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Alluvial Deposits and Metamorphic Geology of the Deogpung Area in the Eastern Seoul

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1. Introduction

Deogpung area is more or less widely developed along the eastern part of the Seoul. The area composes of the Precambrian rocks and Quaternary alluvial deposits. In topography the Precambrian rocks shows more or less low altitudes, and are widely developed in the southern part of the Han Gang. The rocks can be petrologically divided into three rock kinds. The deposits are mainly contacted with the northern part of the metamorphic rocks, and distributed along the meandering inner part of the Han Gang.

2. Characteristics of metamorphic rocks and alluvium deposits

The metamorphic rocks can be petrologically divided into granitic gneiss, banded gneiss and amphibolite schist. The former is located at the eastern part of the area, which shows mainly deeply weathered rock phases. It composes of quartz, alkali feldspar, plagioclase, biotite, muscovite, garnet, zircon and opaques. Among the outcrops of the granitic gneiss, those parts resistant to weathering processes show relatively fresh rock phases. Eroded-out voids of the mafic enclaves often occur as the round or lenticular shapes. Banded gneiss is widely developed at the middle part of the area, partly showing folded textures of small scales. It consists of quartz, plagioclase, biotite, garnet, zircon and opaques. Biotite especially shows predominant foliations and partly flake textures. Amphibolite schist is developed on a small scale at the western part of the area. It shows dark grey in color and deeply red oxidation stains along the fracture plains. And porphyroblasts of dark grey feldspars often occur as sub- to anhedral forms. It consists of plagioclase, amphibole, biotite, chlorite and opaques. Opaques occur frequently as anhedral forms. In the alluvial deposits, gravels are mostly well-rounded and consist of various rock kinds, which are different from the ground Precambrian rocks of the area. These might suggest they were mainly derived from flooding of the upper river flows and deposited in the meandering inner part of the area.

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