Ngauruhoe volcano is a young composite cone in the central North Island of New Zealand, with most recent strombolian and vulcanian style eruptions in 1954-55 and 1974-75. Both eruptions produced hypocrystalline, medium grained, porphyritic, basaltic andesite to andesite ($\text{SiO}_2$ 54.88-58.85 wt.%) juvenile clasts containing quartzofeldspathic xenoliths, with a pl>opx>cpx>ol mineral assemblage within a glassy groundmass.

The 1954-55 strombolian deposit is a 28 m thick scoriaceous lapilli and bomb deposit with a vesicularity range of 6-82% and comprising a coherent to densely agglutinated, and laterally discontinuous, stratified facies that represent changes in intensity and fire fountain direction. The overlying deposit is a 0.8 m thick, finely bedded, dense angular lapilli and ash facies resulting from vulcanian pyroclastic fall and surge activity. The 10 m thick 1974-75 deposit comprises a massive, scoriaceous, dense angular lapilli, block and bomb facies overlying a zone of dense agglutination, during the climactic sub-plinian eruption.

Ngauruhoe has an open, steady-state magma system influenced by magma mixing and homogenisation, indicated by plagioclase sieve textures and oscillatory zoning, and crustal assimilation that incorporated up to 5% quartz xenoliths through the recent eruptions. Physical conduit processes were the major influence on eruption style change from strombolian to vulcanian. The 1955 vulcanian deposits comprise 40% vesicular ash (vesicularity up to 82%) with abundant coalescence and up to 99% interconnectedness, and 60% poorly- to non-vesiculated ash suggesting the presence of a degassed cap rock that likely resulted in pressurisation. No accretionary lapilli or quenching textures were observed to indicate magma-water interaction.