

## ***From: Volcano Watch, September 26, 1997***

Volcano Watch, a weekly feature written by scientists at the USGS Hawaiian Volcano Observatory, is posted on the HVO Web site (<http://hvo.wr.usgs.gov/volcanowatch/>) and published in Hawai'i Island newspapers and online news sources.

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### **A look back at two Mauna Loa eruptions**

This weekend marks the 78th anniversary of the start of the longest -lasting eruption from the southwest rift zone of Mauna Loa Volcano in historic time. The 1919 Alike eruption was the most voluminous historical outpouring from that rift zone until the massive 1950 eruption.

The eruption started during the early evening hours of September 26. In the fading twilight, observers at the Hawaiian Volcano Observatory (HVO) noticed two plumes rising from high on the silhouetted southwest rift zone of Mauna Loa. As night fell, a distinct glow was seen reflecting from the steam clouds, confirming the presence of molten lava. The eruption from this vent lasted only a few hours.

The magma slowly migrated down the rift zone, and a new fissure opened up about 18 km (11 mi) south-southwest of the initial outbreak. The new eruption was first observed from HVO at 1:45 a.m. on September 29, 1919. The primary vent was located at an elevation of 2,350 m (7,700 ft) and about 20 km (12 mi) above the Kona highway, a section of the main "government" road that circled the island.

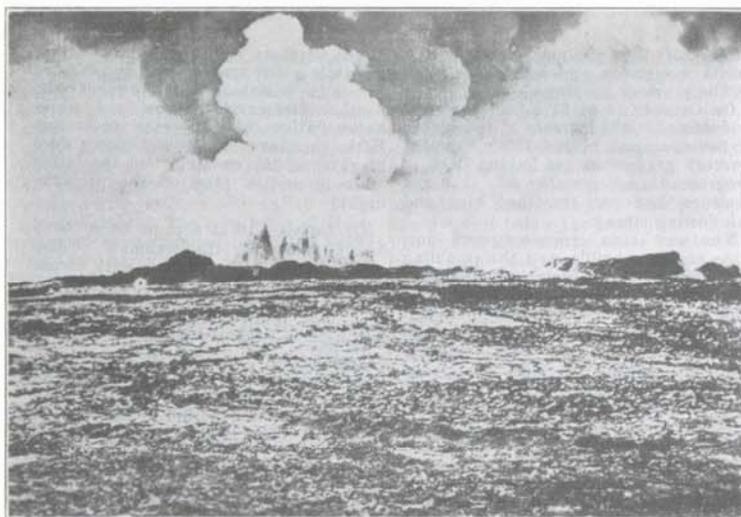
Flows from the vent proceeded down the steep but heavily forested slope. The lava crossed the Kona highway at 9:30 p.m. that night and entered the ocean 23 km (14 mi) from the vent about 24 hours after the eruption started. In contrast, flows from the 1950 eruption originating in the same area crossed the highway in two hours and reached the ocean in less than three hours. The slower speed of the 1919 flow relative to the 1950 flow can be attributed to the lower output of the eruption and to the thicker vegetation along the path of the flow.

The 1919 eruption continued for 38 days and covered an area of 30 km<sup>2</sup> (10.8 square miles). The volume of lava erupted is estimated to be 218 million m<sup>3</sup> (239 million cubic yards), with half the volume under the sea. The lava flowed for great distances under the sea, and fishermen reported seeing boiling water up to 10 km (6 mi) from shore.

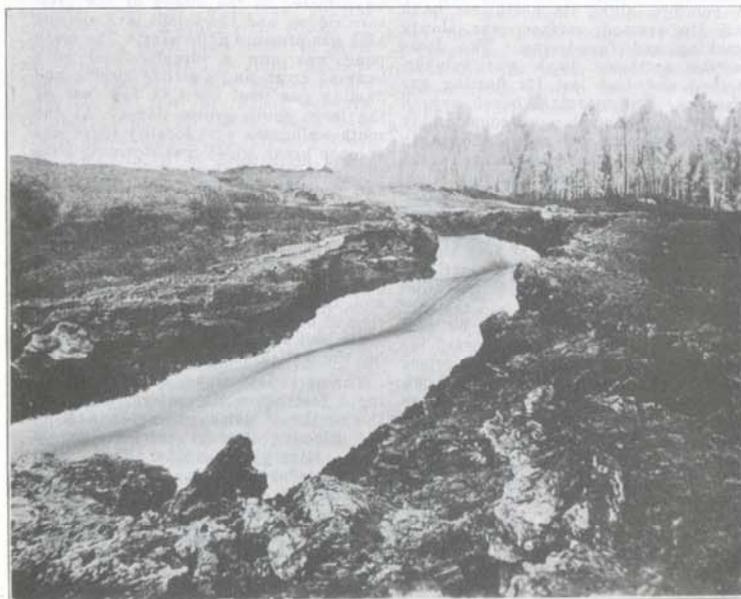
Lava flow activity slowly waned, and the last glow from the vent area was observed on November 5. The sparse settlement of the area limited losses to a few ranch houses, the small enclave of Alike, and about a mile of the Kona highway. If a similar eruption should occur today, losses will be considerably more because of the increased development of the area. The steep slopes of Mauna Loa along this flank of the volcano make lava flows in this area a threat to human lives.

Constant monitoring of Mauna Loa by the U.S. Geological Survey's Hawaiian Volcano Observatory should provide ample warning of any impending eruption of the volcano. In the years to come, HVO will be increasing our real-time surveillance of Mauna Loa with new strain and seismic sensors placed around the volcano.

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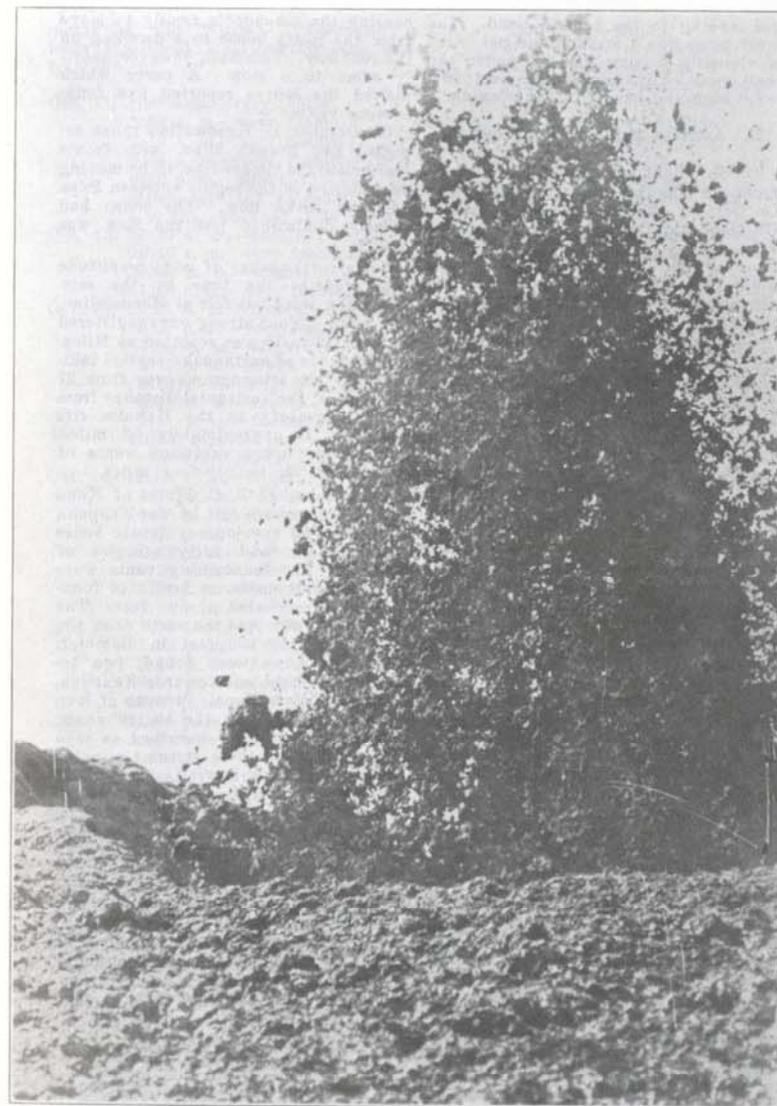


Mauna Loa Rift-Source from the East. Oct. 1, 1919.



Alika Lava Flow, looking upstream—road crossing. Oct. 6, 1919.

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Lava Fountain 50 feet away. North Crater. Oct. 25, 1919.—Photos, Jaggars.