

ates, nor yet with tales of milk and honey.

Each party was under the direction of a Government surveyor, and consisted besides, of a geologist, timber-ranger, two or three assistants, and a full complement of Indian guides, canoe and packmen. The territory—roughly bounded by the Province of Quebec on the east, the Lake of the Woods and Keewatin on the west, Hudson's Bay and its feeders on the north, and the C.P.R. on the south—was divided into

about one hundred *coureurs de bois* last summer.

The general instructions issued to a party involved a track survey of the canoe route taken, a traverse of the main lakes and rivers, the establishment at various points of the watershed between Hudson's Bay and the Great Lakes, and the drawing of maps in scale; reports on the mineral and timber resources were required from the geologist and timber-ranger; and a camera, botanical case, etc., were suggestive of further duties.

It may be well to offer a short explanation of the instruments by means of which the work is accomplished. For the establishment of latitude there is the *transit* (which, with its heavy tripod, becomes an infernal machine on a long portage). For the ascertaining of distance by angles there is the small *quadrant*—a mystery to the layman. An *aneroid barometer* served to indicate the altitude of mountains, but with only fair precision. To ascertain the speed of currents or the distance traversed in still water a *taffrail log* was supplied. But the instrument continually in requisition was the *micrometer* and its complement the *disc-pole* or *target*. The latter is a simple staff, about sixteen feet in height; on the top it carries a disc of white celluloid, about one foot in diameter, and twelve feet below there is a similar disc in red. The *micrometer* closely resembles a hand telescope, except that its lens shows a double image of the disc-pole; an adjustment, however, which makes the two images coincide, at the same moment indicates also the distance of the disc-pole. It will be seen, therefore, how useful are these devices for water measurements where chaining is im-



SPLIT ROCK ON THE NEPIGON

ten districts, and each party, with special or general instructions, was allotted a district about one hundred miles square. Last June the choice of districts was much like the choice between two peas—but in November peradventure every surveyor would have chosen a different field. Certainly, one party felt that it had more than a human share of obstacles; and the word *portage* is not safely used in our presence. A few glimpses of Party No. 8 may haply indicate the experiences of