



Map Unit Descriptions (From Wilson, et al. 1998)	
<b>GENERAL UNITS</b>	<b>PALEOZOIC</b>
bu Bedrock of unknown type or age	<b>Dillingier and Nixon Fork Sequences</b>
g Ice fields or glaciers	<i>Dillingier Sequence</i>
	DCdr Dillingier sequence, undivided
<b>QUATERNARY AND LATE TERTIARY</b>	Dsbr -- Barren Ridge Limestone and correlative units
Qs Surficial deposits, undifferentiated	Stc -- Terra Cotta Mountains Sandstone and correlative units
	SCpl -- Post River Sandstone, Lyman Hills Formation, and correlative units
<b>TERTIARY ROCKS</b>	
<b>Sedimentary Rocks</b>	
Tk Kenai Group, undivided	Nixon Fork Sequence
Tsf -- Sterling Formation	DZn -- Shallow-marine carbonate units of Holtna basin area, undivided
Ty -- Tyonek Formation	DSwc -- Whitewind Creek Formation and unnamed correlative units
Tcb Coal-bearing rocks	Spf -- Paradise Fork Formation and unnamed correlative units
Tlv Fluvialite sedimentary rocks and subordinate volcanic rocks	Ont -- Novi Mountain and Telstina Formations, and unnamed correlative rocks
<b>Igneous Rocks</b>	CZds -- Unnamed dolostone, sandstone, siltstone
Volcanic and Hypabyssal Rocks	
Thf Hypabyssal felsic and intermediate intrusive rocks	<b>Sedimentary Rocks</b>
Thm Hypabyssal mafic intrusive rocks	Oc Chert
<b>Pliocene and Miocene</b>	
Tn Nenana Group	<b>Igneous Rocks</b>
<b>Miocene</b>	Pzvs Volcanic and sedimentary rocks
Tvb Andesite and basalt	<b>Metamorphic Rocks</b>
<b>Oligocene or Eocene</b>	PMpc Phyllite and chert
Toem Granodiorite to tonalite	Pzsc Spruce Creek sequence and correlative rocks
<b>Eocene</b>	
Tegr Granite and granodiorite	
<b>Paleocene</b>	<b>PALEOZOIC AND PRECAMBRIAN</b>
Tgrg Granite rocks	<b>Sequences and Complexes</b>
Thgd Granodiorite and other intermediate plutonic rocks	Yukon-Tanana and Northern Alaska Range Metamorphic Complex
	PzZaps Pelitic and quartzose schist of the Alaska Range
<b>TERTIARY AND/OR CRETACEOUS</b>	<b>Sedimentary Rocks</b>
<b>Igneous Rocks</b>	CZw Wickersham grit, undivided
Volcanic and Hypabyssal Rocks	
TKv Flows, tuff, and breccia, undivided	
TKvd Volcanic Rocks, Dacite	<b>PRECAMBRIAN</b>
TKvr Volcanic Rock, Light Gray to Pink Rhyolite	<b>Metamorphic Rocks</b>
TKvi Younger Phase of Iditarod Volcanics	ZYm Metamorphic basement rocks of the Nixon Fork sequence, undivided
TKd Dikes and subvolcanic rocks of intermediate composition	ZYns -- Pelitic schist
TKiv Mafic to intermediate volcano-plutonic complexes	ZYnc -- Calc-schist
<b>Intrusive Rocks</b>	ZYnv -- Metavolcanic rocks
TKi Intrusive rocks, undivided	
TKg Granitic rocks	
TKgd Granodiorite, tonalite, and monzonite dikes, and stocks	
TDg Gabbro	
<b>CRETACEOUS ROCKS</b>	
<b>Sedimentary Rocks</b>	
Kcs Cantwell Formation, sedimentary rocks subunit	
Kk Kuskokwim Group	
Kk Kuskokwim Group, deep marine rocks	
Kkn Kuskokwim Group, non-marine and shallow-marine rocks	
<b>Sedimentary Rocks of the Yukon-Koyukuk Region</b>	
Kam Quartz-carbonate sandstone and pebbly mudstone	
<b>Melange</b>	
Kmar Melanges of the Alaska Range	
mlu -- Ultramafic and associated rocks	
<b>CRETACEOUS AND/OR JURASSIC</b>	
<b>Sedimentary Rocks</b>	
Kjf Kahlitna flysch sequence	
Kjfn -- Flysch sequence	
<b>JURASSIC</b>	
<b>Igneous Rocks</b>	
Jmu Mafic and ultramafic rocks	
<b>TRIASSIC</b>	
<b>Sedimentary Rocks</b>	
Trcs Calcareous sedimentary rocks	
Trcg Conglomerate and volcanic sandstone	
<b>Igneous Rocks</b>	
<b>Plutonic Rocks</b>	
Trgb Gabbro, diabase, and metagabbro	
<b>MEZOZOIC AND PALEOZOIC</b>	
<b>Assemblages and Sequences</b>	
<b>Isokilo Assemblage</b>	
JTrs Cherty tuff, crystal and lithic tuffs, and volcanic breccia	
TrMs Sandstone, grit, and argillite	
TrMca Chert, argillite, and volcanoclastic rocks	
Pig Graywacke	
MDI Fine-grained limestone	
<b>Stratigraphic Sequences</b>	
<b>Mystic Sequence</b>	
JTrv -- Tatina River Volcanics and equivalent units	
PDsc -- Sheep Creek Formation and correlative siliciclastic units	
Dmi -- Older limestone	
<b>Mystic and Dillingier Stratigraphic Sequences, Undivided</b>	
JCmld Mystic and Dillingier stratigraphic sequences, undivided	
DSmdl -- Unnamed limestone	
<b>Igneous Rocks</b>	
MzPzi Intrusive and volcanic rocks, undivided	
MzZum Ultramafic and mafic rocks, undivided	

**Disclaimer**  
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**Regional Surface Geology of the Minchumina Basin, Alaska**  
(From Wilson et al. 1998)

Compiled by John F. Meyer Jr. 2008

Symbol	Description
●	Population < 1000
●	Population > 1000
⊗	Metalliferous Lode Deposits
—	Fold
—	Fault
—	Normal Fault
—	Fault - Inferred
—	Thrust Fault
—	Thrust Fault - Inferred
—	Syncline
—	Synclinorium
—	Syncline - Inferred
—	Anticline
—	Anticline - Inferred
—	Anticlinorium
—	Paleo Canyon
—	Basin Depocenters
—	Roads
—	Federal Parks
—	Placer Deposits
—	Coalfields

**Data Sources**  
Basemap data including hydrologic data, village and town locations, glaciers and icefields, volcanoes, roads and boundaries are from the State of Alaska, Core GIS database. The oil and gas data are from the Alaska Division of Oil and Gas database adapted from the Alaska Oil and Gas Conservation Commission database. The basin depocenters are from the Alaska Division of Oil and Gas. The regional geologic map units, faults and folds are from Wilson, F.H., et al., 1998, Geology of the Interior of Alaska, U.S. Geological Survey Bulletin 1094, 131 p., and from Mark, R.D. and Hawley, C.C., 1986, and the placer deposits are from Nockleberg, W.J., et al., 1987.

**References Cited**  
Kirschner, C.E. 1986. Map showing sedimentary basins of onshore and continental shelf areas, Alaska. U.S. Geological Survey Miscellaneous Investigations Series I-1873, scale 1:2,500,000.  
Mark, R.D. and Hawley, C.C. 1986. Map of Alaska's coal resources. Alaska Division of Geological & Geophysical Survey, Miscellaneous Investigations Series I-1873, scale 1:2,500,000.  
Miller, D.J., Payne, T.G. and Givc, G. 1969. Geology of the Interior of Alaska. U.S. Geological Survey Bulletin 1094, 131 p.  
Nockleberg, W.J., Sanderson, T.K., Berg, H.C., Brew, D.A., Grebeck, D., Robinson, M.S., Smith, T.E., and Yeend, W., 1987. Significant metalliferous lode deposits and placer districts of Alaska. U.S. Geological Survey Bulletin 1786, 104 p.  
Wilson, F.H., Dover, J.H., Bradley, D.C., Weber, F.R., Sanderson, T.K., and Haneseder, P.J. 1988. Geologic Map of Central Interior Alaska. U.S. Geological Survey Open-File Report 88-133A.