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FROM: L.W. Braile, W.J. Hinze and R.R.B. von Frese, Dept. of Geosciences,
Purdue University, West Lafayette, IN 47907

SUBJECT: Quarterly Progress Report - April, May and June, 1982

DATE: June 30, 1982

For the period April, May and June, 1982, progress has continued on all phases of the research program. VERSATEC listings and cross-reference maps of variable and array names for the spherical earth analysis programs NVERTSM, SMFLD, NVERTG and GFLD have been prepared and forwarded to NASA-GSFC. These programs are currently being implemented on the IBM 4341 computer at Purdue's Laboratory for Applications of Remote Sensing (LARS) to process significantly larger data arrays than can be handled by Purdue's CDC facilities.

The paper entitled DO SATELLITE MAGNETIC ANOMALY DATA ACCURATELY PORTRAY THE CRUSTAL COMPONENT? by R.R.B. von Frese and W.J. Hinze was presented at the U.S. Geological Survey's Geomagnetic Workshop held in Denver during April 13-15, 1982. In preparation are two papers that have been accepted for presentation at the Society of Exploration Geophysicists' annual meeting in Dallas during the week of October 17-21, 1982. These papers include the titles REGIONAL ANOMALIES OF THE MISSISSIPPI RIVER AULACOGEN by R.R.B. von Frese, and SATELLITE MAGNETIC ANOMALIES OF AFRICA AND EUROPE by R. Olivier, W.J. Hinze and R.R.B. von Frese. Considerable effort has been expended in reducing the MAGSAT data from 40°S to 70°N latitude and 30°W to 60°E longitude to radial polarization. In addition, gravity anomaly data from this area are being processed along with the preparation of a variety of filtered maps for combined interpretation of the gravity and magnetic data in conjunction with structural and tectonic maps of the area. Also, the paper entitled REGIONAL NORTH AMERICAN GRAVITY AND MAGNETIC ANOMALY CORRELATIONS by R.R.B. von Frese, W.J. Hinze and L.W. Braile has been published (1982) by the Geophys. J.R. astr. Soc., V. 69, p. 745-761.

Hinze and von Frese have been active members of the MAGSAT-B advisory committee and have used data sets prepared in previous long-wavelength investigations to study the impact of 150 km satellite elevation on the potential results from MAGSAT-B.

(E83-10031) [GRAVITY AND MAGNETIC ANOMALY
DATA ANALYSIS] Quarterly Progress Report,
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