

BOTSWANA GEOSCIENCE INSTITUTE

PRESS RELEASE

TO : ALL PRESS/MEDIA

FROM : MARKETING & COMMUNICATIONS DEPARTMENT

DATE : July 04, 2017

SUBJECT : EARTHQUAKE, JULY 04, 2017

1. The Public is informed that Botswana experienced a seismic event in the afternoon of Tuesday 4th July 2017 and its parameters are as follows;
 - **Origin time:** 04th July 2017, 11:37:05 UTC (13:37:05 Hours Local Time)
 - **Coordinates:** 22.570°S, 25.087°E
 - **Depth:** 10.0 km
 - **Location:** 137km SSW of Letlhakane in the Orapa township area and 168km W of Serowe
 - **Magnitude:** 4.9 Richter scale
 - **Possible cause:** The earthquake was actually one of the aftershocks subsequent to the magnitude 6.5 earthquake that struck Botswana on 03 April 2017 located 132km west of Mojabana. Aftershocks can continue over a period of weeks, months, or years and in general, the larger the main shock, the larger and more numerous the aftershocks, and the longer they will continue.
2. Three months after the main shock of 03 April 2017, Botswana continues to experience a number of aftershocks including the magnitude 4.9 event of 04 July 2017 as well as the previous aftershocks including:
 - 2017-04-08, 19:55:32 UTC (21:55:32 Local Time), magnitude 4.6, 14 km depth, 22.566°S, 25.084°E 137km SSW of Letlhakane
 - 2017-04-05, 00:55:50 UTC (02:55:50 Local Time), magnitude 5.0, 10 km depth, 22.565°S, 25.087°E 141 km from Mojabana, 137km SSW of Letlhakane
 - 2017-04-03, 23:16:22 UTC (01:16:22 Local Time), magnitude 4.0, 16km depth, 22.576°S, 25.126°E 133km W of Mojabana
3. The magnitude 4.9 aftershock of 04 July 2017 was recorded by the global seismographic stations, including the Botswana seismic station at Magotlhwane (LBTB) as well as stations in South Africa, Namibia and Kenya. The Institute has received reports from the public in Lobatse, Gaborone, and Letlhakane confirming that they felt the aftershock.
4. The aftershock was not caused by fracking as some people previously thought in the case of the 03 April 2017 Induced earthquakes due to mining or exploration activities occur at shallow depths, localised within the perimeter of mining area and generally of low magnitude. All our mining and exploration activities have not gone beyond 2 km depths.
5. Aftershocks are formed as the Earth's crust around the displaced fault plane readjusts to the effects of the main shock, and occur along the fault plane itself or along other faults within the volume affected by the strain associated with the main shock. Typically, aftershocks are located

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within a distance equal to the rupture length away from the fault plane. The pattern of aftershocks cloud helps confirm the size of area that slipped during the main shock.

6. The Institute advises the public that it is safe to continue work as normal while it continues to monitor the situation.

About Botswana Geoscience Institute

Botswana Geoscience Institute (BGI), is a Body Corporate operating from Lobatse and it is wholly owned parastatal by the Botswana Government. BGI was established through Botswana Geoscience Institute of 2014 to undertake research in the field of geosciences, providing specialised geo-scientific services and promoting the search for, and exploration of any minerals in Botswana. The Institute is a custodian of all geoscience data/information which include non-confidential prospecting reports.

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