

bases and the sides of the triangles: these gave results as satisfactory as those usually obtained below. The great difference was in the sound itself: the report of the gun producing a kind of hissing noise. The eprouvette was of iron, and was fired with a plug driven into it very tightly after it was loaded. When fired near the level of the sea, it was necessary to close the ears when standing within twenty feet of it. The sound could be heard six miles, and the report was equal to that of a large gun. But on the summit we stood close to it without any precaution whatever, and the noise it there made was more like that of a squib. Although the reports of the eprouvette were heard at the opposite side of the crater distinctly, yet the sound was a faint one; but at the Recruiting Station, then occupied by Lieutenant Alden, about eight miles distant, the sound was loud and reverberatory.

This night we finished the pendulum, and all the dip and intensity observations, except those with Gauss's needle.

The temperature at night stood at 20°.

On the 12th, I joined Lieutenant Budd in the triangulation, and for this purpose made the circuit of the crater to occupy the western stations. The day was fine, and the lava covered with about five inches of snow. Having prepared our boots with hide sandals, Dr. Judd and myself set off at an early hour towards the south, and whilst Lieutenant Budd took the north side, we passed round Pohakuohanalei. In the vicinity of that crater are many fissures, of great depth, and with a fresh appearance, as though they had been in action only the day before. The matter which had been thrown out from them appeared to be pure obsidian, of a dark and shining colour, and very brittle. Beyond it was an extensive bed or stream of pahoiohi. The small crater to the south of Pohakuohanalei, is but a small pit, in comparison with the others, and does not appear to have ever discharged lava over its edge. It is of the kind that I shall hereafter designate as a pit-crater, and will be described when I come to speak of those that are near the new eruption.

In traversing these fissures we were in great danger, and experienced much difficulty in walking on the recent stream that seemed to have flowed from them, for the snow which covered the lava concealed the new and weak places. The idea of being precipitated down a chasm of one hundred and fifty or two hundred feet deep, was by no means agreeable. Our blood was occasionally stirred by breaking through with one leg or both; and I shall not soon forget my own descent into a vapour or steam bath, which on trial was found to be 169° of tempe-