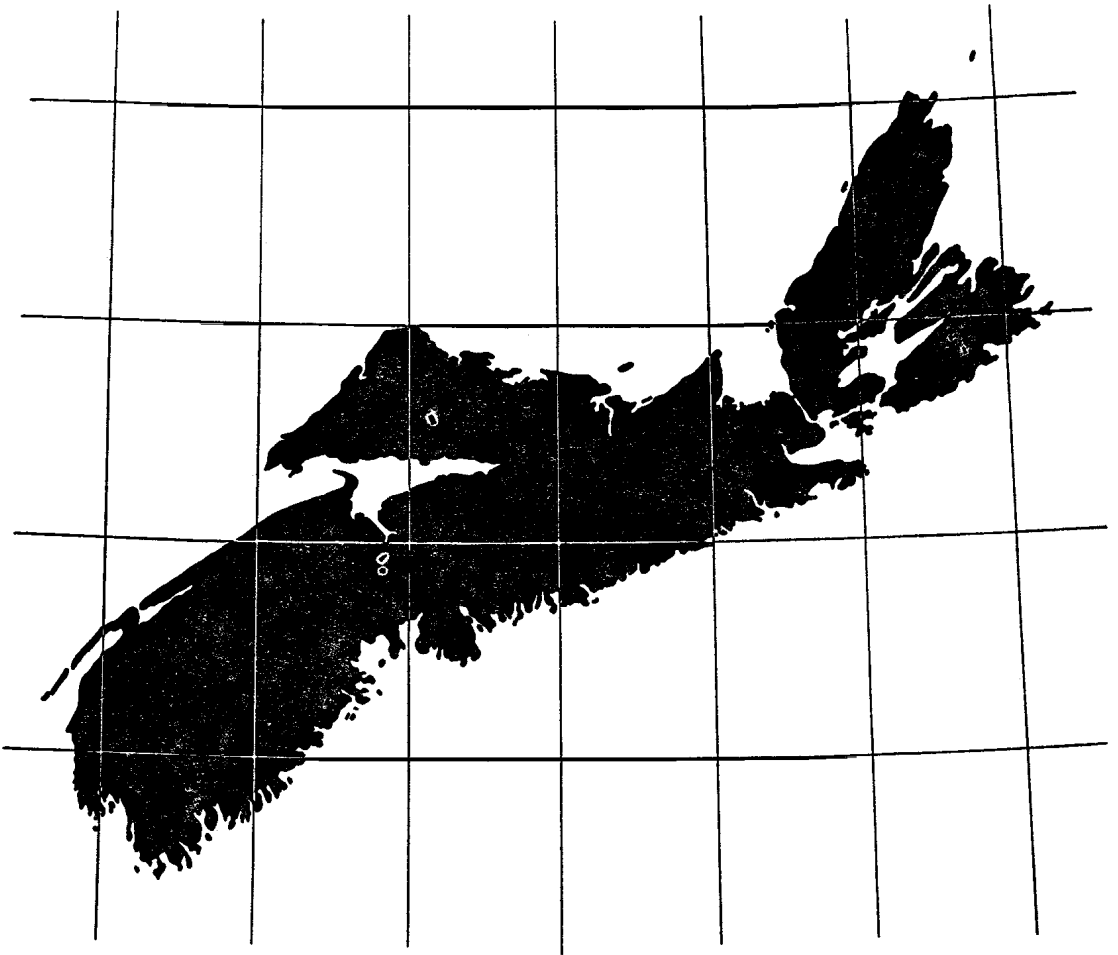


# The NOVA SCOTIAN SURVEYOR



*Published by  
The Association of Provincial Land Surveyors  
of Nova Scotia*

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Founded 1951  
Volume 19

R. E. Millard, P.L.S.  
January, 1967

Incorporated 1955  
Number 50

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ANNUAL REPORT 1966

# The NOVA SCOTIAN SURVEYOR

*Published four times a year by  
The Association of Provincial Land Surveyors of Nova Scotia Incorporated*

GEORGE BATES  
President

EDWARD P. RICE  
Secretary-Treasurer

R. E. MILLARD

Volume 19

Editor

Number 50

Address all communications to P. O. Box 1541, Halifax, Nova Scotia

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## Address By The President

Gentlemen: It is indeed a pleasure to welcome you to this Sixteenth Annual Meeting of the Association of Provincial Land Surveyors of Nova Scotia.

We are pleased to welcome our distinguished guests and delegates from other Institutes and Associations. In a few minutes I will introduce them to you and will ask each of them to stand and be identified. To many of you, some of them need no introduction, they are old friends from away back, and we are always happy to have them with us. To our guests who are attending for the first time we sincerely hope it will not be the last and that you will be back again. We invite all of our guests to feel free to join in the discussions during this meeting.

To any of you who are new members and to those members who are attending an Annual Meeting for the first time, we wish to extend a special welcome. We hope that when you return home you will do so with a feeling of satisfaction and the wish to come back every year. You are also invited to take part in the discussions of the meeting; and that you will become active in your support of the Association. If we are to succeed in our aims we must have the support of all our members; and, to go one step farther; all Land Surveyors must be members of our Association.

Your Council held four business meetings during the past year; in November, December, March and September. The usual number of routine matters were attended to at these meetings. In at least one case it was necessary to go to our solicitor for his decision on how the matter should be dealt with. All of the meetings were well attended which is indeed a credit to the Council members, some of whom had to travel a considerable distance in order to attend. Your Secretary-Treasurer will give you more details of these meetings when he gives his report later this morning.

One of the highlights of the year was the joint symposium on co-ordinate surveys, which was held in April. This symposium was jointly sponsored by the Association and the Halifax Branch of the Canadian Institute of Surveying. The Symposium was well attended and, we feel, a success. We express our thanks to all those who took part and contributed to its success. We have a fine collection of papers and will be using them to compile a brief for presentation to the Government of Nova Scotia. However, because of the busy summer field season, holidays and other commitments, there never seemed to be enough time to get together and prepare the brief. This we hope will be done later this fall. We also hope that the papers presented at the Symposium will be published in the Nova Scotian Surveyor.

During the past year your president attended and represented the Association at the Annual Meeting of the Canadian Institute of Surveying in Ottawa, in January, and the Massachusetts Association of Land Surveyors and Civil Engineers, Provincetown, Mass. in October. Both of these meetings were well attended and were most interesting. The Association was well represented, by your Vice-President, at the Annual Meeting of the

Ontario Land Surveyors Association at Sudbury, and the Newfoundland Land Surveyors Association at St. John's, Newfoundland. I had personally planned to attend the meeting at St. John's, Newfoundland, and also the meeting of the New Brunswick Land Surveyors Association at Saint John, New Brunswick, but because of other commitments was unable to do so. However, I can assure you, we were well represented at these meetings, by George Bates of St. John's, Newfoundland and by Past President Walter Servant, at Saint John, New Brunswick. It is unfortunate that more of our members do not have the opportunity to attend some of the meetings of the other associations. They are, in my opinion, a worthwhile experience.

In May I attended the closing exercises of the Nova Scotia Land Survey Institute and presented the Major J. A. H. Church award, on behalf of the Association, to the student making the best progress during the first year.

Meetings of the Board of Examiners were held in March and November. These meetings will be covered in more detail in the Report of the Board of Examiners which you will hear later this morning.

Errol Hebb, in his address at the opening of last year's meeting, briefly reviewed the events of the Association over the past fifteen years. I am now going to try and take a brief look into the future.

As you are all aware there have been tremendous advances in surveying techniques during the past few years. Many of these are beyond the means of the average land surveyor. However, every surveyor should keep abreast of these developments in order that he realize their potential. One way of doing this is to belong to the Canadian Institute of Surveying and receive their publication "The Canadian Surveyor". To my knowledge this is the only publication on surveying in Canada that is nationwide in scope.

Electronic distance measuring instruments such as you see in the exhibits room are now available. Instruments such as these have made possible for the average surveyor, precision measurements that were only possible for the Geodetic surveyor a few years ago. I believe that we are one of the few provinces having legislation allowing measurements taken by these instruments to be used on legal surveys. We now have provisions in our regulations allowing for their use by surveyors certified as competent by the Board of Examiners.

While in Provincetown last month I saw among exhibits several small computers of the type already in use by several land surveying companies in Massachusetts. Although it may not be practical for every surveyor to own a computer, it may be possible for one enterprising surveyor to set up a business whereby he can provide computers service for a number of other surveyors. We have already had notice of a Surveying Company in Toronto who has this type of service available. If the land surveyor is to take his rightful place in the rapidly changing society, he must be prepared for and ready to cope with these changes. Today effort must be made if he only wishes to maintain the status quo.

At this time I would like to say a few words about the proposed co-ordinate system or I should say the projection upon which this system must be based. I am no expert on projections and it is not my intention this morning to create the impression that I am. What I have to say is merely to remind you of the important bearing this will have on every land surveyor if and when, this system is adopted.

We are not prepared to say at this time what projection is the best for Nova Scotia. However, it is felt by most interested parties that the projection to be chosen for the co-ordinate system should be one that the necessary correction factors fall within the limits of one part in 10,000. It is also necessary that this projection be conformal; for short lines, angles on the projection are equal to the corresponding angles on the ground and a scale factor which, at any point, is the same in all directions.

This type of projection would include the Transverse Mercator, the Lambert con-

formal conic and the stereographic. All three projections have at one time or another been mentioned as possible projections for Nova Scotia.

The stereographic projection is best suited for a circular area of approximately 220 miles in diameter, and although ideally suited for a province the size and shape of New Brunswick is probably the least likely projection for Nova Scotia.

If the scale error is to be held to one part in 10,000, the Transverse Mercator projection must be confined to a band of the earth's surface approximately 160 miles wide extending in a north-south direction and the Lambert conformal conic projection must be confined to a band approximately 160 miles wide extending in the east-west direction along a parallel of latitude. Both of these projections could be applied to Nova Scotia but would require at least two zones to cover the entire province. It is my opinion that if a two zone system is set up, it would more than likely be a system based on the transverse Mercator.

It is possible, however, to develop oblique projections for both the transverse Mercator and the Lambert conformal conic which would include all of Nova Scotia in one zone, and recently Mr. J. E. Lilly, Dominion Geodesist has developed a modified version of the oblique Mercator that he has called the geodesic strip projection. All possibilities will have to be considered, if and when a co-ordinate system is set up in Nova Scotia.

For an oblique Mercator projection it would be necessary for the Y axis to coincide with the centre line of the Province. This projection would allow any portion of the Province to be surveyed and mapped to an accuracy well in excess of 1:10,000, but would have the inconvenience of the Y axis, which is usually considered to agree with the north-south direction, coinciding with the magnetic east and west. However, the axes of the projection may be rotated to produce co-ordinates in the north-south, east-west direction. Co-ordinates produced in this manner are said to be rectified co-ordinates.

Mr. Lilly's geodesic strip projection may be regarded as an approximation of the oblique Mercator projection and may be rectified in the same manner. Both systems appear to be extremely complicated, but no doubt, if either system were devised by the Geodetic Survey for the Province of Nova Scotia it would be as simple to use as any other co-ordinate system.

The Topographic Survey, the Department of Mines and Technical Surveys now Department of Energy, Mines and Resources have proposed a modified Canadian Transverse Mercator system which would comprise of three degree zones rather than six degree zones now covered by the standard U.T.M. This would provide for a uniform system for all of Canada and has already been adopted by some of the other Provinces. Ontario now has legislation on the books which provides that if and when a co-ordinate system is set up in Ontario, it will be set up on this modified transverse Mercator. This projection will provide for a scale error of better than one part in 1:10,000. Unfortunately this system would require that the Province be split into two zones. Zone 4 with the central meridian at longitude 61 degrees 30' W and zone 5 with the central meridian at longitude 64 degrees 30' W. However, because of the possibility of offshore petroleum developments and since the Transverse Mercator will extend almost indefinitely in a north-south direction this may well be the most suitable projection for Nova Scotia. Sable Island would be included in Zone 4.

Both the Oblique Mercator and geodesic strip projections would have the advantage of confining the Province to one zone and would eliminate the necessity for the transformation of co-ordinates from one zone to another. Tests made by Mr. Lilly have indicated that, for an area the size and shape of Nova Scotia, the geodesic strip projection is more accurate, than the oblique mercator. However, in both cases the scale error is limited to 1:20,000 which is more than adequate for our needs at the present time.

I hope that I have not taken too much of your time on this subject and that I have not repeated too much of the material that has recently been published in the survey

publications including the Nova Scotian Surveyor but I do feel that it is an important subject and must be given a great deal of thought.

We regret the passing during the past year of two of our past-presidents, our first president, Mr. E. O. Temple Piers and past-president Freeman Tupper. Please join me in a moment's silence in respect to the memory of these members.

In closing I wish to thank Ed. Rice, our Secretary-Treasurer for his untiring work and to thank his wife Betty for the great amount of work she has contributed for the Association. I, for one, realize the work that is involved in keeping this Association running. I also at this time wish to thank the Committee Members for arranging this meeting and this year's programme and to thank all members of the Council for their co-operation during the past year.

**MINUTES**  
**SIXTEENTH ANNUAL MEETING**  
**ASSOCIATION OF PROVINCIAL LAND SURVEYORS OF NOVA SCOTIA**

The meeting was officially opened on November 4, 1966 at 10 a. m. by the President, H. B. Robertson. After the ringing of the Baffin's bell, the President gave his address. He spoke of the new means of surveying which are now being used in Canada and of the new co-ordinate survey being made in the Province as a joint effort by the Department of Energy, Mines and Resources, city survey forces and the Provincial Department of Lands and Forests. Mr. Robertson also spoke on the increased requirements for a higher education among land surveyors.

Following his address, the President asked the assembly to stand to observe one minute silence in memory of six members who passed away during the past year. They were: Professor E. O. Temple Piers, first president of the Association and honorary member; Mr. Freeman Tupper, past president of the Association; Mr. Gordon L. Crichton, Honorary Life Member; Mr. William P. Morrison, Honorary Life Member, Mr. Andrew MacGillvray, Honorary Member, Mr. James G. Martin.

Then followed the introduction of visitors:

Mr. Willis Roberts of New Brunswick and Mr. Archie McLaughlin of New Brunswick. Both expressed their delight at being able to attend our meeting and wished us success with our meeting. Then followed Mr. L. Sebert, President of the Canadian Institute of Surveying. Mr. Sebert said he was representing two organizations, both the Surveys and Mapping Branch, Department of Energy, Mines and Resources and Canadian Institute of Surveying. He mentioned that the meeting of the Canadian Institute has the possibility of moving its Annual Meeting from Province to Province. He also spoke on the publications being put out by the C.I.S. and recommended them to all members present. Next to be introduced were Mr. Jack Davidson, Ottawa, Mr. Lew Schofield, Representing Schofield Brothers and Mr. W. Schofield, Vice President of the Association of Massachusetts Land Surveyors and Civil Engineers; Dr. Peter Angus-Leppan, Australia. Dr. Angus-Leppan mentioned that the setup we have here is very similar to the one in Australia. He also wished us the best for the success of our annual meeting and that he was happy to be present. Mr. Harland Moffatt, representative of the Association of Ontario Land Surveyors. Mr. Moffatt, after expressing his pleasure at being here, mentioned that in Ontario they were considering the formation of a Technicians Association for surveyors assistants. The next guest introduced was Mr. Mathias Wuhr, representing the Surveyor General of Canada. Mr. Wuhr brought the good wishes of other members of the Department. Following Mr. Wuhr, Mr. W. A. Thompson representing the Cape Breton County Planning Association and Mr. E. A. Green representing the Department of Vocational Education were introduced.

The introducing of the visitors being completed, the President asked the Secretary to read the minutes of the Fifteenth Annual Meeting.

The Secretary moved that the minutes be approved as printed in the Nova Scotian Surveyor's Annual Report Issue, dated January, 1966. Seconded by Errol Hebb. Motion carried.

The President asked the Secretary - Treasurer to give the Financial Report.

The Secretary - Treasurer moved that the Financial Report be adopted as printed and circulated at the meeting. Seconded by Rusty March. Motion carried.

The Secretary - Treasurer then gave his report for the year 1966.

Report of Scrutineers: The result of the balloting for the executive were as follows: Elected for one year to the office of President — Mr. George Bates, Halifax, N. S., of Vice-President—Mr. John S. Pope, Sydney, of Secretary-Treasurer, Mr. E. P. Rice, Rockingham. Elected to Council for two years were:

Halifax City Area — Mr. L. R. Feetham

Halifax County Area — Mr. Brian Wolfe

Eastern Nova Scotia — Mr. David C. Clarke

Cape Breton Area — Mr. Herbert Martell

Western Nova Scotia — Mr. Eric Millard

Councillors at Large — Col. G. E. Streb.

#### **Reports of Committees:**

**Board of Examiners.** Professor A. F. Chisholm, Chairman, Members:

As Mr. Robertson has already told you, the Board of Examiners held two meetings during the past year — one on the 29th of March and one on the 3rd of November which was yesterday. The usual inquiries were received through the year seeking information on the qualifications required for certification to practise land surveying. These were answered according to the Regulations controlling the Board. Two examinations were held — one in December, 1965, 20 - 22 mainly for those candidates having to write supplements from the previous May examinations. The second set of exams were held from May 10-12 inclusive of this year. The number of candidates writing the December supplemental exams was large, all of whom were successful. With one exception, no candidate had to write more than two subjects. One candidate wrote and passed the Part II examinations. In the regular May examinations, thirteen candidates wrote the intermediate examinations, seventeen wrote final Part 1 and six wrote Final Part II. Four of the Part I finals were unsuccessful but are still eligible to write supplementals in December of this year.

The following four candidates having previously successfully passed the required examinations including the twelve month training period were issued their certificates entitling them to practise land surveying in the Province of Nova Scotia upon becoming members of the Association. You will notice that this list is not the same as the one Mr. Rice presented us with. There are certain other qualifications and stipulations in what I've said.

Dunning, John Scott, Stellarton — dated August 30, 1966

Hebb, Barrie Francis, Armdale, Dated August 30, 1966

McCallum, Arthur Ross, Stellarton, Dated June 10, 1966

Sullivan, Hugh James, Guysboro Co., Dated May 16, 1966

There were a number of inquiries this year from university graduates regarding requirements to qualify themselves for a P.L.S. Certificate, but only one candidate wrote the examinations in May. This situation is rather sad because our Association I think can only be the richer by having more professional engineers within the Association itself. I would like to comment that we are intending to have supplemental examinations in December of this year for those candidates who wish them. The dates will be announced a little later — probably during the week of December 19 and we are told to set a due date for applications for such examinations. At our meeting yesterday, it was suggested the 20th of November which turned out to be a Sunday, so perhaps it had better be the 21st. I must pay tribute to the other members of the Board of Ex-

aminers and you will remembered how they are appointed. Mr. Robert Fitzner is appointed by the Association of Professional Engineers of Nova Scotia; Mr. Ronald Chisholm and myself were appointed by your executive, Dr. G. W. I. Creighton is a Government appointment as described in the by-laws, your president, and one other appointment by the Department of Lands and Forests who this year again was Mr. J. F. Archibald, who acted as our secretary, whom I must say did all the work. During the past week, I was privileged to attend the study of Survey Education in Canada held in Ottawa. I would like to make some observations concerning that study. Firstly, it is my feeling that our Association should have a list of active members. This point was not expressed at the meeting in Ottawa but I note that we have been given a set of figures by Mr. Rice, of our registered members and at the meeting another set of figures was given that was considerably different. In fact I think that most of the 27% that Mr. Rice mentioned were Professional Engineers who came in by what some people call the easy way, by taking civil engineering and writing an examination or two on a short term of articles. Most of them came in too before 1959 when our Act was passed. There are extremely few people in Nova Scotia who have a highly specialized training in surveying and on an advanced level and I think that if this coordinate system, as Mr. Robertson mentioned is to be introduced and used to its fullest extent that we must have people who are university trained in photogrammetry and all the rest of the topics and we must have these people if our standards of surveying are to be maintained and improved.

I put myself at a bit of a disadvantage in commenting in this way since I do happen to be an engineer, but I can assure you that most times when I am discussing this with engineers I do try to speak as a surveyor first and an engineer second — enough that I must preserve my loyalty to both groups.

Thank you very much.

**Nova Scotian Surveyor** — Mr. Eric Millard, Editor

It is a pleasure for me to be here at the Sixteenth Annual Meeting and briefly report on the Nova Scotian Surveyor as your Editor. First we've changed reprinting the articles to avoid waste of time and error. We will reproduce the articles by photography so that if there is an error it isn't ours.

In the September issue which you will be receiving during the next month, there is a paper on New Zealand which I received from the Surveyor General of New Zealand and I hope in 1967 to have articles from Australia and other Commonwealth countries.

The advertising is holding the same and I hope to improve it some.

Thank you.

**Nova Scotia Land Survey Institute** — Col. G. E. Streb, Principal

Mr. President and Gentlemen:

I am very pleased to have this opportunity to give you a report on the Nova Scotia Land Survey Institute and to bring you best regards from the staff and students of the Institute.

Although most of you are aware of the courses we offer, I should for the benefit of others tell you something about our courses even if to some it is a bit stale.

The Institute is a small school compared to others and especially to the three large Institutes of Technology which also offer a course in surveying. They are at Burnaby, B.C., Calgary, Alberta, and St. John's, Newfoundland but I understand that other Institutes of Technology are also entering the field this year or next year. But we are unique in that our school is solely devoted to instruction in surveying and mapping and also we are still, I believe, the only institution offering photogrammetry and cartographic drafting at the technical level. But courses in these also will be offered elsewhere soon.

Our enrolment has been excellent. This year we turned away more applicants than we accepted — we are filled to overflowing. There are 15 in Land Surveying, First Year, 15 in Land Surveying Second Year, 10 in Photogrammetry and 19 in Cartographic Draft-

ing. To handle this relatively large number in Cartographic Drafting a second instructor had to be found. Our total enrolment is 59. It includes one from West Cameroon in Africa, two from the West Indies and one Nova Scotian girl in photogrammetry. Nearly all of them have had Grade XII, some have had one or even two years of university.

Our graduates are in brisk demand. Approximately half go to government jobs at one level or another and half to industry and private practice. About two-thirds of recent graduates are located in the Atlantic Provinces. Starting salaries range from \$3000 to \$5000.

We try to keep up to date by having instructors work on actual surveys in the summer and by acquiring recent equipment. For instance, although we still teach logarithms, each student has a hand calculator and these, the Board of Examiners have agreed, may be used for examination purposes.

What the future holds for the school I do not know. This much is clear — that in the present economy there are plenty of applicants for training and there are plenty of jobs for the graduates. We hope our product is as satisfactory as it seems to be. Thank you, are there any questions?

Mr. President: What are the plans for the extension of the school?

Mr. Streb: Not being a member of Government I cannot answer that. We certainly need expansion without any more students. The building was badly underdesigned in the first place and I think it is afoot now to rent a house across the road to help us a bit. I think the school should be doubled in size now by the enrolment we have and the number of rooms we lack. If the Federal Government will pay three quarters of the cost, we will likely expand the school.

**Committee on Percolation Test:** Mr. K. W. Robb, Chairman

Mr. Robb requested that his report be put ahead to the last Business session.

The President asked that the report be brought in at the final business session.

**Changing the name of the Association** — Reported by the President, Mr. Robertson.

At our last annual meeting, a motion was put forth and carried that the name of the association be changed from Association of Provincial Land Surveyors of Nova Scotia to Nova Scotia Land Surveyors Association. I had a discussion on this with Mr. Muggah of the Attorney General's Department and he thought that this year would be a good time to do this because they are in the process of revising the Statutes of Nova Scotia and this I think will be done this coming year. The committee feels that this would be the time to get all amendments in and when the Act is published it will be complete.

Mr. Muggah has since taken a new job and someone else has taken over the job of revising the statutes and I have not been in contact with him since. It was our intention to take this up with the Minister of Lands and Forests to see if we could get it put through as a Government Bill.

In the last few months I've been giving it some thought and I think that there is more required than just the changing of the name.

As some of you may be aware, when our Act was passed in 1959, we tried to get what is referred to as a closed shop — that is every person who is registered as a Provincial Land Surveyor must belong to the Association in order to practise Land Surveying. The Association of Professional Engineers objected to this very strongly and in order that our Act be passed, we accepted Section 17 which deals with the practise of surveying, as it is presently written. I shall now quote this Section, "No person shall practise surveying for gain unless he is the holder of a certificate of qualification as Provincial Land Surveyor and is an active member in good standing of the Association and is entitled under the Engineering Profession Act to practise professional engineering in province." In other words if a man is a holder of a certificate as a P.L.S. and is also a paid up member of the Association of Engineers it will not be necessary for him to belong to the Association in order to practise land surveying. Now with the exception of the province of Prince Edward Island who only have one land surveyor in private practice we are the only Province that have this situation. I think that I am correct in stating that every province in Canada has what



we refer to here as a closed shop and for this reason I didn't go to our Minister to see what could be done about having the name changed because I think that we should go further. If we go further, then it will not be a public act — it will be a private act and we will have to go through our solicitor and he will have the amendments introduced in the House.

This concludes my report on what has been done regarding the changing of the name.

#### **Old Business**

The first item of old business was the item of changing the Association's name and getting Section 17 of the act changed as mentioned in Mr. Robertson's report. During the discussion that followed, Mr. Ronald Chisholm reported that within the past 24 hours he had been talking with executive members of the Association of Professional Engineers of Nova Scotia and he reported that there has not been a change of heart or a change in their position that they had in 1959 when the Act was changed.

Professor Chisholm moved that a questionnaire be sent out with the dues notices, requesting to know how many were in private practice, residing in Nova Scotia and if they were university graduates. Seconded by Walter Servant.

Col. G. Streb moved an amendment that a questionnaire go out to all registered land surveyors. Seconded by Mr. Ronald Chisholm. Motion on the amendment carried.

Following the approval of the amendment, the original motion of Professor Chisholm was then approved.

#### **Second Item of Old Business**

The letter written during the year to the Minister of Lands and Forests and to the Minister of Highways, regarding their employees who are not registered land surveyors and are doing surveying in their spare time, was read to the assembly.

Mr. Pope mentioned that similar cases to these were prosecuted in the City of Montreal for doing improper survey work. They lost their case however because it was felt that no prestige applied.

During the discussion that followed, it was found out that no members of the Department of Lands and Forests were guilty, therefore, Mr. Eldridge moved that a letter be sent out to the Department of Lands and Forests absolving them of the accusation that had been sent. Seconded by Walter Servant. Motion carried.

Mr. Eldridge pointed out that in future we should not be too hasty in sending such letters out until complaints have been written to the Association stating the names and cases.

The Secretary pointed out that he had been in contact with the Association Solicitor with regard to any prosecution we may have, and that Mr. MacInnes had said that if there were any convictions, all costs would have to be absorbed by the Association as only Crown offenses are paid by the Crown.

The next item of old business was the transaction of small portions of land by the Department of Highways without the registering of a deed. The secretary read the correspondence starting with the letter from the Association to the Minister of Highways, his reply, and subsequent correspondence with the Solicitor. It was pointed out that the matter was still in the hands of the council to be dealt with at the next council meeting.

Due to the lateness of the hour, the morning session was brought to a close at 12.25 p.m. and preparations were made for the C.I.S. luncheon.

The C.I.S. luncheon was held at 1 p. m. with the special guest being His Honor the Lt. Governor of Nova Scotia, H. P. McKeen. Also at the head table were Col. Sebert, President of C.I.S., the Aide de Camp to the Lt. Governor, President Robertson and Mr. G. Bates, Chairman, Halifax Branch of the C.I.S.

The afternoon session contained the following instructional films: "Paving the Way to Progress" provided by Wild of Canada Ltd.; "Municipal Control Surveys"

and "Science Flies North", provided by the Department of Energy, Mines and Resources.

Following the showing of the film, "Municipal Control Surveys", a panel chaired by Mr. A. Daykin with members being Mr. Roy Dunbrack, Mr. Robert Miller and Mr. Fred McKeown reported to the assembly on the progress being made in the Province of Nova Scotia on the establishment of a coordinate system.

**Saturday, November 5, 1966**

The morning session began at 9:30 a. m. with Instructional Film "Labrador Diary". This was followed by a paper entitled "The Computer in Management". This paper was very well given by Mr. John I. Davidson of the Department of Energy and Resources, Ottawa.

The second and final paper of the morning was given by Mr. Robert S. Huestis, Barrister, entitled "Some Thoughts on Property Rights". This paper was of great interest to all and in particular to those in private practice as it showed how the Surveyor and Lawyer may assist one another to a greater extent.

At 12:00 noon a recess for lunch was called and the second past-presidents luncheon was held with all the guests attending.

**Second Business Session**

The second business session of the Sixteenth Annual Meeting was called to order at 2:15 p. m.

Before turning over the chair to the incoming President, Mr. Robertson introduced each member of the new executive individually. Following the introduction, Mr. Robertson turned over his office to President George Bates.

President Bates, before getting on with new business, paid high tribute to the outgoing president and his executive for a job well done. He also thanked the president for his share and part in organizing the Sixteenth Annual Meeting.

**New Business**

Professor A. F. Chisholm pointed out to the assembly that the City of Halifax does not recognize surveyors as professional men. Mr. Walter Servant pointed out that when his business was established within his own home, which is an RI residential zone, he was not abiding by the law due to his status of not being classified as a professional.

Professor A. F. Chisholm moved that the incoming council investigate the establishment of professional status for the surveyor. Seconded by Walter Servant. Motion carried.

Mr. Eric Millard reported that the September issue of the Nova Scotian Surveyor was received three days prior to the meeting. However it would not be mailed out until the following week. Mr. Millard recommended to all land surveyors that they read the article in the September issue on legal surveys in Ontario.

Mr. Moffatt, O.L.S. representative, said that in regards to this article, further information could be obtained by writing to the office of the Ontario Land Surveyors, Suite 903, Royal Bank Building, 8 King St., East, Toronto 1, Ontario.

At this point in the meeting, a telegram was received from Ottawa, which President Bates read as follows: "H. B. Robertson, President, Association of Provincial Land Surveyors, Citadel Inn, Halifax — May the Sixteenth Annual Meeting of our Association prove to be the most successful to date. Best wishes in all your endeavours. As our contribution, we wish to state the following: We the undersigned support any motion to delete section seventeen B from the Provincial Land Surveyors Act. To enhance the image of the profession of Land Surveying, the imperative need is to have the strongest possible association. This can be accomplished only by the wholehearted support of every person who derives benefit from the profession of land surveying. It is therefore the responsibility of every person who is a qualified land surveyor but who supports other professional associations to give equal support to

the Association of Provincial Land Surveyors. Signed W. H. Foster, P.L.S., D. K. MacDonald, D.L.S., P.L.S., R. P. Seper, D.L.S., P.L.S., I. P. MacDonald, P.L.S.

The president then read Section 17 of the Act so that the assembly would be familiar to what the telegram referred to.

Following a discussion, Mr. March said he would like to make a motion that the Association continue in its effort to have Section 17 (b) revised in such a way that every Provincial Land Surveyor must be a member of the Association.

Mr. A. McLaughlin, representative from New Brunswick, suggested that we work on having the two words "for gain" deleted from the section.

The Secretary pointed out that the Solicitor had been approached in regard to the words "for gain" and he doubted that any alteration could be made as all societies had these two words in their Act.

Col. G. Streb moved that the council initiate action during the coming year to ensure so far as is possible that all practicing land surveyors in the Province and members of the Association and that all who practice land surveying are qualified Provincial Land Surveyors. Seconded by Mr. K. Robb. Motion carried.

At this point, in the program, while Mr. R. E. Dickie of Brooklyn was absent from the room, President Bates made a motion that Mr. Reginald E. Dickie, past president of the Association, be made an Honorary Member of the Association. Seconded by Rusty March. Motion carried unanimously.

Mr. John Pope asked how other provinces notified the public as to who was qualified to practice land surveying.

Mr. Gregoire Girard, Q.L.S. representative from Quebec mentioned that their Association published an annual list of those who were qualified to practice land surveying.

A discussion followed on such a list being made up of Nova Scotia Land Surveyors who are members of the Association and that this list be published in local papers and mailed to all registry offices and planning boards. The Secretary said that an attempt would be made to have such a list published during April, 1967.

Mr. Brian Wolfe moved that delegates going to conventions give a report in duplicate to the secretary and have one copy forwarded to the Nova Scotian Surveyor for printing. Seconded by Professor Chisholm. Motion carried.

Mr. K. W. Robb, Chairman of the Percolation Test gave his report.

"On or about April 21, 1965 the County of Halifax adopted a new policy whereby a subdivision of three or more lots must have a percolation test carried out by a qualified and certified engineer at the expense of the subdivider. This procedure is quite costly to subdividers and many surveyors feel that these tests can be carried out by them while conducting their surveys in the field.

A committee was set up by council appointing myself as chairman, along with Mr. H. B. Robertson and Mr. J. D. MacKenzie. This committee began correspondence with Municipal Authorities to have their views with regard to getting surveyors qualified to carry out these tests.

As a result of correspondence the planning board advised the committee that they were favorable to our request. There was however the matter of getting the Health Department also to adopt this procedure and getting the surveyors trained.

A meeting between the Board of Health Officials, Planning Board Officials and our Committee is to take place on or about the end of January, 1967, after which it is hoped that training of the surveyors may take place.

The results of this meeting and subsequent decisions will be published in the Nova Scotian Surveyor. Thank you.

President Bates expressed thanks to all the exhibitors who had added so much to the Sixteenth Annual Meeting. He also thanked them for having donated the prizes to be presented at our annual dinner. The exhibitors were: Eastward Industries Ltd., Hughes - Owens Co. Ltd., Jena Scientific Instruments Ltd., Norman Wade Co. Ltd..

Geotech Ltd., Tellurometer Canada Ltd., Agatronics Ltd. and Enamel and Heating Products Ltd.

President Bates also expressed thanks to Mrs. H. B. Robertson and Mrs. E. Rice who co-chaired the ladies activities committee.

An applause of appreciation was extended to the Secretary, E. Rice for the work he has done for the Association during the past year.

President Bates expressed his thanks to the delegates from other associations for attending our annual meeting.

At 3.45 p. m., the President adjourned the Sixteenth Annual Meeting.

At 7:30 p. m., on November 5, the Sixteenth Annual Dinner was held followed by the Annual dance at which 142 persons were in attendance. This was the largest attendance yet held for any annual meeting and dance.

Respectfully submitted,  
E. P. Rice,  
Secretary - Treasurer

#### REGISTRATIONS — 16th ANNUAL MEETING

Alvinie Amirault	Robert Gough	John Pope
Joseph Archibald	Edward Hanifen	William Probert
George T. Bates	Errol Hebb	Edward Rice
Ernest Boehk	Gerald Hughes	E. B. Ritchie
Bernard Campbell	Robert Hunt	Kenneth Robb
William Chambers	Sydney Hyslop	Bert Robertson
Arthur Chisholm	Douglas Joudrey	Fred Saltman
J. Ronald Chisholm	Henry Langley	Robert Sarty
James A. H. Church	Rusty March	Walter Servant
David C. Clark	John Marshall	Burney Smith
Murray Cossitt	Herbert Martell	Lewis O. Smith
David L. Crooker	Roger Melanson	Sterling Snow
Al Daykin	Eric Millard	George Streb
Reginald Dickie	Robert Miller	George Swanburg
Robert Donovan	Albert MacCallum	Forbes Thompson
Roy Dunbrack	Carl MacDonald	Melvyn Wadden
Donald Eldridge	John MacInnis	Ray Wadge
L. Robert Feetham	Ross MacKay	Donald Wagstaff
Peter Fenwick	F. W. McKeown	Ronald Wentzell
Arthur Gilmore	Sheldon Patriquin	Brian Wolfe
	Brian Peel	

#### Exhibitors Registered at the 16th Annual Meeting

Agatronics Ltd. ....	Mr. Roland Zwicky
Charles Bruning Co. Ltd. ....	Mr. S. Carver
Eastward Industries Ltd. ....	Mr. M. Hattie
	Mr. J. Hill
Geotech Co. Ltd. ...	Mr. R. K. Rosebrugh
Hughes Owens Co. Ltd. ....	Mr. C. A. Stringer
	Mr. E. Hollingum
	Mr. R. Kempt
Enamel Heating Products Ltd. ....	Mr. W. A. Hastings
Norman Wade Co. Ltd. ....	Mr. J. H. Noonan
Jena Scientific Instruments Ltd.	Mr. F. Steinmetz
Tellurometer Canada Ltd. ....	Mr. M. Mogg
	Mr. Henry Wilupski

**REGISTRATION OF GUESTS — 16th ANNUAL MEETING**

Representing the Surveyor General .....	Mr. M. Wuhr, D.L.S., P.L.S., Ottawa
Representing the University of New South Wales, Duran, Australia .....	Dr. Peter Angus-Leppen, Australia
Representing the Massachusetts Association of Land Surveyors and Civil Engineers .....	Vice-President W. L. Schofield, LS, CE, Framington, Mass.
Representing the Canadian Institute of Surveying .....	President L, Sebert, Ottawa
Representing the Ontario Land Surveyors Association .....	Mr. Harland Moffatt, O.L.S., Sudbury, Ontario
Representing the Association of Quebec Land Surveyors .....	Mr. G. Girard, A.G., St. Hyacinthe, Quebec
Representing the Cape Breton Regional Planning Association .....	Mr. W. Thomson, Director of Regional Planning
Representing the Department of Natural Resources, New Brunswick .....	Mr. W. F. Roberts, Director of Surveys, Fredericton, N. B.
Representing the Department of Vocational Education, Nova Scotia .....	Mr. E. A. Green, Supervisor, Vocational Schools, Halifax, N. S.
Representing the Association of Professional Engineers of Nova Scotia on the Board of Examiners .....	Mr. R. D. Fitzner, P. Eng., Halifax, N. S.
Other Guests .....	Mr. L. T. Schofield, CE and LS, Framingham, Mass., U.S.A. Mr. J. I. Davidson, P. Eng., Ottawa, Ontario. Mr. Archie MacLaughlin, N.B.L.S., Fredericton, N. B. Mr. C. G. MacDonald, P.E.I.L.S. Charlottetown, P.E.I.

**STUDENTS FROM NOVA SCOTIA LAND SURVEY INSTITUTE ATTENDING  
16th ANNUAL MEETING**

Mr. Arthur Bent	Mr. E. C. Mokoro	Mr. R. L. Tracey
Mr. R. K. Carrick	Mr. F. K. Taylor	Mr. E. J. Webber
Mr. E. Hingley	Mr. William Thompson	Mr. Ralph White

**SLATE OF OFFICERS  
1967**

President .....	George T. Bates .....	1271 Edward St., Halifax, N. S.
Vice President .....	John S. Pope .....	257 Charlotte St., Sydney, N. S.
Secretary - Treasurer .....	E. P. Rice .....	39 Edward Laurie Dr., Rockingham, N. S.

## COUNCILLORS

Halifax City .....	Ernest Boehk .....	2751 Fuller Terrace Halifax, N. S.
** L. Robert Feetham .....	108 Sunnybrae Ave.,	Halifax, N. S.
Halifax County .....	* Forbes Thompson .....	6407 Bayers Road, Halifax, N. S.
	** Brian D. Wolfe .....	P. O. Box 36, Lower Sackville, Halifax Co.
Western Section of Province .....	* Roger Melanson	Mill Village Queens County, N. S.
** Eric Millard .....	P. O. Box 337	Liverpool, N. S.
Eastern Section of Province .....	* Melvin Wadden .....	R.R.1, Riverton, Stellarton, N. S.
** David C. Clark .....	P. O. Box 9	Tatamagouche, N. S.
Cape Breton Area .....	* Carl MacDonald .....	45 Commercial St., Dominion, N. S.
** Hebert Martell	54 Coxheath Road,	Coxheath, Cape Breton Co., N. S.
Members at large .....	* J. F. Archibald .....	2 Faulkner St., Dartmouth, N. S.
** Col. G. E. Streb .....	P. O. Box 225,	Middleton, N. S.
Past President .....	* H. B. Robertson .....	27 Canary Crescent Rockingham, N. S.

\* Term ends November 1967

\*\* Term ends November 1968

## DISCIPLINE COMMITTEE

1967

In compliance with the by-laws of the Association made under the authority granted by the Provincial Land Surveyors Act, being Chapter 6 of the Statutes of Nova Scotia, 1959, and approved by the Governor-in-Council March 30, 1961.

Chairman .....	John S. Pope .....	257 Charlotte St., Sydney, N. S.
Member .....	J. F. Archibald .....	2 Faulkner St., Dartmouth, N. S.
Member .....	Brian D. Wolfe .....	P. O. Box 36 Lower Sackville, Halifax Co.
Member .....	Forbes Thompson .....	6407 Bayers Road Halifax, N. S.
Member .....	David C. Clark .....	P. O. Box 9, Tatamagouche, N. S.
Member .....	L. Robert Feetham .....	108 Sunnybrae Ave., Halifax, N. S.

E. P. Rice  
Secretary - Treasurer

## ANNUAL REPORT OF THE SECRETARY - TREASURER

Mr. President, Members and Guests:

Before beginning my report, allow me to thank all our guests for honouring us with their presence at our meeting. I hope that your stay here will be a pleasant one and that you will take many happy memories back with you on your return home. I also wish to thank the exhibitors, not only for coming but also for their promptness in replying to our invitation to exhibit. Your exhibits are very much appreciated and contribute greatly to the success of our meetings.

I wish to thank at this time the committee members who worked very hard and made many sacrifices to bring this meeting about. The committee was made up of our president, Mr. Bert Robertson, Vice-president, George Bates, Mr. Ted Hellingum and Mr. Forbes Thompson. I also wish to thank Mr. Al Daykin who again has taken an active part in preparing for our meeting. A thank you goes out to the staff of Mr. Robertson of the Department of Land & Forests for printing our programs and list of candidates for election.

During the past year the following new members were accepted in the Association:

Douglas W. Joudrey, Halifax, N. S.

David M. Munroe, Halifax, N. S.

Richard E. Dunbar, James River, N. S.

J. Edward Hanifen, Guysborough, N. S.

W. Cavin Mile, Halifax, N. S.

Hugh J. Sullivan, Heatherton, N. S.

J. Albert MacCallum, Stellarton, N. S.

Leonard W. Telfer, Truro, N. S.

Barrie F. Hebb, Armdale, N. S.

John S. Dunning, Stellarton, N. S.

And Gerald Baylau, P. Eng., was reinstated. This year the Association welcomed its first Associate Member, Mr. Al Daykin. The present membership Statistics of the Association are as follows:

Honorary Members	5
Honorary Life Members	9
Paid-Up Members	192
In Arrears	37
Associate	1
<hr/>	
Total Membership	244

The total membership is down 12 from my 1965 report, however, the paid-up membership has increased 49 members for the same period. I trust that the arrears will keep disappearing from our books and that those who have brought their dues up to date will continue to do so.

Some of the arrears is due to members changing their address and not informing the Secretary. I would like to quote to those here present and to those who will read this report in the Annual Report issue of the Nova Scotian Surveyor that Paragraph 7 of our By-Laws reads as follows: Every member of the Association shall see that his correct address is on record with the Secretary-Treasurer. The mailing of a notice to a member's last notified address shall be deemed to constitute service of notice for any purpose. You may see by this that when dues notices are returned marked "address unknown", one may be suspended by serving notice to this effect to the member's last mailing address.

During the past year an article was printed in the "Canadian Surveyor" to the effect that 41% of the Provincial Land Surveyors in Nova Scotia were university graduates. This prompted the Association of Ontario Land Surveyors to write and ask us to confirm this statement as only 27% of their registered land surveyors were university

graduates. With the help of the secretary of the Board of Examiners, Mr. Joe Archibald, our final count showed that 42.3% of our registered land surveyors were university graduates. This information was forwarded to the secretary of the Ontario Land Surveyor's Association as requested.

Since November 6, 1965, four Council Meetings were held, the first being on November 6 following the annual meeting. Twelve of the fifteen executive members were present. The new Discipline Committee for the year was appointed and Prof. A. F. Chisholm and Mr. Ronald Chisholm were reappointed to the Board of Examiners. To take care of issues arising from the annual meeting the following appointments were made. The President, Mr. Robertson was appointed to look into the possibility of having the Association's name changed.) 2 Mr. John Pope was appointed to draft a letter to forward to the Minister of Lands & Forests and the Minister of Highways regarding unlicensed survey employees doing surveys on their own time. 3) The Secretary was appointed to approach our Solicitor with regards to illegal surveys. 4) Mr. Roger Melanson was asked to contact Mr. Freeman Tupper regarding the Dept. of Highways method of transferring small portions of property.

On December 10, the second Council Meeting was held with 8 members of the executive present. The reports from the previous meeting were read and accepted. In order to keep my report as brief as possible, I will bring the results of these reports up at the Business Session.

The next Council Meeting was held on March 11 with 12 members present. The main item of business was a draft letter prepared by Mr. Kenneth Robb which the Council approved to be forwarded to the Department of Highways with regards to transfer of property without registering a deed. Councillor Robb reported that he had discussed with the Warden for Halifax County the possibility of having surveyors qualified to take the percelation test and that this was to be discussed with the County Board of Health, in hopes of having the Act changed which now requires this work to be done by a Professional Engineer or Sanitary Inspector. Mr. Robb is to continue his investigation in this matter.

The fourth Council Meeting was held on September 9 with thirteen members present. The main topic of this meeting was a letter received from the Dept. of Highways regarding the transfer of title without registration of deeds. The Dept. of Highway indicated that they did not intend to change the present method so Council decided that the advice of our Solicitor should be sought. I have since received a request from our Solicitor that he be authorized to take this matter up with the officials concerned. This will be discussed further at the next Council meeting.

I would like to thank the members of Council for their splendid attendance record during the past year, especially since these meetings are held on Fridays and often cause disruption in one's work schedule. Special mention should be given to the Cape Breton delegation who have a perfect record of attendance for the year. Even icy roads on December 10 last did not keep John Pope away from the meeting as he flew Air Canada from Sydney to Halifax and return at his own expense.

During the past year the Council dealt with two complaints from property owners against two members. These complaints are still under investigation.

Letters are being received from surveyors in other countries who wish to emigrate to Canada and are looking for job opportunities in our province. If anyone here is interested in knowing more about these surveyors please contact me. At present I have three letters at home which were received during the past month. Two are from England and one is from the British West Indies.



Various reports which were presented at the Council Meetings will be dealt with in the Business Session covered under old business.

This concludes my report for the year 1966.

Respectfully submitted,  
E. P. Rice, P.L.S.  
Secretary - Treasurer.

**THE LONG LINE**  
**By J. E. R. March**

**At the graduating exercises of the Nova Scotia Land Survey Institute 1966**

When honored by your invitation to speak here today, I accepted with an eagerness that must have appeared to be almost unseemly grateful for the opportunity to thank the many graduates of this school for the help I received from them during my stay with the Department of Lands and Forests. I can say in all truth, without that help there is little chance either your invitation or my ability to accept could ever occurred.

After agreeing in such haste the problem at once arose, what to speak about. Your principal was consulted and the results were rather negative, mainly because I had neglected to wear my hearing aid. Was his reply "Speak about? Your judgement is your own" or was it "Speak about one minute then sit down". I was not sure.

Hoping the first interpretation was more nearly correct I have decided to tell you a short story — about a long line.

There are a number of crews working on this line and a new crew is being added today. This new crew consists of you, the graduates of the Nova Scotia Land Survey Institute, in surveying, and in cartographic drafting, and in photogrammetry. The line you are now working on is the line of Progress in Surveying.

Of course on all surveys an instrument is required and at the present time we can do no better than consider this school as the principal instrument. As we look around this fine building with its modern equipment, and as we realize the qualifications of your experienced teaching staff, we can be sure of one thing. Your instrument is in good adjustment. If any lingering doubts remain, we need only consider the records of former graduates.

Your instrument is in good adjustment but are we on the proper course? Time alone can provide the answer but at the moment the sight ahead looks good. Our line of progress will require many new stations to be set up in the future — some quite soon and others more distant. In order that we may be in a better position to set these stations in their proper order perhaps we should now check our backsight.

Looking back we find station one has been lost in antiquity. No one now knows when or where the first surveys were made. We learn of the ancient Egyptian surveyors whose chief function appears to have been to relocate the boundaries for the wealthy land owners along the Nile after its annual floodwaters had receded. Some of these surveyors became so good at their work they employed others as instrument men while they made an easier living by simply convincing their employers through argument as to the accuracy of the surveys.

I have often wondered, when frustrated in attempts to have legislation enacted more suitable to our present day survey needs, — was it possible these top bracket ancient and eloquent Egyptians broke away entirely from the surveying profession and formed professional groups of their own, later to become known as the legal profession, or perhaps politicians?

At any rate surveyors problems go back a long ways. Further proof of course may be found in the Book of Deuteronomy (27-17) — that passage so well known to surveyors "Accursed shall be he who removeth his neighbor's landmark and all the people shall

cry amen". Nowadays there appear to be fewer people crying amen than there are operating bulldozers.

Let us jump ahead now to the third century. Here we learn that Heron, the Greek astronomer had in his possession an instrument graduated to three hundred degrees, the same as our modern theodolites. Heron used it in his study of the stars, and strangely enough I have been unable to find any record of such instruments being used for land measurements, or what we call legal surveys, until well into the fifteenth century.

Before we become too critical it might be well to remember that another four hundred years would pass before man for all his inventive ability was able to build a shirt that buttoned in front like a coat. In my youth when we dressed in our Sunday best we had to pull them down over our heads, like the girls do with those sweaters. (I had better get back on line)

The first surveys in Nova Scotia were made by the French. Seignories were surveyed right here in this Annapolis Valley. Our records of these are vague and understandably so, as they are entirely submerged by the British Colonization surveys. It is a remarkable and very appropriate coincidence that what were probably the first surveys in Canada and what is certainly the first survey school in Canada originated in this valley.

In our line of progress we would have to call Station One the township surveys, as they were the first step of a survey framework in this province. Other stations were — surveys for the settlers — for timber grants — the county lines — municipal lines — town boundaries. All with the use of the magnetic compass. Then in time came the problem of resurveys and the demand for land maps. About a half century ago one timber company employed a young surveyor to establish the boundaries of and map their lands in eastern Nova Scotia. This young surveyor developed a system for numbering each corner as it was established, both on the ground and on the maps. This system worked so well that it was adopted by other companies and by the Crown where it is still in use. Many of you here know that surveyor who served so well for many years as secretary to the Advisory Board of this school. His name? V. P. Harrison.

As we sight back carefully we can see many more important stations. The establishment of geodetic control. Control that stayed almost dormant for many years, but which happily is now being used with greater frequency. The increasing use of photogrammetric methods in surveying and in so many other ways — still not to its full advantage because we lack a provincial control system.

New measuring equipment both angular and linear. It is most pleasing to note this school is keeping abreast of the times in this field.

I spoke of this school as our principal instrument in the line of progress and we must also consider the school as a primary station on that line. You good people of Lawrencetown and the surrounding area may believe yourselves more aware of the schools' economic value than are people elsewhere. Let me set you right on that account. About ten years ago I had the honor, as the president of the Canadian Institute of Surveying, to represent the institute at the A.C.S.M. convention in Washington. Of course I was pleased to be so honored. However something happened there that gave me equal pleasure. From almost every state in the Union men — famous men in the profession would say to me "Oh you are from Nova Scotia where the survey school is located. Do you know Major Church of Lawrencetown? He must be quite a man." I would square my shoulders and use the expression later made famous by my good friend George Bates "Yes I'm from Nova Scotia", and I know Major Church, and he is quite a man.

So much for the past and now what of the future? What stations are waiting ahead? First and foremost is the setting up of a plane co-ordinate survey system in this province. This station is well within sighting range, perhaps much closer than we had dared hope even a few years back.

Only a few weeks ago a symposium was held on this subject at the Citadel Inn Mo-

tel in Halifax. It was the culmination of months of planning and years — yes years of study. Among the many who attended were the Minister of Lands and Forests and his Deputy — representatives from the legal profession — engineers — planners — mappers — assessors and others, in addition to more than half a hundred land surveyors. From other parts the most knowledgeable men in this field on the continent came and presented papers. They also gave much valuable advice, acquired through experience with the operation of coordinate systems in other places.

It is a sad commentary on the news media of our provincial capital to state that although the press, radio and television were all notified, for all the information the public received through these sources that meeting might as well have taken place in Lower Slobovia. Perhaps they found it more profitable to keep the public posted on Munsinger mudslinging, or maybe they simply dismissed the whole thing as some sort of hypothetical, geodetical, mathematical legerdemain cooked up by a few crackpot surveyors for their own benefit. Whatever the reason it is sad.

When and not until a controlled, systematic survey and mapping program is set up here can we hope for the next station in our line of progress. That station is an improved land pattern — modern title conveyance and registration fused with modern boundaries. It is now and has been for many years my firm conviction that the greatest single cause for our economic lag is our land pattern. When a surveyor has a problem to solve he knows and applies the proper formula. Others might well use this approach, for there is a formula in our complex civilization that is just as accurate and just as inflexible as any in mathematics. That formula? **Well established and accepted boundaries are the key to prosperity.** It applies to nations — to provinces — to municipalities and to individuals. I have seen men brought to the brink of financial ruin through court costs over petty boundary disputes that should never have occurred. Canada and the United States, the two nations with just about the highest living standards in the world, and the longest unguarded boundary, feeding the nations with the largest populations while they glare at each other across territory coveted and sometimes claimed by both. Even in our great nation we might consider that formula in relation to the vast undeveloped resources to the north. A couple of years ago this province embarked on its Voluntary Economic Planning Program. Great things were expected of this plan and great things most certainly will come through it. Far greater things can be expected when the province provides the assistance by establishing the proper climate for implementing recommendations that are bound to develop. There are in Nova Scotia over 49,500 woodlots of less than 1,000 acres. These woodlots supply more than sixty percent of the pulp wood that keeps the wheels of that multi million dollar industry turning. We hear and read complaints from many of these woodlot owners that they are giving away either their wood or their labor. These complaints are of course debatable but one thing is certain. They will surely be giving away both in the future unless careful, long range planning commences soon. At present many of them do not even know where their boundaries are. Their establishment and delineation are only one of the problems you will meet as you start work today on the line of progress. You will soon discover these problems all fit into one overall pattern, for property ownership is the very cornerstone of our way of life.

One final message. As I stand here today after fifty years in the surveying business and ask myself if I were a young man again what would I choose for a career? Well, I would make one change and one only. I would try to be a better surveyor, and my first step in that direction would be to learn all I could at the Nova Scotia Land Survey Institute. With that behind me I would look to the future full of confidence, and the last words of my message to you who graduate here today in surveying and in mapping and in photogrammetry are — **“So can you”**.

## LETTER TO FELLOW LAND SURVEYORS

Are you completely satisfied with everything concerning the Association of Provincial Land Surveyors of Nova Scotia? I, for one, am not!

We appear to be living in an age where the younger generation is not reluctant to express its opinion and often speaks out defiantly against subjects more revered by the older generation. Thus, since I am one of the younger and relatively newer members of this Association, I feel qualified to cast a dissatisfied voice against it. I am sure that I am not without backing in this venture as some of my complaints are shared by other members, and by surveyors-in-training, who though they have no voice in the Association at this time, foolishly await the day when they too can attain membership in this apathetic body.

My first complaint is in the form of the following question: Why should I pay annual dues to this Association when a qualified member of the Association of Professional Engineers of Nova Scotia, under the provisions of the Provincial Land Surveyors Act of Nova Scotia, Chap. 6, 1959, Sect. 17 (b), may practise land surveying full time without joining or paying dues to our Association? This hardly seems fair to me, to say the least.

Take a good hard look at some of the other survey associations across Canada. One does not see these conditions existing in the Association of Ontario Land Surveyors, the Corporation des Arpenteurs-Geometres de la Province de Quebec, or the Corporation of Land Surveyors of the Province of British Columbia. Notice that word CORPORATION . . . . Anyone get any ideas from that.

Fellow members in private practice, did you ever wonder what would happen if all the eight hundred professional engineers in this province decided to practise land surveying?

Another gripe I have concerns the method in which a graduate forester or engineer may obtain a certificate of qualification as a Provincial Land Surveyor. In the past the practice has been (and I am not sure but that it still exists) to grant said certificate to any candidate who passes a simple Legal examination and serves a year as a surveyor-in-training. I know of one graduate engineer, who on graduation had never set up a transit.

In contrast, a graduate of the two year course in Land Surveying at the Nova Scotia Land Survey Institute, fully trained as a land surveyor, must serve an additional year of apprenticeship and shell out nearly one hundred dollars for three sets of examinations which sometimes appear to have been made out and typed by idiots.

My third complaint is that, in the past, I am told that a good percentage of the members of this Association did not bother to pay their annual dues. According to the Association by-laws, after March thirty-first of the year in which the dues are not paid, the member is not entitled to practise as a Provincial Land Surveyor. What I am now wondering is how this by-law is enforced? The general public has no way of knowing that the land surveyor they have known for years, is no longer entitled to practise. Such being the case, what is to prevent this land surveyor from carrying on his practise much in the way he has done.

My fourth complaint concerns persons unqualified to practise land surveying. This group is comprised of instrument men for the various government departments, engineering students, and others who somehow over the years have learned how to set up a transit or old surveyor's compass, and have gall enough to believe themselves competent to run property lines. These men are quite well known in their respective districts, but since they do not sign plans or receipts for their work, it is next to

impossible to obtain proof of their illicit practise. They only do the easy jobs, the cream of the crop so to speak; so the land surveyor with one of these men in his area finds himself saddled with all the time consuming jobs that have a low margin of profit. These men are more prevalent in the rural parts of the province where it is possible to become known without advertising. Since these men charge a much lower rate than the minimum scale of fees of the Association, the farmer who wants the back line of his woodlot run, is not going to pay seven dollars per hour to a Provincial Land Surveyor, when he can get it done for half that amount.

Here again I ask you to take a look at the Corporation des Arpenteurs-Geometres de la Province de Quebec, and I refer you to an article in **The Canadian Surveyor** of September, 1965, page 326-330, by Michel Sice, Q.L.S., in which he tells of this problem in his province and what is being done to resolve it.

Some say that we cannot afford to prosecute these people. Well then, why not charge higher annual dues, so that we will have more money. To say that we cannot afford more than ten dollars per year dues to a professional association is utterly ridiculous, when that amount can be obtained in fees for one and one-half hours of survey work. Even a labourer pays many times that amount to his union in the run of a year.

My fifth and final complaint for today concerns examinations the surveyor-in-training must sit in order to obtain a Certificate of Qualification. One has only to read Major Church's comments in the January, 1965 issue of the **Nova Scotian Surveyor** to get an indication of the lackadaisical manner in which these examinations have been prescribed in the past. Those of us who wrote four or five years ago have vivid memories of some of the trash that was masquerading then as examination questions.

I believe that it is high time that the standards of the Nova Scotian examinations were brought up to the equivalent of those of the central and western provinces. I have heard of an advertisement calling for land surveyors some time ago, that stimulated in fine print at the bottom that surveyors holding licenses east of the Quebec - New Brunswick border need not apply.

I suggest that you send to the Association of Ontario Land Surveyors for a set of their intermediate or final papers. These you will find are examinations worthy of the surveying profession.

I realize that the Association of Provincial Land Surveyors, at its beginning in 1952, was a great improvement over what had existed previously. After seeing the apathy of some of the present day members, I can imagine what a task it must have been to organize as you did. I am told of the arduous job of obtaining the present Provincial Land Surveyors Act, and that the original idea was to get something, no matter how bad, with the intention of amending it as the opportunity presented itself.

Well, fellow members, I believe that in view of some of the intolerable conditions that exist presently, that the time is now ripe; so I suggest that WE (and by this I do not mean just the little clique of a dozen or so, that appear to be the only members taking an active part in the Association) set about rectifying the matter.

It is my belief that not until conditions are changed will we function properly as a professional body. We cannot afford to procrastinate any longer or we will be unable to attract capable young men to the land surveying profession. It would appear that most of the younger members of the Association are already disenchanted, as witness the number that attended and took part in the Annual Meeting in November.

Think! Are you still entirely satisfied with this Association?

David C. Clark, P.L.S.  
Reg. No. 292

**ASSOCIATION OF PROVINCIAL LAND SURVEYORS OF NOVA SCOTIA  
FINANCIAL REPORT  
FOR PERIOD OCTOBER 1, 1965 T SEPTEMBER 30, 1966**

Bank Balance, October 1, 1965 .....	\$2,181.39	
Receipts .....	5,016.27	
Expenditures .....		\$5,045.69
Bank Balance, September 30, 1966 .....		2,151.97
	<i>Receipts</i>	\$7,197.66
		\$7,197.66

**DETAIL OF EXPENDITURE**

<b>Dues:</b>		
Arrears .....	\$ 495.75	
Current .....	1,806.60	
1967 .....	20.00	
Associate .....	10.00	
Fifteenth Annual Meeting .....	1,197.00	
Examination Fees .....	1,124.00	
Advertising in N. S. Surveyor .....	304.56	
Subscriptions to N. S. Surveyor .....	21.00	
Certificates .....	12.00	
Donation from Atlantic Air Survey .....	25.00	
Premium on U. S. Money Order .....	.36	
	\$5,016.27	\$5,016.27

**DETAILS OF EXPENDITURE**

Fifteenth Annual Meeting .....	\$1,904.36	
Postage and Stationary .....	224.44	
Council Meetings .....	114.69	
Stenographic Services .....	126.56	
Board of Examiners .....	1,251.77	
Honorarium to E. G. Hollingum .....	75.00	
Honorium to E. P. Rice .....	250.00	
Flowers .....	63.25	
Refunds .....	25.00	
Printing of N. S. Surveyor .....	619.18	
Delegates to Conventions .....	150.77	
Symposium .....	50.00	
Bank Charges .....	15.40	
N. S. F. Cheque .....	10.25	
Telegrams and Telephone Calls .....	14.02	
Printing Certificates .....	100.00	
C. I. S. Dues for Editor, N. S. Surveyor .....	10.00	
Solicitors Fees .....	25.00	
Atlantic Almanac .....	3.00	
Prize for Student at Survey School .....	13.00	
	\$5,045.69	\$5,045.69

Respectfully Submitted,  
E. P. Rice, P.L.S.  
Secretary-Treasurer.

Auditors: Joseph F. Archibald

Ernest Boehk



Cooksville, Ontario — A high performance computer called the DE-600 has been added to the Clary line of desk-size computers for use in laboratories and engineering offices. Applications include surveying, civil engineering, structural engineering, statistical analysis, electrical and electronic engineering, bio-medical research, medical laboratories, aerospace, chemical and petroleum engineering, and quality control.

Because of its low cost and mobility, the DE-600 can be made directly available to the engineer or researcher who has a problem to solve, thus enabling him to get answers quickly and maintain control over the problem-solving process.

The DE-600 combines the power of a computer with the operational simplicity of a calculator, to reduce problem solving times by factors of ten to twenty. The user solves his problems using familiar algebraic symbols, and enters numerical data directly on a simple 10-key keyboard. Answers are printed to a precision of 18 decimal digits on the DE-600's electric typewriter. Multi-step problems with decision-making functions are solved using plug-in program panels. While many users will avail themselves of Clary's ease of programming, an extensive library of programs permits many engineering and research problems to be solved without learning to program the computer. The program library available for use with the DE-600 includes general purpose mathematical routines, specialized programs for solving problems in the fields of civil and structural engineering, and specialized programs for solving statistical problems in the fields of quality control and research.

Hundreds of programs are available now for use with the DE-600. These programs have been service tested and proved with the DE-60, predecessor of the DE-600. Over 300 Clary DE-60's have been placed in service during the past four years. The DE-600 provides a three-fold increase in computing speed over the DE-60, employs a solid-state arithmetic unit and programmer, plugs into any standard electrical outlet, and does not require special cooling.

The Clary Corporation was founded in 1939 and has been manufacturing computers since 1956. Clary Corporation has over 350 employees engaged in computer and aerospace projects.

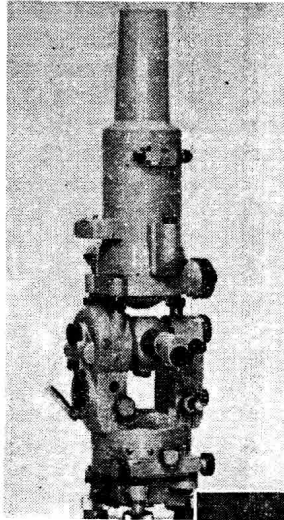
The Clary DE-600 Computer is one of a number of sophisticated lines of surveying equipment and supplies being distributed exclusively across Canada by a new Canadian Company, GEOTECH Equipment Limited. GEOTECH is headed by Keith Rosebrugh, well known to the surveying fraternity, and is affiliated with British Columbia Industries Limited of Vancouver. GEOTECH is located at 3216 Lenworth Drive, Cooksville, Ontario. Phone: 625-1271.

Please write for new catalogue and descriptive literature.





## MOM Precision Theodolites and Levels

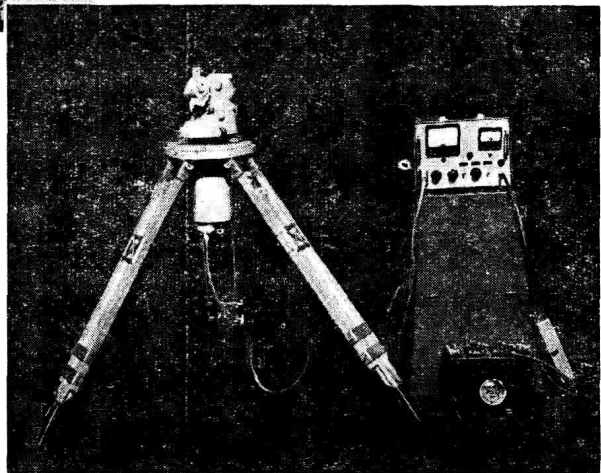


In addition to their well-known medium price range of Theodolites and Levels, MOM have now made available to Canada a very sophisticated Gyroscopic series, distributed exclusively by Geotech Equipment Limited and B. C. Industries. There are five new Gyroscopic models, varying in both scope and price.

The Gi-B2 incorporates a meridian indicator with automatic follow-up and is capable of establishing azimuth with a mean square error of 10" within only 25 minutes including set-up time.

At the other end of the range is the Gi-Di, a to a separate theodolite. In a period of only 10 to 12 minutes it will establish azimuth within light, general-purpose instrument for attachment plus or minus 1'.

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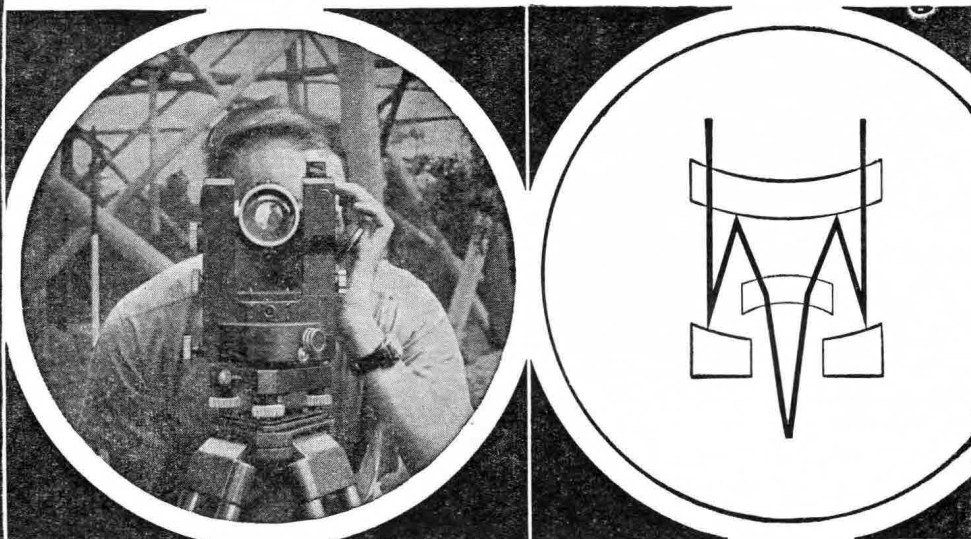
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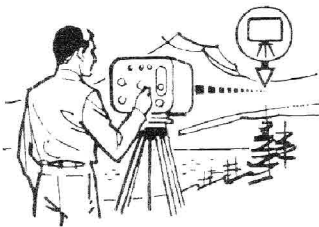
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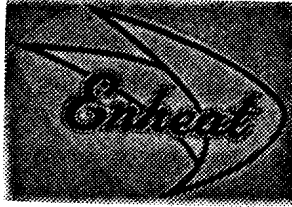


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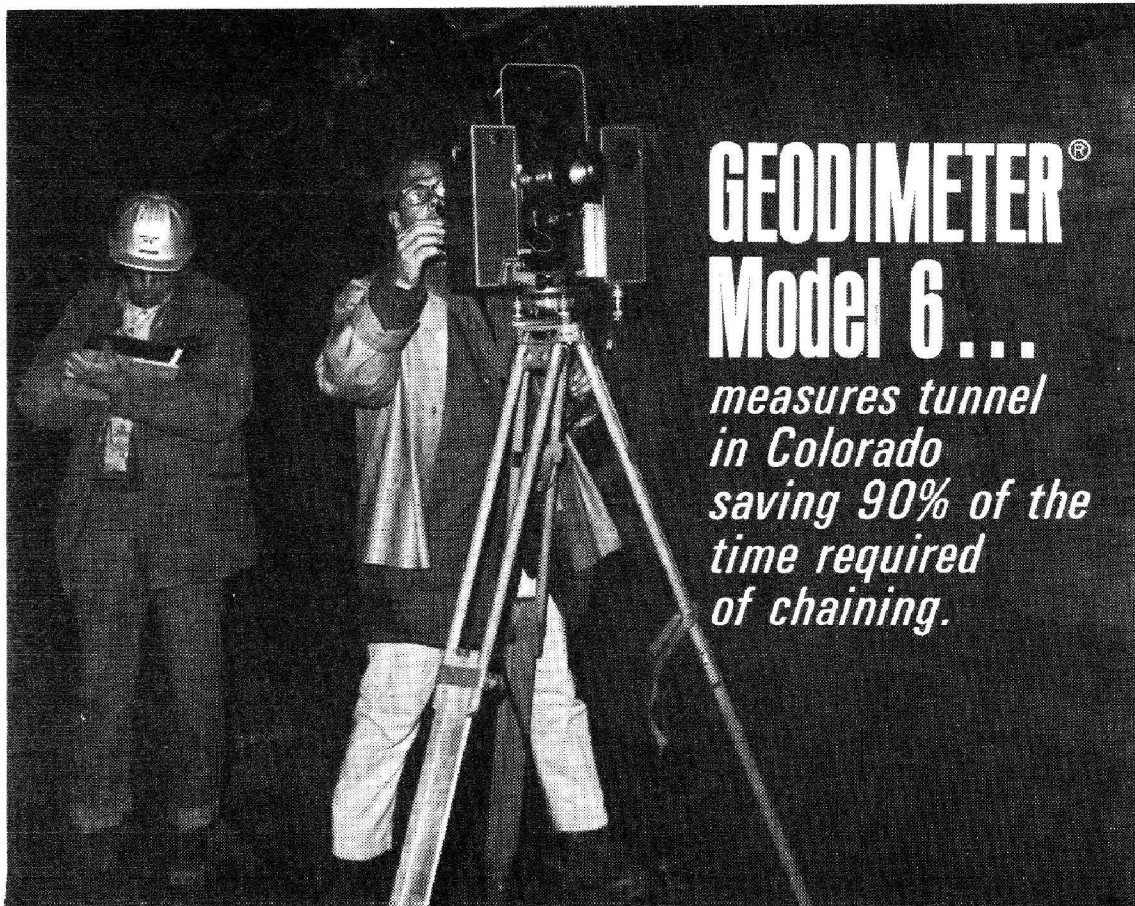
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Photo by R. C. Hopper, Resident Engineer, Colorado Department of Highways.

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