



Picture by courtesy Acton Pub. Co.
Muscular Canadian Lumberjacks at Work in a French Forest.

SURVEYING BY CAMERA FROM THE AIR

By Lieut.-Col. Cull, D.S.O., R.A.F.

in an address before the Geodetic Survey of Canada, December 3, 1918.

Photographing Lakes, Rivers, Mountains, and Forest from Aeroplane an Economical and Accurate Method.

EDITOR'S NOTE:—*The following most interesting paper by Col. Cull will be eagerly read by all who have developed an interest in the aeroplane and its adaptability to forest surveying and fire detection. Col. Cull has a notable war record, and was brought to Canada to organize the air service in connection with the Canadian naval forces.*

Before going into the detailed proposition I would like to briefly touch on the progress of aviation and aerial photography, as well as to submit lines along which, in my opinion, aerial work could be used as an adjunct to survey work.

Early Aviation.

As you know, some twelve years ago the first flight of any practical value was carried out in France by the Wright brothers. One is apt to forget about these pioneers, but whatever progress has since been made is in no small measure due to the Wrights. I was trying to get into aviation myself then, and cherish, together with a lot of other people, a very kindly feeling for

them and the country to which they belong. I would like to say, too, that from what I saw of American pioneer flying officers in France; and latterly in my dealings with the United States Naval Aviation authorities over here, in connection with the formation of the Royal Canadian Naval Air Service, I have seen nothing to change those opinions. A few months before hostilities ceased, at a rather critical submarine time, they were very generous and of the greatest assistance to us over here in connection with the Atlantic coast.

During the four years preceding the war fairly rapid progress was made in aviation, particularly by the Germans, who took it up along methodical