

Letters

On the (im)mobility of Canadian Geoscientists

The last Pyroclast column "Yes, You can tell them Apart" did not provoke a fierce desire to disagree. Generally I agree with the stated differences between industrial, government and university scientists. However, on the question of (im)mobility of geoscientists having had a recent experience in this field, I would like to propose some sobering thoughts. They may not be as exciting reading as the Pyroclasts analysis but I suggest that as reasons for the (im)mobility of geoscientists, they are at least as profound . . .

Pension plans, job security and inflation are the culprits. Let's start with the *pension plan argument*: assume a university geoscientist with 20 years paid up pension, age 48 in 1975, and assume he goes into industry and gets 10 % more in salary and maintains this differential in his career. Assume that both pension plans are identical (an annuity of 2 % times number years of service times average salary for the last five years). Here are the approximate salaries and the estimated annuities: case 1, the geoscientist stays in the university, case 2 the geoscientist moves to industry and stays with it. In case 2 the person will have to his credit a 20 year paid up annuity at the university based on his salary up until 1975 and he will have started his company's pension plan at square 1 in 1975.

	Case 1	Case 2
Salary 1975	\$26,000	\$26,000
1976	31,500	35,000
1978	42,000	46,000
1992	78,451	85,923
Retirement Annuity	\$51,143	\$36,835

Assuming 10 years' life after retirement, that is a \$150,000. argument!

Job security: for the 10% more in industry, you are subject to dismissal or termination of contract if the company goes broke or the president does not appreciate you. In university, only a rather serious crime (first degree murder at least) could terminate your giving lectures (it would probably not terminate your getting an annuity while in prison . . .).

Inflation: it bugs me to realize that I might be earning \$80,000. in 1991 or 2. That is only assuming 6% inflation 1978-1983, 5% 1984-1988 and 3% 1988-1992. Just think it is already 9% for the current year and no signs of better times ahead! If the current inflation rate continues geoscientists (and all others) will have to carefully consider the effect of job changes on their pensions.

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Industry and the Academy: Different Professions?

Ward Neale has made a handy list to help us tell industry geologists from academic (and government) geoscientists. A certain type of job attracts a specific type of person and, he believes, this restricts the mobility of earth scientists.

Undoubtedly, We are talking of two different professions here. The real difference between industry geologists and academic geoscientists is one of fundamental philosophy, and turns on their priorities. The academic is a king of George Mallory: the mountain is there, and he will go forth joyfully to describe, dissect, quantify, and report it, because in his view it is vital that this be done. By contrast, the most successful geologists in industry are businessmen first and foremost, science is only a vehicle they use to focus on matters they consider more important. Geology is an applied science anyway - a mix of chemistry, physics, maths, experience, intuition and sometimes just plain dumb luck - so to apply it to the business of making money is fitting. But somewhere along the way it very often ceases to be science.

And that, I believe, is the reason for restricted mobility between industry and academia. Changing allegiance may be easy: changing professions is another matter

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GSC Report of Activities

In a recent issue of *Geoscience Canada*, Dr. John Westgate reviewed the Geological Survey's Report of Activities Part C, 1976. His remarks dealt mainly with the selection and possible deletion of articles, separation of short research communications from other reports of activities, and certain editorial matters. Because of the large number of contributors, individual issues of the GSC's Report of Activity series - now known as Current Research - are likely to manifest a certain amount of unevenness in content quality and editorial style. Rather than discuss these items further, as a long-time user I would prefer to comment on the usefulness of the report series for a wide and growing reader audience.

A check of the Survey's Reports of Activities between 1970 and 1977 shows that they contain more than 1350 articles, the product of six Divisions in the Survey. A further check of the locations of these studies reveals that they are widely distributed across the country, with a preponderance of them located north of latitude 60°N.

Although my primary interest concerns the broad range of studies on Quaternary geology contributed by scientists in the Terrain Sciences Division, I always scan the Table of Contents of each Report for relevant articles prepared by other Divisions, for they sometimes contain material that bears on projects involving terrain mapping, engineering geology, or environmental geology. Recent examples that come to mind are two notes by G. H. Eisbacher, Cordillera and Pacific Margin Subdivision of the Regional Economic Geology Division in Vancouver. Both articles record the locations and outstanding features of massive rockslides in the northern Cordillera. Because of their significance in major route location projects in the southern Yukon and northern British Columbia, I ordered the stereoscopic airphotos that show these huge and relatively fresh-looking mountainside failures.

I find articles on activities dealing with permafrost studies and with terrain inventory, characterization, and performance in different areas of the Yukon and the Northwest Territories particularly helpful. This group of articles now numbers approximately 150 for the

period 1970 to 1977. Many of these contributions deal with significant geomorphic and geological processes whose better understanding is helpful to a large and growing number of scientists and engineers who are currently interpreting terrain and environmental conditions for the assessment of major transportation systems and resource development projects in northern Canada.

Several times each year I phone the Survey in Ottawa to enquire about the dates of release of Reports of Activities - in recent years put out in Parts A, B, and C. Usually I want to know what types of surficial geological mapping and research activities are taking place, and where and by whom. I also want to find out when the GSC's open file maps of certain areas will be released. Quick release of this information can save many thousands of dollars, especially when it helps in planning and carrying out of costly ground surveys in remote and inaccessible regions. Enquiries like mine no doubt create a burden for the staff of the Survey's Geological Information Division, who process between 150 and 200 such reports each year and usually within a relatively short period of time.

Two things I find helpful, and I feel should be included in the report series where practical, are: 1) the inclusion of small-scale maps showing regional Quaternary geology or geomorphology information that can be used to correlate features and patterns recorded in high altitude airphotos or space imagery when carrying out terrain studies at substantially larger scales, and 2) the discussion of geomorphic processes and characteristic properties of soil and rock materials at places whose specific locations are clearly identified.

I would like to conclude by re-stating that I have found the Geological Survey's Reports of Activities to be of great value in my work over the years. I also believe that any substantial reduction in the number of articles reported must be evaluated carefully because the Survey has been criticized in the past for not releasing information quick enough, nor enough of it.

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GSC Move to Thunder Bay

I would like to contribute my two bits' worth to the spirited discussions presently to be found in some of our geoscience forums (e.g., *Geoscience Canada*, *Geolog*, *Northern Miner*) concerning the proposed relocation of part of the Geological Survey of Canada to an Institute of Precambrian Geology, Thunder Bay, Ontario. Since this relocation will essentially disperse the last nucleus resembling a geological survey and irreparably alter our function and outlook in geology, I'm heartened by the stimulating and brisk approach to the present debate.

What debate, you ask? And well you might ask! Well then, perhaps I might be permitted to update all and sundry on the present situation. The announcement came early Monday, October 3, in a personalized mimeographed fiat from the ADM of Science and Technology of EMR. In part, it read as follows:

"I am writing to advise you of a government decision, to be announced later today, to relocate another part of the Geological Survey of Canada from the National Capital Region to Thunder Bay, Ontario, in accordance with Government policy on decentralization.

The position you now occupy has been identified for relocation to an Institute of Precambrian Geology for which the Precambrian Subdivision will serve as the nucleus, and will also include isotopic geochronology, petrology, analytical chemistry, mineralogy, cartography and related technical and administrative support services. The relocation is estimated to take place in 1980."

Subsequent information revealed that 110 job positions would be transferred, including Precambrian Subdivision, parts of Correlation and Standards Subdivision (petrology, geochronology), as well as the Directorship of Regional and Economic Geology Resource Geophysics and Geochemistry Division and Economic Geology Subdivision would not be moved because their work, though largely in the Precambrian Shield, has apparently a greater and more immediate impact in resource evaluation and management. Proper planning began only *after* the relocation had been promulgated.

Following the announcement, administrative action followed swiftly. Special bulletin boards and lighting arrangements were created to keep all informed on the progress of committees and subcommittees related to the relocation event. Fact-finders were sent to Halifax, Winnipeg, Calgary, Vancouver and Victoria, to study the most efficient way to mummify four score or so professional "selfish, narrow, myopic creatures wrapped up in their research projects and oblivious to the broader implications of their research and of world needs", (Geosci. Can., v. 4, p. 204).

Action from the apprentices-at-the-bench (Geosci. Can., v. 4, p. 150) came equally swiftly. We formed and joined committees, subscribed to the Thunder Bay Times-News, and sent a union representative to study housing and schooling. The findings were discussed during coffee and we quickly learned that in Thunder Bay snow comes in October, that for some of us mortgages would double for comparable accommodation, that some of our wives would leave us, and that the growth rate of T.B. is 0.3%.

However, what we really deplored and were most saddened by is that this decentralization of the Geological Survey of Canada, unlike previous relocations of other elements of the Survey, would now isolate and relegate Precambrian research to a state out of touch with disciplines that nurture it and others that depend on it. Saddened also, that as a national group charged with overseeing the largest Precambrian Shield in the world, we should be so far removed from policy decisions regarding its resource management.

No one quite knows how this disastrous situation came about. However, it was known that Senior Management had for some time been toying with the idea of an Institute for the Precambrian group. Consequently, when decentralization became political, the Precambrian group was readily identified. Most of us apprentices were never asked to join the initial debate on whether or not the initial concept of a Precambrian Institute was really valid.

However, given that lack of managerial provision, it has now been compounded by political fiat. In the end it is difficult to know whether it was a political or administrative decision that has blundered us out of Ottawa. On the other

hand, in the field of Science and Technology, politicians commonly have no choice but to formalize managerial decisions. Who is to inform politicians or Science and Technology, if not Research Directors? In a feeble attempt to rationalize the move, Robert Andras, president of Treasury Board and MP for Port Arthur, stated that Thunder Bay is an apt location for the Precambrian Institute since it is in the area being studied - the Precambrian Shield. The Precambrian group hasn't had anyone working within 500 miles of Thunder Bay for some time, and as far as I know, isn't planning to. For myself, headquarters at Thunder Bay simply increases distance to my field area in Labrador, and my colleagues in St. John's from 1000 miles to 1500 miles. And, in any event, I was under the impression that the Ontario Department of Mines had the geology of the western Superior Province well in hand, thank you.

In any case, decisions such as the proposed relocation are far too important to be made from political motives. And so far, only one senior administrator, J. D. Keys, ADM, Science and Technology, has had the courage to state publicly (Thunder Bay Times-News, December 22, 1977) that the relocation is a poor idea.

So "Are We On The Way At Last?" ("Pyroclasts" in Geosci. Can., v. 4, p. 203). Yes, Dr. Neale, I'm afraid we are. Bring more administrators to Ottawa and move the rest of us into the woods - where we, after all, spend a good portion of our working lives.

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