

CORRELATION OF MAP UNITS

| SURFICIAL DEPOSITS AND SEDIMENTARY ROCKS | VOLCANIC ROCKS | INTRUSIVE ROCKS | PERIOD |
|--|----------------|-----------------|-------------------------|
| Qs | Qsd, Qcs, Qv | | Quaternary |
| Qs | | | |
| Tm | Tv | Ti | Tertiary |
| Unconformity | Tn | | |
| Tt | | Tpf | Cretaceous |
| Unconformity | | | |
| Khc | | | Cretaceous and Jurassic |
| Unconformity | | | |
| Khs | | | |

DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS AND SEDIMENTARY ROCKS

Qs SURFICIAL DEPOSITS—Unconsolidated alluvium, colluvium, glacial, marine, swamp and silted deposits; mainly sand, silt, gravel and pebbles.

Tm MILKY RIVER FORMATION OF GALLOWAY (1974) AND BEAR LAKE FORMATION—Milky River Formation (Pliocene); mainly volcanoclastic sandstone and conglomerate, non-marine. Bear Lake Formation (Pliocene); sandstone, conglomerate, siltstone, shale, and coal; shallow marine to non-marine.

Tt TOLSTOI FORMATION OF BARK (1965) (Paleocene and Eocene)—Sandstone, conglomerate, siltstone, dark shale, coal; high percent volcanic debris; mainly non-marine.

Khc HODDOK AND CHIGNIK FORMATIONS—Hoodok Formation (Upper Cretaceous); dark shale and siltstone. Huddok Formation (Upper Cretaceous); light-colored sandstone, shale, conglomerate, siltstone, and coal; shallow water to non-marine.

Khs HERBERT LIMESTONE AND STARBUCK, HANEX, AND SHELTER FORMATIONS—Herbert Limestone (Lower Cretaceous); thin-bedded calcareous composed of fossiliferous graptolite and other calcareous sandstone. Starbuck Formation (Upper Jurassic and Lower Cretaceous); thin-bedded fossiliferous and laminar sandstone. Hanex Formation (Upper Jurassic); dark siltstone and shale in upper part; light arkosic sandstone and conglomerate in lower part. Shelter Formation (Middle Jurassic); dark siltstone and shale.

VOLCANIC ROCKS

Qsd ASH AND DEBRIS FLOW DEPOSITS—Volcanic ash, pumice, tuff, and breccia; includes air-fall, ash flow, and avalanche deposits; unsorted to well-sorted; poorly- to well-stratified; includes some lava flow.

Qcs CINDER AND SPATTER CONES, AND DOMES—Cinders, scoria, and associated pyroclastic rock.

Qv VOLCANIC ROCKS—Andesite and dacite flows, tuff, volcanic breccia, and lahars.

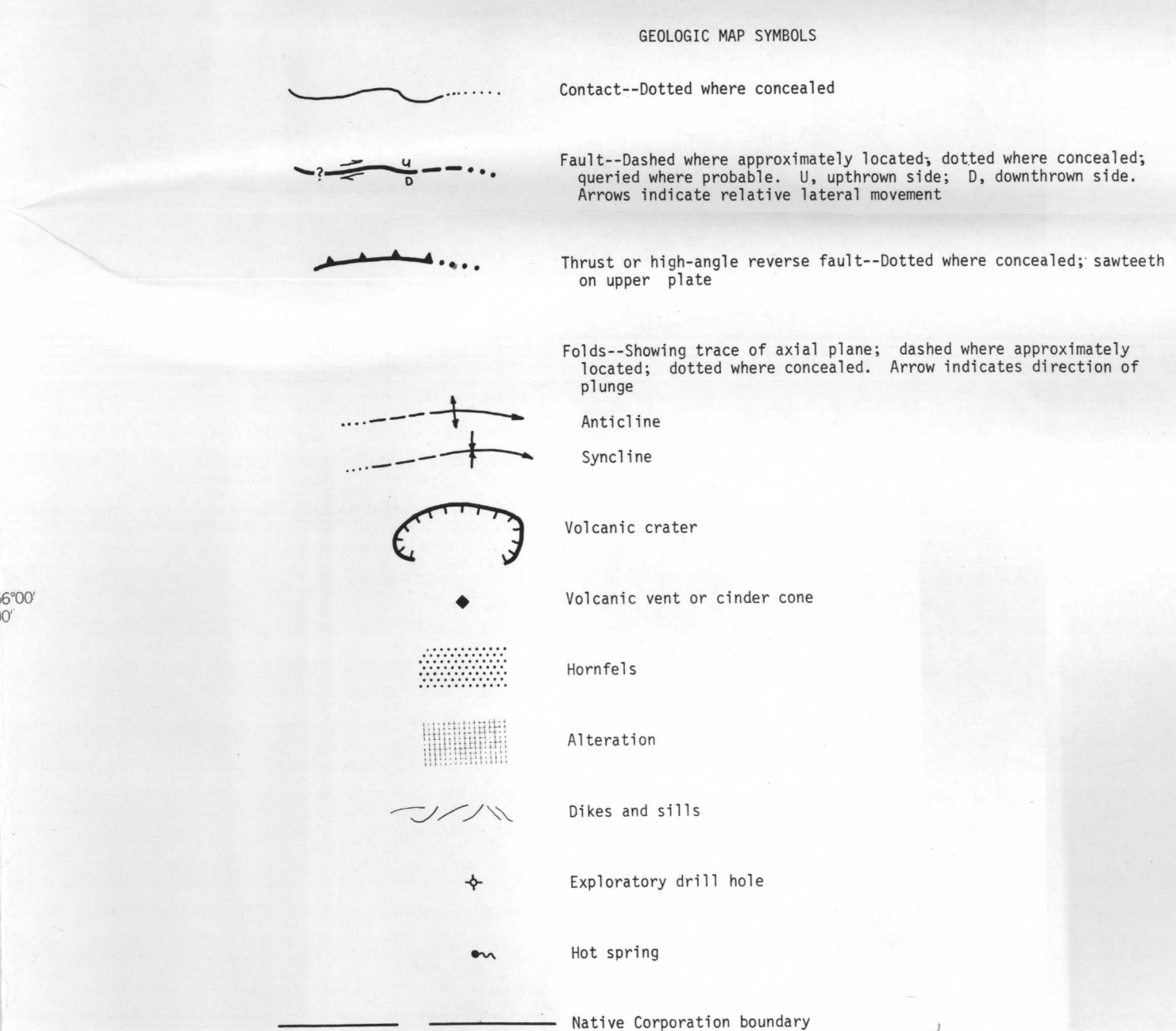
Tv VOLCANIC ROCKS—Rhyolite, andesite, dacite, and basalt flows; tuff, volcanic rubble flows, and lahars; includes hyaloclastite plugs and dikes.

Tn MESA FORMATION (Miocene or Oligocene)—Basalt flows, volcanic rubble flows, and lahars; minor volcanoclastic sedimentary rock.

INTRUSIVE ROCKS

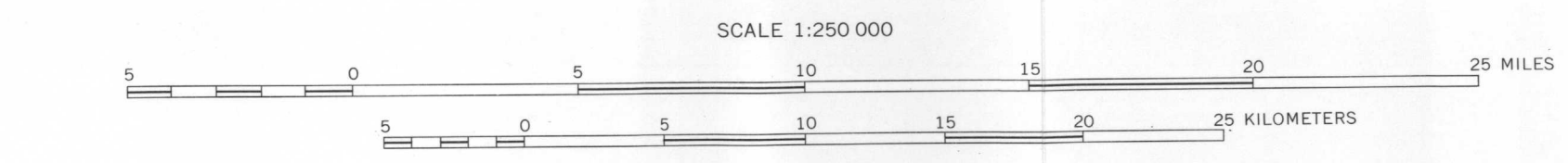
Ti INTRUSIVE ROCKS—Quartz diorite, diorite, and gabbro; medium- to coarse-grained; mainly small dikes.

Tpf GRANODIORITE—Seldot Islands pluton; medium- to coarse-grained; hornblende- and biotite-bearing.



Base from U. S. Geological Survey, 1963

Geology from Detterman and others (1979)



SAMPLE LOCALITY MAP

MAP AND TABLES SHOWING GEOCHRONOLOGY AND WHOLE-ROCK GEOCHEMISTRY, CHIGNIK AND SUTWIK ISLAND QUADRANGLES, ALASKA

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