

ГОРБАЧ

**OLD SHIVELUCH VOLCANO: GEOLOGICAL STRUCTURE, ERUPTIVE CENTERS
RECONSTRUCTION AND THE FEATURES OF THE LATE PLEISTOCENE
VOLCANIC ACTIVITY**

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Results from detailed field work made it possible to describe the geologic structure of Late Pleistocene Old Shiveluch Volcano. Old Shiveluch activity consisted of two phase: extrusive-explosive activity of the initial phase was followed by numerous lava effusions from several eruptive centers. Location of the eruptive centers was reconstructed along the rim of the destroyed southern part of the volcano. Three main types of rocks were distinguished in the Old Shiveluch edifice: magnesian andesites ($\text{SiO}_2=57.3-63.8$ wt.%, $\text{Mg\#}=52.5-57.0$ mol. %), high-Mg basaltic andesites ($\text{SiO}_2=53.9-55.0$ wt.%, $\text{Mg\#}=58.8-63.7$ mol.%) and high-Al basaltic andesites ($\text{SiO}_2=53.5-55.7$ wt.%, $\text{Mg\#}=52.1-56.1$ mol.%). Relative sequence and the approximate volume ratios of the different types of rocks were revealed. New geologic data allowed suggesting what caused a sector collapse of Old Shiveluch edifice.

Keywords: Shiveluch, geological structure, magnesian andesites, volcanic sector collapse.