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MEDIA RELEASE

Details of Bowen quake deciphered

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Scientists believe a magnitude 5.3 earthquake which occurred close to Mount Abbot near Bowen in north Queensland earlier this year may have been the result of horizontal movement along a vertical fault plane.

Geoscience Australia seismologist, Emma Mathews, said the magnitude of the earthquake suggests the rupture could have occurred over a distance of two or three kilometres.

The earthquake was the largest reported in the region since 1913 when a magnitude 5.7 earthquake struck Ravenswood, 80 kilometres west of the Mount Abbot epicentre.

Ms Mathews said that following the magnitude 5.3 earthquake on 16 April 2011, five aftershocks between magnitude 4.1 and 3.2 were recorded at seismic stations in Charters Towers, Eidsvold, Quilpie and Roma during the following three days.

Another event measuring magnitude 4 was recorded near the Mount Abbot epicentre on 17 September 2011.

Ms Mathews said that additional aftershock data was obtained in the weeks following the quake, using four temporary seismic stations deployed between 10 and 48 kilometres from the epicentre near Mount Abbot, extending from Cape Upstart in the north to the headwaters of the Bogie River in the south.

“These stations measured 326 smaller-magnitude aftershocks close to Mount Abbot during the first two weeks following the initial event,” Ms Mathews said.

“Data from these observations and local anecdotal evidence of a fresh landslide on the western side of Mount Abbot suggest that the earthquake was associated with underground movement in the vicinity of the Millaroo fault zone and the Collinsville fault.

“Further analysis of the aftershock data will help reduce uncertainty about the locations of the aftershocks and allow identification of faults associated with the earthquakes and detection of those which are currently active,” Ms Mathews said.

“This information will help to improve future assessments of the likely earthquake hazard in the Bowen region, and more broadly, the likely hazard in coastal areas of north Queensland,” she said.

For more information or to arrange interviews, please contact:
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