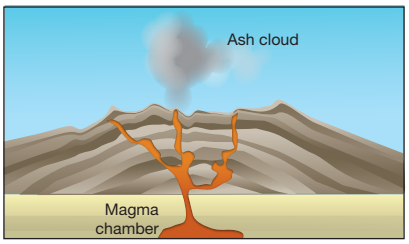
Volcano Fact Sheet

Mount Ruapehu Volcano

Description

- Ruapehu is the largest active volcano in NZ and is located at the southern end of the Taupo Volcanic Zone in Tongariro National Park.
- At 2797m high, it is the highest peak in the North Island.
- It has the North Island's only glaciers.
- 3 summit craters have been active in the last 10,000 years, and the currently active vent is beneath the crater lake of South Crater.
- It is surrounded by a ring plain of volcanic material from lahars and landslides.



▲ The eruption of Mt Ruapehu in 1997.

► The South Crater lake.

◄ Mt Ruapehu is a **stratovolcano (also called a composite cone)** - it is made up of alternating layers of ash and lava flow.

Maori Name

- *Ruapehu* means 'pit of noise' or 'exploding pit'.

Features

- It has several peaks and a summit plateau.
- The warm, acidic crater lake is fed by snow melt.
- There are two large commercial ski fields, Whakapapa and Turoa.

Type

- It is a stratovolcano (also called composite cone volcano).
- Is is built up by a succession of layers of andesite lava and ash deposits.

Cause

- It was created by subduction of the Pacific Plate below the Australian Plate
- The Earth's crust is stretched and thinned in the entire Taupo Volcanic Zone.
- It is believed to have a number of very small magma bodies 1-5km below the crater

Eruptive history

- Ruapehu began erupting at least 250,000 years ago.
- Major eruptions in recorded history have been about 50 years apart, in 1895, 1945, and 1995.
- Minor eruptions are frequent, with about 60 occurring since 1945.

Eruptive material

- Tephra ranging in size from dust (ashfall) to bombs and blocks, is produced in every eruption.
- Lava flows occur from the vent (though none in historical times), lava domes in the vent (1945) and fire fountaining (sprays of liquid lava) have been witnessed.
- Pyroclastic flows are uncommon in Ruapehu's history with none in historic times.
- Usually the crater lake causes magma to cool and fragment (explode) quickly and violently leading to fine ash eruptions.

Last eruptive activity

- On 25 September 2007- an explosion of ash, rocks and water across the summit area lasted 7 minutes and produced 2 lahars but no high eruption plume.

Other Volcanic Hazards

- Frequent lahars have occurred during eruptions or later due to collapse of crater lake wall.
- A 1953 lahar caused the Tangiwai disaster
- The most recent dam break lahar was on the 18 March 2007.
- Landslides (debris avalanches) are also possible.

Monitoring

- 2 web cameras, 10 seismographs and 6 microphones detect volcanic explosions, and 9 continuous GPS stations record ground deformation. Water and gas monitoring of the crater lake and airborne gas monitoring is also carried out regularly.

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