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Spring 2009

No. 185



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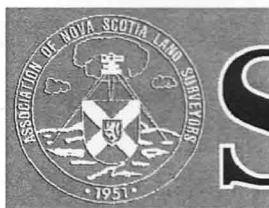
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The Association of Nova Scotia Land Surveyors, 325-A Prince Albert Road, Dartmouth, NS, B2Y 1N5 Canada.
Tel: (902) 469-7962 Fax: (902) 469-7963 E-mail: ansls@accesswave.ca

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PRESIDENT'S REPORT

Raymond Pottier, NSLS



It hardly feels like four months have already passed since our AGM in Halifax this past November when I began my term as President. It is a distinct honour to be able to serve the Association and to represent the membership in various capacities in Nova Scotia and across Canada.

If the first four months are any indication this year is going to be a very busy one. The current plan is for the Governance Committee to complete drafting the new Land Surveyors Act and associated Regulations for presentation at the 2009 AGM.

The Public Awareness Committee is planning to have our new web page ready for later in 2009. The Membership Committee has completed its mandate and is going to be dissolved this year. In fact this year we are hoping to complete all of the goals we set for ourselves in our Strategic Planning Initiative in 2004. At times it may seem that reaching our strategic goals from 2004 has

been a long time coming but I believe it will have been worth the wait.

With that in mind and while we still have some momentum we are going to refocus our strategic planning process and try to make it more responsive to our ever-changing priorities. I hope to make this an ongoing yearly process that will help keep us focused on our continually evolving profession.

We are moving forward with redefining the role of the Survey Review Department in response to the membership's direction. We are also addressing a number of other recommendations made in the management consultant's report which were discussed at the 2008 AGM including developing a Policy and Procedures Manual for the Association.

A Wetlands Committee has been formed to deal with a number of issues surrounding wetlands and water courses as well as the identification and delineation of these wetland areas and the requirement to show these areas on our survey plans.

I was advised by a wise past president of our Association that I should try to choose one task that I would like to get done during my time as President and thereby have a better chance of attaining my goal. Wise words indeed, so I chose the revitalization of our strategic planning process as my self-

imposed goal for this year. Since early November there have been so many issues of import to the Association which have come to the Council table that the importance of a renewed strategic planning process seems more important than ever.

On the national stage, the Agreement on Internal Trade (AIT) continues to be an issue for all regulated professions in Canada. The AIT was originally signed by all First Ministers in the mid 1990's and Chapter 7 of the agreement specifically addressed labour mobility barriers. At that time the CCLS helped broker a Mutual Recognition Agreement among all eleven land surveyor associations which has allowed surveyors to obtain a commission in another jurisdiction with some local requirements. Due to a continued existence of labour mobility barriers, Chapter 7 was recently amended so that after 1 April 2009, mutual recognition exists unless governments approve an exception. The Association has been meeting with the Nova Scotia Labour Mobility Coordinator to deal with this issue. The CCLS Labour Mobility Monitoring Committee has also been meeting regularly to monitor progress across the country.

More than ever the Association needs every member to engage in these important issues and lend your expertise to our deliberations. Stay tuned, this may turn out to be a very interesting year. ■

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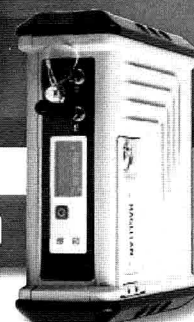
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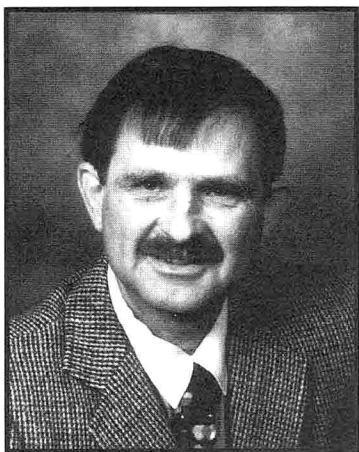
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EXECUTIVE DIRECTOR'S REPORT

F.C. Hutchinson, BA, NSLS, CLS



It has been a cruel winter, but then the older one gets it seems that the winters get worse every year. Spring is always welcome regardless if it is early or late. I have generally found that spring is the best time to find field evidence as a result of the winter snow having beaten down all the vegetation.

The surveying landscape in Canada is changing, as you may be aware. The Agreement on Internal Trade (AIT), in particular Chapter 7, was approved by the First Ministers on December 5, 2008. All affected professions and trades attended or were invited to attend a meeting on February 3, 2009, hosted by the province of Nova Scotia to spell out the changes to the Agreement.

The Association of Nova Scotia Land Surveyors is already a party to an agreement on labour mobility with our fellow survey associations through the Cana-

dian Council of Land Surveyors (CCLS). The existing agreement allows for a member from another province to make application and be subject to examination on local knowledge (mainly statute law) and a survey project with no articles or apprenticeship required. This agreement has been in place since 2001 and is available for viewing by visiting www.ccls-ccag.ca/mobility.htm#mutual-agreement.

Changes to Chapter 7 of the AIT basically eliminate the survey project with the minimum requirement being a single exam on local knowledge. This requirement still only applies to those individuals already holding a cadastral license in another jurisdiction in Canada. Chapter 7 also places responsibilities on the governing body of all professions and trades practicing in Canada to comply with the AIT. All entrance requirements must be completely transparent and publicly available. An appeal committee must also be available to any candidate who has been denied entrance by an existing examining board.

New students who do not hold a survey license are still required to article, obtain a CBEPS academic certificate, pass exams on local knowledge and do a survey project. In the past eight years, Nova Scotia has licensed three surveyors under the CCLS labour mobility agreement. I participated in two CCLS-spon-

sored conference calls in February and it is anticipated that the revisions to Chapter 7 under the AIT will not create any greater demand than has existed in the past. The full effects, however, remain to be seen but there are only about 3000, land surveyors in Canada with most being relatively settled in their home province.

I am pleased to report that the Association's "Annual Golf Classic" now has a wall plaque displaying the team winners since 2002 with room for 24 future winning teams. I would like to thank Gerry Bourbonniere, NSLS (Ret.), and Bob Daniels, NSLS, CLS, for their efforts in dealing with this project, with special thanks to Servant, Dunbrack, McKenzie & MacDonald Ltd. for providing the funding for it. The plaque will adorn one of the Association's office walls for some to envy and for others to gloat.

I would like to remind all that the 2009 AGM will be held at Digby Pines, October 22-24, 2009. Reservations can be made at any time by calling 1-800-667-4637 or 1-902-245-2511. Please state that it is the Association of Nova Scotia Land Surveyors' convention that you wish to attend. As with all conventions we try to increase our knowledge and have a good time while doing it. See you at the Pines!





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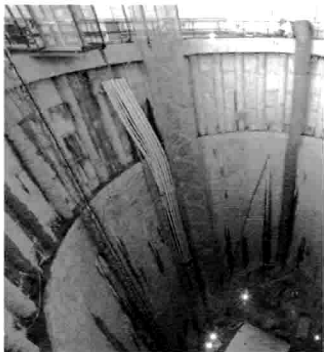
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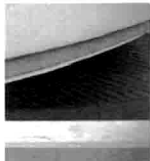
NOTES FROM THE SIDE OF THE ROAD



1. David Alexander, NSLS # 578 - resigned his commission as of January 1, 2009 after a 35-year career with Public Works & Government Services Canada.
2. Claude Bonnell, NSLS # 344 - moved to retired membership as of January 1, 2009 after many years with Natural Resources Canada.
3. Alexander (Sandy) Cameron, NSLS # 408 - resigned his commission as of January 1, 2009.
4. Peter Murray, NSLS # 456 - resigned his commission as of January 1, 2009 and presently resides on the southwest coast of Newfoundland.
5. Michael Peters, NSLS # 576 - resigned his commission as of January 1, 2009.
6. Thompson, Conn Ltd. - moved to their own building at 3597 Dutch Village Road, Halifax.
7. Edward Jeffery, NSLS # 580 - is now employed with the Halifax Water Commission.
8. Kent Carrick, NSLS # 356 - moved to West River Station, Pictou County.
9. Nick Dearman, NSLS #580 - is now employed with the Engineering Department of the Halifax Regional Municipality.
10. Allen Hunter, NSLS # 384 - is now employed with the Engineering Department of the Halifax Regional Municipality.
11. Derik DeWolfe, NSLS # 546 and Eric Morse, NSLS # 609 - now practise under the company name of DeWolfe and Morse Surveying Limited and are nearing completion of a new office building in Middleton.
12. Clive MacKeen, NSLS # 511 - recently received his Alberta Land Surveyor's commission and resides in Calgary, Alberta.
13. Darryl Spidle, NSLS # 419 - retired from Abitibowater of Liverpool and is presently under contract with his former employer to assist with property migrations under the land registration system.
14. Paul Zinck, NSLS # 445 - resigned his commission as of January 1, 2009 and also retired after a long career with the Halifax Regional Municipality and the former City of Dartmouth.
15. Gerry Bourbonniere NSLS, # 578 - moved to retired membership status as of January 1, 2009. He served the Association as manager of the Survey Review Department for most of the past decade and retired from the Halifax Regional Municipality in 1997 after a 30-year career that started with the City of Dartmouth.
16. Dan Gerard, NSLS # 619 - resigned from Council as a Zone 6 councillor.
17. Glenn Myra, NSLS # 584 - was appointed by Council as a Zone 6 councillor until elections at the fall Annual General meeting.



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A Question and Answer Session with Jeffery N. Lucas, PLS, Esq. Part 1 of 3

by Brian Portwood, PLS

RPLS.com Contributor

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Jeff Lucas is a professional land surveyor with over 30-years of experience and a licensed attorney. He writes a monthly column for P.O.B. magazine and has for the last four years. He has earned the respect of his fellow professionals through his many years of intensive and diligent study of the legal process for resolving property boundary issues, conflicts and disputes, with a special focus on the role of the professional land surveyor in that process. In this interview, he answers questions, posed by RPLS.com contributor Brian Portwood, relating to the legal foundation upon which his view of the land surveyor's role in society are based, and encourages surveyors to remain open to learning what the law has to say and how it can be applied in everyday practice.

Q: Is every licensed surveyor qualified to identify himself or herself as an "expert", simply on the basis that they are licensed?

A: Brian, first and foremost I want to thank you for the opportunity to address these questions in a forum that will reach many in the land surveying community (perhaps beyond). It is always a privilege to be able to talk to surveyors about the issues that affect us all. Whereas I do not confess to have all of the answers, I do believe that I can shed some light on some issues that continue to bother us and that are apparently troublesome to surveyors all across the country. The simple answer to your first question is that anybody the judge says is qualified—is qualified. This is due to the changes in the Rules of Evidence and the Rules of Civil Procedure that took place back in the 1980's. A non-licensed individual could conceivably be "qualified" by the court and give expert testimony on surveying matters. It's up to the opposing side to challenge the individual expert's credentials and qualifications to testify as an expert.

Q: Is the surveyor presumed to be an expert on measurement science only, or an expert on the broader subject of boundary location?

A: To clarify an important issue, when we are discussing "boundaries" let's be clear that we are discussing "property boundaries". If a boundary

dispute goes to court that will be the ultimate issue to be decided in the case. No other line really matters. Therefore, when you ask a question related to "boundary location" we are talking about the location of the property boundary between two coterminous landowners. With that in mind, my experience has been that judges and attorneys think we know boundaries. They know we deal with measurements, but until we prove differently they assume we are boundary experts. They actually hope that we are boundary experts, because an attorney who doesn't specialize in boundary disputes (and I haven't run into one who does) knows very little about the subject. As a typical matter, they just don't run into boundary disputes that often. It comes as a shock to attorneys in the case when a surveyor, through his actions and through his answers to deposition questions, shows ignorance of basic boundary law.

Q: If all surveyors are generally viewed and treated by the court as having equal expertise on boundary location, regardless of their specific personal knowledge of boundary law, what makes the expert testimony of the surveyor with minimal knowledge of the law any less likely to prevail in court, than that of a surveyor with advanced knowledge of the law?

A: This is a problem. Two surveyors, equally

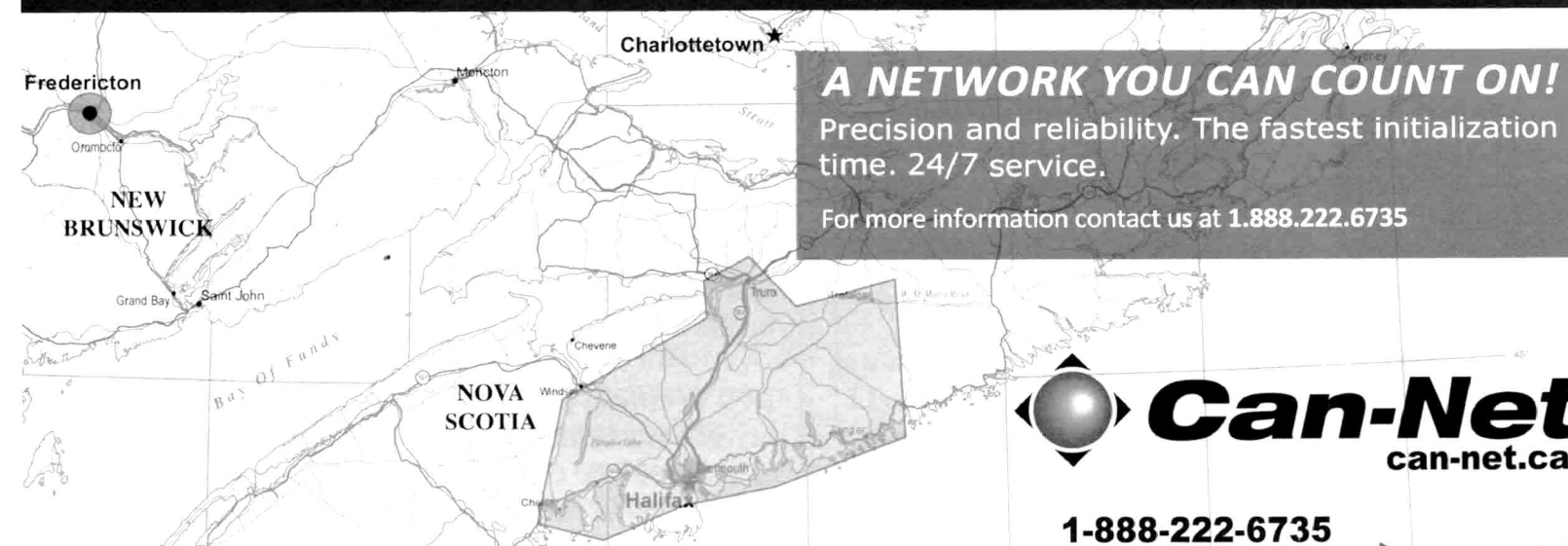
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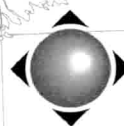
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Continued from page 8

clueless about boundary law (for example, what the BLM Manual actually says about “lost corners” and how the IBLA, Federal, and State Court cases support that position and do not want a corner considered “lost” except as a last resort) testify in court that the corner is lost when in actuality it is really obliterated, then most likely the Court will consider it lost. If nobody in the case (including the surveyors, attorneys and the judges) understands property law, some really bad decisions can be made adversely affecting property rights. Land surveyors are (and rightfully so) the first line of defense when it comes to people’s property rights. Being ignorant of basic property law and the associated rights clearly diminishes respect for the surveying profession. The lack of understanding (ignorance, if you will) of the surveyor(s) in court has to be brought out by opposing counsel. The problem here is the attorneys don’t know property law either, and if they do, they don’t know enough about surveying to be able to ask the right questions to demonstrate the surveyor’s lack of understanding. This is where attorneys really need to find and hire good consultants (knowledgeable surveyors) to teach them what they need to know.

A tool that has come to the aid of those attorneys, and could ultimately spell the undoing of land surveyors who completely ignore property rights and ignore the “ultimate issue” in the case (where is the property line between these two land owners), is Rule 704 of the Rules of Evidence. Basically, Rule 704 states that the expert is allowed to testify as to the “ultimate issue” in the case. Reversing that Rule in the attack mode, as opposing counsel I would “make” the surveyor give his opinion on the ultimate issue. This is where his ignorance of property law would be exposed. Rule 704 is underutilized by attorneys, but has completely changed the liability of the surveyor. Before the adoption of the Rules of Evidence, and Rule 704 in particular, the majority rule in this country was that survey experts could not testify as to the “ultimate issue” in the case. That was the prerogative of the jury. All the surveyor could do was to testify to “facts”: “I found a monument here and I found a monument there.” How much liability is there in that? In other words, prior to the 1980’s two surveyors came into court, one said the monuments

were here the other said the monuments were there. They walk out of court unscathed. Today, the question is not: “Where do you find the monuments?” The question is: “Where is the boundary line?” One surveyor says it’s here the other says it’s there. Now one surveyor is right and the other surveyor is wrong. Now just imagine being a surveyor completely ignorant of property rights and focused only on staking his client’s deed, your client initiated the litigation based on the weakness of your survey, the client has spent \$250,000 litigating the case, the client loses the case, and your survey is judged to be “wrong.” Do you want to be that surveyor? I don’t!

Q: Most, if not all, states stipulate, typically in their code of ethical conduct, that no professional may perform services outside his or her range of personal expertise. How does this rule apply to licensed surveyors?

A: No ethical rules apply to anyone who isn’t willing to be bound by them. Looking back over a 32 year career in surveying, and having the advantage of examining that career through my lawyer “looking glass,” I can see now that I wasn’t qualified to deal with property boundaries in the early part of my career. Just because you have a license to survey, doesn’t mean you are qualified to deal with property boundaries. I now advocate that we should have an enhanced license (possibly along the lines of the new CFedS program that the BLM and ACSM sponsor) for those surveyors who deal with private property boundaries. As it stands, this is an individual choice, left up to the judgment of the individual licensee, as to whether one feels competent to deal with property boundaries. The problem with the status quo is that it’s what you don’t know that leads to trouble, not only for the licensee, but more importantly for the affected landowners.

Q: You have been critical of some of the most revered survey texts, where would you recommend that the surveyor seeking advanced knowledge of boundary resolution focus their study?

A: I’m critical of these texts because they are revered and held up by many surveyors as something just short of the Gospel. My hope would be that the authors would take a look at the shortcomings in

these texts and rectify the situation. Even if they attempt to do so, my feeling is they are fatally flawed. Although these were probably very good texts when they were first put to print (30 plus years ago), the law has moved on and they aren't keeping up. Another problem with them is they are written for a national audience on subject matter that is state specific. It is true, property law is about as generic and homogenized as the law can get. Even so, acquiescence is recognized in some jurisdictions, but not all. Only 30 of our 50 states fall under the PLSS. About 22 states have some form of the Marketable Record Title Act (MRTA) the rest don't. The list goes on and on. I get asked this question every time I give a seminar. So I finally decided to do something about it. At the risk of sounding self-serving, as I write this answer I am in the process of submitting proposals to every surveying society we can find in the country, to prepare a state specific law "handbook" for surveyors in their state. The only other way to do it is to do the digging yourself. There is no shortcut to finding, assembling and digesting the law in your particular jurisdiction.

Q: The typical surveyor is not a lawyer of course, and may even be entirely unaware of certain legal principles and their potential impact on survey work. Why is it important or beneficial for land surveyors to develop a deeper understanding of the law, beyond the relatively few fundamental surveying principles they are typically trained to religiously follow?

A: One of the current misconceptions permeating the entire surveying community is that the law is for judges and lawyers, not for surveyors. That somehow we operate in a vacuum and as long as we stick to our "rules of surveying," we're going to be just fine. The only reason our "rules of surveying" have any validity is that at some point in time, the rule followed the law and/or some principle of equity. When the rule ceases to follow the law and equity, it ceases to be a valid rule. Blind adherence and outright misapplication of these rules is one of the major issues I see in case after case involving land surveyors. In this litigious society that we find ourselves in, what you don't know can certainly harm you. There is only one way to be cognizant of the laws that affect us as land surveyors, we have to put in some effort. That's the bad news, but the good

news is that it isn't rocket science. If some of the people that I went to law school with were able to pass the bar, there is not a surveyor that I have ever met who can't get a very good handle on the law that most affects our practice (i.e. property law, contracts, torts, remedies, and civil procedure).

Q: If the surveyor recognizes that his or her legal knowledge may be insufficient, is it reasonable for them to accept boundary work anyway and develop their own expertise through experience and communication with other professional surveyors?

A: If a surveyor accepts an assignment and gets in over his head, he or she should not be shy about associating themselves with other surveyors or consultants with more expertise. The lawyers do this all of the time. If they get involved in a complicated case, they call in other attorneys with more experience or experts to help them. Of course, they have these contingencies written into their contracts. It just requires a different way of thinking than the way we've always done it. In my opinion, many surveyors are still operating in a 1950's, 1960's and 1970's mind set. This isn't Mayberry and things are not black and white. It's the 21st century and it's in high-def-Technicolor. ☒

From the Naked Mind of George Carlin

Seen at <http://www.phoenix5.org/humor/Carlin.html>

1. *Why do they lock gas station bathrooms? Are they afraid someone will clean them?*
2. *Is there another word for synonym?*
3. *What do you do when you see an endangered animal eating an endangered plant?*
4. *If you try to fail, and succeed, which have you done?*
5. *If the police attest a mime, do they tell him he has the right to remain silent?* ☒

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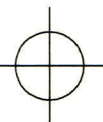
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The Invisible Mapmaker: William MacKay

by Walter Z. Morrison



Walter Morrison at William MacKay's gravesite

The beginning of this account of William MacKay goes back to 1974, when a cartography student at the Nova Scotia Land Survey Institute brought a large rolled manuscript map to class. It was starting to flake off the linen backing, had been slightly burned on one edge, was covered with dirt and spotted with candle wax.

The roll had been stored in a contractor's garage loft after a remodelling job – saved because of a prominent “Annapolis County” lettered across it. At first glance, the drawing appeared quite modern, as it was on ¼-inch graph paper, supposedly a development of the late nineteenth century. But a second look disclosed that “Annapolis County” included what is now Digby County and that the village across the river from Annapolis Royal was called “New Caledonia”, a name which persisted until the 1860's,¹ then was changed to Granville Ferry.²

The Spicer family of Paradise donated the map to the Nova Scotia Land Survey Institute, but nothing was done with it until the Institute moved to a new building in 1975, because the 7-foot x 14-foot map had a disconcerting way of shedding pieces every time it was unrolled. A winter's work stabilized the map and saw it mounted on stretchers in the library.

It became apparent that the display would have to be augmented by an explanation. All the information available was an inked, “William MacKay” in one corner and under that, “(1 inch equals) 40 chains”. Perhaps here it should be mentioned that a chain is 66 feet, so a scale of 1 inch to 40 chains is the same as 1 inch = ½ mile. For comparison, our present 1/50,000 topographic sheets are on a scale of 1 inch to just over ¾ of a mile. MacKay's map of Annapolis County is half again larger.

Who William MacKay was, where he came from, or

where he continued his career, were mysteries. There was no mention of him in *Men and Meridians*³, no knowledge of him as a surveyor among the records at the provincial Department of Lands and Forest or the Crown Lands Office, and no one had ever heard of him at either the Public Archives in Halifax or the Hector Centre in Pictou. The first solid fact was discovered in Appendix C of Patterson's *A History of the County of Pictou*. The list of passengers on the *Hector*, 1773, named the children of Squire William MacKay and mentioned a grandson: “William MacKay, the surveyor, was the author of a map of Nova Scotia, published in London, which has supplied information for all mapmakers since”.⁴

Still, this did not explain the large Annapolis map. It was not until a search of the *Journals* of the House of Assembly was made in the Legislative Library in Halifax, that an account of an entire lost survey unfolded and a new chapter was added to the history of surveying and mapping in our province. The descriptions in these reports shows that the large map on the library wall at the Land Survey Institute is a survivor, possibly the only one still in existence, of William MacKay's first reduction from “The Great Map”.

“Compiled from Actual and Recent Surveys, ...” is a cartographic cliché usually given as much credence as a used-car dealer's description, “... driven by a little old lady only on Sundays”. Yet, that phrase is a completely accurate description of William MacKay's *Map of the Province of Nova Scotia ... published July 10, 1834*, because this was the first printed map of the whole interior of this province to be compiled from actual surveys. Curiously, although a monumental and unique work, it had little influence on contemporary maps, or, indeed, on the subsequent professional life of its author; this, then, is what prompts the title of this paper, “The Invisible Map Maker”.

The map printed in 1834 was the end product of an ambitious, five-year project initiated by Nova Scotia's Legislative Assembly and carried out by a committee of that body, not, as might be expected, by the surveyor-general, Charles Morris. Proposals for a complete survey of the whole province started in 1820 with the Earl of Dalhousie's message to the House of Assembly, on 10

February, lamenting that "... the Want of an accurate Survey of the Province has been long felt as a very serious inconvenience..."⁵ A committee was formed and reports made, but Dalhousie later wrote, "... it was with great surprise and mortification I observed ... that one part of the leading measures which I had submitted to the House has been altogether passed over; I mean the survey of the Province".⁶

Dalhousie's successor, Sir James Kempt, felt compelled to raise the subject again in his message to the House on 28 December 1820:"... there appears to be an urgent necessity for making, if possible, an accurate Survey of the Province. ..." He then expanded on the subject:

Considering the great extent of Wilderness land in the Country, and the means we possess, it will be found impossible, I fear, to make a trigonometrical Survey of the Province. A more prudent and practical plan will be to name so many Townships to each County, to fix the limits of each Township by actual survey, and the limits of the Townships in each County ...⁷

From 1820 to 1827, there was much activity; the Assembly *Journals* are full of reports that were made, committees formed, bills passed and communications written. No tangible results were produced, although Surveyor-General Morris reported:

I employed Anthony Lockwood, Esq. to assist me in compiling and connecting the several detached Surveys of the Province, into one general Map ..., the outline or external limits of which, on the South Shore of the Province, taken from the accurate Surveys of the Coast, by that able and celebrated Surveyor T.[sic]F.W. Desbarres, Esq. which, as far as respects the Navigable Harbours, Bays, and Indents of the Coast, have stood the test of minute examination, and excited the admiration, of all experienced Mariners who have visited these shores.⁸

In April 1827, a committee was appointed "... to cause to be provided [maps] ... The said Maps to be constructed under the direction of the Surveyor-General ..." ⁹ But in March 1828, the House Map Committee took over direct supervision:

... resolved ... a map of the Province, on the scale recommended by the committee, be prepared from the plans and surveys heretofore made under the sanction of the House, and that all Roads and Lines, with the distances, be accurately laid down thereon. That the Map be constructed, under the direction of the

Committee, by such person or persons as they shall appoint; and also, that from the general map, when constructed, Maps of each County and District be prepared and copies, and mounted in a proper manner for preservation.¹⁰

Even before the staff was hired, planning had commenced; in the Assembly *Journal*, 14 March 1828, is the following:

Mr. Fairbanks reported ... it appeared necessary to provide suitable Paper properly prepared, so as to insure correctness in laying down the various Surveys that have been made throughout the Province, and to form as it were a correct outline of a General Map thereof.

The Chairman therefore caused a plate for printing suitable paper for this purpose to be engraved in England. This has been done with all possible exactness, and a quantity of Paper printed from it has been received for the construction of the Maps. In order to complete the Maps in a correct and proper manner, the Committee consider it to be necessary, that a competent Person should be employed to take up the different surveys, and protract them to a scale of Twenty chains to the Inch, on the paper thus provided, and, using the different lines of the Counties and Roads as Base Lines, to proceed as far as correct Surveys admit, to execute an Outline of the whole Province, with the Lines of Counties, Towns, and Roads, with Lakes and Streams, and other objects usually inserted on Maps; this work requires a careful and attentive Surveyor, and ought to be commenced as soon as possible. From this outline, when finished, the County maps can be copied with facility by means of the Paper prepared for it, and all additions can be inserted thereon as future Surveys are returned. The Committee have made enquiry as to the expense of a Surveyor to do this work, and believe a Person, every way competent can be procured for Ten Shillings per Day.

The Committee beg further leave to state, that as their [sic] exists no Map of the Province of a portable size for general use and reference, it will be highly useful to cause one to be prepared under the direction of the Committee, and engraved; they ... are satisfied the sum of Fifty Pounds will defray the whole expense.¹¹

Later, in the *Journals* for 1830-33, is a report on the first two years of the provincial map project:

Continued on page 18

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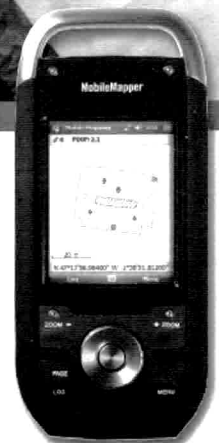
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Continued from page 16

... in May 1828, the construction of the Maps was commenced under the inspection of the Chairman of the Committee, Mr. Fairbanks, by whom a surveyor, Mr. William MacKay, of whose competency and ability he speaks in high terms, was employed for the work, Mr. Charles Morris, Junior, was also employed as an assistant sometime afterwards – Mr. MacKay has been ever since and still is engaged in this employment, and Mr. Morris has devoted his time chiefly to it.

... the Committee have examined the progress made, and find that with the aid of the surveys previously obtained for the County lines and roads, and those made under the direction of the Committee, the outlines of the whole Province, (Cumberland and Cape Breton excepted which have not been surveyed) have been laid down on a large scale – with all the boundary lines of Townships and Counties, so far as they are settled, and with the Roads, Rivers, Lakes &c. of which any Surveys have been made.

That the scale used is that of twenty chains to the inch, by the adoption of which, and by the employment of the same person and the same instruments to lay down all the Surveys from the Original Notes, a degree of accuracy has been obtained, which could hardly have been anticipated, and only inferior to the results of a Trigonometrical admeasurement, which for a long period will be impractical here.¹²

In the first three years of the project, 1827, 1828 and 1829, many gaps were discovered and separate surveys were commissioned to a total of over £329. That these were a series of small jobs to plug up the gaps, is evidenced by just one report, titled “Extracts of surveying costs, acc’t of C.R. Fairbanks”, which lists nineteen surveys for Hants County alone, ranging from £3 to £40 over a period of fifteen months.¹³

Finally, to sum up the whole project, a Report read to the House on Saturday, 13 April 1833, noted:

That there have been constructed ... by the Draughtsman employed, Mr. William MacKay, the following Maps, viz:
First, – a general Map of the whole Province of Nova Scotia Proper upon thick paper, laid down by the scale of Twenty chains to the Inch.
Second, – A Map of each County and District, Cape Breton excepted, laid down by the scale of Forty Chains to the Inch.

Third, – A Map of each County and District, laid down by the scale of Sixty Chains to the Inch.

Fourth, – A Map of the whole Province laid down by the scale of One Hundred and Sixty Chains to the Inch, being the same now in the House of Assembly.

... Maps having each been reduced from the large original, many of the sources of error in former Maps have been avoided, and every degree of accuracy secured which is practical from ordinary surveys.¹⁴

In the 1830 Report, the “Plan of the Province”, meaning the first map in the above list, was described as being on “strong pasteboard ... divided into proportionate squares”;¹⁵ thus, the printed paper from the specially-made copperplate from London was reserved solely for the reductions. Each 20-inch x 30-inch piece of pasteboard was pencilled off into two-inch squares and details from separate surveys were fitted to these squares. These sheets were then mounted on linen backing in groups of from two to as many as six, without any system for the number of sheets per flat or for numbering the flats. In the Public Archives of Nova Scotia, 110 of these flats are preserved, covering all the province except for Cumberland County and Cape Breton Island. There are no borders and the detail is continuous from flat to flat. If laid out continuously, the whole map would occupy a space of approximately 60 feet x 90 feet – and that doesn’t include Cape Breton.

One interesting flat, which probably comes closest to the ideals set by the Committee but seldom achieved, is that for Horton District.¹⁶ The crudity of the drawing is immediately striking, but these were working plots only, or what we would call today – using the current buzzword – a database for later maps. Distances from Halifax are shown by Roman numerals, the town area of Cornwallis (present Port Williams) appears at the northern edge, and township lots are numbered. In contrast, most of the other flats show only roads, drainage, major grants and public buildings. The first reductions from “The Great Map” were on the imported graph paper and fair-drawn, as this was work to be exhibited to the public.

For some years these flats were stored in the basement of the old Archives building, bundled in brown-paper wrappings, separated by county and labelled simply, “Survey Drawings”. After the description of “The Great Map” turned up, Gary Shutlak, map archivist at the Public Archives, made a search and discovered some bundles marked “Sydney County” (present-day Antigonish and Guysborough Counties). The contents fitted “The Great Map” description. Gradually, all the rest of the mainland counties were found, except for Cumberland and some

stray sheets, unfortunately in key areas such as Halifax, Shelburne, Preston and the central Annapolis Valley.

Once MacKay's existence in Halifax had been established, it was a simple task to consult pertinent records at the Public Archives to piece together the following biographical data. William MacKay was born ca. 1789 and was the son of Donald MacKay, settler of Fraser's Mountain above New Glasgow; and as already stated, the grandson of Squire William MacKay, one of the founders of Pictou County. An uncle by marriage was Willie ("the Moose") Fraser,¹⁷ a deputy-surveyor for the Pictou District and a Scottish-born-and-trained land surveyor who may have influenced MacKay's early survey work, such as a rather crude manuscript "Plan of the Road from fisher's grant [*sic*] to the upper Settlement of the East River of Pictou ... June 18th 1820."¹⁸

A court case, Fraser vs. Cameron, 1854,¹⁹ refers to a MacKay survey of lots in New Glasgow (one of which was his own) some thirty years before, so we know he was active in surveying as well as mapping during the 1820s; but as he was then about thirty years old, we must assume he had practiced earlier than that, although no record has so far been uncovered. The same court case mentions that MacKay left the country 25 years before the trial. "Leaving the country" consisted of moving in 1827 from New Glasgow to Halifax, where he was employed in surveying and drawing plans for the Shubenacadie Canal Company.²⁰ Employment by the Canal Company proved fortunate for MacKay, since the secretary of that enterprise, C.R. Fairbanks, was also an MLA for Halifax and chairman of the Map Committee of the Legislature.²¹

Thus in May 1828, MacKay started work on the construction of maps. One of the first to be produced was described as "... a Portable Map, for general information, (History of Nova Scotia)."²² There can be little doubt that this is the map accompanying Thomas C. Haliburton's *An Historical and Statistical Account of Nova Scotia* (1829), because: a.) It was the only map of Nova Scotia published at that time;²³ b.) Volume 1, where the map is located, is subtitled *History of Nova Scotia*; and c.) Haliburton was a member of the Map Committee.²⁴ Incidentally, the House, not the author, paid the £50 for the map.

Ironically, because of the wide circulation of Haliburton's *History* and the limited distribution of MacKay's later, 1834 *Map of Nova Scotia*, basic errors in the earlier map were perpetuated for three more decades. This 1829 map was to a large extent traced from existing contemporary maps, none of which were particularly accurate; primarily Prince Edward Island was misplaced longitudinally and

the Cape Breton Highlands were too narrow east/west.²⁵

Dr. W.F. Ganong attributes John Purdy's *Cabotia* (a map first published in London, 1814, and subsequently in 1821, 1825 and 1828²⁶) as the source of the Haliburton map,²⁷ but he may not have been aware of J.G. Toler's 1819 *Nova Scotia*,²⁸ printed from a plate engraved by Halifax's Charles W. Torbett, or the similarity to James Wyld's 1825 effort.²⁹ All may have stemmed from a Toler manuscript sent to England from Halifax by his army employers in 1812.³⁰ The Toler manuscript's scale was eight miles to the inch, strikingly similar in size and detail to Purdy's and Wyld's.

MacKay's 1834 map, although really derived from "Actual and Recent Surveys", received scant attention from the influential English mapmakers such as John Arrowsmith, because the distribution of "The Great Map" reduction was very limited. One hundred and twenty-five were spread around officially in Nova Scotia, but only nine others to the government in Great Britain; the rest were sold by Clement Belcher in Halifax (who had arranged for the engraving and printing), by Robert Scholey in London, and by Oliver & Boyd in Edinburgh.

These statistics are recorded in the Assembly *Journals* for 1836, although the initial report was submitted in December 1834.³¹ Incidentally, the same report records £5 for "... repairing and rebinding a set of Desbarres' charts, used for construction of Maps"; thus we know from whence came the coastlines on "The Great Map". DesBarres's coastlines were plane-table surveys and equal in accuracy to the land surveys of the day.

After producing such an impressive, copperplate-engraved map – on which one of the larger lines notes "By William MacKay" – one would rather naturally expect the author to build on his success and go on to bigger and better projects. But MacKay went back to drawing plans, surveying for the Shubenacadie Canal Company and working until nearly the end of his life as a deputy-surveyor for Halifax County.³² He did write a book about surveying, which was reviewed by fellow deputy-surveyor Titus Smith in the *Acadian Recorder*, 3 September 1836; but nothing seems to have come of it and no record has been found of the book's existence. MacKay's only other printed map with his credit line is *The Plan of the City of Halifax, Nova Scotia*, lithographed by Thayer & Co., in Boston ca. 1842.³³

Gary Shutlak has narrowed down the time of MacKay's death through discovery of a reference to "the late William MacKay" in the first *Report* of the Hospital for

the Insane, 1859; MacKay was cited for helping the Commissioners, not as an inmate. With this evidence, a survey of newspapers of that period turned up MacKay's death as occurring on 8 July 1858.³⁴ The Camp Hill Cemetery deed index, Halifax, shows that he was buried there, although no monument was erected and no other person was interred in the grave. The Canadian Institute of Surveyors rectified the lack of a monument in July 1983, on the 125th anniversary of MacKay's death.

Included in a collection of plans turned over to the Public Archives by the Halifax City Engineer's office in the past few years, was a subdivision plan on vellum by MacKay, of the north side of North Street at the intersection of Upper Water Street. This was also the location of MacKay's last residence, described in his obituary as being on Water Street at the foot of North.

"The Great Map", at 1 inch to 20 chains, or 1320 feet, would be a large undertaking even today. One's mind boggles at the thought that so many flats could have been coordinated in what has been described as the workplace: "... one of the rooms in the upper part of the Province Building".³⁵ Two-inch, pencilled squares seem a very shaky framework on which to hang an entire provincial survey, but the result, when reduced to the county maps and the printed portable map, was a great advance on the work which had existed to that time.

Sadly, knowledge of MacKay's work soon faded. Duncan Campbell, in his well-known Nova Scotian history, after describing Lord Dalhousie's call for a survey of the province, commented: "Upwards of 50 years have elapsed since this subject was brought under the notice of the House but the work has not yet been done."³⁶ Thus, only fifteen years after his death and some forty years after the completion of "The Great Map", William MacKay's work had become invisible.

Notes:

1. A. & W. Mackinlay, *Mackinlay's Map of the Province of Nova Scotia ...* (Halifax, 1965), still shows "New Caledonia"; Map Collection, 202/1865, Public Archives of Nova Scotia [hereafter PANS].
2. E.F. Neville, *History of Granville Ferry Since 1864* (Annapolis Royal, 1931, does not mention "New Caledonia").
3. Don W. Thomson, *Men and Meridians, The History of Surveying and Mapping in Canada* (Ottawa, 1966).
4. George Patterson, *A History of Pictou Nova Scotia*

- (1877; reprinted Pictou, 1916), p. 282.
5. *Journals and Proceedings of the House of Assembly* [hereafter *Journals*], 1820, p. 135.
6. Beamish Murdoch, *A History of Nova-Scotia or Acadie*, III (Halifax, 1867), 465.
7. *Journals*, 1820, p. 21.
8. *Ibid.*, p. 158.
9. *Ibid.*, p. 151.
10. *Ibid.*, 1828, p. 331.
11. *Ibid.*, p. 286.
12. *Ibid.*, 1830-33, Appendix No. 31, p. 21.
13. Account of C.R. Fairbanks. Reports and Resolutions, Legislative Assembly, RG5, Series S, Vol. 15, 1830-1831, PANS.
14. *Journals*, 1830-33, Appendix No. 48, p. 41.
15. *Ibid.*, Appendix No. 31, p. 21.
16. Flat C-15, as indicated in W.K. Morrison, "Index to 'The Great Map' of Nova Scotia", Map Collection, PANS.
17. Patterson, *Pictou County*, p. 282.
18. Map Collection, 209/1820, PANS.
19. Alexander James, *Reports of Cases ... in ... Nova Scotia*, 1, Part 2 (Halifax, 1852), 189.
20. Shubenacadie Canal Portfolio, Map Collection, 210/1828, PANS.
21. *Journals*, 1828, p. 286.
22. *Ibid.*, 1836, Appendix, Report No. 81, p. 156.
23. W.K. Morrison, "Cartobibliography of the Printed Maps of Nova Scotia", unpublished work in progress.
24. *Journals*, 1827, p. 151.
25. W.K. Morrison, "The Modern Mapping of Nova Scotia", in *The Map Collector*, No. 18 (Tring, England, 1982), 33.
26. Richard Malinski, "Purdy's 'Map of Cabotia' and the Mapping Sequence of New Brunswick", in Association of Canadian Map Libraries, *Proceedings of the Ninth Annual Conference*, June 15-20, 1975, Sackville, New Brunswick (Ottawa, 1976), p. 39.
27. W.F. Ganong, "Additions and Corrections to the Monograph on Cartography", in *Proceedings and Transactions of the Royal Society of Canada*, Section II (Ottawa, 1906), p. 57.
28. Map Collection, 202/1819, PANS.
29. James Wyld, *A Map of the Province of New Brunswick, and Nova Scotia ...* (London, 1825). Author's Collection.
30. Her Majesty's Stationery Office, *Maps and Plans in the Public Record Office [II] America and West Indies* (London, 1974), 191, entry 1101.
31. Miscellaneous Undated Reports, RG5, Series S, Vols. 20 and 21, 1834-35, PANS.
32. *Belcher's Farmer's Almanac ... 1855* (Halifax, 1854), p. 76.

33. Map Collection, V/240/ca. 1842, PANS.
34. *The Evening Express* (Halifax), 9 July 1858 and *The British Colonial* (Halifax), 10 July 1858 list MacKay's death on "Thursday, July 8", but both the *Novascotian* (Halifax), 12 July and the *Morning Chronicle* (Halifax), 10 July have "Thursday, July 7". Thursday was the 8th of July in 1858.
35. *Journals*, 1828, p. 286.
36. Duncan Campbell, *Nova Scotia in its Historical, Mercantile and Industrial Relations* (Montreal, 1973), p. 245.

.....

Walter Kenneth Morrison was a waist gunner in Europe, flying in B17's in the US Air Force in WW2. After the

war, he received his Master of Arts from Clarke University and Bsc in Education from Bridgewater State Teachers' College.

After several years as a cartographer with National Geographic Magazine in Washington, he moved to Cape Breton. He was involved with partners in operating The Ainslie Village Motel.

In 1966 Walter joined the faculty at the (then) NS Land Survey Institute. He taught cartography and photography. He constructed the dark room at the old School and designed the dark room at what is now COGS. He also created the large antique map collection now housed at COGS. Walter is retired and living in Lawrencetown. ☒

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MINUTES OF THE 58th ANNUAL GENERAL MEETING
Held at Halifax Marriott Harbourfront Hotel, Halifax, Nova Scotia
November 7 & 8, 2008

Friday, November 7, 2008

1. Her Honour Mayann E. Francis, ONS, DHumL, Lieutenant Governor of Nova Scotia, brought greetings to the members and delegates on behalf of the Province of Nova Scotia. Karen Hatcher, Sales Manager of the Halifax Marriott Harbourfront Hotel, also addressed the members and welcomed all.

2. President Russell MacKinnon called the meeting to order at 2:15 pm.

3. President Russell reviewed the order of business and the meeting agenda. The meeting is governed by Robert's Rules of Order and common sense. Keith AuCoin was appointed Parliamentarian.

4. The out-of-province delegates and exhibitors were introduced.

5. Introduction of Council Members: President MacKinnon introduced the members of Council for the past year: Zone 1 - Bruce Hyson; Zone 2 - Derik DeWolfe; Zone 3 - Ernie Blackburn; Zone 4 - Gary Wadden; Zone 5 - Jim Gunn and James Redden; Zone 6 - Walter Jackson, Glenn Myra, Robb Ashley and Dan Gerard; DNR representative - Bruce MacQuarrie; Vice-president - Ray Pottier; Past president - Tom Giovannetti.

6. President Russell asked that everyone stand and observe a moment's silence in memory of members and former members who passed away and offered condolences to those who lost friends and family. Members who passed away are: Granville Leopold, NSLS # 265; Earl Verner, NSLS # 113; Erwin Turner, NSLS # 431 and Wilf Creighton, NSLS # 40. Condolences were also offered to Russell MacKinnon, to Lawrence Miller and to Rebecca Ritchie.

7. Secretary's Report on Convention Attendance and Membership: Fred Hutchinson reported that there are 143 NSLS's registered for the meeting. There are more than 35 members present at the meeting, which satisfies the quorum requirement. Fred reported on membership and dues as follows:

<u>Year</u>	<u>Dues</u>	<u>Reg</u>	<u>Life</u>	<u>Ret</u>	<u>Std</u>	<u>Hon</u>	<u>Asse</u>	<u>Total</u>
2008	\$1100	165	19	35	24	4	7	254
2007	\$800	172	19	34	24	4	7	258
2006	\$800	173	19	39	23	4	3	261
2005	\$800	177	20	39	24	4	2	266
2004	\$800	187	20	35	24	4	0	270
2003	\$800	197	18	34	21	4	0	274
2002	\$800	203	16	35	21	4	0	280
2001	\$670	208	16	36	19	4	0	284
2000	\$670	216	16	35	17	3	0	288
1999	\$670	221	15	35	18	3	0	295
1998	\$670	225	15	34	14	3	1	295
1997	\$670	227	14	33	15	3	3	298
1996	\$620	239	14	31	15	3	3	308
1995	\$600	246	14	36	16	3	6	324
1994	\$600	254	13	31	14	4	7	326
1993	\$550	261	14	27	12	4	10	326

It was moved by Rod MacInnis, seconded by Valerie George that the secretary's report be adopted.

Motion carried.

8. Approval of the Minutes of the 57th Annual Meeting: The minutes of the 57th AGM were published in the Spring 2008 issue of "The Nova Scotian Surveyor".

It was moved by Garry Parker, seconded by John MacInnis that the minutes of the 57th annual meeting held at Keltic Lodge Resort, Ingonish Beach, Nova Scotia on October 12 and 13, 2007, be approved as published.

Motion carried.

9. Business Arising from the Minutes of the 57th Annual Meeting: There was none.

10. Report of Council Activities: Council meetings were held on December 7, 2007, March 14, June 6, September 5 and October 10, 2009. Issues dealt with in 2007-2008 by Council were:

- * Land Titles
- * Survey Review Department staffing
- * Fair Registration Practices Act (FRPA) / Agreement on Internal Trade (AIT)
- * Canadian Board of Examiners for Professional Surveyors (CBEPS) and the Atlantic Provinces Board of Examiners for Land Surveyors (APBELS)

- * Approval of the CCLS core and elective syllabus / appointment of ANSLs members on CBEPS
- * Complaints and Discipline process
- * HR Consultant's Report and administration review
- * Issues surrounding wetlands
- * Discussions regarding the purchase of CNR plans and deeds

11. Report from the Secretary of the Board of Examiners: Fred Hutchinson - Report is as published in the Fall 2008 issue of "The Nova Scotian Surveyor".

12. Treasurer's Report: Fred Hutchinson - The December 31, 2007 unaudited financial statement is as published in the Fall 2008 issue of "The Nova Scotian Surveyor". The administration deficit was (\$25,478), the SRD surplus was \$22,050 for a net deficit of (\$3,428). The budgeted combined deficit was (\$16,672).

It was moved by Brian Wolfe, seconded by Bob Feetham that the treasurer's report be accepted.

Motion carried.

13. Report from the Secretary of the Board of Examiners: Fred Hutchinson - The report is as published in the Fall 2008 issue of "The Nova Scotian Surveyor".

There were three new members sworn in in 2008. Those members were introduced to those present at the meeting. They are: Peter Berrigan, NSLS 629; Mark Hatcher, NSLS 630; Britt Roscoe, NSLS 631.

It was moved by John MacInnis, seconded by David Clark that the report of the Secretary of the Board of Examiners be accepted.

Motion carried.

14. Report from the Survey Review Department: Gerry Bourbonniere - The report is as published in the Fall 2008 issue of "The Nova Scotian Surveyor". Since that report was written, submissions received in October have brought the number of plan submissions to the same level as the past three years. If the trend continues, the budgeted revenue should be reached. There were also three complaints forwarded to the Complaints Committee by the SRD manager.

The proposed 2009 SRD budget is also published in the Fall 2008 issue of "The Nova Scotian Surveyor".

It was moved by Brian MacIntyre, seconded by Greg Verner that the SRD Manager's report be accepted.

Motion carried.

15. Report of Scrutineers: Fred Hutchinson - The positions of Councillors for Zones 1, 4, 5 and 6 were filled by acclamation. There was an election for vice-president, with Glenn Crews winning the election by a single vote.

New members of Council for 2009 are:

President elect: Ray Pottier
 Vice-president elect: Glenn Crews
 Zone 1 Councillor: Peter Berrigan
 Zone 4 Councillor: Nathan Clark
 Zone 5 Councillor: Paul Harvey
 Zone 6 Councillors: Nick Dearman, Kirk Nutter

Retiring councillors were thanked for their service and presented with plaques:

Zone 1: Bruce Hyson
 Zone 4: Gary Wadden
 Zone 5: Jim Gunn
 Zone 6: Walter Jackson, Glenn Myra
 Past President: Tom Giovannetti

16. Report of Committees: Committee reports are as published in the Fall 2008 issue of "The Nova Scotian Surveyor". Reports from the following committees were published: Administrative Review, CCLS, Complaints, Discipline, Land Titles, NS Board of Examiners, SRD Advisory, Strategic Planning.

Additions to reports:

Complaints Committee - Glenn Crews: Since the published report, there are 4 new complaints, 3 of them from SRD. All are currently under investigation.

17. Presentation on Labour Mobility - Chuck Salmon, Secretary-Registrar of the Association of BC Land Surveyors, made a presentation on Labour Mobility.

Saturday, November 8, 2008

The meeting was reconvened at 9:00 am.

18. Bob Daniels, chair of the Public Awareness Committee, made a presentation on the new ANSLs website under development. The committee plans to have the website up and running by next year's AGM.

Dave Steeves, chair of the Governance Committee, along with other members of the committee, made a presentation on the legislation update initiative the committee has undertaken during the past year.

Information on the updates to ANSLs legislation will be circulated to members for review and comments. In addition

to the draft act and regulations there is briefing information, a summary of what was provided at this meeting. This will be circulated by email within the next week and it will also be put on the website.

Dave asked that members take the time to review the documents and to send their comments or questions to the Association office. The office will forward these to the committee who will respond directly to enquiries. The information can also be presented at Zone meetings, if Councillors and members wish.

After the review and consultation process is complete, it is the committee's intention to bring the new act and regulations to the 2009 annual meeting for the members' approval.

19. Consultant's Report: The Administrative Review Committee (ARC) commissioned an Organization and Administrative Review of the ANSLs. The Executive Summary of the consultant's report, including recommendations, was circulated to members by email in September 2008. Council's response to the Executive Summary was emailed to members on October 22, 2008 and a hard copy was included with "The Nova Scotian Surveyor" mailout done October 24, 2008.

Ray Pottier reviewed Council's response with a point-by-point review of the Executive Summary.

20. Introduction of New Executive and Council

The ANSLs Council for 2008-2009 is:

President	Ray Pottier
Vice-President	Glenn Crews
Past President	Russell MacKinnon
Councillor Zone 1	Peter Berrigan
Councillor Zone 2	Derik DeWolfe
Councillor Zone 3	Ernie Blackburn
Councillor Zone 4	Nathan Clark
Councillor Zone 5	James Redden
Councillor Zone 5	Paul Harvey
Councillor Zone 6	Robb Ashley
Councillor Zone 6	Daniel Gerard
Councillor Zone 6	Nick Dearman
Councillor Zone 6	Kirk Nutter
DNR Representative	Bruce MacQuarrie

21. President elect, Ray Pottier, assumed the chair. Presentations were made: the President's pen was passed on to Ray Pottier by Russell MacKinnon; Ray Pottier presented Russell MacKinnon with a Past President's pin; Tom

Giovannetti presented a plaque of appreciation to Russell MacKinnon.

22. New Business

The 2009 proposed budget is published in the Fall 2008 issue of "The Nova Scotian Surveyor".

Be it resolved that the 2009 budget be approved as printed in the Fall 2008 issue of The Nova Scotian Surveyor.

Moved by Brian Wolfe, seconded by Jeff Fee.

After discussion, it was moved by Bob Daniels, seconded by Jim Gunn that the 2009 SRD budget be amended by increasing the amount charged per plan from \$25 to \$30, and by increasing the amount charged per Surveyor's Location Certificate (SLC) from \$4 to \$5. The total increase in plan revenue would be \$16,000; the total increase in SLC revenue would be \$4,600, for a total revenue increase of \$20,600.

Motion to amend carried.

Question called on main motion.

Motion to approve the 2009 budget as amended carried.

23. Open Forum

There was discussion regarding contract services for land surveying professionals with regard to extent of association control / involvement with contract companies; liability; safety; quality control.

There are currently issues surrounding wetlands. It was suggested that any member who may have problems should contact the Wetlands Committee and advise them of the details.

24. Out-of-province delegates made closing remarks and thanked ANSLs members for the invitation and hospitality.

The 2009 AGM will be held on October 22-24, 2008 at the Digby Pines Resort.

At 3:35 pm, it was moved by Jeff Fee that the meeting be adjourned.

F.C. Hutchinson, BA, NSLS, CLS
Executive Director