

MAP OF MARYLAND

SHOWING THE GEOLOGICAL FORMATIONS AND AGRICULTURAL SOILS

PREPARED BY
MARYLAND GEOLOGICAL SURVEY
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 IN COOPERATION WITH
 U. S. GEOLOGICAL SURVEY AND U. S. BUREAU OF SOILS.

SCALE: 1:62,500 - 8 miles - one inch

1907

LEGEND

CRYSTALLINE ROCKS		PALEOZOIC FORMATIONS		MESOZOIC AND TERTIARY FORMATIONS		QUATERNARY FORMATIONS	
GEOLOGY.	SOILS.	GEOLOGY.	SOILS.	GEOLOGY.	SOILS.	GEOLOGY.	SOILS.
ACID VOLCANIC Flux granitic rocks, usually well altered by development of epidote or sericite.	This clay loam with occasional small boulders; moderate productivity; wheat, grass and small crops.	CAYUGA (Sallis-Mallin) Red and gray shales and sandstone with thin bedded limestone, 100-200 ft.	Heavy red loams or sandy loams; fair grass and wheat lands.	DUNBAR Thin shales and limestones with coal, 250 ft.	Yellow sandy and clay loam and thin stony loams; hilly pasture land.	LAVATTE Gravel and sand occurring at higher elevations, 20 ft. Elevation 100-150 ft.	Sands and gravel locally hardened; poor farming lands.
BASE VOLCANIC Dark colored compact rocks, composed of epidote and chlorite apophyses.	Micaceous clay soils with boulders; moderately productive; wheat, grass and small crops.	NARARA Alternating thin bedded limestones and shales, 30-50 ft.	Yellow clay loam and loams; fair grass and wheat lands.	MONOMABLE Black shales, sandstones, and limestones, 100-150 ft.	Heavy loams, thin shaly soils; pasture land and locally truck crops.	ST. MARY'S Clays, sandy shales and marls, 100 ft.	Sands and sandy loams; corn, tobacco, truck and general crops.
GRANITE Light granitic rocks often with mica in parallel folia.	Loam, slightly sandy; good farm lands; wheat, hay, corn and oats.	CLERTON Dark greenish gray gneiss rock with much hornblende.	Loam, somewhat sandy; wheat, corn and grass.	CONOVER Sandstone and shales with coal and iron ore, 100-200 ft.	Yellow shaly loams and thin shaly soils with boulders; hilly pasture.	CHESAPEAKE Clays, sandy shales, sands and marls, 100 ft.	Meadow lands and sandy loams; tobacco and truck crops.
DIORITE Bright green, gray or reddish brown rock, with characteristic black streaked outcrops.	Light yellow, thin loam; unproductive; forest growth of small trees and oaks.	TECHUCA Massive white quartzite sandstone, 100-200 ft.	Shallow, grayish, stony, sandy soils; areas forested.	ALLEGHENY Sandy and carbonaceous shales and sandstones with coal seams, 100-200 ft.	Yellow loams and thin shaly soils with boulders; pasture land and forest areas with some fruit trees.	CHALK Clays, sandy shales, marls and dolomitic earth, 100 ft.	Fine sandy to silty loams; corn, tobacco and general crops.
FRONTON SLATE High grade blue-black roofing slate.	Heavy clay loam with rock boulders; seldom farmed extensively.	JONIA Alternating thin bedded red shales and sandstones, 100 ft.	Red sandy loam of limited extent; little cultivated.	MADON CHINE Red shales and sandy shales and thin sandstones, 100 ft.	Red sandy loam on steep hillside, mostly forested.	GREENSBORO Green sand, clay and sand, 100 ft.	Light yellow loams and sandy loams; truck crops also wheat, corn, oats and meadow crops.
GARNET QUARTZITE Finely conglomeratic quartzite.	Rocky, sandy soil on hill slopes; forest clad with oak, pine and chestnut.	MANTERSBURG Dark shaly shales, 100-200 ft.	Yellow clay loam and loams; fair grass and wheat lands.	GREENSBORO Gray and brown siliceous lime stones, 100-200 ft.	Shallow clay loams in narrow bands; grass, wheat and oats.	MATHEW Greenish-black, sandy clay, containing green concretions and lignite, 100 ft.	Sands with sandy subsoil; truck crops and small fruits; chestnuts and oaks.
PHYLLITE Slate and chlorite schists with numerous quartz veins.	Yellow-brown loam, sometimes sandy or clayey; good farm lands; wheat, corn, hay and oats.	SHENANDOAH Massive bedded blue and white limestones, 100 ft.	Red clay soil, excellent farming lands; wheat, corn, hay and oats.	POCONO Massive gray coarse sandstone, 100 ft.	Shallow, stony and sandy soils; areas forested.	MADISON Sandstone with dark carbonaceous shales, 100 ft.	Sand and sandy loams; tobacco, truck and general crops.
WARRICK GREENS Massive white and gray usually much crystallized and carrying garnet, quartz and staurolite.	Yellow-brown loam, micaceous; good farm lands; wheat, corn and grass.	ARTIFICAL Dull brown sandstone grading into shales, 100 ft.	Thin, rocky soils, high rounded hills and mountains; unproductive.	HANSHIRE (Cat Hill) Alternating red shales and sandstones, 100-200 ft.	Red sandy loams and loam along ridges; grass, corn and pasture land.	HARTON Sandstone with dark carbonaceous shales, 100 ft.	Gravelly and sandy loams and sands; medium soil for wheat, corn, hay and truck crops.
MARBLE Pure and coarse bedded crystalline marble, frequently dolomitic.	Heavy clays and meadow lands; excellent farming lands; wheat, corn and grass.	HELENS Gray, sandy shales with sandstone layers, 100 ft.	Yellow, sandy soils; pasture lands; grass and mountain pastures.	JENNINGS (Jennings-Portage-Cherry) Bedded shales and sandstones, 100-200 ft.	Light yellowish loams; pasture lands.	ARONDEL Thin bedded shales with iron ore, 100 ft.	Clays and sandy shales; rather poor soil for general crops.
HAINES GREENS Highly crystalline quartzite of alternating hornblende, micaceous and quartzitic layers, often interbedded with pyroxenite and granite.	Sandy soil, rather stony; hillside slopes with forest cover.	WATERLOO White sandstone quartzite and conglomerate, 100-200 ft.	Thin, rocky soils high peaks and ridges; unproductive.	HONEY (Marvill-Hamilton) Dark gray shales and sandstones, 100 ft.	Light yellowish loams; pasture lands.	FALSTON Interbedded shales and clays, 100 ft.	Clays and sandy shales; rather poor soil for general crops.
COMPLEX UNWRAPPED A complex of acid and basic rocks, crystalline sediments and sandstone metamorphosed to schists. Individual members unnumbered.	Heavy clay, loam and micaceous soils on low lands; rocky thin soils on ridges; good farm lands.	LODON Dark slate with limestone, shales, sandstones and conglomerates, 100-200 ft.	Thin, micaceous, sandy soil in low ridges and valleys; grass, pine and clover lands.	ORLEANS Olive to black carbonaceous sandstones, 100 ft.	Shallow gray sandy soil, steep slopes; forested or pasture.	DEBAR Narrow dikes or rusty, brown, rounded boulders.	Body boulders with thin covering of deep red clay.
				HELDERSBERG Dark blue and gray limestones, 100 ft.	Stony clay soils, good grass, wheat, oak, pine and clover lands.	NEWARK Red and gray sandstones and shales.	Red and gray lands; chiefly grass and wheat.
				TALBOT Low-lying terrace composed of gravel, sand and clay, 10 ft. Elevation 10-20 ft.	Meadow land, sandy loam and clay; wheat and corn.	PRE-QUATERNARY LEVEL	
				CHESAPEAKE Medium level terrace, carrying sandstone and green sand and clay, 10 ft. Elevation 10-20 ft.	Steady loam and loams with gravel and boulders; wheat, corn, oats and hay.	SURFICIAL DEPOSITS	
				CHESAPEAKE High-lying terrace composed of gravel, sand and clay, 10 ft. Elevation 40-50 ft.	Sandy loam and sands usually in high level areas; tobacco and truck crops.	IN EASTERN AND SOUTHERN MARYLAND	