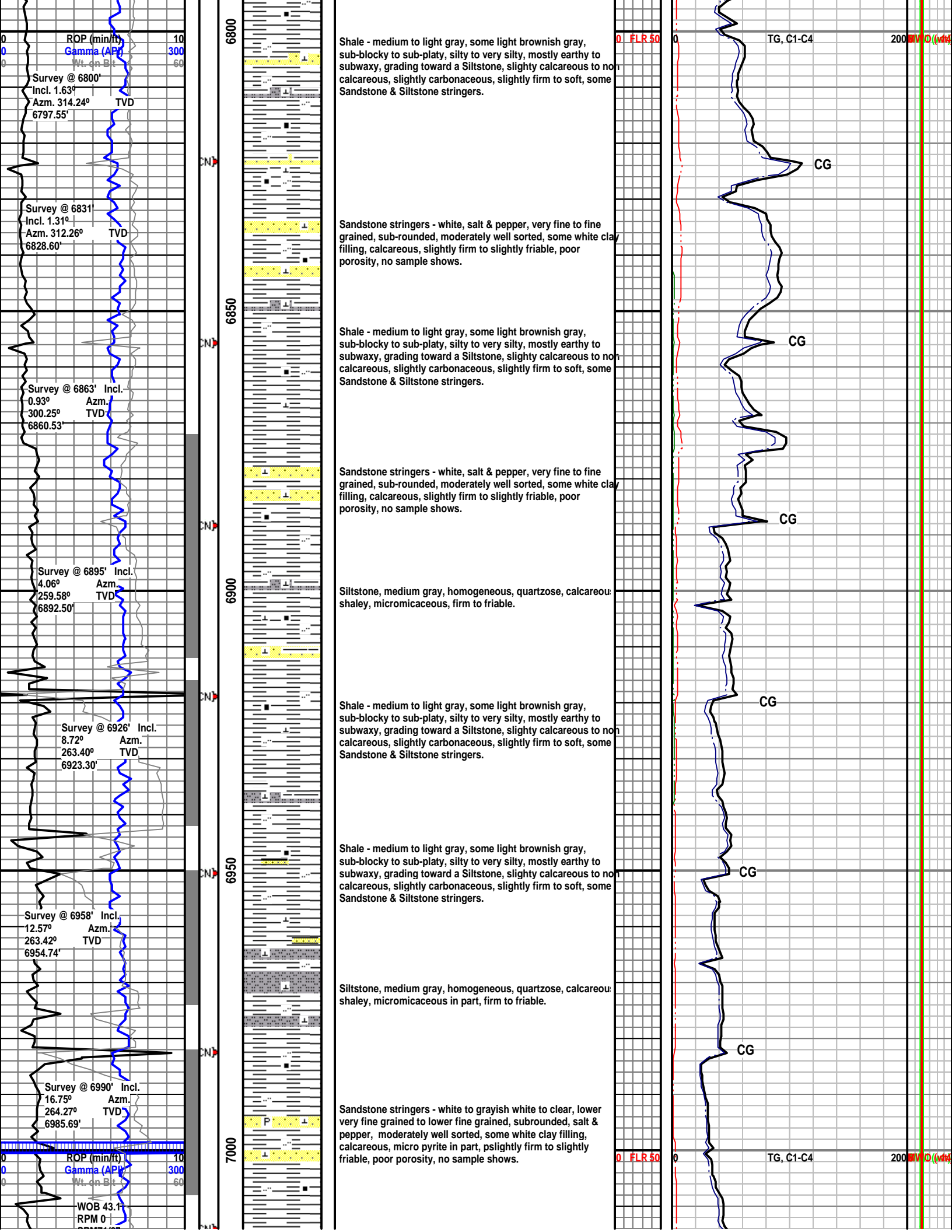
Sandstone stringers - white, salt & pepper, very fine to fine grained, sub-rounded, moderately well sorted, some white clay filling, calcareous, slightly firm to slightly friable, poor porosity, no sample shows.

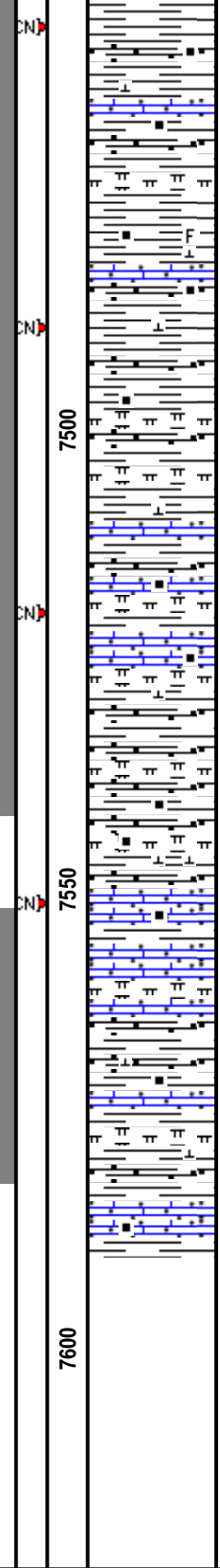
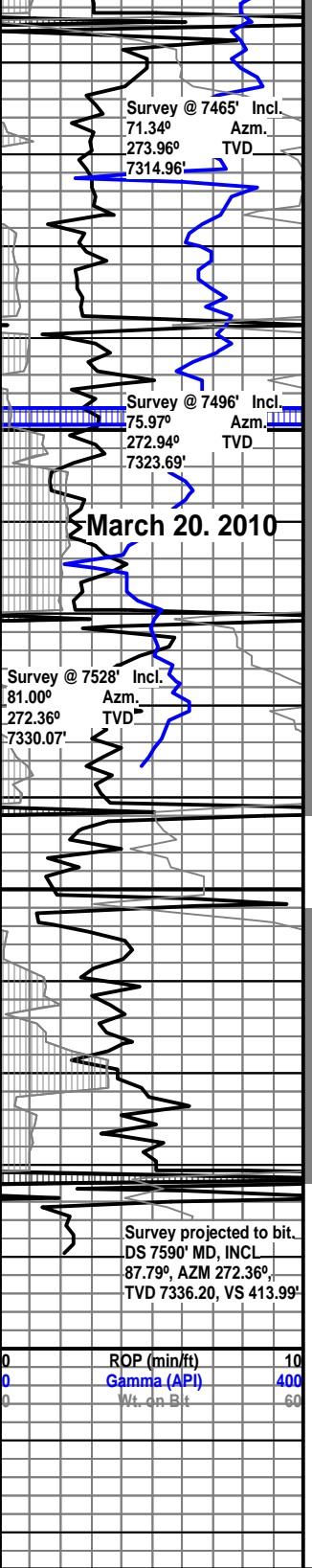
Shale - medium to dark gray, light gray, sub-blocky to sub-platy, some fissile, slightly silty to silty, micaceous in part, slightly calcareous, slightly carbonaceous in part, slightly firm to soft, with Sandstone stringers - as above.

Sandstone stringers - white, salt & pepper, very fine to fine grained, sub-rounded, moderately well sorted, some white clay filling, calcareous, slightly firm to slightly friable, poor









Shale - Marlstone - predominantly black, dark gray, some dark brownish black, mostly mottled, sub-blocky, sub-platy to fissile, very calcareous, very carbonaceous, calcite inclusions and calcite micro inclusions, slightly chalky in part, slightly firm to brittle to soft, with carbonaceous Chalk.

Shale/Marlstone - dark gray to mostly black, rare dark brownish black, mostly mottled, sub-blocky, sub-platy to fissile, earthy, very calcareous, very carbonaceous, calcite inclusions and calcite micro inclusions, slightly chalky in part, slightly firm to brittle to soft.

Shale - Marlstone - predominantly black, dark gray, some dark brownish black, mostly mottled, sub-blocky, sub-platy to fissile, earthy, very calcareous, very carbonaceous, calcite inclusions and calcite micro inclusions, slightly chalky in part, slightly firm to brittle to soft, with carbonaceous Chalk.

Shale Marlstone - black to dark gray, splintery, sub-platy, very marly - very calcareous to calcareous, very carbonaceous, chalky in part, slightly soft to slightly firm to brittle.

**Niobrara "B" Chalk @
7,550 ft. Md, 7,334 ft. TVD**

- Carbonaceous Chalk - light to medium gray, mottled, earthy, sub-platy to sub-blocky, marly - limy - very calcareous, firm, white calcite filled fractures. Oil coated mud on samples, green, bright yellow white fluorescence, immediate milky flashing cut, thick film and ring.
- Shale Marlstone - black to dark gray, splintery, sub-platy, very marly - very calcareous to calcareous, very carbonaceous, chalky in part, slightly soft to slightly firm to brittle, with carbonaceous Chalk
- Carbonaceous Chalk - light to medium gray, mottled, earthy, sub-platy to sub-blocky, marly - limy - very calcareous, firm, some white calcite filled fractures. Oil coated mud on samples, green, bright yellow white fluorescence, immediate milky flashing cut, thick film and ring.

Bit #5 cut 1616 ft. in 82 hrs.

Landing Point and Intermediate Casing Depth of 7,590' at 0600 hrs. 3-20-2010.

Addition log data will continue on the associated Critter Creek 02-03H horizontal log.

