

CROWN SURVEYS

Mr. J. D. Barnes, O. L. S., sent in this article, with the following comment: "The other day I came across a paper by James Dickson, P. L. S., which I believe will be of interest to fellow surveyors. I enclose excerpts from this paper, which was taken from the Sixth Annual Meeting of the Association of Provincial Land Surveyors, held in Toronto in March, 1891. In studying the report, one cannot help but feel that an Examiner of Surveys, such as the position now in Land Titles, was and always will be a necessity for examination of plans of survey throughout the Province of Ontario."

The subject upon which I have been requested to write a paper, viz, "Crown Surveys," is a somewhat delicate one for an Inspector of Surveys to take up, as it will be necessary not only to remark on the manner in which such surveys ought to be made, but also to mention a few of the inaccuracies and errors I have met with in the field.

It is not my intention to make this paper a long one, but confine myself to a few examples of how some members of our profession do their work, and then, very briefly, point out the manner in which Crown Surveys ought to be made.

I think you will all agree with me that the first object a surveyor should have in view is to keep up the standard of his profession. And no matter whether the commission he may have on hand is great or small, no matter whether the survey is of little or much importance, it should be his ambition to do it as accurately as possible. It should be his ambition to show the public that accuracy is within the compass of possibility. And leave everything behind him done in such a manner that there could be no room for either doubt or trouble in the future. Were this object always held in view there would be no necessity for any government to appoint an Inspector of Surveys.

I believe every person will agree with me that if there is any survey which should be made with perfect accuracy it is that of a new township, for to inaccuracy and ambiguity in original surveys are to be traced the beginning of most of those long and expensive lawsuits touching the ownership of lots and parts of lots which are almost constantly before our Superior Courts. During my own practice I have been engaged in a good many such cases, and I cannot recall a single instance in which there would have been room for either doubt or dispute had the original survey been correctly made.

Of course it is not to be expected that any surveyor, no matter how careful he may be, or how accurate his instruments, for as much depends on the integrity of his chainmen as on himself, and those he cannot have always under his eye, can cut up a township into 1,000 acre or 640 acre blocks, and have all his lines intersect at the exact spot, but it is expected that every line will run straight from one intersection to another, and that the dimension of the lots and bearing of the lines in the field will be the same as those returned on the plan and field notes.

Perfect accuracy is neither expected nor looked for, but perfect truthfulness is.

Some will say, Oh, the land is so poor there is no use in being too particular. To such I would simply reply, the quality of the land is something they have nothing whatever to do with in making the survey. Their duty is to carry out their instructions; that, and that alone, should be the only object in view. They should not lose sight of the fact that, although in many places the land is utterly worthless for agriculture, the recent discovery of valuable minerals has made it more than ever necessary that the surveys should be accurately made. In some of what seemed the most worthless townships has been found the most valuable nickel and copper mines perhaps in the world; and the surveys of some of the townships where those minerals have been discovered - but which were made before the inauguration of the present system of inspection - have been performed in such a loose manner that I predict, at no distant day, to hear of some of our legal friends reaping a rich harvest.

While discharging the duty of Inspector of Surveys I have been over a good many townships, and it has been my unpleasant duty to report a considerable percentage of bad work. It has been a matter of no small astonishment to me that some surveyors should leave so many errors, both of omission and commission, behind them, when they have been duly warned that their surveys would be inspected after they left the field before their accounts would be closed. While I find the greater part of the work now well done, there are still some who seem to think the Inspector will only go over the lines as a matter of form, and either not see, or wink at, irregularities, or, in other words, that he is either a knave or a fool. Such men should bear in mind the Inspector has a reputation to maintain; that he has been sent out at considerable expense, the Department having confidence in his integrity to report everything exactly as he finds it; that he must be no respecter of persons; that, while it may be in the interest of the contractor to slight

his work, or leave some of his lines not run at all, to the Inspector it makes not the slightest difference whether the work is well or ill done, his pay and thanks are the same.

I shall now give a few specimens of what I have met with in the field, which were not laid down either in the field notes or in the plan.

I have found lines run straight to within a short distance of those they were intended to intersect, then suddenly bend either to the right or left, sometimes in the form of a bow, in order to strike the post.

I have found the whole four posts at an intersection made of trees. A man could stand at any one of them, pay out forty links of the chain, and touch the other three. Some posts standing at almost any angle with the line except the correct one, others tossed off the line, not even set up; bearing trees sketched in the notes for every post, whole blocks without a single bearing tree marked in the field, numbers of the lots not even posted; one linerun up to another, end there, and start off on the opposite side at from a few links to several chains to one side, only one of them posted; a post instead of standing at an intersection planted on the concession line as much as two chains from it; in numerous instances, lines only partly run, others not even started; a block, which contained five lots on the plan, with six posted in the field; a side line start at lots 20 and 21 and strike the next concession line, 100 chains distant, at lots 25 and 26; lines start from each end of a block, and miss each other at an intermediate point by from a few links to six chains; beautifully proportioned triangles across and offsets around lakes, in the notes, where it was simply impossible to have got any such in the field at all; lines run from other lines on either side of a lake to the water, which, instead of striking at opposite points, would miss each other by as much as seven chains, and the water assumed to contain whatever the two added together lacked of marking the full block; some lots which were returned twenty chains not eight chains, others as much too large. Streams in the field not on the plan, others on the plan but none in the field; and as many as seven streams all crossing the line at right angles in a distance of half a mile, which turned out to be only one small creek. I have found posts made of poplar, with cedar and spruce trees of the proper size standing as near as the tree from which they had been cut. In some cases not a lake traversed in a whole township, their outlets not even shown; in others, while there had been a rough traverse made of the largest, the smaller not even sketched, no attempt whatever made to show either their size or shape.

I have found a whole township of 50,000 acres divided into 100 acre lots, each lot returned exactly twenty chains by fifty, and not three times the size of a man's thigh cut in the whole township; where one could only follow the lines by keeping his eye constantly fixed on the blazes, and those small, few, and far between, the hands almost constantly occupied in separating the brush in order to force the body through. Need I ask any practical surveyor if such a survey could be even approximately correct? What chainmen could make correct measurements under such circumstances? Am I using too strong language when I say that a man who does his work in this manner is a disgrace to the profession?

In most cases where I have found angles in the lines they were poorly opened, while in others there had been a good deal of work done. In the latter case, I attribute the errors to placing too much dependence on the magnetic needle, and not being sufficiently careful in taking back-sights, especially in thick swamps and going over knolls. In others which have been run by theodolite, to the instrument not being standing solid while crossing soft ground. In every case where the instrument cannot be made solid, posts should be driven into the ground, and the instrument set on them, then the surveyor can move around it without any danger of throwing it out of line. In still other instances the errors are undoubtedly traceable to unskilled assistants and insufficient instruments. Some men even go so far as to use a small compass without a ball and socket attachment.

I would now briefly point out a few of the most important points to be observed by a surveyor in making a Crown Survey. His instruments should be of the very best to be had, and both them and the chain kept in proper adjustment. If at all possible an astronomical observation should be taken before commencing the survey, and check observations taken as frequently as circumstances will permit during its progress.

He should not hang his work on any other man's, assuming it correct, but should depend entirely on himself. By doing this, each man's work is a check on the other; if they are both correct they must agree, if not, and he knows he has done his correctly, he will then be in a position to confidently invite inspection without any fear of the result.

by James Dickson, P. L. S., as published in Report of Annual Meeting, Association of Provincial Land Surveyors, Toronto, March, 1891.

THE EFFECT ON RETRACEMENTS

OF LAND TITLES & REGISTRY SYSTEMS

by W. Marsh Magwood, Q. C.

The basic difference between the two prevailing systems of land registration, (Land Titles and the Registry System), has given rise over the years to two dissimilar and frequently opposing methods of retracement of boundaries of property.

This variance is disclosed in many instances when an owner desires to bring his land under the Land Titles Act and submits in support of his application a survey or surveys of his property made at some earlier date.

The outstanding differences in the two modes of retracement may be expressed in general terms as follows:-

- (a) Under the Registry Act, many surveyors show the fencelines or other lines of occupation as the boundaries without sufficient investigation for survey monuments, and often without sufficient regard for whether or not title has always accompanied occupation.
- (b) Under the Land Titles Act, many surveyors adhere strictly to the measurements and bearings on the register without sufficient investigation for survey monuments and with complete disregard for occupational evidence.

Both concepts are entirely erroneous and in fact the differing systems of registration have no bearing or should have no bearing whatsoever on the duties of a surveyor in retracement work.

Perhaps a brief outline of the Registry and Land Titles systems, and some comment on the Limitations of Titles Act in relation thereto, will serve both in showing how these conceptions came about and why they are erroneous.

The Ontario Registry Act first passed in 1795, originally provided for the registration of memorials of instruments, not the originals, by means of an alphabetical index. To search title therefore one must have the owner's name. Unfortunately in many areas these indexes were inadequately maintained.

In 1865, therefore, the Ontario Registry system was changed by the introduction of the "abstract index". By this innovation, registration books were opened and kept with a page reserved for the recording of registered instruments affecting each original township lot; or where a plan of subdivision has been registered each lot shown on the plan. With the introduction then of the "abstract index" it is no longer necessary to know the owner's name in order to search title.

The Registry office system therefore, as its name implies, is simply a registry of deeds, and whereas the actual instrument registered is required by the Act to be properly executed legally speaking, there is no requirement