

LEGEND

ALLUVIAL AND GLACIAL DEPOSITS

Qag

FELSIC TO INTERMEDIATE HYPABYSSAL INTRUSIVES
Small, irregular feldspar porphyry plugs and stocks of andesite to quartz latite composition

Ti

CONGLOMERATE
Pebble to boulder conglomerate with mudstone and siltstone matrix; very poorly sorted, well-rounded clasts comprise most units in the area; deposited on apparent unconformity in Valdez group schists

Tcg

NORTH OF THE BORDER RANGES FAULT

GABBROIC TECTONIC MELANGE
Blocks of Jg, Jtk, KJqd, Ksm, and others (?) floating in a cataclastic matrix of gabbro and serpentinite; locally intruded by Ti

McHUGH COMPLEX
Sedimentary melange (locally less disturbed): chert, argillite, tuff, massive and pillowed greenstone, minor gabbro, sandstone, and marble; metamorphosed to prehnite-pumpellyite grade

MATANUSKA FORMATION
Marine sedimentary rocks, largely siltstone, sandstone, claystone, and conglomerate; may locally include non-Matanuska sedimentary rocks

INTERMEDIATE INTRUSIVES
Quartz diorite, diorite, and trondhjemite stocks and plutons with abundant fine-grained mafic dikes

TALKEETNA FORMATION
Marine and non-marine pyroclastic rocks and lavas of predominantly intermediate composition; minor sandstone and argillite

GABBRO
Layered two-pyroxene gabbro, hornblend gabbro, and leucogabbro; minor ultramafic, dioritic, and quartz dioritic rocks

CONTACT
dotted where inferred

FAULT
dotted where inferred; large dots where concealed and inferred from aeromagnetic survey

THRUST FAULT
dotted where inferred; teeth on upper plate

SOUTH OF THE BORDER RANGES FAULT

VALDEZ GROUP
Metasedimentary and minor metavolcanic rocks of predominantly greenschist grade: siltstone, argillite, sandstone, and conglomerate; minor mafic metatuff and greenstone

METAVOLCANIC ROCKS
Metavolcanic and minor metasedimentary rocks predominantly of greenschist grade; local blueschists

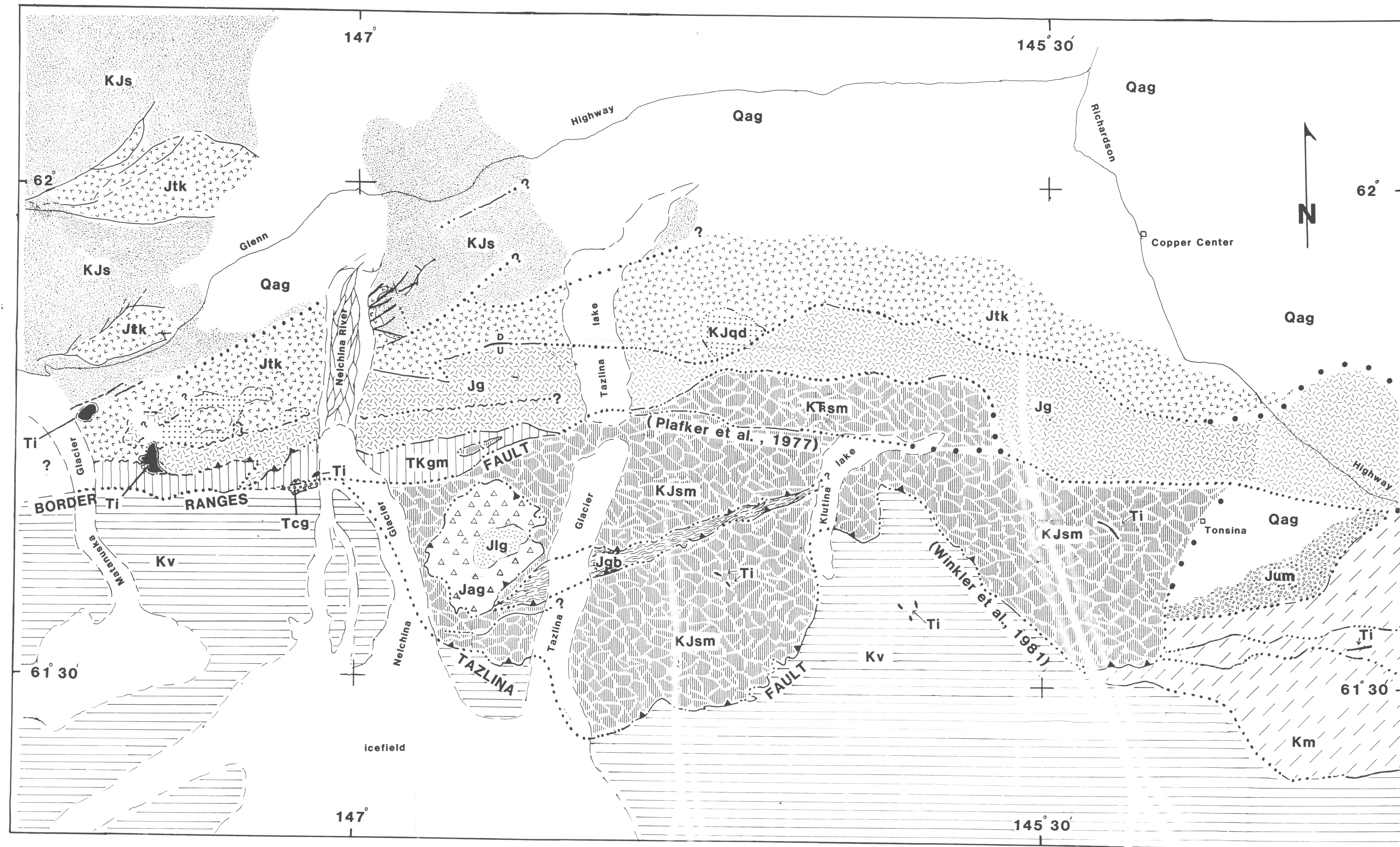
McHUGH COMPLEX
Sedimentary melange (locally less disturbed): chert, argillite, tuff, massive and pillowed greenstone, minor gabbro and sandstone; metamorphosed to prehnite-pumpellyite grade

GREENSCHIST AND TRANSITIONAL BLUESCHISTS
Diverse protoliths of unknown original ages; includes metavolcanic and calcareous metasedimentary rocks

AMPHIBOLITE AND ORTHOGNEISS
Metaplutonic and metasedimentary (?) rocks; original ages and protoliths not known

GABBRO
Layered quartz gabbro

ULTRAMAFIC ROCKS
Largely dunite and harzburgite, minor gabbro



Note: Plafker et al. (1977) and Winkler et al. (1981) disagree in the location of the Border Ranges fault; this discrepancy has not been resolved in the literature.



Scale: 1:250,000

PLATE 1: GENERALIZED GEOLOGY OF THE N VALDEZ, NE TALKEETNA, AND SW GULKANA
1' X 3' SHEETS, ALASKA

from Andreason et al. (1964), Plafker et al. (1977), Pessel et al. (1977), Winkler et al. (1981), and Burns (unpub. data).

Compiled by L. E. Burns, 1982

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.