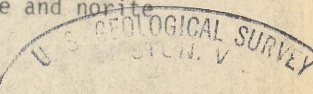


Qa1	ALLUVIUM--Unconsolidated to semiconsolidated interbedded clay, silt, sand, and gravel of stream channel, flood-plain, terrace, and lake deposits
Qt	TALUS DEPOSITS--Accumulation of angular to subangular pebble-, cobble-, and boulder-sized fragments derived from nearby bedrock outcrops
Qc	COLLUVIUM--Unconsolidated slope-wash deposits of mixed silt, sand, pebbles, and cobbles. Includes soils and unconsolidated materials of undetermined origin
Qaf	FAN DEPOSITS--Unconsolidated sand, gravel, pebbles, cobbles, and boulders forming fan-shaped areas at mouths of tributaries to major streams
Qn	GLACIAL DEPOSITS--Unstratified, semiconsolidated, poorly sorted, glacially derived debris consisting of silt, sand, pebbles, cobbles, and boulders of igneous and metamorphic rocks, locally indurated with iron-oxide cement
Tka	INTRUSIVE ANDESITE--Plagioclase biotite porphyry with minor quartz and hornblende
Pz	SEDIMENTARY ROCKS--Limestone, minor shale
mi	MAFIC INTRUSIVE ROCKS--Dikes of basaltic composition
	STILLWATER COMPLEX--Divided into:
	BANDED AND UPPER ZONES (about 4,000 m). Includes:
kuu	Upper anorthositic* member (90-800 m exposed)--Plagioclase cumulate with or without post-cumulus pyroxene
Wug	Upper gabbro member (70-610 m)--Plagioclase-two-pyroxene cumulate. Minor plagioclase cumulate at base
Wum	Upper mixed zone (40-140 m)--East of Boulder River: plagioclase-olivine cumulate at base, plagioclase-bronzite cumulate at top, with plagioclase-two-pyroxene cumulate between. West of Boulder River: plagioclase-bronzite cumulate top and bottom, plagioclase cumulate between
Wnu	Middle anorthositic member* (330-690 m)--Plagioclase cumulate with and without post-cumulus pyroxene
Wnm	Middle mixed zone (270-400 m)--A group of one to three cycles of predominantly plagioclase cumulate with plagioclase-bronzite and plagioclase-olivine cumulates
Wmq	Middle gabbro member (120-280 m)--Plagioclase-two-pyroxene cumulate with interbeds of plagioclase cumulate, plagioclase-bronzite cumulate, and plagioclase-olivine cumulate
Wtm	Lower mixed zone (110-330 m)--Interbedded plagioclase cumulate, plagioclase-bronzite cumulate, and plagioclase-olivine cumulate
Wta	Lower anorthositic member* (60-330 m)--Plagioclase cumulate with and without post-cumulus pyroxene
Wtg	Lower gabbro member (190-590 m)--Plagioclase-two-pyroxene cumulate, locally with minor interbeds of plagioclase cumulate and plagioclase-bronzite cumulate
Wno	Norite member (710-770 m)--Plagioclase-bronzite cumulate with pyroxene oikocrysts, locally with minor interbeds of plagioclase cumulate, sulfides, and olivine cumulate
	ULTRAMAFIC ZONE (about 1,600 m). Divided into:
Wub	Bronzite member (about 350 m average)--Upper bronzite cumulate of ultramafic zone
Wob	Pseudotite member (about 1,000 m average)--Olivine-bronzite cumulate (middle one-third of member)
Wbz	BASAL ZONE (170 m average)--Bronzite cumulate and norite
WHO	HORNFELS
WFS	FELSIC GNEISS
Wf	SCHIST



MAY 14 1977

*As used here, the term "anorthosite" refers to rocks in which plagioclase is the only cumulus mineral. These rocks contain 0-50 percent post-cumulus pyroxene.

REFERENCES

Hess, H. H., 1960, Stillwater igneous complex, Montana, a quantitative mineralogical study; Geol. Soc. America Mem. 80, p. 50, 82, pl. 2.

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