

The 2015 Villarrica volcano eruption: amazing lava fountaining with spatter fall and flows that triggered lahars which caused damage in the Pucón area

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The March 03, 2015 eruption of Villarrica volcano lasted for only about half an hour and consisted in a ca. 1.5 km high lava fountaining from the main crater. Around the crater intense spatter falls started to accumulate until they got an unstable thickness that generated incandescent flows radially over the steep slopes of the volcano covered by a glacier. On the contrary, as seen before in eruptions of Villarrica volcano, where high effusion rate of lava flows produced “jökullhaupt” lahars. In this case continuous spattering around the crater formed lahars gradually, that spread mainly to the northern slope of the volcano. The features of the lahars were absolutely different as those generated by “jökullhaupt”, in the sense that they had much more fine matrix and look like “mudflows” in most places carrying PJB (blocks and bombs). Only at the Pedregoso-Turbio creek they resembled more as the “typical” Villarrica volcano lahars, with abundant rounded blocks and a minor amount of fine matrix. Waves up to 4 m high were reported along this last valley and many small bridges and roads were cut, leaving isolated around 100 people. In the Zanjón Seco valley mudflows up to 2,0 m high destroyed part of a touristic site (Cuevas Volcanicas), the Ski area water supply, many bridges and road infrastructure. Isolated blocks up to 2,5 m in diameter (30 tons) were carried for more than a kilometer and some of them were left on the roads of the Villarrica National Park.