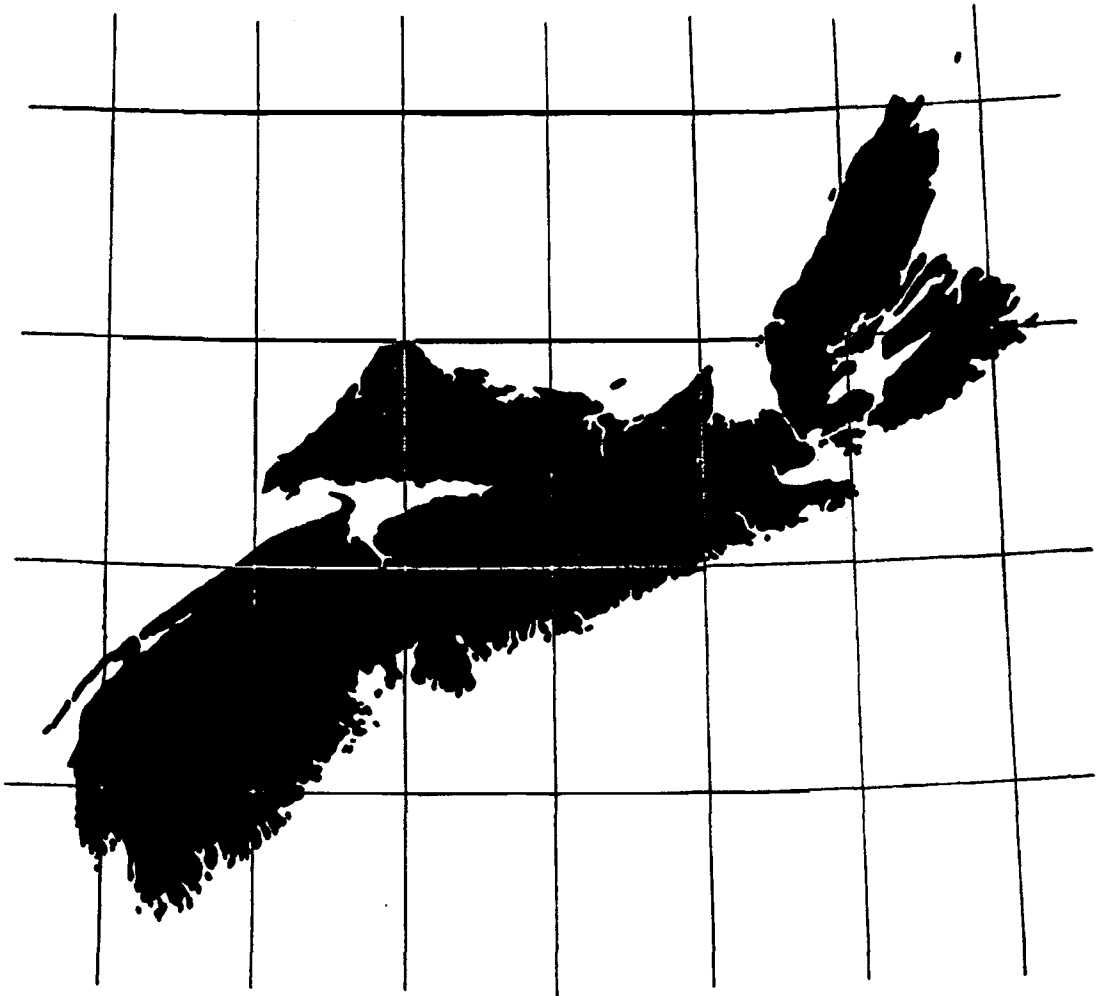


The NOVA SCOTIAN SURVEYOR



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

Founded 1951
Volume 16

R. E. Millard, P.L.S.
JANUARY, 1964

Incorporated 1955
Number 38

The NOVA SCOTIAN SURVEYOR

Published four times a year by

The Association of Provincial Land Surveyors of Nova Scotia Incorporated

J. F. ARCHIBALD
President

EDWARD P. RICE
Secretary-Treasurer

Volume 16

R. E. MILLARD
Editor

Number 38

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

An Editorial Observation

Gentlemen:

For your information the following remarks:

The Association of Provincial Land Surveyors of Nova Scotia is an association of men who hold certificates as land surveyors in Nova Scotia, which gives the holders the legal authority to determine the position and lengths of the various sides of a lot of land anywhere in Nova Scotia, if his services are requested by an owner or representative of an owner. There are people who say it is legal robbery, the Surveyor using a transit or compass, while the regular robber uses a pistol. Only you as a surveyor knows if this is even close to being right.

This Association was formed by land surveyors who were not satisfied to take and accept the statement that it could not be done, less than a baker's dozen took on the task of writing to each holder of a Land Surveyor Certificate listed in the Dept. of Lands and Forests Annual Report in 1948. Gradually enough surveyors answered and became interested in the formation of an Association of Nova Scotia Land Surveyors.

This original group met in whatever room that could be found provided that it did not cost us any money. We met in offices, classrooms at Tech and we were even permitted on a number of occasions to use the living room of one of our members, and, I often wonder if anyone thought to say "Thank You Sir".

As all members know or should know our Officers are elected in the following manner —

The members of Council in the various districts send recommendations to the Secretary in writing, at the next Council meeting these recommendations are reduced to the ballot form which each member receives before the Annual Meeting. The member then does one of three things for sure; he opens it and marks his choice as presented on the ballot; he can add his own recommendation if he chooses, even add his own name; or he throws it in the waste basket or just plain forgets about it.

The ballots returned to the Secretary, are opened by scrutineers named by the President on the morning of the annual meeting and they present the slate as arrived at by the total number of votes tabulated from the ballot sheet for the various offices.

There are those who feel they should be at the head of the table and steering the ship. This can also be done very easily in the following manner; try to help the association by offering your services. I can assure you, you won't go begging every time you ask. If you help the Association you will soon see what the Association has done for you and you may feel better.

You only get out of an effort, what you put into it.

PUSH DON'T PULL

13th Annual Meeting

of the Association of Provincial Land Surveyors of Nova Scotia.
Lord Nelson Hotel

November 8th and 9th, 1963 — Halifax, N. S.

SUBJECT

Remarks by the Editor

Members registered at meeting, 64.

Exhibitors at 13th Annual Meeting were: Hughes-Owens Ltd., Halifax Branch; Norman Wade Company Limited, Halifax Branch; Enamel and Heating Products Ltd., Amherst, N. S.; Department of Lands and Forests of Nova Scotia; Nova Scotia Historical Society, Halifax, N. S.

Guests attending 13th Annual Meeting:

Mr. E. A. Green, Supervisor of Provincial Vocational Schools, Halifax, N. S.

Col. G. E. Streb, Principal Nova Scotia Land Survey Institute, Lawrencetown, N. S.

Mr. Brenton V. Schofield, Farrington, Mass., U. S. A.

Mr. Larry Murdock, Regional Hydrographer, Bedford Institute of Oceanography, Dartmouth, N. S.

Mr. C. Y. Mersereau, Secretary-Treasurer, New Brunswick Land Surveyors.

Mr. Lester C. Higbee, Chairman of Board W. & L. E. Gurley, Troy, N. Y.

Dr. William English, Director, Bedford Institute of Oceanography, Dartmouth, N. S.

Through the courtesy of our exhibitors

An enjoyable cocktail party was held at 7.00 p.m. and I believe very well attended. I am not too sure, but!!

At 8.30 we sat down in congenial groups of eight and enjoyed the dinner placed before us, as well as the company of those around us.

Following the dinner a presentation of Honorary Life Memberships in the Association of Provincial Land Surveyors of Nova Scotia to H. W. I. Doane, P. Eng., John A. Fraser, T. W. I. Lynch and Fred E. Saltman were made though the above recipients were not present.

Also the climax of the meeting was the presentation of an Honorary Membership in the Association of Provincial Land Surveyors of Nova Scotia to your Editor. This was a surprise and to the Association all I can say is "Thank You" it is greatly appreciated.

After this, we left the tables and moved to another room where a band started up and soon Surveyors and their Surveyorettes were tripping the light fantastic, running trial lines and traverses with some amazing closures and little error in latitudes and departure.

On Saturday evening after the dinner and dance was over groups gathered in various rooms where new acquaintances were made and old ones unmade and many were the amazing tales told.

Many problems encountered since the last Annual Meeting were discussed and some solutions found. I wonder what answers would come if the problems were put to an I. B. M. Computer, who knows?

I think all will agree it was a good meeting throughout

WHITHER THE MEETING IN 1964?

President's Address

Thirteenth Annual Meeting, the Association of Provincial Land Surveyors of Nova Scotia, Lord Nelson Hotel, Halifax, N. S., Friday and Saturday, November 8-9, 1963.

It has become the custom of this organization that the President, at this time, give an account of his stewardship, and discuss and communicate with the membership, the forces and trends which are at work, and which will shape, to a large extent, the action which will be called for from this organization in the years which lie ahead.

The council of this association was very active during the year dealing with the day to day problems which normally come up as well as trying to the best of our ability to carry out that which was specifically requested at the last annual meeting.

Council meetings were held in November and December 1962 — March, June, September and November 1963. These meetings were well attended and in many instances caused a certain amount of personal sacrifice on the part of the councillors to be present. During the year I have had excellent co-operation from the council and would like at this time to publicly express my thanks for the time and effort which they have given.

At the last annual meeting we were instructed to "vigorously pursue the member in arrears." This we have done with I think fair results. You will be given a complete breakdown in the secretary's report.

The council came up against certain problems in our effort to collect one hundred percent of the dues or take the indicated drastic action with those who are delinquent. This in turn gives rise to further problems which it is expected can only be solved by new legislation. Our legislation committee has this and other problems in mind and are working towards the day when we can more effectively deal with members who are delinquent in their dues.

But we would not be fulfilling our function properly if we confined ourselves only to the mechanics of the association—such as collecting dues - holding meetings and so forth, as important as these may be. The question is sometimes heard, "What is the association doing for me," or "what am I getting out of this association?"

What has and is being done will be discussed thoroughly before this meeting will close. I believe the good that is derived from our close contact at meetings such as this with surveyors from different parts of the province and indeed all Canada, the U. S. A. and sometimes elsewhere is in itself justification enough for our efforts. However the role which I vision this organization will play in the future takes in a great deal more than this and will very intimately affect every surveyor in the Province.

There are great changes taking place about us in this province. This could be the beginning of an expansion and development that will carry us far. Along with this growth and development there is and will be a pressing demand for detailed and exact maps to assist the engineer - planner and economist etc.

The question arises as to whether we have at our disposal a system of survey which will satisfy the requirements of the future. A brief look into the history and pattern of surveying in this province will show that the system was probably adequate in the past. However in this age of rapid advance in the technological field we find that the surveyor can be supplied with instruments of the most advanced design, capable of producing the most exacting results. I believe the time is fast approaching when we surveyors will have to provide surveys to meet these requirements. A tried and proven system is available. I am referring to a co-ordinate system and I may add the handmaid to the co-ordinate system an improvement regarding the registration of

title to land. With this in mind we have made available copies of the "Lands Titles Act" which to many capable surveyors appears to have much to recommend it. It is hoped that a discussion on this act will take place.

Concerning a co-ordinate system we have been hearing on and off about its merits and demerits. We know the Province of New Brunswick has within the recent past instituted such a system and is already making use of its many benefits, even though its benefits are usually reckoned over the longer period. Would it be a worthwhile endeavour for our association to make a study of this system. Then, if such a study suggested that it would be of great benefit to the Province, I believe it would be a proper step for us to work towards its adoption. I believe it is inevitable that such a system will eventually be put into practice in this province and I also believe this association could make a big contribution towards the realization of this goal.

Concerning the survey requirements which it is anticipated will be required in the days to come, we can find very interesting and informative reading in the "Report on Municipal Boundaries" by W. D. Outhit, Q. C.

As mentioned previously we find survey instruments available which were not even heard of a few years ago. Should the need exist I believe it would be a proper endeavour of this organization to sponsor a course or courses for the members, in the use of instruments and other pertinent fields.

I would like at this time to mention the splendid work being done by Eric Millard, Editor of the N. S. Surveyor. This is the means more than any other whereby we maintain intimate and close contact with our members. The editor has been asking for contributions since the first edition appeared. There have been some excellent articles contributed and surely there are many more which could be contributed. It is a tribute to the editor that he has maintained such an excellent paper with so little help.

We have within our organization resourceful intelligent and experienced men who are capable of meeting the challenges which lie ahead. Let us work together to attain the goals which we all seek.

Technical Standards for Property Surveys

The American Congress on Surveying and Mapping has adopted the following set of Technical Standards for Property Surveys for the instruction and use of the members of the Congress and affiliates, and all others who have occasion to use them. The Congress hereby authorizes any changes, alterations, amendments, additions, or deletions, from time to time, as the occasion may arise, provided such variations are made with the consent and under the direction of the proper officers or committees of the Congress. These Standards may be segregated as to any or all parts, or revisions thereof, for particular use in any locality requiring them without necessitating any change of form or recommendation in other parts of the Standards required or used by other sections. It is understood that these Standards are recommendatory only, and not mandatory. It is the hope of the Congress that members will use their influence, sponsorship and recommendations in any proper capacity to promote the beneficial operation of such Standards.

Technical Standards for Property Surveys

EDITOR'S NOTE — The following set of Technical Standards for Property Surveys was devised by the Technical Division on Property Surveys of the American Congress on Surveying and Mapping. It was submitted to the membership of the Congress and adopted in the published form at the Sixth Annual Meeting of the Congress on June 28, 1946.

Slate of Officers 1964

President: J. F. Archibald, P. L. S. — 2 Faulkner St., Dartmouth, N. S.
Vice-President: Errol B. Hebb, P. L. S. — 15 Walnut St., Bridgewater, N. S.
Secretary-Treasurer: E. P. Rice, P. L. S. — 39 Edward Laurie Dr., Rockingham, N. S.

COUNCILLORS

Halifax City:

- * V. P. Harrison, P. L. S. — 951 Marlborough St., Halifax, N. S.
- ** Roy A. Dunbrack, P. L. S. — 52½ London St., Halifax, N. S.

Halifax County:

- * Robert Gough, P. L. S. — 18 Towerview Dr., Armdale, N. S.
- ** H. B. Robertson, P. L. S. — 27 Canary Cres., Rockingham, N. S.

Western Section of Province:

- ** J. F. Doig, P. L. S. — P. O. Box 44, Lawrencetown, Annapolis Co., N. S.

Eastern Section:

- * Melvyn H. Wadden, P. L. S. — R. R. No. 1, Riverton, Stellarton, N. S.
- ** William E. Chambers, P. L. S. — Park St., Westville, N. S.

Cape Breton Island:

- * Otto P. Rosinski, P. L. S. — P. O. Box 278, Port Hawkesbury, Inverness Co., N. S.
- ** Murray F. Cossitt, P. L. S. — 428 Atlantic St., Sydney, N. S.

Members at Large:

- * J. E. R. March, P. L. S. — 1690 Robie St., Halifax, N. S.
- ** Reginald E. Dickie, P. L. S. — P. O. Box 15, Brooklyn, Queens Co., N. S.

Past President:

- * J. Ronald Chisholm, P. L. S. — P. O. Box 737, Antigonish, N. S.
- * Term ends November 1964
- ** Term ends November 1965

New Committee Set-up:

Co-Ordinate System Committee: Chairman, J. E. R. March; Walter Servant, Major J. A. H. Church.

Discipline Committee:

Chairman, E. B. Hebb; J. E. R. March, Robert Gough, H. B. Robertson, Roy Dunbrack, V. P. Harrison, J. F. Doig, Murray Cossitt.

FINANCIAL REPORT

FOR PERIOD SEPTEMBER 30, 1962 TO SEPTEMBER 30, 1963

Bank Balance September 30, 1962	\$2044.67	
Receipts	4589.16	
Expenditures		\$4787.14
Bank Balance September 30, 1963		1846.69
	<hr/>	<hr/>
	\$6633.83	\$6633.83

DETAILS OF RECEIPTS

Annual dues for 1962 and 1963	\$2,131.95
Arrears in dues collected	280.00

Examination fees	1,119.35	
Advertisement in the Nova Scotian Surveyor	272.50	
Annual Meeting: — Registration	180.00	
Dinner	325.00	
Exhibitors	250.00	
Donations: — Major J. A. H. Church	10.00	
Mr. Peter Boutilier	20.00	
Interest36	
	\$4589.16	\$4,589.16

DETAIL OF EXPENDITURES

12th Annual Meeting	\$ 1443.33	
Examinations	1009.40	
Steno Services	244.89	
Printing of the Nova Scotian Surveyor	764.45	
Cost for holding Council Meetings	96.68	
Postage	110.15	
Delegates to Conventions	333.57	
Flowers (Wallace Betts and Mrs. MacGregor)	17.85	
Stationery	240.35	
Refund of Special Levy for 1963	35.00	
Honorarium	225.00	
Solicitor's Fees	75.00	
Certified Chain and Tape	113.87	
Major Church Prize	10.00	
CIS dues for the Editor of the Nova Scotian Surveyor	10.00	
Cheques returned N. S. F.	45.00	
Exchange deducted from cheques	12.60	
	\$ 4787.14	\$4,787.14

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

Auditors R. M. Schofield and Freeman Tupper

The Chronicles of Bill

EPISODE VI: THE UNWILLING PACKER

We were camped conveniently close to a small town that summer, and to conserve time for field work we always filled the gas tanks about 8.30 in the evenings, thus combining business with pleasure.

So it happened that one night we were seated in the beer parlour when the conversation swung around to bears. As is well known, every surveyor has had at least one adventure with bears, and all of us except Jack, our second year student, were knowledgeable on the subject. Jack, as usual, thirsted for knowledge and looked to Bill for the answers.

"If a bear came after you, would it do any good to climb a tree?" he asked.

"Son", Bill answered, "if you ever get close enough to a bear in the woods to see him the chances are you won't have any need to climb a tree — or any opportunity. The bear will climb the tree first, and pull it up after him, to get away from you."

"Do you mean that bears are afraid of people?" asked Jack incredulously.

"Well, let's say that bears are like other wild creatures: they are shy," replied

Bill. "Of course, there are exceptions, and you never can be sure. Some times a bear may tolerate the presence of a man, and may even seem to like him. Or again, a bear may decide that it is his duty to exterminate any creature, including a man, that crosses his path. But generally he avoids people and keeps pretty much to himself unless molested, and under average conditions a man in the woods is pretty safe as far as bears are concerned."

Bill stopped speaking, no one else appeared to have anything to contribute, and the subject of bears seemed about to be dropped, "If he lets this opportunity pass," murmured Sam through froth-covered lips, "I won't buy him another beer for a month." The next instant his fears were allayed.

"Ah yes, there are exceptions," said Bill. He had poised his glass six inches from his face and was gazing reminiscently into it. "You never know for sure what a bear will do, and some times it is just as well you don't know. For instance, take Trapper Tom Morin."

"Here we go." grinned Sam, much relieved. "He should just about make it by the time we finish this round."

Trapper Tom Morin liked bears (said Bill). At least, he liked one bear, a bear named Joe, and for good reason. Tom had found Joe in the woods, a helpless and motherless infant. He nursed him, fed him the few cans of tinned milk he had left from his last trip outside, followed with powdered milk, and raised him to adulthood in his cabin and on the trap line. Growing up in constant company of a man, Joe became no ordinary bear.

Tom's territory lay along the banks of a river that was fit for canoe travel over most of its length. There were a few portages, but mostly short ones, and Tom was able to make his summer rounds several times each season. The first summer, Joe travelled in the canoe with Tom, but thereafter he could not be trusted to handle his bulk safely in such a frail craft, and he had to walk.

Joe quickly got to know the route from portage to portage by land as well as Tom knew it by water, and he seemed to have no trouble in covering the distance as fast on foot as Tom did it by paddling. So it came about that Joe went with Tom on all his rounds, greeted him at each portage, made the several trips across the portage with him, and set off on foot for the next as soon as Tom pushed off in the canoe.

Now Tom was a resourceful man, as a trapper has to be, and pretty good at finding ways to save himself work. It occurred to him that there was no reason why Joe should not do some of the work on the portages, so he improvised a harness for Joe and made a pack bear out of him.

Joe made no objection to the packing, after he got over the initial puzzlement at the feel of the unfamiliar harness, and seemed to consider it a small price to pay, for cutting the usual three or more trips across a portage to one. He happily followed Tom and the canoe from water to water, looking more enormous than ever by reason of the skins, blanket roll, and other gear that Tom had loaded him with, and the partnership between man and bear was complete.

The longest portage in Tom's territory was near the middle of the main waterway, and Tom had sensibly built his cabin at the centre of this portage. This way he reduced one long carry somewhere in the middle of each round to two short ones, separated by the full length of the round. Joe soon formed the habit of waiting for Tom at the end of each trip and packing his share of the load over the last leg of the journey. At this point Tom was usually pretty well bushed from several weeks on the trail, and the sight of the familiar colossus waiting for him was always a welcome one.

It was at this portage that Joe finally did the unexpected thing that might have led to Tom's undoing.

Coming in to shore at dusk one May evening with a good load of furs and meat, weary from weeks of tramping the woods and paddling the loaded canoe, Tom grinned with real pleasure at the sight of a dark mound of fur under a tree a few yards back from the water's edge. Quickly he set about emptying the canoe and preparing for the portage, expecting at any time to feel the nudge of the big head and growing slightly puzzled at the lack of a welcome from Joe.

Ready at last to load Joe and himself for the trail, Tom turned and found the bear's bulk, growing indistinct in the gathering shadows, still in the same position.

"Found good fishing on the way, did you, you lazy loafer?" said Tom affectionately. "Too full now to shake it off and say hello, eh? Well, you'll have to do your sleepin' after we get to the cabin. Come on: up and at it." And Tom aimed a hefty kick at a broad hind quarter.

The bear lifted its head at last and growled. This surprised Tom, for Joe was not usually a talkative bear, but he accepted the growl as a tardy welcome and aimed another kick in an effort to get the beast on its feet so that he could adjust the pack saddle. This time he got a much greater surprise, for a backward sweep of a great furry paw sent him tumbling into the woods, unhurt, but speechless for a moment with astonishment.

Now Tom had lived among animals for many years, he had trained a number of them to become acceptable and manageable as pets, and he knew as much about their psychology as anyone would be likely to learn under such circumstances. Of one thing he was convinced: once let an animal get away with disobeying you and you will never again be his master. So Tom did not hesitate. Seizing a stout limb from the ground, he quickly trimmed it into a formidable club and advanced on the bear.

"You untanned overstuffed fur jacket," he roared, "get fresh with me again and I'll use your hide for a blanket and your fat to grease my moccasins," and he dealt the bear a clout on the head that left him as astonished as Tom had been and caused him to give a yelp of consternation and to stand swinging his muzzle from side to side in angry bewilderment.

Tom quickly set the load on the broad flat back and urged the bear up the darkening trail, guiding him with kicks and prods of his club when the unwilling beast seemed about to wander off into the woods. Arriving at last at the clearing, the bear at first headed for the cabin door, then stopped just outside as if considering whether to enter or not. In that moment Tom pulled the slip knot that released the pack. It was lucky he did so, for as the pack fell to the ground the bear set off into the woods as fast as he could run, while Tom stood staring after him, more surprised than ever.

Then the hair on the back of Tom's skull lifted and a chill sped down his spine, as a familiar nose pushed him playfully in the back and a familiar "Woof" greeted his ears.

It took a minute for Tom to realize what had happened, and when he did he was filled with wonderment at his own survival. Joe had indeed done the unexpected. Instead of waiting for Tom at the water's edge as usual, he had, for some mysterious reason of his own, gone on to the cabin. In the last half hour Tom had handled, cuffed, kicked, clouted, and otherwise mistreated a strange and completely untamed bear.

There was a long silence as Bill finished speaking. At last his listeners relaxed, raised their long untouched glasses and allowed the appreciative grins to appear. Jack was the first to speak.

"Bill," he said, "I figured you for a goshawful liar when you put that one about the monument over on me, and I see no reason to change that opinion now."

"What the surveying profession needs," said Bill into his beer, "is a new generation of student assistants. The present crop is getting too damn smart for its britches."

THE ASSOCIATION OF PROVINCIAL LAND SURVEYORS OF NOVA SCOTIA

Technical Standards For Property Surveys

Reprinted from *Surveying and Mapping*, July-Sept. 1946, Vol. VI, September 1948
Washington

1. LAND TITLES AND LOCATION

Every parcel of land whose boundaries are surveyed by a licensed surveyor should be made conformable with the record title boundaries of such land. The surveyor, prior to making such a survey, shall acquire all necessary data, including deeds, maps, certificates of title, centerline, and other boundary line locations in the vicinity. He shall compare and analyze all of the data obtained, and make the most nearly correct legal determination possible of the position of the boundaries of such parcel. He shall make a field survey, traversing and connecting all available monuments appropriate or necessary for the location, and co-ordinate the facts of such survey with the pre-determined analysis. Not until then shall the monuments marking the corners of such parcel be set, and such monuments shall be set in accordance with the full and most satisfactory analysis obtainable.

Any descriptions written for conveyance or other purpose, defining land boundaries, shall be complete and accurate from a title standpoint, providing definite and unequivocal identification of the lines or boundaries, and definite recitals as to use or rights to be created through such descriptions. Any form of description, regardless of presence or absence of any or all dimensions, but specifically tying to adjoining, which fulfills the foregoing conditions, is acceptable. However, such description, insofar as possible, in addition to all necessary ties to adjoining, should contain sufficient data of dimension, determined from accurate field survey, to enable the description to be completely platted. It is also advisable wherever correct surveys have determined the co-ordinate values of boundary corners or monuments recited in a description, to make proper reference thereto in the description by any appropriate recital.

Any surveys made for purposes other than location of land boundaries need only the ordinary information and data necessary to fix the situs of the work to be done, by one or more ties to some known and accepted title boundary line or corner, together with such data as may be required to tie the project into adjoining matters appurtenant.

II. MAPS

Every land survey requires a map properly drawn, to a convenient scale, showing all the information developed by the survey; also a proper caption, proper dimensions and bearings or angles, and references to all deeds and other matters of record pertinent to such survey, including monuments found and set.

If the survey is made for purposes other than land location, then the map should be conformable to the needs of the work authorized to be done, giving all the necessary information in conformity therewith.

Wherever provided by law or whenever necessary to perpetuate valuable evidence of land line locations, a map of the survey should be recorded in a public office in accordance with the provisions or permissions of the law in the particular state in which the survey is made.

Every map submitted to a client or presented as a public record must bear the name of the Licensed Surveyor responsible for the work, his official seal or license number, and the date.

III. COORDINATE SURVEYS AND BASE TRIANGULATION SYSTEMS

The use of the coordinate survey systems of the U. S. Coast and Geodetic Survey and the U. S. Geological Survey is to be encouraged in all states.

The establishment of secondary triangulation systems tied in and properly related to such coordinate systems is also recommended.

Wherever available, within reasonable distances, every land survey is to be connected with two or more monuments of the main or secondary triangulation system; and the maps of such survey shall show the correct verified coordinates of such monuments and of at least two of the monumented corners of such survey.

IV. MEASUREMENTS

Measurements shall be made with instruments capable of attaining the required accuracy for the particular problem involved. All tapes shall be calibrated to government standard for temperature and pull, and all measurements in the category of accuracy of 1 part in 10,000 or greater shall be made, taking into consideration such temperature and pull in the actual field work.

All transits shall be maintained in close adjustment and the projection of lines shall be made with the system of double centering or proper adjustments made to field readings by predetermined coefficient of error. All angles with a transit shall be determined by the continuous repetition or run-up method, dividing the sum total of the angles by the number of repetitions for the average value of the measured angle.

All leveling instruments shall be maintained in close adjustment, and the readings of elevations shall be made with equal foresights and backsights as nearly as practicable and/or proper adjustment made to field readings by predetermined coefficient of error.

The minimum accuracy of linear measurements between points shall be 1 part in 10,000 on all property lines of boundary or interior survey. Preliminary or reconnaissance surveys shall maintain an accuracy of not less than 1 part in 5,000, except in those cases where general information only is to be obtained and no precise monumented corners are to be created.

In a closed traverse the sum of the measured angles shall agree with the theoretical sum by a difference not greater than 5 seconds per angle, or the sum of the total angles shall not differ from the theoretical sum by more than 90 seconds, whichever is smaller.

A circuit of levels between precise bench marks or a circuit closed upon the initial bench mark shall not differ more than 0.02 foot multiplied by the square root of the number of miles in the circuit, and in no case to exceed 0.05 foot, except in levels for preliminary or rough stadia control, in which case the allowable error of closure may be 0.10 foot.

All field measurements must be balanced, both as to angles and distances, so that the dimensions shown on the map of such survey will be mathematically exact; this will permit the proper use of the prorate method in field relocation.

Bearings or angles on the map shall be given to the nearest 5 seconds; distances to the nearest hundredth foot.

Accuracy of measurement in triangulation dimensions shall conform with the standards set by the U. S. Coast and Geodetic Survey.

V. MONUMENTS

The type and position of monuments to be set on any survey shall be determined by the nature of the survey, the permanency required, the nature of the terrain and cadastral features involved, and the availability of material.

Monuments set in an inhabited area with improved streets, buildings, and other more or less permanent topographical features, shall be such as will remain for the life of such features and may be set in contact with or alongside of such semi-permanent structures with reasonable security. Monuments set in open country where maintenance is to be continued for long periods shall be of a material such as concrete, rock, or metal, of sufficient size that they will not be readily removable and will be easily discoverable; and witness monuments of ready visibility shall be placed alongside or nearby, if necessary.

Except in the case of original surveys, in which monuments are to be referred to in the record, permanent monuments shall not immediately be placed on lines or positions where their destruction is more or less immediately by reason of construction; but semi-permanent monuments, such as stakes, pipes, or other material, shall be set in protected spots at definite known distances from the true corners for the purpose of location of such corners after construction is completed. The surveyor shall make a definite commitment of record, that he will correctly set such true corners soon as their permanence in position can be assured.

VI. PLANNING AND DESIGN

No standard is set for planning and design of land line location as to the type and position of such lines. Each particular problem carries its own plan and its design within itself. A plan acceptable in one locality or under some conditions is not be adaptable in another.

How about this? Is it too much to give your client?

THE ASSOCIATION OF PROVINCIAL LAND SURVEYORS OF NOVA SCOTIA

Suggested Rates for Provincial Land Surveyors approved by the Association of Provincial Land Surveyors at the 13th Annual Meeting held in Halifax on the 9th Day of November, 1963

Suggested Rates to Apply to N. S. Land Surveyors:

(1) Day Rates:

Surveyor — \$40.00 per day (6 Hr.) or \$7.00 per hr. (\$20.00 min.) Each Assistant \$15.00 per day. Draftsman \$4.00 per hour.

(2) Subdivision Surveys, includes final Plans and proper monuments \$35.00 per lot, PLUS \$20.00 per acre.

(3) Reposting Lots previously Laid out: 1st Lot \$35.00 — \$15.00 for each additional contiguous lot.

(4) Mortgage and Builders Certificates: Residential \$25.00 1st lot. — \$15.00 each contiguous lot. — Duplicated \$2.50 each — Commercial Lots \$50.00. Note: This applies to lots with monuments in place otherwise day rates to apply.

(5) Descriptions — 4 boundaries or less \$7.00 each. ADD \$1.00 for each boundary over four OR if involved descriptions day rates to apply.

(6) Consultations, attendance at Court Cases, etc — \$7.00 per hour. Minimum \$25.00 per day.

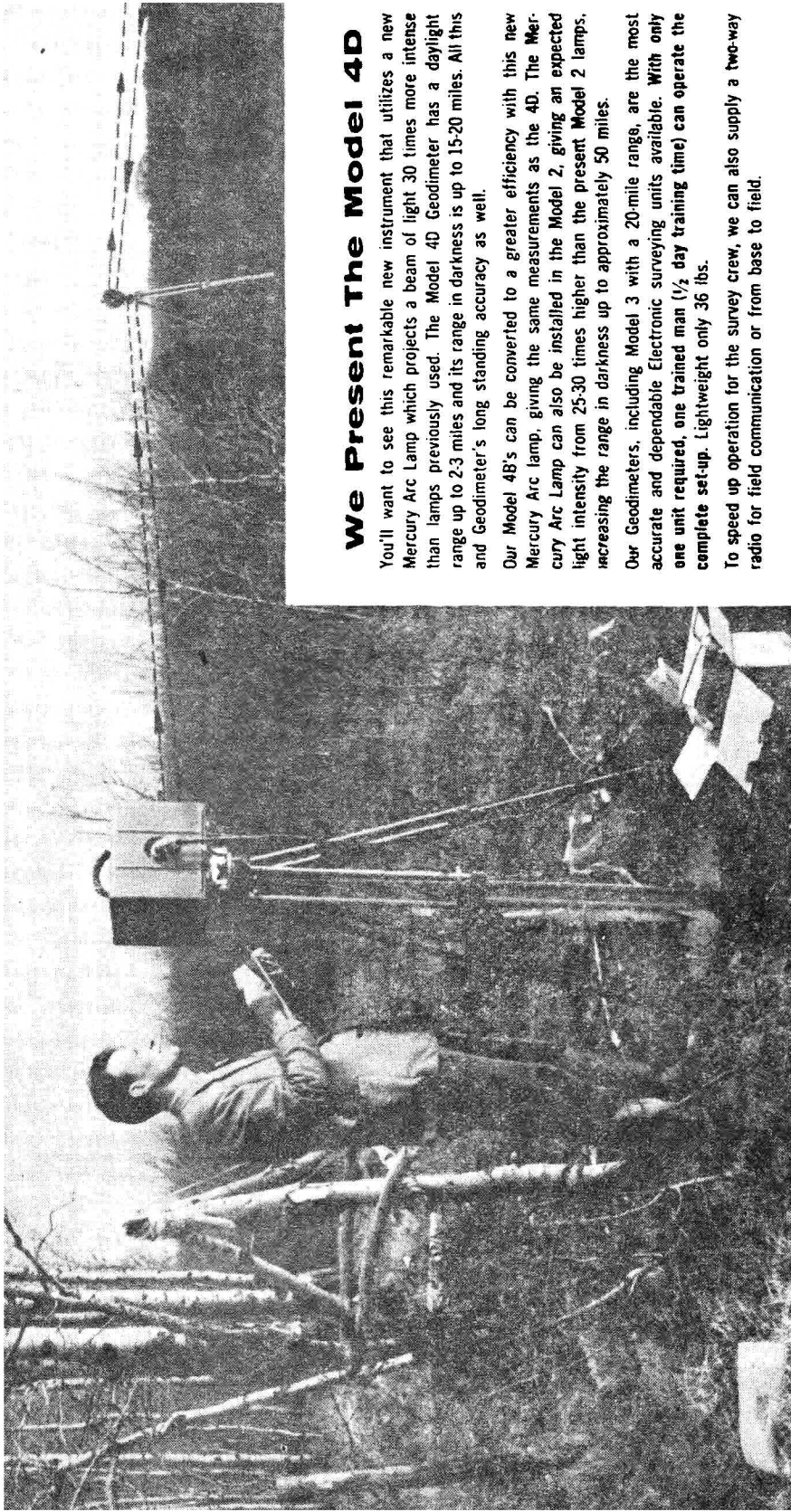
(7) Mileage — 12c per mile.

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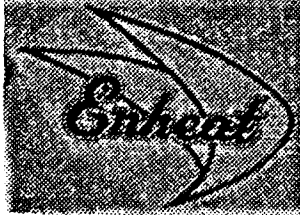
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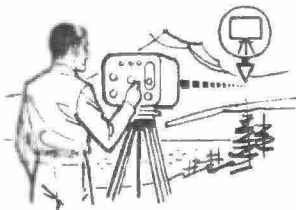
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