

season in the summer months, and all computations and photogrammetric compilations are performed in the office the following winter. It is for this reason that we have been hesitant in incorporating any self-reading devices into our procedure which have not been extremely well proven.

We have found that the altimeter-helicopter method of establishing elevations on picture points has been the most practical method in certain areas in Alaska. The foregoing discussion has been a comparison of our operational methods to an altimeter-helicopter procedure outlined by Mr. Fagerholm.

GROUND SURVEY PROBLEMS SOLVED BY HELICOPTERS*

IN THE past, the shortness of the Arctic summer, combined with the sometimes insurmountable difficulties encountered in transporting men and materials in the rugged mountains of the Yukon, limited seriously the amount of work which survey parties could achieve each year.

In 1950, however, the task of extending topographical survey farther than ever towards the Northern Ocean is being speeded by helicopter.

Two years ago, the Geodetic Survey of Canada, J. L. Rannie, Dominion Geodesist, sent out a survey party under F. P. Steers, on primary triangulation along the Alaska Highway. It was at this time that a helicopter was brought into play. Al Soutar of Weston Aircraft piloted the aircraft, while Bill Finlay and Hugh McGeach of the same company maintained it from a mobile trailer-workshop.

In 1949, P. E. Palmer, chief topographical engineer of the federal department of Mines and Technical Surveys sent out a survey party to Northern Quebec under the direction of H. N. Spence. Using a helicopter once more, this survey was the largest ever accomplished in one season.

This summer, three flying members of the Hiller 360 Helicopter Fleet are in the field. Two of the helicopters are based at Mayo in the Yukon. The third Hiller helicopter is being used by the Army Survey establishment, Department of National Defence, Ottawa, under the direction of Lieut.-Col. C. H. Smith, deputy director of Military Survey. Its operational coverage is in the territory adjacent to the Alaska Highway, west of Whitehorse.

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