



Survey on Mobility of Geoscientists in Canada: Results

April 2006

The Prospectors and Developers Association of Canada (PDAC) commissioned this survey in order to support its work on behalf of the PDAC membership and the geoscience profession. Comments on this survey and on the issue of geoscience registration and mobility are encouraged. Please contact the PDAC at info@pdac.ca

Background

In early 2006 the Institute on Governance conducted a survey respecting issues of geoscience registration and mobility in Canada. The purpose of the survey was to profile members of the profession and their practices, and to discern the views of working geoscientists.

Methodology

A short questionnaire was developed in consultation with the Prospectors and Developers Association of Canada (PDAC). The survey was formally launched at the PDAC international convention in Toronto, March 5–8, 2006. A member of the survey team distributed and collected hard copies of the questionnaire during the convention. Simultaneously the questionnaire was placed, in both English and French, on a confidential internet survey site, publicized via e-mail notices to PDAC members and advertised on the PDAC web site. The survey period ended on April 7, 2006. In all, 270 respondents completed the survey.

Profile of the Profession

Respondents have worked in the geosciences field for a considerable length of time (average: 26 years). They are highly educated and well paid. One in five respondents is self-employed and on his or her own; two in five work in organizations of up to 100 employees and the remaining two in five work in organizations with more than 100 employees. Three-quarters of all respondents are PDAC members.

- The average respondent has worked in the geoscience field for 26 years, with approximately 90 percent of respondents having worked in the geoscience field for at least ten years.
- The largest share (44.7%) of respondents reside primarily in Ontario, with the next largest groups living in Newfoundland and Labrador (16.7%), British Columbia (16.3%), Alberta (8.2%), and Quebec (6.2%). The remaining eight percent are spread amongst the other provinces and territories or outside of Canada.
- Virtually all respondents report having a university degree, with over half having completed either a master's degree (37.1%) or a doctoral degree (24.6%).
- The vast majority of respondents (84.0%) describe “geology” as the type of geoscience or geological work in which they are engaged. Roughly half of respondents report involvement in more than one type of work. 15.2% of respondents report involvement in prospecting, 13.7% report involvement in geophysics, and 10.9% report involvement in geochemistry (in all cases either as their sole occupation or in combination with geology).
- Nine in ten respondents earn \$60,000 (before taxes) per year or more, with 56.0 percent earning over \$90,000.

- The largest share (39.1%) of respondents work in organizations employing 101 people or more. Remaining respondents are spread fairly evenly among self-employed, one-person operations (19.5%), organizations employing between two and five people (10.9%), organizations employing between six and 20 people (16.4%), and organizations employing between 21 and 100 people (14.1%).
- Nearly three-quarters of respondents report being current PDAC members. Most of these are core (40.7% of the total) or regular (28.1% of the total) members. Only 1.6 percent of respondents report being corporate members.

Working, Mobility and Registration

Mobility is high among Canadian geoscientists. Most respondents report working mainly in their home province, but nearly three-quarters also worked last year in either another province or territory, or outside of the country. Conversely, registration is low among Canadian geoscientists. Less than half (46.7%) of the work performed by respondents last year was carried out under registration.

- The vast majority of respondents report working the most days in the past 12 months in their home province. However, 72.2 percent report also working in at least one location outside of their home province. This includes nearly 30 percent of the respondent sample reporting work outside of Canada, but also large numbers reporting work in Canada but outside of their home province. This work took place in Ontario (29.2% of respondents), Quebec (22.5%), British Columbia (19.2%), Manitoba (14.1%), the Northwest Territories (10.7%), and Nunavut (8.1%).
- Considering only those provinces and territories requiring registration, 46.7 percent of respondents report being registered with the provincial or territorial professional associations of provinces or territories in which they worked either the most days or as one of their secondary locations. Provinces with the reported highest registration rates were Saskatchewan (80.0% registration), Alberta (77.4%) and Newfoundland and Labrador (60.0%). Provinces and territories with the reported lowest registration rates were Northwest Territories and Nunavut (34.4%), New Brunswick (30.8%), Manitoba (28.9%), Quebec (22.9%) and Nova Scotia (22.2%).

Respondent Opinion

Most respondents understand the professional geoscientist registration system, yet most find it difficult to use, with high fees. The vast majority of respondents — more than four in five — report being dissatisfied with the interprovincial/territorial mobility afforded by Canada's registration system.

- Over half (50.2%) of respondents report that they understand the system for the professional registration of geoscientists “well.” The majority of the remaining respondents report understanding the system “somewhat” with less than ten percent reporting that they understand the system “poorly.”
- In spite of a generally good understanding of the registration system, less than one-quarter find the system either “extremely easy” (1.5%) or “somewhat easy” (23.3%) to use. Most find the system “somewhat difficult” (56.8%) or “extremely difficult” (18.4%) to use.
- The majority of respondents (60.2%) find the fees for registration in their home province or territory “high,” while 39.8 percent find the fees “fair and reasonable” and no respondents report the fees as being “low.” A higher proportion of respondents (68.4%) find the fees for registration in other provinces/territories “high,” while only 30.7 percent find these fees “fair and reasonable.”
- The vast majority of respondents (84.3%) report being dissatisfied with the interprovincial/territorial mobility afforded by Canada’s registration system, with nearly three in five being “extremely dissatisfied.”

Conclusions

Canada’s geoscientists are a highly professional and seasoned group working in a wide range of organizations across the country. They are highly mobile, working both internationally and in provinces and territories outside of their home province or territory.

They find Canada’s professional geoscientist registration system difficult to use and feel the fees are high, especially the fees associated with working in other provinces and territories. They are dissatisfied with the interprovincial/territorial mobility afforded by Canada’s registration system. Perhaps not surprisingly, over half of the work carried out in jurisdictions requiring registration is carried out without registration.

2006 Survey on Mobility of Geoscientists in Canada

ANNEX: Methodological Notes

The 2006 Survey on Registration and Interprovincial / Territorial Mobility was a basic survey¹ addressing potentially complex issues. Each province and territory has different registration rules, procedures and fees. Individual professionals differ in how and where they work, including whether or not they visit sites physically. The survey attempted to ask questions in such a way that respondents from all provinces and territories representing a wide range of professional sub-disciplines could reasonably answer each question. Out of 270 only one respondent indicated having had difficulty in applying the language of one question to his or her situation. Most respondents answered most or all questions. This tells us that the questionnaire made sense to respondents and, at least in an elementary way, spoke to their individual circumstances. We can reliably infer that all respondents interpreted each question the same way so that if they answered differently from one another, it is because they truly differ from one another in their views respecting the question.

A random sample of 270 has a 95% probability of representing a population of any size (including the entire population of Canada) within about 6 percentage points in either direction. If every single member of PDAC were questioned and 50% of them said “red” and the other 50 % said “green,” then if we randomly surveyed 270 PDAC members, 19 times out of 20 between 44% and 56% would say “red” and between 56% and 44% would say “green.” Strictly speaking, the 2006 Survey on Registration and Interprovincial / Territorial Mobility did not randomly sample the PDAC population. Respondents “self-selected;” people chose whether or not they would participate in the survey. This opens the possibility of selection bias, a situation in which one or more sub-groups are over- or under-represented (the especially disgruntled, the especially content, the most educated, the least educated, etc.). We have no reason to suspect selection bias, however, and in such cases researchers generally assume that the sample is close-to-random. This is, in fact, the situation in virtually every survey conducted. The only way to avoid self-selection would be for the researcher to select a pure random sample and force each selectee to respond. This is, of course, impractical and potentially opens up other sources of bias. In short, the 2006 Survey on Registration and Interprovincial / Territorial Mobility was conducted according to common practice and standards and we are satisfied that the results are valid.

With these points in mind, the findings as presented in the report may be interpreted as valid and reliable. The finding that 84.3% of respondents are dissatisfied with the Interprovincial / Territorial mobility afforded by Canada’s registration system, 75.2% find the system difficult to use, and 68.4% find the fees for registration in other provinces/territories high are significant and important findings as are the findings that 72.2% of respondents report working in at least one location outside of their home province and only 46.7 percent of respondents report being registered with the provincial or territorial professional associations of provinces/territories in which they work.

¹ The rule of thumb in the social research profession is to keep surveys as simple as possible in order to encourage maximum response. To address complicated questions more deeply, face-to-face interviews are used.