Surficial Geology of Sít' Tlein (Malaspina Glacier)

Wrangell-St. Elias National Park and Preserve, Alaska

National Park Service
U.S. Department of the Interior

Geologic Resources Inventory
Natural Resource Stewardship and Science

Location Map



Map Units

- **Qi** — **Clean Ice:** Glacier ice free of, or minimally covered by, surficial debris. White or very light gray in appearance.
- **Qdms** — **Minor Supraglacial Debris:** Thin and/or discontinuous medial moraines and debris on the glacier surface; light in color and typically only one to several clasts thick with ice or moisture from melt visible at the surface.
- **Qdts** — **Thick Supraglacial Debris:** Thick and/or continous medial moraines and debris on the glacier surface; dark in color and typically with no ice visible among the clasts.
- **Qos** — **Supraglacial Outwash:** Debris on the glacier surface that has been transported, sorted, and deposited by supraglacial streams.
- **Qm2** — **Younger End and Ground Moraine:** Surface gently undulating, largely covered with brush and scattered trees. Arrows are drawn along axes of elongate ridges and depressions and indicate inferred direction of ice movement.
- **Qm1** — **Older End and Ground Moraine:** Surface hummocky, largely covered with mature forest. Arrows are drawn along axes of elongate ridges and depressions, and indicate inferred direction of ice movement.
- **Qmu** — **Undifferentiated Moraine:** Interlobate and lateral moraine deposits of uncertain age along mountain front; covered with brush and trees.
- **Qo2** — **Younger Outwash:** Deposits of existing glacial streams, including active braidplains and floodplains; thin active channels not necessarily shown or mapped. Largely bare of vegetation.
- **Qo1** — **Older Outwash:** Deposits of former glacial streams, largely vegetated with brush and/or forest. Single channel streams may still be present.
- **Qb2** — **Younger Marine Beach, Bar, and Spit Deposits:** Comparatively recent unvegetated beach deposits.
- **Qb1** — **Older Marine Beach, Bar, and Spit Deposits:** Beach deposits with brush and trees.
- **Qbu** — **Marine Beach, Bar, and Lagoon Deposits, Undifferentiated:** Linear beach and bar deposits covered with brush and trees, alternating with flat wet areas with little vegetation.

Legend

0 5 Kilometers
0 5 Miles
North

- US - Canada Border
- NPS Boundary
- Geographic Names
  - Sudden Stream
- Modern Ice Margin
- Historic Ice Extents
  - 1987 (youngest surge margin)
  - young
  - older
- Former Ice Flowlines (inferred)
- Vegetation Boundary (upstream extent)

This map displays geologic map data compiled by the National Park Service Geologic Resources Inventory. It is not a substitute for site-specific investigations.

Geologic Mapping: Anna C. Thompson and Michael G. Loso (Wrangell-St. Elias Park and Preserve)
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All Geologic Resources Inventory geologic map data and publications are available at https://go.nps.gov/gripubs.