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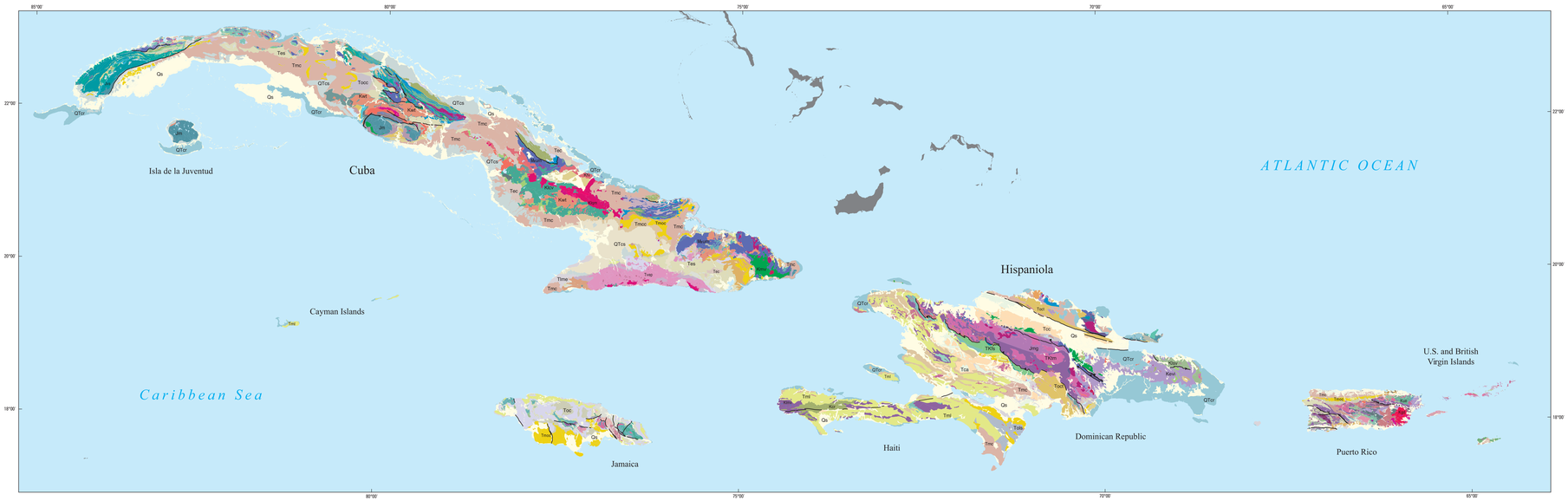
U.S. Department of the Interior
U.S. Geological Survey

Open-File Report 2019–1036
Sheet 1 of 2
Pamphlet accompanies map



Coastline for U.S. Virgin Islands from National Hydrography Dataset. Remaining coastlines from compiled geologic maps

Lambert Conformal Conic projection; World Geodetic System 1984 (WGS84)

APPROXIMATE MEAN DECLINATION, 2019

SCALE 1: 2 500 000

50 0 50 100 150 200 250 MILES

50 0 50 100 150 200 250 300 350 KILOMETERS

NATIONAL GEODETIC VERTICAL DATUM OF 1988

The geologic data shown on this map is derived from mapping published as early as 1926 and as recently as 2002. The largely nondigital source maps were digitized and the map units of each source were integrated across the region by the compilers

GIS database and digital cartography by F.H. Wilson and Keith Labay

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CORRELATION OF MAP UNITS

[See Description of Map Units (in pamphlet) for precise unit ages]

LIST OF MAP UNITS

[See Description of Map Units (in pamphlet) for complete unit descriptions]

UNCONSOLIDATED AND SEMICONSOLIDATED DEPOSITS

Qs — **Surficial deposits, undifferentiated (Quaternary)**—Unconsolidated deposits ranging from clay to coarse cobbles and boulders and organic debris

QTcr — **Deposits associated with carbonate reefs and reef complexes (Quaternary and upper Tertiary, Pliocene)**—Semiconsolidated and partially consolidated carbonate reef complexes

QTcs — **Marine sand and conglomerate (Quaternary and upper Tertiary, Pliocene)**—Semiconsolidated conglomerate, sand, and marl

Qom — **Artificial-fill deposits (Quaternary, Holocene)**—Consists of a variety of rock types reworked for artificial fill

SEDIMENTARY ROCKS

TERTIARY SEDIMENTARY ROCKS

Time — **Limestone, marl, and evaporite deposits (Tertiary, Pliocene to Miocene)**—Consists of older reef deposits of reef limestone and marl representing intertidal facies

Tcs — **Calcarenite, biocalcarenite, limestone and marl (Tertiary, Pliocene to Miocene)**

Tcc — **Continental clastic rocks (Tertiary, Pliocene to Miocene)**—Conglomerate, sandstone, and sandy shale; local coarse, unconsolidated sand and lignite

Tmcc — **Mixed clastic and carbonate rocks (Tertiary, Miocene)**—Claystone, marl, sandstone, limestone, and siltstone

Tmc — **Limestone, marl, and calcarenite**—Limestone, marl, and calcarenite

Tmmc — **Mixed clastic rocks**—Conglomerate, sandstone, siltstone, and claystone

Tmos — **Clastic rocks (Tertiary, Miocene to Oligocene)**—Sandstone, siltstone, calcareous clay, and marl with interbeds of silty biodetrital limestone

Tml — **Limestone (Tertiary, middle Miocene to middle Eocene)**—Generally white limestone

Tmoc — **Limestone and marl (Tertiary, lower Miocene to upper Oligocene)**—Dominantly limestone; also, lesser marl, clay-rich limestone, calcarenite, and minor sandstone and conglomerate

Tmoos — **Clastic rocks associated with carbonate-rock formations (Tertiary, lower Miocene to upper Oligocene)**—Polymictic conglomerate with silty and sandy matrix; sandstone and shale

Tooc — **Mixed carbonate and clastic rocks (Tertiary, Oligocene)**—Limestone, marl, siltstone, and sandstone

Toc — **Carbonate rocks**—Limestone and marl; locally dolomitized or may include minor calcarenite

Tosc — **Clastic rocks, including conglomerate**—Claystone to conglomerate, locally containing lenses of sandstone that have lignite

Toct — **Older clastic rocks (Tertiary, Oligocene to Eocene)**—Dominantly coarse clastic rocks, including conglomerate and polymictic sandstone; also includes minor siltstone, and locally, marl and limestone

Tols — **Reef limestone and chert (Tertiary, Oligocene to Eocene)**—Variably bedded limestone containing interbedded and nodular chert

Tvs — **Volcanic and sedimentary rocks (Tertiary, Eocene)**—Limited exposures of volcaniclastic sedimentary rocks derived from underlying Cretaceous andesite (unit Kevi here)

Tec — **Limestone containing igneous-rock debris (Tertiary, Eocene)**—Limestone interbedded with breccia and tuff

Tecs — **Limestone and igneous-rock debris, shallow-water facies**—Limestone, marl and carbonate breccias; locally, dolostone; also, calcarenite containing abundant igneous clasts

Tecd — **Limestone and igneous-rock debris, deep-water facies**—Marly or argillaceous limestone and marl; argillaceous calcarenite having graded bedding and containing dark igneous clasts. Some limestone breccia is present

Tecr — **Conglomerate and sandstone (Tertiary, Eocene)**—Polymictic, graywacke sandstone interbedded with sandy calcarenite, shale, marl, and conglomerate

Tes — **Mixed clastic and lesser carbonate rocks (Tertiary, Eocene)**—Various mixtures of conglomerate, sandstone, claystone, limestone, siltstone, and marl

Tvcv — **Mixed carbonate and clastic rocks and tuff (Tertiary, Eocene)**—Thin- to medium-bedded lithic and litho-vitric tuff and interbeds of limestone, marl, and thin-bedded siltstone; locally, limestone is dominant

Tepc — **Brecciated carbonate and clastic rocks (Tertiary, middle Eocene to Paleocene)**—Sandstone, conglomerate, claystone, marl, limestone, and, locally, calcareous breccia

Tpor — **Volcanic clast–bearing rocks (Tertiary, lower Eocene to Paleocene)**—Conglomerate containing metamorphic, volcanic, and plutonic rock clasts, in muddy sand matrix; locally, includes ash-flow tuff or ignimbrite

Tvg — **Sedimentary rocks and tuff (Tertiary, lower Eocene to Paleocene)**—Calcareous tuff, graywacke, medium-grained volcanic clast sandstone or conglomerate, and massive limestone containing volcanic-rock fragments

TERTIARY TO CRETACEOUS SEDIMENTARY ROCKS

TKfs — **Flysch (lower Tertiary to Upper Cretaceous)**—Calcareous, flysch-like rocks containing minor igneous-rock debris

Mixed volcanic and sedimentary rocks (Tertiary? to Cretaceous, Campanian or lower?)—In southwestern Puerto Rico

TKcs — **Conglomerate, sandstone, and claystone**—Volcaniclastic sandstone, siltstone, claystone, conglomerate, and, locally, limestone

TKvc — **Mixed volcanic and clastic rocks**—Volcaniclastic sandstone and conglomerate; also, olistostrome beds

TKmv — **Andesite and basalt flows and tuff**—Dark-green volcaniclastic breccia; thin- to thick-bedded to massive, coarse-grained tuff and tuff breccia; interbedded flows

TKl — **Limestone, marl, and tuff (Tertiary, Paleocene and Cretaceous, Maastrichtian)**—Marl, micritic and detrital limestone, fine-grained polymictic sandstone and conglomerate, and bentonitic clay

CRETACEOUS SEDIMENTARY ROCKS

Kvsf — **Mixed sedimentary and volcanic rocks (Cretaceous)**—Limestone and chert; tuff or volcaniclastic rocks

Klsv — **Sedimentary and volcanic rocks (Upper Cretaceous)**—Volcaniclastic rocks, tuff, marl, claystone, intermediate- to mafic-composition volcanic rocks, and reefal limestone

Kor — **Limestone and chert (Cretaceous)**—Dominantly limestone; beds of dolostone and dolomitic limestone present locally

Klc — **Limestone and limestone conglomerate (Upper Cretaceous, Maastrichtian and Campanian)**—Dolostone and dolomitic limestone; silicified porcellaneous limestone; and massive limestone

Kelc — **Limestone and minor calcarenite (Cretaceous, Turonian to Hauterivian)**—Stratified, biomicritic and arenaceous limestone, chert, marl, and, locally, breccia-conglomerate

Kec — **Carbonate rocks, including biomicritic limestone (Lower Cretaceous, Barrremian to Berriasian)**—Biomicritic limestone, local calcareous argillite or minor chert

Kogl — **Volcaniclastic conglomerate (Cretaceous, Maastrichtian to Albian)**—Volcanic-pebble conglomerate containing predominantly andesitic and mafic volcanic-rock clasts

Ku — **Undifferentiated clastic rocks (Upper Cretaceous, Maastrichtian to Campanian)**—Widely exposed shale to conglomerate; uncommon limestone

Kvss — **Volcaniclastic sandstone and mudstone**—Andesitic to dacitic volcanic-clast sandstone, tuffaceous sandstone, lapilli tuff; mudstone, and a few thin, limestone beds

Kso — **Siltstone and local olistostrome deposits**—Siltstone; distinctive because of included olistostrome deposits containing igneous- and sedimentary-rock debris

Kcls — **Clastic rocks and rudistid limestone (Upper Cretaceous, Maastrichtian to Campanian)**—Conglomerate, sandstone, volcaniclastic sandstone and siltstone; always associated with limestone and marl

Klsv — **Mixed clastic, carbonate, and volcanic rocks (Upper Cretaceous, Campanian to Coniacian)**—Tuffaceous sandstone, conglomerate, felsic- to intermediate-composition tuff, siltstone, argillite, limestone, andesite, marl, and breccia

Kue — **Older undifferentiated clastic rocks (Upper Cretaceous, Santonian to Cenomanian)**—Volcanic-clast sandstone, lesser volcaniclastic breccia, calcareous mudstone, and interbedded sandy limestone, siltstone, chert, minor volcanic-clast conglomerate, and, locally, lava flows

Klu — **Tutu Formation (Cretaceous, Santonian to Albian)**—Volcanic-clast wacke, shale, conglomerate, calcareous siltstone, sparse limestone, and rare basalt and andesite; also includes metamorphosed equivalents in Virgin Islands

Kvsv — **Older mixed clastic, carbonate, and volcanic rocks (Cretaceous, Cenomanian to Albian)**—Chiefly volcaniclastic sandstone and siltstone and subordinate pillowed basaltic andesite flows and minor limestone, conglomerate and breccia; local calcarenite

Kmm — **Martin Mesa Formation and similar formations (Cretaceous, Turonian and lower)**—Massive and stratified biomicritic limestone, calcarenite, quartzose sandstone, slate, and clayey calcareous rocks

Kor — **Rio Nuevo Formation and similar clastic-rock units (Cretaceous, Cenomanian to Albian)**—Siltstone, shale, volcaniclastic sandstone and mudstone, minor volcanic breccia, and volcanic-clast conglomerate

Kclh — **Chert (Cretaceous, Cenomanian to Aptian or lower)**—Chert and dark, fissile, carbonaceous, locally marly or clayey shale of probable volcanic origin

Kwi — **Water Island Formation, volcanic-clast wacke (Lower Cretaceous)**—Volcanic-clast wacke containing clasts of keratophyre, basalt, and trondhjemite

Kpf — **Polier Formation (Lower Cretaceous, Albian to Valanginian)**—Thin-bedded, micritic limestone interbedded with sandstone and shale

CRETACEOUS TO JURASSIC SEDIMENTARY ROCKS

Kch — **Limestone and shale (Lower Cretaceous to Upper Jurassic)**—Limestone; includes bituminous limestone, chert, quartz-rich sandstone, and argillite

JURASSIC SEDIMENTARY ROCKS

Jlc — **Limestone and dolostone (Upper Jurassic)**—Massive limestone, calcarenite, calciradite, micrite; locally dolomitized

IGNEOUS ROCKS

YOUNG VOLCANIC ROCKS

Qvm — **Alkali basalt (Quaternary)**—Nepheline basalt and "alkaline basalt"

QTv — **Dos Hermanos and Valle Nuevo volcanic fields (Quaternary, Pleistocene and Tertiary, Pliocene)**—Trachyandesite and latite

TERTIARY VOLCANIC AND HYPABYSSAL ROCKS

Thb — **Hypabyssal dikes and intrusions (Tertiary)**—Rhyolite and syenite; porphyritic rhyodacite and dacite dikes, hypabyssal intrusions, and lesser mafic rocks

Tv — **Intermediate and mafic flows and tuff (Tertiary, Miocene to Eocene)**—Basalt, tuff, and agglomerate; includes subaerial and submarine volcanic rocks

Tvc — **Pyroclastic rocks (Tertiary, Eocene)**—Andesite, augite-andesite breccia and flows, tuff, and volcanic-clast sandstone; locally, poorly bedded felsic-lapilli tuff

Tn — **Necker Formation (Tertiary, Eocene?)**—Subaerial tuff and breccia, including welded tuff

Tvep — **Tuff and breccia (Tertiary, early Eocene and late Paleocene)**—Undifferentiated tuffite, andesite, basaltic andesite, tuffaceous sandstone, and beds of limestone

Ttd — **Intermediate to felsic biotite tuff (Tertiary, early Paleocene)**—Andesitic volcaniclastic breccia and interbedded quartz-bearing dacitic tuff

TERTIARY TO CRETACEOUS VOLCANIC ROCKS

TKkd — **Dacite and keratophyre (Tertiary to Late Cretaceous)**—Dacite and quartz keratophyre

TKv — **Extrusive rocks, flows, tuff, and breccia (Tertiary, Paleocene to Late Cretaceous, Campanian?)**—Volcanic breccia interlayered with basaltic flows and tuff, and, locally, limestone

TKcr — **Rhyodacite and rhyolite (Tertiary, Paleocene to Late Cretaceous)**—Rhyodacite and rhyolite

CRETACEOUS VOLCANIC AND HYPABYSSAL ROCKS

Klhk — **Hypabyssal rocks and keratophyre porphyry (Cretaceous)**—Mafic dikes of gabbro, diabase, andesite, diorite, and lamprophyre; small diabase bodies, as well as keratophyre dikes and plugs

Kvr — **Volcanic rocks, undivided (Cretaceous)**—Rhyolite to basalt, as well as nonpillowed flows, volcanic breccia, sandstone, and conglomerate; minor limestone, siltstone, and tuff

Kvf — **Andesitic breccia, flows, and tuff (Late Cretaceous, Maastrichtian to Santonian)**—Welded and nonwelded ash-flow tuff and volcanic breccia; locally, includes pillowed and nonpillowed andesitic flows and lenses and beds of calcarenite, sandstone, and conglomerate

Klmv — **Basalt, pillowed and nonpillowed flows, breccia, and tuff (Late Cretaceous, Maastrichtian to Santonian)**—Basaltic or basaltic-andesite flows; locally containing lenses of limestone, tuffaceous beds, and chert; local volcaniclastic conglomerate

Kof — **Felsic volcanic and hypabyssal rocks (Late Cretaceous, Campanian)**—Felsic flows and tuff, dacite and rhyolite domes

Klv — **Intermediate and felsic volcanic rocks (Cretaceous, Campanian to Coniacian)**—Rhyolite to andesite flows, tuff, and domes; also, minor basaltic andesite and basalt

Klp — **Intermediate and silicic pyroclastic rocks (Late Cretaceous, Turonian to Cenomanian?)**—Largely andesitic to dacitic tuff and tuffaceous sedimentary rocks; locally includes basalt, marl, and limestone

Kvlb — **Iberia Formation of Cuba (Cretaceous, Turonian to Albian)**—Andesite and volcaniclastic rocks, sandstone, diabase, tuff, and limestone

Klet — **Intermediate and mafic pyroclastic rocks (Cretaceous, Cenomanian to Aptian)**—Volcaniclastic rocks; composition ranges from dacite to basaltic andesite, but largely andesite

Kmum — **Mafic volcanic rocks (Cretaceous, Cenomanian to Barremian)**—Largely basalt flows; also, subordinate andesite and sedimentary rocks, dominantly chert, but lesser limestone, argillite and siltstone

Kevi — **Intermediate-composition volcanic rocks (Early Cretaceous, Albian to Barremian?)**—Primarily pillowed or brecciated andesitic flows, interbedded with tuff, tuffaceous sandstone, and chert

Kevm — **Basalt and basaltic andesite (Early Cretaceous, Albian and older)**—Basaltic andesite flows; pillows of amygdaloidal basalt, flow-breccia, tuff, tuff-breccia, and hyaloclastite breccia; local limestone lenses

Kkp — **Keratophyre (Early Cretaceous)**—Keratophyre flows, flow breccia, and tuff interbedded with thin flows of dark-green to almost black spilite flows

Kspf — **Spilitic basalt (Early Cretaceous)**—Generally massive spilite flows; lacking columnar joints and, though commonly lacking pillows, pillows are locally well developed

CRETACEOUS TO JURASSIC VOLCANIC AND HYPABYSSAL ROCKS

Kclb — **Zurrapandilla Formation and Cajul Basalt (Early Cretaceous to Late Jurassic)**—Diabase and basalt; rare siltstone and limestone; may include spilitic basalt, diabase, chert, and possible tuff

TERTIARY INTRUSIVE ROCKS

Tegr — **Granite and granodiorite (Tertiary, Eocene?)**—Granite to granodiorite, monzonite, and, locally, quartz diorite

Ted — **Diorite and tonalite (Tertiary, Eocene?)**—Small diorite and tonalite plutons; also included are rocks described as plagiogranite

Tgn — **Gabbronorite, norite, and diorite (Tertiary, Eocene)**—Primarily small plutons, dikes and complex dike swarms, some with internal layering parallel to dike walls

TERTIARY TO CRETACEOUS INTRUSIVE ROCKS

TKga — **Alkali syenite (Tertiary, Paleocene to Late Cretaceous, Maastrichtian?)**—Small body of alkali syenite

TKga — **Granite and aplite (Tertiary, Paleocene to Late Cretaceous, Maastrichtian?)**—Granite and aplite

TKgm — **Granodiorite and quartz monzonite (Tertiary, Paleocene to Late Cretaceous, Maastrichtian?)**—Small granodiorite stocks and Utuado batholith of Puerto Rico

TKim — **Granitic rocks, granodiorite, and tonalite (Tertiary, Paleocene to Late Cretaceous, Maastrichtian?)**—Granodiorite and tonalite, in belt trending northwestward across Hispaniola

TKgt — **Quartz diorite and diorite (Tertiary, Paleocene to Late Cretaceous, Maastrichtian?)**—Generally small diorite plutons, in Dominican Republic, Puerto Rico, and U.S. Virgin Islands

TKgb — **Fountain Gabbro (Tertiary, Paleocene or Late Cretaceous, Campanian?)**—Two-pyroxene gabbro

CRETACEOUS INTRUSIVE ROCKS

Kgb — **Gabbro (Cretaceous)**—Gabbro and diabase, primarily in Cuba but also in U.S. Virgin Islands

Kim — **Granitic rocks, undivided (Late Cretaceous)**—Granitic and hypabyssal rocks of undivided granodiorite and quartz diorite and subvolcanic rhyolite and dacite

Kgr — **Granite (Late Cretaceous, Maastrichtian and Campanian)**—Granite and lesser granodiorite and aplitic syenite, in small bodies in Cuba

Kqm — **Quartz monzonite and similar rocks (Late Cretaceous, Maastrichtian and Campanian)**—Granosyenite (quartz syenite?), syenite, and other granitic rocks in Cuba

Kgd — **Granodiorite (Late Cretaceous, Maastrichtian and Campanian)**—Granodiorite of San Lorenzo in Puerto Rico

Kqd — **Quartz diorite (Late Cretaceous, Maastrichtian and Campanian)**—Small quartz diorite plutons, in Cuba, Dominican Republic, and Puerto Rico

Kdh — **Diorite and hornblendite (Late Cretaceous, Maastrichtian and Campanian)**—Small diorite and hornblendite bodies, in Cuba and Puerto Rico

Kmgd — **Granodiorite and tonalite (Cretaceous, Santonian to Albian)**—Granodiorite, tonalite, and subordinate granitic rocks, in Cuba, Dominican Republic, and Puerto Rico

Kmq — **Trondhjemite and keratophyre (Early Cretaceous)**—Trondhjemite and intrusive keratophyre bodies, in U.S. Virgin Islands

JURASSIC INTRUSIVE ROCKS

Jgr — **Río Cana Granite (Middle Jurassic)**—Coarse-grained, pink granite, in Cuba

METAMORPHIC ROCKS

MESOZOIC METAMORPHIC ROCKS

Mxm — **Marble (Mesozoic or older)**—Marble of indefinite age, in central Cuba and at east end of Samaná Peninsula in Dominican Republic

Kmgb — **Gabbroic amphibolite and amphibolite (Cretaceous?)**—Gabbroic amphibolite and amphibolite

KJcm — **Mariguita Chert (Cretaceous, middle Turonian? to Jurassic, early Tithonian to late Kimmeridgian)**—Laminated, fine-grained, dark-gray chert; locally, interbedded with recrystallized and largely silicified limestone and pillow basalt

Kgs — **Marble and greenschist (Cretaceous, Cenomanian or older)**—Marble of Outer Brass Limestone and Congo Cay Limestone Lens of Tutu Formation, in U.S. and British Virgin Islands

Kmv — **Metavolcanic and meta-volcaniclastic rocks (Early Cretaceous)**—Mostly pyroclastic metavolcanic rocks in Cuba; in Dominican Republic, consists of metamorphosed keratophyre, quartz keratophyre, tuff, and other volcanic rocks

KJmc — **Mabujina Complex and equivalent rocks (Early Cretaceous or Late Jurassic)**—Gabbro, basalt, basaltic andesite, and pyroclastic rocks; deformed and metamorphosed to greenschist and amphibolite facies

Klg — **Metaigneous rocks (Early Cretaceous, Hauterivian to Berriasian)**—Meta-granite variably foliated and boudinaged and, locally, strongly folded

KJyb — **Metasedimentary and metaigneous rocks (Early Cretaceous or Late Jurassic, Tithonian)**—Graphitic phyllite and metamorphosed shale, laminated meta-limestone, and possible ultramafic to mafic tholeiitic rocks metamorphosed to blueschist and greenschist facies

KJmq — **Cabrito Formation (Early Cretaceous to Late Jurassic)**—Flysch-like beds of metamorphosed carbonate and clastic rocks

JURASSIC METAMORPHIC ROCKS

Jsch — **Metamorphic complexes characterized by glaucophane schist (Jurassic?)**—Metasedimentary schist and local metavolcanic rocks, characterized by presence of glaucophane and other blueschist-facies minerals

Jm — **Metasedimentary rocks, including marble (Jurassic)**—Metasedimentary schist, locally graphitic, and marble; lacks evidence of blueschist facies

Jmg — **Mafic schist and amphibolite (Late to Middle Jurassic)**—Garnetiferous amphibolite, containing felsic plagioclase, white mica, and clinozoisite; includes layer of garnetiferous meta-quartzite

Jvs — **San Cayetano Formation (Jurassic, Oxfordian to Early Jurassic)**—Undifferentiated metasandstone, mudstone, argillite, and phyllitic schist

OPHIOLITE AND OPHIOLITE-ASSOCIATED ROCKS

Mxs — **Serpentinite (Cretaceous or Jurassic?)**—Small bodies of serpentinite, in Jamaica and Puerto Rico

Mxmd — **Mafic rocks, diorite, and gabbro (Mesozoic or older)**—Undifferentiated metaigneous rocks, including ultramafic and mafic metamorphic rocks, serpentinite schist, talc schist, antigorite-rich schist, and metagabbro

Mxum — **Ultramafic and associated rocks (Mesozoic or older)**—Ultramafic rocks consisting of serpentinite, harzburgite, lherzolite, wherlite, and serpentinized dunite, throughout Cuba; small pyroxenite and other ultramafic bodies, in Hispaniola

KJmu — **Dike complexes (Early Cretaceous or Late Jurassic)**—Scattered mafic dike complexes, in central and southern Cuba

TECTONITES

Tmo — **Mélange and olistostromes (Tertiary, Eocene to Paleocene)**—Mélange and olistostrome deposits

TKyf — **Yaguajay Formation (Tertiary, Paleocene to Cretaceous, Maastrichtian)**—Chaotic mix of blocks of serpentinite, gabbro, volcanic rocks, limestone, and tuff

Kmk — **Mélange (Cretaceous?)**—Mélange, in Dominican Republic (No other description is available)

TECTONICALLY AND HYDROTHERMALLY ALTERED ROCKS

TKht — **Hydrothermally altered rocks (Tertiary, Eocene or Cretaceous)**

Tfb — **Fault breccia (Tertiary, Eocene)**—Consists of clay-rich altered rocks; mapped only in south-central Puerto Rico, but, likely much more widely distributed

bu — **Bedrock of unknown type (age unknown)**

EXPLANATION OF MAP SYMBOLS

[Contacts and minor faults not shown on map sheet 1 owing to small map scale]

Contact—Solid where location is certain; long-dashed where location is approximate; short-dashed where location is inferred; dotted where location is concealed

Fault—Solid where location is certain; dashed where location is approximate; dotted where location is concealed

Thrust fault—Solid where location is certain; dashed where location is approximate; dotted where location is concealed. Sawteeth on upper plate

High-angle thrust fault—Solid where location is certain; dashed where location is approximate; dotted where location is concealed. Sawteeth on upper plate

Preliminary Geologic Map of the Greater Antilles and the Virgin Islands

Compiled by
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