

Political Boundary Surveying in the Philippines: A Case Study in a Mount Pinatubo Lahar-Covered Municipality

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SUMMARY

The catastrophic eruption of Mount Pinatubo in June 1991 brought massive devastation to large portions of Central Luzon in the Philippines particularly in the 7,180-hectare town of Bacolor in Pampanga, where almost ninety percent of the area was buried in 3-10 meters of lahar or volcanic mudflow. Concrete boundary monuments which had been set in place during the Bacolor cadastral survey were totally destroyed and, thus, returning residents found it difficult to relocate their property boundaries. Relocation surveys using traditional methods with conventional survey instruments would be expensive and time-consuming. A post-eruption political boundary survey of Bacolor was conducted in 2000 using conventional ground survey methods. This case study utilized Global Positioning System (GPS) technology and applicable transformation formula from the World Geodetic System of 1984 (WGS84) to the Philippine Reference System of 1992 (PRS92) to evaluate the accuracy of the political boundary survey. Furthermore, in compliance with government regulations requiring all surveys in the Philippines to be connected to PRS92 by 2010, this study attempts to present a viable alternative methodology for relocation survey using GPS

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