

HEEBNER	3687	-1783			3674	-1784	+	1			3656	-1746	-	37
TORONTO	3710	-1806			3696	-1806	+	0			3676	-1766	-	40
DOUGLAS	3743	-1839			3730	-1840	+	1			3688	-1778	-	61
BROWN LIME	3870	-1966			3858	-1968	+	2			3839	-1929	-	37
LANSING	3887	-1983			3875	-1985	+	2			3856	-1946	-	37
BKC (TVD)	4267	-2363			4258	-2368	+	5			4240	-2330	-	33
MARMATON (TVD)	4272	-2368			4267	-2377	+	9			4247	-2337	-	31
MISSISSIPPIAN (TVD)					4332	-2442					4318	-2408		
KINDERHOOK (TVD)	4412	-2508			4403	-2513	+	5			4393	-2483	-	25
VIOLA (TVD)	4480	-2576			4468	-2578	+	2			4447	-2537	-	39
RTD/EOC (TVD)	4492	-2588			4750	-2860	+	272			4457	-2547	-	41

ROCK TYPES

Cht	Lmst fw<7	shale, gry	shale, red
Dolprim	shale, grn	Carbon Sh	

ACCESSORIES

FOSSIL

∩ Bioclastic or Fragmental

STRINGER

- Chert
- Limestone
- Sandstone
- Siltstone
- Shale
- green shale

TEXTURE

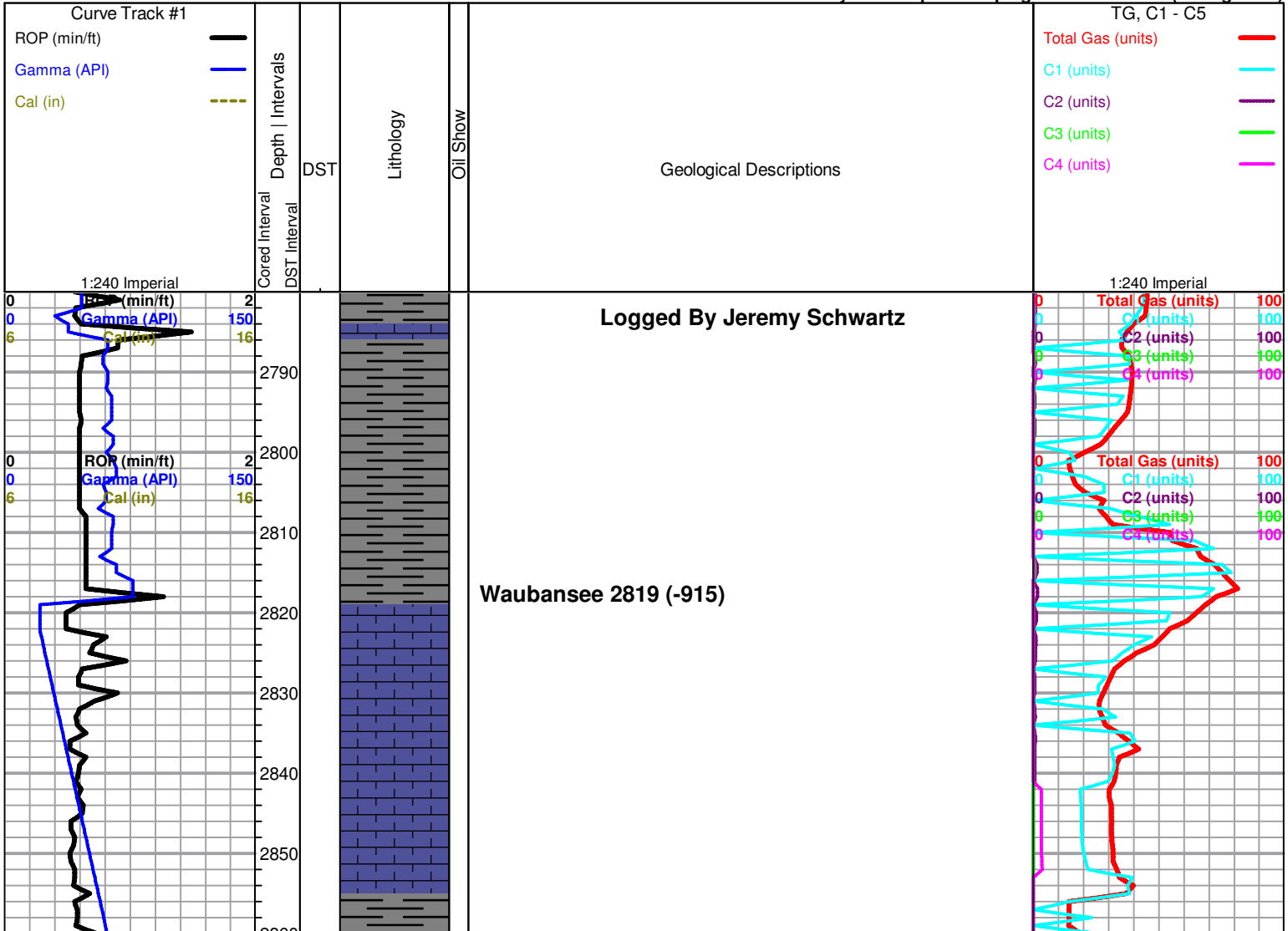
C Chalky

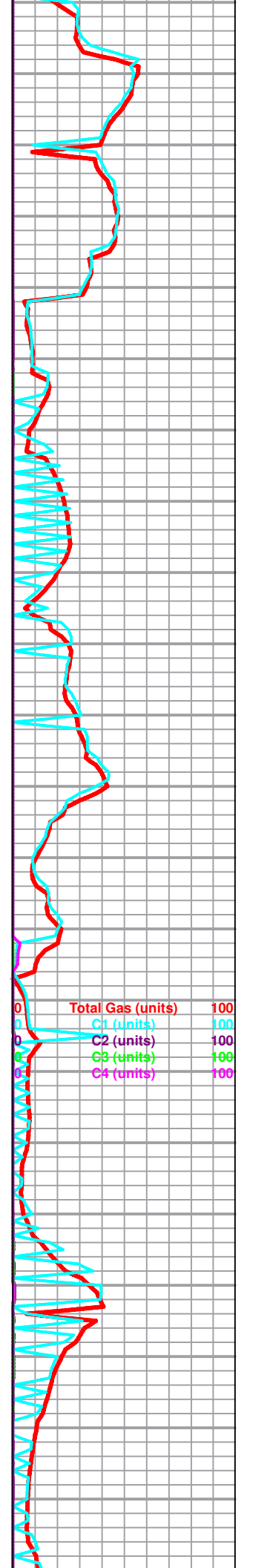
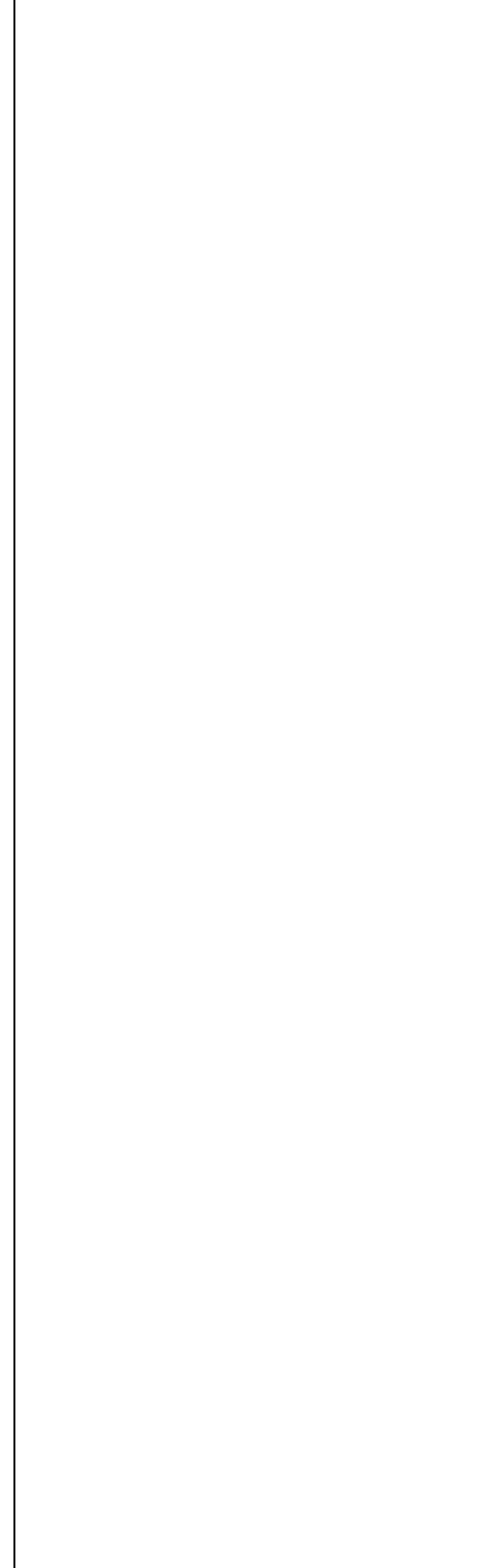
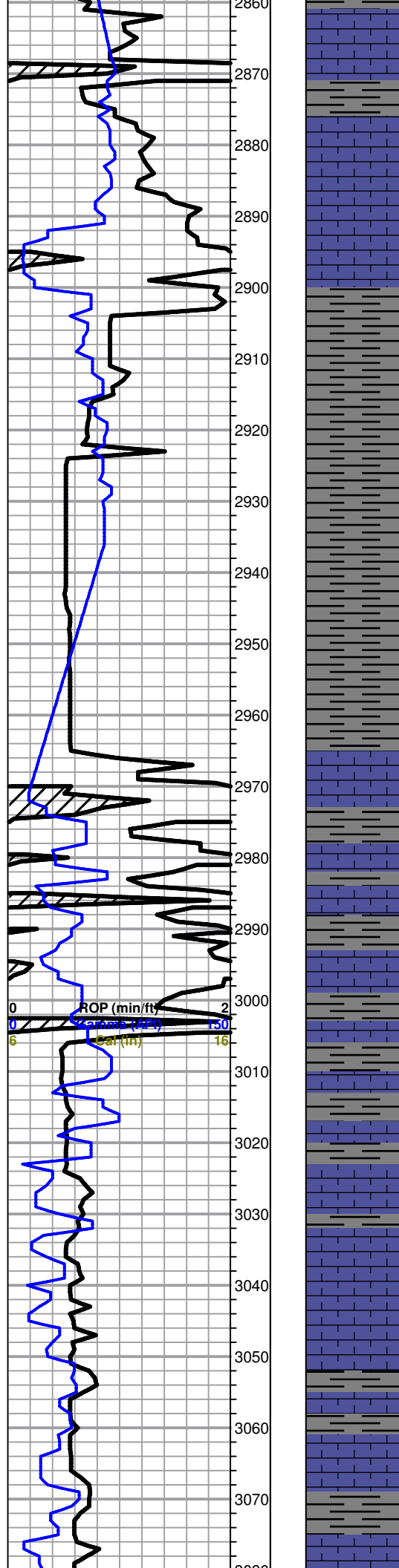
OTHER SYMBOLS

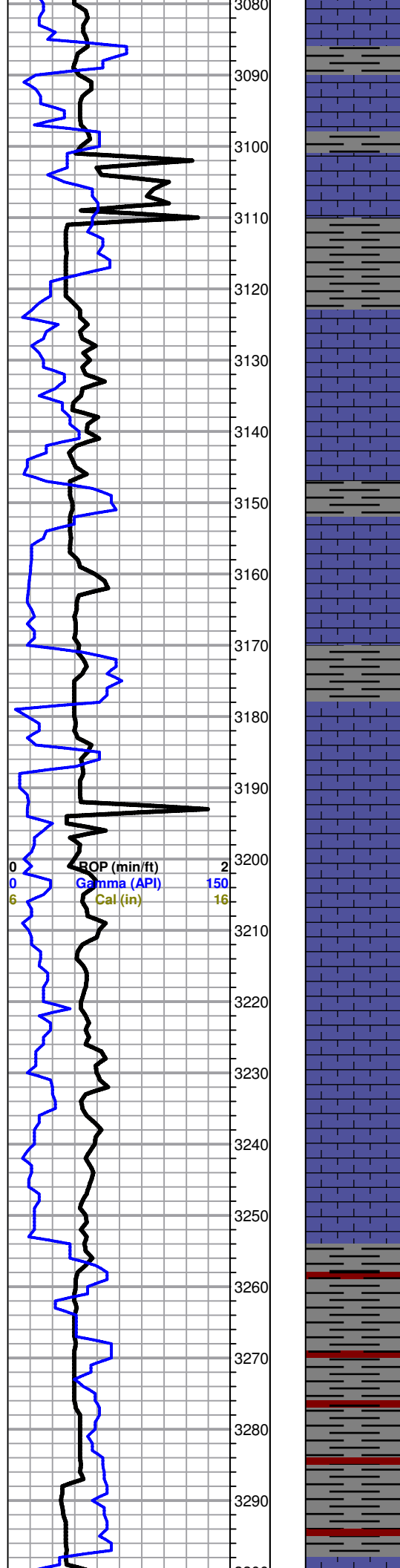
DST

- DST Int
- DST alt

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)

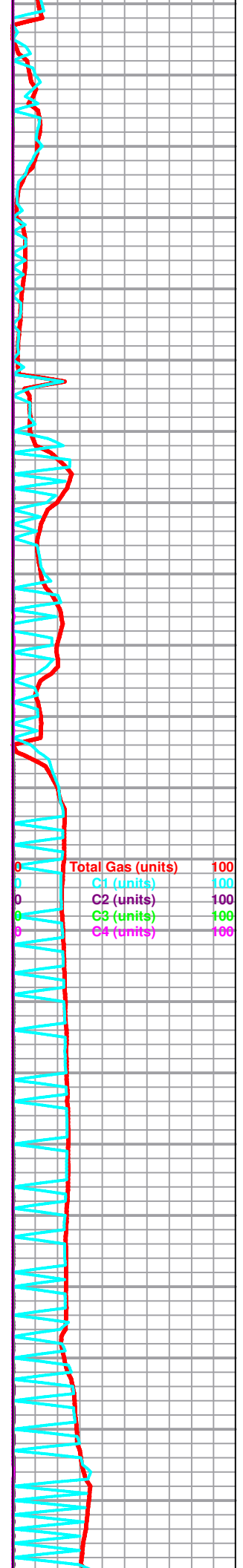




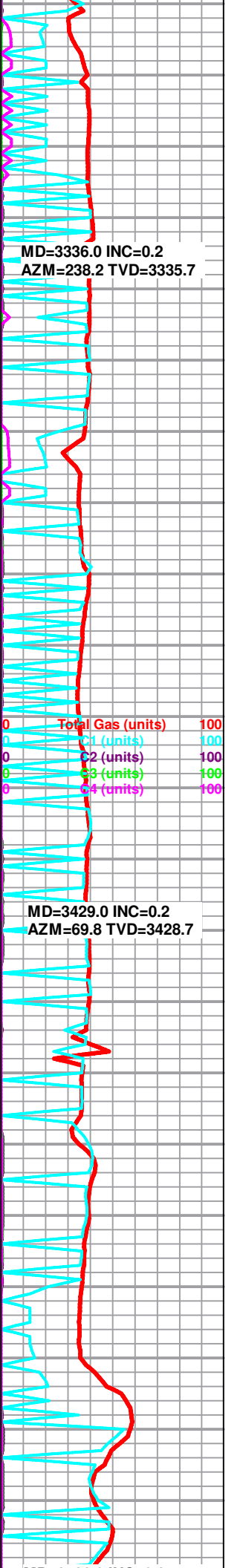
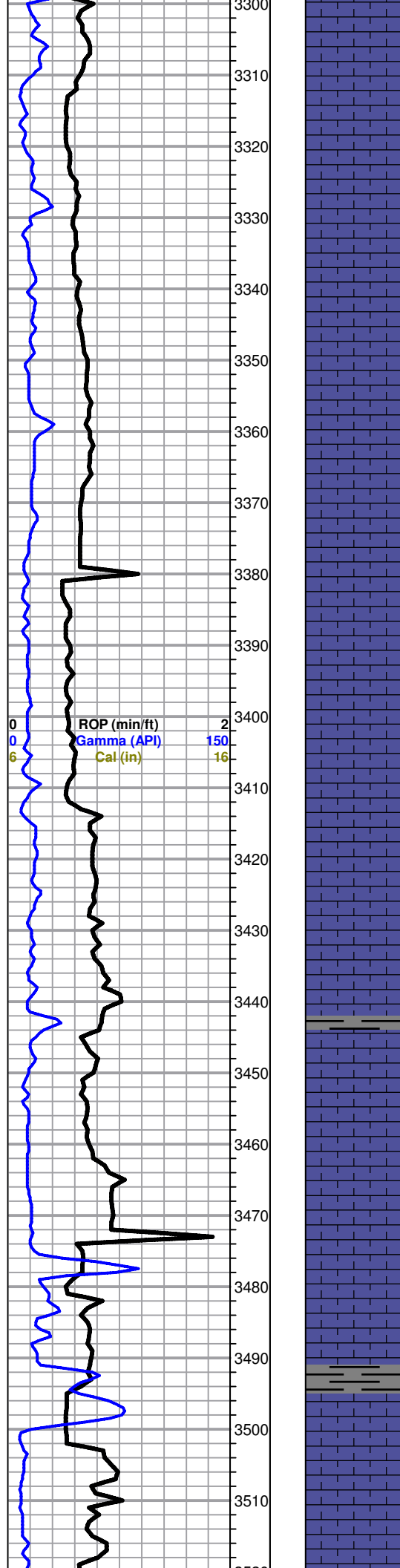


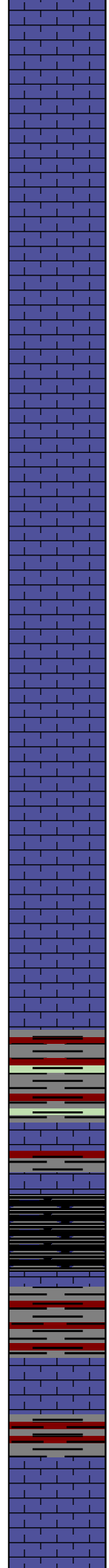
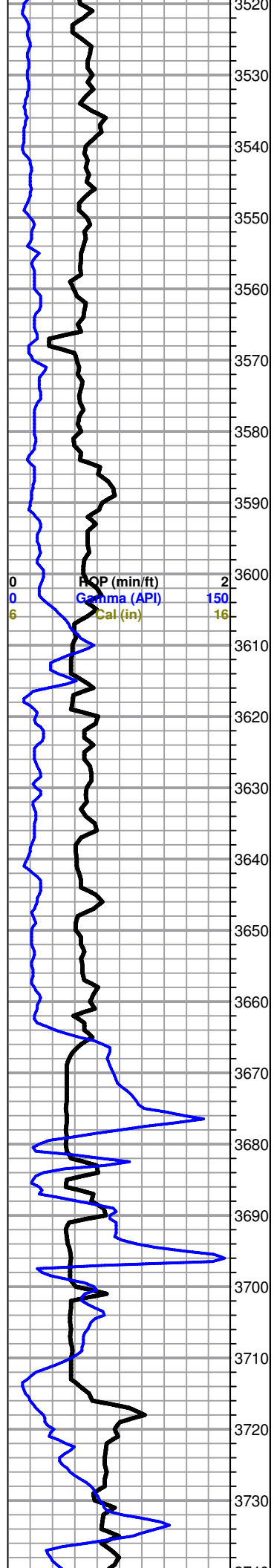
Howard 3178 (-1274)

Topeka 3298 (-1394)



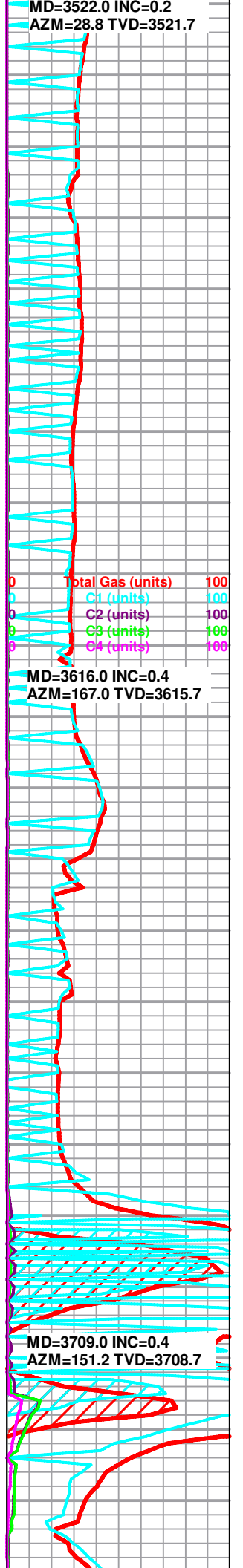
Total Gas (units)	100
C1 (units)	100
C2 (units)	100
C3 (units)	100
C4 (units)	100



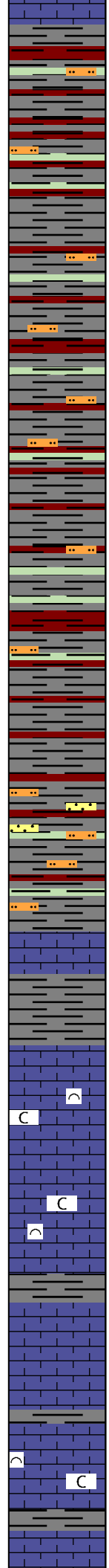
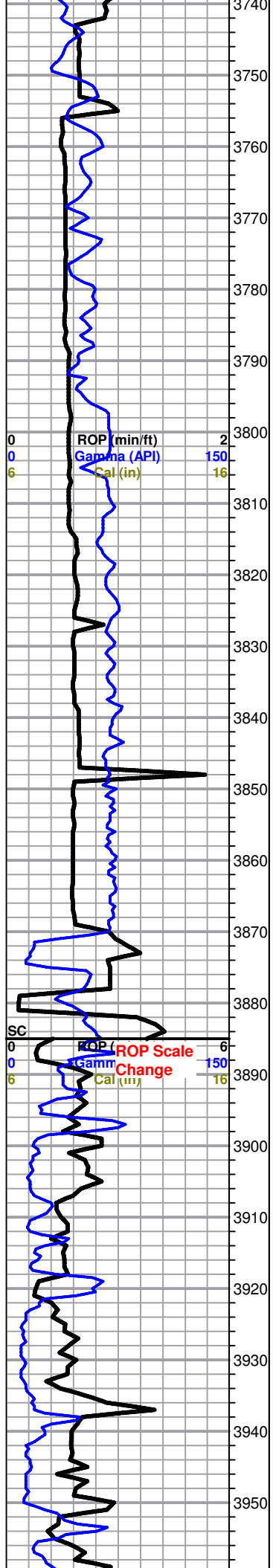


Heebner 3687 (-1783)

Toronto 3710 (-1806)



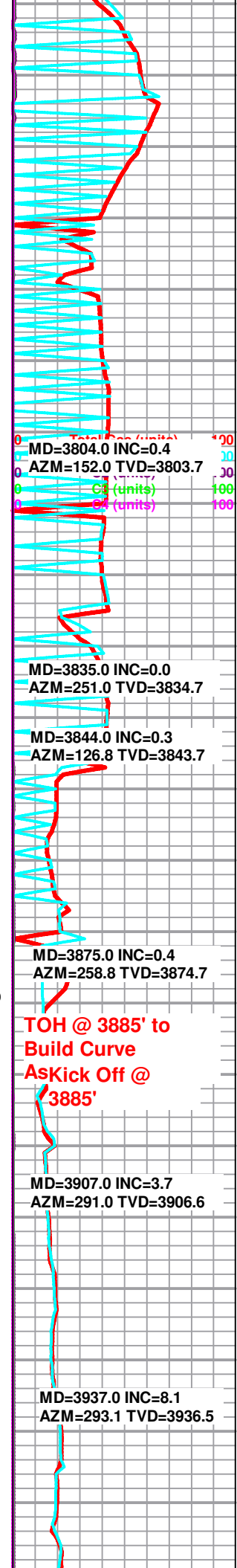
Douglas 3743 (-1839)

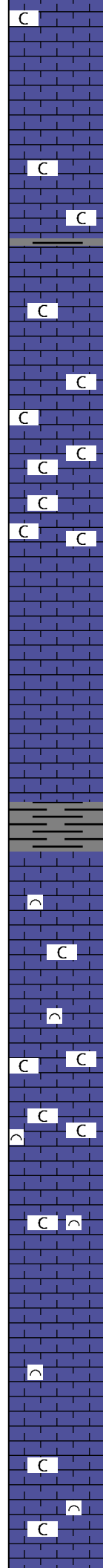
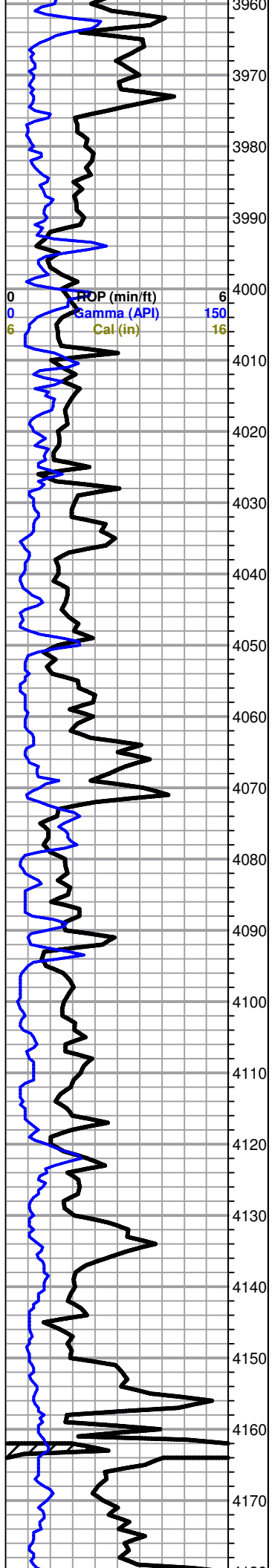


Brown Lime 3870 (-1966)

Geologist Jeremy Schwartz on Location @ 1100hrs, 7/19/18 (Waiting on Repairs Before TIH to KO)

Lansing 3887 (-1983)





****For Previous Rock Descriptions Please See Brubaker 1-17H Original Location Final GeoLog****

20' Wet and Dry Samples Begin @ 4100'

Shale, mostly gray with some scattered red, soft and waxy

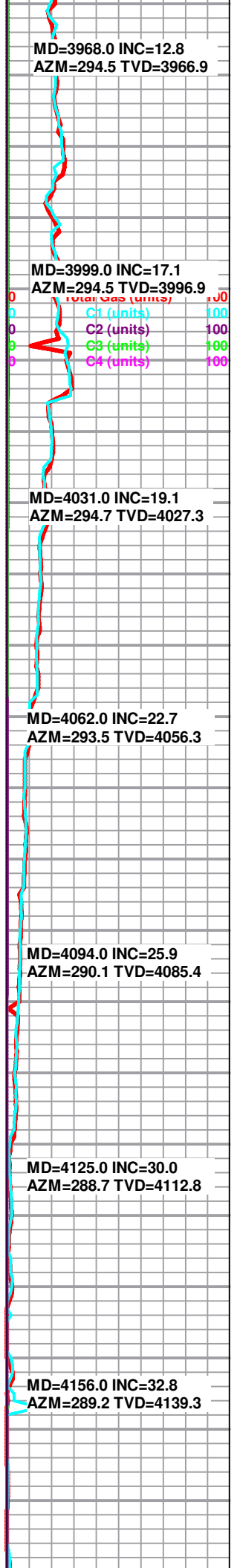
LS, cream to gray, micro-xln, fossiliferous to lithographic, most dense with poor visible porosity, some chalky in part, slightly chalky sample., no show or odor

LS as above, some very scattered with some scattered mostly poor pinpoint porosity, influx chalk, chalky sample

LS, cream to gray with some very scattered brown, micro-xln, mostly dense with poor visible porosity, some very scattered poor pinpoint porosity, noticeably less chalky, no show or odor

LS, cream to gray with some brown, micro-xln, fossiliferous to lithographic and mostly dense with poor visible porosity, no show or odor

LS as above, with slight influx chalk, no show or odor



MD=3968.0 INC=12.8
AZM=294.5 TVD=3966.9

MD=3999.0 INC=17.1
AZM=294.5 TVD=3996.9

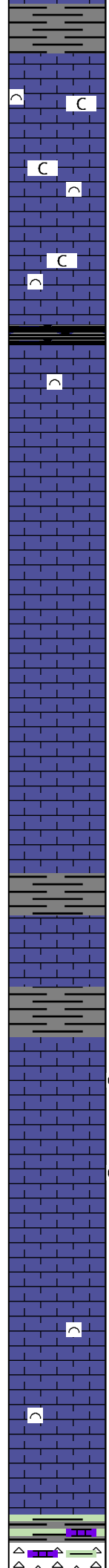
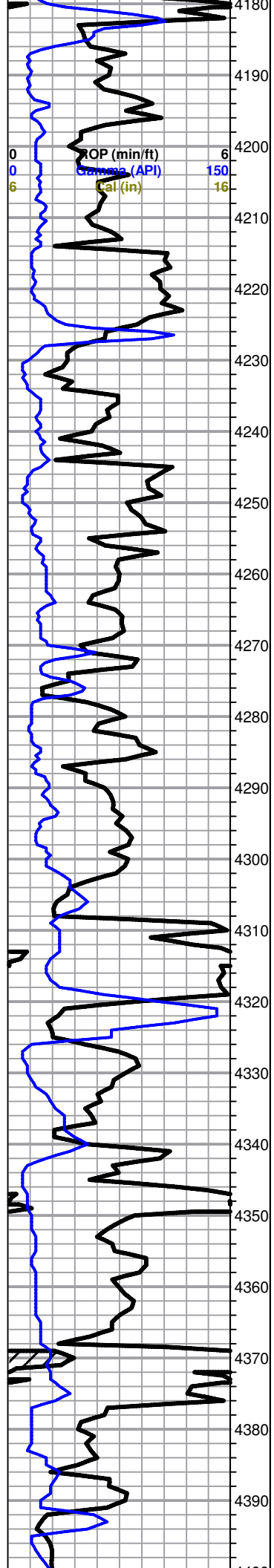
MD=4031.0 INC=19.1
AZM=294.7 TVD=4027.3

MD=4062.0 INC=22.7
AZM=293.5 TVD=4056.3

MD=4094.0 INC=25.9
AZM=290.1 TVD=4085.4

MD=4125.0 INC=30.0
AZM=288.7 TVD=4112.8

MD=4156.0 INC=32.8
AZM=289.2 TVD=4139.3



As above, no show or odor

LS, cream to gray with some scattered brown, micro-xln, lithographic to fossiliferous and dense with poor visible porosity, some very scattered chalky in part, slightly chalky, no show or odor

LS as above, with slight influx cream, micro-xln with some scattered poor sub-oolitic porosity, no show or odor

LS, cream to gray with some scattered white, micro-xln, mostly lithographic and dense with poor visible porosity, no show or odor

LS as above, no show or odor

LS, mostly cream with some scattered gray, micro-xln, mostly lithographic with poor visible porosity, no show or odor

LS as above, with slight influx gray shale, no show or odor

BKC 4319' MD (4267' TVD)

Marmaton 4326' MD (4272' TVD)

LS, mostly cream to white with some scattered light gray, micro-xln, mostly lithographic with poor visible porosity, some LS cherty and fossiliferous to oomoldic with scattered mostly dead black stain and slightly vuggy with some scattered good vuggy porosity, some chips with few free oil droplets pooling up on surface, also with some very scattered cream oolitic with very scattered poor inter-oolite stain, SSFO in tray, no odor

4370' Sample missing

LS, cream to white with some gray, micro-crypto xln, mostly lithographic with some scattered fossiliferous, poor visible porosity, no show or odor

Penn Chert / Cong. 4392' MD (4317' TVD)

Cherty LS with large influx white chert, some fossiliferous, some with tripolitic areas with mostly poor visible porosity, some scattered chips

MD=4187.0 INC=35.0
AZM=289.9 TVD=4165.0

Total Gas (units)	100
C1 (units)	100
C2 (units)	100
C3 (units)	100
C4 (units)	100

MD=4218.0 INC=37.3
AZM=291.0 TVD=4190.0

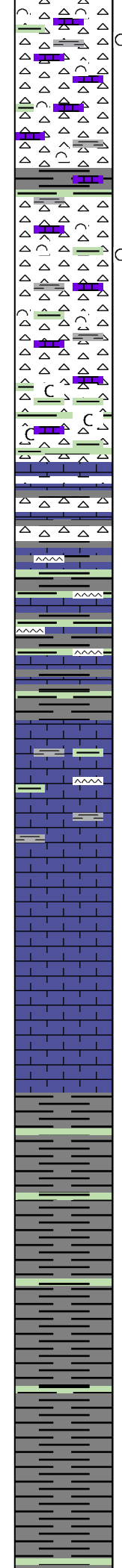
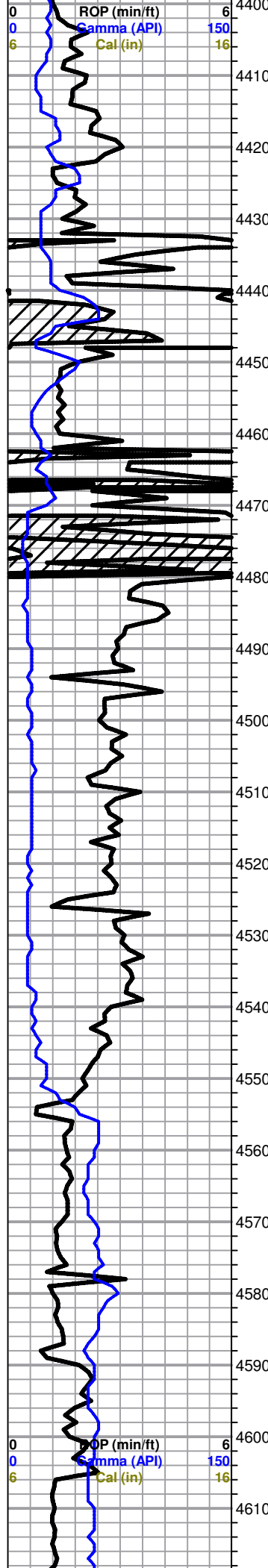
MD=4249.0 INC=39.2
AZM=292.0 TVD=4214.4

MD=4281.0 INC=41.0
AZM=292.8 TVD=4238.8

MD=4313.0 INC=43.2
AZM=293.8 TVD=4262.6

MD=4344.0 INC=44.8
AZM=294.7 TVD=4284.9

MD=4375.0 INC=46.3
AZM=295.2 TVD=4306.6



with scattered black to brown stain, with some scattered gray and green shale, NSFO, very scattered dull fluor., poor odor

Chert and cherty LS, most with some scattered dead black to brown stain and mostly poor porosity, some very scattered chert chips tripolitic with mostly saturated stain and scattered fair visible porosity, upon break NSFO in any chips, scattered to fairly even dull yellow fluor., in tray, strong pungent odor

Mostly white chert with some scattered cherty LS as above, less shows and porosity, slight influx white to tan and opaque chert, fresh and sharp, barren with no visible porosity, NSFO, some very scattered dull yellow fluor., strong pungent odor

Mostly clear translucent chert, fresh and sharp, with some white to tan and white to tan opaque, no shows, also with some scattered cream LS, micro-xln and lithographic with poor visible porosity, with influx light green waxy shale, influx chalk, NSFO, very scattered poor fluor., fair pungent odor

Chert and LS as above, with influx gray shale with some green and very scattered red, no shows or odor

Conglomerate as above, no show or odor

LS, cream to gray, micro-xln, lithographic with poor visible porosity, chert and shale appears to have mostly dropped out, no show or odor

LS, mostly cream with some gray, micro-xln, lithographic with poor visible porosity, no show or odor

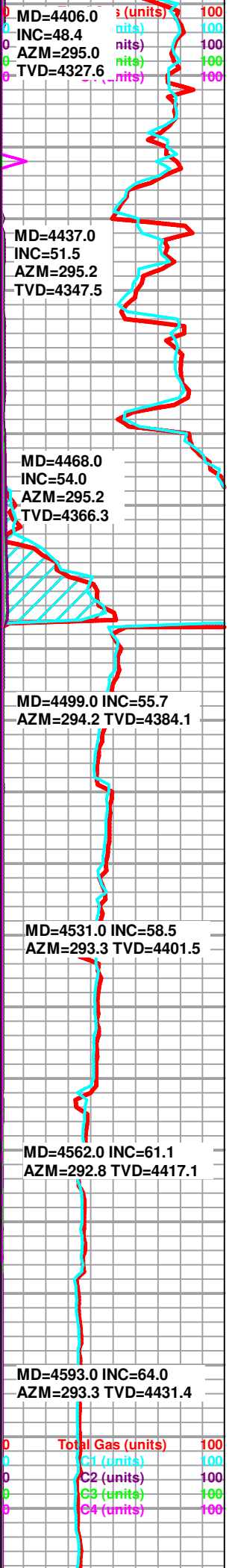
Kinderhook 4552' MD (4412' TVD)

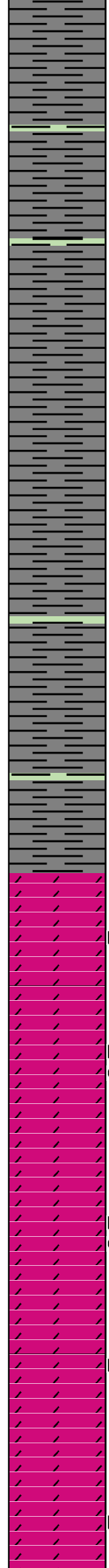
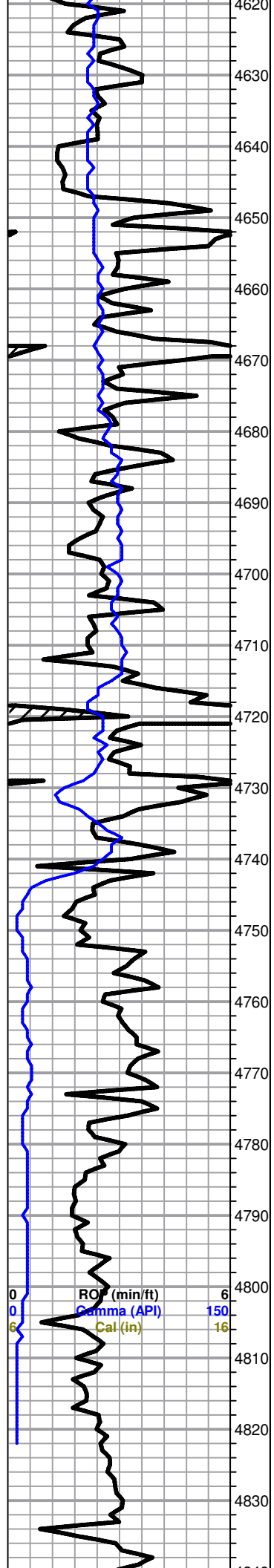
Shale, dark gray to gray with trace green, mostly dense and brittle, some silty/sandy

Shale as above, with some scattered SS, cream colored, vf-grained, sub-rounded and well sorted, friable, no show or odor

Shale, dark gray to gray, most splintered and brittle, dense, some very scattered silty

Shale, mostly dark gray with trace green, splintered to blocky and dense, mostly brittle, some very scattered silty





Shale as above

Shale as above

Shale, dark gray to gray, some splintered, some blacky, mostly brittle and dense

Shale as above, with trace green

Viola 4743' MD (4480' TVD)

Shale as above, abundant nut plug flooding samples, with few very scattered very small dolomite chips, mostly white, micro-xln, with some scattered sub-rhombic, some have dead black gilsonitic stain, no odor

Still nut plug flooding samples, slight influx very small dolomite chips as above, some scattered rhombic, most with gilsonitic to very scattered brown stain in some, upon break few chips have VSSFO, very slow weak to no cut, no odor

Dolomite, white, micro-xln, very small chips, mostly sub-rhombic to rhombic with poor visible porosity, most chips have scattered gilsonitic to tarry stain, some very scattered chips also with very scattered brown stain, with some very scattered sucrosic, very friable with poor visible porosity, no odor

Dolomite, white, micro-xln, mostly sub-rhombic to rhombic with poor visible porosity and scattered black gilsonitic to tarry stain, no odor

Dolomite as above, some scattered good rhombic with some scattered fair visible inter-xln porosity, most chips with scattered dead black gilsonitic to tarry stain as above, no odor

MD=4623.0 INC=66.2
AZM=294.0 TVD=4444.0

MD=4655.0 INC=69.5
AZM=294.0 TVD=4456.1

MD=4686.0 INC=72.8
AZM=294.0 TVD=4466.1

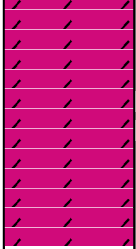
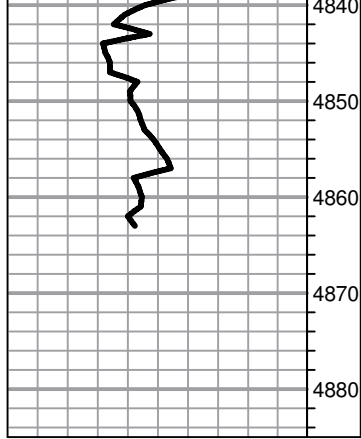
MD=4717.0 INC=75.8
AZM=293.8 TVD=4474.5

MD=4747.0 INC=78.8
AZM=293.6 TVD=4481.1

MD=4779.0 INC=82.7
AZM=293.5 TVD=4486.2

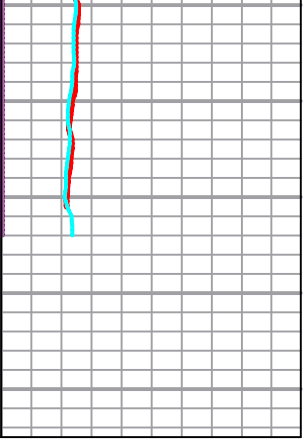
MD=4810.0 INC=85.2
AZM=293.6 TVD=4489.5

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100



D
O

Dolomite, white, micro-xln, very small chips, most sub-rhombic to rhombic with poor visible porosity and scattered to very scattered black gilsonitic to tarry stain, few very scattered chips with very scattered brown stain, no odor



RTD / EOC @ 4864' MD / 4492' TVD
Geologist Jeremy Schwartz on location from
3885'MD - 4864'MD

****See Brubaker #1-17H HZ GeoLog for Lateral****