

Keywords: Seismograms; Gravitational intensity; Magnetic intensity; Richter Magnitude Scale

Introduction

Nigeria is becoming tectonically active owing to earth tremor occurrences and reportages by Akpan and Yakubu [1]. Abuja have had its fair share of the ground-shaking event and in order to reduce the future damages that this event could cause, it has become necessary to monitor tectonic activities within Veritas University entry route in Zuma II, Abuja. The entry route into Veritas University within Zuma II settlement is deeply gullied, owing to concealed perseverant mainspring. Subsequent coatings and repairs could not annihilate the disfigurement on the route—buckles and folds are spotted. Seismometers, gravity meters and magnetometers are employed for analyzing the geotechnical assault to this route.

9.2886°N and 7.4172°E, 9.2887°N and 7.4173°E, 9.2889°N and 7.4173°E, 9.2891°N and 7.4171°E, 9.2894°N and 7.4168°, 9.2893°N and 7.4172°, 9.2895° and 7.4171

°E and 9.2897°N and

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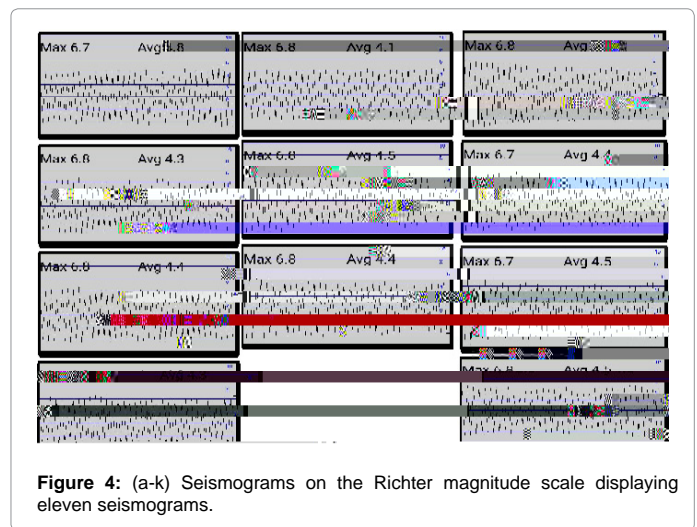
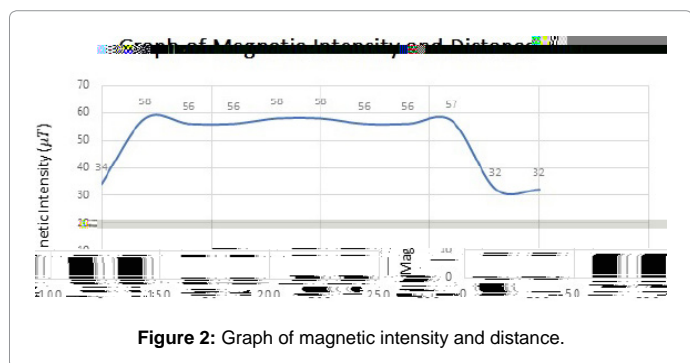
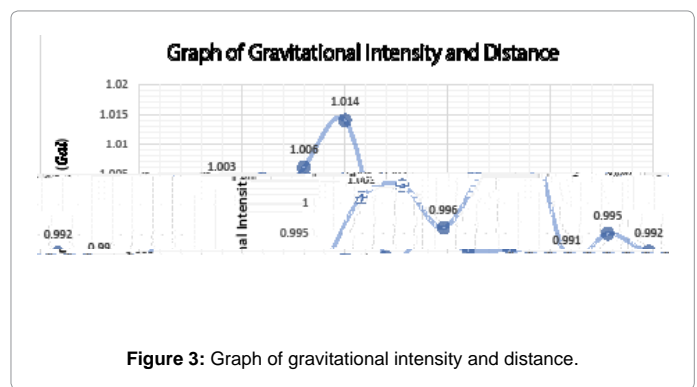
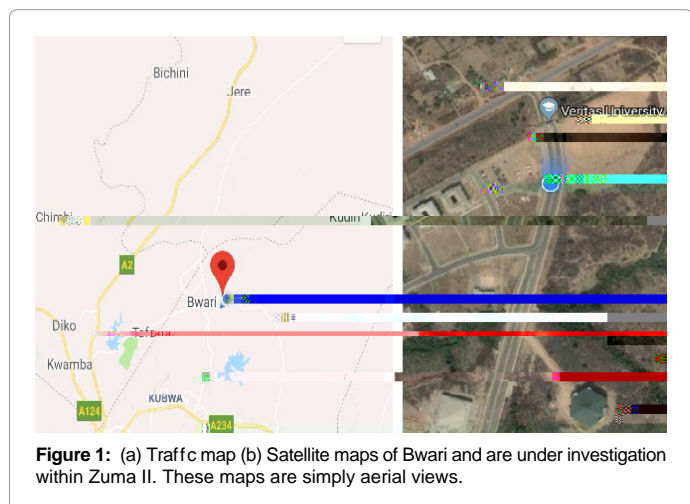
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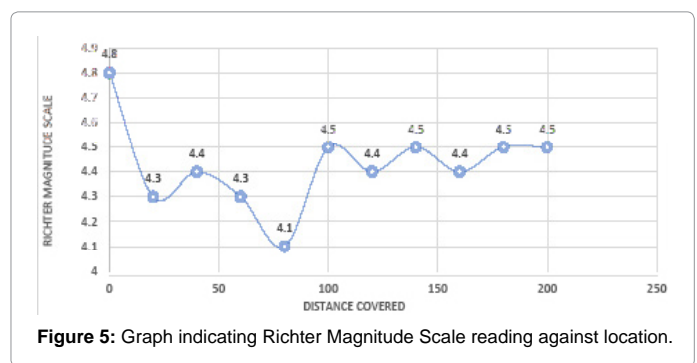
Furthermore, Richter scale magnitude variation for each location is plotted in a graph in Figure 5. Magnitude peaked at the very beginning, the first point of reading. However, the magnitude value dipped the most at about 75 m location from the first point of reading.

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An observed sharp rise in magnetic intensity within 20 m at 9.2882° and 7.4175° and 160 m at 0.2893rp rise i.0 0 81.20 f11 0 0 11 310.7244 670.0



progressing distance. Gravitational field intensity peaked differently with values of 1.003 Gal, 1.014 Gal and 0.995 Gal; the greatest peak of 1.019 Gal, is located within 9.2886°N; 7.4172°E, and 9.2887°N; 7.4173°E between 80 m and 100 m from the first point of measurement. All three peaks are located within 9.2882°N; 7.4175°E and 9.2895°N; 7.4171°E between 25 m and 175 m from the first point of measurement. This region harbours folds, twist and geotechnical assaults. Dude and Nutti [14] and Piccozi et al. [15] worked on Earthquake magnitude scales and a rapid response magnitude scale for timely assessment of the high frequency seismic radiation respectively-indeed, these scales are helpful in tectonic assessments. The magnitudes of ground vibration on the Richter scale are measured and presented as eleven seismograms in Figures 4a-4k Each seismogram relates amplitude of wiggles to time.



m, 180 m and 200 m. However, an anomalous magnitude reading of 4.8 on the Richter scale at the start point was observed. The gravitational intensity reading showed 0.988 Gal at the start point. However, this intensity reading peaked at 1.014 Gal at 100 m. The location at 9.2882° and 7.4175° is the lowest part of the route and the location 9.2889° and 7.4173°, 100 m from the earlier location is the highest part of the route. The Richter Magnitude scale readings in this research work is close enough to earth tremor magnitude scales. Indeed, shortly after the readings were observed, earth tremor events happened on September 5,

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