GEORGE'S FIELD NOTES

LOCATION: SHELLY BEACH ,PORT MACQUARIE

GEOLOGICAL FEATURE: BASALT DYKE

ROCK UNIT: BASALT INTRUSION, 520-480 MILLION YEARS OLD

A dyke is a crack or fissure in rocks that has been filled with molten magma that has then cooled and hardened. Dykes cut across existing layers of rock. If the crack runs in the same direction as the layers of rock, this feature is called a *Sill*.

In order for molten rock to move to the surface and erupt as a volcano, it has to move through all the solid rock above where it formed. Molten rock usually comes from depths of over 15km in the crust, so that's a lot of rock to get through before it reaches the surface. In order to travel through all that rock, the magma moves up through cracks and pushes rocks apart to create dykes.

Dykes can be made of any igneous rock, not just basalt. It is common around granite intrusions to find dykes of slightly different granite varieties such as coarse grained pegmatite. Around volcanoes it is possible to see different dykes feeding lava up to different vents.