

## MAYO - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Bohaun South Volcanics, Partry Mountains</b>
Other names used for site	
<b>IGH THEME</b>	<b>IGH4 Cambrian to Silurian</b>
<b>TOWNLAND(S)</b>	<b>Bohaun South</b>
<b>NEAREST TOWN</b>	<b>Westport</b>
<b>SIX INCH MAP NUMBER</b>	<b>98</b>
<b>ITM CO-ORDINATES</b>	<b>501870E 772820N</b>
<b>1:50,000 O.S. SHEET NO. 38</b>	<b>GSI BEDROCK 1:100,000 SHEET NO. 11</b>
<b>GIS Code MO013</b>	

### **Outline Site Description**

Mountainside exposures on mainly sheep grazing land.

### **Geological System/Age and Primary Rock Type**

Lower Ordovician age (c. 485–481 million years ago) basalts and pillow lavas of the Bohaun Volcanic Formation.

### **Main Geological or Geomorphological Interest**

The Bohaun Volcanic Formation rocks are associated with intra-oceanic arc volcanism (Lough Nafooey Arc) prior to collision of the arc with Laurentia (ancient continent comprising much of North America), and represent early stage volcanic activity above a young subduction zone. The rocks at the site are associated with the basal (lowest) units of a thick accumulation of Ordovician age lavas and volcanoclastic sediments found in south Mayo (the South Mayo Trough). The Bohaun Volcanic Formation and the Lough Nafooey Group are the oldest and most primitive formations of the South Mayo Trough sequence. The volcanic rocks at Bohaun were originally in part pillow lavas, which are now extremely stretched in a NE-SW direction. Strong deformation in the volcanic rocks is associated with the Bohaun Shear Zone where the volcanics are thrust over the Rossroe Formation conglomerates.

The pillow lavas were squeezed out (erupted) as molten lava on the ocean floor, where the lava oozes cooled into bulbous and pillow-shaped lobes. Successive eruptions squeezed more pillows on top of older pillows, eventually building up thick sequences of pillow lavas.

### **Site Importance – County Geological Site**

This County Geological Site is significant in understanding the geochemical and tectonic evolution of the South Mayo Trough. The Ordovician rocks at Bohaun demonstrate important stratigraphical relationships between the volcanic rocks and the conglomerates (containing acid volcanic clasts) and sandstones of the Rossroe Formation.

### **Management/promotion issues**

No immediate threats are obvious in this remote area. However, managed forestry is a current land-use practice in the locality. Further development of forestry in the area would have an adverse effect on the integrity of the exposures, and on access to the outcrops.



View from Bohaun, looking NW towards Croagh Patrick (peak in distance). Basalts exposed in *roche moutonnée* ice-moulded rock outcrop.



Pillow lava exposures.



Pillow lava exposures, looking east to Bohaun hills.



View looking north from Bohaun South.



Clean exposures of basalts where soil and peat has eroded.



