

Notes from surveillance flight with LHG to the eruption site, 5 FEB 2015.

Observations from the previous surveillance flights held on 10 and 21 JAN had already indicated that the intensity of the eruption had decreased since early DEC 2014. Observations made on 5 FEB suggests that the intensity of the eruption continue to decrease. The collective evidence is given here below.

Vent activity and appearance:

By comparison of the below three images from 10 JAN (left), 21 JAN (right) and 5 FEB (below), it is evident that the bubble bursting activity (already reduced from NOV) has reduced further during JAN and by early FEB concentrated in two zones of the crater (south and central). Along Heimasætan there is no longer any bubble bursting activity. In this section of the lava lake weak slabs are passively rafted along with the flow into the channel, where slabs travel at seemingly lower velocity. The level of the lava stand inside the crater is now at the lowest level since the lake first formed.

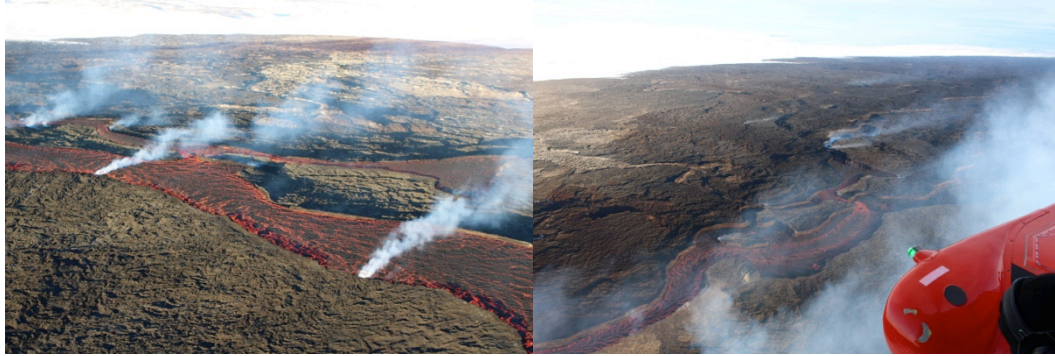


Photos of the rampart on 10 JAN (upper left), 21 JAN (upper right) and 5 FEB (below).

Lava channels:

The northern branch that formed during mid-DEC remains inactive. The assessment is that following a recent further decrease in effusion rate (after 15 JAN) this open channel can no longer be fed. The once broken levee now again function as a levee. The eastern branch with the once-persistent lava pond is

now completely crusted over, all the way up to the fork with the branch flowing NE. The eastern branch might still be active though, sustaining active breakouts far east out by Jökulsá. The lava now stands even lower against the levees, corroborating with observations made at the vent. The open section of the NE branch appears shorter, and now there is a lava cascade in its canyon. There, flow continues subterranean.



Photos of the central section of the braided open lava channel system on 21 JAN (left) and 5 FEB (right). On 5 FEB the lava stands significantly lower inside the open channels. The entry point for the now-frozen northern lava channel sits high above and out of reach from the still active channel system. The entry point for the eastern channel is the dark gray visible above the LHG helicopter landing gear (right image).

Interestingly, the pond in the NE branch immediately upstream of the canyon crusted over between passes during the day. It remains unclear, if this is temporary due to fluctuations at the vent. Other explanations are also possible.



Photos of channel and pond leading northeast on 05 FEB (left, 10:31, right 11:46).

Lava field:

The largest active area in the entire field is a rather large breakout to the NE (2.5-3.5 km from vent) immediately west of a north-south trending escarpment on top of the lava field. Frontal breakouts are still taking place in the far east field by Jökulsá, as well as on top of the lava field out there, and fed by either the eastern or northeastern branch.

Activities: In addition to aerial surveillance, two stops were made on the ground by Jökulsá (collecting samples and temperature measurements).

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