

Base from U.S. Geological Survey Wiseman, 1956, unrevised.

Geology from Dillon and others, 1986.

LODES, PROSPECTS, AND OCCURRENCES IN THE WISEMAN QUADRANGLE, BROOKS RANGE, ALASKA

By

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1988

1. U.S. Geological Survey, Menlo Park, CA.

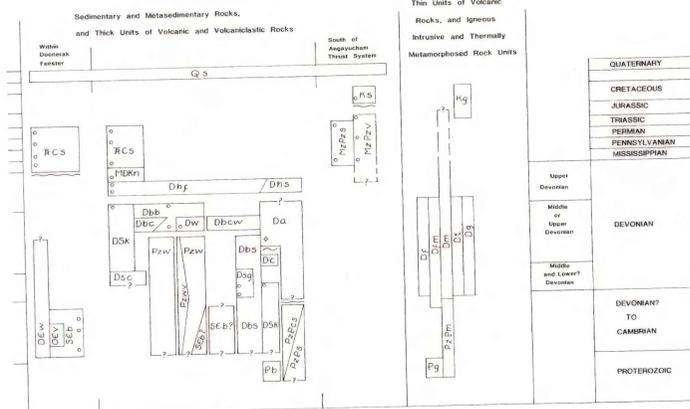
4. U.S. Geological Survey, Denver, CO.

2. Alaska Division of Mines and Geology, Fairbanks, AK.

5. U.S. Geological Survey, Washington, DC.

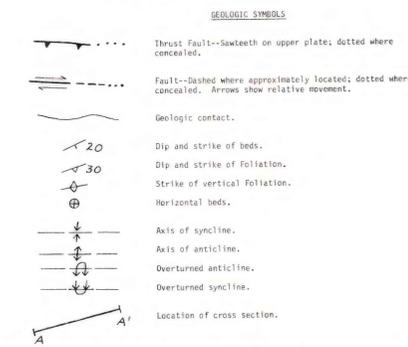
3. Deceased.

CORRELATION OF MAP UNITS



Thin Units of Volcanic
Rocks, and Igneous
Intrusive and Thermally
Metamorphosed Rock Units

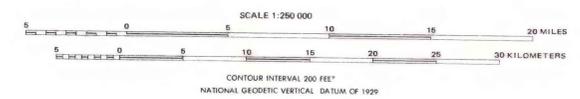
QUATERNARY
CRETACEOUS
JURASSIC
TRIASSIC
PERMIAN
PENNSYLVANIAN
MISSISSIPPIAN
Upper Devonian
Middle or Upper Devonian
Middle and Lower? Devonian
DEVONIAN?
TO
CAMBRIAN
PROTEROZOIC



OTHER SYMBOLS
X Lodes, prospects, and occurrences (see text for description for each numeric or alphanumeric code).
General areas hosting commodities as indicated on map.

The following description of a map units is an abbreviated version of one prepared by Dillon and others (1986):

- QUATERNARY UNCONSOLIDATED DEPOSITS.**
 - Qs SURFICIAL—glacial, alluvial, colluvial, and landslide.
- CRETACEOUS SEDIMENTARY ROCKS.**
 - Ks NONMARINE AND MARINE SEDIMENTS—includes conglomerates, sandstones, shale, siltstone, and coal.
- MESOZOIC GRANITIC PLUTONIC ROCKS OF THE HODZANA HIGHLANDS.**
 - Kg QUARTZ MONZONITE.
- ROCKS WITH AT LEAST ONE REGIONAL METAMORPHIC FABRIC.**
 - MzPzs METAGRAYWACKE AND PHYLLITE (Mississippian to Triassic)—also includes cherts and metagabbros.
 - MzPzv MAFIC VOLCANIC ROCKS (Devonian to Lower Jurassic)—includes pillow basalt, diabase, chert, and minor limestone.
- SLIGHTLY METAMORPHOSED SEDIMENTARY AND VOLCANIC ROCKS WITH TWO REGIONAL METAMORPHIC FABRICS.**
 - TrCs SEDIMENTARY ROCKS (Carboniferous through Upper Triassic)—includes black, red, and green shale and siltstone, calcareous siltstone, cherty and fossiliferous limestone, quartzite and minor conglomerate. Local felsic volcanics. (Includes the following Formations or Groups: Shublik, Otuk, Sadlerochit, Siskapok, Lisburne, Kayak Shale, Kekukuk Conglomerate.)
 - MlKn KANAYUT CONGLOMERATE AND NOATAK SANDSTONE (Upper Devonian and Lower Mississippian)—Marine and nonmarine, also includes some shale.
- TWICE METAMORPHOSED SEDIMENTARY AND VOLCANIC ROCKS, MIDDLE TO UPPER GREENSCHIST FACIES.**
 - Dhf HUNT FORK SHALE (Upper Devonian)—also includes phyllite, lithic wacke, conglomerate, sandstone, and minor fossiliferous limestone.
 - Dhw HUNT FORK SCHIST (Upper Devonian)—also includes biotite garnet quartz schist.
- BEAUCOUP FORMATION.**
 - Dbb BLACK ROCKS (Middle or Upper Devonian and Upper Devonian)—black calcareous phyllite and thin, dark limestone.
 - Dbcw CALCAREOUS CHLORITIC WACKE (Middle or Upper Devonian)—also includes sandstone, conglomerate, limestone, and phyllite (Correlates with Dw).
 - Dbc CONGLOMERATE (Middle or Upper Devonian).
 - Dbs BLACK SLATE, PHYLLITE, AND LIMESTONE (Middle or Upper Devonian?, or older?)—also includes quartzite and lenses of brown dolomite.
- BANDED SCHIST, PARAGNEISS, AND ORTHOGNEISS THAT MAY HAVE BEEN REGIONALLY METAMORPHOSED THREE TIMES.**
 - PzPm METABASITE (Proterozoic or Lower Paleozoic?)—diabase and gabbro dikes and greenschist.
 - PzPs SCHIST (Proterozoic or Lower Paleozoic?)—various types, local marble.
 - PzPcs CALCAREOUS SCHIST (Proterozoic or Lower Paleozoic?)—local marble.
 - Pg GRANITE GNEISS (Proterozoic?).
 - Pb BANDED SCHIST (Proterozoic?)—also includes quartzite, marble, and metabasite.
- BASEMENT ROCKS OF THE DOONERAK FENSTER.**
 - Dcw WACKE (Paleozoic)—also includes meta-tuff.
 - Scb BLACK SILTSTONE AND PHYLLITE (Cambrian to Silurian)—also includes minor quartzite, graywacke, metatuff, dolomite, and limestone; numerous unmapped mafic sills.
 - CGV VOLCANIC ROCKS (Cambrian? and Ordovician)—andesitic to basaltic volcanics with local phyllite, gabbro, diabase, and phyllite.
- WACKE (Middle or Upper Devonian?)—also includes some conglomerate and thin fossiliferous limestone.**
- WACKE AND LIMESTONE (Devonian or older)—also includes conglomerate, schist, phyllite, sandstone, and felsic flows, plugs, and tuff.**
- VOLCANIC CONGLOMERATE (Middle or Upper Devonian?, or older?).**
- AMBLER METAVOLCANIC ROCKS (Lower?, Middle and Upper Devonian)—mafic and felsic volcanics interbedded with schist, quartzite, and marble.**
- FELSIC METAVOLCANIC ROCKS (Devonian)—extrusive and intrusive; interbedded with metasediments.**
- METABASITE (Devonian and Devonian?, and Jurassic?)—locally are parts of Ambler Metavolcanics, includes both intrusive and extrusive rocks.**
- METAMORPHOSED BIMODAL IGNEOUS ROCKS (Devonian and Devonian?)—interlayered felsic and mafic extrusive and intrusive rocks locally mixed with clastic rocks.**
- GRANITE GNEISS (Devonian and Devonian?).**
- TACTITE (Devonian?).**
- CHLORITIC AND CARBONATE ROCKS (Middle or Upper Devonian?)—phyllite and dolomite; also includes metasediments, marble, and conglomerate.**
- SKAJIT LIMESTONE (Devonian and older?)—marble, dolomite, and carbonate conglomerate, locally schist.**
- SILICEOUS CLASTIC ROCKS (Middle Devonian?)—includes metasilstone, sandstone, phyllite, grit, and conglomerate (correlates with Dwg and upper part of Pzw).**
- GRAYWACKE OF SILLYASHEEN MOUNTAIN (Middle Devonian).**



This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature. Any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS.