



# STEVEN P. MURPHY, P.G.

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

Well Name: Anderson #1-31

Location: Thomas County

License Number: API #15-193-20793-00-00

Region: Kansas

Spud Date: 5/1/11

Drilling Completed: 5/12/11

Surface Coordinates: 2290' FSL & 1810' FWL (Approx. C SE NW NE SW)

Section 31-Township 10 South-Range 34 West

Bottom Hole Coordinates: Vertical Well with minimal deviation, same as above

Ground Elevation (ft): 3286'

K.B. Elevation (ft): 3296'

Logged Interval (ft): 3700

To: TD

Total Depth (ft): RTD -4979' LTD- 4979

Formation: Topeka through Mississippian

Type of Drilling Fluid: Chemical - Mudco (Engineer - Reed Atkins)

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

## OPERATOR

Company: Russell Oil, Inc.

Address: P.O. Box 8050

Edmond, OK 73083

## GEOLOGIST

Name: Steven P. Murphy, PG (KS License #228)

Company: Consulting Petroleum Geologist

Address: 3365 County Rd 390

Otis, KS 67565

620-639-3030 (Cell)

## LOG TOPS (Datum)

The open-hole logging was performed by Log-Tech (Hays, KS shop). Logs included Compensated Neutron/Compensated Density, Dual Induction, Sonic & Microlog.

Formation tops and associated datums from these logs include the following:

Anhydrite Top - 2772 (+524)  
Anhydrite Base - 2797 (+497)  
Topeka - 3926 (-630)  
Heebner - 4142 (-846)  
Toronto - 4163 (-867)  
Lansing - 4184 (-888)  
Muncie Creek - 4334 (-1038)  
Stark - 4413 (-1117)  
Base KC -4476 (-1180)  
Marmaton - 4520 (-1224)  
Pawnee - 4600 (-1304)  
Myrick Station - 4643 (-1347)  
Fort Scott -4661 (-1365)  
Cherokee - 4691 (-1395)  
Johnson Zone - 4732 (-1436)  
Morrow Shale - 4781 (-1485)  
Basal Penn Sand - 4810 (-1514)  
Mississippian - 4826 (-1530)

The drill-stem testing of the well was performed by Chuck Smith & Kevin Mack with Trilobite Testing (Scott City shop).

**DST #1 (Toronto) 4140-4170**

**30:30:45:45**

**IF: 3" blow, no return**

**FF: 2" blow, no return**

**Recovery: 165' MW**

**(70% W, 30% M)**

**IHP: 2142 FHP: 2033**

**IFP: 18-47 ISIP: 1241**

**FFP: 52-95 FSIP: 1240**

**BHT: 121 F**

**Chlorides: 39,000 ppm**

**DST #2 (LKC "H") 4340-4360**

**15:15:15:15**

**IF: Surface blow died Immed  
no return**

**FF: No blow, no return**

**Recovery: 5' Oil spotted M**

**IHP: 2147 FHP: 2160**

**IFP: 16-17 ISIP: 97**

**FFP: 16-18 FSIP: 85**

**BHT: 118 F**

**DST #3 (LKC "K") 4410-4440**

**15:15:15:15**

**IF: Surface blow died Immed  
no return**

**FF: No blow, no return**

**Recovery: 10' Oil Sptd M**

**IHP: 2190 FHP: 2176**

**IFP: 15-17 ISIP: 845**

**FFP: 18-17 FSIP: 964**

**BHT: 119 F**

**DST #4 (Myrick Station & Ft. Scott) 4630-4680**

**30:30:30:30**

**IF: 1/4" blow died in 15",  
no return**

**FF: No blow, no return**

**Recovery: 10' M**

**IHP: 2311 FHP: 2261**

**IFP: 16-29 ISIP: 283**

**FFP: 18-20 FSIP: 150**

**BHT: 124 F**

**DST #5 (Johnson Zone) 4716-4770**

**30:45:30:60**

**IF: BOB in 6 min, 9" return**

**FF: BOB in 14 min, 9" return**

**Rec: 180' GIP, 540' GO (20% G,**

**80% O), 120' GMCO (10% G,**

**50% O, 40% M)**

**IHP: 2369 FHP: 2261**

**IFP: 48-143 ISIP: 1044**

**FFP: 166-211 FSIP: 1033**

**Oil Gravity: 22**

**BHT: 132 F**



**COMMENTS**

The Anderson #1-31 was drilled by H2 Drilling, Rig #2 (Toolpusher - Steve Craig). This wildcat was spudded on 5/1/11 and 8-5/8" surface casing was set @ 270' w/180 sacks of cement (3% calcium chloride, 2% gel), cement did circulate.

Rig total depth was 4979' and log total depth was also measured at 4979'.

Based on the results of DST #5, and log & sample analysis, it was recommended that production casing be set to produce the Johnson Zone. 5-1/2" 15.5# production casing was set @ 4973', with the DV tool @ 2800'. Well operations concluded on 5/12/11,

Recommended perforations in the Johnson Zone are:

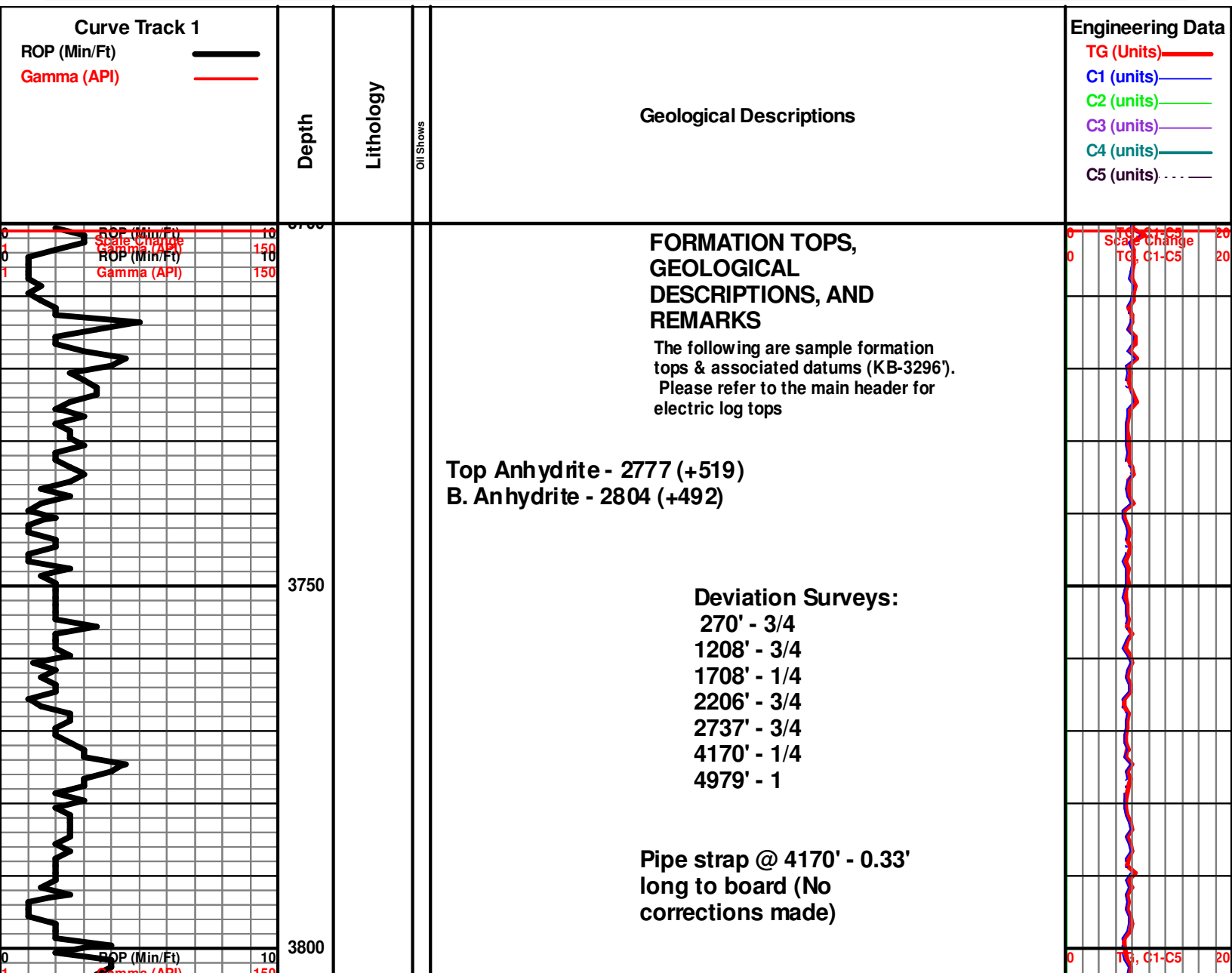
4735-4737', 4740'-4742', 4746-4748'

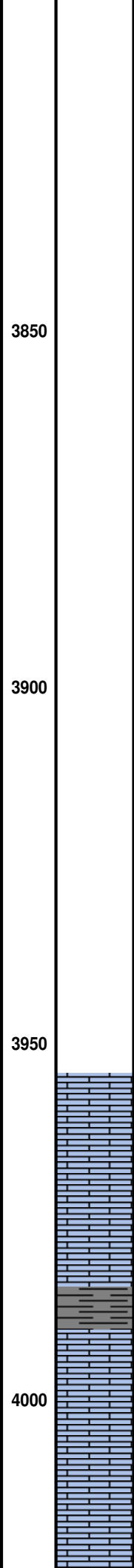
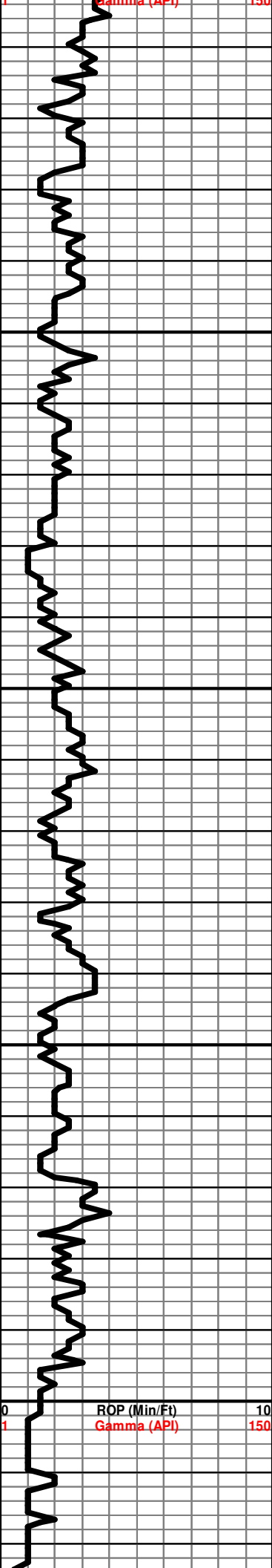
Prior to abandonment, the following zones should be perforated:

LKC "A" Zone: 4185-4189

Respectfully submitted,

Steven P. Murphy, PG





LS: crm, vfxln, sl chalky, sl foss,  
dense, NS

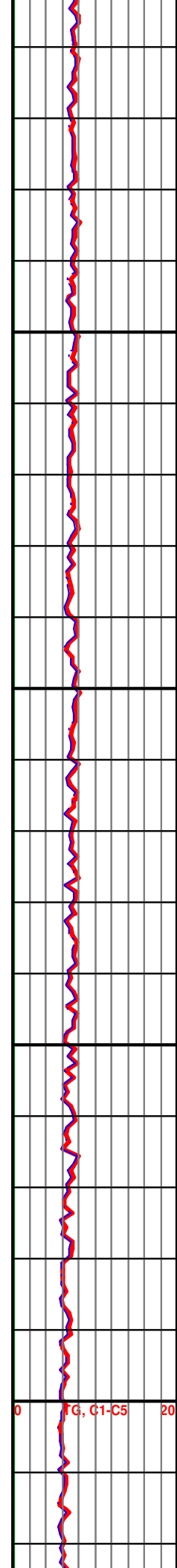
SH: gry

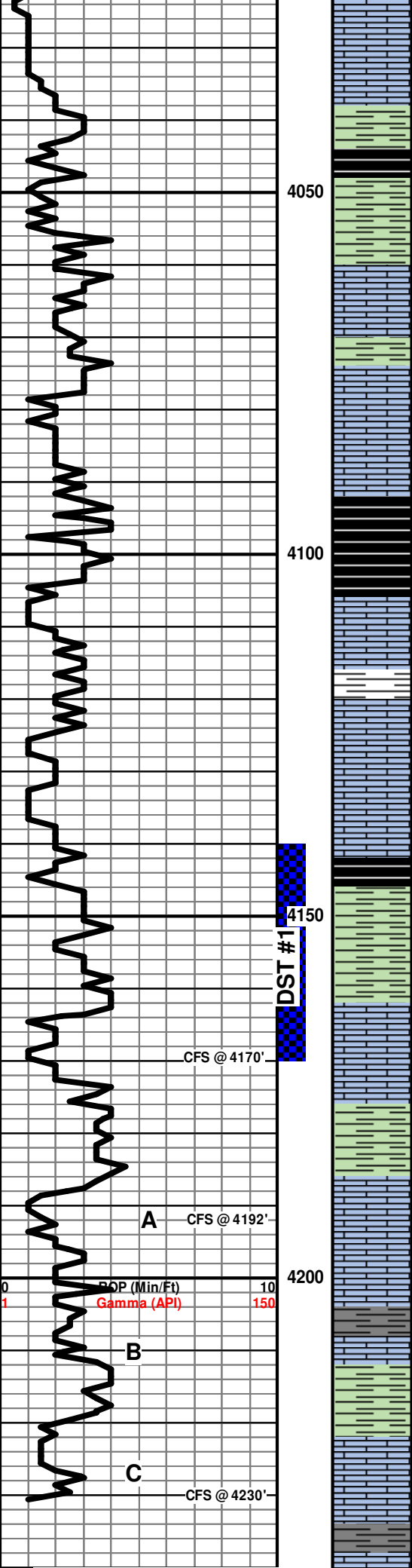
LS: wh-gry, fxlIn, ool in pt, foss, gd  
inxln & vug por, NS

LS: wh-gry, fxlIn, sl foss, v. chalky,  
dense, NS

LS: wh-tan, fxlIn, ool in pt, gd inxln por,  
chalky, NS

**Begin samples @ 3960'**





LS: as above

SH: blk-gry

SH: gry-grn-brn

LS: crm-tan, vfxln, dense, NS

SH: gry-red-brn

LS: crm-gry, vfxln, dense, NS

SH: blk

LS: wh-gry, fxln, oolic in pt, gd vug por, NS

SH: gry-grn-red

LS: crm-tan, fxln, dense, chalky, NS

LS: crm-tan, fxln, dense, chalky, NS

**HEEBNER 4143 (-847)**

SH: blk

SH: grn-gry-red-blk

**TORONTO 4164 (-868)**

LS: wh, fxln, ool in pt, gd inxln & ppt por, fsfo, spty stn, fr odor, sl chalky

LS: crm-gry, vfxln, dense, NS

SH: blk-gry-grn-brn

**LANSING 4187 (-891)**

LS: wh-tan, oolitic, pr intool por, v chalky, mostly dense, spty rare stn, nsfo, no odor

SH: gry-grn-brn

LS: wh-tan, vfxln, sl chalky, dense, NS

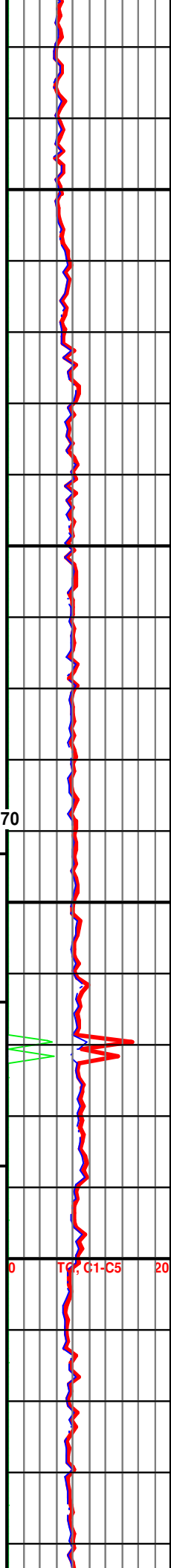
SH: grn-gry-red-brn

LS: Wh-tan-gry, vfxln, dense, v chalky, NS

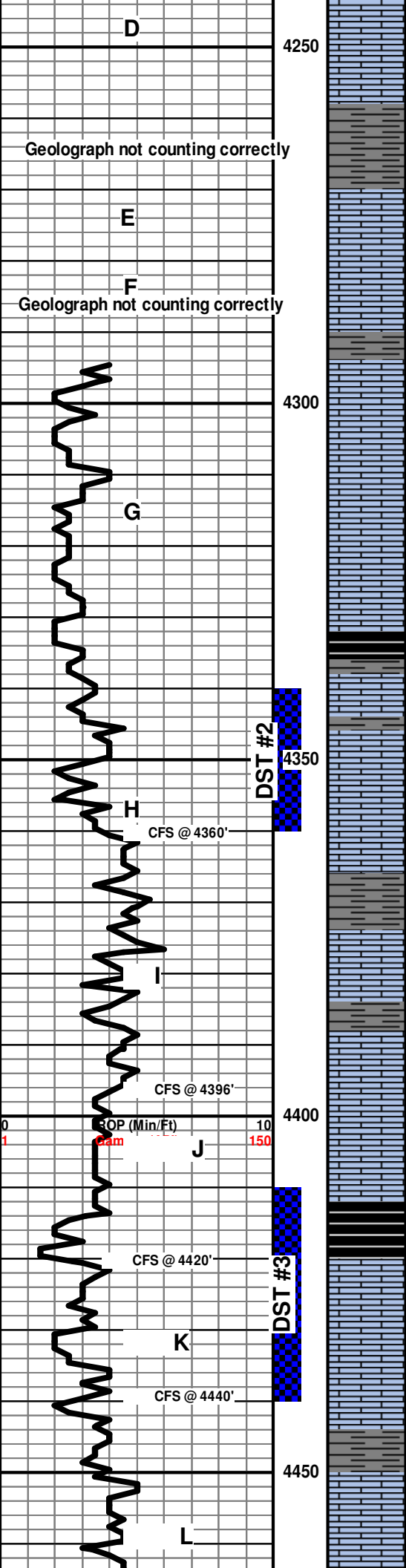
SH: gry-grn-brn

LS: crm-gry, fxln, pr inxln por, dense,

DST #1 (Toronto) 4140-4170  
 30:30:45:45  
 IF: 3" blow, no return  
 FF: 2" blow, no return  
 Recovery: 165' MW  
 (70% W, 30% M)  
 IHP: 2142 FHP: 2033  
 IFP: 18-47 ISIP: 1241  
 FFP: 52-95 FSIP: 1240  
 BHT: 121 F  
 Chlorides: 39,000 ppm







sl chalky, NS  
 LS: crm-tan, vfxln, dense, chalky, minor chert, NS

SH: gry-grn-blk

NOTE: Geograph showing 4340' strapped pipe, actual depth 4293'

LS: wh-tan, fxlIn, dense, chalky, cherty, NS

SH: gry-grn-brn

LS: wh-tan, vfxln, dense, sl chalky, abund chert, NS

LS: wh-tan-gry, vfxln, dense, sl oolitic, sl chalky, NS

**MUNCIE CRK 4330 (-1034)**

SH: blk-gry  
 SH: gry-grn

DST #2 (LKC "H") 4340-4360  
 15:15:15:15  
 IF: Surface blow died Immed no return  
 FF: No blow, no return  
 Recovery: 5' Oil spotted M  
 IHP: 2147 FHP: 2160  
 IFP: 16-17 ISIP: 97  
 FFP: 16-18 FSIP: 85  
 BHT: 118 F

LS: wh-tan, vfxln, dense, NS

LS: wh-crm, fxlIn, oolic, fr-gd inxln por, ssfo, even lite stn, fr odor

SH: gry-grn-blk-brn

LS: wh-tan, fxlIn, mostly dense, rare fr vug por w/ssfo, spotty stn, sl odor

LS: wh-tan-gry, vfxln, dense, tr stn, nsfo, no odor

LS: wh-tan, vfxln, dense, v. chalky

LS: as above w/ gry chert

**STARK 4415 (-1119)**

SH: blk

DST #3 (LKC "K") 4410-4440  
 15:15:15:15  
 IF: Surface blow died Immed no return  
 FF: No blow, no return  
 Recovery: 10' Oil Sptd M  
 IHP: 2190 FHP: 2176  
 IFP: 15-17 ISIP: 845  
 FFP: 18-17 FSIP: 964  
 BHT: 119 F

LS: wh-gry, vfxln, dense, chalky, NS

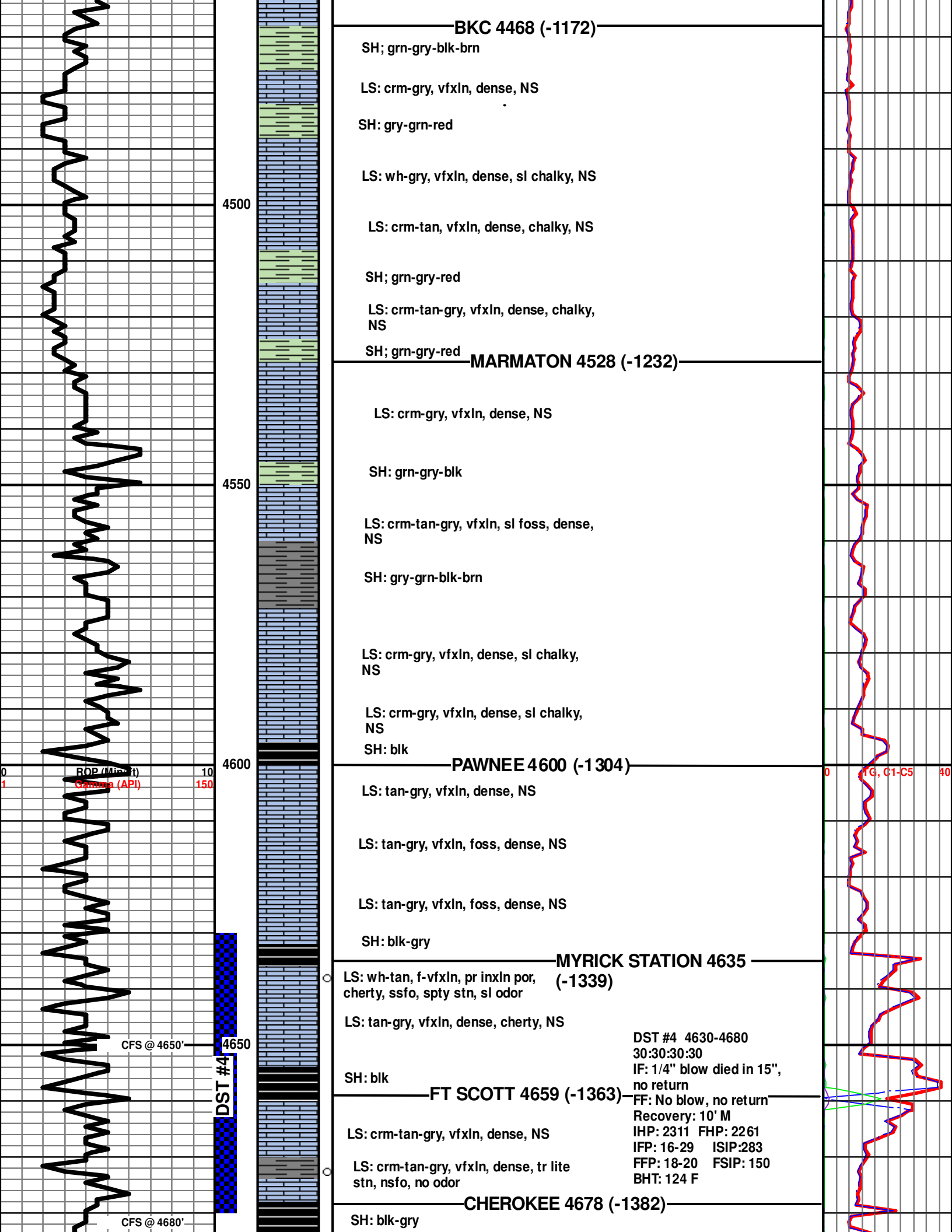
LS: crm-tan, fxlIn, foss, fr-gd ppt/Intfoss por, ssfo, even stn, str odor

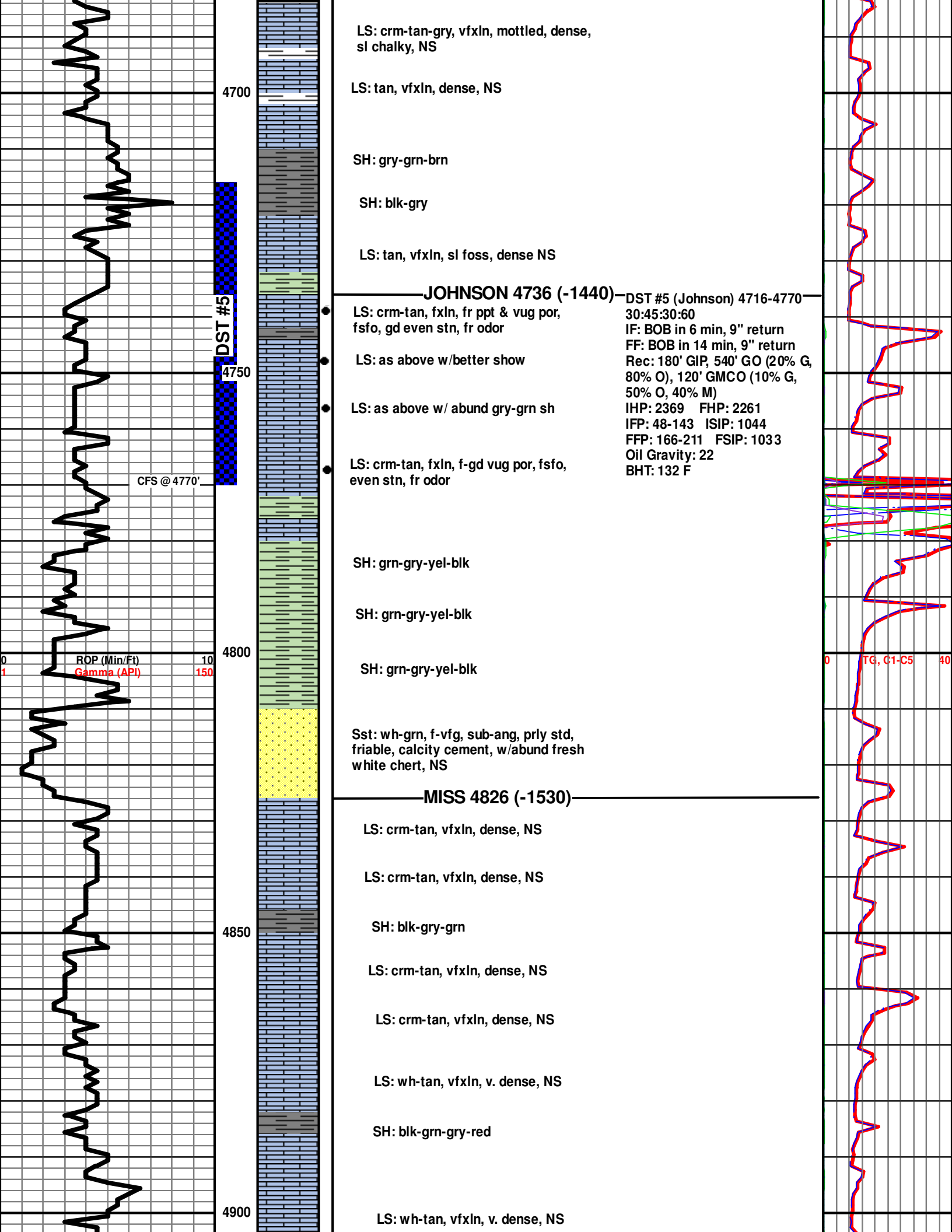
LS: crm-tan, vfxln, dense, sl chalky, minor chert, NS

SH: grn-gry-blk-red-brn

LS: wh-tan-gry, vfxln, dense, sl chalky, NS (minor sh as above)

LS: as above w/minor chert, NS





4700  
4750  
4800  
4850  
4900

CFS @ 4770'

DST #5

LS: crm-tan-gry, vfxln, mottled, dense, sl chalky, NS

LS: tan, vfxln, dense, NS

SH: gry-grn-brn

SH: blk-gry

LS: tan, vfxln, sl foss, dense NS

**JOHNSON 4736 (-1440)**

LS: crm-tan, fxl, fr ppt & vug por, fsfo, gd even stn, fr odor

LS: as above w/better show

LS: as above w/ abund gry-grn sh

LS: crm-tan, fxl, f-gd vug por, fsfo, even stn, fr odor

DST #5 (Johnson) 4716-4770  
30:45:30:60  
IF: BOB in 6 min, 9" return  
FF: BOB in 14 min, 9" return  
Rec: 180' GIP, 540' GO (20% G, 80% O), 120' GMCO (10% G, 50% O, 40% M)  
IHP: 2369 FHP: 2261  
IFP: 48-143 ISIP: 1044  
FFP: 166-211 FSIP: 1033  
Oil Gravity: 22  
BHT: 132 F

SH: grn-gry-yel-blk

SH: grn-gry-yel-blk

SH: grn-gry-yel-blk

Sst: wh-grn, f-vfg, sub-ang, prly std, friable, calcity cement, w/abund fresh white chert, NS

**MISS 4826 (-1530)**

LS: crm-tan, vfxln, dense, NS

LS: crm-tan, vfxln, dense, NS

SH: blk-gry-grn

LS: crm-tan, vfxln, dense, NS

LS: crm-tan, vfxln, dense, NS

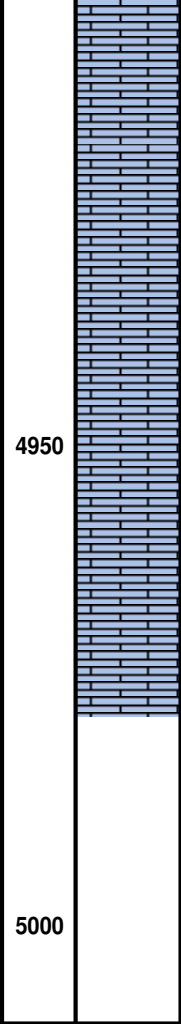
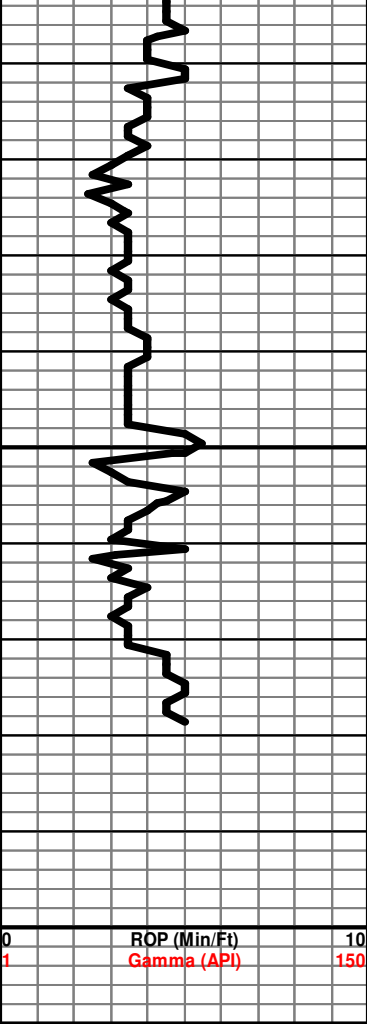
LS: wh-tan, vfxln, v. dense, NS

SH: blk-grn-gry-red

LS: wh-tan, vfxln, v. dense, NS

ROP (Min/Ft)  
Gamma (API)

TG, C1-C5



LS: wh-tan, f-mxln, sl sandy inclus,  
dense, NS

LS: tan, fxlN, oolitic, no vis por (? frac  
por?), ssfo at edge, minor stn, no odor  
(60 min cir sample)

LS: crm-tan-gry, f-vfxln, dense, oolitic  
in pt, ssfo on edge, no vis por, rare  
edge stn, no odor

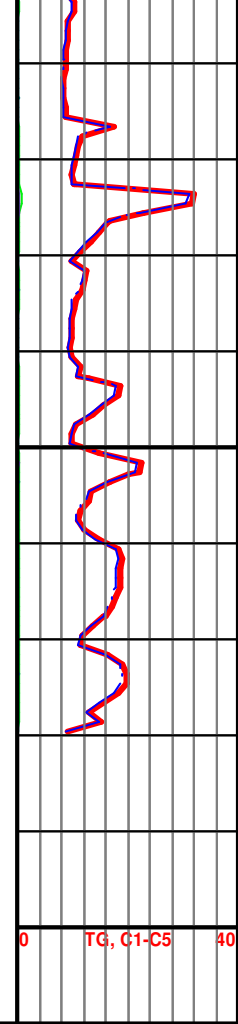
LS: crm-gry, vfxln, dense, NS

LS: crm-gry, vfxln, pr inxln por, nsfo,  
rare edge stn, no odor

LS: wh-tan, vfxln, v.dense, oolitic in  
pt, cherty, no vis por, NS

**RTD @ 4979'**

**LTD @ 4979'**



ROP (Min/Ft) 10  
Gamma (API) 150

TG, C1-C5 40