

31. On Two Borings near Atami-mati, Idu Peninsula.

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(Read Jan. 19, 1932.—Received March 20, 1932.)

The authors present the following geologic interpretation of two columnar sections obtained by borings made near the Atami hot springs, Idu Peninsula, Central Japan. Of the two cores obtained, one was forwarded by the Nozawa-Gumi Company, Marunouti, Tôkyô, to the Earthquake Research Institute, Tôkyô Imperial University, while the other was obtained by the writers from the Matuo Boring Company at Atami, to whom our thanks are due.

These borings supplemented by actual surface geologic investigations made by H. Kuno, one of the writers, form the data of our study on the presumed underground geologic structure of the region.

The boring machine was of the "Matuo" type, with fishtail bit, so that instead of large complete bore cores we could get only fine powders of the rocks. A large part of the sample was so decomposed by the "hot spring solution" that no satisfactory determination of mineral properties could be made. Fig. 1 is the index map and rough geologic sketch map as surveyed by H. Kuno. A and B of Fig. 2 are the columnar sections.

Boring No. 1. (Fig. 1 and 2, A).

Position of the bore: Northern suburb of Atami-mati (Nisiyama,¹⁾ Nozawa-gumi Bunzyôti).

Height of ground surface above mean sea-level: 150 m.

At depth of 42 m. below the ground surface: Decomposed rocks character.

At depth of 42-45 m. below the ground surface: Pale green tuff containing medium sized fragments (about 2-3 mm. diam.) of dacite. This dacite has the same characters as that of the NONAKA²⁾ beds, which name has been proposed by H. Kuno.

At depths of 45 m.-300 m. or more below the ground surface: Decomposed rocks belonging to the rheumatika of the Sogayama³⁾ beds so far as

1) 西山. 2) 野中. 3) 曾我山.

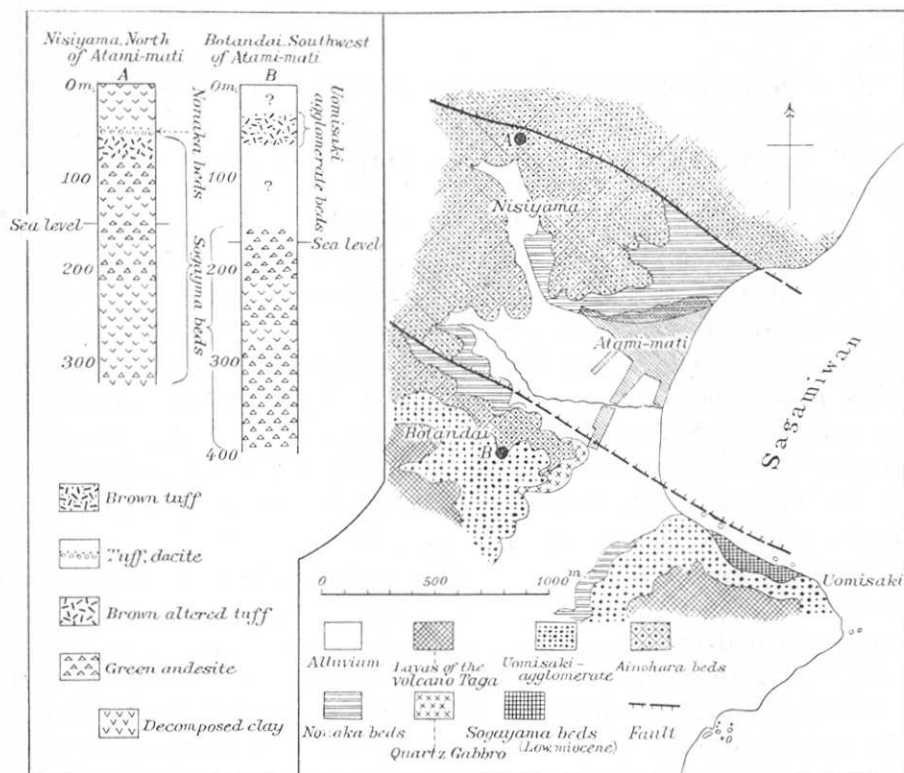


Fig. 2. Columnar sections.

Fig. 1. Index map and rough geologic sketch map.

concerns the richness of zeolite veins and other geologic relations.

Remarks:—From the above boring, the dacite of the Nonaka beds appears at a depth of 42-45 m. below the surface. From 45 m. to the bottom, were found decomposed andestic rocks and tuff, which may belong to the Sogayama beds. About 45 m. below the ground surface is probably a geologic boundary plane between the Sogayama beds and the Nonaka beds. The foregoing geologic relations were deduced from the borings.

Boring No. 2. (Fig. 1 and 2, B).

Position of the bore: At Botandai,⁴⁾ the southwestern suburb of Atami-mati.

Height of ground surface from the mean sea-level: 170 m.

4) 牡丹臺.

At a depth of 30 m. below the ground surface: No material was preserved.

At a depth of 30-70 m. below the ground surface: Dark brown loose tuff which may belong to the matrix of the agglomerate cropping out at Uomisaki⁷⁾ near Atami, the earliest ejecta of the ancient volcano Taga (early Diluvium).

At a depth of 70-130 m. below the ground surface: Indeterminable decomposed rocks.

At a depth of 130-300 m. below the ground surface: Dark green propylitised andesite (more or less fresh).

Remarks: From boring No. 2, we found that the Uomisaki agglomerate appears above 70 m. and propylitised andesite of the Sogayama beds from a depth of 130 m. to the bottom (about 300 m. or more). These results of the boring definitely confirm those of the surface geologic survey. As quartz gabbro crops out 300 m. east of boring No. 2 (see Fig. 1.), it is inferred that this rock intruded into the propylitised andesite of the Sogayama beds that appears below a depth of 130 m. from the ground surface.

According to the engineer of the Matuo Boring Company, the boring at the southeast point of Simotaga⁹⁾ showed that the green more or less soft rocks appear in the bore core to a depth of about 450 m., and the green rocks intercalate with coal although rarely. From these facts one of the writers, H. Kuno, conclude that the green rocks belong to the green altered andesite of the Sogayama beds. The writers therefore believe that the Sogayama beds make up the base of the Idu peninsula, at least that region near Atami-mati and Taga village, and also that the younger volcanic materials do not cover this basal rock to any very great depth.

31. 伊豆半島、熱海町附近の二つの試錐

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末廣所長の御幹旋により、東京丸の内野澤組から送附された熱海町附近の試錐 (Fig. 2, A.) の材料と筆者等が實地踏査の際に寄贈を受けた松尾ボーリング商會に保存されてあつた試錐 (Fig. 1

5) 魚見崎. 6) 下多賀.

2, B.) の材料との報告で、之等によりて、偶々この地域を調査してゐた筆者等の一人久野が地上の關係からは決定的な關係を突き止められないでゐたところの地質學的關係に關して多くの事實を知ることができた。この結果は伊豆半島少くとも熱海多賀附近の基盤として久野の曾我山層がかなり廣く分布してゐることを暗示してゐるし、又た若い地質時代の火山岩層がそんなに厚く堆積してゐないことをも暗示してゐる。