

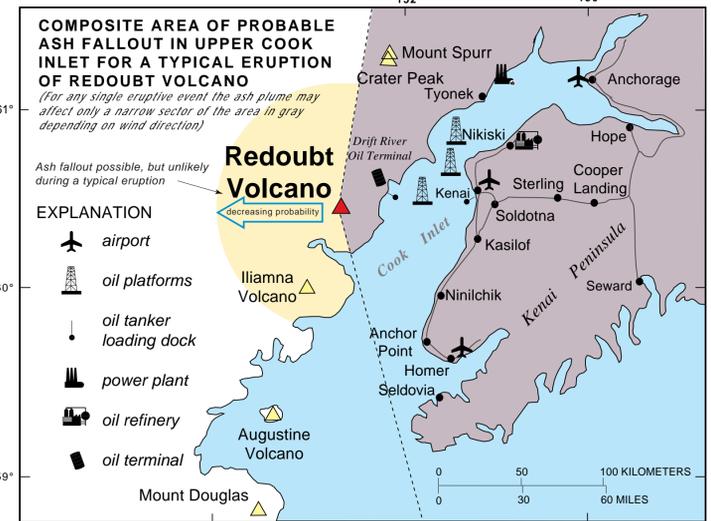
Aerial view of Redoubt Volcano, looking toward the northeast, December 18, 1989. At this time, a low-level eruption of steam (white) and ash (gray) was occurring. The steam and ash plume extends to about 4500 meters above sea level. Photograph by W. White, USGS.



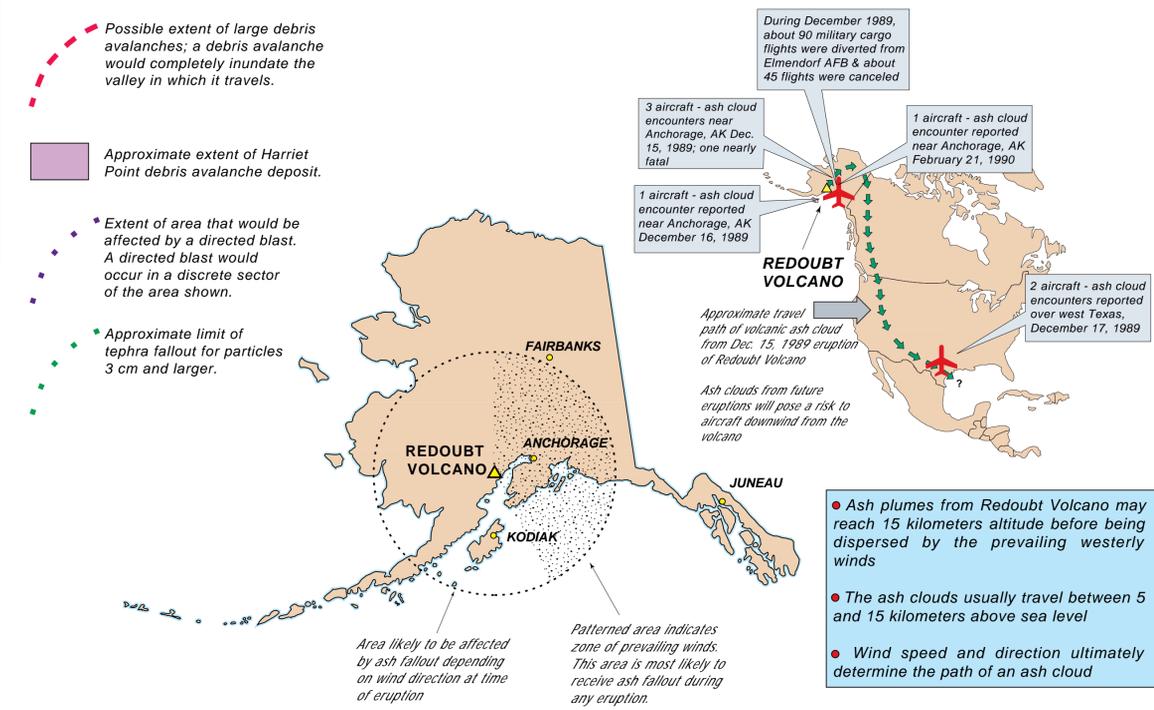
Lower Drift River valley, February 15, 1990, looking to the west. The muddy-looking areas along the river are lahar deposits generated by an eruption on February 15. These lahars, and others like them, covered the entire floor of the Drift River valley (between arrows) and extended from the Drift Glacier to Cook Inlet. A typical lahar consists of a fast-moving slurry of mud, rock debris, and water. Photograph by T.P. Miller, USGS.

**AREAS OF POTENTIAL HAZARD FROM FUTURE VOLCANIC ERUPTIONS**

- Approximate extent of 1989-90 pyroclastic flows.
- Extent of area most likely to be affected by pyroclastic flows. The flows will travel primarily along valleys and drainages, but ridges and divides could be affected near the volcano.
- Approximate extent of 1989-90 pyroclastic surge.
- Extent of area most likely to be affected by pyroclastic surges. Most surges will travel primarily along valleys and drainages, but ridges and divides could be affected near the volcano.
- Extent of area most likely to be affected by lahars, lahar-runout flows and floods. Approximate travel times for March 1990 lahars in Drift River valley also indicated.
- Possible extent of large debris avalanches; a debris avalanche would completely inundate the valley in which it travels.
- Approximate extent of Harriet Point debris avalanche deposit.
- Extent of area that would be affected by a directed blast. A directed blast would occur in a discrete sector of the area shown.
- Approximate limit of tephra fallout for particles 3 cm and larger.



**VOLCANIC ASH FALLOUT AND AIRCRAFT HAZARDS**



**PRELIMINARY VOLCANO-HAZARD ASSESSMENT FOR REDOUBT VOLCANO, ALASKA**

by

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