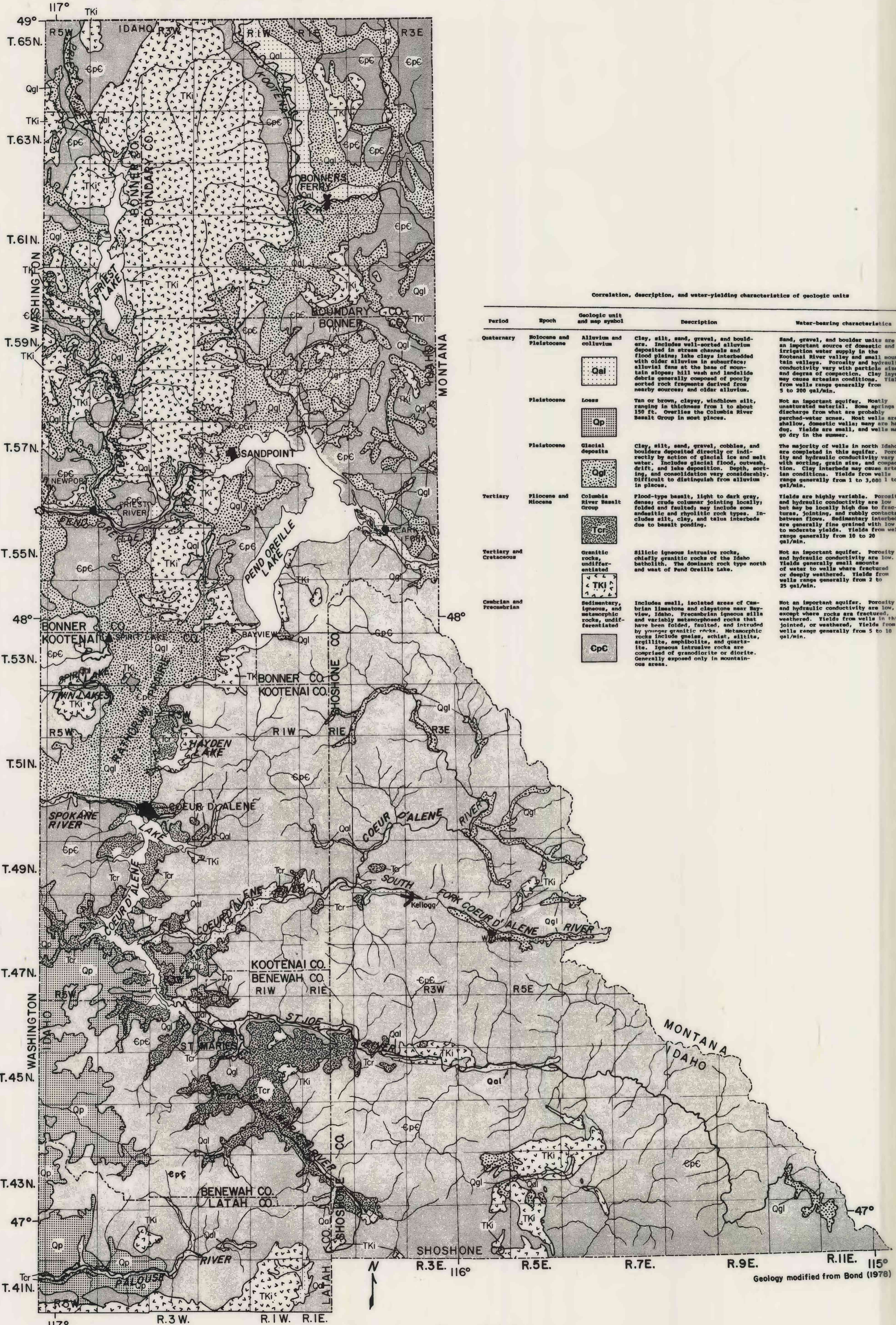


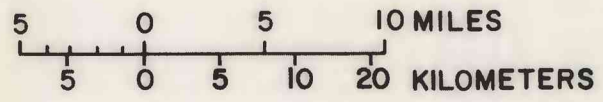
C A N A D A



Correlation, description, and water-yielding characteristics of geologic units

Period	Epoch	Geologic unit and map symbol	Description	Water-bearing characteristics
Quaternary	Holocene and Pleistocene	Alluvium and colluvium 	Clay, silt, sand, gravel, and boulders. Includes well-sorted alluvium deposited in stream channels and flood plains; lake clays interbedded with older alluvium in subsurfaces; alluvial fans at the base of mountain slopes; hill wash and landslide debris generally composed of poorly sorted rock fragments derived from nearby sources; and older alluvium.	Sand, gravel, and boulder units are an important source of domestic and irrigation water supply in the Kootenai River valley and small mountain valleys. Porosity and hydraulic conductivity vary with particle size and degree of compaction. Clay layers may cause artesian conditions. Yields from wells range generally from 5 to 200 gal/min.
		Loess 	Tan or brown, clayey, windblown silt, ranging in thickness from 1 to about 150 ft. Overlies the Columbia River Basalt Group in most places.	Not an important aquifer. Mostly unsaturated material. Some springs discharge from what are probably perched-water zones. Most wells are shallow, domestic wells; many are hand dug. Yields are small, and wells may go dry in the summer.
	Glacial deposits 	Clay, silt, sand, gravel, cobbles, and boulders deposited directly or indirectly by action of glacial ice and melt water. Includes glacial flood, outwash, drift, and lake deposition. Depth, sorting, and consolidation vary considerably. Difficult to distinguish from alluvium in places.	The majority of wells in north Idaho are completed in this aquifer. Porosity and hydraulic conductivity vary with sorting, grain size, and compaction. Clay interbeds may cause artesian conditions. Yields from wells range generally from 1 to 3,000 l to gal/min.	
Tertiary	Pliocene and Miocene	Columbia River Basalt Group 	Flood-type basalt, light to dark gray, dense; crude columnar jointing locally; folded and faulted; may include some andesitic and rhyolitic rock types. Includes silt, clay, and talus interbeds due to basalt ponding.	Yields are highly variable. Porosity and hydraulic conductivity are low but may be locally high due to fractures, jointing, and rubble contacts between flows. Sedimentary interbeds are generally fine grained with low to moderate yields. Yields from wells range generally from 10 to 20 gal/min.
Tertiary and Cretaceous		Granitic rocks, undifferentiated 	Silicic igneous intrusive rocks, chiefly granitic rocks of the Idaho batholith. The dominant rock type north and west of Pend Oreille Lake.	Not an important aquifer. Porosity and hydraulic conductivity are low. Yields generally small amounts of water to wells where fractured or deeply weathered. Yields from wells range generally from 2 to 25 gal/min.
Cambrian and Precambrian		Sedimentary, igneous, and metamorphic rocks, undifferentiated 	Includes small, isolated areas of Cambrian limestone and claystone near Bayview, Idaho. Precambrian igneous sills and variably metamorphosed rocks that have been folded, faulted, and intruded by younger granitic rocks. Metamorphic rocks include gneiss, schist, siltite, argillite, amphibolite, and quartzite. Igneous intrusive rocks are comprised of granodiorite or diorite. Generally exposed only in mountainous areas.	Not an important aquifer. Porosity and hydraulic conductivity are low, except where rocks are fractured, weathered. Yields from wells in this jointed, or weathered, Yields from wells range generally from 5 to 10 gal/min.

Base from U.S. Geological Survey 1:250,000 series, revised 1969



Geology modified from Bond (1978)

GENERALIZED GEOLOGY OF NORTH IDAHO