Seismicity of the Earth 1900–2013
Offshore British Columbia–Southeastern Alaska and Vicinity

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EXECUTIVE SUMMARY

The oceanic area of the Pacific is unique among researchers interested in earthquake and volcanic hazards. Because the plate boundaries can't be directly observed, the geologic, oceanographic, and geophysical data are used to study the tectonic and volcanic processes that govern the seismic and volcanic hazards in the region.

The following sections provide a summary of the seismicity and volcanic activity in the offshore British Columbia–Southeastern Alaska and Vicinity region.

Seismicity

Earthquakes are a common occurrence in the offshore British Columbia–Southeastern Alaska and Vicinity region. The region is situated along the western boundary of the North America plate, where it subducts beneath the Pacific plate. The subduction zone is characterized by a complex system of faults and seismic activity.

The seismic activity in the region is largely due to the interaction between the North America and Pacific plates. The North America plate is moving northward relative to the Pacific plate, resulting in a series of earthquakes along the Queen Charlotte and Fairweather faults.

Volcanic Activity

Volcanic activity in the offshore British Columbia–Southeastern Alaska and Vicinity region is primarily associated with the subduction of the Pacific plate under the North America plate. This process generates magma that rises to the surface, forming volcanic arcs.

The volcanic activity in the region is characterized by periodic eruptions of volcanoes along the coastline. The volcanoes are characterized by a range of eruption styles, from explosive to effusive.

In summary, the offshore British Columbia–Southeastern Alaska and Vicinity region is a complex area with a high level of seismic and volcanic activity. The region is subject to seismic and volcanic hazards, which require careful monitoring and preparedness.