

**MINERAL TERRANES**

Terrane units are meant to be only a general guide to areas where certain deposits could occur. Each rock type below is followed by a listing of commodities that maybe found in each terrane. The listing does not indicate known or commercial concentrations actually occur. Site-specific information will require on-site examination. A comparison of the Mineral and Energy Resources Map and this map will show most mineral deposits lying within the designated terrane units but there are exceptions as well as exceptions to the listed commodities expected and those actually reported. Terrane classification was developed by C.C. Hawley and Associates for the Arctic Environmental Information and Data Center (AEIDC, 1982). Terrane unit boundaries for this map were adapted from the AEIDC map (1982) and from the 1:250,000 scale geologic map of this quadrangle by Winkler, Silberman, and others (1981).

Terranes favorable for mineral deposits that formed contemporaneously with their enclosing rocks.

**INTRUSIVE TERRANES AND FAVORABLE COMMODITIES**

**Granitic Rocks**  
 IGI Undivided granitic rocks (includes the three groups below)  
 IGA Alkalic granitic rocks - uranium and rare earths  
 IGF Felsic granitic rocks - tin, tungsten, molybdenum, uranium, thorium  
 ICI Intermediate granitic rocks - copper, gold, molybdenum

**Mafic-ultramafic Rocks**  
 IMA Mafic intrusive rocks - copper, nickel, byproduct platinum and cobalt  
 IUM Ultramafic rocks - chromium, nickel, platinum metals, byproduct cobalt

**VOLCANIC-SEDIMENTARY TERRANES AND FAVORABLE COMMODITIES**

**Felsic Volcanic Rocks**  
 VFU Undivided felsic volcanic rocks - copper, lead, zinc, gold, silver  
 VEA Alkalic felsic volcanic rocks - uranium, thorium  
 VSF Undivided sedimentary and felsic volcanic rocks - copper, lead, zinc, gold, silver

**Mafic Volcanic Rocks**  
 VMU Undivided mafic volcanic rocks - copper, zinc, byproduct gold and silver  
 VSM Undivided sedimentary and mafic volcanic rocks - copper, zinc, byproduct gold and silver

**SEDIMENTARY TERRANES AND FAVORABLE COMMODITIES**

**Marine Rocks**  
 SLS Limestone and shale - copper, lead, zinc  
 SBS Black carbonaceous shale and limestone - zinc, lead, barium, byproduct silver  
 SFS Phosphatic shale - phosphate, byproduct uranium and vanadium  
 SCH Chert - may be favorable for deposits like those of volcanic, or black shale terranes

**Continental Rocks**  
 SEC Conglomerate - gold or deposits like those of black shale terrane  
 SCB Coal-bearing sandstone and shale

Terranes favorable for mineral deposits that are introduced by metamorphic or igneous-hydrothermal processes after deposition of their enclosing rock.

**SEDIMENTARY TERRANES AND FAVORABLE COMMODITIES**

SGS Graywacke and shale - gold or deposits like those of intrusive terranes  
 SLU Limestone - copper or deposits like those of intrusive terranes

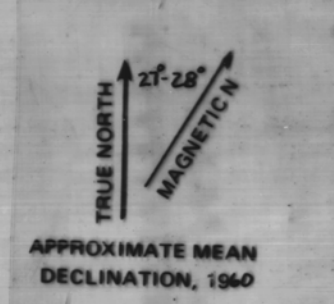
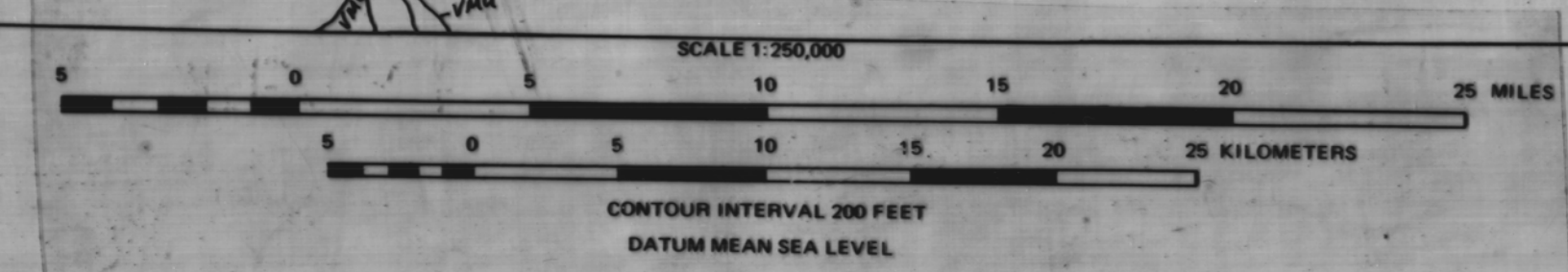
**TERRANES NOT IDENTIFIED AS FAVORABLE FOR MINERAL DEPOSITS**

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**References**

Arctic Environmental Information and Data Center, 1982, Mineral terranes of Alaska; 1982: Research and display by C.C. Hawley and Associates, prepared and published by Arctic Environmental Information and Data Center, University of Alaska, 707 A Street, Anchorage, Alaska 99501.  
 Winkler, G.R., Silberman, M.L., Grant, A., Miller, R.J., and MacKevett, Jr., 1981, Geologic map and summary geochronology of the Valdez Quadrangle, southern Alaska: U.S. Geological Survey Open-file Report 80-892-A.

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**MINERAL TERRANES, VALDEZ QUADRANGLE, ALASKA**

