Labour a Key Influencers of a Project’s Financial Success: BC Mining Perspective

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CENTRE OF TRAINING EXCELLENCE IN MINING
Today’s Presentation

• CTEM Overview
• BC Mining Labour Market Information
• Questions and Discussion
A province-wide virtual hub that facilitates collaborative, innovative training opportunities for the British Columbia mining industry, job seekers and communities.
CTEM’s Influence – Provincial and Global
Significance of Skills Shortage Impact on Projects

### Top 10 risks 2013

<table>
<thead>
<tr>
<th>Rank</th>
<th>Risk Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Capital dilemmas – capital allocation and access (new in 2009)</td>
</tr>
<tr>
<td>02</td>
<td>Margin protection and productivity improvement (was cost initiation)</td>
</tr>
<tr>
<td>03</td>
<td>Resource nationalism</td>
</tr>
<tr>
<td>04</td>
<td>Social license to operate</td>
</tr>
<tr>
<td>05</td>
<td>Skills shortage</td>
</tr>
<tr>
<td>06</td>
<td>Price and currency volatility (new in 2010)</td>
</tr>
<tr>
<td>07</td>
<td>Capital project execution (new in 2011)</td>
</tr>
<tr>
<td>08</td>
<td>Sharing the benefits (new in 2012)</td>
</tr>
<tr>
<td>09</td>
<td>Infrastructure access</td>
</tr>
<tr>
<td>10</td>
<td>Threat of substitutes (new in 2013)</td>
</tr>
</tbody>
</table>

### Over six years 2008

<table>
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<th>Rank</th>
<th>Risk Description</th>
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<tbody>
<tr>
<td>01</td>
<td>Skills shortage</td>
</tr>
<tr>
<td>02</td>
<td>Industry consolidation (not a threat in 2013)</td>
</tr>
<tr>
<td>03</td>
<td>Infrastructure access</td>
</tr>
<tr>
<td>04</td>
<td>Maintaining a social license to operate</td>
</tr>
<tr>
<td>05</td>
<td>Climate change concerns (under the radar in 2013)</td>
</tr>
<tr>
<td>06</td>
<td>Rising costs (margin improvement)</td>
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<tr>
<td>07</td>
<td>Pipeline shrinkage (under the radar in 2013)</td>
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<tr>
<td>08</td>
<td>Resource nationalism</td>
</tr>
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<td>09</td>
<td>Access to secure energy (under the radar in 2013)</td>
</tr>
<tr>
<td>10</td>
<td>Increased regulation (under the radar in 2013)</td>
</tr>
</tbody>
</table>

Remained in the top 10 over six years

Preparing for the Future:
Mining Labour Market Outlook for British Columbia
Key Recognition

Funding provided through the Canada-British Columbia Labour Market Development Agreement.
Mining is an important sector in BC
Mining is one of the major contributors to BC’s economy


Source: Statistics Canada. Table 379-0028 — Gross domestic product (GDP) at basic prices, by North American Industry Classification System (NAICS), provinces and territories, annual (percentage share), CANSIM (database), (2016)
Mining Generating Jobs & Boosting Economies

- 3-15% of employment in a country is mining (direct, indirect and induced)

- 2-20% of Economic Contribution
  - Fluctuate between countries and over time
  - BC’s 8.7 Billion of gross mining revenue (2016)

Significance of Skills Shortage

Mining employers need a continuous flow of individuals through the “talent pipeline” to ensure they have a sufficient pool of qualified workers to meet future hiring requirements and support competitiveness and growth in the mining industry in British Columbia.

Source ‘Preparing for the Future: Mining Labour Market Outlook for British Columbia 2016 - 2026"
A look at the future
If the mining industry expands, there will be a need to hire up to 20,000 workers over the next 10 years.

Forecast of mining employment in BC by scenario (1987–2026)

Source: Mining Industry Human Resources Council, (2016)
Hiring requirements persist in all economic scenarios

**BC cumulative hiring requirements forecast by scenario (2017–2026)**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Net Change in Employment</th>
<th>Replacement Requirements</th>
<th>Cumulative Hiring Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Retirement</td>
<td>Non-Retirement</td>
</tr>
<tr>
<td>Contractionary</td>
<td>-5,985</td>
<td>6,670</td>
<td>6,295</td>
</tr>
<tr>
<td>Baseline</td>
<td>-730</td>
<td>7,415</td>
<td>7,015</td>
</tr>
<tr>
<td>Expansionary</td>
<td>3,980</td>
<td>8,105</td>
<td>7,690</td>
</tr>
</tbody>
</table>

*Source: Mining Industry Human Resources Council, (2016)*
Impact on Financing (CAPEX and OPEX)
Labour needs over a project cycle

Struggle to be Ready (a.k.a. the RISKS)

Individual
- Timing
- Job alignment / availability
- Cost of training
- Transferability
- Personal/Family
- Bridge to Employment

Company
- Delays in starting
- High capex cost
- Cost of training
- Retention
- Social Benefits
- Bridge to Employment
Consequences

Individual
- Timing
- Job alignment
- Cost of training
- Transferability
- Personal/Family

Company
- Delays in starting
- High capex cost
- Cost of training
- Retention
- Social Benefits
Skills Miss-Match

• Alignment of Training Opportunities
• Skill Transferability
  • Mining Life Cycle
  • Projects & Sectors
• Skills Upgrading
Job Postings

BC Mining Companies Advertise Job Opportunities on...
- Company Websites
- Sector Specific Job Sites

Skilled Immigrants Search for Jobs on...
- Government Job Banks
- Non-sector Specific Job Sites (ex. Monster)

Significance of Skills Shortage

“The focus on ‘Canadian experience’ combined with other biases employers may harbour not only costs employers their competitive edge, but it can cost them the opportunity to be innovators in their field.”

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THANK YOU
Questions?
Recommendations in the report
Collaboration is an Answer
Key sources of labour supply

1. Strengthen collaborative partnerships between employers and government to support labour market information collection and strategies for attraction, retention and transition of mining workers through mine life cycles.

2. Build upon findings to develop strategies to address critical job vacancies and support a sustainable workforce.
Destination of domestic mining exports from BC
Factors for Leaving

50-50 Split

Sales

- Retirement
- Attrition