

INITIAL MAPS FROM THE NORTH AMERICAN MAGNETIC ANOMALY DATABASE PROGRAM

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A new program to compile aeromagnetic data into a data base and digital map for the North American continent is underway. The Geological Survey of Canada, U. S. Geological Survey, and Consejo de Recursos Minerales of Mexico are committed to produce a database and digital map for the North American continent by the year 2002. The unified data set will be a powerful tool for investigating the structure, geologic processes, and tectonic evolution of the continent and can be used to help resolve societal and scientific investigations that span national boundaries. In many cases examination of magnetic anomalies is the fastest and most cost- effective means to address geologic issues in the third dimension (depth), to trace important geologic trends and structures in regions of poor exposure, or to do reconnaissance evaluation of mineral or energy resource potential. An integrated, readily accessible, modern digital database of magnetic anomaly data spanning North America will be a valuable asset for government, private industry, and academic studies of a wide variety of geologic issues. Initial products of this 3 year program are the compilations of cross- border aeromagnetic data sets for Nogales and Douglas. Arizona and Mexico, Alaska and the Yukon, and British Columbia and Washington. A consistent representation of the Earth's magnetic field (International Geomagnetic Reference Field (IGRF)) was removed from each data set. All data sets were analytically continued to the same flight elevation with their datums shifted to match adjacent data. These procedures help to make a seamless map useful for geologic interpretation.