# W Pocahontas Corporation No. 2(745) Well.

Slab Fork District, Wyoming County, W. Va.

By Owens, Libber-Owens Gas Department, Charleston, W. Va.

Located .39 Mi. S. of 37° 40' .82 Mi. W. of 81° 25'

Mullens Quadrangle - WC

Elevation - 2014.81' L

Permit Wyo-126

#### Top Bottom Thickness

POTTSVILLE FORMATION, 1104 FEET.

Sandstone, very light and light-gray to yellowishgray and light olive gray, moderate to dark yellowish
brown at the top (stained by iron oxides), very fine
to fine grained, hard, segular to subangular, kaolinitic; scattered sark streaks containing carbonaceous
material, muscovite and some siderite; also contains
specks of chlorite and carbonaceous material; 25-44
a large amount of pale yellowish brown to brownishgray (slightly to moderately sideritic), and brownishblack (highly sideritic), the dark streaks are more
highly micaceous and less carbonaceous

44 52

Sandstone, light brownish gray to brownish-gray with dark gray to brownish-black layers, and yellowish-brown specks of iron oxide and siderite, fine-grained to very fine grained; the dark layers are highly sideritic, micaceous, carbonaceous and very shaly

52 58

Shale, dark-gray to dark brownish gray, moderately to highly sideritic, soft; some dusky-brown, highly sideritic shale

58 59

1 No Sample

59 67

Sandstone, yellowish-gray to light brownish gray and

brownish-gray (somewhat sideritic) with brownish-black and grayish-black to black (highly sideritic, carbonaceous, and micaceous) streaks; some dark gray shale

sec 1 4 1950

- 67 88 21 Shale, dark-gray to brownish-gray, soft, moderately to highly sideritic; small amount of dark-brown siderite at the bottom
- 88 94 6 Sandstone, light-gray and yellowish-gray to brownish-gray, medium- to coarse-grained, subangular to subrounded, poorly sorted, hard, highly sideritic in part, somewhat chloritic and micaceous, some carbonaceous material
- 94 99 5 Sandstone, very light to light-gray, very fine to finegrained, highly micaceous (muscovite), subangular to subrounded, contains some dark-gray to brownish-gray shale and some chlorite, somewhat sideritic
- 99 187 88 Sandstone, white to very light gray, fine to very fine grained, subrounded to rounded, somewhat micaceous and chloritic; considerable dark-gray to brownish gray( sideritic shale) at the top and 119 to 123; in the upper part, some shale; 123-135, fine-grained; 135-139, very fine grained 139 to 151, moderately sideritic; 151 to 187, white, quartoze, medium-grained
- 187 215 28 Sandstone; at the top, light olive gray to light-gray, a large number of siderite spherulites, fine-grained sand to coarse silt, small amount of dark-gray to black (highly carbonaceous) shale, highly michceeus; in the upper and middle parts, very light tok light-gray, fine-grained, somewhat sideritic, with some coal in the upper part, somewhat micaceous; in the lower part of this interval, medium light to light-gray, fine-grained, contains much mica and carbonaceous material, some chlorite and some coal at the bottom, somewhat sideritic
- 215 231 16 Shale, dark-gray to grayish-black, some brownish-black (highly sideritic), moderately sideritic; some coal at the bottom; some light-gray, fine-grained, partly sideritic sandstone at the bottom
- 231 246 15 Sandstone, very light gray to light greenish gray, finegrained, subangular to subrounded, somewhat chloritic and
  micaceous, somewhat sideritic; a moderate amount of darkgray to grayish-black, somewhat sideritic shale; small
  amount of dark-brown, sideritic shale

- 246 252 6 Shale, dark-gray to black (highly carbonaceous), somewhat sideritics and some brownish-black (highly sideritic), 70%; siltstone and silty shale, medium-gray to greenish-gray, him highly micaceous, 30%
- 252 257 5 Siltstone, greenish-gray to medkum-gray, some brownish-gray (sideritic), shaly in part, moderately to highly sideritic, highly micaceous
- 257 330 73 Siltstone, light brownish gray to brownish-black, some dark-gray and grayish-black, very highly micaceous, moderately to highly sideritic, somewhat kaolinitic; some very fine grained sandstone near the bottom
- Sandstone, very light gray to light brownish gray, some brownish-gray (sideritic), fine-grained moderately sideritic; , slightly micaceous and chloritic; 341- to 350, very fine grained, very highly sideritic and carbonaceous in part; 383-405, fine-grained with some medium grains, chloritic and micaceous, sideritic at the bettom; some moderate-brown clay at the bettom; a moderate amount of interbedded, dark-gray to black (carbonaceous) and brownish-black (sideritic) shale throughout most of the interval and a large amount at the top
- 405 411 6 Shale (very silty) and siltstone, dark-gray to grayishblack, some brownish-gray to brownish-black, highly micaceous, highly sideritic, somewhat calcareous and dolomitic
- 411 423 12 Siltstone (coarse at top) to sandstone (very fine at the bottom), brownish-gray to brownish- and grayish-black at the top, light-gray to brownish-gray at the bottom, kaolinitic, highly micaceous at the top, carbonaceous in part, moderately sideritic at the top to slightly sideritic toward the bottom
- 423 476 53 Shale, dark-gray to brownish- and grayish-black, somewhat micaceous, slightly sideritic, highly sideritic in part, somewhat carbonaceous

- fine to very fine grained, some medium grains, subangular, poorly sorted, contains earbonaceous and kaolinitic material, mica, iron oxides (partly hematite), highly sideritic, 60% at the top to 30% at the bottom; interdedded, dark-gray to black (highly carbonaceous), brownish-gray to dusky-brown (highly sideritic) shale 40% at top to 70% at bottom; small amount of blackish-red to very dusky red hematitic (?), sideritic shale
- 490 504 14 Siltstone (at the top) to very fine sandstone (at the bottom), medium light to medium-gray and brownish-gray, (highly sideritic), highly micaceous and somewhat carbonaceous, kaolinitic; some interbedded dark-gray and dusky-brown (sideritic) shale
- Shale and siltstone, medium- and dark-gray to greenishgray and olive-gray, moderately sideritic in part, highly
  micaceous; and the hours a moderate amount of interbedded dark
  yellowish brown to dusky-brown, highly sideritic shale; at
  the bottom, considerable dark-gray to brownish-black and
  black, highly carbonaceous shale with streaks of coal and
  a small amount of pyrite
- 524 735 Sandstone, white to very light gray, fine-grained, subangu-211 lar to subrounded, quartzose except the top 40 feet and 584 to 590, slightly micaceous and slightly chloritic, some of the quartz grains show secondary crystal facets; a small amount of dark gray to brownish-black and black carbonaceous and somewhat sideritic shale; the top forty feet of this sandstone is very light to light-gray, some brownish-gray (moderately to highly sideritic), fine- to medium-grained, somewhat chloritic and micaceous, considerable dark-gray to black (carbonaceous) and brownish-black (sideritic) shale; 584 to 590 considerable dark-gray to black and brownishblack (sideritic) shale, some brownish-gray, sideritic sandstone; 718-727 a moderate amount of dark-gray to brownish. black and black, partly sideritic shale, some medium light gray, moderately sideritic sandstone; at the bottom a small of red ferruginous cement

735 739 Sand stone, light-gray with brownish-gray streaks, finegrained, highly sideritic in part, 50%; shale and siltstone. medium- to dark-gray (highly micaceous), grayish-black to black (highly carbonaceous), dark yellowish brown to very dusky brown (highly sideritic)), 50%; a small amount is ferruginous 739 743 Shale, medium dark to dark-gray, soft, highly sideritic in part, some dark to dusky yellowish brown, highly sideritic shale 743 747 Shale, medium dark to dark-gray, some dark to dusky, yellowish brown(sideritae), soft, 60%; sandstone, light-gray to yellowish-gray, fine to very fine grained, 40% Shale, medium dark to dark-gray with black, highly carbon-747 750 3 aceous streaks, 60%; sandstone (very fine) to siltstone, light-gray to brownish-gray (sideritic), some dark yellowish brown (highly sideritic), womewhat micaceous, 40% Shale, medium dark gray, some dark-gray with black carbon-750 753 3 aceous streaks, and some dark, sideritic spherulites; some li light to medium-gray siltstone Sandstone, light to mindlamkk medium gray, some greenish-753 761 gray, highly micaceous and kaolinitic, some chlorite, very fine grained to siltstone, shaly in part, 70%; shale, medium dark to dark-gray with black carbonaceous streaks, 30%; some dusky-brown to blackish-red, sideritic shale 761 769 Siltstone to very fine sandstone, very light to medium-gray, micaceous, some carbonaceous material, 50%; shale, mediumgray to brownish-gray (sideritic) to black (carbonaceous), 10%; sandstone, white, medium-grained to very coarse grained, quartzose, 40% 769 818 Sandstone, white at the top to very light gray in the middle 49 part to light-gray toward the bottom (small amount of carbonaceous material), medium- to fine-grained, some coarse grains, but at the top and bottom medium to very coarse grained, quastzose, subangular to subrounded 818 824 Conglomerate, very light gray, mostly quartz, some brownishblack and black, carbonaceous and sideritic shale

- 824 830 6 Conglomerate, very light gray, mostly quartz, with some brownish-black and black, carbonaceous and sideritic shale, 40%; sandstone, brownish-gray to medium-gray, fine-to medium-grained, moderately to highly sideritic, some carbonaceous material, some chlorite
- 830 849 19 Siltstone and shale (very silty), medium dark to darkgray, some brownish-gray, slightly to moderately sideritis,
  contains mica and carbonaceous material; some light-gray
  to brownish-gray, sideritic sandstone, at the top; in the
  middle, some medium-gray, fine-grained sandstone; at the
  bottom, some black "coaly" shale and some olive-gray,
  slightly sideritic siltstone; a small amount of dark
  yellowish brown, highly sideritic shale throughout the
  interval
- 849 864 15 Siltstone, medium light to it medium-gray, very sandy,

  Contains chlorite, carbonaceous
  highly micaceous, and kaolinitic material; small amount of
  dusky-brown, sideritic shale
- Shale, medium- to dark-gray, some greenish-gray, some grayish-black to black in upper part, soft; some light-gray to brownish-gray, silty, carbonaceous, sideritic sandstone at the top; some medium-gray to brownish-gray, micaceous siltstone and silty shale at the bottom
- 876 882 6 Shale, medium-k to dark-gray, so me brownish-black and black, soft, 40%; siltstone, medium light to medium-gray, coarse, highly micaceous and kaolinitic, contains some chlorite, slightly sideritic, 60%; small amount of dark yellowish-brown, sideritic shale
- Sandstone, medium light gray, some light-gray and medium-gray, fine to very fine grained, chloritic and kaolinitic, moderate amount of brownish-black to black (carbonaceous) shale grains, somewhat micaceous, some dark yellowish brown (sideritic) and some very dark duskyred (ferruginous) cementing material

889 896 7 Shale, medium- to dark-gray, some brownish-gray, (some-what sideritic), some black (carbonaceous) and dark yellowish brown (highly sideritic), 50%; sandstone, light to medium light gray, fine-grained, chloritic with iron oxides and siderite cementing material, many of the grains are shale fragments, somewhat micaceous, 50%.

Sandstone, light to medium light gray, some light brownish gray at the bottom, fine-grained, fine- to medium-grained in part, chloritic, many of the grains are dark to black shale fragments, contains siderite, carbonaceous material, iron oxides, and clayey material as a cement, the chlorite content decreases toward the bottom; near the bottom, dark streaks of highly sideritic and carbonaceous shaley material; at the bottom, considerable iron oxide and siderite cementing material

956 966 10 Sandstone, medium light gray to light brownish gray, finegrained, chloritis, siderite and in iron oxide cement, 30%;
shale and siltstone, medium-gray to brownish-gray, highly
micaceous, some black (highly carbonaceous), some dark
yellowish brown (highly sideritic), 70%

Shale, medium to medium dark gray, some dark-gray to black (highly carbonaceous), some dark yellowish brown (highly sideritic); considerable interbedded, medium light gray to brownish-gray, moderately to highly sideritic (with very highly sideritic and carbonaceous shaly streaks), micaceous, fine sandstone to coarse siltstone

986 996 10 Shale, medium- to dark-gray (micaceous), some black (carbonaceous); considerable interbedded, fine sandstone to coarse siltstone, medium light to medium-gray, slightly to moderately sideritic, micaceous.

996 1003 7 Siltstone, brownish-black to black, sandy, very shaly, very highly carbonaceous and sideritic, micaceous; considerable interbedded, medium light gray to brownish-gray, fine to very fine grained sandstone, moderately sideritic, chloritic; small amount of medium- to dark-gray, dark yellowish brown (highly sideritic) shale

- Shale (silty) and siltatone, light clive gray to brownish-gray and medium-gray, some dark-gray to black (highly carbonaceous), 60%; xhallakakaka sandstone, medium light gray to medium-gray, fine-grained, chloritic, siderite and some iron oxide cement, 30%; trace of coal (Pocahontas No. 3?)
- 1010 1050 40 Sandstone, medium light gray with some light— and some medium—gray in the upper part, brownish—gray with some medium—gray in the lower part, fine—grained, very fine grained at the top, chloritic and micaceous, highly micaceous at the top, chloritic and micaceous, highly micaceous at the top, slightly to moderately sideritic (cement) in the upper part, moderately sideritic in lower part, highly sideritic at the bottom (cement and concretions ?), slightly calcareous near the center
- Shale, medium- to dark-gray, some grayish-black to black (highly carbonaceous), 50%; sandstone, light-gray, very fine to fine grained, kaolinitic, some mica and chlorite, slight-ly sideritic, 50%
- Sændstone, white to light-gray, light-gray to light brownish gray at the top, fine-grained, slightly to moderately
  sideritic and fine to very fine grained at the top; small
  amount of dark-gray to black (carbonaceous) and dark yellowish brown (sideritic) shale throughout the interval
- 1097 1104 7 Shale (very silty) to siltstone, medium to dark-gray and brownish-gray, highly micaceous, slightly to highly sider-itic, contains dark streaks of highly sideritic and highly carbonaceous material

#### MAUCH CHUMK GROUP, 1641 feet

- Siltstone and shale, light olive gray, highly spotted with dark to dusky kee yellowish brown siderite spherulites, contains considerable muscovite and some kaolinitic material; a moderate amount of dark-gray to black (highly carbonaceous) shale
- light gray to light olive gray, (highly sideritic- spherulites), slightly to moderately sideritic, highly micaceous; small amount of dark-gray to black (carbonaceous) shale

- 1125 1133 8 Siltstone and shale (silty), greenish-gray, some medium-gray to brownish-gray (sideritic), moderately calcareous and dolomitic in part, moderately to highly sideritic in part
- Shale and silty shale, medium- to dark-gray, grayish-brown to dusky-brown, greenish-gray, some grayish-black to black (carbonaceous), sideritic (spherulites) and micaceous in part; some of the greenish-gray is siltstone
- 1142 1147 5 Siltstone, medium and medium dark gray to greenish-gray, highly micaceous, sideritic in part, some carbonaceous material; small amount of dark-gray to black (carbonaceous) shale.
- 1147 1157 10 Siltstone, medium- to dark-gray, highly micaceous, shaly, carbonaceous, slightly to moderately sideritic, contains highly sideritic and highly carbonaceous streaks
- Sandstone (very fine) to siltstone (coarse), light-gray to medium-gray and brownish-gray, with brownish-black to black (highly carbonaceous)streaks, carbonaceous, micaceous, some kaolinitic material, slightly to moderately sideritic, slightly dolomitic
- 1181 1189 8 Sandstone, light to medium light gray and brownish-gray
  with brownish-black to black (highly carbonaceous and missess
  micaceous, shaly, streaks) fine to very fine grained,
  slightly to moderately sideritic, slightly calcareous, kaolinitic, micaceous
- Siltstone to sandstone (fine), light- to medium dark gray, somewhat shaly, highly micaceous and kaolinitic, some carbonaceous material, slightly to moderately sideritic, 70%; sandstone, very light to light-gray, medium-grained, some chlorite, a little siderité, 30%
- Sandstone, very light to light gray, some medium light gray, fine- to medium-grained, subrounded, slightly misses calcareous, slightly to moderately sideritic, highly sideritic in part, kaolinitic, some chlorite

Sandstone, light- to medium-gray, very fine to fine-1211 10 1201 grained, kaolinitic, chloritic, slightly calcareous, slightly to moderately sideritic, shaly (highly carbonaceous and micaceous) towards the bottom; some medium dark to cark-gray, micaceous, silty shale in the upper and middle parts Shale (silty) to siltstone (shaly) to sandstone (fine), 1211 1216 5 medium dark gray to grayish-bia,ck (highly micaceous, somewhat carbonaceous), light- to medium-gray and brownish gray (slightly to moderately sideritic, chloritic, kaolinitic); some moderate-brown to dark yellowish brown, highly sideritic siltstone 1216 1221 5 Shale (silty) to siltstone (shaly), medium dark to darkgray, some brownish-gray, highly micaceous, slightly sideritic, moderately sideritic in part 1221 1230 9 Sandstone, light to medium light gray and brownishgray, fine to very fine grained, very fine grained to siltstone (with black, carbonaceous and highly micaceous streaks) at the top; micaceous, somewhat chloritic, moderately sideritic (at the top) to slightly sideritic (at the bottom) 1230 1250 20 Sandstone, very light to light gray, medfum-grained, fine to medium-grained at the top, the quartz is subangular to subrounded, some secondary crystal facets, chloritic, very slightly calcareous at the top, moderately calcareous and dolomitic in the lower part to highly dolomitic at the bottom, slightly sideritic, some of the grains are dark-gray shale; considerable brownish-gray to dark-gray, highly micaceous, slightly sideritic shale in the upper part and middle parts 1250 Shale, grayish-brown and dusky-brown to brownishegray, 1260 10 80% at top to 50% at the bottom; shale, greenish-gray to light olive gray to olive-gray, somewhat calcareous,

highly dolomitic in part, some carbonaceous material,

20% at the top to 50% at the bottom

light olive gray to olive-gray (calcareous and dolomitic), medium-gray to greenish-gray (shale and siltstone); some light-gray to light greenish gray, dolomitic, finegrained sandstone; small amount of dark-gray to black (carbonaceous) shale Sandstone (fine, light-gray to light greenish gray), to siltatone (medium light gray to greenish-gray), 1265 1278 13 contains some chlorite, mica, kaolinitic material, and some shale, moderately calcareous and dolomitic; considerable interbedded shale, grayish- and dusky-brown to brownish-gray, greenish-gray to light olive gray (dolomitic and calcareous) to medium- and dark-gray 1278 1281 3 Siltstone, greenish-gray to olive-gray, slightly to moderately sideritic; some medium to dark-gray shale; small amount of black shale 1281 1336 55 Sandstone, light-gray to medium light gray, mostly light-gray in the middle part, fine to very fine grained, very fine grained to siltstone at the top (some mediumgray and brownish-gray), kaolinitic, somewhat carbonaceous and chloritic, slightly to moderately sideritic, moderately dolomitic; slightly calcareous; some grayish-brown to dusky-brown shale at the top; a moderate amount of medium-gray, micaceous shale in the lower part 1336 1339 3 Shale and siltstone, medium- to dark-gray, somewhat sideritic, 80%; sundstone, light-gray, fine to very fine grained, 20% 1339 1340 1 Shale, medium- to dark-gray, 40%; sandstone, very light to light-gray with medium light to medium-gray streaks (fine-grained), fine to medium-grained, 60%; small amount of dark yellowish brown, highly sideritic shale 1340 1352 12 Sandstone, very light to light-gray in the upper part, light-gray to light brownish gray in the lower part, fineto medium-grained, quartz grains are subangular to subrounded showing some secondary crystal facets, slightly calcareous and dolomitic in the upper part; a moderate (at the middle) to a large amount (at the bottom) of pale to moderate yellowish brown dolomite and dark to dusky brown siderite

Shale, grayish- and dusky-brown to brownish-gray,

1265

1260

5

1352	1357	5	Shale, medium dark to dark-gray; small amount of dark to
			dusky yellowish brown sideritic shale; small amount of
			kight-gray, fine to medium-grained sandstone
1357	1360	3	Shale, grayish-black to black (highly carbonaceous), some
			dark-gray, 50%; sandstone, very light gray to light olive
			gray, slightly to moderately sideritic, 50%
1360	1380	20	Sandstone, very light to medium light gray (with brown-
			ish-gray to black, highly carbonaceous, shaly streaks at
			the bottom), very fine grained, micaceous in part, kao-
			linitic in part, moderately dolomitic and somewhat sider-
			itic at the top, slightly sideritic toward the bottom
1380	1384	4	Sandstone, light- to medium-gray, very fine grained,
•			silty, 20%; shale and siltstone, dark-gray to grayish-
			black, some medium dark gray, sideritic in part, mica-
			ceous, 80%; small amount of dark to dusky yellowish brown
	-		siderite; small amount of pyrite
1384	1413	29	Shale (silty) and siltstone, dark-gray to grayish-black,
		÷ .	some olive-black, some medium dark gray, micaceous,
			slightly to moderately sideritic, highly sideritic in part;
			some light-gray, very fine grained sandstone at the top
			(cavings ?)
1413	1474	61	Shale, dark-gray to grayish-black, some olive-black and
			brownish-black, some medium dark gray, some moderate-
			brown to brownish-gray in upper part, slightly sideritic,
			calcareous and dolomitic in part at the bottom
1474	1482	8	Shale, dark-gray to grayish-black, 50%; sandstone, light-
			gray, very fine grained, 50%
1482	1503	21	Sandstone, light-gray and pinkish-gray to light brownish
			gray, very fine grained, kaolinitie, slightly chloritic
			and micaceous, somewhat dolomitic and sideritic in the
			upper part to very slightly dolomitic and sideritic at the
			bottom; considerable interbedded, dark-gray to grayish-
<b>.</b>			black shale in the upper part
1503	1510	7	Sandstone (very fine) to siltstone, light-gray to light
	<b>3</b>		brownish gray, kaolinitic, sideritic in part, 30%; shale medium dark gray to grayish-black (with black, highly carbonaceous streaks); some dark yellowish brown, sider-itic shale; small amount of grayish-red to very dusky red shale

Shale, medium dark gray to grayish-black (with black highly carbonaceous streaks at the bottom) to siltstone, medium light to medium and brownish-gray (somewhat sideritic), micaceous and kaolinitic 1553 1558 5 Shale, medium dark gray to grayish-black (with some black carbonaceous streaks), 70%; sandstone, light-gray, very fine grained, silty, 30% 1558 1563 5 Sandstone, light-gray, very fine grained, silty, subrounded, somewhat sideritic; some medium dark to darkgray shale 1563 1581 18 Shale, greenish-gray, some medium-gray, small amount of siderite, soft, silty and sandy at the bottom to siltstone and very fine sandstons; some light-gray, very fine grained with silt and fine sand, calcareous sandstone in the upper part 1581 1585 Shale, greenishpgray, 30%; shale and siltstone, mediumdark-gray, some olive-gray (slightly sideritie), some grayish-black to black (carbonaceous), 70%; small amount of white, medium-grained sandstone 1585 1640 Sandstone, white to light-gray, 1585-1620 (medium-grained 55 but fine-grained in part) 1620-1627 (fine- to mediumgrained), 1627-1630 (fine to very fine grained), and from 1630-1640 (very fine grained), subangular to subrounded, mostly quartz, Slightly calcareous at the bottom; a large amount of greenish-gray, dark-gray to grayish black shale (probably cavings) 1640 1646 Shale, medium-gray to dark-gray, soft, dolomitic in part 6 1646 Shale, highly calcareous, highly dolomitic, moderately 1682 36 sideritic, medium- to dark-gray in the upper part to a somewhat sideritic, dolomitic, shaly limestone, brownishgray to brownish-black with light-gray spots in the lower part (Avis Limestone) 1682 1691 Limestone, brownish-gray to brownish-black, dolomitic, shaly, 20%; shale, grayish-red to grayish-brown, medium- to dark-gray, \$0%; siltstone, greenish-gray to brownish-gray and grayish-brown, 10%

1510

1553

43

- 1691 1801 110 Shale and clay-shale, grayish-red to grayish-brown, a little dark-gray to black (carbonaceous), calcareous and dolomitic in part, at the top, some brownish-gray to medium gray and a little greenishegray; 1735-1741, some grayish-red to dusky-brown siltstone; 1747-1753, considerable interbedded medium-gray to brownish-gray and greenish-gray shale; at the bottom, considerable brownish-gray and some medium- to dark-gray shale
- 1801 1818 17 Shale, grayish-red to grayish-brown, medium-gray to dark-gray, some black (carbonaceous); considerable greenish-gray and brownish-gray shale and siltstone in the lower part, part of the shales are calcareous and dolomitic and highly dolomitic in the middle part
- 1818 1824 6 Shale (silty) and skltstone, medium light to medium-gray, partly dolomitic; considerable dark-gray to black (carbon-accous) and some grayish-red to grayish-brown shale
- 1824 1832 8 Shale, grayish-red to grayish-brown, calcareous in part, 60%; shale, medium-gray and greenish-gray, dolomitic in part, 40%
- 1832 1849 17 Shale and siltstone, very dusky red to dusky-brown at the top to grayish-red and grayish-brown at the bottom, somewhat calcareous and dolomitic
- 1849 1858 9 Clay and shale, grayish-red to grayish-brown and dusky-brown, slightly calcareous and dolomitic
- 1858 1869 11 Shale, grayish-brown and dusky-brown to very dusky red, slightly dolomitic in part 50%; clay-shale and shale, medium to medium dark gray, some greenish-gray, some brownish-gray, moderately dolomitic, somewhat calcareous in part
- 1869 1922 53 Shale, grayish-red to grayish-brown and dusky-brown at the top, and grayish-brown to dusky-brown at the bottom, a large amount of grayish-brown to dusky-brown siltstone in the middle part, a large amount of medium-gray to brownish-gray shale below the middle part, slightly calcareous and slightly dolomitic in part

- 1922 1963 41 Siltstone, greenish-gray, slightly calcareous, somewhat dolomitic, kaolinitic, somewhat micaceous and chloritic; some medium-gray to greenish-gray shale (considerable at the top); some grayish-red to grayish-brown shale at the top (cavings?); at the bottom, a moderate amount of medium-gray to brownish-gray dolomite and some light brownish gray to olive-gray calcareous dolomite
- 1963 1972 9 Shale, grayish-brown to dusky-brown, greenish-gray to medium- and dark-gray, some brownish-gray; some light olivε-gray to brownish-gray somewhat calcareous dolomite, shaly in part
- 1972 1999 27 Siltstone and shale, greenish-gray to medium-gray, olive-gray to brow nish-gray, some grayish-red to grayish@brown, some dark-gray to black; small amount of light olive gray to greenish-gray dolomite; 1979 to 1985 a large part is medium dark gray to grayish-black shale with considerable medium-gray to brow nish-gray calcareous dolomite
- 1999 2019 20 Shale and siltstone, grayish-red to grayish-brown to brownish-gray, medium-gray to greenish-gray (somewhat dolomitic), some dark-gray
- Shale and siltstone, medium dark to dark-gray with a few black "coaly" streaks, dolomitic in part, a little grayish-red to grayish-brown; some grayish-black to black dolomite; small amount of pyrite; a small amount of light-gray, very fine sandstone
- Sandstone, greenish-gray to light- and medium-gray, very fine to fine-grained, some siltstone, slightly calcareous in part; a large amount of medium dark to dark-gray shale and siltstone at the top and middle part; 2033 to 2036, shale, dark-gray to grayish-black with some micaceous and carbonaceous siltstone and some sandstone (the sandstone is very light to light-gray in the bottom part of the interval
- 2047 2059 12 Shale, medium dark to dark-gray; some dark-gray to grayish-black, fossiliferous, calcareous dolomite and dolomite shale, and some medium-gray to greenish-gray siltatone in the upper part

- 2149 2157 8 Shale, medium dark gray to grayish-black, a moderate amount of black (highly carbonaceous with a little pyrite); some greenish-gray siltstone; some grayish-brown to grayish-red shale at the bottom
- 2157 2174 17 Shale with siltstone toward the bottom, grayish-brown to grayish-red, greenish-gray to medium-gray, some dark-gray to grayish-black, considerable greenish-gray to medium-and brownish-gray in the lower part; small amount of light olive gray to dark-gray, calcareous, dolomitic shale
- 2174 2178 4 Shale, dark-gray to grayish-black, some black (highly carbonaceous), some grayish-brown to grayish-red, some greenish-gray to medium-gray (calcareous and dolomitic); some pyrite; some very light gray, fine-grained sandstone
- 2178 2248 70 Sandstone, white to very light gray, very light-gray to

  freenish
  light because gray at the bottom, fine-grained (subangular

  gray at the bottom,
  to subrounded, 2178 to 2195 (very fine grained) 2207 to

  2211 (fine to very fine grained), very fine grained for the
  bottom 10 feet, mostly quartz, small amount of shale scat
  tered throughout the interval; 2178 to 2191 and 2237 to

  2240, considerable dark-gray to black shale; trace of calcite (cement)
- 2248 2260 12 Dolomite, brownish-gray to medium and dark-gray, shaly; shale, greenish-gray to medium-gray, dolomitic; the lower part is mostly greenish-gray shale with some dark-gray to black shale; a small amount of light-gray, fine-grained, sandstone at the top
- Shale, greenish-gray to medium-gray, medium-gray to black (carbonaceous); shale (silty) to siltstone brownish-gray to grayish-brown; some greenish-gray siltstone and medium-to dark-gray dolomite, at the top; at the bottom, a small amount of very fine grained, light greenish-gray to light-gray sandstone
- 2278 2296 18 Sandstone, light-gray to light greenish gray, very fine grained to a kaolinitic and micaceous, medium light to dark-gray siltstone containing some carbonaceous material; considerable interbedded, dark-gray to black (highly carbonaceous) shale; at the top, a large amount of greenish-gray shale, some grayish-brown to brownish-gray shale, and some medium dark to dark-gray shaly dolomite (cavings)?

- Shale and siltstone, greenish-gray to medium-gray; shale, medium- to dark-gray, some grayish-black to black (carbonaceous); mostly greenishpgray in the upper part to mostly dark-gray in the bottom part; some medium- to dark-gray delomite and delomitic shale at the top; some brownish -gray and dark-gray limestone and calcareous shale toward the bottom
- Shale, dark-gray to grayish-black, slightly to moderately dolomitic, and siltstone, medium-gray in the upper part; shale, dark greenish gray to olive-gray, soft, 60% in the upper part and shale, dark-gray to grayish-black dolomitic in part, 40%, in the lower part of the interval
- 2335 2351 16 Siltstone and some shale, grayish-red to grayish-brown, brownish-gray to greenish-gray, micaceous; some dark-gray to grayish-black, somewhat dolomitic shale
- 2351 2357 6 Shale, medium-gray to grayish-black, moderately to highly dolomitic; shale, greenish-gray (soft), some brownish-gray to grayish-brown; some dark greenish-gray to olive-gray and medium-gray siltstone
- 2357 2374 Shale (dolomitic at top, calcareous at bottom) to calcareous

  17

  dolomite in the upper part to a dolomitic limestone in the

  lower part, medium-gray to dark-gray; considerable green
  ish gray to medium-gray soft shale at the top and some in the

  the lower part
- 2374 2387 13 Dolomite (highly calcareous) to limestone (highly dolomite), dark-gray to grayish-black with some medium-gray spots, shaly in part; a moderate amount of greenish-gray to medium- and dark-gray shale in the upper part
- 2387 2393 6 Limestone, dark-gray to grayish-black, highly dolomitic; shale, dark-gray to black, highly carbonaceous ("coaly" in part); small amount of light-gray to medium-gray, very fine grained sandstone
- 2393 2395 2 Sandstone, very light to light-gray, very fine grained; a very large amount of dark-gray to black (carbonaceous) shale and dark-gray to grayish-black limestone (cavings)

2395 2494 99

Sandstone, white to light-gray, light brownish gray in part, very fine grained, fine to very fine grained in part, 2437 to 2450 and 2480 to 2494 (fine to very fine grained), very slightly calcareous, mostly quartz, slightly carbonaceous (scattered streaks and specks of carbonaceous material), shely in part; a small amount of dark-gray to kkm black, silty and carbonaceous shale throughout the interval; a large amount of grayish-black to black, highly carbonaceous shale in the upper 25 feet (probably mostly cavings)

(Maxton Sandstone 2392-2506, from drillers) log)

2494 2511 17 No Samples

Shale, dark-gray to grayish-black, some black (carbona-ceous), slightly calcareous; limestone, dark-gray to gray-ish-black, some brownish-black, some medium- to dark-gray, dolomitic in part, contains many fossil fragments, very shaly in part; mostly shale with some medium- to dark-gray dark-Gray to grayish-black limestone at the top; mostly, dark-gray to grayish-black shale at the bottom

2562 2580 18 Limestone, dark-gray to brownish-black and black, some medium@gray spots, very shaly, contains many fossil fragments, somewhat delomitic in part, colitic in part; a moderate amount of medium dark to grayish-black shale at the top

2580 2595 15 Limestone, grayish-black to black, some brownish-black at the bottom, some light- to medium-gray (matrix), clastic texture, highly colitic, mostly colitis at the top, contains many fossil fragments in the middle and lower parts, very shaly in part

Dolomite, greenishegray, calcareous to shale, mediumgray and greenish-gray, somewhat calcareous and dolomitic,
the shale contains many fossil fragments, mostly shale
in the lower part; some grayish-black limestons at the top

Shale, medium- to medium dark gray, some greenish-gray,

mitic

highly calcareous (mostly fossil fragments) somewhat dolo-

Shale, medium and medium dark gray to dark greenish 2**6**36 2**6**56 20 gray, highly fossiliferous, highly calcareous (fossil gragments), somewhat dolomitic 2656 2673 Limestone, brownish-gray to brownish-black, shaly, some-17 what fossiliferous to a highly calcareous shale that is highly fossiliferous, mostly shale at the top ter very little at the bottom 2672 2678 Shale, dark greenish gray to blive-gray, highly calcareous, moderately dolomitic, somewhat fossiliferous, 70%; shale, medium@gray and greenish-gray to dark-gray, some black, somewhat calcareous and dolomitic, 30%; small amount of dark-gray to brownish-black limestone Shale, greenish-gray to medium-gray (highly dolomitic, 2678 2695 17 calcareous), grayish-brown to grayish-red and brownishgray (highly calcareous, dolomitic); the greenish-gray is highly calcareous in part (mostly fossils) 2695 2711 16 Limestone, medium- to dark-gray, highly fossiliferous, partly shaly to highly calcareous (mostly fossil fragments), shale, greenish-gray to medium-gray, silty 2711 2732 Shale, medium dark gray (highly calcareous, dolomitic) 21 at the top to a brownish-gray, very shaly limestone and highly calcareous shale at the bottom; the limestone has medium-gray, highly fossiliferous spots; the shales have many fossil fragments 2732 2738 Shale, brownish-black to black, highly calcareous at the 6 top to a very shaly, brownish-black limestone at the bottom 2738 2745 Shale, medium dark to dark-gray, very silty, very highly calcareous to a very silty and shaly limestone, brownishblack to dark-gray; considerable medium-gray limestone

### GREENBRIER LIMESTONE, 393 Feet.

2745 2753 8 Limestone, some medium-gray (fossiliferous) at the top,
brownish-gray to medium-gray with white to light-gray spots,
(mostly colites), clastic texture; considerable medium dark
to dark-gray and brownish-black highly calcareous shale
(cavings)? (Big Lime 2747-3144, from drillers) log)

with light-gray fossil fragments

light-gray spots, clastic texture, mostly colites, occasional mam pore space between the colites; some medium to dark-gray shale 27 56 2764 8 Limestone, brownish-gray to medium-gray with light-gray spots, some light brownish gray, moderately to highly oolitic, somewhat sandy and silty Limestone, light brownish gray (at the top) to brownish-2764 2782 18 gray and brownish-black with light brownish gray spots (in middle and lower parts), clastic texture, mostly oolites with calcite cement, slightly sandy in part 2782 2789 Limestone, light to dark brownish gray, colitic in part 7 2789 2795 6 No Samble 2795 2798 3 Limestone, brownish-gray, some light brownish gray; small amount of dark-gray shale; small amount of white dolomite? 2798 2809 11 Limestone, brownish-gray to brownish-black, some light brownish gray, clastic texture, slightly andy, fossiliferous and colitic in part, very slightly delomitic in part, an increase in the amount of colitic and fossiliferous limestone toward the bottom; small amount of white dolomite? Limestone, brownish-gray to dark-gray (with a large 2809 2825 16 amount of white to light-gray) at the top, brownish-gray to dark-gray and brownish-gray black (with some lightgray) at the bottom, clastic texture, a large amount of fossil fragments in the upper part, colitie Limestone, brownish-gray to dark-gray, some brownish-black, 2825 2856 31 some light-gray to light brownish gray, crystalline texture except for colitic streaks or layers, fine-grained, medium- to coarse-grained in part, somewhat shaly and silty, slightly dolomitic in part 2856 2874 Limestone, brownish-black (at the top) to dark brownish 18 gray (at the bottom), crystalline texture, very fine grained, some coarser grains, shaly and silty, some fossil fragments, somewhat colitic

Limestone, medium-gray to brownish-gray with white to

2753 2756

3

Limestone, brownish-gray to medium-gray, some light-gray. very shaly and silty in upper part to somewhat shaly and silty at the pottom, highly colitic at the top, slightly dolomitic in part, crystalline texture except at top, very fine to fine grained, medium-grained in part 2908 2935 27 Limestone, light brownish gray to medium-gray, some brownish-gray limestone and greenish-gray (highly calcareous, dolomitic) shale at the top, somewhat shaly in the upper part, very highly colitic at the top and middle, somewhat dolomitic in part, crystalline texture, very fine grained, some medium and coarse grains 2935 2979 44 Limestone, brownish-gray to medium- and dark-gray to brownish-black, some light-gray, shaly and very silty in part, slightly to moderately dolomitic in part, crystalline texture, fine grained 2979 Limestone, light brownish gray to brownish- and medium-3000 21 gray, very shaly, slightly silty at the top to slightly shaly and very silty at the bottom, crystalline texture, fine-grained, slightly to moderately dolomitic in part 3000 3033 Limestone, brownish-gray to medium-gray, some very light 33 to light-gray (mostly matrix), clastic texture, highly oolitic, sklty in part, some shaly limestone near the middle, a very large amount of light-gray, highly colitic limestone toward the bottom 3033 3043 10 Limestone, light olive gray and greenish-gray to brownishgray, very shaly and silty, moderately to highly dolomitie; considerable brownish-gray limestone at the bottom 3043 3062 19 Limestone, brownish-gray and medium dark gray to brownishgray black, some medium gray, very slightly to slightly dolomitic; crystalline texture, fine-grained; considerable medium-gray to brownish-gray, highly calcareous, silty shale at the bottom 3062 3081 19 Limestone, light brownish gray and light-gray (at the top), to brownish-gray (at the bottom), very slightly to somewhat dolomitic, crystalline texture, very fine grained, somewhat silty and shaly; some dark brownigray, dolomitic limestone at the bottom

2874 2908 34

3198 3210 12 Siltstone and shale, medium dark to dark-gray (shale)
with some greenish-gray to brownish-gray (siltstone) in
the upper part, grayish-brown to brownish-gray and greenish-gray (siltstone) with some medium- to dark-gray (shale)
in the bottom part, micaceous, the greenish-gray siltstone
contains some glauconite?; some medium- to dark-gray
limestone (cavings?)

Siltstone, grayish-brown to grayish-red, some greenish-slightly gray to medium- and dark-gray, kighty dolomitic, slightly glauconitic in part, ferruginous (cement giving red-brown color), somewhat micaceous; at the bottom, some brownish-gray to greenish-gray, sandy, kaolinitic siltstone; small amount of white dolomite

#### POCONO FORMATION, 553 FEET

- 3222 3254 32 Siltstone (coarse) to sandstone (very fine), medium-gray and greenish-gray to light olive gray and light brownish gray at the top to light olive gray and medium-gray at the bottom, kaolinitic, contains grains of rock fragments and a little carbonaceous material; a very large amount of interbedded, medium dark to dark-gray silty shale in the upper part, trace of pyrite; trace of limestone
- 3254 3258 4 Wiltstone, light olive gray to medium-gray, kaolinitic, 20%; shale and siltstone, medium-gray to grayish-black (somewhat carbonaceous), micaceous, 80%
- 3258 3298 40 Siltstone (light olive gray and medium- to dark-gray) and shale (medium dark gray to dark-gray, some grayish-black), kaolinitic, micaceous, contains some carbonaceous material, slightly to moderately sideritic in part
- 3298 3302 4 Shale and siltstone, medium- to dark-gray, 60%; sandstone, greenish gray to light bisownish gray and medium-gray, kaolinitic, very slightly pyritic, 40%
- 3302 3311 9 Sandstone, light olive gray to medium-gray and greenish-gray, very fine grained, silty, kaolinitic, contains grains or rock fragments (grayish-brown, dark-gray), very slightly pyritic; small amount of calcite in the lower part

- Siltstone and shale, medium- to dark-gray, micaceous, 3311 3340 29 kaolinitic, some carbonaceous material at the top, slightly to moderately sideritic, very slightly dolomitic at the bottom; a small amount of light- to medium-gray, finegrained sandstone containing carbonaceous material, some coarwe grains 3340 3391 Sandstone, medium light to medium dark gray, medium dark 51 gray to brownish-gray in lower part and medium light gray , light clive gray for the bottom 15 feet, very fine grained, some medium and coarse grains at the top, carbonaceous, somewhat kaolinitic and micaceous, very slightly calcareous and sideritic; co\_nsiderable interbedded, mediumto dark-gray shale and siltstone at the top (cavings ?) 3391 3400 Sandstone, medium light gray and light olive gray to 9 medium-gray, very fine grained, contains brown iron oxide cement, some kaolinite, some mica, and some carbonaceous material, slightly calcareous, 60%; shale, medium dark to dark-gray, some brownish-gray (somewhat sideritica, 40%; 3400 3481 Shale, medium dark to dark-gray; small amount of dark to 81 dusky yellowish brown, sideritic shale and siderite; some light- to medium-gray, kaolinitic, siltstone at the bottom; at the top, some light- to medium-gray, very fine grained sandstone (probably cavings) 3481 3702 221 Siltstone, light- to medium-gray. kaolinitic, micaceous, some carbonaceous shaly streaks, sideritic in part; interbedded shake, medium dark to dark-gray; small amount of moderate to dark, yellowish brown, highly sideritic shale 3702 3724 Silfstone, dark-gray to grayish-black, shaly, somewhat 22 carbonaceous; siltstone, medium- to dark-gray, kaolinitic and micaceous; shale, medium dark to dark-gray 3724 3744 Shale, grayish-black to black (highly carbonaceous), some 20
- shale and siltstone

  3744 3765 21 Shale, grayish-black to black (highly carbonaceous),
  brownish-black (silty, slightly pyritic); some interbedded,
  light olive gray to medium-gray and brownish-gray (somewhat sideritic) siltstone and shale

dark-gray, some brownish-black (silty and slightly pyritic)

in the lower part; small amount of light- to medium-gray

3765 3775 10 Shale, grayish-black to black (highly carbonaceous), brownish-black (silty, slightly pyritic), medium dark to dark-gray; some siltstone (sandy) to sandstone (very fine grained), light- to medium-gray (Berea); small amount of brownish-gray somewhat sideritic siltstone

#### DEVONIAN SHALES, 2859 FEET

- 3775 3810 35 Siltstone and shale, medium light to medium dark gray, kaolinitic, micaceous
- 3BMO 3819 9 Sandstone (very fine) to siltstone, very light gray to medium light gray, somewhat kaolinitic; interbedded, shale, medium dark to dark-gray
- 3819 3854 35 Siltstone, light gray and light greenish gray to medium-gray, somewhat kaolinitic and micaceous; a large amount of interbedded, shale, medium dark to dark-gray
- 3854 6623 2769 Samples not described
- Shale, black, very highly carbonaceous, moderately to highly calcareous, somewhat dolomitic, contains streaks of highly pyritic shale; small amount of medium- to dark-gray shale; small amount of brownish-gray to dark-gray limestone; small amount of medium- the bottom

### HUNTERSVILLE CHERT, 38 Feet

- 6634 6637 3 Chert, light- to medium-gray and brownish-gray, calcareous to a cherty limestone, 20%x to 30%; shale, grayish-black to black, very highly carbonaceous, pyritic, calcareous, ("coaly" in the bottom part), 70% to 80% (mostly cavings?)
- 6637 6642 5 Chert (calcareous) to limestone (cherty), light- to medium gray and brownish-gray, 40% at top to 80% at bottom; shale, grayish-black to black (very highly carbonaceous), somem dark-gray, pyritic in part, calcareous 60% at top to 20% at bottom (cavings)
- 6642 6646 4 Chert (calcareous) and limestone (cherty), light- to dark-gray and brownish-gray, very shaly
- 6646 6648 2 Contains chert but are too highly contaminated to examine

Chert, calcareous, shaly, too highly contaminated with 6648 6660 12 iron rust and steel chips for detailed description Chert, light- to medium-gray (glassy), dark-gray to 6660 6661 1 black (very shaly), calcareous, glauconitic, some pyrite Chert (calcareous at top) to limestone (cherty, at 6661 6664 3 bottom), light- to medium-gray (glassy to milky), darkgray to brownish-gray to black (very shaly) 6667 Sandstone (very cherta, much of the grains are shale) to 6664 3 shale (sandy and cherty), calcareous; some moderate reddishkrawa brown clay 6667 6670 Sandstone (very fine to fine-grained, very shaly), to a 3 shale (very sandy), grayish-black to black, most of the grains are quartz and shaly chert with a shale and dolomite matrix, glauconitic Chert, very light gray to light-gray (glassy to milky) 6670 6672 2 and dark-gray to black (very shaly), 50% (at top) to 40% (at bottom); sandstone (shaly) to shale (sandy), grayish-black to black, some medium to dark-gray (at the bottom), dolomitic, glauconitic, 50% (at top) to 60%(at bottom)

### ORISKANY FORMATION, 12 FEET.

- Sandstone, very light to light-gray, fine to very fine grained, subangular to subrounded, some rounded medium grains, small amount of glauconite (included in chips of the sandstone), slightly calcareous; small amount of limestone; a large amount of dark-gray to black shale and chert (cavings?)
- Sandstone, very light to light-gray, fine-grained, subrounded, some medium (rounded) grains, contains many shale
  grains and a little glausonite; at the bottom (6683-6684)
  a large amount of coarse to very coarse grains, some
  granules, This sample shows very poor sorting and contains much shale. (conglomeratic or gravel cavings?)

## HELDERBERG LIMESTONE, 168 FEET.

<b>.</b>		_	The state of the s
6684	£ 668 <b>6</b>	2	Sandstone, medium- to dark-gray, very fine to medium-
			grained, slightly cherty, slightly glauconitic, moderately
			to highly carbonaceous, moderately calcareous; some black
			very carbonaceous, sandy shale at the bottom
6686	669 <b>5</b>	7	Sandstone, medium- to dark-gray, some black (particu-
			larly in upper part and at bottom), light- to medium-gray
			(in the lower part), fine- to medium-grained, subrounded
			to rounded, some coarse well rounded grains, moderately to
			very highly carbonaceous, slightly to moderately calcar-
			eous
6693	66 <b>9</b> 5	2	Sandstone, medium to dark-gray, fine- to medium-grained,
			rounded, highly calcareous to a very sandy limestone
6695	<b>67</b> 0 <b>0</b>	5	Sandstone, medium- to dark-gray, very fine to fine-
			grained, some medium (rounded) grains, highly calcareous
			at top to moderately calcaraous at the bottom, somewhat
			silty and manay shaly
6 <b>7</b> 00	6704	4	Sandstone, light- to medium-gray, some dark-gray, fine-
		24	grained, very highly calcareous (at top) to a very sandy
			limestone (at the bottom)
6704	6713	9	Sandstone, white to very light gray, fine to very fine
			grained, subrounded, some (medium grained rounded) quartz
			grains, highly calcareous (at the top) to somewhat cal-
			careous (at the bottom), slightly carbonaceous; trace of
			chert
6713	6714	1	Limestone (very sandy) to sandstone (highly calcareous),
			light- to medium-gray, slightly carbonaceous
6714	6720	6	Sandstone, very light to light-gray, fine to very fine
			grained, highly calcareous
6720	6722	2	Sandstone (very highly calcareous) to a limestone (very
			sandy), light- to medium-gray (6722 corrected to 6720)
6720	6725	5	Sandstone, light- to medium-gray, fine to very fine
			grained, silty, very cherty (6723-6724 very cherty to
			chert), very highly calcareous
6725	6729	4	Chert (sandy) to a sandstone (very fine, very cherty), light-gray, some medium-gray, very highly calcareous; trace of glauconite

672	9 6734		5 Siltstone, light olive grew to light one
		•	and the gray to light-gray, some medium-
			gray, very cherty, very highly calcareous, to a very silty limestone
6734	4 6735	7	
			Sandstone, light-gray, very fine grained, highly calcar- eous, cherty
673	5 6740	ε	
			sandstone (very line, highly
			calcareous), light- to medium-gray, very silty, cherty at
6 <b>74</b> 0	6742	2	the top, shaly at the bottom
	0111		
6742	6747	5	gray, very silty and sandy, moderately cherty and shaly
	0111	J	dark-gray and brownish-gray, very
			shaly to a highly calcareous shale, very silty, sandy (
			(very sandy at the bottom), slightly cherty, contains
67 <i>4</i> 7	67 <b>5</b> 2	15	fossil fragments
<b>4.7 2.1</b>	0.00	10	Limestone (at the top), very sandy, light- to medium-gray,
			(a few dark gray streaks) to a sandstone (at the bottom),
 6762	6778	16	fine (rounded) light gray, very highly calcareous  and brownish - gray, some light gray,
	• • • • • • • • • • • • • • • • • • • •	10	Limestone, medium to dark-gray, very sandy and shaly at
			the top, shaly and very silty and very cherty in the middle
			cherty and shaly and sandy at the bottom, slightly glau-
6778	6782	4	Conitic, some fossil fragments
			Limestone, light- to medium-gray; chert, white to light-
			gray; shale (dark-gray to grayish-black, brownish-gray) to
6782	6784	2	a very sandy, very shaly limestone
		•••	Limestone, medium- to dark-gray (very shaly) with light
			gray sposs, very shaly, very sherty and sandy, contains many fossil fragments
6784	6785	1	
		,	Limestone, medium- to dark-gray and brownish-gray, very
6785	6806	21	Limestone light to a light
			Limestone, light- to medium-gray with dark-gray spots and streaks, highly fossiliters.
			streaks, highly fossiliferous, very cherty, shaly and silty, very silty and sandy at the bottom
68 <b>06</b>	6812	6	
			Sandstone (light-gray, very fine, highly calcareous) to limestone (very sandy shelp to
			limestone (very sandy, shaly to very shaly, medium- to dark- gray) and shale (highly colors)
			gray) and shale (highly calcareous, silty, cherty, dark-gray)

68 <b>12</b>	6825	13	Shale (dark-gray to grayish-black, highly calcareous)
			to limestone (brown ish-gray to medium-gray, very shaly),
			very cherty, silty and sandy, mostly shale at the top to
			mostly limestone at the bottom
6825	6839	14	Limestone, dark-gray to grayish-black, some medium-gray,
			considerable medium-gray at the top, highly fossiliferous,
			very shaly and cherty at the top to shaly, silty and sandy
	•		at the bottom
68 <b>39</b>	6852	13	Limestone, dark-gray to grayish-black, clastic texture,
			mostly oolites with light- to medium-gray matrix, some-
			what silty and sandy; small amount of pyrite
			CAYUGAN GROUP, 33, plus, FEET
68 <b>52</b>	6862	10	Limestone (brownish-black to black, somewhat dolomitic)
٠			at the top to dolomite (grayish-black to black, calcareous,
			very silty) at the bottom, some fossil fragments
6862	6879	17	Dolomite, medium dark to dark-gray and grayish-black to
			black, moderately to highly calcareous; some brownish-
			black, somewhat dolomitic limestone at the bottom
68 <b>79</b>	6885	6	Limestone, brownish-black to black, dolomitic and dolo-
			mite, grayish-black to black, calcareous
6889			TOTAL DEPTH