

An Interview with Bill Daniels, O.L.S.

ONE OF the most important traits of a successful land surveyor is his ability to recognize the importance of history in his profession. We all recognize the need to keep regular, well-indexed field notes for current and future use and we recognize the need and the obligation to inspect the records of the surveyors who have gone before.

No one can read the diaries of the early surveyors without thinking about the hardships of life in the bush in the nineteenth century. No one can retrace the footsteps of the early surveyors without thinking of the generally good results that they achieved with what by today's standards must have been primitive equipment used under difficult conditions.

Thinking about these old surveying instruments and surveyors is about as far as most of us go, but there is one OLS who has delved deeply into the past to discover more about the surveyors of old, their lives and times and the equipment that they used. This man is William J. "Bill" Daniels and "The Quarterly" had an opportunity recently to interview Bill and find out a little more about that rather rare breed, the "SURVEYOR-HISTORIAN-COLLECTOR".

Bill was born in Orangeville, Ontario but grew up in the "Junction" area of West Toronto. He was educated in Toronto public schools and graduated in Forestry from the University of Toronto in 1963.

After graduation he decided that he would travel and after seeing some of the world he realized that of all the courses he had taken in forestry, those that involved surveying had made the most impression, particularly those given by Bas Haynes and Glenn Bird.

Bill articulated with Brian Edwards and was commissioned in 1972 and after a series of rather short stays with a number of survey firms, including two years on his own, he joined his current employer, Public Works of Canada in 1980. Bill is responsible for the supervision of field staff who make surveys for government departments that do not have "in house" survey staffs and also for the supervision

of contracts between these departments and private survey firms.

"The Quarterly" caught up with Bill on a recent Saturday morning and he was kind enough to answer some questions about his fascinating hobby.

AOLS QUARTERLY: You are known by many surveyors and historians as an expert on old surveying equipment. What got you into this hobby?

BILL DANIELS: I come by it honestly as my great-grandfather, also William J. Daniels, was an entrepreneur and inventor in the Orangeville area who designed and marketed such farming-related objects as "Fanning Mills" (a form of separator for wheat and chaff), "Hay Racks", "Patent Gates" and "Butter Churns" and in fact a "Daniels Fanning Mill" is a prize sought after by collectors of early Canadiana.

My Grandfather, E. C. Daniels, was a watchmaker and jeweller in Orangeville and he introduced me to the intricacies of mathematical instruments and I can remember him showing me the insides of pocket watches and clocks when I was only 8 years old.

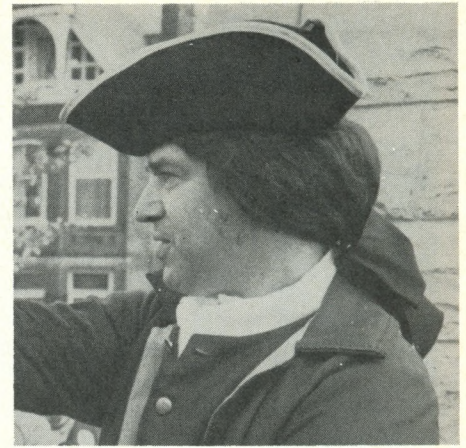
My Grandfather's roll-top work bench was the centre of his professional work and when he retired in 1953 it sat in a garage for many years. I was able to acquire it and restored it at considerable expense and it became my first collectable.

Q: You seem to be able to speak authoritatively to the AOLS annual meeting, educational institutions and historical societies. Do you have any other interests apart from surveying instruments?

BILL: My searches and research into early surveying equipment has led me into the field of early Upper Canada furniture and in particular clocks and desks while at the same time I have learned a great deal about the lives of the 19th century residents of Ontario as well as their artifacts.

Q: How did you get started in collecting surveying memorabilia?

BILL: One of my first jobs with Public Works in 1980 was to make a survey of Rice Bay on Lake Erie near Long Point



Bill Daniels -Bi-Centennial - Kingston

Ontario. I was searching for stone monuments set by T. W. Walsh who worked in the area from 1870 to 1883 and discovered that he had retraced earlier work by James Black in 1854. It had been thought that this work had been performed using a compass only but when I read Black's diary it was clear that he must have had some form of theodolite to make astronomic observations.

I made inquiries into Black's family and discovered two elderly ladies who were descendents of Black who had possession of his theodolite. They were not interested in selling but did allow me to examine the instrument and photograph it. (See photo #1.)

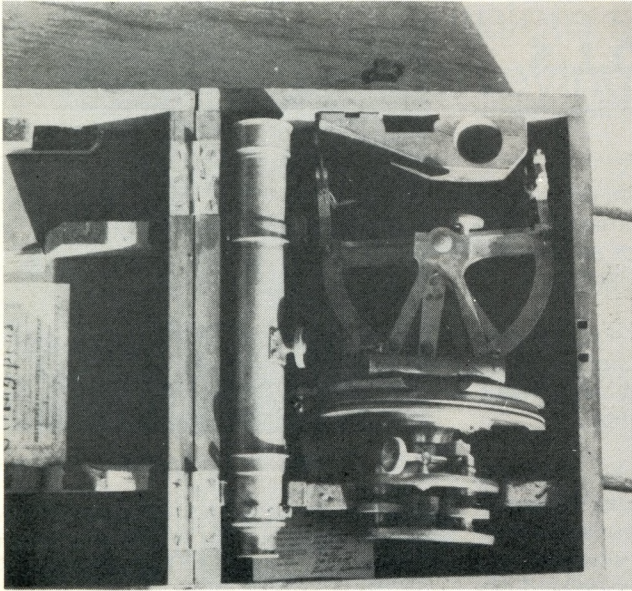
Q: Was this an English or American instrument, as we understand that surveying instruments were not made in Canada in the early days.

BILL: This is a common misunderstanding even by such an authority as Don Thompson in "Men and Meridians". The "Black" instrument had a Toronto instrument makers card inside the case and this led me to discover that there were as many as 6 makers in Toronto during the 19th century.

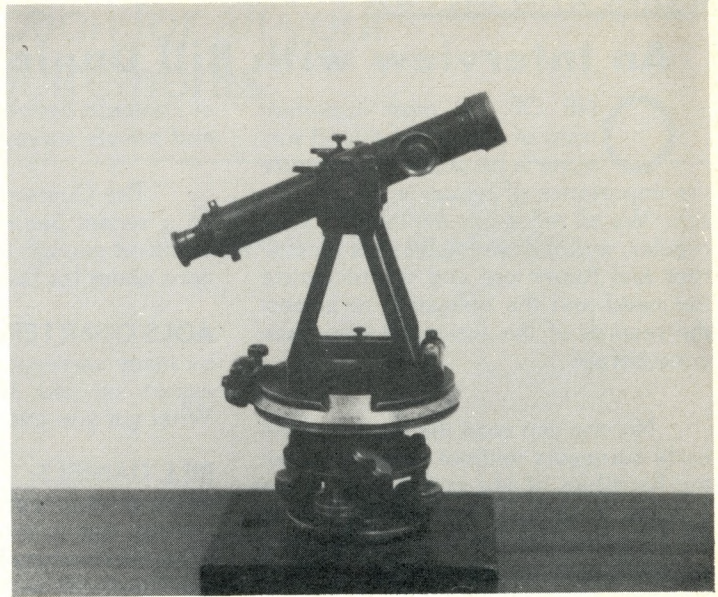
Q: Are there many people involved in collecting surveying instruments in a serious way in Ontario?

BILL: No, there are very few in Ontario or even Canada and most of the collecting by the English-speaking world is done by Americans buying in England. England has always been a good marketplace as the earliest equipment was made there.

Q: How do you know what may be for sale?



J. Black's Theodolite



Transit - James Foster

BILL: I know a number of other collectors of course but a good source of information about available collectables can be found in the catalogues of a number of New England antique dealers who publish 4 times per year. These catalogues also contain background information about equipment. As I said earlier, England is also a good source but specialist collectors from the U.S. have driven the prices up. Occasionally, Southeby's and Christie's auctions will produce good specimens.

Q: How do you know what to look for when you go looking?

BILL: The most important thing is that the instrument be complete with no accessories missing. It should be functional and its outward appearance is not always so important as you always have to do some restoration.

The final appearance of the piece is often a matter of personal choice. English collectors favour highly polished brass instruments which tend to sell well to those who simply want an ornament for their coffee table, while I prefer only to restore as much as a piece needs to bring it to an authentic state.

Most sellers will allow a trial purchase subject to return in the same state as it arrived but buying at auctions can be dangerous as little information is available before the sale and a thorough inspection is often difficult. Items also tend to cost more at auctions as two or more avid collectors can drive the price up well beyond its realistic value.

Some dealers will work on the barter system similar to the antique furniture market and exchanges that are satisfying to both sides may often be made.

Q: How valuable are antique surveying instruments and what do they cost?

BILL: Rarer items are always more expensive of course, but as a rule of thumb, good makes of compasses and theodolites will triple in value in ten years. Be careful, however, of compasses made by the well-known firm of W. and L. E. Gurley. These compasses did not change very much over a long period of time, from about 1852 to 1920 and it is difficult to authenticate their ages. A Hearn and Potter vernier compass recently sold for \$1,500 U.S.

As for myself, the least that I have paid for an item (excluding chains, etc.)

was \$125 for a Charles Potter vernier compass made in about 1825 while the most was \$1,000 U.S. for a Revolutionary War period Circumferentor which is a plane surveying compass.

At the moment I am looking for a mid-18th century Telescope Theodolite. I actually did purchase one fairly recently for \$3,000 U.S. but unfortunately I had to send it back as the telescope was not original.

Q: Besides yourself, of course, where can one go to get information on this hobby and on restoration of equipment?

BILL: An excellent source of information on old surveying equipment is Silvio Bedini who writes a regular column in the magazine "Professional Surveyor" that I know is sent to many Ontario surveyors. Bedini has also published an authoritative text on the subject of restoration but unfortunately it is now out of print and is well on its way to becoming a collector's item in its own right.

Some of the dealers that I mentioned earlier can also be a useful source of restoration and historical advice and for those who would like to pursue this further I can let you have a list of these dealers. (Ed. Note. see list following.)

Q: What problems do you run into when restoring?

BILL: The biggest problem is that there are no spare parts available, particularly level vials which are most susceptible to breakage. Small parts may be sometimes fabricated by a machinist if you are able to give very careful specifications. Glasswork is also very hard to come by but there are some specialists in the United States who can be of assistance. If the wooden cases need a lot of work, the services of a cabinetmaker may be necessary.

Q: What is the oldest piece of equipment that you have and what is the most interesting?

BILL: Well, the oldest is a horizontal theodolite made in England in 1730 but perhaps the most interesting is a "Pocket Transit" made by James Foster of Toronto in 1900. This instrument was called a "Pocket" transit because it was a very small instrument that could literally be carried in one's pocket while going to the survey site in Toronto by streetcar. (See photo #2.) James Foster was Toronto's first mathematical instru-

ment maker who worked from 1844 to about 1910.

I have also found that one of the additional benefits of this hobby is that you not only learn about the equipment but you also learn an awful lot about the society that they lived in.

Q: There has been some talk about trying to establish a museum for Surveying in Ontario, perhaps in Kingston. What is your feeling about this?

BILL: I think it would be of great value in reminding the surveyors of today and the general public of the important part the pioneer surveyors played in the development of Ontario but there are problems.

The insuring of fine art and artifacts is always a problem and getting people to donate to a new museum may be difficult. However Kingston would be a good location as it is the birthplace of our profession in Ontario and there are many fine examples of early equipment in that area.

Q: Bill, thank you very much for taking

the time today to talk to us about this most interesting link with our past. ●

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