THE BOARDS OF BOUNDARY LINE COMMISSIONERS

BY L. M. SEBERT

In March, 1838, the Legislative Assembly of Upper Canada passed an Act of Parliament which is certainly unique in Canadian survey law, and may in fact be unique in the history of British land surveying. This act, which was gazetted the following year as 1st Victoria 1837, 1838, caused, in the first instance, a wholesale examination of a large number of the existing survey lines in Upper Canada. This was then followed by the movement of many surveyed lot lines that were found to be in the wrong position. The fact that such action was directly contrary to all survey and land management tradition was not lost on the authors of this legislation, but they considered that the errors in the existing survey fabric of Upper Canada were so extensive and so troublesome that ruthless measures were necessary. They were also able to convince the members of the Assembly that this was so.

1st Victoria, 1837, 1838, provided for the appointment of a Board of Boundary Line Commissioners in each of the districts of the Province. Each Board consisted of three persons, one of which had to be a licensed land surveyor. The stated duties of the Boards were "to hear and determine all matters of dispute touching on any line or boundary of any township, concession or lot and to ascertain, fix, and determine such lines, boundaries or divisions as shall appear just and reasonable". They were also empowered to employ competent surveyors to resurvey lines that were thought to be in error, and if found to be so to instruct the surveyors to make plans of the corrections which were then filed with the Registar of the County as the new and authorized boundaries of the lot or concession.

The Boards set about their work with commendable energy, but, as can be imagined, the moving of existing boundary lines from their erroneous to their correct positions at times created much hardship. Some settlers who had carved their farmland out of the wilderness saw large tracts of their holdings transferred to a neighbour. There were accusations in the press of favouritism and improper influence in the work of the Commissioners, but in the judgement of the very few historians that touch on this subject the passage of 1st Victoria was essential.

There is no doubt that many of the early surveys in what is now Ontario were far from accurate. In fact it would have been quite surprising if they had been much better than they were. A number of factors conspired to produce poor work. Most of the surveyors in the Province were poorly trained; they relied almost entirely on primitive survey compasses for the direction of their lines even in areas where there was considerable local magnetic attraction; and, most important of all, the township design of the day was completely lacking in the basic requirements for accurate surveying, and thus errors were almost inevitable. Let us examine some of the deficiencies in the design of the early townships.

At the beginning of settlement in Upper Canada the common basis of land granting was the 200 acre lot surveyed in a pattern now known as the Single Front System. R. M. Anderson OLS, writing in the April 1936 issue of the Canadian Surveyor gives the following succinct description of the first townships to be surveyed:

The Survey of these townships and those laid out for the succeeding thirty-five years consisted in outlining the boundaries of the townships and then marking the front corners of the lots along the concession lines. The running of the side lines was left then as now to the settler, not even the side roads being run in those days, and the settler's holding extended back from his front posts to the front of the concession in rear.

Several important facts emerge from this description. The first is that in most cases the side lines of farm lots were run by the settlers, (i.e. amateur surveyors). A second point in that the posts planted along the concession in rear did not control the course of the side lines. These were defined as running on a course parallel to the governing line of the township, which was usually the township side line from which the concession lots were numbered. How the settlers obtained and laid out the appropriate side line bearing is impossible to determine today. If the sidelines ran back at right-angles to the concession line, one of the elementary methods of setting out 90 degrees would no doubt have been employed. If a more complicated angle was involved possibly a compass would be borrowed for the occasion. In any event there was great scope for gross errors in this method particularly in areas where the compass was seriously affected by local attraction.

The rule that the posts along the concession in rear did not control the direction of side lines may seem strange today, but one must remember the difficulties of chaining in the original survey. The dense forests, swamps and broken ground would make any symmetry between chained distances along adjoining concession lines a coincidence rather than the normal occurrance. In a paper read by M. Graveller, OLS, at the 30th Annual Meeting of the OLS Association in 1915, chainage differences of 45 chains between adjacent concession lines are mentioned. Even the most amateurish running of side line bearings would in most cases be more accurate than relying on long chained distances, yet there were licensed surveyors that maintained that in an area where the compass was unreliable chaining was the only acceptable method. The following is an excerpt from a long letter written to the Surveyor General in 1812 by Robert McLean, a deputy surveyor working in the District of Johnstown, which illustrates this controversy:

The Second line I was called upon to run after I had the honour of being one of your Deputies, was in the center of Lot 29 in the 3rd Concession of Elizabethtown, which has been twice run; first by Mr. Sherwood and afterwards by Mr. Graves, on his favourite Plan of measuring from the Eastern boundary of the township, on the front of the concession to the place where the line would commence, and then measuring as he supposes, the same distance, on the rear of the concession (himself and another Surveyor from the United States carrying the chain) and then ran a line from the front to the rear measurement. This line went so far to the East of the expectation of the Parties concerned that they concluded it could not be right, which was the reason of my being called upon.

I first went, (as I always do, for the first line I run in a concession) to that boundary of the Township opposite to the said concession from which the Lots are numbered. I commenced a line at the front of the concession at the said boundary and with pickets sharply pointed with a penknife, setting them a great distance asunder and sighting over their tops with a telescope rested on the sharp point of the last set picket, minding to adjust the length of them in such a manner that their points

might come in a range. Where the uneveness of the ground made that impractical I use a heavy plummet exactly in line and go back a few chains to a picket in the line and sight forward by its sharp point and the plummet line for setting the next picket, and by this means a line can be carried up an ascent or down a descent as accurately as if the ground were level. I cut away every obstruction and carried on the line perfectly straight from the front to the rear of the concession. I then took an observation by one of the stars of Ursa Major and the pole star when in the same vertical, intersecting the said picket line and found by a sextant, that I had made with a 30 inch radius, that the said line made an angle with the said meridian of 31° 55′ 30″ by which it appeared that the variation of the needle in that place at the time of the original survey in 1787 was 7° 55′ 30″. In April 1811 the variation was 6° 25′ for an observation intersecting the front end of the line to be then set off at the same angle, and carried through in the same manner as I had done the town line, with all possible care and accuracy, and with no use of the needle in any part of the operation. When to the rear of the concession I was about ten chains to the West of Mr. Graves' line and about five chains west of Mr. Sherwood's line. As there were five parties concerned in this line some of them were, as might be expected, still dissatisfied. As I was a young surveyor and there was a possibility that I might have made a mistake, in order to prove whether I had not and give all the satisfaction in my power, I volunteered to go through the operation again. After taking an observation at each place, namely at the town line and the line I had run, and carefully examining the angles, the observation severally made with the town line, and the line I had run, I found it to be truly parallel with the town line.

The Single Front System depended on parallelism; concession lines and side lines had to be parallel to the township base line and governing side line respectively if lots of 200 acres were to be produced. As Anderson has mentioned no proof lines were required across the concession so if the surveyor was conscientious and put them in, he did so at his own expense. Most preferred to make their way across the nine or more miles of the concession line as best they could, hoping for the best. It should surprise no one that in certain cases gross errors were made. In the above-mentioned article Anderson states: "It is not unknown for two concession lines to converge until they meet, thus pinching out a whole concession." Such serious errors have of course been corrected, in most cases this was done before the land was occupied.

In 1818 the Double Front System was instituted. It was designed essentially to make occupancy on both sides of a concession line immediately available so as to increase the density of settlement. This did nothing to improve the accuracy of the survey, but it did clear up the doubt that previously existed regarding the exact position of the survey line in the concession road allowance. In a paper read at the 1906 Meeting of the OLS Association, J. F. Whitson states:

Since 1818 the limits of the roads have been defined by a double row of posts, as all outlines of every section are surveyed in the middle of the road allowance, thus getting rid of an uncertainty which even to this day exists in many of the older townships as to which side of the road allowance the blazed lines were actually run. The field notes are so vague that no mention is made, and the instructions do not state definitely on which side it was intended the surveyor should run.

The inaccuracies caused by the lack of proof lines became so troublesome that a system of block perimeter surveys was introduced by Order-in-Council on March 27th, 1829. This was the 2400 Acre Section System which was in reality an adaption of the Double Front System. Surveyed lines across concessions were made mandatory in the side road allowance which ran between every sixth and seventh lot. To compensate for this extra work only every second concession line was run in the original survey. By specifying a closed survey around the section of 12 lots a reasonable degree of parallelism could be ensured, and the eventual survey of the central concession and side lines could be done without fear of gross error. The survey instructions of the day do not specify the limit of error that would be tolerated in closing out a survey around a section, so it is difficult to judge the precision of work that was expected. Nevertheless, March 27th, 1829, marks the beginning of a reliable township survey system, and it can be presumed that most of the errors discovered by the Boundary Line Commissioners were the result of surveys conducted before this date.

It must be remembered that the survey problems of Upper Canada were not caused by ignorance on the part of the officials in the Surveyor General's office. The importance of careful survey and good monumentation was clearly understood. They were aware that the elegant Front and Rear System used in the Niagara Peninsula from 1787 to 1813 was superior to the Single or Double Front Systems, but the Front and Rear was too slow and too expensive for the survey of wilderness lands. However, it is to their credit that the survey authorities did attempt, to correct some of the faults of the early systems.

The first of these legislative moves was the passage of **Act 38th of George 3rd, 1798.** This was a belated action to provide a bare minimum of permanent markers in surveyed townships. The Act enforced the placing of stone monuments (or monuments of other durable materials) at the corners of all townships and at both ends of all concession lines. The act is quite specific that these new monuments will be "the true courses and distances of the Boundary Lines of said Townships and Concessions". In short, the perimeter of the township was to be well marked but the interior lines were still open to survey, and argument. An interesting point that does not receive mention in the records of the day is how these permanent monuments were placed. Were they set out by new measurement, or was evidence of previous survey used? One would hope that the latter was the case except in instances of serious error in the original survey.

The validity of the survey posts placed by licensed surveyors along the concession lines received confirmation twenty years later with the passage of **Act 59th of George 3rd, 1818.** This act stated that posts placed by licensed surveyors marking the front angles of lots would be held to be correct irrespective of the findings of further surveys. The act also confirmed that the side lines running back from the front angles were "to be parallel to the Boundary of the Township from which the lots are numbered". This further tightening of the authority of the original survey must have been welcomed, but the defining of side lines by a single monument and bearing continued a practice that has always been detested by land surveyors.

By the mid 1830's so many boundary disputes had reached the courts that even the most non-technical members of the Assembly could understand that a comprehensive solution to the deficiencies in the survey had to be found. The moving of boundaries and monuments was repugnant, but it had to be done, and 1st Victoria was passed with a comfortable majority. It must be remembered that the Commissioners were not bound by the statutes of limitation on adverse possession in the rendering of boundary decisions. Their judgements could be appealed before the circuit courts, but such action was beyond the financial resources of most settlers.

As has been said, the whole operation of the Boundary Line Commissioners was considered repugnant but necessary. 1st Victoria 1837, 1838, was repealed as soon as possible, in 1841, and it expired in 1842. In retrospect, was it a useful piece of legislation? Gilbert C. Patterson,

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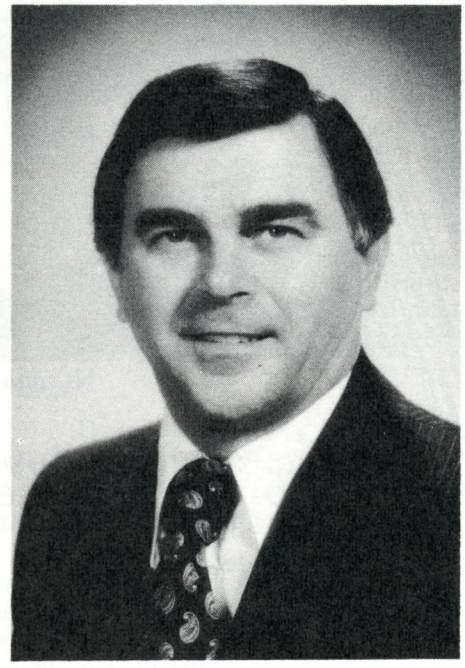
Surveyors Of The Present

BY BILL STRETTON

George Zubek, newly-elected President of the Association of Ontario Land Surveyors, has enjoyed his past five years on the Council of the Association and recommends such service to anyone who can possibly spare the time. He found that, while his eighteen years of attendance at Annual Meetings were a good way for experiencing fellowship and the exchange of ideas with fellow surveyors, the attendance at Council Meetings has been worth while in a broader sense, teaching him more about the true value of the Association.

George was born on a small farm about 30 miles north of Winnipeg, near Stonewall, Manitoba. His family moved to Toronto when he was eleven and he completed his education at Wellesley Street Public School (now site of the Sutton Place Hotel), and at Jarvis Collegiate, graduating in 1954. At High School, George spent four years on the football teams, and five years on the track and field team, winning the T.S.S.-A.A. Quarter-mile Championship in 1954. He was also a member of the Jarvis Collegiate Glee Club for five years.

After school, George went to work at the Canadian National Railway Survey Department in Toronto and after a trial period of a couple of years was apprenticed to Harry Currie, then Regional Surveyor for the Great Lakes Region.



GEORGE JOHN ZUBEK

Harry was President of the Association in 1961, the year George qualified as an Ontario Land Surveyor and Harry was able to administer the Oath of Office to George when he was sworn in.

In May of 1961, George started a private survey practice in the Collingwood area, and in 1962, purchased the Branch Office operation of W. N. Wildman, O.L.S. in that area. Ron Emo joined George as a Partner in 1963 and in 1978, Lynn Patten also joined the firm as a Partner. The firm is now known as Zubek, Emo and Patten Limited, and they conduct a general Legal Survey Practice.

While living in Toronto, George met Kathy Wallace, an elementary school teacher through mutual friends, and they were married in 1961. Kathy continued to teach for several years until the survey practice was firmly established. Kathy and George have an eleven year old daughter, Paula, who is an excellent student in the Senior Public School in Collingwood. George and Paula enjoy skiing and take advantage of the excellent facilities at the nearby Blue Mountain Ski Resort. George and Kathy have enjoyed golfing for a number of years and until recently took regular golf holidays at Jekell Island in Georgia. George has served as a member of the Board of Directors of the Blue Mountain Golf and Country Club for six years, being President in 1973. In 1971, George initiated the "ZUMO Invitational Golf Tournament" on behalf of Zubek and Emo Limited and this has become a popular annual event attracting some 75 players each year.

George takes a keen interest in local politics, was elected to two terms on the Collingwood Municipal Council, and in 1969 narrowly missed being elected Mayor. While on Council, George was a member of a three man Committee that established the Collingwood Area Airport, which has been developed from a grass strip to a paved runway with night flying facilities. George does not fly himself, but appreciates the value to industry and tourism of adequate airport facilities. George also served on a Committee which established the first Day Care Centre in Collingwood and served as Chairman of that Committee for two years. He also served on a Committee which established, then acted, as the first Parking Authority in Collingwood. George was also a Charter Member of the Kinsmen Club of Collingwood, and served as President of the Club in 1963-64.

George has been a member of the Georgian Bay Regional Group since its inception, was Treasurer from 1972 to 1974, and started a term as Vice-chairman in 1975, a position from which he resigned when he was elected to the Association Council in 1976. On the A.O.L.S. Council, he served successively as Chairman of the Surveying Zone - 1976; Education Zone - 1977; the Legislation Zone in 1978, and Vice-President in 1979. He became President of the Association on February 21 at the 1980 Annual Meeting.

George enjoys the work and meetings of Council, where he has been an active and vocal member. He campaigned in 1979 for the Office of Vice-President with the message that Erindale Survey Science graduates should be eligible for membership in the A.O.L.S., whether they became Legal Land Surveyors, Photogrammetrists, Hydrographers or Geodesists. As President, he intends to pursue, and enlarge upon this topic and to present to the membership for a vote, a method by which the Association can accept as members the practitioners in these related survey fields.

COMMISSIONERS

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in his definitive work "Land Settlement in Upper Canada, 1783-1840", gives the following opinion:

*"A most useful and timely Act of Parliament was passed in March of *1836 establishing Boards of Boundary Line Commissioners in the various districts. The necessity for such an Act lay in the numerous and extensive errors inherent in the early surveys, constantly resulting in the most serious and complicated disputes between landowners."*

What can the surveyor of today learn from all this? The pinched-out concessions and chainage errors of 45 chains have long since been corrected. But any legal change in the position of a boundary is liable to leave a perplexing trail in the registry office. Erroneous survey lines that have been "corrected" often leave confusing evidence on the ground in the form of misleading fences, blazes and other signs of property limits. There are times when an enigmatic title can only be explained by a knowledge of the instructions under which our predecessors operated and the trend of the law from the time of the original surveys.

** A misprint. Correctly 1838.*