



STRENGTHENING MINING'S TALENT ALLOY



Exploring **Diversity** and **Inclusion**



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Executive Summary

The Mining Industry Human Resources Council (MiHR) has undertaken a focused research program designed to help the sector meet its needs for talent – in particular through greater engagement of sources of talent currently underutilized in the industry.

Despite the current downturn, the long-term trends are clear – Canada's mining and minerals employers will need to recruit, retain and engage a wide range of skilled people. This research was designed to contribute to a deeper understanding and more informed discussion of the barriers, opportunities and experiences in relation to workers with a wide range of backgrounds, traits and attributes. Companion reports provide a focused perspective on Aboriginal peoples, immigrants to Canada, and gender issues in the mining and minerals industry¹.

The research draws primarily on a survey conducted with industry employees. It has also been informed by an environmental scan which included a review of previous research and best practices, interviews with mining employees, and consultations with industry stakeholders. These insights will support industry stakeholders in improving the attraction, retention, development and engagement of talent to meet their future labour needs.

The experiences and perspectives from the range of research participants tell a compelling story – of challenges faced and opportunities that lie within reach.

¹ See the three reports in the series titled *Strengthening Mining's Talent Alloy*.

The 281 workers who responded to the survey, the 51 employees who participated in in-depth telephone interviews and the more than 50 representatives of employers and stakeholders who shared best practices and participated in consultation sessions suggest that:

- **There is some good news.** Most employees reported that their employers are trying at least sometimes to create an environment that is welcoming and inclusive. Many members of diverse talent pools are enthusiastic about their experience in the industry and are looking toward opportunities for a fulfilling career in mining.
- **There is room for improvement.** One in nine survey respondents reported that their employer rarely or never takes action to foster the characteristics of an inclusive workplace. Employers emphasize the value of hiring more Aboriginal peoples and workers from local communities; there is noticeably less commitment to groups such as women or immigrants to Canada.
- **Not everyone feels welcome.** Employees – at all organizational levels – describe challenges in getting equitable access to opportunities, in “fitting in” to the mining culture and in having their qualifications recognized. Some experiences were negative and hurtful. Most seem to be examples of “micro-inequities” – those small differences that add up over time. Nonetheless, most employees continue to describe their workplace as team-oriented and generally respectful; perhaps just not enough so.



The employers in Canada’s mining and minerals sector are not standing still on these challenges. More than two-thirds of the survey respondents indicated that they see their employer “often” or “always” taking action to create a workplace that is respectful and welcoming. Similar percentages report that their employers are taking actions to encourage the employment of Aboriginal peoples and workers from local communities.

This research is a starting point. The next steps can include identification of priority areas for focus, and more in-depth needs analysis to target impactful solutions. Additional strategic recommendations for the industry are provided at the end of this report, and a companion report of best practices and case studies is available for employers, titled *Strengthening Mining’s Talent Alloy: Practices in Inclusion* (MiHR, 2016 pending).



Introduction and Background

Diversity and Inclusion in the Context of the Labour Market

The Mining Industry Human Resources Council (MiHR) undertakes initiatives in support of Canada's mining and minerals industry, including efforts to help the sector address talent gaps and skills shortages. In support of these efforts, a program of research has been carried out to build understanding of the employment barriers that diverse talent pools face within the mining sector, and to identify strategies for greater engagement of these important human resources.

The current research study is an exploration of particular experiences and perspectives of some of the wide variety of people working in Canada's mining and minerals sector. While it is not a comprehensive look at the experiences of *all* people in mining, the research offers a fresh look at many topics. The personal experiences and perspectives complement MiHR's strategic view of the labour market dynamics in the industry, summarized below (MiHR, 2015). These fresh insights will support industry stakeholders in creating strategies to increase the sector's ability to engage new pools of talent in mining work.

Canada's mining industry – Facing critical long-term hiring needs despite the cycles

MiHR's labour market research (MiHR, 2015) has demonstrated that over the next decade, the mining industry will need to hire more than 106,000 workers, of whom more than 11,500 will be needed to fill new jobs.

With greater labour market tightness than other industries in Canada, employers are reporting difficulties in recruitment for trades and production occupations (reported by 85 per cent), engineers (63 per cent) and frontline supervisors (45 per cent). Underground production and development miners comprise the highest demand occupational group in Canada's mining industry, with a need to hire more than 5,000 workers in this group over the next decade.

Diversity of talent – A solution to hiring needs

A lack of workforce diversity has been identified as a factor that is limiting to a strong labour market in Canada's mining industry. There are several implications for mining stakeholders and prospective strategies to improve the breadth, depth and sustainability of the sector's labour market (see MiHR, 2015 for a comprehensive review). For example, there are opportunities to increase the involvement of Aboriginal peoples, particularly those in close proximity to mining operations. Women and immigrants are known to be underrepresented in the industry and offer well-educated, experienced and mature workers. The industry cannot afford to miss these and other opportunities.

Recruiting and retaining younger workers in the mining labour force is another important opportunity. The representation of 25- to 34-year-olds in the industry jumped almost 10 per cent from 2005 to 2011 (Statistics Canada data reported by MiHR, 2015), and this brings its own set of opportunities and challenges for effective retention, development and engagement. Younger workers lack the experience of many of their older peers, and have their generation's keen interest in career advancement while integrating a commitment to young families and a fulfilling personal life. People who are even earlier in their careers face uncertain employment prospects in the industry – they tend to experience greater unemployment, higher rates of part-time employment and have employment outcomes more sensitive to economic cycles. Such factors could discourage younger job seekers from pursuing mining careers.



Simultaneously, MiHR's most recent research (MiHR, 2015) has revealed that the industry has a rising annual retirement rate (1.8 per cent in 2015 to 2.5 per cent by 2025), and a younger average retirement age as compared to other private sector workers in Canada (62 vs 64). Such a wave of talent departures will undoubtedly create additional challenges for the industry.



The Research Process

Taking a Look from Many Angles

The multiple research methods in this study provide a unique look at the experiences and perspectives of employees in Canada's mining and minerals industry. Simultaneously, the project explored several *Practices in Inclusion*² that are being deployed by mining sector employers. Building on previous MiHR research, this work will contribute new insights to a national industry consultation on diversity and inclusion and the development of strategies on workforce diversity within the Canadian mining sector.

This study had both secondary and primary research elements, including an environmental scan of industry-relevant resources and literature; an online survey and interviews with mining workers; and consultations with industry representatives and stakeholders. In particular:

- 281 employees responded to an online survey
- 51 employees participated in personal telephone interviews to provide more insight into their experiences
- 19 representatives from employers and agencies (HR practitioners, hiring managers) participated in in-depth telephone interviews for case studies
- More than 50 representatives of industry employers and stakeholders participated in web-hosted or in-person research dialogue and consultation sessions

Research methods and protocols were authorized through the MiHR ethics review and approval process. Details of the research methods are provided in the Appendix.

² The strategies are included in a case study companion report titled *Strengthening Mining's Talent Alloy: Practices in Inclusion*.

New Research that Puts a Human Lens on Labour Data: A Cross-Section of Research Participants with Depth of Experience

The research participants brought a depth of experience that greatly enriched the process. The employees who completed the survey or participated in telephone interviews work in a range of occupations and a variety of mining contexts. In their current or most recent job, survey respondents reported being mostly professionals in technical / scientific fields (21 per cent), middle or line management / supervisors (18 per cent) or production / maintenance (16 per cent). Two-thirds of them were working for a large mining or minerals company, defined as having more than 500 employees.

The research participants also brought a range of personal characteristics. Their time in the industry ranged from less than one year to more than 25 years. Two-thirds had completed a college or university education. Sixty per cent were men; 40 per cent women. There were people who had immigrated to Canada; people who have disabilities or health concerns; parents and non-parents; and Aboriginal peoples. Key demographic characteristics of the survey respondents are presented in the Appendix.

The employer and stakeholder representatives were a mix of men and women, drawn from various sectors and regions of the mining industry. They included Aboriginal liaison professionals, human resources managers, representatives of immigrant-serving agencies, and industry leaders.



This research process involved a number of voluntary approaches – a survey, interviews, and dialogue sessions. The intent was to gather perspectives from a wide range of people in the industry; the research was not designed to assure a statistically representative sample of the Canadian mining workforce. Those who chose to participate are more highly educated than the overall mining workforce, and occupations such as labourer, skilled trades, and maintenance/production are under-represented among the employees who participated. The stakeholders and employer representatives had extensive experience with the full range of the mining workforce.

Useful and important insights have been generated by the research. Nonetheless, it is important to be cautious in generalizing the results to the overall mining workforce.



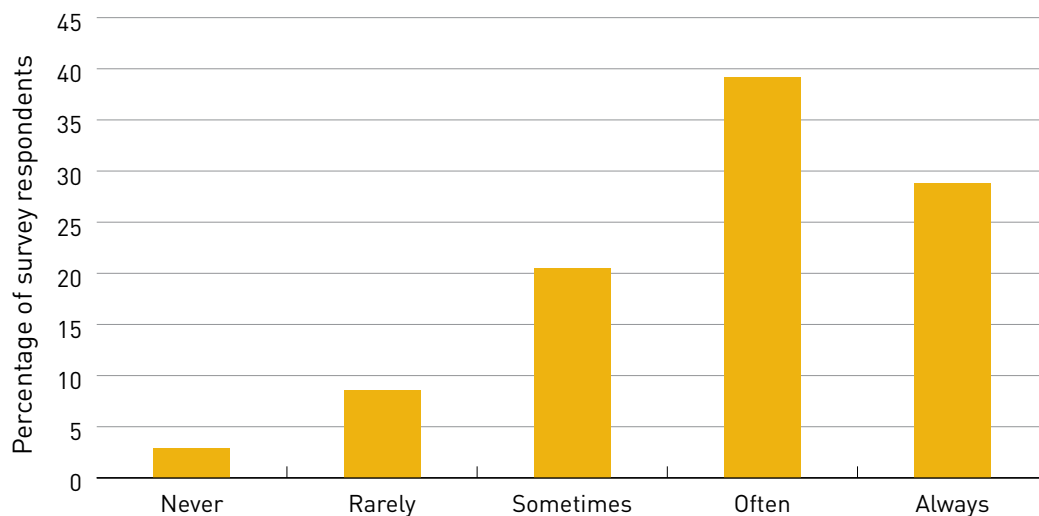
Findings

From Diversity to Inclusion: Employers are intentional about welcoming difference

Going beyond the numbers of “diverse employees,” or the diversity of the demographics, inclusion efforts show people that they are valued contributors to the work. Flexibility and attempting to respond to individual needs and interests is a hallmark of inclusion.

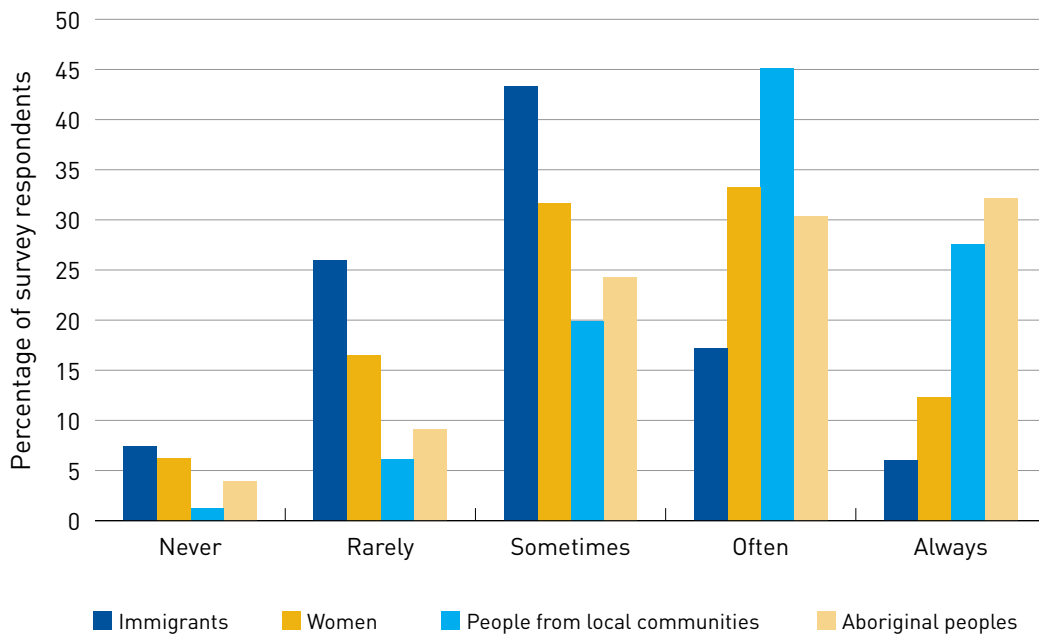
The survey respondents generally see that their employers are taking actions to create a workplace that is respectful and welcoming (see Figure 1). Nonetheless, one in nine respondents reported that their employer rarely or never takes action to foster the characteristics of an inclusive workplace.

Figure 1: How frequently my employer acts to create a respectful, welcoming workplace



With respect to specific groups of labour, employers are evidently focused on increasing the employment of Aboriginal peoples and local workers. This is consistent with employers' reports in the most recent MiHR national employer survey (MiHR, 2015), where 82 per cent indicated that hiring of Aboriginal peoples is a priority solution to their hiring needs, with also some focus (though noticeably less) on women and immigrants.

Figure 2: How frequently my employer acts to increase the hiring of this group



Survey respondents were given an opportunity to identify positive practices in their workplace. Specifically, the optional question was, “*What positive practices have you seen in your workplace(s)? What has helped people from different backgrounds to feel included and to succeed?*” Approximately 40 per cent of the respondents provided a comment. The comments were analyzed and categorized as: a negative comment (n=3), no comment (n=162), a general positive comment or practice (n=41), or a positive employer practice with an explicit diversity and inclusion focus (n=75).

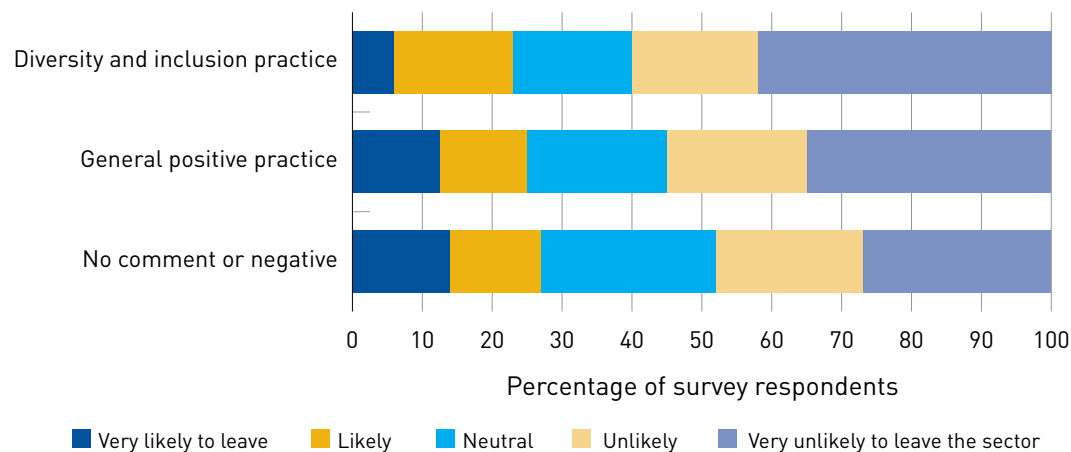
Approximately 15 per cent mentioned a general positive practice in their workplace, such as holding team meetings, distributing a newsletter or providing training. While not being specifically focused on a diverse workforce, they can start to lay the foundation for an inclusive workplace.

More than one-quarter of the respondents (75 respondents or 27 per cent) listed a successful diversity and inclusion practice of their employer. These ranged from: mentoring and targeted training programs, to having clear and enforced harassment policies, to building separate washroom facilities for transgendered employees.

Survey respondents were also asked to indicate how likely it is that they will look for another job outside of Canada's mining sector within the next five years. As shown in Figure 3, people who listed a successful diversity and inclusion practice from their employer were also more likely to report that they expect to stay in the mining sector beyond the next five years.



Figure 3: Diversity and inclusion practice and intentions to leave the sector



Drill down to the experience of integrating work and personal lives

A theme that cuts across all groups is the challenge of balancing work, personal and family commitments while working in the mining industry. Within the survey sample, Caucasian Canadian-born men who did not report a disability responded that they had “missed important events in their family or community because of work” somewhat more frequently than did people with at least one “diversity characteristic.”³ Overall, many of the research participants commented (both in the survey and in interviews) that this was a significant concern for them. Some of their employers are taking steps to provide more flexibility – a trend that is well appreciated by the survey respondents.

I work in a flexible workplace that recognizes the importance of commitment to family but when there are serious deadlines, I have chosen to ensure the work gets done and my family has understood the sacrifice.

(Immigrant woman; senior management role; planning to stay in the industry)⁴

My schedule is fairly flexible and the company I work for is very employee dedicated.

(Man in a supervisory role at a fly-in work site; planning to stay and highly recommends mining)

Work-life balance

With changing societal norms around family structures and roles, the increasing numbers of younger workers in the industry, and their generation’s strong values around the integration of work and family commitments, this will be an important issue for the industry to address.

However, it appears that these employers are the exception rather than the norm.

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³ This difference holds up even when controlling for age differences.

⁴ Comments are direct quotes from research participants, edited as required for brevity, clarity and/or to preserve anonymity. The meaning has not been affected.

Experiences with Mining's Workplace Culture

The survey included many questions to capture employee perspectives on their recent experiences in mining workplaces. Overall, workers who are “diverse” in some identifiable way – i.e., they identified themselves as being a member of a group that is a minority in mining – reported a different experience of the workplace than did the majority group.⁵

Majority group members gave more positive responses to a set of questions that reflect:

- I feel comfortable here; it is a good fit for me
- There is a respectful team atmosphere in my workplace
- The workload is not too heavy
- Ease of adapting to the mining culture
- Knowing people who could tell me about openings
- Knowing enough about possible careers in the industry
- Seeing the workplace climate as respectful
- Not having any personal experience of harassment, violence or bullying



Looking at the same issues through the lens of people outside of the majority – women, immigrants, people with disabilities and health concerns, Aboriginal peoples, workers whose first language is neither English nor French, members of visible minorities – it becomes clear that challenges remain. Overall, the experience of people is positive, but they do not describe their experience in mining as being *as positive*, on average, as do Caucasian Canadian-born men who did not report a disability.

It's still an “old boys’ club.”

[Several participants in survey and interviews]

There are always amazing individuals in each of these categories that break through the glass ceiling....but it comes with a lot of “scars” which they would argue might not have been worth the journey. For any of the “underrepresented” there is a requirement to go above and beyond the average in order to get promoted.

[Woman in a technical management role; would prefer to stay in the industry but expecting to leave]

⁵ A minority for this purpose includes anyone who reported being Aboriginal, or an immigrant, or a woman, or someone whose first language was not English/French or a person with a disability or current health concern. Research participants reporting more of these characteristics were considered as “more diverse” in several analyses. The “majority” group includes Caucasian, Canadian-born, English- or French-speaking men without reported disabilities.

Experiences of Aboriginal Women Respondents

There were 19 Aboriginal women who participated in the survey. Compared to the rest of the survey participants, the Aboriginal women in this sample were more likely to report that it was easy for them to find out about openings, apply for jobs and go through the hiring interview. This might well be an indication that employers have implemented practices to support the recruitment and selection process.

Nonetheless, within this research sample, the Aboriginal women were more likely to expect to leave the sector. Of the 19, ten reported that they were “likely” or “very likely” to look for another job outside of the sector within the next five years. Five responded “neutral” and only four replied they were “unlikely” or “very unlikely” to look to leave the sector. Although it is difficult to draw conclusions from a small sample, these responses are nonetheless in stark contrast to the remainder of the survey participants, as shown in Table 1.

Table 1: Percentage who report they are likely to leave the sector within five years

How likely is it that you will look for another job outside of the Canadian mining and minerals sector, within the next five years:

	Aboriginal women (n=19)	All others (n=256)
Likely or very likely	53% (n=10)	23% (n=60)
Neutral	26% (n=5)	22% (n=57)
Unlikely or very unlikely	22% (n=4)	54% (n=139)

Once hired, inclusive practices have an impact. Six of the nine who said they are at least “neutral” about staying with the industry described a positive practice that their employer has, “to help people from different backgrounds to feel included and to succeed.” These ranged from formal practices such as anti-harassment policies with safe reporting procedures to informal practices such as a Mine General Manager going out of his way to make a particular Aboriginal woman worker feel valued.

Of the ten who feel they are “likely” or “very likely” to leave the sector, some of them cited other positive aspects of their workplace, such as a strong focus on safety, regular team meetings, or employee-led social events that had no company involvement. However, not one of the ten mentioned a successful diversity-related practice implemented by their employer.

Almost half of the Aboriginal women (nine of the 19) reported having experienced harassment, violence or bullying in their workplace – of those nine, only one intends to stay in the industry. While this is clearly a small sample, it is a topic worth exploring in future research.

“My Generation” – Age and difference in perspective

The research sample included people from under 25 years old and just embarking on their careers to those above 65 who are moving into retirement. Not surprisingly, these groups have different perspectives. The different characteristics of the generations in today’s workplaces are widely described in the media and academic literature. Within mining, the current research allows a “drill-down” into the aspirations and challenges of each age cohort.

Drill down to the changes by decades – Advancement and security, supporting family, making money and leaving a legacy

As shown in Table 2 (see Appendix), the survey sample contained approximately 70 respondents in each of three age cohorts – age 25-34, 35-44 and 45-54. While there are still limitations to our ability to generalize from this sample to the overall mining workforce, there are nonetheless interesting comparisons that can be made among these three age groups.

25- to 34-year-olds One-third of 25-34 year olds reported it is “likely” or “very likely” that they will look for a job outside the sector within five years; another third was “neutral” about the possibility. Their comments in the survey offer some insights into their interests and concerns.

- People who said they are likely to stay mentioned various factors, mostly overall job satisfaction.

I enjoy my job and the people I work with.

(Several participants; planning to stay at current jobs)

- Career advancement is important. Many cited the lack of advancement potential as a key concern and a reason to look elsewhere.

Limited upward progression. Slow development. I am currently looking. ... Because the recession has prevented boomers from retiring, there are no vacant jobs for upward progression.

(Man in a technical role; planning to change jobs and would not recommend mining to others)

- Several individuals – both men and women – mentioned work-life balance as a determining factor in their career decisions.

My children are very young; working at a drive-to mine allows me to be home with them, instead of away in camp.

(Woman in a scientific professional role; planning to stay at current job)

I want to relocate closer to home.

(Man in an operational role; planning to make a career change)



I am working on a site to which I am bussed each day. There is very little flexibility or forgiveness It makes it difficult for our children to be involved in any activities ...

[Woman in a technical role; planning to change jobs within mining]

35- to 44-year-olds in this sample believe they are more likely to stay with the industry for at least five years; only one-fifth say it is likely or very likely they will look for a job outside the sector; and another fifth are “neutral.” Their comments revealed the following:

- Pay and benefits are important. Most of those who are planning to stay in the sector cite the compensation as a positive feature.
- Family considerations are a driver of career intentions (stay or change).

I would like to try and be home a bit more. Plans will depend on if family needs me at home more.

[Man in a professional technical role; considering a career move]

- An interest in changing jobs is sparked by either a desire for career advancement or by a need for job security.

I need to work. Love to work in the mine but am applying everywhere.

[Aboriginal woman; operational trades role; currently laid off and looking for work]

My ability to attain my career goals seems to be limited to some extent by my gender, specifically in terms of the opportunities that I’m provided access to and/or consulted on.

[Woman in a professional technical role; planning to change jobs within or outside of mining]

45- to 54-year-olds who responded to the survey are not inclined to look beyond the sector; approximately one-quarter say they are “likely” to look for a job outside the sector and one-fifth are “neutral.”

- Pay, benefits and upcoming retirement plans make it unappealing for this age group to consider leaving. Nonetheless, several indicated they would still consider opportunities.

Great company with great opportunities and a pension plan. Hope to retire with this company.

[Several participants; planning to stay at current job]



- Some expect to leave the sector by necessity if their work ends due to market conditions.

Until the industry picks up I will need to find some work. I have been doing part-time odd jobs to make ends meet.

(Woman in a professional scientific role; currently unemployed from mining)

- A few comments refer to the person's interest in "giving back," either within the industry by passing on knowledge or encouraging other women, or within the individual's home community by helping the Aboriginal community to become more self-sufficient.

I would like to help my community and my nation become healthy economically and socially; I don't think I will do that working within the mining industry.

(Woman in a professional non-technical role; planning to make a change)

- A few people indicated they are planning to make a career change so that they will have more equitable access to career advancement.

My skills are transferable and if I'm unable to move into a new and more challenging position here in the next year, I will look elsewhere.

(Woman in a professional non-technical role; considering a career move)

Overall, the participants who are 55 years of age or more are focused on retirement.

- They hope to stay in their current job until they retire.
- They are generally positive about the industry, and are quite likely to recommend it to others.
- A few indicated that they will be looking for more lucrative opportunities – internationally to earn higher wages, or in another industry out of necessity if there is no mining work in their location.

32 years in mining has been financially rewarding but I would like to do something different at home instead of packing a suitcase to go to work.

(Man in an operational role; considering a career change)

I enjoy my current situation teaching ... also might do some short contract work in mining as age/health permits.

(Man in a professional role supporting the industry; considering opportunities)

These observations demonstrate the extent to which age diversity within the sector brings both challenges and opportunities.

A critical challenge: People early in their mining career are concerned about the limited advancement opportunities they see within the industry. At the same time, they are starting young families and are concerned about their ability to integrate their work and personal lives in mining. In a labour market where skills are in short supply and employers are competing for talent, these young employees are likely to leave their current employer, and possibly the industry.

A promising opportunity: People approaching retirement are positive ambassadors for the industry. They are keen to help pass on their knowledge, mentor others, and support local communities in building capacity. Some are concerned about their health yet are still willing to take on less physically demanding roles where they can contribute.

Drilling down into health concerns and disabilities

A small number of the research participants identified that they have either a disability or perhaps a shorter-term injury or health concern. A few individuals spoke about challenges of work-related health issues.

[My job] is hard on the body regardless of [ergonomic features]... 12 hour night shifts.... Our minds fight the fatigue and our bodies react to that in ways such as dizziness, fatigue, hallucinations, vomiting.

(Aboriginal woman in an operations role; planning to leave the industry and would definitely not recommend mining to others)

I was bullied into resigning after I got hurt. I'm still injured. I'm hoping to be able to work soon.

(Aboriginal woman in an operations role; planning to return to the industry, would highly recommend it to others)

I left due to the small scale of the company and the overwhelming stress from the employer, along with my health conditions worsening from the job.

(Immigrant woman currently in a different industry; previously in a professional technical/scientific role; not planning to return to mining)

The sample size is very small, with only 14 respondents indicating a disability, injury or ongoing health concern. Nonetheless, this group is significantly less positive in some of their views of the mining workplace. They are less likely to plan to stay with the industry – none of them said they were “very unlikely” to look for a job outside the sector within five years. They are less likely to see their workplace as inclusive. Finally, while they might recommend the industry “in general,” they are significantly less willing to recommend it to “close friends or relatives who are similar to them.”

While many disabilities are independent of age, the overall prevalence of disabilities increases as the population or workforce ages. The mining industry will not likely be any different.



Summary and Conclusion

This research has added fresh insights and new perspectives to the understanding of some of the challenges and opportunities related to increasing workforce diversity and inclusion in Canada's mining and minerals industry.

This report complements the findings of the three reports in the *Strengthening Mining's Talent Alloy* series focusing on Aboriginal peoples, gender issues in the industry and the inclusion of immigrant talent. It identifies some themes that cut across the various dimensions of diversity – such as the value of employer efforts to create respectful and welcoming workplaces, the fundamental importance of recognizing and resolving work-life tensions, and the impact of different perspectives across the age groups in the mining workforce.

Categories can be helpful in understanding common perspectives and developing strategies. However, diversity can be defined as “all the ways in which we differ” and individuals are more than the sum of their labels. For example, Aboriginal women have experiences that are not simply the sum of the experiences of women and the experiences of Aboriginal peoples. While this report touched briefly on Aboriginal women as an example, there is much more work to be done to understand and respond to the dynamics of these intersections of difference.

At the time of writing this report in early 2016, the industry is confronted by a downturn in the mineral commodities cycle, with the Bloomberg World Mining Index at an 11-year low. The insights from this research show that there are many avenues for making significant progress without large expenditures. It would be beneficial for the industry to focus attention on diversity and inclusion now, in preparation for the next turn in the cycle.



Recommended Industry Strategies

There are a number of promising directions that were uncovered through the research process. While some of these possibilities might be explored in greater detail in future MiHR projects, others are feasible for rapid implementation by employers or the industry overall.

Nothing in the following recommendations is intended to suggest “reinventing the wheel.” There are many good tools and resources available that can be used effectively within the mining sector. In some cases, they are directly applicable; in others, best practices from other industries can easily be adapted and customized to the particular characteristics of mining workplaces.

Recommendation 1: Take action to foster a welcoming and inclusive workplace culture.

Provide training and education to employers and their workforces on the elements of an inclusive workplace culture. A special focus should be on:

- Building an awareness of unconscious bias and micro-inequities that are particularly relevant to a range of differences presented by today’s labour force.
- Clarifying what constitutes “harassment” and how to address it.
- Emphasis on creating a workplace characterized by respect.

Recommendation 2: Review workplace policies and practices to identify unintended systemic barriers.

Leverage the current GEM Works Toolbox that focuses on gender, to support employers in reviewing policies and practices to identify a wider range of unintended systemic barriers.

Recommendation 3: Focus on work-life integration challenges across the full range of employee groups (generations, genders, occupational groups, etc.).

- Explore innovative solutions to work-life integration such as personal leave policies, fly-in, fly-out (FIFO) work schedules, bereavement leave policies, and personal communication methods (telephone, internet, etc.) for connecting with family members. Simultaneously explore how to leverage the positive benefits that FIFO schedules can offer to some employees.

Recommendation 4: Conduct a needs assessment to develop industry-wide retention and career growth supports, such as:

- Sample occupational profiles and career paths that highlight possible links between mining work and important personal values – such as environmental sustainability, giving back to the community, or family time.
- Collaboration with stakeholders in the mining sector, professional associations and possibly other related industry sectors to explore possibilities for cross-sector career paths that would allow people with transferable skills to smoothly transition from mining during a downturn, and yet return when hiring needs expand again.
- Awareness and skill-building programs to support more inclusive and bias-aware promotion processes.



Recommendation 5: Expand the current research

- Extend the current research by exploring the dynamics of some of the identified issues for people who are working in labour, production and maintenance roles within the mining sector, those who work seasonally, and groups of talent that were not fully explored in this research.
- Conduct research to further investigate the intersections of various diversity characteristics, such as gender with Aboriginal status, generational differences, and occupational categories.



Appendix

Research Methodologies

Literature Review

This report is built directly upon the findings and recommendations from the first phase situational analysis. That earlier work, including a review of literature and key informant interviews, was instrumental in shaping the research methodology, including the key questions and potential sources of good practices.

Survey

A comprehensive online survey was made available to a broad spectrum of workers in the sector – those currently employed in the mining and minerals industry as well as those who had been employed in the sector within the previous five years.

The online survey, branded as a National Industry Discussion, and a Canadian Mining Industry Worker Survey, was hosted on the FluidSurveys platform from January to March 2015. The survey was available in both English and French. Alternative methods for completing the survey, such as printed copy, or telephone interview, were made available upon request.

In order to respond to the survey questions, individuals were required to meet the following criteria:

- Currently or recently (within the last five years) working in Canada's mining and minerals industry, including those working as an independent contractor, and those who worked with a company providing services to the sector.
- Willing to provide confirmation of informed consent, through providing a response to a consent confirmation at the start of the survey. Detailed information was available online for the respondent to review prior to completing the survey.

An incentive was provided to respondents – if they consented, their name was entered into a draw for one of ten \$50 VISA gift cards; they were not required to complete the survey in order to enter the draw.

To achieve an acceptable response rate, several methods of distributing the survey were utilized:

- Attractive and informative supporting materials:
 - Image for posting on social media
 - General poster targeted to workers, and one specifically for Aboriginal workers
 - Factsheet with information on the wider project
 - News release
 - Postcards for distribution at conferences (general and Aboriginal)
- A variety of media and outreach approaches:
 - News release distributed to all MiHR channels.
 - Posts on other MiHR social media: Mining Students in Canada Facebook, LinkedIn.
 - Materials distributed at four conferences: Immigrant Women in Mining, BC in November 2014, and Mineral Exploration Roundup and Northern Exposure in January 2015 and PDAC in March 2015.
 - Online portal to sign up for the survey, in advance of it becoming available in January 2015. This method was designed primarily to support the distribution of information at conferences and other events in advance of the survey period. Individuals who had “registered” in this manner were advised by email when the survey became available.
 - Three MiHR tweets daily prior to the launch of the survey, as well as each day it was live; re-tweets/favourites/new tweets from several partners such as PDAC, Hire Immigrants, Engineers Canada, Ontario Mining Association, Women Res Dev Corp, Mining Association of Canada, mining companies, NWT & NU Chamber of Mines, Immigrant Women in Mining - BC, Explore for More - BC, Graybridge Malkam and individuals.
 - Specific to Aboriginal employees, NationTalk distributed a fax blast to Aboriginal communities; project consultants made targeted calls to Aboriginal associations, ASETs, Friendship Centres and communities, following up by email with materials
 - Specific outreach to immigrant populations was supported by groups such as Centre for Excellence for Research on Immigration and Settlement (CERIS), Settlement. Org, Immigrant Women in Mining - BC, Explore for More - BC, Graybridge Malkam, immigrant-serving agencies and individuals.

- A collective cascading effort to raise awareness and distribute the survey link through networks:
 - By MiHR: to Board members, individuals who have participated in past projects on similar topics, committee members and other partners.
 - By project consultants: to networks, stakeholders from education, professional associations, agencies serving members of the target employee groups, Aboriginal organizations and economic development agencies in mining regions. We also followed up with immigrant and Aboriginal survey participants who had offered to participate in the next phase of the research, asking them to distribute the link.

Data were analyzed using SPSS, to produce descriptive and inferential statistics to explore patterns in the data. Any inferential statistics in the survey findings (such as differences in average scores between groups) that are presented throughout this report are statistically significant at $p < .05$, unless otherwise indicated.

Open-ended responses were subjected to a qualitative analysis, to identify themes and patterns that could aid in the interpretation of the quantitative survey data. These findings were also helpful in framing the interview and focus group research questions.



A total of 357 people provided some responses to the survey; the data set for this research included the complete responses from 281 people. Demographics of the sample are reported below.

Telephone Interviews

Telephone interviews were conducted with a total of 51 current or recent workers in Canada's mining and minerals industry. Most of these individuals were among those who had volunteered for follow-up interviews upon completing the survey; others were identified through contacts with industry stakeholders.

The purpose of the interviews was to explore themes emerging from the online survey, with a particular focus on the workplace culture, experienced barriers and the interviewees' career history. Interviews were conducted by telephone and lasted approximately 45 minutes.

Transcripts from the interviews were offered to interviewees for validation and confirmation of accuracy. They were then combined with the focus group transcript (see below) into one qualitative data set and subsequently analyzed using the NVIVO qualitative analysis tool to identify key themes and patterns.

Focus Groups and Industry Dialogues

Eight consultation sessions of 90-120 minutes were conducted with representatives of industry employers and stakeholders either online or in person. These sessions were designed to gain a more in-depth understanding of themes emerging from the online survey, supplement the interviews, identify good practices in place within the industry, and ensure that the research and the findings were grounded in the industry's operational reality. In total, the sessions included more than 50 participants, all of whom have extensive experience with issues of diversity and inclusion within Canada's mining and minerals industry.

The transcript from the sessions was integrated with the interview transcripts and subsequently analyzed using the NVIVO qualitative analysis tool to identify key themes and patterns. The questions and themes being explored in the interviews and focus groups were similar; as such it was appropriate to combine the transcripts for the analysis. The source of comments was retained, so that if there were trends or important differences in perspectives, these could be identified and reported.

Case Study Interviews — Practices in Diversity and Inclusion in Mining

Based upon the previous MiHR research and literature review, as well as the industry experience and insights of the Research Steering Committees, 19 successful or promising programs, policies and practices were identified for the purpose of documenting successes and key learnings in a series of case studies. The goal of documenting case studies was to help inspire industry stakeholders to implement similar measures for enhancing the inclusion of diverse talent pools within their organizations and the industry overall. The research methodology is described in the companion report, *Strengthening Mining's Talent Alloy: Practices in Inclusion*.

Data collection tools

Several tools were created to support the primary research in this project:

- Online survey, in English and French.
- Interview protocols and scripts for telephone interviews with Aboriginal peoples, as well as men, women and immigrants currently or recently working in the Canadian mining and minerals sector.
- Focus group protocols, scripts, communiqués and facilitation plans for consultation sessions with employers and stakeholders – the sessions were conducted in English, and translation into French was made available upon request.
- Key informant interview protocol and script for documenting case studies.

Copies of these tools are available from MiHR upon request.

Selected Survey Data Tables

Survey

A total of 281 individuals provided full responses to the online survey. Certain analyses have smaller sample sizes due to missing data on particular questions.

The survey was open to people currently employed in the industry as well as those “recent leavers” who had worked within the industry within the last five years and are now either temporarily or permanently not working in the sector. Within the sample, 90 per cent were currently employed in the mining sector, and 10 per cent were “recent leavers.”

Key demographic characteristics of the complete sample are presented below. Descriptions of the samples for the Aboriginal, gender, and immigrant focus studies are presented in the companion reports in this *Strengthening Mining’s Talent Alloy* series. In summary:

Ethnic background:	Aboriginal peoples accounted for 12 per cent of the survey sample; 5 per cent of the respondents considered themselves to be members of a visible minority (excluding Aboriginal peoples); and approximately 11 per cent of the respondents were immigrants to Canada.
Occupation:	In their current or most recent job, survey respondents reported being mostly professionals in technical / scientific fields (21 per cent), middle or line management / supervisors (18 per cent) or production / maintenance (16 per cent).
Employer:	Two-thirds of the complete sample were working in large mining companies, defined as having more than 500 employees.
Gender:	59 per cent of the survey respondents were men; 41 per cent were women.
Age:	78 per cent of the participants were between 25 and 54 years of age (equally distributed in 10-year age cohorts). The remainder were below 25 or over 55.
Family status:	Most respondents (76 per cent) were married or in a common-law relationship.
Education:	The survey respondents were well educated, with two-thirds having completed college or university.
Years in the industry:	Over half of the respondents were relatively early in their mining career, with under ten years in the industry. Just over one-fifth of the respondents (21 per cent) reported they have been in the industry more than 25 years.
Location:	Respondents’ work locations were drawn from eleven provinces or territories, with BC accounting for 43 per cent of the overall sample.

Table 2: Demographic characteristics of the survey respondents

	Total Survey Sample (n=280)
Gender	
Man	59.5%
Woman	40.5%
Age of respondent	
18–24 years old	5%
25–34	25%
35–44	25%
45–54	28%
55–64	15%
65 or above	2%

Figure 4: Community of current residence reported by survey respondents (n=279)

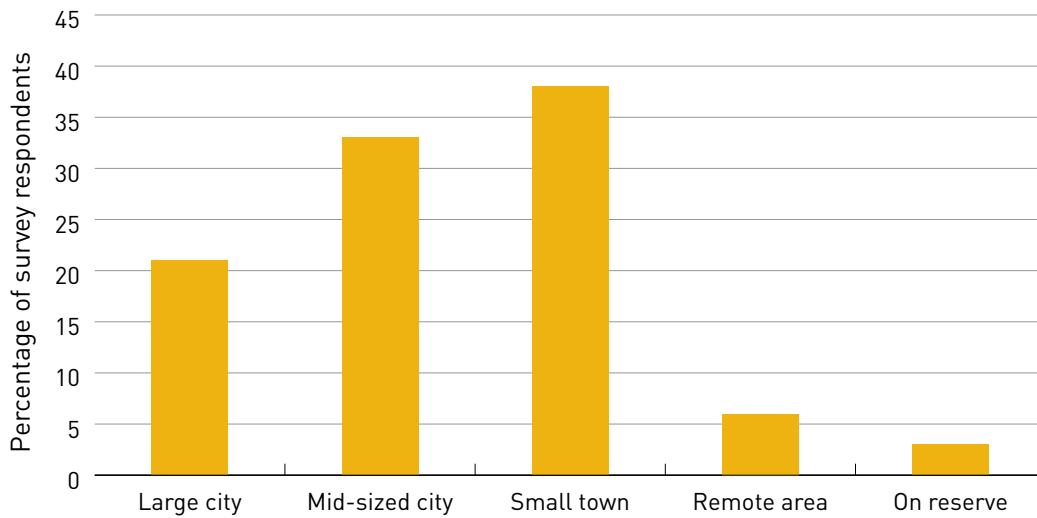
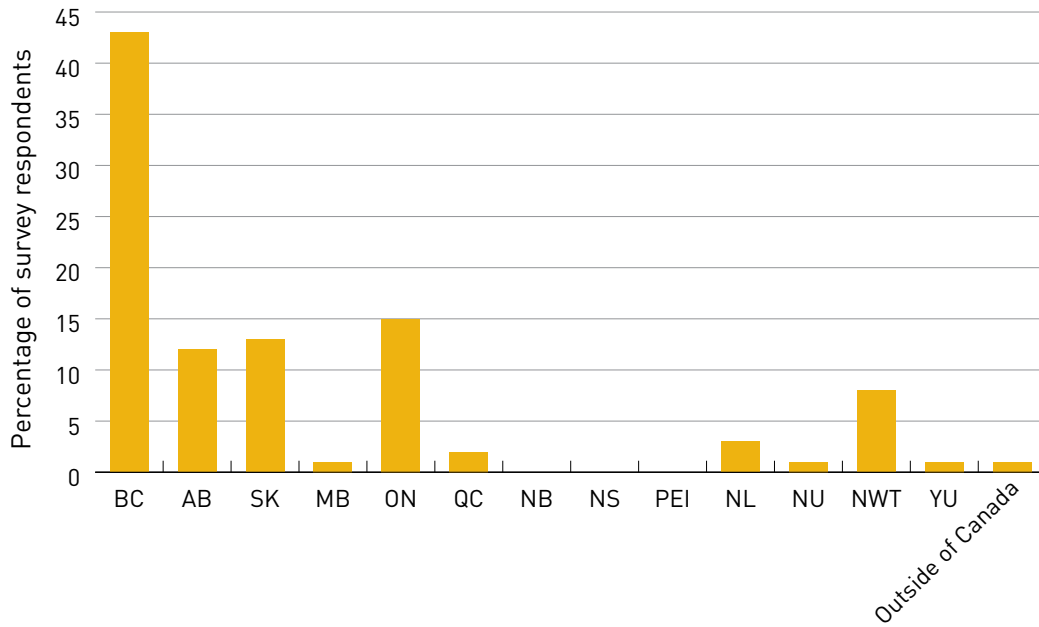


Table 3: Work-related demographics of survey respondents; Aboriginal and Non-Aboriginal

Total Survey Sample (n=280)	
Completed post-secondary education in a mining-related field	
Yes	24%
No. of years in Canadian mining sector	
Less than 1	5%
1–5	24%
6–10	27%
11–15	10%
16–20	7%
21–25	5%
More than 25	21%
Current (or most recent) occupation	
Clerical and Support	2%
Labourer	5%
Production / Maintenance	16%
Technical and Skilled Trades	7%
Lead hand or Foreman	5%
Professional – Technical and Scientific	20%
Professional – Admin., HR, Legal, Finance, etc.	11%
Middle and Line Management / Supervisor	18%
Senior Management	10%
Other	7%
Current (or most recent) employer	
Self-employed, contractor, consultant	5%
Company providing services to mining	10%
Small mining / minerals company (<500)	16%
Large mining / minerals company (>500)	66%
Different industry, NOT mining or minerals	1%
Other	1%

Figure 5: Province of work reported by survey respondents (n=279)



References

- MiHR. (2015). *Canadian Mining Industry Employment, Hiring Requirements and Available Talent: 10-year Outlook*. Ottawa: Mining Industry Human Resources Council.
- MiHR. (2016 pending). *Strengthening Mining's Talent Alloy: Practices in Inclusion*. Ottawa: Mining Industry HR Council.



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