NOTES ON THE ORE-DEPOSIT OF THE TREADWELL MINE, ALASKA.

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The Treadwell mine, situated on Douglas island, Alaska, is a somewhat remarkable ore-deposit, and has of late years become prominent as a producer of gold. I am not aware that any systematic description of the character of this deposit has yet been published, and this circumstance may render the following notes on its mode of occurrence of interest, while the microscopical examination of the gold-producing rock by Mr. F. D. Adams, throws further light on the character of the deposit. My examination of the mine itself was made, by the kind permission of Mr. Treadwell, while I was on my way back from the Yukon District in the autumn of 1887.

Attention was first drawn to this deposit, by the discovery of gold-placers, which were worked for several years previous to the finding of the ore, and in a few cases were found to pay well. The gold of the placers was fine, but rough and unworn in character. The placers occurred on the surface of the ore-mass itself and on the rather steep slopes running down from its outcrop to the shore, and must have been produced by the natural decay of the ore subsequent to the glacial period, as they were found to lie above the boulder-clay, which fills many of the hollows and rests directly on the rock wherever it occurs. It may be noted here in passing, that Mr. Treadwell informed me that barnacles and various marine shells had been found still adhering to the surface of the rock, in places from which the clay had been excavated, up to a hight of 150 feet above the present sea-level.

The ore-mass, which has been extensively exposed by stripping and proved as well by several drifts, has a thickness of about 400 feet. Its length, or at least the length of that part of it which will pay for working, is not accurately ascertained but must be considerable. It runs in a general northwesterly direction, parallel to the shore of the eastern side of Douglas island and is bounded to the northeast and southwest by dark, rather slaty argillites, which, from analogy with similar rocks which