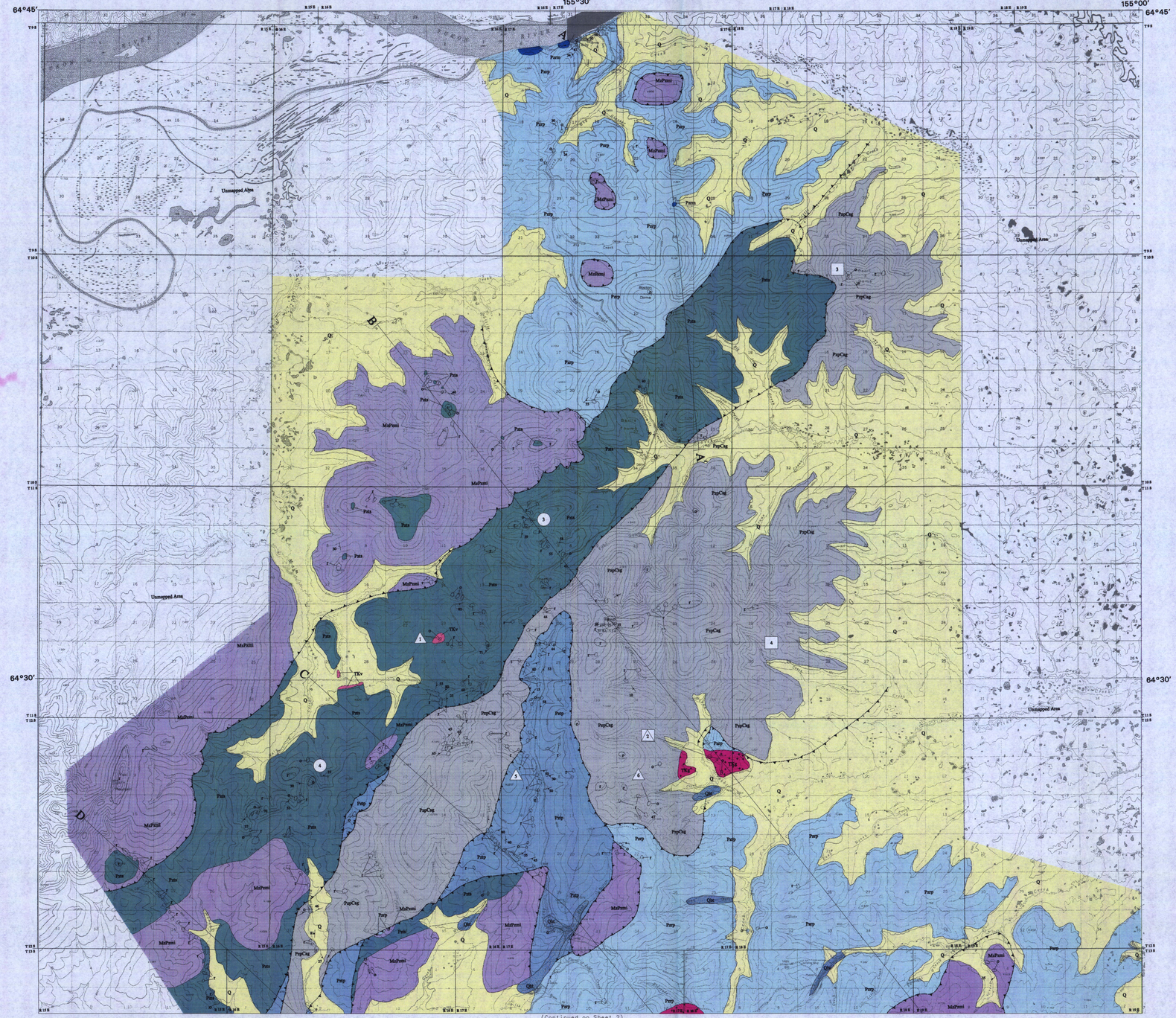


Base modified from U.S. Geological Survey Ruby A-5, A-6, B-5, B-6, C-5, C-6, 1952 1:63,360 Quadrangles, Alaska. Universal Transverse Mercator Projection, 1927, North American Datum. Scanned and rectified for use in ARC/INFO GIS system.

Scale 1:63,360

1 0 1 2 3 4 5 Miles

1 0 1 2 3 4 5 Kilometers

Geology by C.C. Puchner, G. M. Smith, R.W. Flanders, D.E. Crowe, and S. C. McIntyre. Original compilation at 1:125,000. Electronic cartography by F. Cunley.

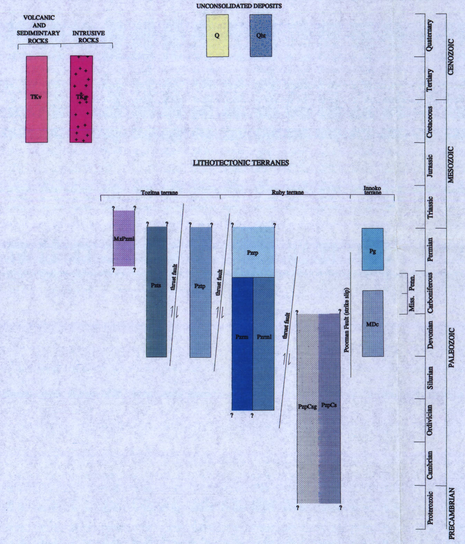
GEOLOGY OF THE RUBY-POORMAN MINING DISTRICT, ALASKA

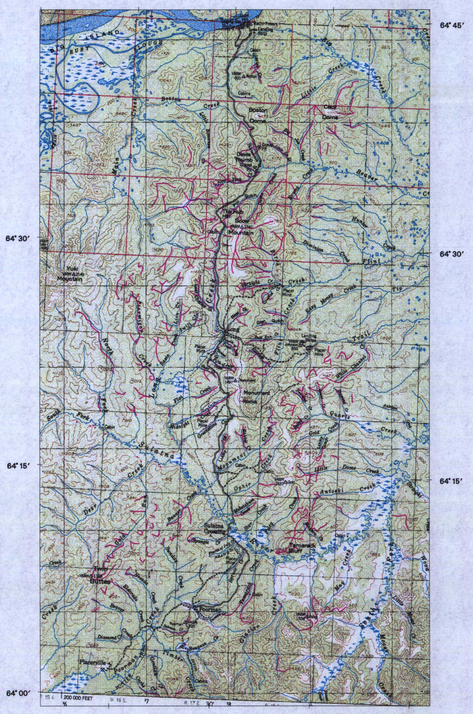
by C. C. Puchner, G. M. Smith, R. W. Flanders, D. E. Crowe, and S. C. McIntyre

1998

main: /files12/fmah/rubygeoh98_11f.mxd plot: /files12/fmah/rubygeo/plotsh9811-1f.gm

CORRELATION OF MAP UNITS





Scale 1:250,000

5 0 5 10 Miles

5 0 5 10 Kilometers

Figure 3 - Traverse location map, Ruby/Poorman Mining District

Geologic traverse

Spot observation

Department of Natural Resources
Division of Geological and Geophysical Surveys
Geologic Data Modeling System

DESCRIPTION OF MAP UNITS

OVERLAP ASSEMBLAGES

UNCONSOLIDATED DEPOSITS

Qbt PLACER TAILINGS.

Q SURFICIAL DEPOSITS—Alluvium, colluvium, and loess.

VOLCANIC AND SEDIMENTARY ROCKS

Tkv VOLCANIC ROCKS, SILTSTONE AND SANDSTONE—Porphyritic basalt, andesite, and rhyolite flows,tuffs, and breccias with minor intercalated siltstone and sandstone.

INTRUSIVE ROCKS

TKg GRANITE—Medium- to coarse-grained, equigranular to porphyritic biotite granite composed of anhedral quartz, anhedral to euhedral (porphyritic variety) potassium feldspar, anhedral plagioclase, and subhedral biotite.

LITHOTECTONIC TERRANES

Tozitna terrane

MzPzmi INTERMEDIATE TO MAFIC INTRUSIVE ROCKS—Fine- to medium-grained gabbro with lesser quartz diorite, quartz monzonite, orthopyroxene gabbro, and pyroxenite. The intrusive bodies are commonly sill-form. Wall rocks of the intrusions are restricted to the other lithologies of the Tozitna terrane described below.

Pzts SLATE, SILTSTONE, CHERT, GRAYWACKE, AND LIMESTONE—Gray, green, black and tan slate and siltstone intercalated with gray to green graywacke and lesser white to green chert and rare limestone.

Pzsp PHYLLITE, SCHIST, METAGRAYWACKE, METACHERT, GREENSTONE, AND MARBLE—Gray and green phyllite or fine-grained quartz-muscovite-chlorite schist intercalated with metagraywacke, recrystallized chert, greenstone, and rare marble. With the exception of greenstone, this is the same lithologic assemblage as the Pzts unit, but is distinguished by a distinctly higher metamorphic grade. Lithologies commonly exhibit three cleavages with co-linear intersections, which produce characteristic long slender "pencile" upon fracturing. Bodies of mafic intrusive rocks (MzPzmi) in the unit are small and commonly foliated.

Ruby terrane

Pzp PHYLLITE AND QUARTZITE—Graphitic phyllite with minor intercalated graphitic quartzite and quartzite. Locally upgraded to fine-grained graphite schist and graphitic quartz-mica schist. Hornfelsic adjacent to TKg, commonly with well-developed andalusite porphyroblasts.

Pzmi MARBLE AND LIMESTONE—Marble and recrystallized limestone, dominantly fine- to coarse-grained calcitic marble with some sedimentary features preserved locally where metamorphic recrystallization is incomplete.

Pzm MARBLE—Medium- to coarse-grained marble composed of calcite with minor muscovite and pyrite.

PzpCs PELITIC SCHIST—Fine- to medium-grained graphitic quartz-muscovite ± chlorite schist. Lensoid quartz segregations are common. Distinguished from PzpCag by distinctly lower metamorphic grade and lack of lithologic variety.

PzpCag SCHIST AND GNEISS—Medium- to coarse-grained quartz ± muscovite ± chlorite ± biotite ± graphite ± garnet ± staurolite schist, quartzofeldspathic gneiss, and foliated greenstone. The mineralogy is consistent with amphibolite facies metamorphism.

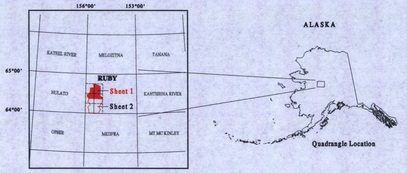
Innoko terrane

Pg GRAYWACKE, CONGLOMERATE AND MUDSTONE—Fine- to medium-grained graywacke; graywacke conglomerate with basalt, andesite, shale, chert, quartzite, and schist clasts; and gray to green mudstone.

MDc CHERT AND SLATE—Thin-banded gray, green, and red chert with thin interbeds of slate.

MAP SYMBOLS

- Thrust fault - located approximately, dotted where inferred, teeth on upper plate
- Contact - located approximately, dotted where inferred
- High angle fault
- Form lines
- Limit of outcrop
- Limit of rubblecrop
- Strike and dip of foliation
- Strike and dip of bedding
- Strike and dip of joints
- Strike of vertical foliation
- Lode prospect
- 1 Sample location, K-Ar age date (Table 1)
- 1 Sample location, major oxide analysis (Table 2)
- 1 Fossil locality (Table 3)



Location of Map Area

The permission of Doyon Limited and the Ruby Village Corporation to map on native lands is gratefully acknowledged.

September 12, 1998