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Geoscience Jobs 2002: Who, What, and Where? -- Part One

During the nearly three years that I have been a volunteer (and current Chairman) for the HGS Personnel Placement Committee, I have frequently been asked questions concerning the geoscience job market--most often, the "who, what, and where"? While I really don't consider myself an expert on the subject, by any means, I felt that the 479 positions listed on the HGS Job Listings website during 2002 (a record year for ads), would be a natural source for information. Therefore, to be able to provide answers for those questions to a more widespread membership, and also to get a glimpse into the most recent trends, I have extracted and analyzed some of the available information from the website, for this article.

From all of the available data, I narrowed the analysis down to six significant criteria. The "Who" can be found in (1) Job Categories, and (2) Ad Submitters; the "What" is covered in the (3) Minimum Experience Levels, (4) Job Status, and (5) Minimum Education Requirements; and finally, the "Where" will be covered in the (6) Job Location. In fact, because there is so much data available, which is countered by a lack of time and space to publish this information in the HGS Bulletin, this article will be broken into two parts, which will hopefully be seen in two consecutive, monthly releases. Part one, which covers the first three criteria, will be discussed in this release.

Job Categories

The types of positions that were listed in the ads, the Job Categories, were broken down into nine groups--Geologists, Geophysicists, Geoscientists (positions available for either Geologists or Geophysicists, but with no preference indicated), Support (includes Geotechs, Data Loading techs, etc.), Information Systems personnel (Programmers, System Administrators, Software Training, etc.), Sales, Managers, Petrophysicists, and Miscellaneous (Technical Writers, and Researchers, to name a couple).

The bar graph in Figure 1 was an attempt to describe how these job categories might have changed throughout the year. For example, the ratio between Geologists and Geophysicists, does seem to vary throughout the year. The pie chart, also included in this figure, quantifies the overall percentage of each category. It is interesting to note that nearly 65% of the positions posted on the website were for the individuals most directly responsible for geoscience data analysis/processing, and interpretation--the Geologists, Geophysicisists, Geoscientists, Petrophysicists, and Managers. Of the remaining 35% of the total positions, over half were for Support personnel.

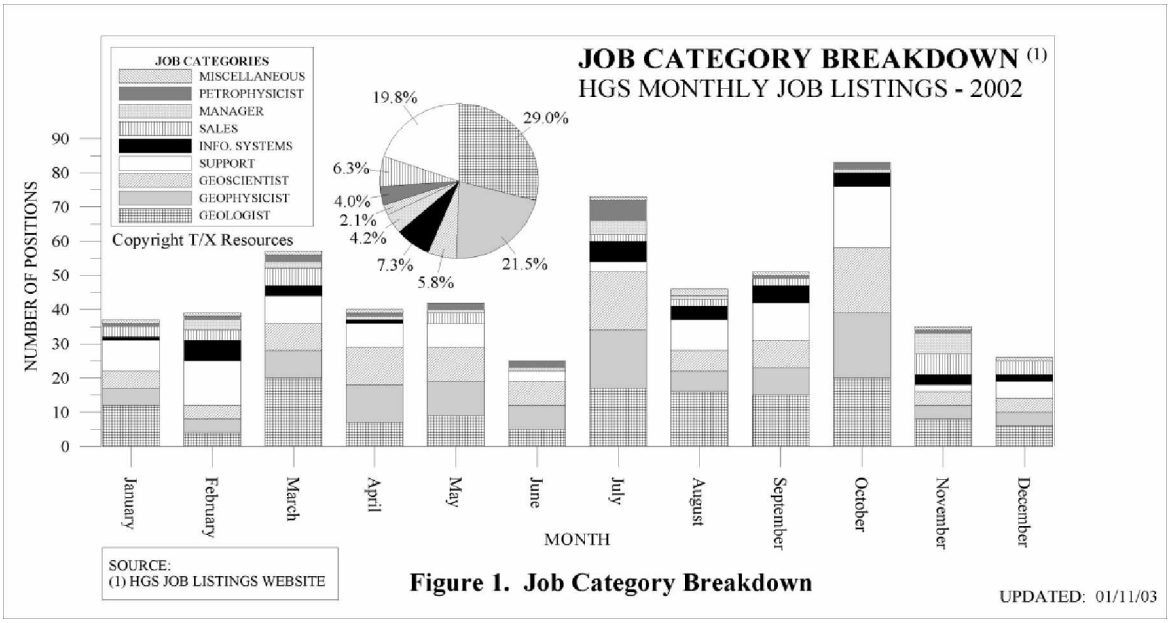


Figure 1. Job Category Breakdown

Ad Submitters

The evaluation of the Ad Submitters was an attempt to reveal the relative hiring activity between Tier 1 companies (*directly involved* in the search for hydrocarbon resources, such as oil companies) and Tier 2 companies (*indirectly related* to the search for these resources, such as service companies, universities, etc.). By looking at these results, we may be able to judge the extent of the total work that is now being done by the service sector--much of which may have previously been considered as "in-house" work, done by the oil companies.

A casual examination of the raw information from the submitted ads, on the website, indicates that only about 11% of the 479 positions were submitted directly by Tier 1 oil companies, while 34% of the total positions were submitted directly by Tier 2 service companies. In addition to the ads submitted directly by these two groups, quite a large number, the remaining 55%, were received from search firms (which can also considered to be Tier 2 companies). This may lead one to conclude that about 89% of the positions were submitted by Tier 2 service companies. This would actually be very misleading however, based on additional information not available on the website. Quite the contrary, it is estimated that the percentage actually shifts back towards the oil companies, by a slight majority, when you consider that a large portion of the oil company positions was handled by the search firms.

While not trying to gloss over the personal traumas endured during the last 20 years of oil industry layoffs of tens of thousands of former employees who left the oil industry entirely, it would be interesting to find out how many of the remaining, like-minded recipients of these layoffs were moved by the entrepreneurial spirit to form their own companies. Since it seems that the service sector now accounts for nearly 50% of the hiring activity, there may still be some opportunities out there, in this arena.

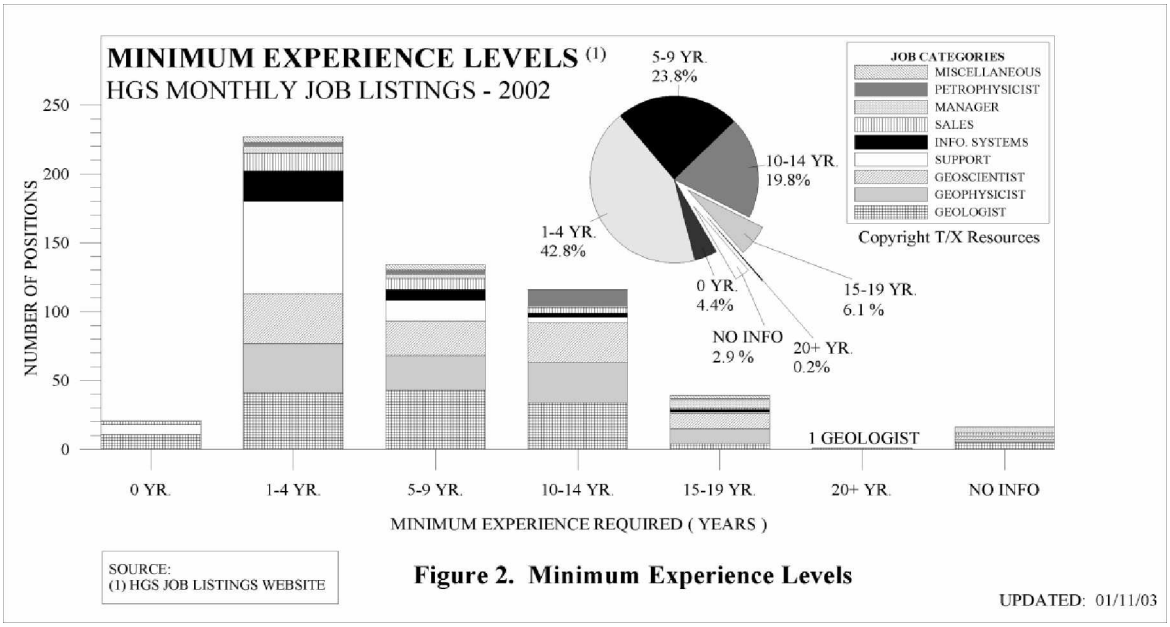
Minimum Experience Levels

Many, but not all of the ads, gave a range of experience required, for the position. This presents some difficulties when trying to standardize this analysis, because the extent of the ranges were so variable. So, to reduce the difficulties, I chose the minimum number of years

of experience required for the position, from each ad, as the standardizing parameter--the Minimum Experience Level. The positions were then grouped into seven levels: 0 years, 1-4 years, 5-9 years, 10-14 years, 15-19 years, and 20+ years, along with NI (no information given). Please note that many of the jobs for Geologists, Geophysicists, and Managers fell into this NI category (frequently, the other required skills in these ads, implied a high level of experience).

The bar graph in Figure 2, reveals the distribution of the number of positions, during 2002, within these experience levels. One of the first impressions from this graph is the large number of positions in the group with a minimum of 1-4 years of experience. Within this level, you will also notice that the Support category had the largest number of positions (the most of any group, by far). Considering that one of the primary responsibilities for many in Support, is loading geoscience data into computer workstations, this may give us a reason to pause. Especially, when you consider the potential ramifications of improperly loaded data, which can result from a lack of experience. Due to it's highly technical nature, and the fact that it can be presented in many formats and units of measurements, much of this geoscience data can, and often does, require a higher skill level to be loaded correctly. Several examples of this data would include: borehole positioning (locations/deviation surveys), seismic velocity information, or the seismic data itself, to name a few.

It also becomes apparent in this graph, that the relative number of positions for Geologists, Geophysicists, and Geoscientists remained fairly consistent for the 1-4, 5-9, and 10-14 year experience levels. Most of the decrease in the overall number of positions for these three experience levels was at the expense of the other job categories.



The smaller pie chart, also within this figure, indicates the relative percentages of each experience level. The most significant result of this chart, alluded to earlier, was that nearly half, or 47.2%, of the 479 positions were submitted for personnel with a minimum experience level that ranges from zero, to four years. At the other end of the spectrum, positions that required a minimum of 15+ years of experience, were few and far between, with only 6.3% of the ads (there was only one position for a minimum of 20+ years of

experience). The intermediate experience level, which I grouped into the range from five to 14 years, accounted for the remaining 43.6%.

However, we, the more experienced portion of the pool of oil industry talent, shouldn't be too discouraged by these numbers. As a reminder, they are only the minimum experience levels that the companies were seeking for the available position, and do not indicate what level was actually hired. Also, many ads, while having a low minimum experience requirement, had a wide range, or open-ended experience requirement, which would allow many of the more experienced job seekers to fill the position.

Part Two--To be continued

Next month, in Part 2, we will cover the results from the last three categories: (4) Job Status, (5) Minimum Education Requirements, and (6) Job Location, along with a summation of the results. I hope the information presented so far, has been useful and enlightening.

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