

NOTES:

8-5/8" Surface casing set @ 1872' w/675 sacks 65/35 Poz w/6% gel, 3% CC; plug down @ 5:00 PM 5/17/12, cement did circulate.

The following are sample tops & associated datums (KB of 2856'). Please refer to the main header for open-hole log tops & datums:

CHASE GRP 2677 (+179)

DOL: gry, vfxln, dense NS/NF

DOL: as above

DOL: as above

DOL: as above

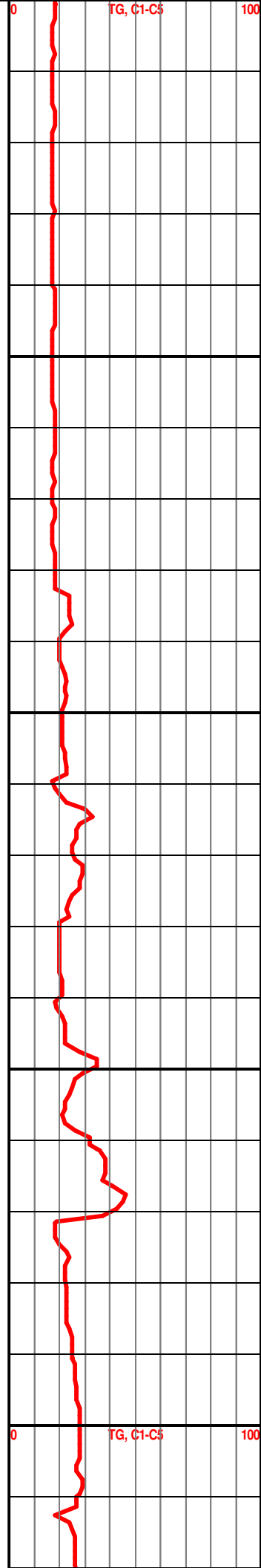
WINFIELD 2760 (+96)

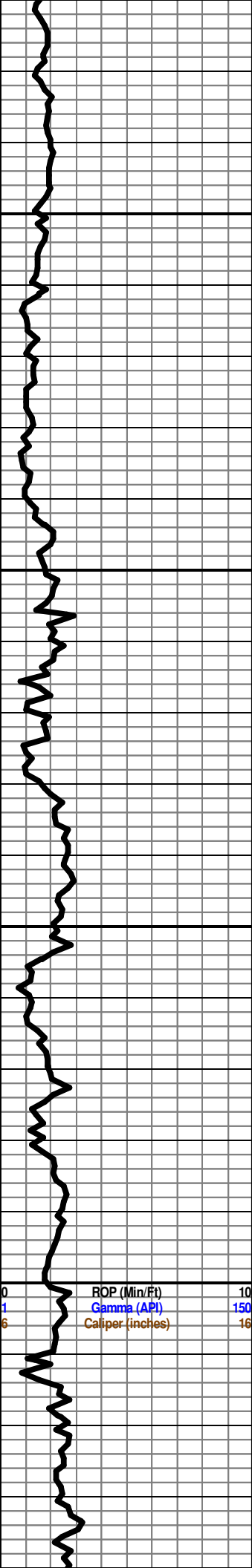
DOL & SLST: gry, vfxln, dense NS/NF

SH: gry-red

TOWANDA 2800 (+56)

DOL: crm-gry, fxln, much dense, rare fr inxln por, w/assoc gry, fresh sharp chert, NS/NF





2850

2900

2950

3000

ROP (Min/Ft) 10
 Gamma (API) 150
 Caliper (inches) 16

DOL: as above

SH: lt-dk gry

FT. RILEY 2851 (+5)

DOL: crm-gry, vfxln, dense, NS/NF

Sample quality poor,
 abund uphole shales
 & anhyd

DOL: as above

"

DOL: as above

"

SH: red-gry

"

DOL: wht-gry, fxln, gd vug por, shaley,
 NS/NF

"

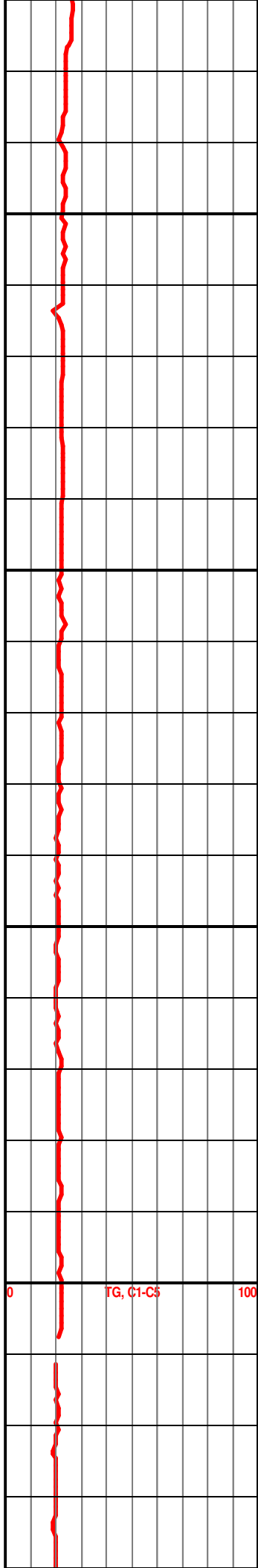
DOL & SH: as above

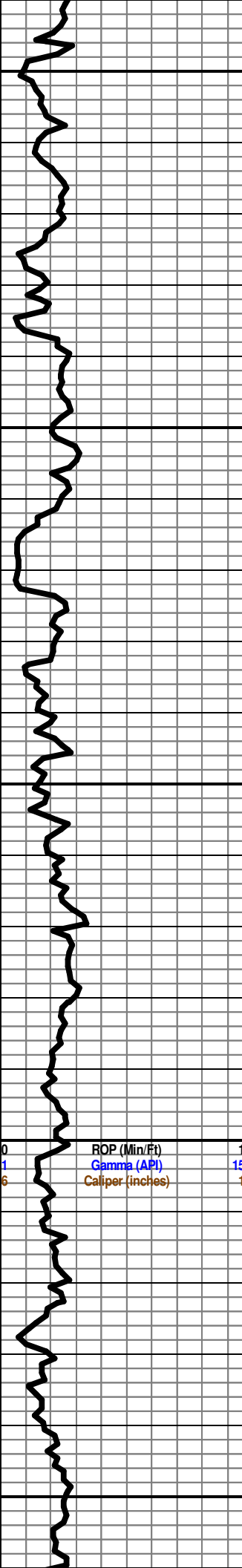
0 TG, C1-C5 100

DOL & SH: as above

"

DOL & SH: as above





3050
3100
3150
3200
3250

SH: gry-red

DOL & SH: as above

SH: gry-red

LS: wht-tan, f-vfxln, mostly dense, chalky, NS/NF

LS: wht-tan-gry, vfxln, dense, sl oolic, chalky, NS/NF

LS: as above, shaley

LS: as above w/abund gry silty SH

NEVA 3181 (-325)

LS: wht-gry, vfxln, dense, NS/NF

LS: as above w/abund wht-gry Cht

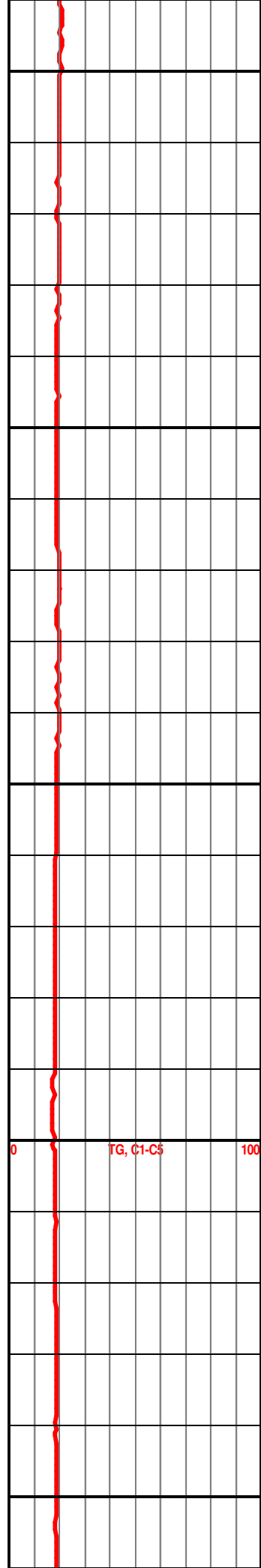
LS & CHT: as above

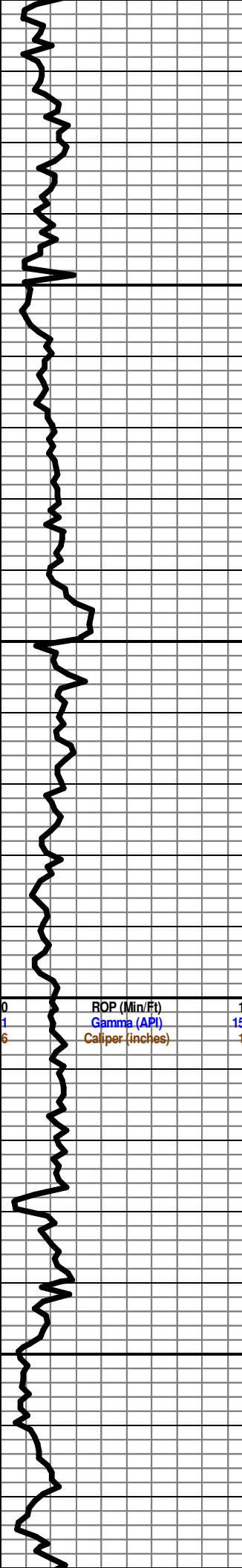
SH: gry-grn-blk

SH: as above

Red-gry SH flood

Good sample quality





3300

3350

3400

3450

LS: wht-tan-gry, vfxln, dense, mottled in pt, abund gry CHT, NS/NF

SH: gry-blk-grn-red

FORAKER 3298 (-442)

LS: wht-tan-gry, fxlIn, oolic in pt, foss, chalky, dense, NS/NF

LS: as above w/abund multic shale

LS: wht-gry, vfxln, chalky, foss, dense, NS/NF

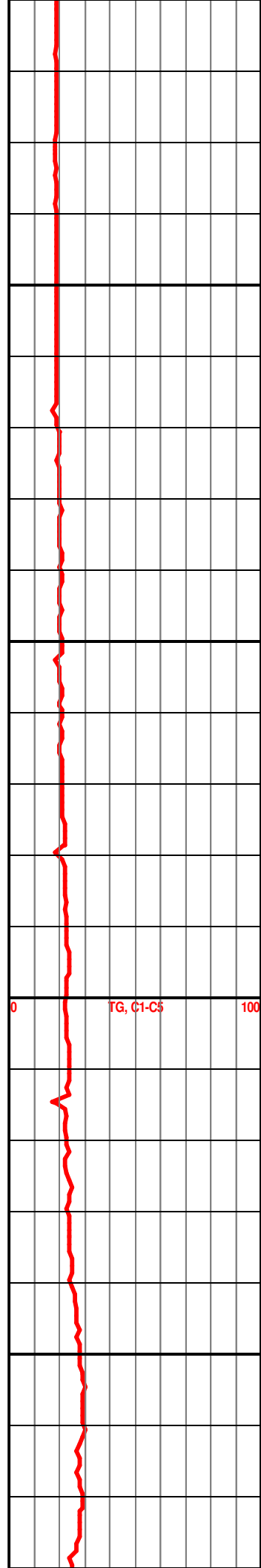
LS: as above w/abund multic shales

LS & SH: as above

LS& SH: as above

LS: crm-gry, vfxln, foss, chalky, dense, NS/NF

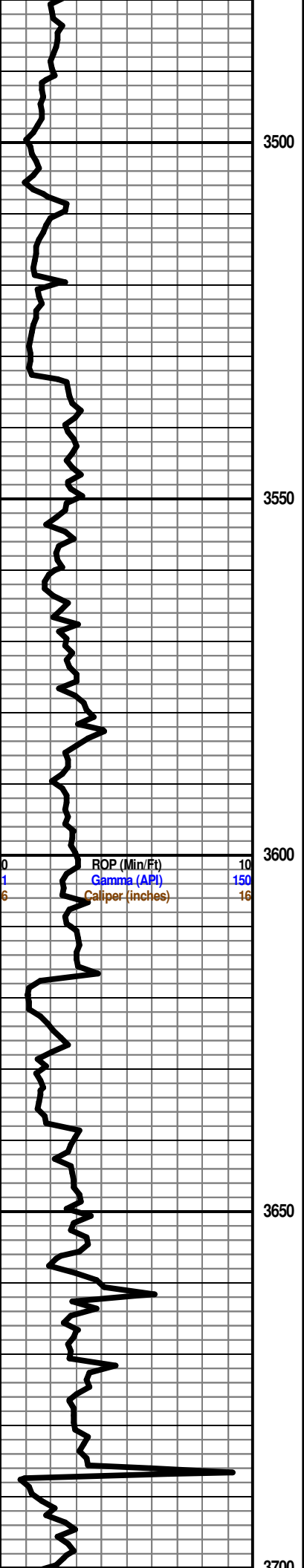
LS: gry, vfxln, foss, v dense, NS



0

TG, C1-C5

100



LS: crm-gry, vfxln, foss, chalky, mottled in pt, dense, NS/NF

SH: gry-red-grn

STOTLER 3533 (-677)

LS: wht-tan-gry, vfxln, sl oolitic, sl foss, dense, NS/NF

LS: crm-tan-gry, vfxln, foss, mottled in pt, dense, NS/sl min flour

LS: as above

LS: tan-gry, vfxln, foss, mottled, dense, minor cht, NS/NF

TARKIO 3606 (-750)

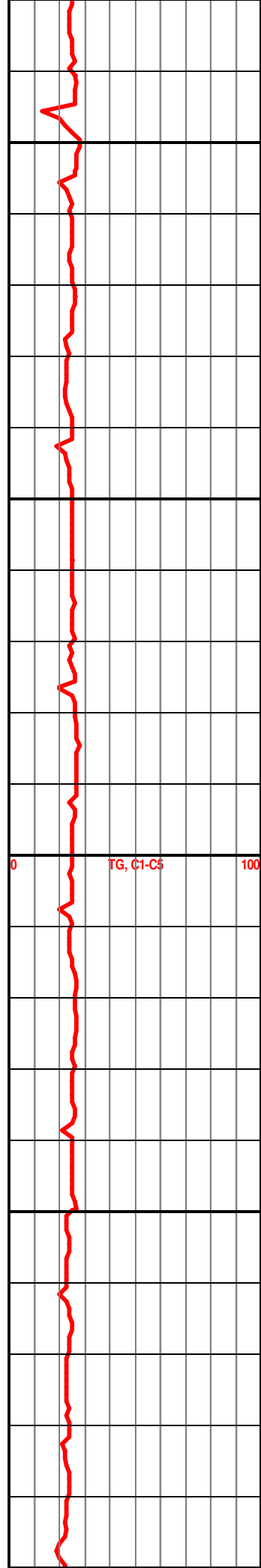
LS: crm-tan-gry, vfxln, foss, chalky, dense, NS/NF

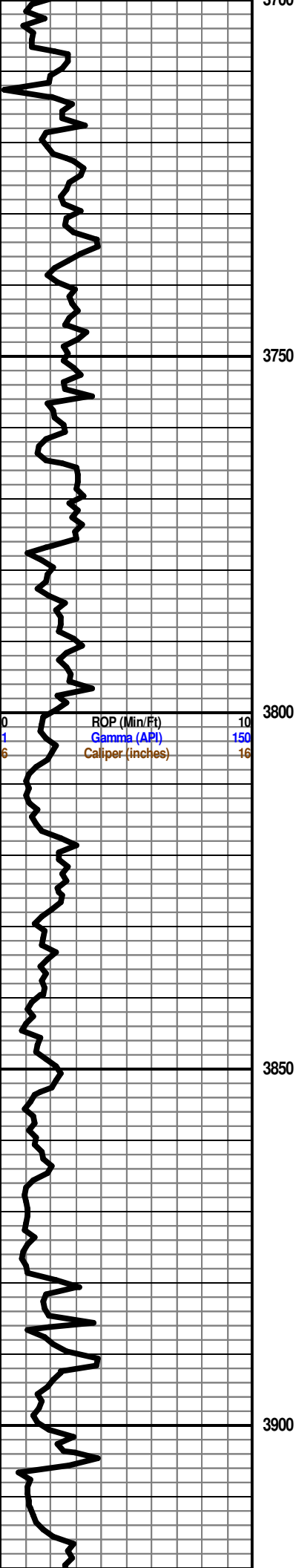
LS: as above

LS: crm-tan-gry, vfxln, foss, dense, NS/NF

LS: as above

SH: gry-grn-red, silty





BERN 3699 (-843)

LS: wht-brn-gry, vfxln, foss, chalky, dense, NS/NF

LS: crm-brn-gry, vfxln, oolic in pt, much mottled, foss, sl chalky, dense, NS/NF

LS: crm-tan-gry, vfxln, foss, sl chalky, dense, minor cht, NS/NF

LS: as above

SH: gry-grn-rust, silty

TOPEKA 3797 (-941)

LS: crm-tan-gry, vfxln, foss, mottled in pt, sl chalky, dense, NS/NF

LS: as above

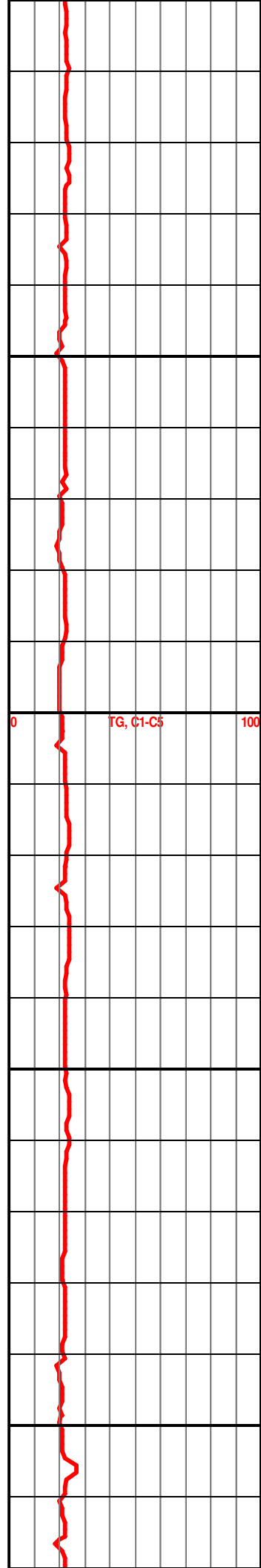
LS: crm-gry, fxl, foss, chalky, dense, w/assoc foss chert, NS/NF

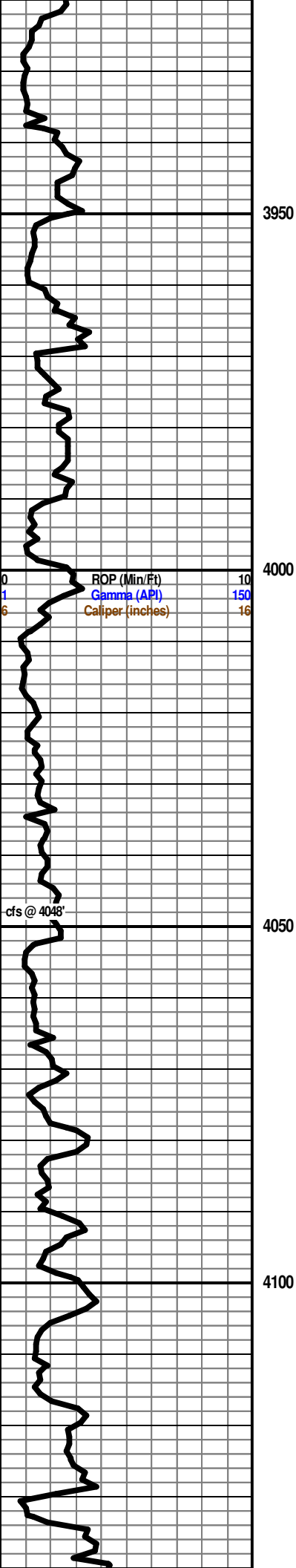
LS: crm-tan-gy, fxl, foss, sl oolic, chalky, nvp, NS/NF

LS: as above
SH: gry-blk-rust-grn

LS: wht-tan-gry, vfxln, oolic in pt, chalky, dense, NS/NF

LS: as above
SH: blk-grn-grn-rust





3950

4000

4050

4100

ROP (Min/Ft) 10
Gamma (API) 150
Caliper (inches) 16

cfs @ 4048'

SH: blk-gry-grn-Frust

LS: as above

LS: crm-gry, vfxln, oolic in pt, chalky, dense, NS/NF

LS: crm-gry, vfxln, chalky, dense, NS/NF

LS: as above w/assoc fresh chert

LS & CHT: as above, incr in chalk

LS: crm-tan-gry, fxl, fr inxln por, sl foss, v. chalky, minor cht, dense, NS/NF

LS: as above

LS: wht-tan, fxl, oolic, fr-gd ppt & vug por, sl foss, v. chalky, NS/NF

LS: as above w/minor CHT

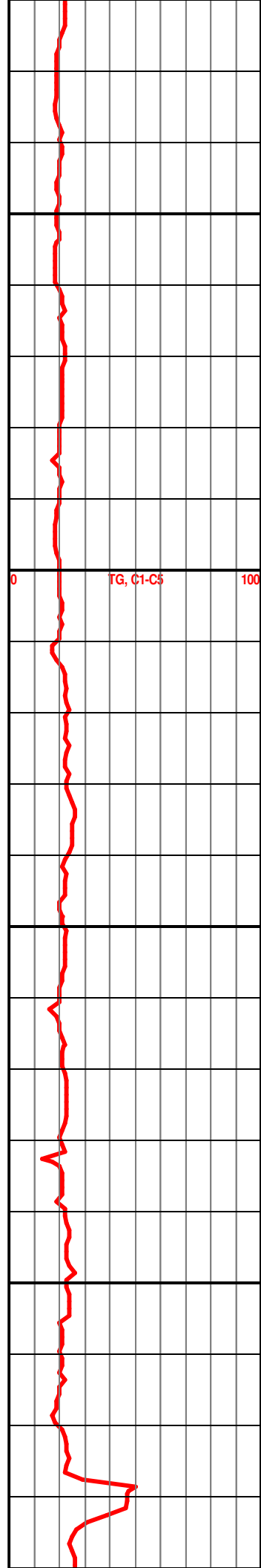
LS & CHT: as above w/gry-grn-blk shale

Start 10' samples

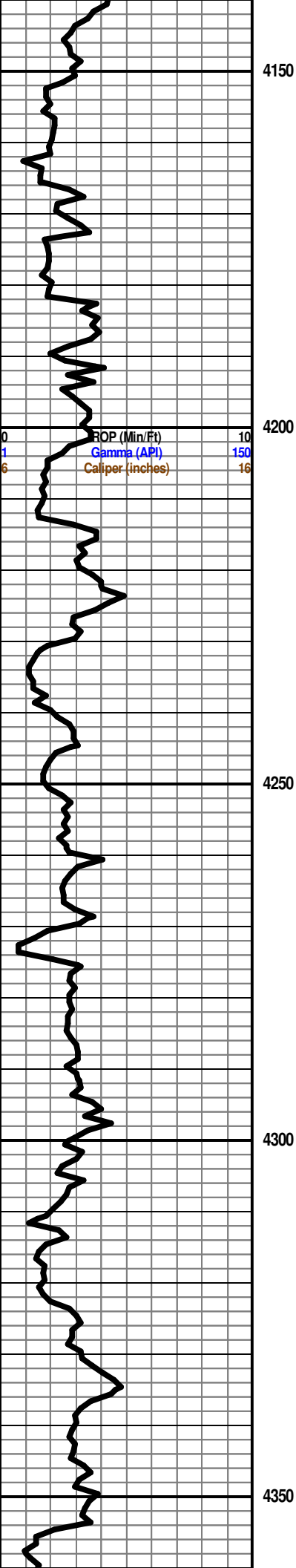
HEEBNER 4130 (-1274)
SH: blk, carbonaceous

SH: red-grn-brn-grv-blk

Shale gas kick



0 TG, C1-C5 100



TORONTO 4148 (-1292)

LS: crm-brn-gry, vfxln, foss, chalky, v. dense, abund fresh chert, NS/NF

DOUGLAS 4166 (-1310)

SH: gry-grn-blk

LS: crm-tan-gry, fxln, foss, v. chalky, abund chert, NS/NF

LS: as above mottled w/abund inclusions

SH: gry, silty

LANSING 4225 (-1369)

LS: crm-tan, fxln, foss, chalky, minor chert, dense, NS/NF

LS: as above w/incr in chert

LS & CHT: as above

SH: gry-blk-brn

LS: crm-tan, fxln, foss, chalky, mostly dense, rare fr inxln por, NS/NF

LS: crm-tan-gry, vfxln, foss, chalky, dense, abund chert, mottled in pt, NS/NF

SH: gry-blk-grn

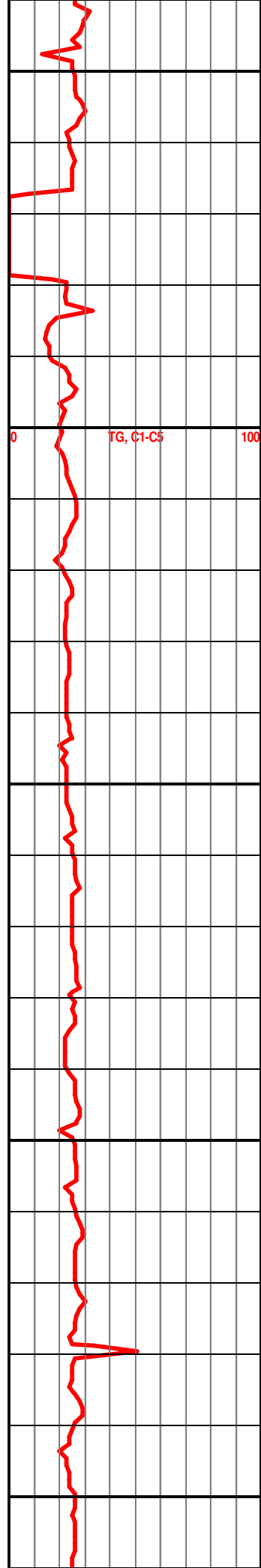
LS: crm-tan-gry, vfxln, foss, sl chalky, minor cht, dense, NS/NF

LS: as above

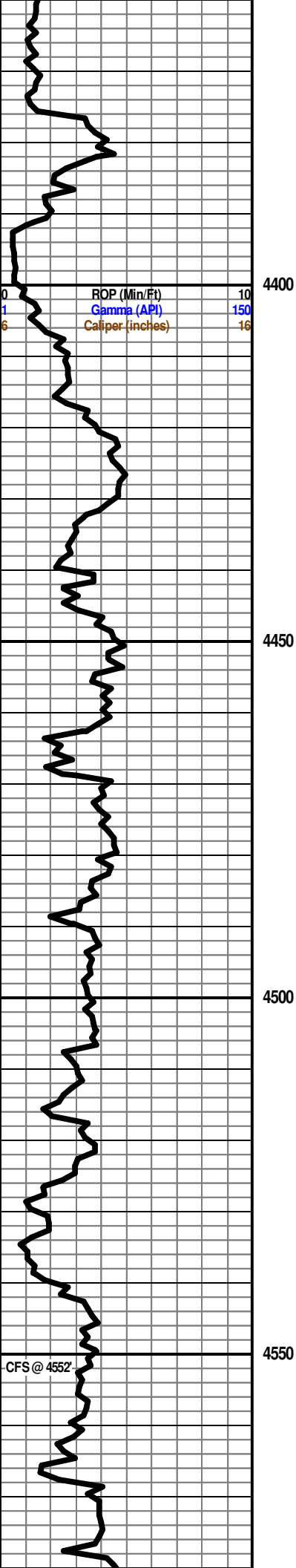
LS: crm-brn-gry, vfxln, sl foss, sl chalky, minor chert, dense, NS/NF

SH: dk gry-grn-blk

Shut down to jet pits



test gas detector



LS: tan-gry, vfxln, chalky, v. dense, abund dk chert, NS/NF

SH: gry-grn-blk-rust-red

LS: crm-tan, fxl n, oolic, fr-gd oomold por, chalky, NS/NF

LS: crm-brn-gry, vfxln, oolitic in pt, chalky, dense, NS/NF

SH: grn-gry-rust-blk

LS: crm-tan-gry, vfxln, oolitic-oolic, pelletal, pr oomold por, chalky, abund chert, dense, NS/NF

SH: gry-blk-grn-brn

SH: as above

LS: crm-brn, vfxln, foss, chalky, dense, NS/NF

LS: crm-tan-gry, vfxln, chalky, dense, NS/NF

LS: as above

LS: crm-tan-gry, vfxln, sl foss, chalky, abund chert, dense, NS/NF

SH: gry-grn-blk

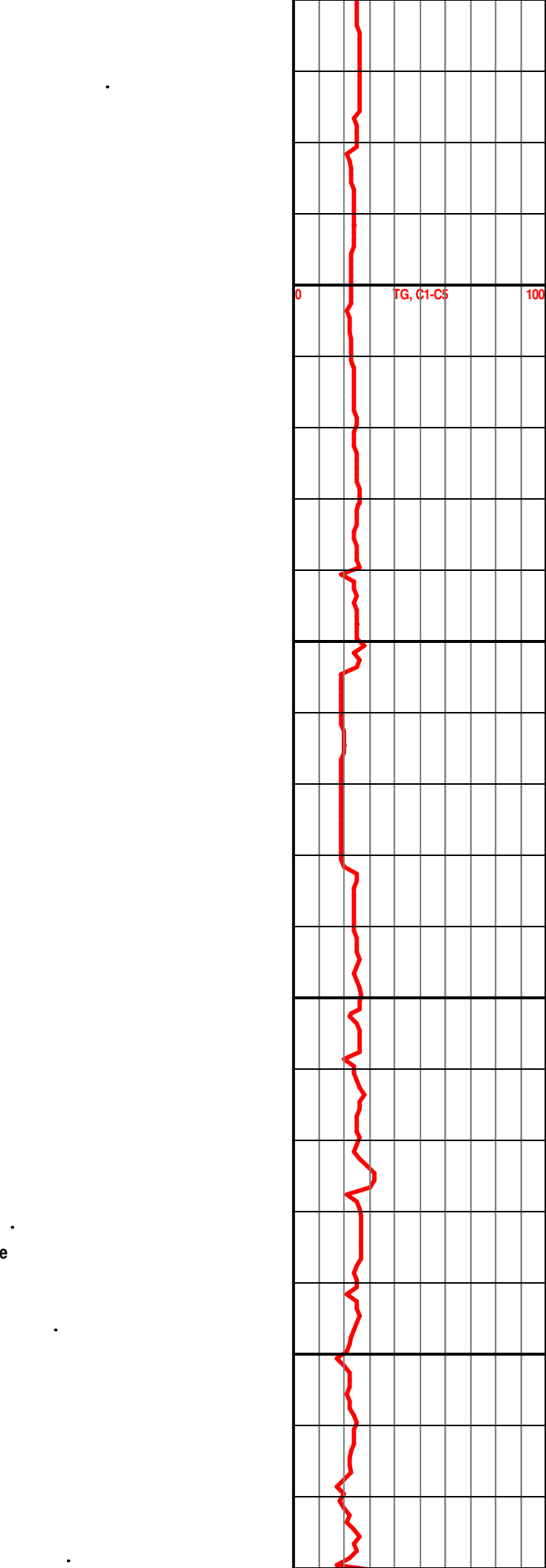
LS: crm-tan-gry, vfxln, chalky, abund chert, v. dense, NS/NF

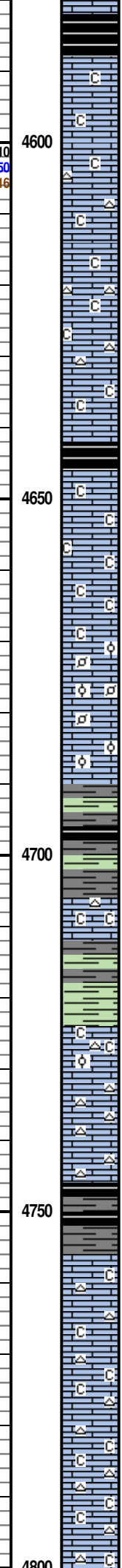
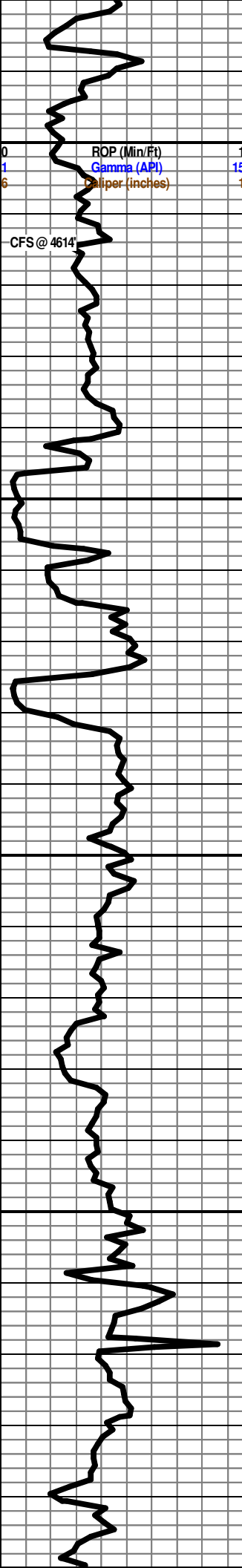
LS: crm-tan, fxl n, oolic, pr por, chalky, dense, minor chert, nsfo/stn, sl odor, brite min flour, no cut

LS: crm-tan-gry, vfxln, dense, minor chert, NS/NF

LS: crm-tan, vfxln, v dense, minor cht, NS/NF

LS: crm-brn-gry, vfxln, v. dense, minor chert, NS/NF





STARK SH 4582 (-1726)
SH: blk, carbonaceous

LS: crm-tan-gry, vfxln, pr inxln por, sub-chalky, v. dense, NS/NF

LS: crm-brn-gry, vfxln, no vis por, lithog, minor chert, chalky, dense, NS/NF

LS: as above

LS: as above

HUSHPUCKNEY 4642 (-1786) SH: blk, carbonaceous

LS: crm-tan, oolitic-oolic, mostly dense, rare fr oomold por, sl chalky, NS/NF

LS: as above

LS: crm-tan, fxltn, oolitic-oolic, chalky, pelletal in pt, fr-gd vug/moldic por, NS/NF

SH: blk-brn-gry-grn

LS: crm-brn-gry, vfxln, dense, chalky, lithog, NS/NF

SH: gry-grn-brn

MARMATON 4723 (-1867)

LS: crm-gry, vfxln, dense, mottled in pt, oolitic in pt, chalky, abund chert, NS, mineral flour

LS: crm-tan-gry, vfxln, dense, oolic, chalky, abund chert, NS, mineral flour

SH: gry-blk-rust

LS: crm-tan-gry, vfxln, dense, lithog, chalky, minor chert, NS, mineral flour

LS: as above

LS: crm-brn, vfxln, dense, oolitic & pelletal, chalky, minor chert, NS, mineral flour

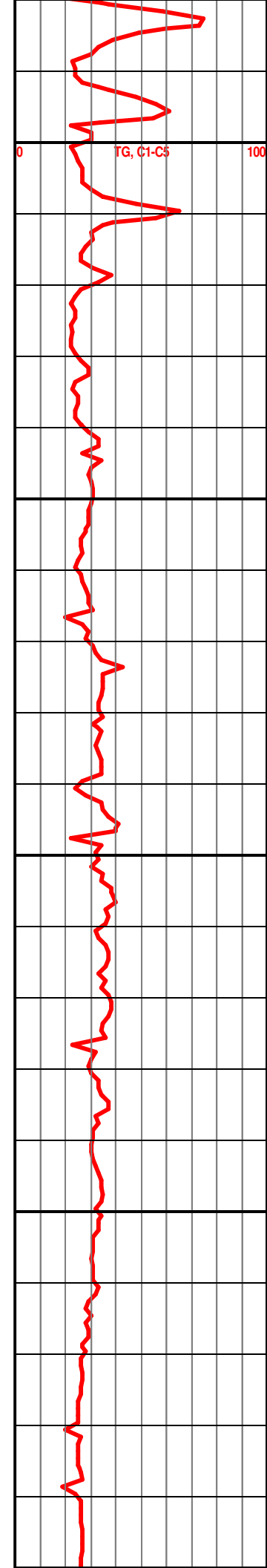
LS: as above

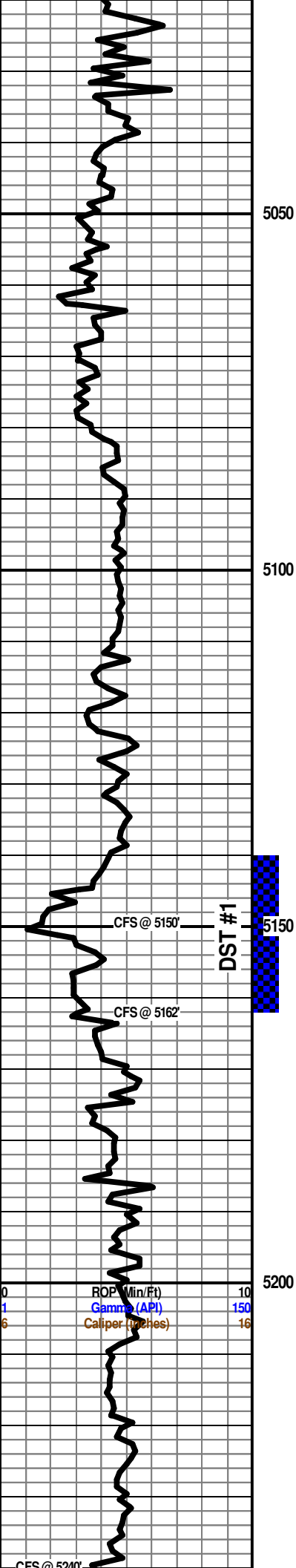
Shale gas kick

Shale gas kick

Note: Stark samples recirc thru causing gas kicks @ regular intervals

Shale gas kick





SH: gry-grn-brn

LS: tan-brn-gry, vfxln, lithog, sl chalky, no vis por, abund brn-blk chert, NS/NF

MORROW SH 5050 (-2194)

LS: as above w/gry-grn-brn shale flood

SST: clr-tan, f-mgr, prly std, sub-ang, tight clusters, v. glauconitic, abund pyrite, NS/NF (abund multic shale)

LS: tan-brn-gry, vfxln, glauconitic, assoc pyrite inclusions, v. dense, sl chalky, abund multic waxy shales

SH: olive-gry-brn-blk-grn w/LS stringers as above

SH: gry, silty

SH: as above

MISSISSIPPIAN CHESTER LIME 5112 (-2256)

LS: crm-brn-grn-gry, fxdn, oolitic in pt, abund bioclastic & pelletal, no vis por, foss in pt, abund dark chert, w/ multic shale flood, NS, dull mineral flour

MISSISSIPPIAN ST GEN ? 5144 (-2288)

LS: as above w/minor amt of blk-brn med-gr, dense sst w/minor amt of gilsonite, nsfo, no odor, dull min flour, no cut & multic shale as above & dk chert

5160' sample: Sst, fgr, brn, well-cemented, pr friability, well-std, sub-rd, pr-fr intergran por, gsfo (gsy on brk), even sat stn, str odor, dull yellow flour, brite fast streaming cut

5150' sample-50 min: Sst: vfg-fg, brn, fairly tightly cemented, well-std, sub-rd, fsfo (gsy), even sat stn, str odor, dull yell flour, brite fast streaming cut

5162' sample - 50 min Sst: fg-cgr, prly std, sub-ang, white cement, friable to tite, w/assoc multic dense LS & chert, NS/NF (abund multic shales (red wash))

SH: grn-gry-blk-brn-red

LS: wht, oolitic, dense, chalky, v. sandy, grn-gry-rust shale flood, NS/NF

DST #1 5140-5162 5:90:43:0

IF: Wk surface blow, no return

FF: Wk surface blow died in 43 min

Recovery: 10' Mud w/trace of oil

IHP: 2434 FHP: 2434
 IFP: 8-9 ISIP: 203
 FF: 10-12 FSIP: NA
 BHT - 128 F

LS & SH: as above

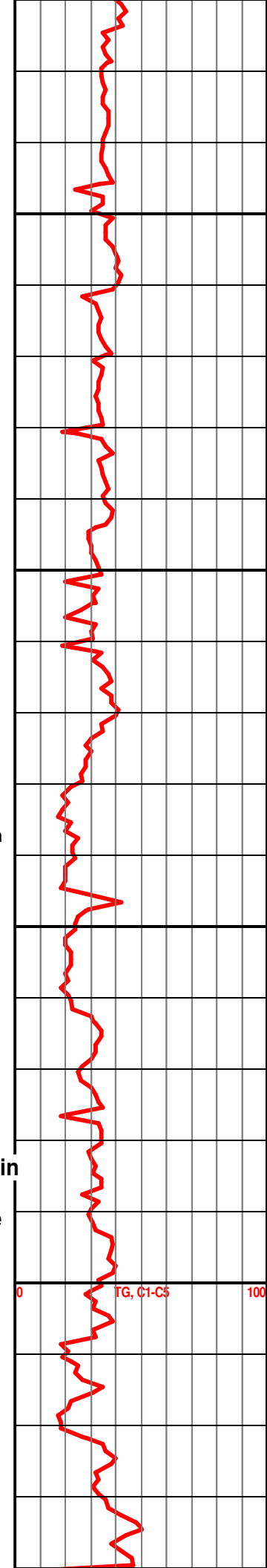
LS: as above w/gilson stn in v. sandy LS, pr inter-gran por, dull flour, nsfo, no cut, no odor

LS: wht-tan, oolitic-v. sandy, v. chalky, calcite cem, friable in pt, abund dead oil stn, fr inter-gran por, nsfo, brite yell flour, slow cut, no odor

LS: wht-oolitic, v. chalky, sandy in pt, matrix, dense, NS/NF

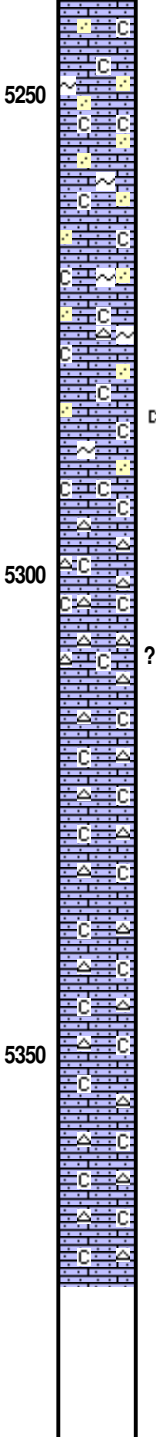
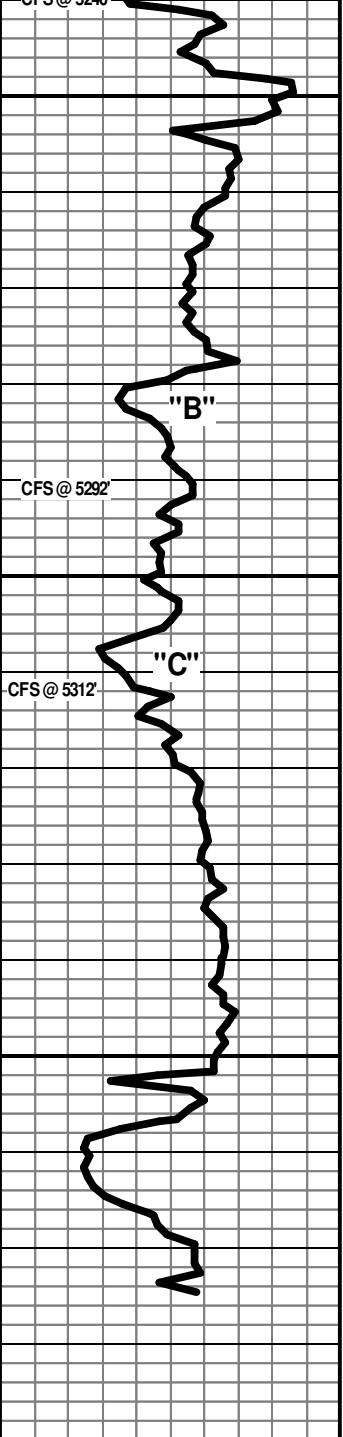
LS: as above w/gry-grn-brn shale flood

ST LOUIS 5241 (-2385)



ROP (Min/Ft) 10
 Gamma (API) 150
 Caliper (Inches) 16

0 100
 TG, C1-C5



LS: crm-grn-gry, vfxln, oolitic, sl sandy, chalky, minor glauc, dense, NS/NF

LS: as above

LS: as above

LS: crm-gry, fxl, oolitic, chalky matrix, minor glauc, mostly dense, rare pr-fr inter-ool por, spotty brite yell flour, rare slow cut, nsfo, minor dead oil stn when crushed

LS: crm-gry, vfxln, oolitic & lithog, dense, sl chalky, minor chert, NS/NF

LS: crm-gry, fxl, oolitic & lithog, mostly dense, rare pr int-ool por, sl chalky, minor chert, spotty yell flour, v. spotty edge stn, v. sl odor, no cut

LS: crm-gry, vfxln, oolitic & litholog, v. dense, chalky, abund lite chert, sl min flour, NS

LS: as above

LS: as above

LS: wht-tan-gry, fxl, oolitic, dense to sl friable, wht chalky matrix, abund chalk, minor chert, NS/NF

RTD - 5375'

