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Topographical Survey Work, 1917.

Forty-four survey parties will be engaged in the western provinces this season on the survey of Dominion Lands under instructions of the Surveyor General. The surveys on which they will be employed may be classed under the following heads:

(1) Survey of base lines and initial meridians. (2) Township subdivision. (3) Retracement and resurveys. (4) Stadia surveys of water areas. (5) Levelling operations. (6) Boundary surveys. (7) Photo-topographical surveys. (8) Inspection.

(1) *Base lines and initial meridians.*—Three surveyors will be engaged on this part of the work. As these lines form the basis of all the subdivision surveys, they must be established with the greatest care and accuracy.

(2) *Township subdivision.*—Ten parties will be engaged on subdividing the land into townships, sections and quarter-sections. On account of the war and the consequent falling off of immigration, the number of parties is smaller than usual.

(3) *Retracement, resurveys and miscellaneous corrections.*—Five parties will be employed on these surveys, which are made either for the purpose of correcting errors in the original surveys or to establish new boundary monuments in cases where the markings of the older surveys have disappeared.

(4) *Stadia surveys.*—Eleven parties will be engaged this season on making stadia surveys for the purpose of determining the extent of water areas as they now exist. At the time of the early surveys many bodies of water existed which have now partially or entirely dried up, leaving considerably more land available for settlement. In some instances bodies of water are found which did not exist, or were not noticed by the surveyor when subdividing the townships; in other instances, the courses of rivers are found to have greatly altered. Each township is carefully examined by a stadia party and the information collected is used in the compilation of new township plans representing conditions as they are at present.

(5) *Levelling.*—Levelling operations may be classed under two heads: (a) Precise levelling, which is under the direction of J. N. Wallace, D.L.S., and (b) Levels taken along base lines and initial meridians and along section lines in townships.

(6) *Boundary surveys.*—The survey of the interprovincial boundary between Alberta and British Columbia will again be carried on. The limit through the Yellowhead pass will be defined and the 120th meridian through the Peace river district.

(7) *A photo-topographical survey* will be made of the south part of the Bow river forest reserve.