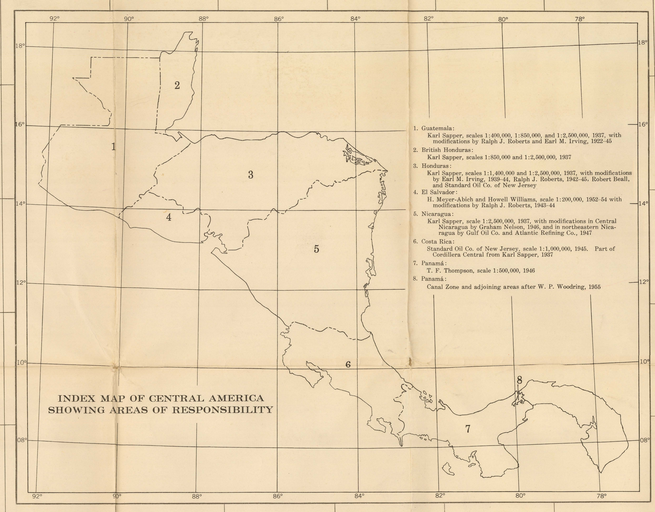
GEOLOGIC MAP OF CENTRAL AMERICA

Scale 1:1,000,000

10 0 50 100 Miles

10 0 50 100 Kilometers

Contour interval 1,000 feet
Datum is approximate mean sea level



EXPLANATION

SEDIMENTARY ROCKS

Qal — Alluvium
Terrestrial alluvium, slope wash, lakebeds, and river-terrace deposits; includes marine and beach deposits along coast

Q / Qm — Limestone and sediments
Q, limestone in British Honduras. Qm, includes sand, clay, conglomerate, and agglomerate of Pleistocene age in Costa Rica

QTs — Sands
Quaternary and Pliocene quartzose sands forming extensive terraces with savanah vegetation in British Honduras and Honduras; also includes unconsolidated sediments in Panama

Tp — Pliocene rocks
Unnamed formations in Honduras and Costa Rica. Pliocene beds in northern Guatemala. Chiriquí (volcanic outwash), Chagres Azul, and Bas formations in western Panama; San Carlos, east Mandinga formations of continental origin and Chagres formations of marine origin in central Panama

Tpm — Pliocene and Miocene rocks
Marine and continental beds in Guatemala

Tm — Miocene rocks
Toledo and unnamed limestone in southern Guatemala and British Honduras. Upper Petén, Sepur, Upper Mazatenilla, and unnamed formations in Nicaragua, Costa Rica, and Panama; Gatún, Culebra, La Boca marine member of Panama formation, Pedro Miguel agglomerate member of Panama formation, and Cucaracha formations, and upper part of Caimito formation, east of Canal Zone; and unnamed formations in Panama

To / Tos — Oligocene rocks
To, Río Dulce, Petén, and Juxtlahuaca formations in Guatemala; unnamed formations in Costa Rica. Tos, Caimito, Bohío, Bas Obispo, Las Cascadas, and unnamed formations in Panama

Teo / Teu / Te / Tep — Eocene rocks
Te, Gatuzcelin and Tzeel formations in central and eastern Guatemala; Toledo limestone in southern Guatemala and adjacent areas in Nicaragua and Costa Rica subdivided locally into upper Eocene, Teu, middle Eocene, Tem, and lower Eocene, Tel. Tep, Sepur strata, continental beds in central Guatemala, grade northward into marine beds

Upper Cretaceous

Ku — Limestone and clastic rocks
Includes unnamed limestone in Guatemala, beds of clastic rock in Nicaragua; also includes Caloma, Crucero, and Planeton formations in central Honduras

Kls — Limestone
Overlies Metapán formation in Honduras, eastern Guatemala, and Nicaragua. Includes Esquias formation in Honduras

Km — Metapán formation
Continental and marine Cretaceous beds; Metapán formation in eastern Guatemala, Honduras, and Nicaragua; includes overlying limestone unit near Metapán, Honduras. Valle de Angeles and Agua Fresca formation in central Honduras; may include rocks of late Cretaceous or Tertiary age near Tegucigalpa, Honduras

Ks — Sedimentary rocks, undifferentiated
Undifferentiated Cretaceous sedimentary rocks of marine and continental origin

Kc / Kli — Cobán and Lozoy formations
Limestone and dolomite in Guatemala

KJt — Todos Santos formation
Interbedded sandstone, shale, and conglomerate with minor amounts of limy shale, marl, and limestone. Differentiated only in western Guatemala

Teg — El Plan formation
Near San Juancito in central Honduras

Pc — Chochal limestone
Limestone and dolomite (Carboniferous limestone of Sapper and Termer)

Pr — Santa Rosa formation
In Guatemala and British Honduras consists of interbedded limestone, conglomerate, marl, shale, and sandstone

SEDIMENTARY AND IGNEOUS ROCKS

Qv / Qb — Volcanic rocks
Qv, basaltic and andesitic lavas and dacitic pyroclastic rocks, Qb, pyroclastic rocks, water-laid tuffs, and lacustrine deposits. Differentiated in Nicaragua, El Salvador, and Guatemala

QTv — Volcanic rocks
Basaltic and andesitic Pliocene volcanic rocks in El Salvador; not differentiated in Guatemala and Honduras. May also include volcanic rocks of Quaternary age

Tv — Volcanic rocks
Chiefly ductile and rhyolitic lavas and pyroclastic rocks with interbedded sedimentary rocks, largely of pre-Pliocene age; includes Oligocene rocks in Panama and may include some Quaternary and pre-Miocene units

Ti — Intrusive rocks
Granite, granodiorite, diorite, and related plutonic rocks. Largely of early Tertiary and late Mesozoic age, but may include intrusive rocks of Paleozoic age in Honduras and Guatemala

KT — Igneous, pyroclastic, and sedimentary rocks
In Panama and Costa Rica, includes dioritic intrusive rocks in Panama

M — Serpentine
Probably late Paleozoic and early Mesozoic

Pi — Intrusive rocks
Granite, granodiorite, diorite, and related porphyries. Largely of Paleozoic age but may include intrusive rocks of pre-Paleozoic and Mesozoic age

SEDIMENTARY AND METAMORPHIC ROCKS

pP — Pre-Cretaceous metamorphic rocks
Phyllite, schist, and gneiss in eastern Honduras and Nicaragua

PAL — Rocks of Paleozoic age
Undifferentiated shale, limestone, and sandstone and their metamorphic equivalents

pC — Pre-Cambrian metamorphic rocks
Undifferentiated schist, gneiss, phyllite, quartzite, and marble, probably pre-Cambrian. May also include strata of Paleozoic age and early Mesozoic age in places

? — Geology uncertain or unknown

Contact
Dashed where approximately located

U / D — High-angle fault
U, upthrown side; D, downthrown side. Dashed where approximately located; dotted where concealed

Thrust fault
T on upper plate

Note: See plate 2 for explanation of purple circled numbers

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