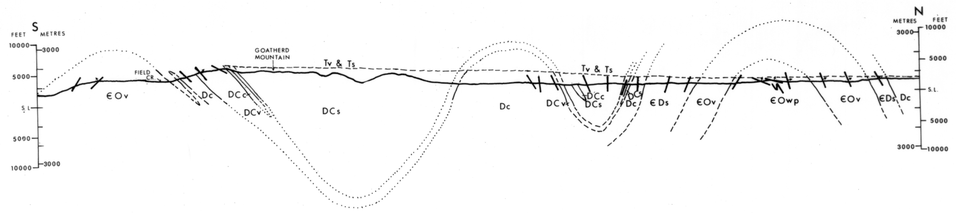
GEOLOGY OF PARTS OF MOUNT ST. ELIAS (115B) AND DEZADEASH (115A) MAP-AREAS, YUKON TERRITORY

MAP 3A



HORIZONTAL SCALE = VERTICAL SCALE

1:125000

Miles 5 0 5 10 15 20 Miles

Kilometres 5 0 5 10 15 20 25 30 Kilometres

THE DECLINATION OF THE COMPASS NEEDLE 1950

The declination of the compass needle at any place along a red line is the same as at the point where the red line crosses the blue. At other places the declination is between those given on the neighbouring red lines; that at the place marked A the declination is 30° East. The annual change in the declination of the compass needle is decreasing 2 minutes annually.

INDEX MAP

ALEXANDER TERRANE

QUATERNARY
PLEISTOCENE AND RECENT
- Qs — Glacial deposits, recent alluvium and colluvium; few if any outcrops
- Qsl — Landslide and rockslide debris

TERTIARY
MIOCENE AND(?) YOUNGER
- TRl — WRANGELL INTRUSIONS: Felsite, latite porphyry
- Tv — WRANGELL LAVA: basalt, latite; minor rhyolite

OLIGOCENE AND(?) OLDER
- Ts — AMPHITHEATRE FORMATION: sandstone, conglomerate, shale; minor carbonaceous shale, lignite

MESOZOIC & CENOZOIC

TAKU-SKOLAI TERRANE

QUATERNARY
PLEISTOCENE AND RECENT
- Qs — Glacial deposits, recent alluvium and colluvium; few if any outcrops
- Qsl — Landslide and rockslide debris

TERTIARY
MIOCENE AND(?) YOUNGER
- TRl — WRANGELL INTRUSIONS (TRl, Tdi): Felsite, latite porphyry
- Tdi — Hornblende-biotite diorite
- Tv — WRANGELL LAVA: basalt, latite; minor rhyolite

OLIGOCENE AND(?) OLDER
- Qfp — Biotite quartz latite porphyry
- Ts — AMPHITHEATRE FORMATION: sandstone, conglomerate, shale; minor carbonaceous shale, lignite

CRETACEOUS AND/OR TERTIARY
- KTgd — Hornblende-biotite quartz diorite
- KTdi — Biotite-hornblende diorite
- KTgd — Biotite-hornblende granodiorite

CRETACEOUS
LOWER CRETACEOUS
- lKb — Augite-hornblende gabbro and diorite
- lKpx — Clinopyroxenite; minor hornblende clinopyroxenite

JURASSIC
UPPER JURASSIC
- Jg — Porphyritic granite; minor diorite and hornblendite

TRIASSIC TO CRETACEOUS
UPPER TRIASSIC TO LOWER CRETACEOUS
- uKp — Grey phyllite; minor greywacke and conglomerate (includes DEZADEASH FORMATION and upper part of McCARTHY FORMATION

UPPER TRIASSIC
- uTrc — McCARTHY FORMATION: thin-bedded limestone and argillite
- uTrk — KIZINA LIMESTONE and CHITISTONE LIMESTONE (uTrk, uTrc); Gypsum
- uTrc — Massive limestone, thin-bedded limestone limestone breccia
- uTrv — NIKOLAI GREENSTONE (uTrv, uTrc): Dark green and maroon amygdaloidal metabasalt, meta-andesite; minor pillow lava, volcanic breccia and conglomerate at base
- uTrc — Thin-bedded limestone; minor chert and argillite

MIDDLE TRIASSIC
- mTr — Dark grey phyllite; minor limestone

PERMIAN AND/OR TRIASSIC AND/OR(?) CRETACEOUS
- Pgb — Pyroxene gabbro. Pattern used where boundaries are undefined.
- Pub — Peridotite; rare dunite. Pattern used where boundaries are undefined.

PERMIAN AND(?) PENNSYLVANIAN
LOWER PERMIAN AND(?) CLOSE
- Psp — HASEN CREEK FORMATION (Psp, Psg): Siliceous argillite; minor greywacke and conglomerate; rare limestone
- Psg — Sandstone; minor siliceous argillite and pebble conglomerate
- Psv — Amygdaloidal pillow basalt, breccia, tuff
- Psc — Bioclastic limestone, calcarenite
- Psg — Pebble to cobble conglomerate

PENNSYLVANIAN AND(?) PERMIAN
- Pssv — STATION CREEK FORMATION (Pssv, Psv): Tuff, breccia, siliceous argillite, chert; rare meta-andesite flows
- Psv — Tuff, breccia, meta-andesite and meta-basalt flows; rare argillite. Patterns indicate pillow lava

DUKE RIVER FAULT

SHAKWAK & DALTON FAULTS

PALEOZOIC & MESOZOIC

CARBONIFEROUS AND(?) DEVONIAN
- DCp — Dark grey phyllite
- DCv — Calcareous tuff, breccia, meta-andesite flows; locally chlorite-actinolite schist
- DCc — Thin-bedded limestone and phyllitic limestone
- DCs — Grey phyllite, limy phyllite, siltstone; minor phyllitic limestone

DEVONIAN AND(?) SILURIAN
MIDDLE DEVONIAN AND(?) UPPER SILURIAN
- Dc — Massive, light grey crystalline limestone

CAMBRIAN TO DEVONIAN
- EDv — Greenstone, greenschist
- EDs — Massive siltstone, tuffaceous phyllite and greywacke

CAMBRIAN OR ORDOVICIAN
UPPER CAMBRIAN OR LOWER ORDOVICIAN
- EOv — Porphyritic meta-andesite and meta-basalt; rare volcanic breccia and limy tuff
- EOc — Thin-bedded crystalline limestone
- EOwp — Greywacke, phyllite; minor pebble conglomerate

PALEOZOIC (UNDIFFERENTIATED)
- Pgw — Grey phyllite, meta-sandstone; minor meta-grit
- Pv — Meta-andesite flows, tuff, breccia; minor pillow lava indicated by pattern
- Pc — Light to dark grey crystalline limestone
- Pw — Massive green meta-greywacke and -tuff

FAULTS

- Pb — Gabbro, pegmatitic gabbro, diabase

INTRUSIONS OF UNKNOWN AGE
- g — Granite
- qm — Quartz monzonite
- gd — Granodiorite
- qd — Quartz diorite
- di — Hornblende diorite

Geological boundary: defined; approximate; assumed
Limit of geological mapping
Fault: defined; approximate; assumed
Bedding, facing determined: inclined; vertical; overturned
Bedding, facing undetermined: inclined; vertical
Foliation: inclined; vertical
Lineation, fold axis: undetermined vergence*; northerly vergence*
Fold: undetermined vergence* (first phase, second phase, undetermined phase); northerly vergence* (first phase, second phase, undetermined phase)
Trace of axial plane of macroscopic fold (2 on trace of axial plane indicates second phase fold): upright — synciline, synform (approximate, assumed); anticline, antiform (approximate, assumed); inclined — synciline, synform (approximate, assumed); anticline, antiform (approximate, assumed); overturned — synciline, synform (approximate, assumed); anticline, antiform (approximate, assumed)
Trace of attitude on plane of cross-section: bedding, facing determined; bedding, facing undetermined; foliation
Orientation of fold and its asymmetry on plane of cross-section
Fossil locality and map collection number (F28)
Roads, all weather
Other roads
Contours (interval 100 or 500 feet)
Height in feet above mean sea level (4590)

Radiometric date: location and rock type (igneous rock); mineral (a amphibole, b biotite, w whole-rock); method (K Potassium-Argon); age in millions of years; laboratory (b University of British Columbia, g Geological Survey of Canada, w United States Geological Survey)

*Vergence is the direction of the upper member of the rotational couple implied by the asymmetry of the fold.

Geology by P. B. Read, 1974, 1975; J.W.H. Monger, 1974

Geological cartography by P. B. Read, 1976. Base map compiled from editions available as of January 1976.

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