Fieldwork on Mt Erebus
LIDAR equipment uses laser technology to produce a pin map of the cone. Repeated scans will enable to view the changes in the shape of the cone. Changes in cone shape may dictate an imminent eruption.
The thermal imaging camera helps observe heat from the volcano. On Erebus it helps measure the variation in the level of the lava lake. It can also help understand the changes in heat emitted from the lava plume.
Rock sampling of lava or tephra from the volcano can give information on the history of an eruption. Information from the crystals in the rocks can give information on the origin of the magma or the style of eruption.
Here the scientists are measuring tephra in the Barne glacier. Sampling tephra stratigraphy gives scientists an understanding of the chemistry of the erupted material which will help determine the style of the eruption.
Scientists are hiking across Antarctica to study a dyke in a rock outcrop. The difficult conditions experienced are clear in this picture, showing the challenges presented by the harsh Antarctic climate.