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REPORT ON THE PROGRESS OF SURVEYING AND MAPPING
IN THE PEOPLE'S REPUBLIC OF CHINA DURING 1983--1986

Submitted by the People's Republic of China

Since the Tenth United Nations Regional Cartographic Conference for Asia and the Pacific in 1983, the surveying and mapping activities of the People's Republic of China have achieved a considerable progress. In accordance with the requirements of national construction and scientific research, the emphasis of surveying and mapping work was put on providing services to the agriculture, energy, transportation, urban and rural construction and land management. The fields of activities and service scopes of surveying and mapping have been expanding.

The progress of surveying and mapping work in China during the last four years were mainly made in following aspects:

1. Geodetic Survey:

1. After the completion of the overall adjustment of the national astrogeodetic network, its accuracy was analysed and its application was investigated. The emphasis was put on field check of the secondary order triangulation network (also called the old secondary order triangulation network), which was set up with RMSE of angular measurement 2.5". With the need of economic construction, part of the network where it was less accurate have been strengthened and improved gradually with about 300 control points remeasured annually. At same time, optimum schemes for strengthening and improving the astrogeodetic network were explored in combination with production. The experiments were made with the following methods: supplementary measurement of super-precise traverse, lay-out of trilateration network and Doppler network, and adding appropriate amount of initial sides, etc. At present, the field surveys have been completed and data processing and analysis is going on.

2. The overall adjustment of the first order national leveling network has been completed and the further densification of national leveling network is continued.

The total length of the first order national leveling network is more than 93,000 km. Its field survey was finished in 1982. In the last four years, a preliminary calculation was carried out and partial surveys were supplemented. The closure errors of the loops were evaluated by 2 k, and only one of them was larger than prespecified limit. The reason for that was the loop was located on dessert and has a too long perimeter. Meanwhile, the data preparation and schemes selection for the adjustment of whole network were started.