

## GENERAL INSTRUCTIONS FOR SURVEYORS.

Surveyors employed to make surveys for the Department of Indian Affairs will, except in such particulars as may be otherwise directed in their special instructions, be guided by the following general instructions wherever they will apply :—

All lines are to be transit lines; when through woods, they are to be well cut out and blazed. Every tree without exception standing within two feet of a line is to be blazed on three sides; one blaze fronting the line and the other two on each side of the said blaze.

Except where iron posts are specified or provided, or where stone posts are specified, all posts are to be of cedar or of the most durable wood to be obtained in the locality; they should be five inches square, four and a half feet long, pointed at one end and bevelled at their heads. All posts, iron or wood, should be driven into the ground eighteen inches and mounded with earth or preferably with stones when these can be obtained within a reasonable distance. The mounding may be omitted where on account of roots, etc., the labour would be excessive. Posts should have the letters "I.R." deeply cut into them on the side facing the reserve. Posts are to be planted at all main corners or angles in the boundaries of reserves. On long straight boundaries posts are to be planted at intervals where considered necessary, and in no case should they be farther apart than half a mile. In prairie, iron posts will be generally provided; they should be driven down to within six inches of their heads. A trench two feet wide, one foot deep is to be dug around the post and at a distance of two feet from it and the earth scattered.

In woods one bearing tree should be marked "B.T." at each post, provided a suitable tree stands within a distance of twenty-five links. The bearing of the tree from the post, its distance and class should be entered in the field-notes.

All boundary lines are to be run, unless otherwise obviously necessary or otherwise specified, astronomically East and West, North and South. In order to adhere to this rule and to enclose a necessary area, the boundaries may be jogged.

Irregular boundaries, shores of lakes, rivers and large bodies of water should be carefully traversed. Angles should be measured with a transit; distances may be measured by stadia or micrometer. Bearings may be taken in any manner that the Surveyor may desire, but they should be reduced to refer to the North or the South in the ordinary manner, for record in the Department.

The returns will consist of a plan, field-notes, report and account.

The plan should be prepared on a piece of mounted drawing paper, measuring 24 in. x 30 in. If this size is too small for a large piece of work, the size of the plan should be doubled in order that the plan may be folded in the middle. The scale should be as reasonably large as the said size of paper will permit, but not less than forty chains to an inch unless otherwise specified. The plan should show the astronomic bearings and lengths of all lines run, main features of topography, soil and timber, also the numbers of adjacent sections, lots or concessions, or other properties and their intersecting boundary lines when they can be readily found. Areas should be carefully computed and noted on the plan in acres and hundredths of an acre. The plan should be signed and dated by the Surveyor. An astronomic North point should be plotted on the plan and the magnetic variation noted thereon.

Field-notes are to be prepared in the books which will be supplied on demand by the Department. At the commencement of the field-book the title in careful detail, the surveyor's name and date of the survey should be entered. Then should follow on the succeeding pages the names of the parties employed and an index, preferably in the form of a sketch, indicating on which pages the several field-notes may be found. Each page of the field-notes should have its title in full. The field-notes are to be taken in the usual manner and entered so that they may be readily understood. They should contain all necessary information relating to measurements, bearings, posts, topographical features, soil, timber, etc.

Traverses should be plotted on tracing linen in convenient lengths and widths and pasted at the end of the field-book. They should be plotted on as large a scale as may be convenient, and in no case less than ten chains to an inch. All the distances and bearings of the several courses should be noted on the tracings.

The report should be in the form of a letter addressed to the Secretary of the Department, and a copy of it should be entered at the end of the field-notes. The report should state the date of the instructions, the Surveyor's proceedings generally and all matters of interest in connection with the survey or with the lands surveyed.

Pay lists should be prepared and signed in duplicate; vouchers also in duplicate will be required for all payments. The account should be made in duplicate; it should show the amount of the pay rolls, payments made for supplies, transport, etc., and all advances to date with the date of each advance, and finally the balance still due. All accounts will require to be made in careful detail in order that they may be readily audited.

J. D. McLEAN, Secretary.