

COUNTY: Scott  
VDMR Well #: W 806

Well: Sayler Branch #1  
Farm: W. D. Sayler  
Driller: Lanter and Dean (Contractor - Joy)  
Location: Mendota Quadrangle  
N.-10,222.6  
E.- 9,751.4  
Elevation: 1,836.5  
Angle and Bearing: Vertical  
Total depth: 570 feet  
Started drilling: 3/15/57  
Finished drilling: 3/30/57  
Sample description by: E. K. Rader, Virginia Division of Mineral Resources  
References: Core obtained from U.S. Steel Company; Log by R. P. Crumpton

#### GEOLOGIC SUMMARY

Depth	Thickness	Formation (and remarks)
0.0'-6.6'	6.6'	No core received
6.6'-137.4'	130.8'	Beekmantown fm., highly fractured, medium to dark gray dolomite with scattered chert
137.4'-570.0	432.6	Copper Ridge dolomite, gray recrystalline and fine-grained, laminated, sandy dolomite, with thin sandstones and conglomeratic sandstones and oolitic chert

Depth	Thickness	Description
0.-6.6'	6.6	No core
6.6'-12.0'	5.4'	Dolomite, light to medium gray, fine-grained; core recovery less than 1 foot
12.0'-12.6'	0.6'	Dolomite, tan to dark gray, fine - to medium-grained core recovery poor
12.6'-17.2'	4.6'	Dolomite, dark gray, fine-grained, fractured, white dolomite in fractures; brecciated along fractures at 16'
17.2'-25.5'	8.3'	Dolomite, medium to light gray, fine-grained, black laminae, weathered, dolomite near laminae stained tan, fractured, white dolomite in fractures
25.5'-33.2'	.7'	Dolomite, medium gray, fine-grained, white chert at 28' to 28.2', weathered pyrite in chert, core badly broken 29'-34'; 3 ft. core lose 29-33.2'
33.2'-34'	0.8'	Dolomite, medium gray, fine-grained, black laminae and lighter gray chert blebs
34'-39'	5.0'	Dolomite, medium gray, fine-grained, mottled slightly tan dolomite; few black laminae, spares fractures, filled with white dolomite
39'-36.0'	7.0'	Dolomite, dark gray, fine-grained, minor tan dolomite, white chert blebs at 39.8' and 43.5'; faint black laminae; core badly broken
46.0'-50'	4.0'	Dolomite, light to medium gray, fine-grained; sparse black laminae, sparse white dolomite blebs
50'-55'	5.0'	Dolomite, medium to dark gray, fine-grained, chert 52'
55'-58.0'	3.0'	Dolomite, light gray, fine-grained; core badly broken
58.0'-61.0'	2.0'	Dolomite, light gray, fine- to medium-grained, recrystalline?;
61.0'-67.3'	6.3'	Dolomite, dark to medium gray, fine-grained, fractured; chert at 61'; weathered pyrite 65' to 67'
67.3'-68.5'	1.2'	Dolomite, medium gray, fine-grained
68.5'-74.2'	5.7'	Dolomite, medium to light gray, fine-grained, fractured

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Depth	Thickness	Description
74.2'-81.5'	7.3'	Dolomite, dark gray, fine - to medium-grained, fractured, mottled
81.5'-94.6'	13.1'	Dolomite, dark gray, fine-grained, fractured; core badly broken in places
94.6'-101.1'	6.5'	Dolomite, light gray and white, fine-grained, intensely fractured (brecciated)
101.1'-104'	2.9'	Dolomite, medium gray and white, fine-grained, intensely fractured (brecciated)
104'-109.5'	4.5'	Dolomite, dark gray, fine-grained, intensely fractured
109.5'-122.6'	13.1'	Dolomite, medium gray, fine-grained, fractured, minor white dolomite, sparse blebs of white dolomite and quartz, chert at 120.3, 121.2.
122.6'-126.4'	4.2'	Dolomite, medium to dark gray, fine - to medium-grained, chert at 125.3
126.4'-127.6'	1.2'	Chert, dolomitic, light gray, fractured (brecciated)
127.6'-133.8'	6.2'	Dolomite, medium gray, fine - to medium-grained, fractured (brecciated)
133.8'-137.4'	3.6'	Dolomite, medium to dark gray, fine - medium-grained, black laminae, sparse blebs of white dolomite, sparse fractures, white dolomite in fractures.
137.4'-159.4'	22.0'	Dolomite, dark to medium gray, fine-grained, laminated, chert at 148.3, 153.7
159.4'-160.4'	0.8'	Dolomite, medium gray, fine-grained, microscopic specks of pyrite, chert 163.3.
160.4'-160.8'	0.4'	Dolomite, light gray to tan, fine-grained, stylolites, fractured
160.8'-163.4'	2.6'	Dolomite, medium gray, fine-grained, tan, highly fractured dolomite at 161.9'; pyrite at 162.4', chert at 163.4'
163.4'-166.0'	2.6'	Dolomite, dark gray, fine-grained, sparse black laminae, blebs of white chert
166.0'-167.8'	1.8'	Dolomite, dark gray to tan, fine-grained, conglomeratic at top, fracture at bottom
167.8'-170.4'	2.6'	Dolomite, light gray, fine-grained, fractured, white chert and dolomite in fractures at 168.5', 169.3'

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Depth	Thickness	Description
170.4'-176.3'	5.9'	Dolomite, medium gray, medium-grained, sparse fractures, white dolomite in fractures
176.3'-181.1'	4.8'	Dolomite, medium gray, fine - to medium-grained, fractured, blebs of white dolomite and quartz, sparse laminae
181.1'-182.4'	1.3'	Dolomite, light to medium gray, fine-grained, tan dolomite at bottom, sparse laminae
182.4'-186.8'	4.4'	Dolomite, medium gray, fine - to medium-gray, black laminae, fractured, fractures, with white dolomite, slightly sandy
186.8'-191.5'	4.7'	Dolomite, medium gray, fine-grained, intensely fractured at top, conglomeratic below fractured zone, minor tan dolomite
191.5'-192.0'	0.5'	Dolomite, dark gray, medium-grained, fractured, slightly sandy
192.0'-195.6'	3.6'	Dolomite, medium gray, fine-grained, core badly broken
195.6'-196.4'	0.8'	Dolomite, dark gray, medium-grained, fractured
196.4'-200.0'	3.6'	Dolomite, medium gray, fine - to medium-grained, fractured
200.0'-202.0'	2.0'	Dolomite, dark gray, fine - to medium-grained, faint, black laminae; 0.3' tan, fine-grained dolomite at bottom
202.0'-202.8'	0.8'	Dolomite, medium gray, fine-grained
202.8'-207.8'	5.0'	Dolomite, dark gray, fine-grained, black laminae, large bleb of white dolomite at bottom, fractured
207.8'-212.0'	4.2'	Dolomite, medium gray, fine-grained, light gray chert at top and at 210. Shale partings at 211.
212.0'-215.0'	3.0'	Dolomite, medium gray, medium-grained, blebs of white dolomite
215.0'-230.4'	15.2'	Dolomite, light to medium gray, fine-grained, chert at 215, 222.6', 223.3', 230, fractured

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Depth	Thickness	Description
230.4'-231.7'	1.3'	Dolomite, dark gray, fine-grained, sparse blebs of white dolomite
231.7'-232.6'	0.9'	Sandstone, dolomitic, fine-grained, oolitic chert in lower 0.3'
232.6'-233.7'	1.1'	Dolomite, light gray, fine-grained, sandy, sandstone stringer at bottom
233.7'-234.5'	0.8'	Dolomite, medium to dark gray, fine-grained, sandy at bottom
234.5'-234.8'	0.3'	Sandstone, dolomitic, light gray, fine-grained
234.8'-238.7'	3.9'	Dolomite, light to medium gray, fine-grained, breccia
238.7'-242.8'	4.1'	Dolomite, dark gray, fine-grained, black shaly laminae
242.8'-246.3'	3.5'	Dolomite, medium gray, fine-grained, blebs of white dolomite, fractured
246.3'-249.8'	3.5'	Dolomite, sandy, light gray, medium-grained, blebs of white dolomite, scattered pyrite, mottled
249.8'-255.3'	5.5'	Dolomite, light gray, fine-grained, slightly sandy, blebs of white dolomite
255.3'-257.3'	2.0'	Dolomite, sandy, light to medium gray, fine - to medium-grained, sand increases toward bottom, fractured at top, abundant white dolomite, recrystalline?.
257.3'-258.4'	1.1'	Sandstone, cherty, dolomitic, light gray to white; chert, oolitic
258.4'-259.6'	1.2'	Dolomite, sandy, medium gray, fine - to medium-grained
259.6'-260.0'	0.4'	Chert, oolitic, gray to white
260.0'-261.4'	1.4'	Dolomite, very sandy, light gray, fine - to medium-grained, dolomite bleb at 261.3' with abundant pyrite

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Depth	Thickness	Description
261.4'-264.3'	2.9'	Dolomite, light gray, fine-grained, sandy top 1', pyrite grains scattered throughout
264.3'-269.8'	5.5'	Dolomite, dark gray, fine - to medium-grained chert at 264.5', 265.4', fractured, pyrite scattered throughout
269.8'-270.4'	0.6'	Sandstone, dolomitic, fine - to medium-grained, dark gray, laminated at top, pyrite associated with laminae
270.4'-271.9'	1.5'	Dolomite, light gray, fine-grained, slightly sandy at top, few scattered grains of pyrite, chert at 271.5'
271.9'-290.4'	18.5'	Dolomite, dark gray, fine-grained, fractured, very slightly sandy, sparse blebs of white dolomite, scattered pyrite grains
290.4'-292.9'	2.5'	Dolomite, sandy at top, light to medium gray, fine-grained, sparse black laminae
292.9'-301.7'	10.8'	Dolomite, light gray, coarse to medium gray, recrystalline?, sandy, few sandstone stringers, sandstone at 297.8' to 298.3', chert, 293.6, - shale, 293.5
301.7'-305.2'	3.5'	Dolomite, light gray, fine-grained sandy to slightly sandy, sparse black laminae, chert 305, 302
305.2'-307.3'	1.6'	Dolomite, medium gray, fine-grained, chert at 307
307.3'-308.3'	1.0'	Dolomite, light gray, fine-grained, highly fractured
308.3'-309.1'	0.8'	Sandstone, dolomitic, light gray, fine-grained
309.1'-309.8'	0.7'	Dolomite, light gray, fine-grained
309.8'-323.0'	14.2'	Dolomite, light to medium gray, medium to coarse-grained, fractured; recrystalline;? abundant white dolomite, minor black and brown laminae

Depth	Thickness	Description
323'-327.8'	4.8'	Dolomite, light gray, fine-grained, fractured with white dolomite
327.8'-340.0'	12.2'	Dolomite, medium gray, fine-grained, sheared 327.8, 336.0'; core badly broken, chert 339.8'
340.0'-345.0'	5.0'	Dolomite, light to medium gray, fine-grained, badly broken
345'-352'	7.0'	Dolomite, medium to dark gray, fine-grained, chert 345', sheared 350, 350.5
352'-354.8'	2.8'	Dolomite, medium gray, fine-grained, sheared
354.8'-360.9	6.1'	Dolomite, light to medium gray, fine to medium-grained, intensely fractured
360.9'-363'	2.1'	Dolomite, sandy, light to medium gray, medium-grained, core badly broken
363'-364.8'	1.8'	Dolomite, dark gray, medium-grained, slightly sandy, core badly broken
364.8'-367.7'	2.9'	Dolomite, light gray, fine-grained, abundant weathered pyrite
367.7'-374.8'	7.1'	Dolomite, sandy, medium to dark gray, fine to medium-grained, sparse fractures, sparse blebs of white dolomite, few tan dolomite bands
374.8'-375.4'	0.6'	Sandstone, light gray, medium-grained
375.4'-377.0'	1.6'	Dolomite, medium gray, medium-grained, tan shale at top, core broken, sandy
377.0'-385.0'	8.0'	Dolomite, medium gray, fine to medium-grained, very sandy, badly broken
385.0'-386.4'	1.4'	Dolomite, tan, fine-grained
386.4'-389'	2.4'	No core - rubble from above
389'-390'	1.0'	Dolomite, dark gray to black, medium to fine-grained, somewhat oolitic

Depth	Thickness	Description
390'-392.8'	2.8'	Dolomite, light gray, fine-grained, core badly broken
392.8'-394.6'	1.8'	Dolomite, medium gray, fine to medium-grained, core badly broken at top
394.6'-398.0'	3.5'	Dolomite, light gray, medium-grained, sandy
398.0'-398.4'	0.4'	Sandstone, dolomitic, light gray, medium-grained, conglomeratic
398.4'-401.5'	3.1'	Dolomite, light gray, fine-grained, large blebs of white dolomite at 399.5'
401.5'-403.0'	1.5'	Dolomite, sandy, medium gray, fine-grained, fractured in lower part, white dolomite
403.0'-403.8'	0.8'	Sandstone, dolomitic, light gray, medium-grained, thin green shale at base
403.8'-405.0'	1.2'	Dolomite, medium gray, medium-grained, sparse blebs of white dolomite, chert 404.5'-405.0'
405.0'-407'	2.0'	Dolomite, light gray, fine-grained
407'-411'	4.0'	Dolomite, recrystalline?, light-medium gray, coarse-grained, chert bands, 410.3', 410.9'
411'-413'	2.0'	Dolomite, light gray, fine-grained, tan at bottom, brown, sandy laminae near bottom, core badly broken
413'-414.3'	1.3'	Dolomite, dark gray, fine-grained, black laminae, scattered pyrite, sandstone stringers at bottom
414.3'-414.9'	0.6'	Dolomite, light gray, fine-grained, sandy
414.9'-417.3'	2.4'	Dolomite, medium gray, medium-coarse grained, white chert at 416' to 417.3', sandy
417.3'-420.1'	2.8'	Sandstone, dolomitic, light gray, fine-grained, conglomeratic
420.1'-423.1'	3.0'	Dolomite, light-medium gray, fine-grained, black shaly parting in lower part
423.1'-429'	5.9'	Dolomite, dark gray, fine-grained, oolitic. Core badly broken 426'-429'
429'-431'	2.0'	Dolomite, dark gray, fine-grained, stringers of sandstone, black laminae



Depth	Thickness	Description
431'-433.9'	2.9'	Dolomite, medium gray, fine-medium-grained
433.9'-442.6'	9.7'	Dolomite, dark gray, fine-medium-grained, oolitic, chert at 442.5'
442.6'-443.9'	1.3'	Sandstone, conglomeratic; sand, light gray, fine-grained; pebbles, subrounded to rounded, light gray, fine-grained, dolomite
443.9'-444.6'	0.7'	Dolomite, light gray, fine-grained
444.6'-448.0'	3.4'	Dolomite, dark-medium gray, fine-medium-grained, black laminae, conglomeratic at bottom
448.0'-454.4'	6.4'	Dolomite, light-dark gray, fine-medium-grained, abundant black wavy laminae
454.4'-456.3'	1.9'	Sandstone, dolomitic, light gray, fine-medium grained
456.3'-464'	7.7'	Dolomite, sandy, dark gray to black, medium-grained, black wavy laminae
464'-470.7'	6.7'	Sandstone, dolomitic, light gray, fine-medium-grained, black laminae
470.7'-473.8'	3.3'	Dolomite, light-medium gray, fine-medium-grained
473.8'-474.6'	0.8'	Dolomite, light gray, fine-grained
474.6'-480'	5.4'	Dolomite, medium-dark gray, fine-grained
480'-483.8'	3.8'	Dolomite, dark gray, medium-fine-grained, fracture, white dolomite
483.8'-487.2'	3.4'	Dolomite, light gray, fine-grained
487.2'-488.2'	1.0'	Dolomite, dark gray, medium-fine-grained, sandy
488.2'-489.4'	1.2'	Sandstone, dolomitic, light gray, fine-medium-grained
489.4'-493.1'	3.4'	Dolomite, light-medium gray, fine-grained
493.1'-495'	1.9'	Dolomite, light gray, fine-grained
495'-497.8'	2.8'	Dolomite, light-medium gray, fine-grained
497.8'-500.0'	2.2'	Dolomite, sandy, medium-dark gray, medium-grained, black laminae
500.0'-502.3'	2.3'	Sandstone, dolomitic, light, fine-medium-grained, core broken at top
502.3'-505'	2.9'	Dolomite, light-medium gray, fine-medium-grained core badly broken, breccia at top

Depth	Thickness	Description
431'-433.9'	2.9'	Dolomite, medium gray, fine-medium-grained
433.9'-442.6'	9.7'	Dolomite, dark gray, fine-medium-grained, oolitic, chert at 442.5'
✓ 442.6'-443.9'	1.3'	Sandstone, conglomeratic; sand, light gray, fine-grained; pebbles, subrounded to rounded, light gray, fine-grained, dolomite
443.9'-444.6'	0.7'	Dolomite, light gray, fine-grained
444.6'-448.0'	3.4'	Dolomite, dark-medium gray, fine-medium-grained, black laminae, conglomeratic at bottom
448.0'-454.4'	6.4'	Dolomite, light-dark gray, fine-medium-grained, abundant black wavy laminae
454.4'-456.3'	1.9'	Sandstone, dolomitic, light gray, fine-medium grained
456.3'-464'	7.7'	Dolomite, sandy, dark gray to black, medium-grained, black wavy laminae
464'-470.7'	6.7'	Sandstone, dolomitic, light gray, fine-medium-grained, black laminae
470.7'-473.8'	3.3'	Dolomite, light-medium gray, fine-medium-grained
473.8'-474.6'	0.8'	Dolomite, light gray, fine-grained
474.6'-480'	5.4'	Dolomite, medium-dark gray, fine-grained
480'-483.8'	3.8'	Dolomite, dark gray, medium-fine-grained, fracture, white dolomite
483.8'-487.2'	3.4'	Dolomite, light gray, fine-grained
487.2'-488.2'	1.0'	Dolomite, dark gray, medium-fine-grained, sandy
488.2'-489.4'	1.2'	Sandstone, dolomitic, light gray, fine-medium-grained
489.4'-493.1'	3.4'	Dolomite, light-medium gray, fine-grained
493.1'-495'	1.9'	Dolomite, light gray, fine-grained
495'-497.8'	2.8'	Dolomite, light-medium gray, fine-grained
497.8'-500.0'	2.2'	Dolomite, sandy, medium-dark gray, medium-grained, black laminae
500.0'-502.3'	2.3'	Sandstone, dolomitic, light, fine-medium-grained, core broken at top
502.3'-505'	2.9'	Dolomite, light-medium gray, fine-medium-grained core badly broken, breccia at top

Depth	Thickness	
505.'-505.7'	0.7'	Dolomite, dark gray, fine-grained
505.7'-505.9'	0.2'	Chert sandy, light gray to white
505.9'-506.4'	0.5'	Dolomite, medium gray, fine-grained, black laminae
506.4'-508.9'	2.5'	Dolomite, dark-medium gray, fine-grained, Sandstone stringers, black laminae
508.9'-509.9'	1.0'	Sandstone, dolomitic, light gray, fine-grained
509.9'-511.8'	1.9'	Dolomite, medium gray, fine-grained, chert, light gray, Sandstone stringers, black laminae
511.8'-514.0'	2.2'	Dolomite, medium gray, fine-grained, sparse black laminae
514.0'-520.5'	6.5'	Dolomite, dark gray, fine-medium-grained, black laminae, abundant
520.5'-524.6'	4.1'	Dolomite, light gray, fine-grained, sandy
524.6'-528.7'	4.1'	Dolomite, dark gray, fine-grained, black laminae abundant
528.7'-536.4'	7.7'	Dolomite, light-medium gray, fine-grained, black laminae, sparse Sandstone, light gray, fine-grained 529.5' Shale, black 529.6' Chert, oolitic, white 530.1'
536.4'-570'	33.6'	Dolomite, medium-dark gray, fine-grained, abundant black laminae, wavy, pyrite 541.1'

INTERVAL SHEET

Page 1

VDMR Well No.: W-806

Date 4/3/63

Sample Interval: from 6.6 to 570

PROP: Sayler

Total depth 570

COMP: U. S. Steel

Oil      Gas      Water      Exploratory X

COUNTY: Scott

Cuttings      Core X Other     

From-To	From-To	From-To	From-To	From-To
6.6 - 12	126.4 - 127.6	230.4 - 231.7	309.8 - 316.0	414.3 - 414.9
12 - 12.6	127.6 - 133.8	231.7 - 232.6	316.0 - 323.0	414.9 - 417.3
12.6 - 17.2	133.8 - 137.4	232.6 - 233.7	323.0 - 327.8	417.3 - 420.1
17.2 - 21	137.4 - 142.4	233.7 - 234.5	327.8 - 333.0	420.1 - 423.1
21 - 25.5	142.4 - 147.4	234.5 - 234.8	333.0 - 340.0	423.1 - 429.0
25.5 - 28	147.4 - 152.4	234.8 - 238.7	340.0 - 345.0	429.0 - 431.0
28 - 33.2	152.4 - 159.4	238.7 - 242.8	345.0 - 352.0	431.0 - 433.9
33.2 - 34	159.4 - 160.4	242.8 - 246.3	352.0 - 354.8	433.9 - 442.6
34 - 39	160.4 - 160.8	246.3 - 249.4	354.8 - 360.9	442.6 - 443.9
39 - 42	160.8 - 163.4	249.8 - 255.3	360.9 - 363.0	443.9 - 444.6
42 - 46.0	163.4 - 166	255.3 - 257.3	363.0 - 364.8	444.6 - 448.0
46 - 50	166 - 167.8	257.3 - 258.4	364.8 - 367.7	448.0 - 454.4
50 - 55	167.8 - 170.4	258.4 - 259.6	367.7 - 374.8	454.4 - 456.3
55 - 58	170.4 - 176.3	259.6 - 260.0	374.8 - 375.4	456.3 - 464.0
58 - 61	176.3 - 181.1	260.0 - 261.4	375.4 - 377.0	464.0 - 470.7
61 - 64	181.1 - 182.4	261.4 - 264.3	377.0 - 385.0	470.7 - 473.8
64 - 67.3	182.4 - 186.8	264.3 - 269.8	385.0 - 386.4	473.8 - 474.6
67.3 - 68.5	186.8 - 191.5	269.8 - 270.4	389.0 - 390.0	474.6 - 480.0
68.5 - 74.2	191.5 - 192.0	270.4 - 271.9	390.0 - 392.8	480.0 - 483.8
74.2 - 81.5	192.0 - 195.6	271.9 - 280.0	392.8 - 394.6	483.8 - 487.2
81.5 - 86.5	195.6 - 196.4	280.0 - 290.4	394.6 - 398.0	487.2 - 488.2
86.5 - 91.5	196.4 - 200.0	290.4 - 292.9	398.0 - 398.4	488.2 - 489.4
91.5 - 94.6	200.0 - 202.0	292.9 - 297.0	398.4 - 401.5	489.4 - 493.1
94.6 - 101.1	202.0 - 202.8	297.0 - 301.7	401.5 - 403.0	493.1 - 495.0
101.1 - 104	202.8 - 207.8	301.7 - 305.2	403.0 - 403.8	495.0 - 497.8
104 - 109.5	207.8 - 212.0	305.2 - 307.3	403.8 - 405.9	497.6 - 500.0
109.5 - 114.5	212.0 - 215.0	307 - ---	405.0 - 407.0	500.0 - 502.3
114.5 - 119.5	215.0 - 220.0	307.3 - 308.3	407.0 - 411.0	502.3 - 505.0
119.5 - 122.6	220.0 - 225.0	308.3 - 309.1	411.0 - 413.0	505.0 - 505.7
122.6 - 126.4	225.0 - 230.4	309.1 - 309.8	413.0 - 414.3	505.7 - 505.9



Well: Sayler Branch #1  
Farm: W. D. Sayler  
Driller: Lanter and Dean (Contractor - Joy)  
Location: Mendota Quadrangle  
N.-10,222.6  
E.- 9,751.4  
Elevation: 1,836.5  
Angle and Bearing: Vertical  
Total depth: 570 Feet  
Started drilling: 3/15/57  
Sample description by:

Finished drilling: 3/30/57

References: Core obtained from U.S. Steel Company; Log by R.P. Crumpton

#### GEOLOGIC SUMMARY

Depth	Thickness	Formation (and remarks)
0.0'-6.6'	6.6'	No core received
6.6'-137.4'	130.8'	Beekmantown fm., highly fractured, medium to dark gray dolomite with scattered chert
137.4'-570.0	432.6	Copper Ridge dolomite, gray recrystalline and fine-grained, laminated, sandy dolomite, with thin sandstones and conglomeratic sandstones, and oolitic chert
0.'-6.6'	6.6'	No core
6.6'-12.0'	5.4'	Dolomite, light to medium gray, fine-grained; core recovery less than 1 foot
12.0'-12.6'	0.6'	Dolomite, tan to dark gray, fine - to medium-grained; core recovery poor
12.6'-17.2'	4.6'	Dolomite, dark gray, fine-grained, fractured, white dolomite in fractures; brecciated along fractures at 16'
17.2'-26.0'	8.8'	Dolomite, medium to light gray, fine-grained, black laminae, weathered, dolomite near laminae stained tan, fractured, white dolomite in fractures

Depth	Thickness	Formation (and remarks)
26.0'-33.2'	7.2	Dolomite, medium gray, fine-grained, white chert at 28' to 27.2', weathered pyrite in chert, core badly broken 29'-33'
33.2'-34'	0.8	Dolomite, medium gray, fine-grained, black laminae and lighter gray chert blebs
34'-39'	5.0	Dolomite, medium gray, fine-grained; mottled slightly, tan dolomite; few black laminae, sparse fractures, filled with white dolomite
39-46.5	7.5	Dolomite, dark gray, fine-grained, minor tan dolomite, white chert blebs at 39.8' and 43.5'; faint black laminae; core badly broken
46.5'-50	3.5	Dolomite, light to medium gray, fine-grained; sparse black laminae, sparse white dolomite blebs
50'-55'	5.0'	Dolomite, medium to dark gray, fine-grained, sandy at 49.5', chert 52'
55'-59'	4.0	Dolomite, light gray, fine-grained; core badly broken
59'-60.4'	1.4	Dolomite, light gray, fine-to medium-grained, recrystalline?.
60.4'-67.3'	6.9	Dolomite, dark to medium gray, fine-grained, fractured; chert at 61'; weathered pyrite 65' to 67'
67.3'-68.5'	1.2	Dolomite, medium gray, fine-grained
68.5'-74.2'	5.7'	Dolomite, medium to light gray, fine-grained, fractured
74.2'-81.5'	7.3	Dolomite, dark gray, fine-to medium-grained, fractured, mottled
81.5'-94.5'	13.0	Dolomite, dark gray, fine-grained, fractured; core badly broken in places
94.5'-101.1'	6.6	Dolomite, light gray and white, fine-grained, intensely fractured (brecciated)
101.1'-104'	2.9	Dolomite, medium gray and white, fine-grained, intensely fractured (brecciated)

Depth	Thickness	Formation (and remarks)
104'-109.5'	4.5	Dolomite, dark gray, fine-grained, intensely fractured
109.5'-122.2'	12.7	Dolomite, medium gray, fine-grained, fractured, minor white dolomite, sparse blebs of white dolomite and quartz, chert at 120.3, 121.2.
122.2'-126.6'	4.2	Dolomite, medium to dark gray, fine-to medium-grained, chert at 125.3
126.6'-127.2'	0.6	Chert, dolomitic, light gray, fractured (brecciated)
127.2'-133.9'	6.7	Dolomite, medium gray, fine-to medium-grained, fractured (brecciated)
133.9'-137.4'	3.5	Dolomite, medium to dark gray, fine-to medium-grained, black laminae, sparse blebs of white dolomite, sparse fractures, white dolomite in fractures.
137.4'-159.6'	22.2	Dolomite, dark to medium gray, fine-grained, laminated, chert at 148.3, 153.7
159.6'-160.4'	0.8	Dolomite, medium to dark gray, fine-to medium-grained, microscopic specks of pyrite
160.4'-160.8'	0.4	Dolomite, light gray to tan, fine-grained, stylolites, fractured
160.8'-163.5'	2.7	Dolomite, medium gray, fine-grained, tan, highly fractured dolomite at 161.9'; pyrite at 162.4', chert at 163.4'
163.5'-166.0'	2.5	Dolomite, dark gray, fine-grained, sparse black laminae, blebs of white chert
166.0'-167.9'	1.9	Dolomite, dark gray to tan, fine-grained, conglomeratic at top, fracture at bottom
167.9'-169.9'	2.0	Dolomite, light gray, fine-grained, fractured, white chert and dolomite in fractures at 168.5', 169.3'
169.9'-176.3'	6.4	Dolomite, medium gray, medium-grained, sparse fractures, white dolomite in fractures.



Depth	Thickness	Formation (and remarks)
176.3'-181.0'	4.7	Dolomite, medium gray, fine-to medium-grained, fractured, blebs of white dolomite and quartz, sparse laminae
181.0'-182.6'	1.6	Dolomite, light to medium gray, fine-grained, tan dolomite at bottom, sparse laminae
182.6'-187.0'	4.4	Dolomite, medium gray, fine-to medium-gray, black laminae, fractured, fractures, with white dolomite, slightly sandy
187.0'-191.5'	4.5	Dolomite, medium gray, fine-grained, intensely fractured at top, conglomeratic below fractured zone, minor tan dolomite
191.5'-192.0'	0.5	Dolomite, dark gray, medium-grained, fractured, slightly sandy
192.0'-195.6'	3.6	Dolomite, medium gray, fine-grained, core badly broken
195.6'-196.4'	0.8	Dolomite, dark gray, medium-grained, fractured
196.4'-200.0'	3.6	Dolomite, medium gray, fine-to medium-grained, fractured
200.0'-202.0'	2.0	Dolomite, dark gray, fine-to medium-grained, faint, black laminae; 0.3' tan, fine-grained dolomite at bottom
202.0'-202.8'	0.8	Dolomite, medium gray, fine-grained
202.8'-207.8'	5.0	Dolomite, dark gray, fine-grained, black laminae, large bleb of white dolomite at bottom, fractured
207.8'-212.0'	4.2	Dolomite, medium gray, fine-grained, light gray chert at top and at 210. Shale partings at 211.
212.0'-215.0'	3.0	Dolomite, medium gray, medium-grained, blebs of white dolomite
215.0'-230.2'	15.2	Dolomite, light to medium gray, fine-grained, chert at 215, 222.6', 223.3', 230, fractured

Depth	Thickness	Formation (and remarks)
230.2'-231.6'	1.4	Dolomite, medium to dark gray, fine-grained, sparse blebs of white dolomite
231.6'-232.6'	1.0	Sandstone, dolomitic, fine-grained, oolitic chert in lower 0.3'
232.6'-233.7	1.1	Dolomite, light gray, fine-grained, sandy, one sandstone stringer at bottom
233.7'-234.5'	0.8	Dolomite, medium to dark gray, fine-grained, sandy at bottom
234.5'-234.8'	0.3	Sandstone, dolomitic, light gray, fine-grained
234.8'-237.6'	2.8	Dolomite, light to medium gray, fine-grained
237.5'-242.3'	4.8	Dolomite, dark gray, fine-grained, black shaley laminae
242.3'-245.7'	3.4	Dolomite, medium gray, fine-grained, blebs of white dolomite, fractured.
245.7'-249.4'	3.7	Dolomite, sandy, light gray, medium-grained, blebs of white dolomite, scattered pyrite
249.4'-255.4'	6.0	Dolomite, light gray, fine-grained, slightly sandy, blebs of white dolomite.
255.4'-258.1'	2.7	Dolomite, sandy, light to medium gray, fine-to medium-grained sand increases toward bottom, fractured at top, abundant white dolomite
258.1'-258.7'	0.6	Sandstone, cherty, dolomitic, light gray to white; chert, oolitic
258.7'-259.5'	0.8	Dolomite, sandy, medium gray, fine-to medium-grained
259.5'-259.9'	0.4	Chert, oolitic, gray to white
259.9'-261.5'	1.6	Dolomite, very sandy, light gray, fine-to medium-grained, dolomite bleb at 261.3' with abundant pyrite

Depth	Thickness	Formation (and remarks)
261.5'-264.3'	2.8	Dolomite, light gray, fine-grained, sandy top 1', pyrite grains scattered throughout
264.3'-269.9'	5.6	Dolomite, dark gray, fine-to medium-grained chert at 264.5, 265.4, fractured, pyrite scattered throughout
269.9'-270.4'	0.5	Sandstone, dolomitic, fine-to medium-grained, dark gray, laminated at top, pyrite associated with laminae
270.4'-272	1.6	Dolomite, light gray, fine-grained, slightly sandy at top, few scattered grains of pyrite, chert at 271.5'
272'-290.4'	18.4	Dolomite, dark gray, fine-grained, fractured, very slightly sandy, sparse blebs of white dolomite, scattered pyrite grains
290.4'-292.9'	2.5	Dolomite, sandy at top, light to medium gray, fine-grained, sparse black laminae
292.9'-302.0'	10.9	Dolomite, light gray, coarse-to medium gray, recrystalline?, sandy, few sandstone stringers, sandstone at 297.8' to 298.3', chert, 293.6, - shale, 293.5. Chert 302.
302'-307'	5.0	Dolomite, light gray, fine-grained sandy to slightly sandy, sparse black laminae, chert 305,
307'-307.4'	0.4	Chert, gray, dense, strongly sheared.
307.4'-309'	1.6	Dolomite, medium gray, fine-grained
309'-309.4'	0.4	Dolomite, light gray, fine-grained, highly fractured
309.4'-310.1'	0.7	Sandstone, dolomitic, light gray, fine-grained
310.1'-310.8'	0.7	Dolomite, light gray, fine-grained
310.8'-323.	12.2	Dolomite, light to medium gray, medium-to coarse-grained, fractured; recrystalline?, abundant white dolomite, minor black and brown laminae

Depth	Thickness	Formation (and remarks)
323'-327.8'	4.8	Dolomite, light gray, fine-grained, fractured, with white dolomite
327.8'-340.0'	12.2	Dolomite, medium gray, fine-grained, sheared 327.8, 336.0'; core badly broken, chert 339.8
340.0'-345.0'	5.0	Dolomite, light to medium gray, fine-grained, badly broken
345'-352'	7.0	Dolomite, medium to dark gray, fine-grained, chert 345', sheared 350, 350.5
352'-354.8'	2.8	Dolomite, medium gray, fine-grained, sheared
354.8'-360.6'	1.4	Dolomite, light to medium gray, fine-to medium-grained, intensely fractured
360.6'-363'	2.4	Dolomite, sandy, light to medium gray, medium-grained, core badly broken
363'-364.8'	1.8	Dolomite, dark gray, medium-grained, slightly sandy, core badly broken
364.8'-367.5'	2.7	Dolomite, light gray, fine-grained, abundant weathered pyrite
367.5'-374.9'	7.4	Dolomite, sandy, medium to dark gray, fine-to medium-grained, sparse fractures, sparse blebs of white dolomite, few tan dolomite bands
374.9'-375.3'	0.4	Sandstone, light gray, medium-grained
375.3'-377'	1.7	Dolomite, medium gray, medium-grained, tan shale at top, core broken, sandy
377'-384.6'	7.6	Dolomite, medium gray, fine-to medium-grained, very sandy
384.6'-386.4'	1.8	Dolomite, tan, fine-grained
386.4'-389'	2.4	No core - rubble from above
389'-390'	1.0	Dolomite, dark gray to black, medium-to fine-grained, somewhat oolitic

Depth	Thickness	Formation (and remarks)
390'-392.8'	2.8	Dolomite, light gray, fine-grained, core badly broken
392.8'-394.6'	1.8	Dolomite, medium gray, fine-to medium-grained, core badly broken at top
394.6'-398.1'	3.5	Dolomite, light gray, medium-grained, sandy
398.1'-398.4'	0.3	Sandstone, dolomitic, light gray, medium-grained, conglomeratic
398.4'-400.5'	2.1	Dolomite, light gray, fine-grained, large belbs of white dolomite at 399.5'
400.5'-402.8'	2.3	Dolomite, sandy, medium gray, fine-grained, fractured in lower part, white dolomite
402.8'-403.4'	0.6	Sandstone, dolomitic, light gray, medium-grained
403.4'-404.7'	1.3	Dolomite, medium gray, medium-grained, sparse blebs of white dolomite, chert 404.5'
404.7'-407'	2.3	Dolomite, light gray, fine-grained
407'-411'	4.0	Dolomite, recrystalline?, light-medium gray, coarse-grained, chert bands near bottom
411'-413'	2.0	Dolomite, light gray, fine-grained, tan at bottom, brown, sandy laminae near bottom, core badly broken, chert 410.8
413'-414.3'	1.3	Dolomite, dark gray, fine-grained, black laminae, scattered pyrite, sandstone stringers at bottom
414.3'-414.9'	0.6	Dolomite, light gray, fine-grained, sandy
414.9'-417.3'	2.4	Dolomite, medium gray, medium-coarse grained, white chert at 416' to 417.3', sandy

Depth	Thickness	Formation (and remarks)
417.3'-420'	2.7	Sandstone, dolomitic, light gray, fine-grained, conglomeratic
420'-423'	3.0	Dolomite, light-medium gray, fine-grained, black shaly parting in lower part
423'-429'	6.0	Dolomite, dark gray, fine-grained, oolitic chert 423.5. Core badly broken 426'-429'
429'-431'	2.0	Dolomite, dark gray, fine-grained, stringers of sandstone, black laminae
431'-433.9'	2.9	Dolomite, medium gray, fine-medium-grained
433.9'-442.8'	9.9	Dolomite, dark gray, fine-medium-grained, oolitic, chert at 442.5'
442.8'-443.8'	1.0	Sandstone, conglomeratic; sand, light gray, fine-grained; pebbles subrounded to rounded, light gray, fine-grained, dolomite
443.8'-444.5'	0.7	Dolomite, light gray, fine-grained
444.5'-447.9'	3.4	Dolomite, dark-medium gray, fine-medium grained, black laminae, conglomeratic at bottom
447.9'-454.6'	6.7	Dolomite, light-dark gray, fine-medium grained, abundant black wavy laminae
454.6'-456.4'	1.8	Sandstone, dolomitic, light gray, fine-medium grained
456.4'-464'	7.6	Dolomite, sandy, dark gray to black, medium-grained, black wavy laminae
464'-470.5'	6.5	Sandstone, dolomitic, light gray, fine-medium grained, black laminae
470.5'-473.8'	3.3	Dolomite, light-medium gray, fine-medium grained
473.8'-474.8'	1.0	Dolomite, light gray, fine-grained
474.8'-480'	5.2	Dolomite, medium-dark gray, fine-grained

Depth	Thickness	Formation (and remarks)
480'-483.9'	3.9	Dolomite, dark gray, medium-fine-grained, fracture, white dolomite
483.9'-487.2'	3.3	Dolomite, light gray, fine-grained
487.2'-488.3'	1.1	Dolomite, dark gray, medium-fine-grained, sandy
488.3'-489.7'	1.4	Sandstone, dolomitic, light gray, fine-medium-grained
489.7'-493.1'	3.4	Dolomite, light-medium gray, fine-grained
493.1'-495'	1.9'	Dolomite, light gray, fine-grained
495'-497.8'	2.8	Dolomite, light-medium gray, fine-grained
497.8'-499.3'	1.5	Dolomite, sandy, medium-dark gray, medium grained, black laminae
499.3'-502.1'	2.8	Sandstone, dolomitic, light, fine-medium grained, core broken at top
502.1'-505'	2.9	Dolomite, light-medium gray, fine-medium grained core badly broken, breccia at top
505'-505.7'	0.7	Dolomite, dark gray, fine-grained
505.7'-505.9'	0.2	Chert sandy, light gray to white
505.9'-506.4'	0.5	Dolomite, medium gray, fine-grained, black laminae
506.4'-508.9'	2.5	Dolomite, dark-medium gray, fine-grained, sandstone stringers, black laminae
508.9'-509.9'	1.0	Sandstone, dolomitic, light gray, fine-grained
509.9'-511.8'	1.9	Dolomite, medium gray, fine-grained, chert light gray, sandstone stringers black laminae
511.8'-514.0'	2.2	Dolomite, medium-gray, fine-grained, sparse black laminae
514.0'-520.5'	6.5	Dolomite, dark gray, fine-medium grained, black laminae, abundant

Depth	Thickness	Formation (and remarks)
520.5'-523.6'	3.1	Dolomite, light gray, fine-grained, sandy
523.6'-528.5'	4.9	Dolomite, dark gray, fine-grained, black laminae, abundant
528.5'-536.0'	7.5	Dolomite, light-medium gray, fine-grained, black laminae, sparse., 1 Sandstone, light gray, fine-grained 529.5' 1 Shale, black 529.6' 3 Chert, oolitic, white 529.8'
536'-570'	34.0	Dolomite, medium-dark gray, fine-grained, abundant black laminae, wavy, pyrite 541



County: SCOTT  
UDMR Well No.

Well or property: SAYLER BRANCH NO. 1  
Farm: W.D. Saylor  
Driller: Lanter and Dean (contractor-Joy)  
Location: Mendota quadrangle,

Elevation: 1,836.5 feet

Total depth: 570.0 feet

Started drilling: 3/15/57

Finished drilling: 3/30/57

Sample description by: R.P. Crumpton

Reference: Obtained from U.S. Steel Company

#### GEOLOGIC SUMMARY

Depth	Thickness	Formation (and remarks)
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0.0 - 1.0

1.0

(Overburden)

1.0 - 137.4

136.4

Beekmantown fm., strongly fractured, recrystallized

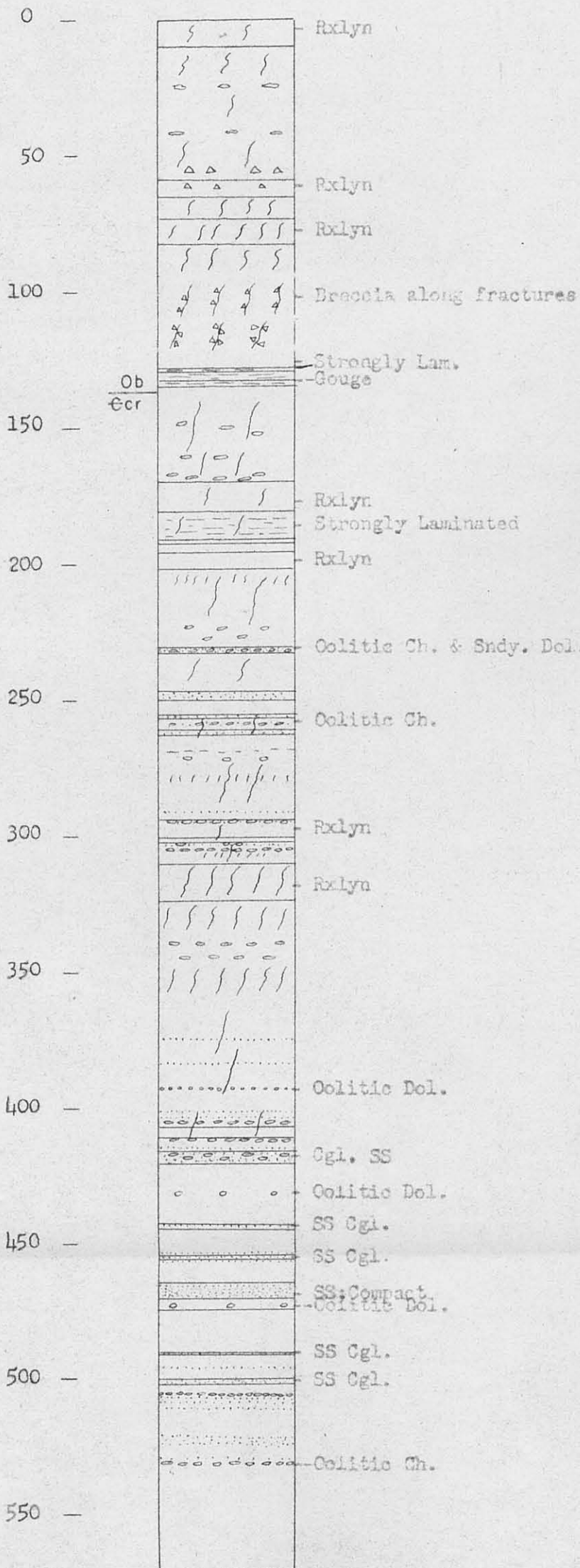
137.4 - 570.0

432.6

Copper Ridge dol., mainly rexled and laminated dol., thin sandstone and sandstone congl. layers, a few thin oolitic chert horizons.

GENERALIZED GRAPHIC LOG

SAYLER BRANCH NO. 1



## DIAMOND DRILL HOLE RECORD

SAYLER BRANCH NO. 1

Location: N-10,222.6 E-9,751.4  
 Elevation: 1,836.5  
 Total depth: 570.0 Feet  
 Angle and bearing: Vertical  
 Core size: AX  
 Started Drilling: 3/15/57  
 Finished Drilling: 3/30/57  
 Drill Contractor: Joy Driller: Lanter and Dean  
 Farm: W.D. Saylor  
 Logged by: R. P. Crumpton  
 Classification: Barren

<u>From</u>	<u>To</u>	<u>Description</u>
✓ 0	1.0	Overburden
✓ 1.0	9.5	Dol., rexlyn, med. grn., gray; sparse NVF(60°) dol. filled.
9.5	16.0	Dol., fn. grn., gray; badly broken; breccia on 60° fract. 15.8 to 16.0; sparse fract. throughout. 1.3 ft CL
16.0	25.5	Dol., fn. grn., gray; laminated, bedding 5-15°; breccia on 60° fract. 16.0 to 16.1; some NVF dol. filled; sparse limonite xyls.
25.5	41.7	Dol., gray & dk. gray, fn. grn.; Lam. dip 12°; wh. chert 28.0 to 28.2; Core badly broken 29.2 to 34.0; some 60° fractures. 3 ft. CL 29.0-33.2
41.7	43.0	Dol., fn. grn., gray; badly broken
43.0	46.0	Dol., fn. grn., blue-gray; lam.; concentric wh. chert 43.3 to 43.4
46.0	58.0	Dol., fn. grn., gray; sparse NVF; wh. dol eyes 48.4 - 48.7; Core shattered 54.3 - 54.6; core moderately broken.
58.0	61.0	Dol., rexlyn, lt. gray; sparse NVF; chert breccias 60.7 - 61.0
61.0	62.5	Dol., fn. grn., gray; broken.
62.5	65.0	Dol., rexlyn, med. grn., gray - dk. gray, fractured NVF's.
65.0	67.3	Dol., fn. grn., gray; some NVF's; core broken; sparse chert 66.6 - 67.3
67.3	68.5	Dol., fn. grn., gray, silty, shale partings; bedding 12°.
68.5	73.4	Dol., fn. grn., gray; core badly broken, NVF's.
73.4	82.2	Dol., rexlyn, med.-fn. grn., gray - dk. gray; strongly mottled; some NVF's; shattered 78.5 - 82.2
82.2	87.9	Dol., fn. grn., gray; NVF's prominent; core badly broken 85.2 - 87.9. (1 ft. CL 86.0 - 87.9)

<u>From</u>	<u>To</u>	<u>Description</u>
87.9	94.6	Same as above; (4' CL)
94.6	109.5	Dol., lt. gray upper part, gray lower part: intensely brecciated, fractured, sheared: gouge zone ?
109.5	122.6	Dol., fn. grn., gray to lt. gray; some shattering on 60° fractures, well healed: lam. offset; bedding about 10°; very sparse ch. 120.3 to 121.2
122.6	126.4	Dol., gray, finely xyn., some shattering; dk. ch. nod 125.3
126.4	127.6	Dol., gray, fn. grn., cherty, brecciated
127.6	129.0	Dol., gray to lt. gray, fn. grn.; pulverized?
129.0	133.3	Dol., fn. grn., gray; much fracturing w/sparse wh. dol.
133.3	133.8	Dol., gray, pulverized?
133.8	137.4	Dol., gray, fn. grn., strongly laminated; very sparse fracturing; bedding about 25°.
Ob		
137.4	159.4	Dol., gray, fn. grn. to finely xyn., laminated; slightly fractured w/wh. dol., chert eyes 148.3 and 153.7
159.4	163.4	Dol., lt. gray mottled w/dk. gray, fn. grn., lam.; brown chert 163.3-163.4
163.4	167.8	Dol., fn. grn., gray; laminated; some NVF
167.8	170.4	Dol., lt. gray, fn. grn., laminated; cherty at 168.5 & 169.3
170.4	181.1	Dol., rexlyn, med. to fn. grn., lt. gray mottled w/wh. dol., altered by fractures.
181.1	182.4	Dol., fn. grn., lt. gray; lam., fractured by NVF.
182.4	183.8	Dol., fn. grn., gray; fractured NVF w/wh. dol.
183.8	184.8	Dol., gray, fn. grn., very strongly lam., bedding about 35°
184.8	186.8	Dol., gray, fn. grn., laminated; core badly broken 185.2 to 186.8; sparse NVF.
186.8	191.5	Dol., fn. grn., gray; laminated; some NVF; weathered 186.8 to 187.6; bedding about 35°; silty partings 191.0
191.5	192.7	Dol., rexlyn., fn. grn., mottled w/wh. dol.
192.7	196.0	Dol., gray, fn. grn., badly broken, (1.5' CL)
196.0	201.5	Dol., rexlyn, fn. grn., gray; badly broken 199.0 to 200.0; sparse fracturing.
201.5	210.9	Dol., gray to lt. gray, fn. grn., laminated; some NVF w/wh. dol., sparse sand grains at 208.0; fractured w/wh. dol

<u>From</u>	<u>To</u>	<u>Description</u>
		prominent from 206.0 to 207.0
210.9	216.0	Dol., fn. xlyn to fn. gr., gray; lam., sparse NVF; gray sh. parting 210.8-210.9; sheared 214.0 - 214.4, may be gouge.
216.0	230.4	Dol., fn. gr., gray mottled w/ dk. gray lam.; ch. nod at 223.6 and 227.1; sparse NVF.
230.4	231.7	Dol., fn. gr., dk. gray.
231.7	233.7	Dol., sandy; oolitic chert; and ss stringers.
233.7	238.7	Dol., fn. gr., gray; sparse NVF's with breccia tightly healed.
238.7	242.8	Dol., fn. gr., dk. gray, banded in part; very sparse NVF's lower part.
242.8	246.3	Dol., fn. gr. - xlyn; gray, mottled w/ wh. dol.; sparse and fine NVF's.
246.3	249.8	Dol., rexlyn, fn. - med. gr., gray; mottled w/ wh. dolo throughout; sandy 249.6-249.8; very sparse FeS xyls. 249.6; sparse NVF's.
249.8	255.3	Dol., fn. gr. to compact, gray; some NVF's with FeS.
255.3	257.3	Dol., rexlyn, fn. med. grl., gray, mottled w/ wh. dol., sparse FeS xyls. along NVF; sandy 256.7 - 257.3
257.3	257.9	Sandstone (or very sandy dol.)
257.9	258.4	Chert, oolitic, milky white.
258.4	259.6	Dol., fn. gr., gray, sparsely sndy upper part.
259.6	260.0	Chert, oolitic.
260.0	261.4	Dol., fn. gr., gray, very sndy; sparse FeS eyls. 261.3 to 261.4
261.4	264.3	Dol., fn. grn. to compact, gray; sparse wh. dol. and NVF's.
264.3	269.8	Dol., fn. gr., dk. gray and gray; some NVF's; lam. in part; dip 5° to 10°.
269.8	271.9	Dol., fn. gr., gray; ch. nod. at 271.5
271.9	290.4	Dol., fn. grn. gray and dk. gray; some NVF's w/wh. dol., laminated in part; strongly sheared 279.0 - 279.7
290.4	292.9	Dol., fn. gr., gray to lt. gray; very sndy 290.4 - 291.1
292.9	301.7	Dol., rexlyn, med. to coarse grn., gray to lt. gray; dk. gray chert band 293.6 - 293.7; th. green sh. 293.5; Sndy 293.5 to 293.6.

<u>From</u>	<u>To</u>	<u>Description</u>
301.7	305.2	Dol., fn. gr., gray; cherty at 302.0; wh. dol eyes 302.4 - 303.2; sparse sndy lam. 303.2 - 302.4 offset 2" by 60° fct., chert 305.0 - 305.2; sparse NVF's w/wh. dol.
305.2	307.3	Dol., fn. gr., dk. gray; strongly sheared 306.6 - 307.1; some NVF's.
307.3	308.3	Dol., fn. xyln., gray, sparse NVF's.
308.3	309.8	Dol., fn. gr., gray; badly broken; some NVF's.
309.8	323.0	Dol., rexlyn, fn. gr., mostly gray; dk. gray 315.2 - 316.5; poor grade rexlyn in part; brown weathered silt partings 313.4 - 313.7; mottled w/wh. dol along many NVF's and eyes; dip about 10°.
323.0	327.8	Dol., fn. gr to compact, lt. gray; NVF's w/ fine wh. dol.
327.8	340.0	Dol., fn. xyln to fn. gr., gray; badly sheared 327.8 to 328.3; 336.0 to 337.0; core badly broken with 4' core loss; Lt. gray ch. 339.8 - 340.0; NVF's w/ sparse wh. dol
340.0	345.0	Dol., fn. gr to compact; lt. gray; badly broken 340.0 to 341.0; sheared at 343.0.
345.0	352.0	Dol., fn. xyl., gray; Dk. gray ch. 345.0-345.2; NVF's; sheared at 350.0 and 350.5-351.2
352.0	354.8	Dol., fn. gr., gray, strongly sheared
354.8	360.9	Dol., fn. gr.-compact, lt. gray; strongly sheared - gouge?
360.9	364.8	Dol., fn. gr., gray; sndy 360.9-361.2 with thin edgewise brown dol. slivers; core badly broken .
364.8	367.7	Dol., fn. gr.-compact, lt. gray; core badly broken.
367.7	373.1	Dol., fn. gr., gray, mottled with brown; silty throughout; core badly broken 369.8-372.0
373.1	374.8	Dol., fn. gr., lt. gray; thn. snd. stringers, dip 20°.
374.8	375.4	Sandstone
375.4	375.5	Shale, tan, dolomitic.
375.5	380.2	Dol., fn. gr., xyln in part; gray; very fn. sndy lam. 378.0-378.2.
380.2	384.4	Dol., fn. xyln., gray, sparsely sndy upper part; sandy lam. lower foot.
384.4	385.0	Dol., fn. gr., gray; badly broken.

<u>From</u>	<u>To.</u>	<u>Description</u>
385.0	386.4	Dol., compact, mostly tan; dip about 15°.
386.4	389.0	Rubble from above - Core loss 2.6'
389.0	390.0	Dol., fn. xyln., Dk. gray; somewhat oolitic; mottled lower part.
390.0	394.6	Dol., fn. gr., lt. gray and gray; core badly broken; sparse weathered FeS xyls 394.5-394.6
394.6	398.0-	Dol., fn. xyln., lt gray, sparse mottling w/ wh. dol., sparse weathered FeS xyls.
398.0	401.5	Dol., fn. gr., lt. gray; sndy cgl. 398.0 - 398.3.
401.5	402.3	Sandstone, lower part; sndy dol. upper part; NVF w/ wh. dol.
402.3	403.0	Dol., fn. gr., lt. gray; NVF's.
403.0	403.8	Sandstone, with thin green shale at base; NVF w/ wh. dol.
403.8	405.0	Dol., fn. gr., gray; banded in part with FeS; banded with blue chert 404.5 - 405.0
405.0	407.0	Dol., fn. gr.- compact, lt. gray; faintly lam.; dip 12-15°; sparse NVF's
407.0	410.3	Dol., rexlyn., med. - fn. gr., lt. gray; mottled w/ wh. dol., sparse FeS xyls weathered; sparse NVF's.
410.3	413.8	Dol., fn. gr., gray; blue chert 410.3; 410.9; Dk gray shale 410.8 - 410.8; good sndy lam. 413.0 - 413.8; dk. gray with lam. 412.2 - 413.0
413.8	416.0	Dol., rexlyn, gray, banded; lower half sandy w/chert bands.
416.0	420.1	Sandstone, lt. gray; Cgl. throughout
420.1	423.1	Dol., fn. grn., gray; laminated; dip 20°; sparse FeS 421.7.
423.1	441.3	Dol., fn. gr. in part, fn. xyln. in part; mostly dk. gray; Oolitic in part; dk. lam. dip 20°.
441.3	442.6	Dol., fn. gr., gray; very sandy w/three oolitic ch. bands.
442.6	443.9	Sandstone, conglomeratic
443.9	444.6	Dol., fn. gr., lt. gray.
444.6	448.0	Dol., fn. xyln., dk. gray; laminated; cgl. lower foot.
448.0	454.4	Dol., fn. gr., gray to lt. gray; lam., dip 18°.
454.4	456.3	Sandstone

<u>From</u>	<u>To</u>	<u>Description</u>
456.3	457.3	Dol., fn. xyln., dk. gray; very sndy with sand grns very small to silt size.
457.3	464.0	Dol., fn. xyln., dk. gray; sparsely lam., strongly oolitic upper part.
464.0	470.7	Sandstone, compact, non-cgl.
470.7	474.6	Dol., rxyln., fn. gr., gray; fn. gr. lower foot, faintly oolitic.
474.6	483.8	Dol., fn. gr., dk. gray, banded; dip 20°; faintly oolitic.
483.8	488.2	Dol., fn. gr., to dense, lt. gray/
488.2	489.4	Dol., very sndy., sli. cgl., gray.
489.4	490.8	Sandstone, compact, sli. cgl.
490.8	496.5	Dol., fn. gr., mostly lt. gray; sandy 490.8 - 491.2; 496.0 - 496.5.
496.5	500.0	Dol., fn. gr., gray; sandy 498.9 - 500.0.
500.0	502.3	Sandstone, cgl. at base; 0.2' Breccia at base w/FeS xls.
502.3	515.0	Dol., fn. gr., gray and dk. gray, banded; dip 20°, lt. gray oolitic chert band 505.7 - 505.9; sndy, some sandy lam. brown 506.8 - 510.7; dk. shale band 511.5
515.0	521.7	Dol., fn. gr., dk. gray, lam. and banded; oolitic 517.2 - 518.0; sndy 521.4 - 521.7.
521.7	524.6	Dol., fn. gr., gray, lam.; sparsely sndy and sndy lam. 521.7 - 523.7
524.6	528.7	Dol., fn. gr., dk. gray; sparsely lam.
528.7	536.4	Dol., fn. gr., lt. gray and gray; sndy 528.8 - 529.6; 529.8 - 529.9; oolitic chert 530.1 - 530.3; sparsely lam.
536.4	570.0	Dol., dk. gray - gray; fn. gr., lam., FeS xyls at 541.1
Total depth 570.0 feet.		



12959

101

Additions to core description for:  
Saylor Branch #1  
V.D.M.R. well # W 806  
Scott County, Va.

32.5-32.6 Black shale

32.9-33.0 Intraformational conglomerate? Rounded, elongate fragments of siltstone? in dolomite matrix.

37.8-39.0 Dolomite contains scattered blebs of white, siliceous material.

46.8 White, siliceous dolomite.

50.2-50.3 Light-gray, siliceous dolomite.

50.8-50.9 Light-gray chert nodule.

55.2-55.3 Chert, gray, fractured, with iron-oxide staining along fractures.

60.8-60.9 Chert, light-gray.

63.0-? Dolomite is intensely fractured.  
Core from 64.2-123.0 is missing.

136.6 Small vug filled with black, vitreous material (gilsonite?)

182.0-182.1 Dolomite, slightly sandy, contains bluish-gray blebs of quartz.

- 208.1-208.9 Dolomite, medium-gray, fine-grained. Contains well-rounded, poorly sorted quartz grains.
- 233.7-234.2 Stylolitic; concentrations of finely disseminated pyrite along stylolites.
- 234.8-238.7 Dolomite, medium-gray, fine-grained, fractured, stylolitic, pyritic. Does not appear to be a breccia as described by R.
- 246.8 Chert, white, fine-grained, lens-shaped, bounded on one side by a stylolite.
- ~~310.5-311.0~~ ~~Black, dendritic coatings on the dolomite.~~
- 310.0-311.7 Dolomite, gray, fine-grained, sandy (well-rounded quartz grains), intensely fractured. Fractures are coated with white dolomite. Black, dendritic coatings on fractures 310.5-311.0.
- 311.8-313.0 Dolomite, light-gray, medium- to coarse-grained, stylolitic.
- 315.0-315.3 Leached zone; leaching of interstitial material has left friable dolomite grains. Pyrite along stylolites has been altered to limonite.

- 321.6 - 322.6 Abundant black, dendritic coatings.
- 356.0 - 358.0 Cavity noted by driller.
- 361.0 - 363.0 Sandstone, reddish-brown, fine to medium-grained, intensely fractured (brecciated).
- 366.4 Chert nodule, medium-gray.
- 367.7 - 368.0 Dolomite, tan to reddish-brown, fine-grained, sandy.
- 372.2 - 372.6 Dolomite, gray, medium-grained, conglomeratic (intraformational?); contains rounded, reddish-brown fragments.
- 386.4 - 389.0 Very little recovery. Some dolomite, gray to tan, finely laminated, streaks of dark-gray chert. Dark-gray, oolitic dolomite at ca. 388.8.
- 402.0 - 402.1 Oolites in clear cement.
- 413.0 - 414.3 Contains gray, argillaceous material.
- 414.9 - 417.3 Scattered pyrite crystals, stylolitic. Wavy streaks of gray, very fine-grained dolomite 414.9 - 415.2.
- 417.3 Thin layer (0.5 inch) of silicified oolites.

- 420.1-423.1 Scattered pyrite, stylolitic.
- 423.1-429.0 Pyritic, stylolitic, silty at bottom.
- 429.0-431.0 Pyritic.
- 431.0-433.0 Scattered, small, spherical masses of pyrite (bladed crystals radiate out from a central point), slightly silty.
- 433.0-441.9 Dolomite, dark-to medium-gray, fine-to medium-grained, pyritic, stylolitic, fractured (white dolomite along some of the fractures) partially oolitic, slightly sandy in lower part.
- 441.9-442.7 Gray to white siliceous oolites and sandstone containing rounded to subangular dolomite fragments.
- 444.6-448.0 Pyritic, stylolitic. Sandy 447.6-448.0.
- 448.0-454.4 Pyritic, stylolitic, partly sandy. Layer of gray shale 448.9-449.0.
- 456.3-464.0 Stylolitic, pyritic. Only top 1 foot is sandy. Dolitic 457.6-458.8.

- 471.0-471.3 Sandstone, light-gray, fine-  
to medium-grained, subrounded.  
Dark-gray shale parting at top.
- 471.3-473.8 Pyritic, stylolitic.
- 473.8-474.6 Stylolites perpendicular to the  
bedding.
- 474.6-480.0 Stylolitic, fractured (some fract-  
ures filled with white dolomite).  
Dark-gray chert nodule 477.7.
- 480.0-482.4 Dolomite, dark-gray to brown,  
fine-grained, oolitic, stylo-  
litic, fractured (some fractures  
filled with white dolomite).
- 482.4-483.8 Dolomite dark-gray to brown,  
fine-grained, slightly sandy,  
stylolitic, scattered pyrite  
crystals, fractured (fractures  
filled with white dolomite).
- 483.8-487.2 Stylolitic, contains scattered,  
rounded, very fine quartz  
grains.
- 487.2-488.2 Oolitic, conglomeratic (subangular  
to rounded dolomite fragments),  
stylolitic, scattered blue  
quartz grains.
- 488.2-489.4 Stylolitic, pyritic.

- 489.4-493.1 Stylolitic, slightly pyritic.
- 495.0-496.0 Dolomite, light-gray, fine-grained, stylolitic, greenish-gray shale along stylolites.
- 496.0-496.6 Dolomite, light-gray, fine-grained, very sandy.
- 496.6-500.0 Dolomite, medium-gray, fine-grained, silty, slightly pyritic, dark-gray laminae composed of silt and shale.
- 500.0-502.3 Sandstone, light-gray, fine to medium-grained, dolomitic, stylolitic, fractured (fractures lined with quartz and dolomite crystals), conglomeratic (rounded dolomite pebbles).
- 502.3-505.0 Pyritic, fractured. Pellets or small, one-layer oolites 504.6-505.0.
- 509.0-511.8 Conglomeratic (rounded dolomite pebbles).
- 517.4-517.8 Dolitic.
- 520.5 Chert, white to brown.
- 520.5-524.6 Stylolitic, scattered oolites.
- 526.4-526.5 Dolitic.

528.7-536.4

Stylolitic, scattered pyrite.

Chert, medium-to dark-gray, fine-grained, contains small, euhedral dolomite rhombs

529.6-529.8. Dolomite, siliceous, light-gray, fine-grained 535.0-535.2.

536.4-570.0

Scattered stylolites. Dolomite, dark-gray to brown, fine-grained, oolitic 553.3-554.2. Chert,

medium-gray, fine-grained, banded 559.6. Dolomite,

light-gray, fine-grained, conglomeratic (greenish-gray to brown, rounded dolomite pebbles) 561.0-561.2. Chert,

tan, contorted banding

565.8. Siliceous breccia, partly oolitic 566.4.

Chert, dark-gray to brown, contorted banding 567.5.

DIAMOND DRILL HOLE RECORD

SAYLER BRANCH NO. 1

Location: N-10, 222.6 E-9, 751.4  
Elevation: 1,836.5  
Total depth: 570.0 Feet  
Angle and bearing: Vertical  
Core size: AX  
Started drilling: 3/15/57  
Finished drilling: 3/30/57  
Drill contractor: Joy Driller: Lanter and Dean  
Farm: W. D. Sayler  
Logged by: R. P. Crumpton  
Classification: Barren

<u>Depth</u>	<u>Thickness</u>	<u>Formation</u>
0.0 - 1.0	1.0	(Overburden)
1.0 - 137.4	136.4	Beekmantown fm., strongly fractured, recrystallized
137.4 - 570.0	432.6	Copper Ridge dol., mainly rexled and laminated dol., thin sandstone and sandstone congl. layers, a few thin oolitic chert horizons.





Saylor Br. D.D.H. 1, Elev. 1836.5

GATE CITY 14 MI

HILLTOP 15.5-NW

KINGSPOINT 17 MI

KINGSPOINT 18 MI

LEADON SPRINGS 19.5-SW

ROYSTON 15 MI

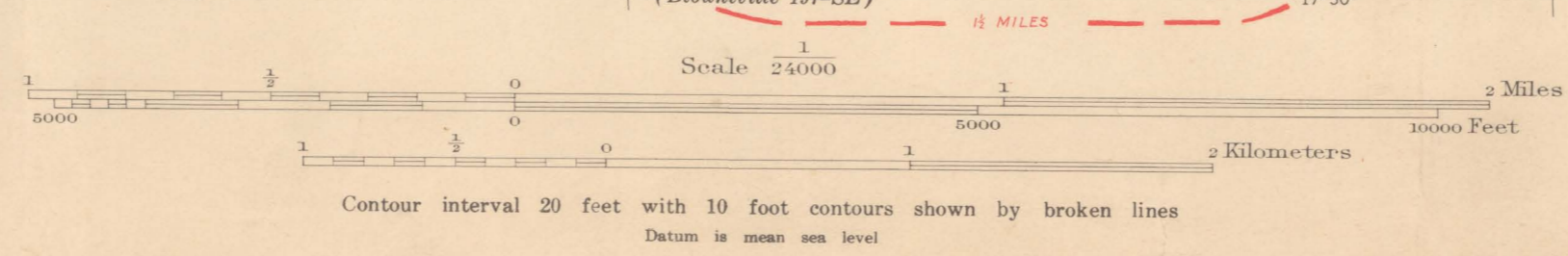
WALLACE 20.5-NW

GREENWICH 3 MI

BRAND 20.5-SW

Control by USC&GS, USGS, and TVA.  
Topography by Geological Survey from aerial  
photographs by stereophotogrammetric methods.  
Field examination by Tennessee Valley Authority, 1938.

APPROXIMATE MEAN  
DECLINATION, 1939



Contour interval 20 feet with 10 foot contours shown by broken lines  
Datum is mean sea level

Polyconic projection. 1927 North American datum  
10,000 foot grid based on Virginia (South)  
rectangular coordinate system.

HARD IMPROVED SURFACED ROADS  
OTHER MAIN TRAVELED ROADS  
U.S. ROUTE  
STATE ROUTE

MENDOTA VA.  
197 NE  
Edition of 1939

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