ALASKA DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

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Explanatory booklet accompanies map

PR115-SH1

GEOLOGIC MAP OF THE UPPER CHENA RIVER AREA, EASTERN INTERIOR ALASKA

by

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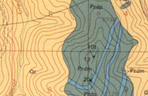
1994

Base modified from U.S. Geological Survey Circle A-2, A-3, (1956)
Big Delta D-2, D-3, Quadrangles, Alaska, (1958)
Universal Transverse Mercator projection, 1927 North American datum.

INDEX MAP - MAJOR BEDROCK UNITS

SCALE 1:63,360

CONTOUR INTERVAL 100 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929



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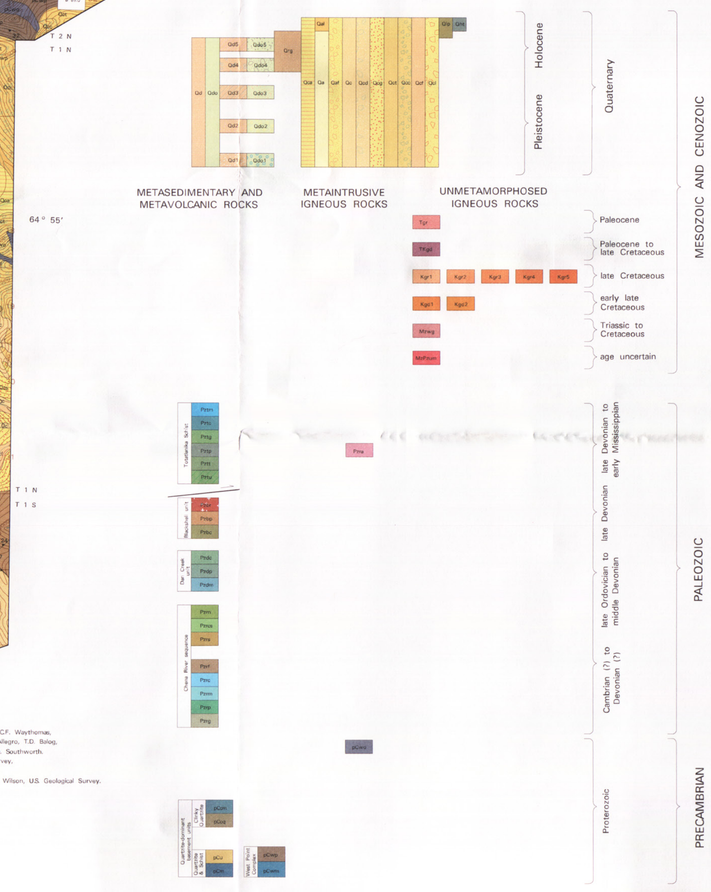
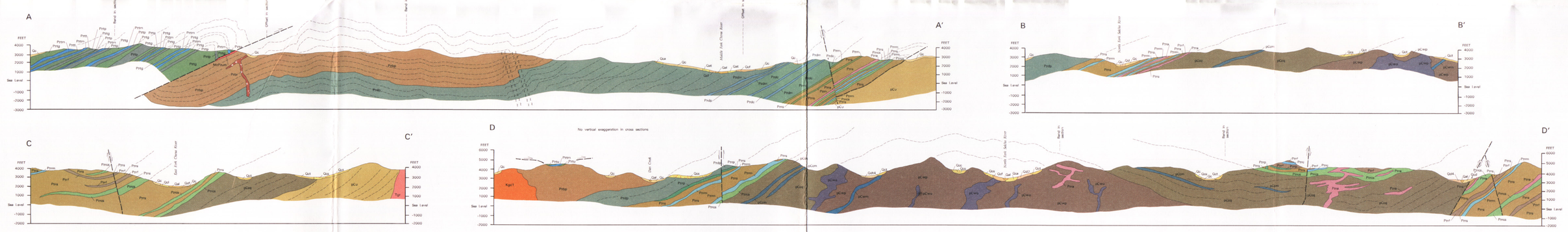
CORRELATION OF MAP UNITS





DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS

- Qht Placer tailings
- Qlp Peat, peaty silt and fen deposits
- Qcl Landslide deposits
- Qd Glacial drift, age uncertain
- Qd5 Glacial drift
- Qd4 Glacial drift
- Qd3 Glacial drift
- Qd2 Glacial drift
- Qd1 Glacial drift
- Qdo Glaciofluvial outwash, age uncertain
- Qdo5 Glaciofluvial outwash
- Qdo4 Glaciofluvial outwash
- Qdo3 Glaciofluvial outwash
- Qdo2 Glaciofluvial outwash
- Qdo1 Glaciofluvial outwash
- Qrg Rock-glacier deposits
- Qca Alluvium and colluvium, undifferentiated
- Qa Alluvium, undifferentiated
- Qal Floodplain alluvium
- Qaf Alluvial fan deposits, undifferentiated
- Qc Colluvial deposits, undifferentiated
- Qcd Colluvial drift
- Qcg Gelifluction deposits
- Qct Talus fans and aprons, undifferentiated
- Qcc Slope talus
- Qcf Fine-grained colluvium

BEDROCK UNITS

IGNEOUS ROCK UNITS

- Tgr Granite (West Windy Pluton)
- TKgd Granodiorite
- Kgr1 Granite and granodiorite (Dex Pluton)
- Kgr2 Granite
- Kgr3 Granite
- Kgr4 Granite and quartz monzonite
- Kgr5 Quartz monzonite and granite
- Kgd1 Granodiorite
- Kgd2 Granodiorite (North Fork Pluton)
- Mzwg Granite, granodiorite and quartz monzonite
- MzPzum Serpentinite

METAMORPHIC ROCK UNITS

TOTATLANIKA SCHIST

- Pztm Marble
- Pztc Calcschist
- Pztg Green phyllite and semischist
- Pztp Gray phyllite and semischist
- Pztt Tan phyllite and semischist
- Pztu Undifferentiated Totatlanika Schist

BLACKSHELL AND DAN CREEK UNITS

- Pzbr Blackshell rhyolite
- Pzbp Blackshell quartzite and phyllite
- Pzbc Blackshell calcschist and marble
- Pzdc Dan Creek calcschist
- Pzdp Dan Creek calcphyllite
- Pzdm Dan Creek marble

CHENA RIVER SEQUENCE

- Pzra Augen gneiss
- Pzrn Greenschist
- Pzrcs Calcsilicate rocks
- Pzrs Pelitic schist and quartzite
- Pzrf Banded amphibolite and felsite
- Pzrc Calcschist
- Pzrm Marble
- Pzrp Massive amphibolite
- Pzrg Graphitic schist

QUARTZITE-DOMINANT BASEMENT UNITS

- pCcq Clinky quartzite
- pCcm Marble in Clinky quartzite
- pCu Undifferentiated quartzite and schist
- pCm Marble

WEST POINT IGNEOUS/METAMORPHIC COMPLEX

- pCwo Orthogneiss
- pCwp Paragneiss
- pCwm Marble

GEOLOGIC MAP SYMBOLS

- Contact - Dashed where approximately located or inferred
- High-angle fault - Dashed where approximately located; dotted where concealed. Arrows show apparent direction of relative horizontal movement. U, upthrown block; D, downside block
- Thrust fault - Sawteeth on upper plate; dashed where approximately located; queried where questionable; dotted where concealed
- Trace and plunge of anticlinal fold axis
- Trace and plunge of synclinal fold axis
- Shear zone - Undetermined offset
- Strike and dip of joints: Inclined; Vertical
- Strike and dip of foliation: Inclined; Vertical; Horizontal
- Bearing and plunge of lineation; c, crenulation; f, minor fold axis; q, quartz boudins; m, mineral
- Strike and dip of cleavage
- Whole-rock major oxide sample location - Letters refer to map and table 2
- Location of sample dated by K-Ar or U-Pb methods - Letters refer to map and to tables 1 and 2. M, muscovite; B, biotite; H, hornblende; z, zircon
- Whole-rock and K-Ar age sample location - numbers refer to map and to table 1
- Area of augen gneiss (Pzra) rubble
- Area of bimodal "quartz-eye" quartzite rubble, mainly in pCu unit

ACKNOWLEDGMENTS

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