The Nova Scotian Surveyor

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The Association of Provincial Land Surveyors Nova Scotia



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NUMBER I

Introduction

This little booklet is offered with a twofold purpose by your executive.

First: It is in the nature of a report. We feel that our association has developed to the stage where it is necessary to submit more than an annual report to the members. We also believe the time has arrived when we should review what has been accomplished. This review will be found on the following pages, and it will, we hope, be apparent that your executive has not been idle. However, much remains to be done, and a strong, healthy Association is the only method of bringing the pro-

fession to its proper place in the economy of our Province. It is our aim to have every qualified provincial land surveyor in Nova Scotia become a member.

Second: This little booklet is yours to continue or to condemn. Many members can no doubt contribute items of great interest to the rest of us. Because we live in one of the oldest settled places on the continent, we have survey problems not encountered in other places. Let's get together and organize a strong healthy Association.

A Call For Increased Membership

In the month of December 1950, a few Provincial Land Surveyors, interested in the Profession and the forming of an Association, met at the Technical College, Halifax, under the chairmanship of Professor E. O. T. Piers. Other meetings were held during January of 1951 and finally a general meeting was called for February, at which time the Association was formed.

Our membership, at this time, was small but gradually grew until by the time of our annual meeting in 1952 totalled ninety, of which about seventy were Charter Members.

During 1952 the membership remained about the same, gaining some new members but losing some of those of the year before.

In 1953, after a drive put on during the month of December, we increased the membership to about one hundred and thirty at the time of the Annual Meeting in March 1954, and as of this date about one hundred and forty.

There are now over three hundred registered

Land Surveyors in the Province. Many of these are scattered throughout other Provinces as well as the United States; many others are elderly and retired or otherwise inactive. Nevertheless, many of both these categories are members.

The success of any Association rests with the response accorded it by the members of the profession which it represents. We cannot afford to rest with less than fifty per cent of the profession in the Association. Our objective should be sixty, seventy, eighty percent with ultimately one hundred per cent. Then and only then can the Association adequately serve the profession and the people of Nova Scotia.

We therefore propose another drive during the months of November and December and I would urge all members to strive to add to our membership and thus to the strength of the Association in order that we may better serve both the Profession and the people.

R. E. Dickie, President.

A Brief Report by Executive of 1954

- 1. The revision of the Act in relation to Land Surveyors and the Regulations thereto, as discussed and passed upon by the Annual Meetings of 1953 and 1954, were submitted to the Legislature and passed without any appreciable alteration.
- 2. An application made, under the Company's Act, for the incorporation of the Association and for a charter. It is anticipated that this will be granted in the near future.
- 3. A suggestion, to be submitted to the Board of Examiners, that applicants writing the Provincial Land Surveyors examinations be given three hours per paper rather than three hours for two papers as at present.
- 4. Discussions leading to the revision of present examination papers with a view of increasing their

practicability. This will be discussed at the forthcoming Annual Meeting.

- 5. A suggestion to increase our Council from five to seven members, viz: two from Halifax and vicinity, two from Western Nova Scotia, two from Eastern Nova Scotia and one from Cape Breton. This will also be up for discussion.
- 6. The starting of a quarterly magazine or letter. This is a trial balloon which the Association, at the Annual Meeting, will be asked to condone or condemn.
- 7. Your Council has met regularly during the year, holding meetings in February, May, August, and October, with another scheduled for the latter part of November.

Officers of the Association of Provincial Land Surveyors of Nova Scotia

	1951	1952	1953	1954
President Vice Pres. Sec'y-Treas.	E. O. T. Piers J. D. McKenzie W. A. G. Snook	E. O. T. Piers J. D. McKenzie W. A. G. Snook	J. D. McKenzie R. E. Dickie W. A. G. Snook	R. E. Dickie J. R. March W. A. G. Snook
Council				
Halifax area	F. Tupper J. R. March	F. Tupper J. R. March	F. Tupper J. R. March	F. Tupper E. Robertson
Provincial area	J. A. H. Church R. E. Dickie	J. A. H. Church R. E. Dickie	R. E. Millard E. Hebb	R. E. Millard J. A. H. Church
Cape Breton area	A. H. Martell	A. H. Martell	A. H. Martell	A. H. Martell
Past Presidents			E. O. T. Piers	J. D. McKenzie

List of Members

James MacKenzie, Halifax, N. S.

R. E. Dickie, Brooklyn, Queens Co.

W. A. G. Snook, Halifax.

J. R. March, Halifax.

Freeman Tupper, Halifax.

R. E. Millard, Liverpool, N. S.

E. B. Hebb. Bridgewater, N. S.

Herbert Martell, Sydney River.

E. O. T. Piers. Halifax.

R. M. Schofield. Dartmouth.

C. W. MacAloney, Halifax.

R. A. Logan, Lake Charlotte, Halifax.

Colin MacPhail, South Bar, C. B.

Angus MacLeod, Wreck Cove, Victoria Co.

Leander R. Snow, Sydney Mines.

G. R. Parry, Port Maitland, Yarmouth Co.

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D. W. Lambton, Bridgetown, Annapolis Co.

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R. N. Burgess, Truro, N. S.

T. M. Smith, Port Hood, Inverness Co.

N. Y. Moseley, Glace Bay, N. S.

Charles Rogers, Oxford, Cumberland Co. R. P. Morrison, Baddeck, Victoria Co.

S. E. March, Bridgewater, N. S.

S. C. Crowell, Yarmouth.

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F. C. Whiteman, Amherst.

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A. M. James, Halifax.

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G. W. I. Creighton, Halifax.

W. E. Servant, Halifax.

J. S. Archibald, Dartmouth.

A. O. Harris, Halifax. Ian MacInnes, Spryfield, Halifax Co.

A. F. Chisholm, Halifax.

J. R. Baker, Cooks Cove, Halifax Co.

H. M. Anderson, Cooks Cove, Halifax Co.

James R. Ryan, Halifax.

Jacques Price, Windsor.

A. R. J. MacDonald, Reserve Mines.

Andrew MacGillivary, Dartmouth.

Y. C. Barrington, Sydney Mines.

C. C. Lindsay, Montreal.

F. E. Wilhjelm, Sunny Brae, N. B.

Grayden D. Spence, St. Croix.

E. A. Crawley, Halifax.

A. C. MacKay, Egerton, Pictou Co.

F. W. Forbes, New Glasgow.

Charles L. Archibald, Amherst.

Eldon Adams, Glace Bay.

Walter L. Bell, St. John's, Nfd.

Gerald D. Hughes, Cody's P. O., N. B.

Alan T. MacDonald, Kentville.

Donald L. Eldridge, Truro.

Ernest Boehk, Westville, N. S.

John A Fraser, Glace Bay.

P. C. Ahern, Halifax.

J. G. Martin, Ottawa.

J. B. Cameron, Ottawa.

Allan MacDonald, Trenton.

N. R. Harrington, Middleton.

George B. MacAulay, Brantford. Ontario.

Brian R. Alexander, Hantsport.

T. W. Lynch, Dartmouth.

J. V. Brown, Ottawa.

E. O. Harling, Mulgrave.

L. M. Harvey, Baddeck.

B. L. Bloomer, Halifax.

A. E Amirault, Upper West Pubnico.

G. B. Boylan, Chester.

V. W. E. Johnston, Fairview.

W. A. Arsenault, Belle Cote, Inverness Co.

F. G. Nolan, Halifax.

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Roy Amero, Barton, Digby Co.

G. W. Swansburg, Shelburne.

H. W. L. Doane, Halifax.

Ronald Chisholm, South River, Antigonish Co.

W. P. Morrison, Dartmouth.

Rev. W. P. Fogarty, St. Francis Xavier.

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James K. MacKay, Shelburne.

J. H Comeau, Ottawa.

Donald L. MacQuarrie, Ottawa.

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J. Phillip Dumaresq, Halifax.

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P. G. Boutilier, Yarmouth.

James Frederick Kelly, Halifax.

George Killam, Yarmouth.

Joseph I. Robichaud, Ottawa.

G. N. Nightingale, Kentville.

Murray F. Cossitt, Sydney.

C. S. Creighton, Halifax.

George T. Bates, Halifax.

William J. Morrison, Halifax.

Lewis O. Smith, Brookfield, Queens Co.

J. W. Pertus, D'Escousse, Richmond Co.

H. K. Wedlock, Halifax.

Earl Verner, Sydney.

Arthur H. Thomson, Truro.

E. B. Ritchie, Liverpool.

A. H. Murray, Earltown, Colchester Co.

C. D. Sampson, Westville.

Donald D. MacAskill, Amherst.

Wallace H. Betts, Halifax.

John Russell, Digby.

Fred E. Hatt, Moncton, N. B.

Arthur M. Dechman, Bridgewater.

H. W. MacKay, Bridgewater.

H. B. Robertson, Halifax.

William W. Foster, Halifax.

G. L. Crichton, Halifax.

G. M. Hilchie, Halifax.

J. Layton Reid, Halifax.

E. A. MacDonald, Halifax.

W. B. Watson, Jr., Inverness.

Archie F. Pamenter, Montreal.

Duncan B. Gilmore, Regina, Saskatchewan.

Robert E. Wade, River Bend, Quebec.

M. C. Mosher, Halifax.

R. P. Carey, Sackville, N. B.

Charles M. Douglas, Caledonia, Queens Co.

Beverley J. Ham, Antigonish.

David W. W. Hudson, Edmunston, N. B.

J. Walter Lahey, Dartmouth.

John S. Pope, Louisburg.

Minutes of Quarterly Meeting

held Monday October 16th, 1954, at 310 Robie Street, Halifax, N. S.

The meeting opened at 2, 30 p. m.

Present: R. E. Dickie, J. A. H. Church, Freeman Tupper, and J. R. March.

Mr. Snook, our Secretary, when contacted by phone, stated with extreme regret that due to his mistake in the date of meeting, he would be unable to attend, having made an appointment, which could not be postponed. In his absence President Dickie asked Mr. March to act as Secretary.

Minutes of Previous Meeting

Minutes of previous Meeting were not read due to the absence of the Secretary.

Discussion re Examination for Provincial Land Survey Certificates

Major Church remarked that the time allowed for writing these papers was not sufficient. Mr. March stated that this matter had, he believed, been dealt with at a previous meeting and that a resolution had been passed to be placed before the Board of Examiners, requesting a full three hours for writing each paper.

President Dickie and Mr. Tupper were of the same opinion and President Dickie suggested that the Secretary be contacted to find out if this was correct.

Major Church then presented to the meeting the following additional information in respect to the time allowed for writing these examinations.

According to the calculations the time allowed in writing the Dominion Land Surveyor Examininations approximated 36 minutes per page of answers, whereas the time allowed in writing the Nova Scotia Examinations approximated only 18 minutes per page of answers or about one-half.

He also noted that in case of paper no. 4 the time of three hours was allowed, but that this paper was in two parts. Part 1 consisting of questions on instruments and their adjustments, Part two being legal questions. He noted that while most applicants were allowed only three hours to write Parts 1 and 2, graduates from the Nova Scotia Technical College Engineering Class were allowed the full three hours to write Part 2 only.

Major Church then called attention to one of the questions relating to observation by the method of equal altitudes of the sun. He noted that the time given in the question was unsuitable being too near noon. He also noted that the altitude was calculated in data given in the question, would place the altitude of the sun some 12 degrees higher than could be possible in the given latitude.

Major Church also called attention to a plan accompanying one of the questions. The meeting

agreed that the plan was not very neat in part of a Land Surveyor's examination paper.

Major Church noted that no other Province in Canada allowed any graduates from any Universities, exemptions from writing all papers for Land Surveyors Certificates.

Mr. Tupper said that in view of their importance in the present highway construction, a full paper on curves might perhaps be considered.

Mr. March suggested that perhaps Major Church would consent to make up, what in his opinion, would be a suitable sample set of examination papers for Nova Scotia Land Surveyors. Major Church agreed to do this.

Following the discussion it was moved by Major Church and seconded by Mr. Tupper that the following resolution be submitted at the next annual meeting, to be placed before the Board of Examiners, RESOLVED:

WHEREAS all the Provinces of Canada and the Board of Governors, Dominion Land Surveyors, all require that University graduates shall write full final examinations.

AND WHEREAS we are seeking to standardize Land Surveyors Examinations throughout Canada, be it resolved that this Association, respectfully requests, that the Board of Examiners for Nova Scotia do likewise in respect to the Nova Scotia Provincial Land Surveyors Examinations.

Carried

Quarterly Publication

President Dickie stated he and Mr. Millard had been in touch with the publisher of the Liverpool Advance and that the approximate cost of one hundred and fifty copies, consisting of four pages each, would be approximately \$12.00.

Moved by Mr. Tupper and seconded by Major Church that the President be authorized to request Mr. Millard to go ahead at once and have a trial issue of one hundred and fifty copies printed.

Membership

President Dickie stated that in the drive for membership, fees paid from now until the end of the year, should cover membership dues for 1955 as well. Mr. March stated that authority for this already existed, as the same thing was done last year.

President Dickie said that he had heard considerable complaints that the membership cards were not received by members until late in the year and he suggested that it would be a good idea to have the membership certificates and cards ready to be signed and delivered at the annual meeting.

Annual Meeting and Dinner

The matter of one or two days was discussed at length and it was finally moved by Mr. Tupper and seconded by Major Church that the meeting be for one and one-half day, thus leaving the afternoon of the second day open for the in-coming executive.

Carried

It was suggested that Tuesday, December 7th, or Tuesday, December 14th, be set as a tentative date for the annual meeting, pending consultation with the rest of the executive, which was to be done within the next two or three days by Mr. Tupper

and Mr. March and the President so advised.

Moved by Mr. Tupper and seconded by Major Church that the Secretary be authorized to make the necessary arrangements for the annual Dinner.

Carried

Subsidy

Major Church suggested that the matter of obtaining a small subsidy for the Provincial Government should be looked into. Mr. March and Mr. Tupper volunteered to look into this matter.

The meeting adjourned at 6:00 p. m.

J. R. March Secretary Protem.

Early attempt to Form an Association

In 1925 and 1926 a goodly number of Land Surveyors, interested in the forming of an Association, met in the old Halifax Hotel, or it may have been the Queen Hotel, drew up a constitution and endeavoured to become incorporated. The result was the presentation of the following Act:

No. 58 BILL 1928

AN ACT TO INCORPORATE THE ASSOCIATION OF NOVA SCOTIA LAND SURVEYORS

BE IT ENACTED by the Governor-in-Council and Assembly as follows;—

- 1. This Act may be cited as the Nova Scotia Land Surveyor's Association Act.
- 2. R. J. Milgate, Halifax; S. W. Crowell, Kentville; A. M. Foster, Bridgetown; J. K. McKay, Clyde River; F. A. Harrison, Antigonish; Clayton Prosser, Tusket; E. B. Parker, Bear River; S. E. March, Bridgewater; C. W. Taylor, Cook's Cove; Jos. S. McLean, Baddeck; McLellan, Bell Cote, Margaree; R. E. Dickie, Brookfield; V. P. Harrison, Southhampton; Letson M. Smith, Scotch Village; and

such other persons as shall hereafter become members of the Association hereby incorporated, are hereby created a body corporate by the name of the Nova Scotia Land Surveyor's Association.

3. The objects and purposes of the Association are to facilitate the acquirement and interchange of professional knowledge among its members, and more particularly to promote the acquisition of that species of knowledge which has particular reference to the profession of land surveying, and further, to encourage investigation in connection with all branches and departments of knowledge connected with the profession.

NOTE: This was presented to the Legislature and received its first reading on Feb. 24, 1928 and was turned down.

Of the sponsors of that Act in 1928, J. K. Mc-Kay and R. E. Dickie are active members in the present Association; R. J. Milgate, F. A. Harrison and S. E. March are honorary members. The others have all passed away with the exception of A. M. Foster, Clayton Prosser and V. P. Harrison.

Retracement Surveys

One of the most important, and most difficult duties of the land surveyor in Nova Scotia, is the retracement of old grant boundaries. With each passing year, fire, axe, and time, continue their relentless obliteration of old line marks and corners.

Fortunately the recent surveys of the Crown Lands, and the timber lands of most of the larger pulp and lumber companies, have set up a very useful framework of grant lines in many districts. Other areas however have not been so favored, and in these areas the surveyor can be sure of only one thing, trouble.

Having spent some thirty years at this sort of work, it might not be amiss to pass along a few hints on what to do and what not to do when called upon to retrace old grant lines.

First

Obtain copies of the original grant plans of survey, not only of the grant to be retraced, but

also of the surrounding grants, if any. These are available at the Crown Land Office of the Dept. of Lands and Forests, Halifax. This is an absolute necessity. Study these plans with intelligent care. Quite often it will be noticed that a line between two grants shows a different bearing for each grant. Which was correct? Perhaps both were. Check the date of both surveys. The annual variation may account for the difference. Again you may find the same bearing recorded on a line common to two grants that were surveyed and granted many years apart. Which is the one expected to be correct, and the one you will be required to calculate the variation from? Almost always the first one surveyed. It is quite a safe bet that the survevor when running out the later grant recorded the bearing from the first one. Whether or not be allowed any variation when surveying that part of the lot where the lines are not common to the older grant is a matter that only a trial line will solve.

Second

Always run a trial line before re-establishing an old grant line. You may think you have the exact bearing to follow the old line through to the corner. If so you are due for a rude surprise. You will likely be following a straight course, whereas the original surveyor likely went from sight tree to sight tree, taking no account of local attraction, backsights, daily variation, and every once in a while going ahead to the wrong tree. Believe it or not, most of the older woodlot grants were run out by the surveyor going ahead of his axemen and chainmen. (I call them chainmen for want of a better name.)

Third

Remember that straight or crooked, the original line holds. The point has sometimes been raised that where original corners are known, and only one bearing recorded on the line between, then the correct line is a straight line between the two known corners. I have never known of this opinion being upheld in court, nor do I believe it ever was. However, extreme care must be taken not to confuse careless renewal marks made by incompetent persons, with original line marks. Check the age of doubtful line blazes, but do not overdo it. When you make a deep cut into a tree to count the growth

rings it will likely blow down during the next big windstorm, breaking off where you cut into the old blaze. Make careful notes of all trees so checked, if it turns out they carry original line blazes.

Fourth

Once the original line has been located, set it up and monument it properly. If the original line was not straight and it was necessary to use several bearings in order to stay on it, make notes of the exact places where changes in bearing occur. Note all places where local attraction exist. When renewing line marks on a crooked line, simply make new blazes fore and aft, either above or below the former blazes. However if able to follow the entire length of the line on one course, then mark the trees fore and aft and also on the side facing the line. When blazing small trees be sure to leave some bark between blazes, otherwise the tree will die. Mark centre trees on line with three hacks up. Where the line passes over barren land use stone markers. Three stones of diminishing size with the top stone on line. A number of the earlier surveyors used this method of marking a line over barren land, and many such markers can still be found, particularly when passing over rock ledges. When passing over muskeg or bog use stakes. The points will last indefinitely in wet ground. I have found the points of corner stakes in wet bogs and swamps, that were put there over a hundred years before, and still looked like new. No trace whatever would be visible above the ground. It is not as difficult to find an original corner stake in a bog or swamp, as it is to locate a mound of stones on dry land, covered with many years growth of bushes, moss, or turf, or perhaps scattered by bears looking for grubs. How? Step on it. Run your trial lines to intersect, or else run some distance beyond the given grant chainage. then walk along the line feeling with your feet. If the stake point is there, a firm spot will exist that feels almost like a rock. Then dig down and pull it out. While it is not always as simple as that, you will be surprised to find out how often you will be successful.

In the near future I hope to give a few tips on the keeping of notes on retracement surveys, and do some of you ever need them?

J. E. R. M.

Surveyor's School

We have in Lawrencetown, Annapolis County, the only school of its kind in Canada, wherein only land surveying is taught. This is under the auspices of the Vocational Branch of the Department of Education, with Major J. A. H. Church as instructor.

During the last several years he has turned out about fifty graduates, all of which, with one or two exceptions, have passed their Provincial examinations. These are all now engaged either privately, with various companies or in Government employ.

Anyone knowing a young man interested in our profession should advise them to contact Major Church or E. K. Ford, Director of Vocational Training, Dept. of Education, Halifax.

THAT D- LAND SURVEYOR!

He is indeed a man extraordinary. He starts here and he gets there in ways that are wondrous to perceive. One party says start here, the other fellow says that's wrong start here, so the surveyor starts where he damn well pleases so it appears to the opposing parties and much to their amazement he arrives at the point where Pa told me it should be and when asked when Pa told him he comes up with this answer and it's the truth, so help me.

Now less see, "I'll be 77 next Christmas and when I was a little sprout about 10 years or maybe 9 years old, Pa took me on the sled in the winter. you know Jim, you remember that old black ox Pa had that winter? No I don't remember any black ox and neither do you Harry because I'm only 65 years old and you didn't leave the island until you were 17 years old. I did so! You did not and so on for an hour or more (at 2.50 per hr. nice going boys keep it up, I like it.) The fact that Harry never did tell how he knew that was the exact spot he saw, 67 years ago and he'll take his oath any time that was the exact spot, even though he has to take a flashlight to go to the wood pile against the end of the house for wood, so that he can find his way back.

I have come to the conclusion that they are all truthful men and the surveyor is crazy as Hell. Whats he know about the lines here? How does he know that Jim's Pa and Harry's Pa traded 2 rods on front for 4 on the back field and were good friends so did not have any writing made up about it. They knew and that's all that mattered.

And when Aunt Letitia got 2 rods from Harry for a garden plot on the East side of her line and insisted on Harry giving her a deed, Harry got so mad he never spoke to Lettie again, figured she did not trust his spoken word. Anyway Lettie got the deed and being very thrifty she put it away and was never able to find it. So Harry left for another world and so did Lettie, (Surveyors go to a special world where all lines conform with the written word) and later when the sons of both took over and worked the land, one day the cow got into the garden and the fat was in the fire. So the surveyor is called and the story he gits at first is open and shut. It will only take you an hour or two to straighten us out, when he gets there he probably feels that 2 wipes of an ax would do it quicker; but he being a diplomat, personnel relation officer, a very wise man refrains from bodily harm and slowly unravels the puzzle made over a period of 60 years or more in a day or two. When the job is completed and markers set and the bill paid. after much discussion and amazement, that it comes to so much regardless of the fact that Harry and Jim had hundreds of dollars ready to be spent to settle the matter at the beginning, suddenly are both poverty stricken, Harry is broke and Jim ain't seed a \$10.00 bill since G . knows when.

So the surveyor goes on to the next job and both Jim and Harry let the line go as it was before the cow got in Aunt Lettie's garden. Some day maybe the surveyor will get the rest of his account if he pushes hard enough.

THE LAND SURVEYOR'S PRAYER

Dear Lord, I know You grew those trees
That men lay low with stupid ease,
And when they go, for centuries
Leave barren, rock, and sand.

A speeding car, the careless flip
Of spent cigar with smoking tip:
From near and far the choking grip
As fire sears the land.

A sun dried patch of weed or moss;
A match, a scratch, a heedless toss:
The quick flames catch. What needless loss,
All from that tiny brand.

And so I pray "Keep, Lord Divine,
Those flames from maple, spruce, and pine,
And never may, please God, be mine,
That careless, guilty hand!"

J. E. R. M.

We wish to take this opportunity to thank Mr. S. E. March (an honorary member), Bridgewater, for the excellent design on our Certificates. This was designed by Mr. March, gratis, and does great credit both to himself and to the Association. Thank you Mr. March.

This little magazine is in the nature of a trial balloon. We would, therefore, appreciate having the members write Walter Snook, our secretary, P. O. Box 1541, with their comments. Halifax, N.