

DESCRIPTION OF MAP UNITS

**UNCONSOLIDATED DEPOSITS**

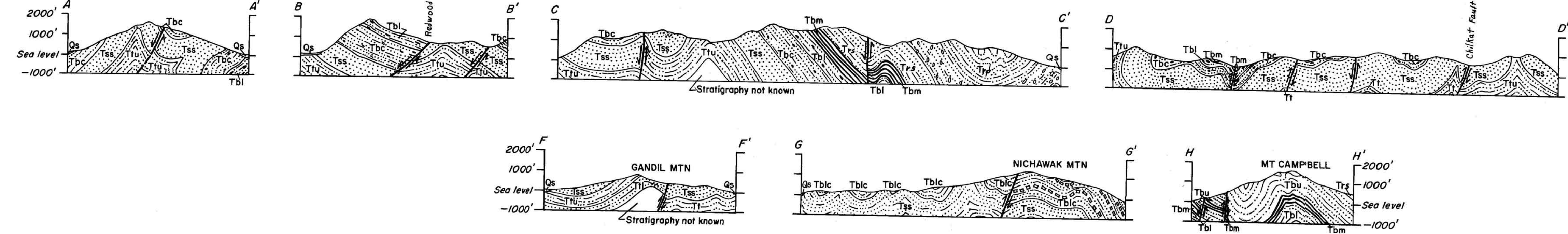
- Qa UNDIFFERENTIATED SURFICIAL DEPOSITS (Holocene) Mainly glacioluvial, fluvial, and lacustrine gravel, sand, and mud; includes lagoon and tidal estuary deposits at present and former sea level.
- Qop MARINE SHORELINE DEPOSITS (Holocene) Mainly sand and gravel of present beaches, beach ridges, spits, and tidal flats.
- Qof OLDER MARINE SHORELINE DEPOSITS (Holocene) Sand and gravel associated with former beaches, beach ridges, and spits.
- Qs GLACIAL WASHING DEPOSITS (Holocene) Predominantly till with minor lacustrine and fluvio-glacial material.

**CONSOLIDATED ROCKS**

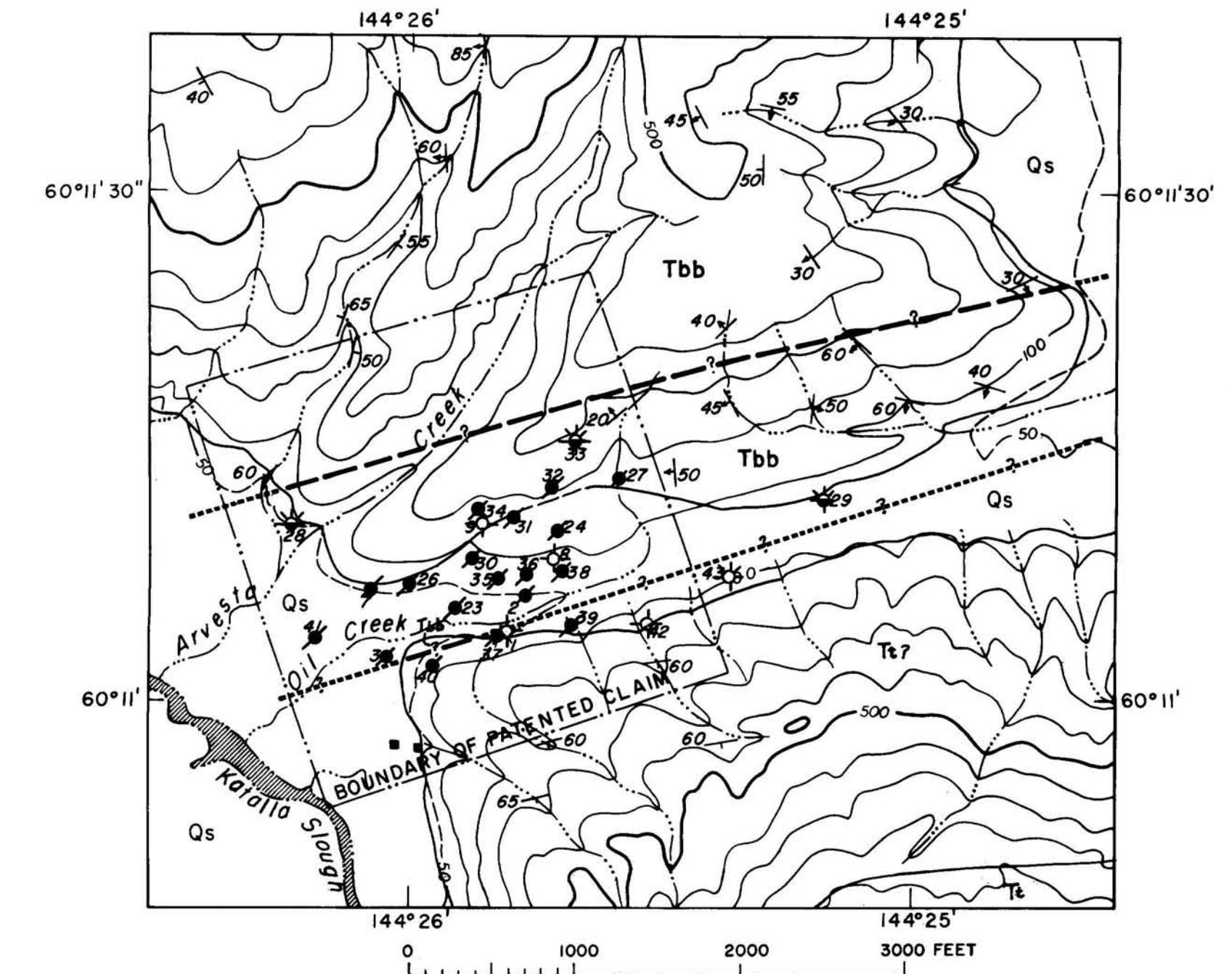
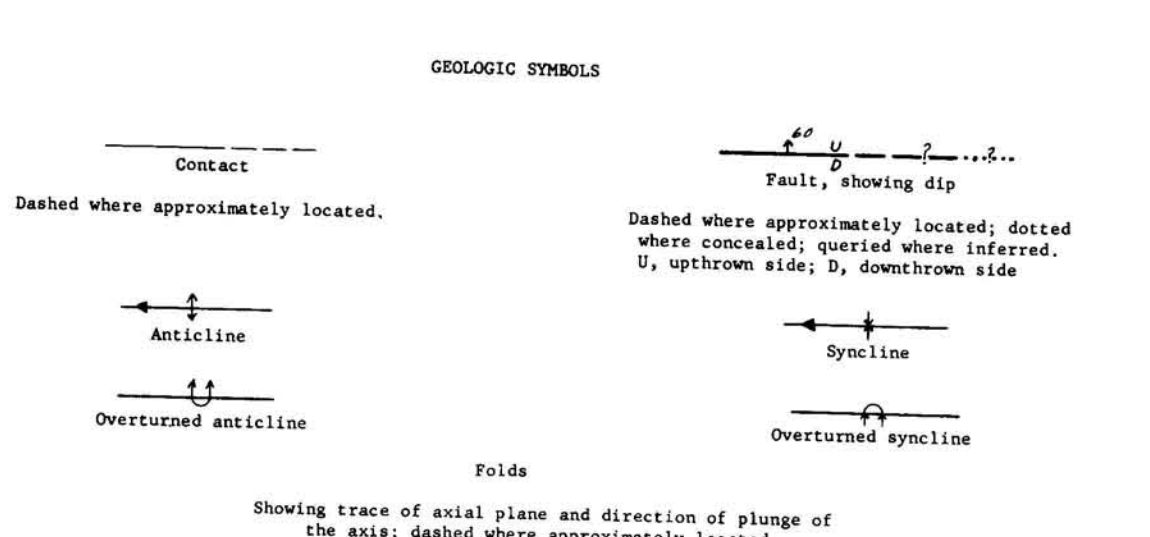
- Redwood Formation (Tm) PEPPER HODDER (Upper Oligocene and Miocene) Approximately 3000 feet (1130 m) of interbedded siltstone, mudstone, claystone, sandy mudstone, and shaly sandstone, and calcareous sandstone. Sparse marine fauna. Faultly wide marine to upper bathyal. Top and exposed upper stratigraphic contact with underlying strata.
- SANDSTONE MEMBER (Upper Oligocene) Between 400 and 500 feet (120-150 m) of thick-bedded, fine to medium-grained sandstone interbedded with subordinate siltstone and shaly siltstone. Rare, noninfructiferous marine microfossils. Probably middle to outer neritic. Contact with underlying conformable Katalla Formation varies between gradational and sharply defined; unit locally may include the upper part of the Katalla Formation.
- INTERBEDDED SILTSTONE MEMBER (Oligocene or younger?) Altered pyroclastic-bearing siltstone or diatomite in localized outcrops west of Nichawak Mountain. Contact relations unknown.
- KATALLA FORMATION (Oligocene)
- BURLS CREEK SHALE MEMBER (Upper Oligocene)
- UPPER BAY (Upper Oligocene or Lower Miocene) From 140 to 2000 feet (45-610 m) of dark gray, commonly sandy, massive to shaly, fine-grained, fine-grained sandstone and siltstone with abundant shell corals and thin-bedded to lenticular limestone. Moderately fossiliferous. Middle neritic to outer neritic.
- ORGANIC SILTSTONE MEMBER (Upper Oligocene or Lower Miocene) Black, carbonaceous siltstone or shale 50 to 200 feet (15-60 m) thick in the Doe Miller Hills and as much as 200 feet (65 m) thick near Nichawak Mountain. Some calcareous concretions with lenticular to oolitic apertures as much as 2 feet (0.6 m) in largest diameter. Locally includes silty pyroclastic rocks and thin beds of lenticular graywacke rich in siliceous graptolites. Generally strongly contorted and sheared. Reported in restricted marine environment, probably at bathyal depths. Unit occurs as one or more horizons conformably interbedded within the Burl's Creek Shale Member.
- LOWER BAY (Upper Oligocene or Lower Miocene) From 500 to about 1000 feet (150-300 m) of hard, gray, very fine grained, partly glauconitic, shaly siltstone and shaly sandstone, dark-colored siltstone containing abundant calcareous, crab-bearing "conglomerate" (lenticular to oolitic) concretions, and shaly siltstone. Locally contains lenticular to upper (?) bathyal. Conformable contact with the underlying strata.
- BURLS CREEK SHALE MEMBER AND BAIN CREEK MEMBER, UNDIVIDED
- LOWER BAY OR BURLS CREEK SHALE MEMBER AND BAIN CREEK MEMBER, UNDIVIDED
- SPLIT SEVEN SANDSTONE MEMBER (Oligocene or younger?) From 700 to 1400 feet (210-425 m) of brownish-gray, shaly, shaly, partly glauconitic, shaly siltstone and shaly sandstone, dark-colored siltstone containing abundant calcareous, crab-bearing "conglomerate" (lenticular to oolitic) concretions, and shaly siltstone. Locally contains lenticular to upper (?) bathyal. Conformable contact with the underlying strata.
- TOUPEE FORMATION (Upper Miocene and Lower Oligocene) Up to 3500 feet (1070 m) of concretiferous siltstone interbedded in a lower and thin-bedded sandstone. Contains abundant fossil corals in the variable amount of sandstone. Contains abundant fossil corals in the upper part and a sparse to moderately abundant fauna. Tropical exposed.
- UPPER BAY (Upper Miocene and Lower Oligocene) Predominantly medium- to dark-gray, massive siltstone containing thin beds and discontinuous lenses of limestone or limy siltstone and randomly distributed calcareous concretions to about 3 feet (1 m) maximum diameter. Interbedded with subordinate amounts of very fine-grained, light-gray, calcareous sandstone, thin-bedded siltstone, and siltstone with disseminated glauconite.
- LOWER BAY (Upper Miocene) Predominantly light- to dark-gray, fine- to medium-grained, micaceous, calcareous sandstone interbedded with abundant siltstone and thin-bedded sandstone. Occurs only in Point Bay area.

Base map west of 144° longitude is from published U. S. Geological Survey maps of Cordova A-1, A-2, B-1, and B-2 (1933) quadrangles. Base map east of 144° is from unpublished compilation by multiple methods in the Bering Glacier A-8 and B-8 quadrangles.

Bedrock geology mainly from field mapping by D. J. Miller, D. L. Rossman, C. A. Hickox, R. M. Vosburgh, and George Pfanker, 1944-1953, supplemented by photo interpretation. Landforms and unconsolidated deposits mainly from photo interpretation; in part generalized from Kachadoorian (1960).



Note: Units Tbu, Tbm, Tbi, Tbc, Ttu, and Tt do not appear on accompanying geologic map.



# GEOLOGIC MAP AND SECTIONS OF THE CENTRAL PART OF THE KATALLA DISTRICT, ALASKA

by Don J. Miller

1975

