

**STRATEGIC ANALYSIS AND MITIGATION STRATEGIES TO ADDRESS THE  
HUMAN CAPITAL RELATED BUSINESS RISK TO TECK**

by

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## **Abstract**

Teck Resources, headquartered in Vancouver, is Canada's largest diversified mining and metals company with operations in North and South America. Teck is actively exploring the globe for new opportunities. This project assesses the human capital challenges facing Teck, and the potential business risk that the shortage of human resources presents. After examining Teck's demographic profile, growth plans and the global demand for human resources, this paper found that Teck must continue to focus on enhancing all of its human resources programs. The paper also identifies four priority areas for strategic initiatives, and the need for a longer-term human resource strategy, including establishing a globally recognized employment brand and a competitive employment value proposition. Teck must become visibly more attractive than most of its competitors in the areas of attracting, developing and retaining human talent if it is to be successful in the increasingly competitive global mining and energy market.

## **Executive Summary**

Teck Resources is Canada's largest integrated mining and metals company. It owns or has interest in 14 operations in Canada, Chile, Peru and the United States of America. In addition to its existing operations, Teck is actively exploring future opportunities throughout the Americas, Asia Pacific, Europe and Africa and is currently pursuing four-advanced projects.

The retention and attraction of quality employees is the greatest challenge facing Teck as it works to sustain its current operations and realize its forecast growth. At Teck, we talk about our people being our # 1 resource; they will soon be our scarcest resource.

Three events are coming together to create the "perfect storm" on the people front:

1. Teck's demographic profile in North America is heavily weighted towards employees that are in the later stages of their career and moving towards retirement. In Canada alone, out of a total workforce of just over 7,000 employees, Teck has more than 3,500 employees over the age of 50. Teck's demographic profile is a reflection of North American, and in particular Canadian, demographics. As a result of this North American demographic profile, Teck and other employers will be facing the same pressure, with a large number of their employees retiring and thus needing to be replaced by new employees.
2. The second driver of human capital shortage at Teck is its aggressive growth plans. Teck has publicly announced 40% growth in its Copper and 50% growth in its Coal business units in the next four years. Teck's growth plans will mean that not only does it have to deal with the demographic challenge and replace the employees that are retiring but it will also need to attract a significant number of additional employees to meet its growth targets and expanded production needs. For Teck's four advanced projects alone, it will require approximately 2,800 additional employees between 2011 and 2018.
3. The third driver of human capital shortage at Teck is the unprecedented high global demand for natural resources. This increased demand for natural resources

is creating a shortage of supply, and driving record commodity prices. In turn, this is leading to aggressive growth in the mining and energy sectors. It is estimated that the mining industry in Canada alone will require 53,000 new employees in the next five years, 100,000 in the next 10 years. Globally the demand is staggering. Australia, South America, Africa, China and other mining activity hot beds have even greater demands than Canada. This increased demand and aggressive growth is creating a significant talent shortage.

The demographic realities coupled with the unprecedented global demand for raw materials is creating a huge talent shortage and fuelling a war for talent within the global mining and energy sectors.

To win this war for talent, Teck must change the rules of the game. Teck will need to be strategic and smart if it is to avoid being trapped in a bidding war for talent that materially affects its profitability at a time when other factors make strong profits realistic. For the next 10 to 20 years, the profitability of firms may be determined as much by their access to the human resources required as to the resources themselves. Just as with access to defined ore bodies, access to skilled people will be competitive. Strategies are required to attract and keep the best people in the face of other companies trying to do the same.

Given Teck's overall strategy of expansion at existing operations and the development of new operations, it will not be good enough to improve attraction, retention and employee development. Teck will need to become visibly more attractive than most of its competitors in these three areas if it is to be successful in attracting and retaining the human resources required to execute its growth strategy.

*To my wife, Susan*

*For her unwavering dedication, encouragement and support*

*To my son, Aiden*

*For his patience and understanding*

## **Acknowledgements**

The Teck MBA Cohort, instructors, and students for their guidance, sharing of experiences and opportunity to grow.

My Human Resource colleagues, for their support and insight.

The executive and senior management of Teck Resources for this opportunity and for their support in implementing human resource initiatives to continually improve what it means to be an employee of Teck Resources.

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## **Glossary**

- Attrition** All employees who leave the organization, includes turnover, retirements and deceased.
- EVP** Employment Value Proposition is the balance of rewards and benefits that are received by employees in return for their performance at the workplace.
- Turnover** Number or Percentage of employee that leave the organization by means other than retirement, deceased or layoff.

# **1: Introduction**

This paper will assess the human capital challenges facing Teck Resources. As shown in this paper, human capital challenges are the number one business risk to Teck's ability to sustain and grow its business.

The problem is significant: when combining the impact of Teck's demographic profile, aggressive growth plans and voluntary turnover, Teck will need to attract, hire and develop in excess of 5,000 employees in the next five years and over 10,000 employees in the next ten year period. These numbers are based on Teck's demographic profile, current, relatively low turnover rates and the four advanced projects that Teck has publicly announced and is currently moving through the various stages of approval. These numbers could rise significantly if voluntary turnover increases or if Teck advances more of the projects currently in its pipeline.

This paper serves as a starting point aimed at defining the nature of the challenge, identifying the most urgent pinch points and organizational changes required to address the short term human resource challenges, and some of the key elements of a global strategy to move Teck out in front of the pack, positioned to win the war for talent. The paper does not attempt to lay out a comprehensive longer term strategy because the issue is complex and interlocked with many factors that Teck is not in a position to control such as the moves other companies and industries make, and the future rate of industrialization in BRIC countries, to name but two. What it does do is identify several important first steps to ensure that Teck is positioned for the future and engaged in the kind of planning and monitoring activities that are required to manage this important business risk.

## **2: Teck Resources**

Teck Resources, headquarter in Vancouver, is Canada's largest diversified mining and metals company and one of the largest companies in Canada. Teck is a world leader in the production of copper, steelmaking coal and zinc. Teck also produces specialty metals, and has interests in several oil sands development projects.<sup>1</sup>

### **2.1 History**

This section demonstrates how Teck's long history, long life operations and growth through mergers and acquisitions have compounded the demographic challenges that the organization is now facing.

Teck and some of its predecessor companies were founded in the early 1900's and have therefore been around for more than a hundred years. Teck's long history and many long life operations, coupled with the downturn in the mining industry through the 80's and 90's which resulted in the layoff of younger unionized workers and retention of older unionized employees, have left Teck with an aging workforce and compounded the magnitude of the demographic challenge that Teck is currently facing.

An additional contributing factor is that Teck's growth has come through the merger and acquisition of many companies over the past one hundred plus years.<sup>2</sup> This growth through mergers and acquisitions has led Teck to historically have a very decentralized organizational structure where individual operations were responsible for all functions within that operation. This decentralized organizational structure has lead to a management approach where site management is focused only on the individual operation and its specific needs and challenges. It has only been in the past couple of years that Teck has taken a more centralized approach to some aspects of its business where a broader organizational and industry wide view is required. An example of this would be in the area of human resources. The human resource function was restructured in early 2009. As a result of this restructuring, a senior corporate human resource person, reporting to the Vice President of Human Resources, is assigned responsibility for a

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<sup>1</sup> Teck Resources Website

<sup>2</sup> Teck Global Intranet, Company History

business unit and a functional area of corporate human resources. This restructuring has led to an increased focus on aspects of human resources such as succession planning, employee development and recruiting being assessed on an organization wide basis. As a result of this restructuring and Teck-wide review of human resources, there has been increased awareness of the demographic challenge facing the organization.

## **2.2 Control and Ownership**

Teck's unique dual class share structure has enabled it to survive as an independent organization in spite of significant international consolidation within the mining industry, which has swept away most other large Canadian mining companies.<sup>3</sup> This protection from takeover, and long operating history, mean that Teck is likely to be able to survive well into the future and therefore must develop long term strategies around key business risks including finding and developing the people it needs to succeed and meet its business objectives.

## **2.3 Teck's Strategy**

Teck's strategy involves significant growth over the coming decade. The following section reviews Teck's strategy and how it influences the demand for human capital and the re-skilling of the workforce.

According to the business overview on the investor section of the Teck Resources web site, Teck's strategy is

“to build a diversified mining company, active in low-risk jurisdictions, with a solid Canadian base. Our strategy is based on the belief that over the long-term, a diversified mining company is more highly valued than a single commodity company as we are able to pursue the best mining investment opportunities and not be constrained by commodity”.<sup>4</sup>

In 2008, Teck organized itself into commodity focused business units. The restructuring more clearly defined Teck's breadth and strength as a diversified mining company with greater focus and accountability in each commodity area. A senior executive manages each of these

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<sup>3</sup> Control of Teck is through the Class A common shares and Class B subordinate voting shares. The Class B subordinate voting shares represent 38.3% of the aggregate voting rights attached to the Class A common shares. Teck is dual listed on both the Toronto (TCK.a and TCK.b) and New York (TCK) stock exchanges. :Teck Resources Website

<sup>4</sup> Teck Resources Website

business units with full responsibility for the performance of the business unit, including establishing growth strategies and project identification and development.<sup>5</sup>

Teck currently owns or has interest in 13 mining operations in Canada, Chile, Peru and the United States of America, which produce metallurgical coal, copper and zinc. Teck also owns and operates a lead /zinc metallurgical complex in western Canada. In addition to its existing operations Teck is actively exploring for future opportunities throughout the Americas, Asia Pacific, Europe and Africa.<sup>6</sup>

Teck's North American operations are concentrated in Western Canada and the North Western United States. The majority of Teck's operations in South America take place in Chile. However, the Antamina mine in Peru, a joint venture operation, is a significant copper and zinc producer. As an integrated mining company, Teck needs to continually replenish its mineral reserve base. In addition, growing the mineral reserves raises the value of the company. With these two objectives in mind, Teck has developed an ambitious growth schedule for the next 8-10 years. Production, from currently operating mines in Canada and Chile, is being ramped up to take advantage of the high commodity prices. These two countries will also host new projects and expansions, with construction potentially commencing as early as 2011. Production increases from current operations and development of new projects are expected to increase copper and coal output over 2009 levels by 40% and 50%, respectively over the next 4 years. Figure 1 below provides a summary of Teck's global operations and the key projects being developed.

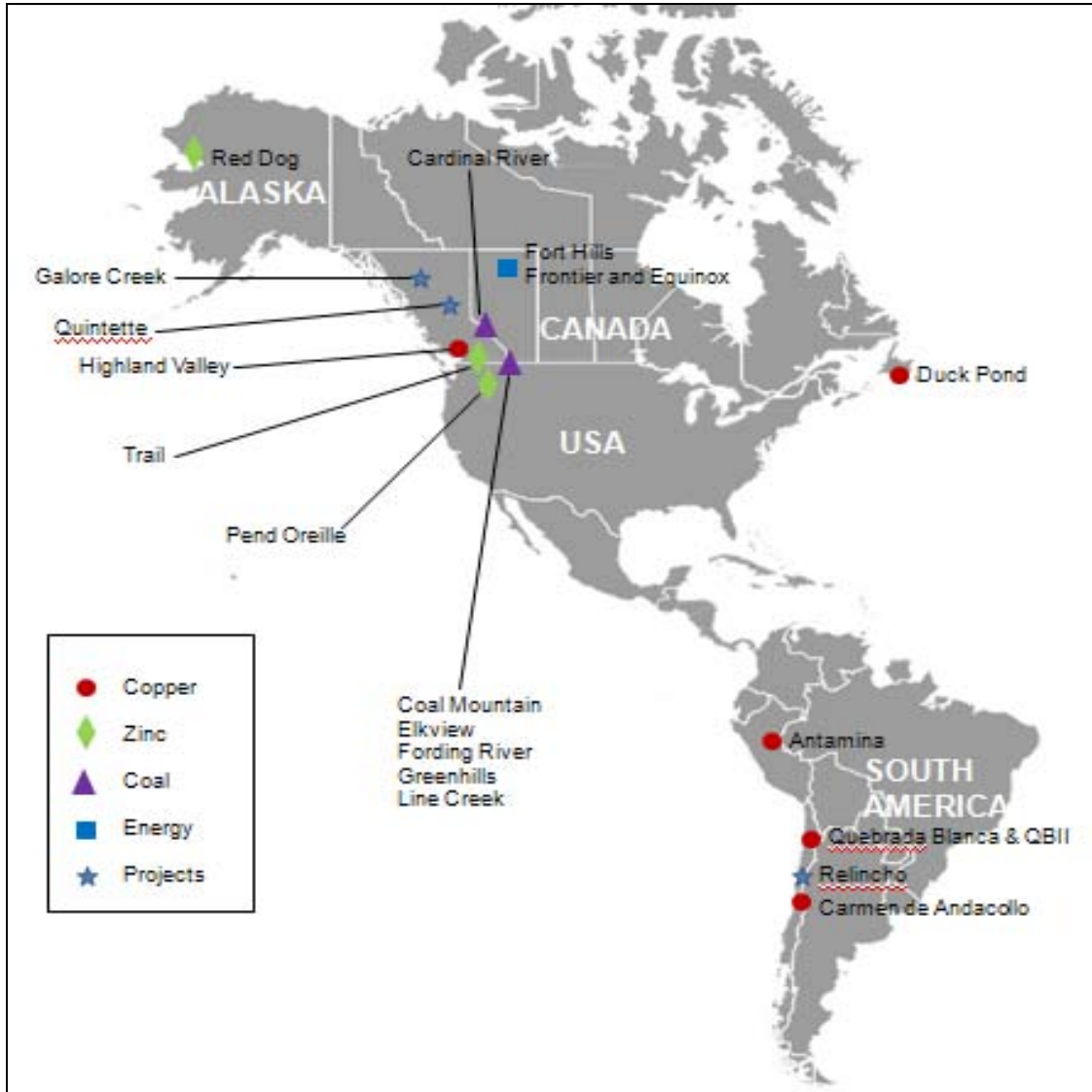
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<sup>5</sup> Teck Internal Announcement, August 2008

<sup>6</sup> Teck Resources Website



Figure 1 Teck Global Operations



Source: Figure by Author, data from Internal Teck Reports

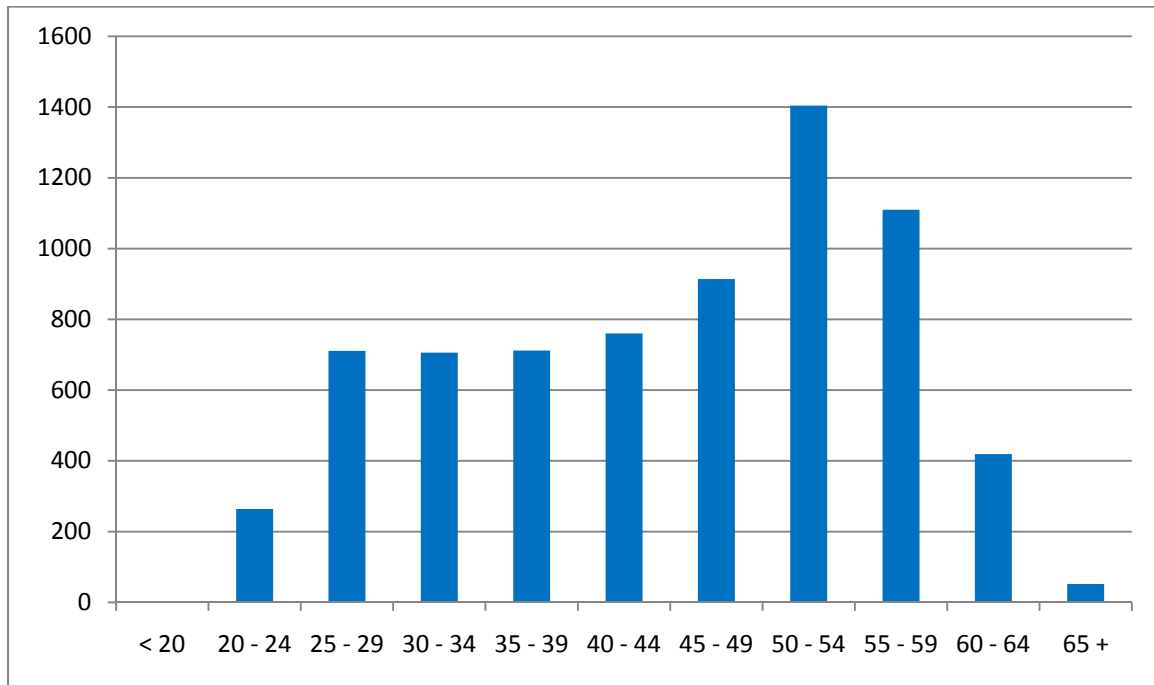
### **3: The Problem**

The problem addressed in this paper is the business risk to Teck due to a human capital shortage. This section demonstrates that Teck has a pending human resource shortage, and that the magnitude of this future human resource shortfall creates a significant business risk for Teck. This shortage of human resources is a result of three key drivers; demographics, Teck's aggressive growth plans, and the significant increase in the global demand for natural resources, which is driving a very competitive environment for skilled employees now and for the next 10 to 20 years.

#### **3.1 Demographic Challenge**

The demographic profile both within the Teck workforce and the North American population in general is heavily weighted towards employees that are in the later stages of their career and moving toward retirement. In Canada, out of a total workforce of just over 7,000 employees, Teck has more than 3,500 employees over the age of 50. Likewise, the demographic profile of North Americans and in particular Canadians is very similar to the demographic profile of Teck's employees. As a result of this North American demographic profile, Teck and other employers will be facing the same pressure, with a large number of their employees retiring and thus needing to be replaced by new employees. This North American demographic profile also impacts the pool of potential candidates available to Teck and other companies as they work to replace employees retiring from their organizations. These demographic drivers of human capital shortage are demonstrated in the two figures below.

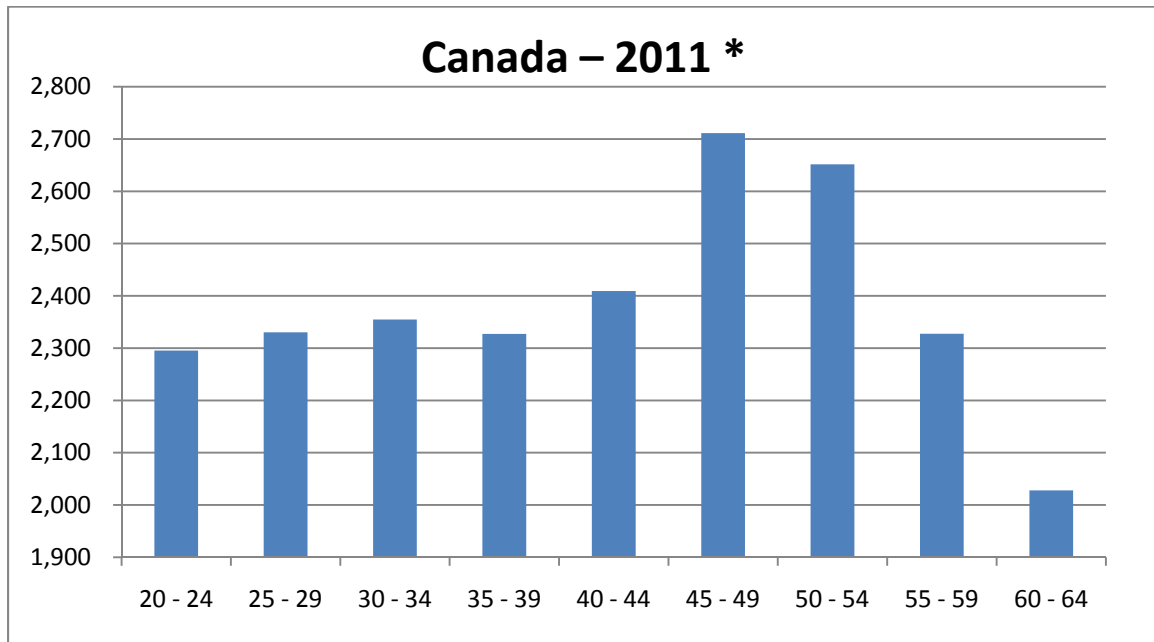
Figure 2 Teck Canadian Employee Demographics



Source: Figure by Author, data from Internal Teck Reports

Figure 2 above outlines Teck's overall Canadian employee demographic profile and clearly shows the heavy weighting in the 50 plus years of age categories. Figure 3 below, demonstrates that the overall Canadian demographic profile is also heavily weighted towards an older population. Of note when comparing these two figures is that Teck's Canadian employee demographic profile has the heaviest weighting in the 50 to 54 category followed by the 55 to 59 categories when compared to the overall Canadian population which has the greatest representation in the 45 to 49 category followed by the 50 to 54 category. This clearly makes Teck's demographic profile and challenges associated with an aging work force even more severe than the demographic challenges of the broader Canadian population.

Figure 3 Canada's National Demographic Profile

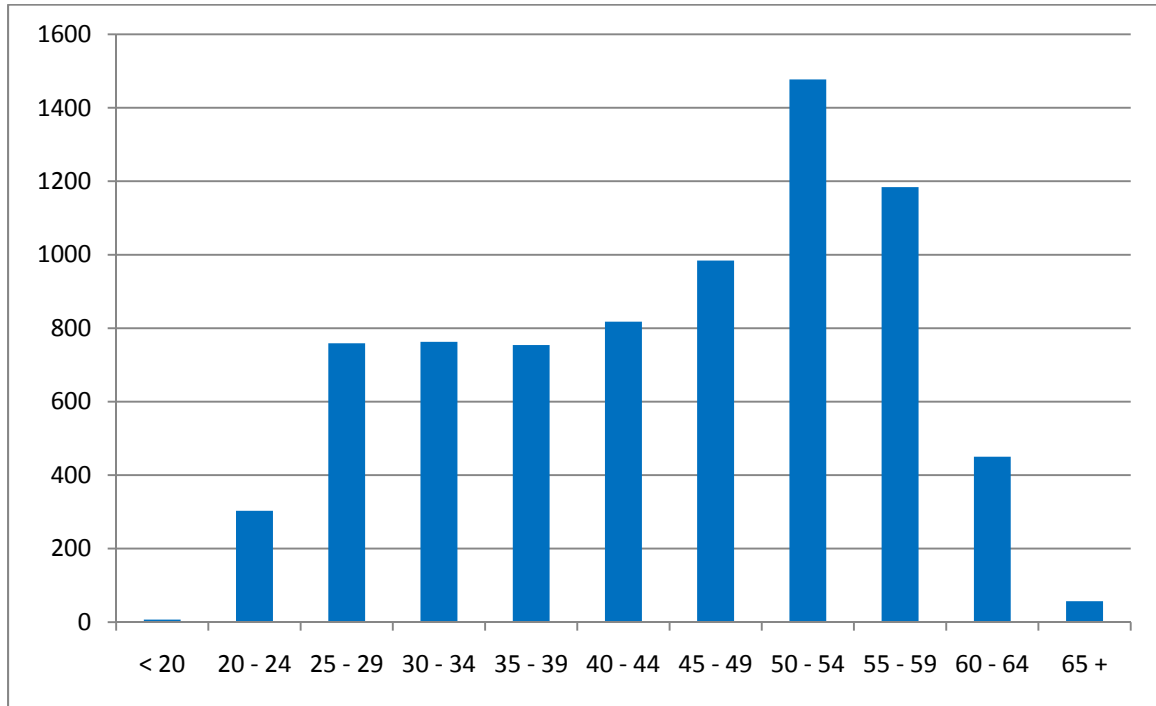


Source: Figure by Author, data from Statistics Canada, 2005 Medium Growth Projections

### 3.1.1 Narrowing the Demographic Focus

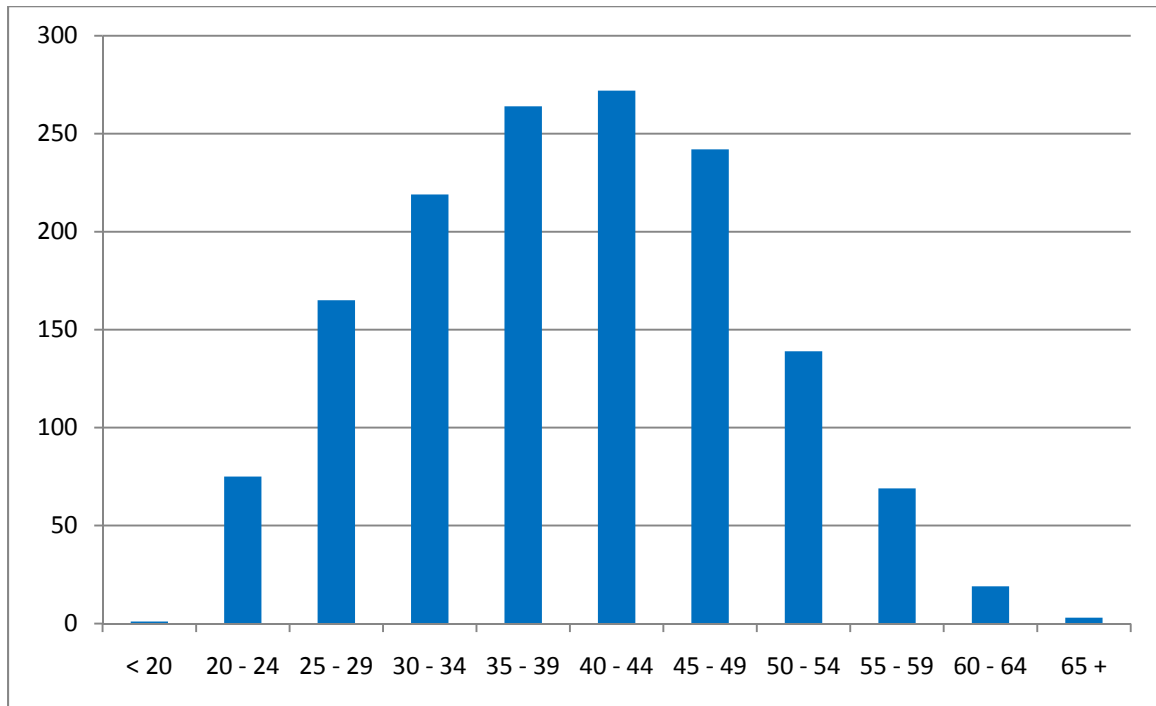
A review of Teck's demographics for North and South American operations reveals that the challenge of an aging workforce is largely an issue for Teck's North American operations. The significant differences in demographics are demonstrated by the two figures below. North American Operations have a heavy weighting of employees over the age of 50 while South American operations have a much more balanced demographic profile.

Figure 4 Teck North American Employee Demographics



Source: Figure by Author, data from Internal Teck Reports

Figure 5 Teck South American Employee Demographics

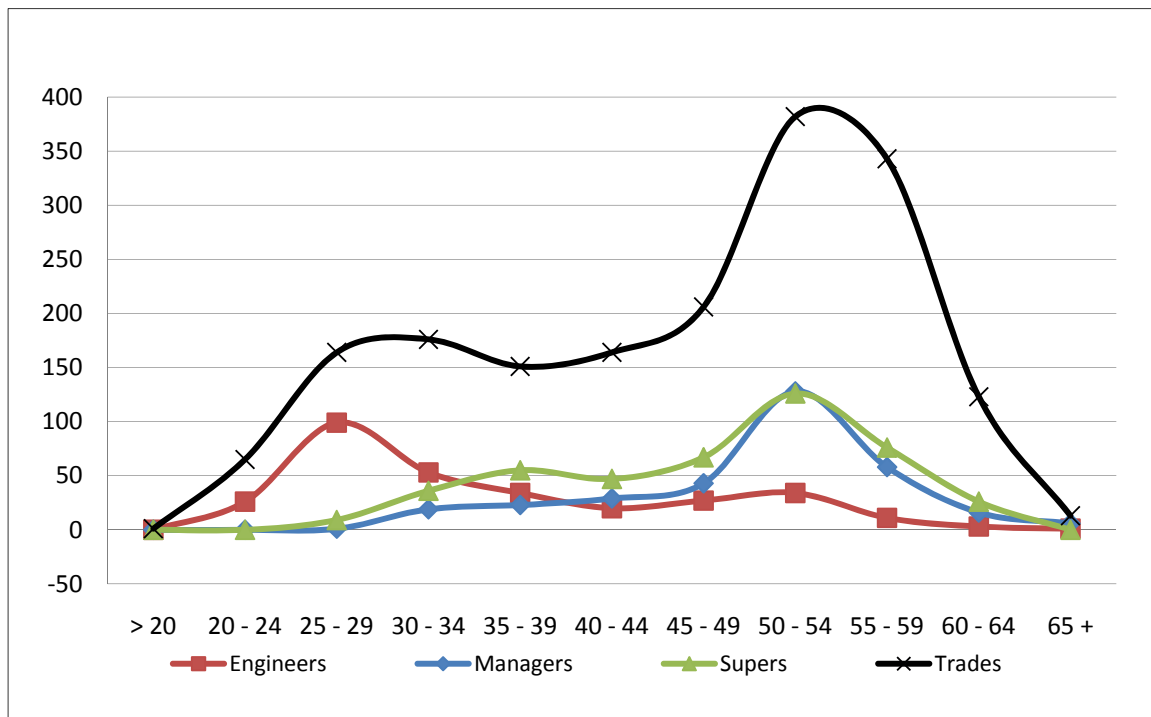


Source: Figure by Author, data from Internal Teck Reports

By applying historical retirement ages and conducting further age demographic analysis Certified Trades, Front Line Leaders, Mid Management, and Engineers and Senior Technical employees were identified as the four occupational employee groups presenting the greatest age-specific demographic challenges in the coming years. The first three groups, Certified Trades, Front Line Leaders and Middle Management have the same challenge in that a significant portion of these employee groups are over the age of 50 with many upcoming retirements. The Engineer and Senior Technical employee group has the inverse problem of the other three employee groups that have been identified above. In the Engineer and technical employee group, a large percentage of the employees are in the very early stages of their careers. Having the majority of this critical skill set in the early stages of their careers has left Teck with a shortage of experience and critical knowledge in these areas. This also poses the problem of a lack of available successors for the few senior level technical employees who will be retiring from this group in the near future.

The following chart shows the demographic age profile of the four employee groups identified above.

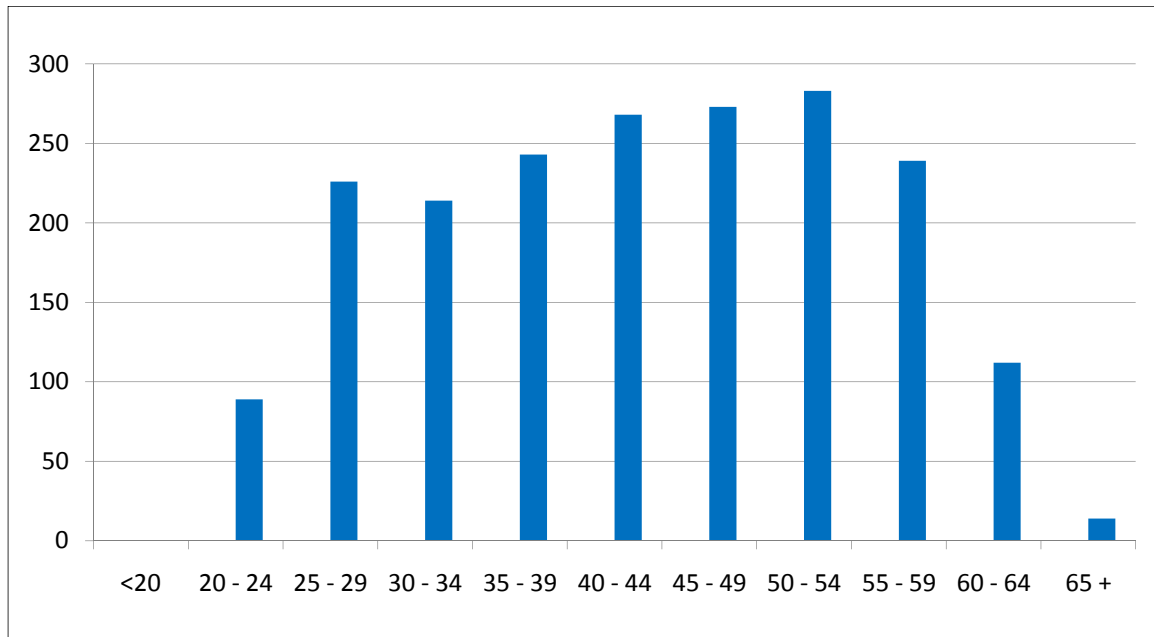
Figure 6 Teck Employee Groups with Specific Age Demographic Challenges



Source: Figure by Author, data from Internal Teck Reports

In contrast to the four Teck North American employee groups identified above as having age specific demographic challenges, the following chart demonstrates that Teck’s North American equipment operator employee group is quite well balanced. This is Teck’s single largest employee group and is typically the entry level position for new employees at Teck’s operations. There are over 2,000 employees in this category with only 32% being over 50 years of age. There is an equal employee age distribution from age 25 through to age 60.

Figure 7 Teck Equipment Operator Demographic Profile



Source: Figure by Author, data from Internal Teck Reports

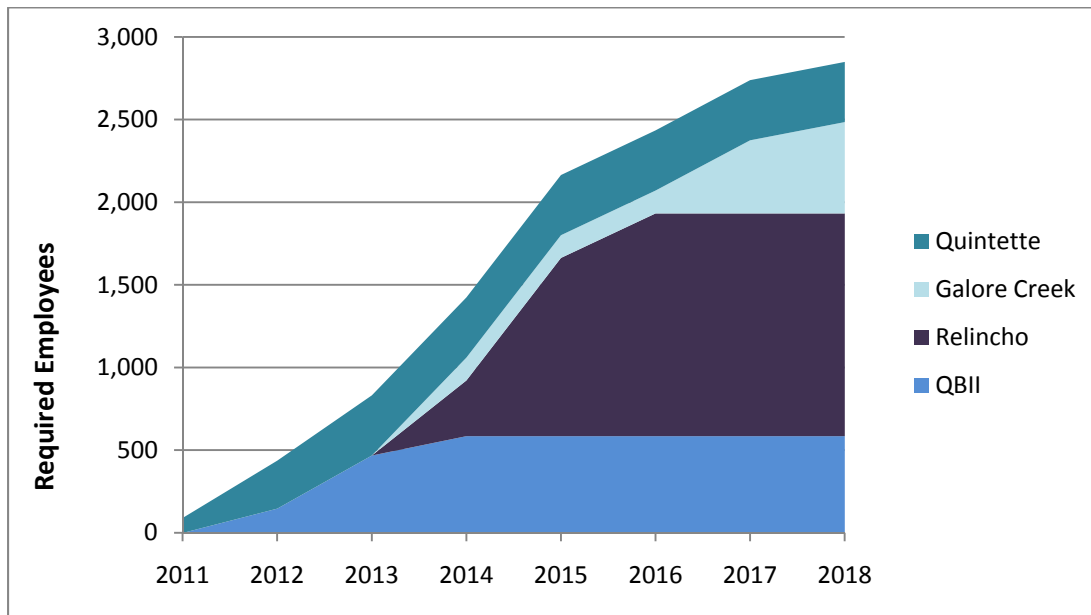
### 3.2 Teck’s Growth Requirements

The second driver of human capital shortage at Teck is the company’s growth. Teck’s demographic profile poses a significant challenge for the company. However, demographics are not the only challenge. Teck’s aggressive growth plans, as outlined in the strategy section above, will require a significant number of additional employees to meet these expansion targets. Teck will not only have to replace retiring employees, but also recruit to fill new positions created as a result of expanding operations. Three new operations and one major expansion are currently being advanced through the various approval stages. If all of these projects receive approval for development, significant new human resources will be required to construct and operate these mines. Figure 8 shows the estimated number of new employee requirements to operate the four

new projects. For these four projects alone, Teck will require approximately 2,800 new employees by 2018. This new employee requirement breaks down to approximately 550 new employees per year for the next four years followed by approximately 200 new employees per year in the subsequent three year period.

The table below does not include data for employees that will be required for Teck’s planned growth in energy or consideration for the many other projects that Teck has in its pipeline. As a result these numbers should be viewed as conservative estimates of new future employee requirements.

Figure 8 Teck Employee Requirements for Advanced Development Projects



Source: Figure by Author, data from Internal Teck Reports

### 3.3 Competitive Environment

The third driver of human capital shortage is the sustained high global demand for natural resources. This increased demand for natural resources is creating a shortage of supply and driving record commodity prices. These record prices are driving aggressive growth in the mining sector. This aggressive growth is creating a significant talent shortage and fuelling a war for talent within the mining industry and related industries such as oil and gas. The recently released 2010 MiHR Canadian Mining Industry Employment and Hiring Forecast states:



“Human resource challenges will be the major constraint to economic growth in Canada’s mining sector. Despite the increasing participation of new Canadians, Aboriginal peoples, women and older workers, demand for workers will be harder to meet.”<sup>7</sup>

It is not only Canada that is experiencing and forecasting significant growth in the mining and resource sectors. The growth in global mining and resource projects is staggering. In an April 2011 Bloomberg News article by Michael Heath and Jason Scott, the authors reference the total value of mining and resource projects in Australia.

“HSBC estimates the total value of Australian mining and resource projects proposed or under construction at \$777 billion, or about 60 per cent of gross domestic product.”<sup>8</sup>

In Chile there is also significant growth in the mining and resource sector. In December 2010 the Chilean Copper Commission Research and Policy Planning Department issued a report on copper and gold mining investment in Chile for 2010-2015. In this report, it estimates that there would be US\$50 billion dollars worth of investment in the period from 2010-2015. This 50 billion was restricted to projects that are already being built or would commence construction during the period.<sup>9</sup> The threshold to be included in this estimate appears to be quite high as Teck’s QBII project is included in the list while the Relincho project is not. This significant growth in the mining industry in Chile will impact Teck on both the attraction and retention fronts. The tight labour market will increase challenges associated with retaining existing employees and will create a significantly more competitive market in which Teck will be attempting to recruit new employees to staff its expansion in Chile.

The combination of demographic challenges and the increased demand for natural resources is creating an increasingly competitive global market for a scarce resource, skilled people.

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<sup>7</sup> Canadian Mining Industry Employment and Hiring Forecast 2010

<sup>8</sup> Heath, Scott, Australian Mines Fuel Pay Bonanza: Bloomberg News, April 2, 2011

<sup>9</sup> Chilean Copper Commission Research and Policy Planning Department, May 2010

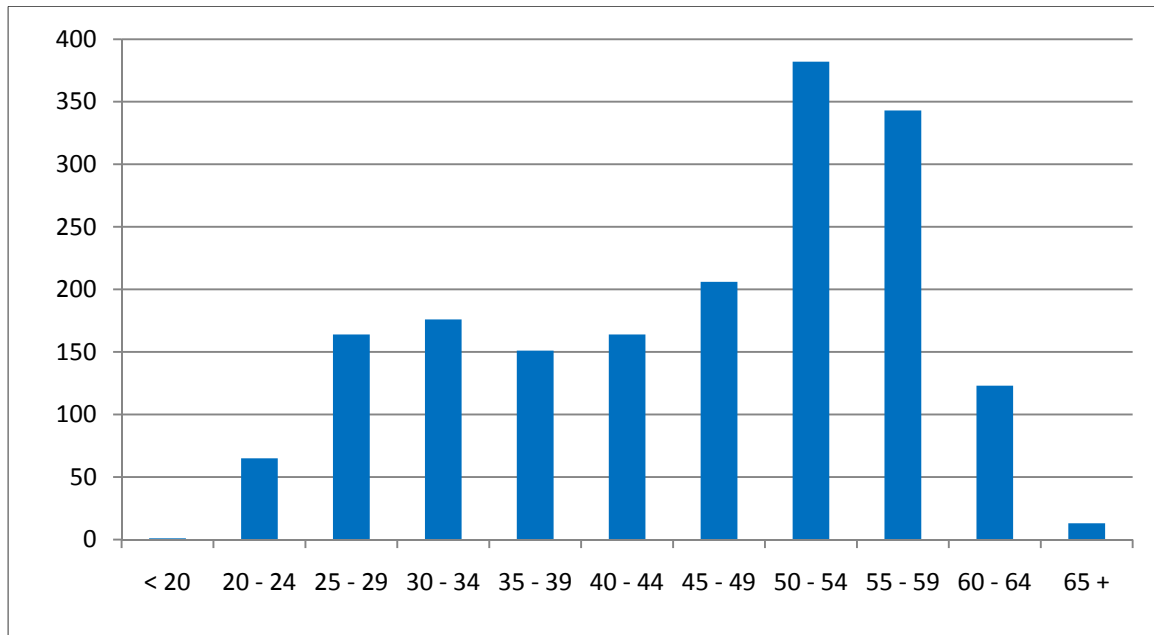
## 4: Trades

Certified trades are a critical employee group for Teck as they are required to maintain all of the fixed assets and mobile equipment at Teck’s various operations. Certified trades are essential for Teck to safely and efficiently meet production requirements at all of its operations.

### 4.1 The Current Situation

Approximately 50% of Teck’s current trades employees in Canada are over the age of 50. When applying average retirement age and taking into account the employees that are already above average retirement age, approximately 400 trades employees will retire in the next 5-year period. Approximately another 400 trades retirees will follow in the ensuing 5-year period. Over the total 10-year period, this represents approximately 50% of Teck’s total certified trades employees that will be leaving the organization through retirement. Figure 9 below outlines the demographic profile of trades people at Teck’s Canadian operations.

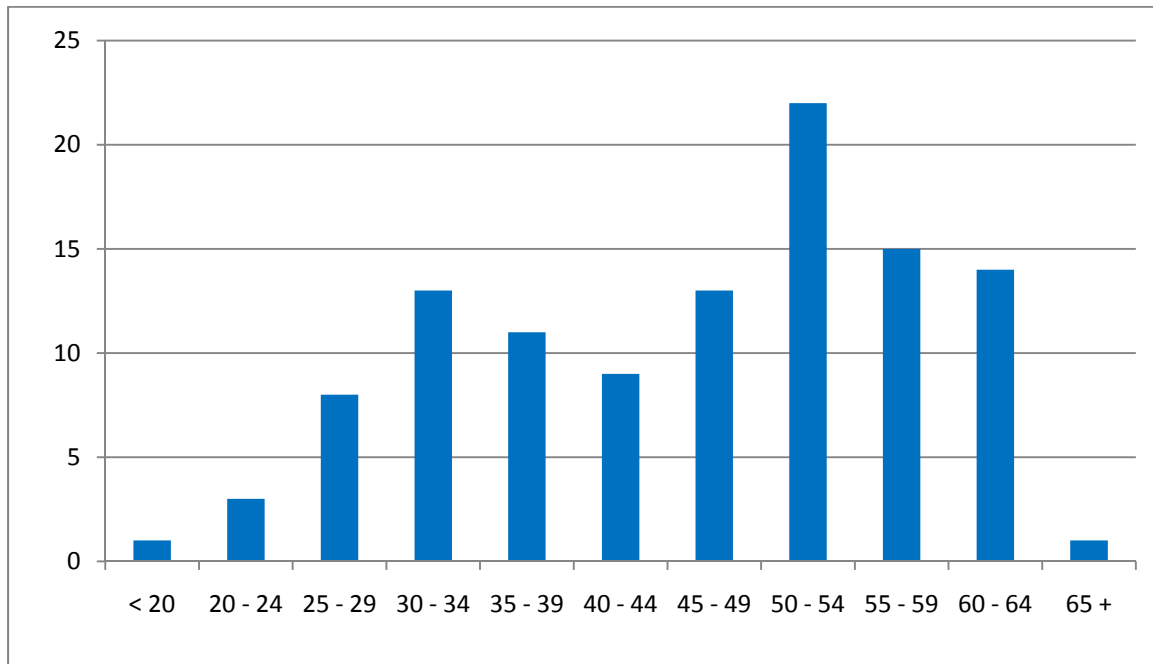
Figure 9 Teck Trades Employee Demographics for Canada



Source: Figure by Author, data from Internal Teck Reports

Teck's trades employees in the United States have a very similar demographic profile with 48% of the 110 trades employees being over 50 years of age. The key difference between the trades demographic challenge in the US when compared to Canada is that the total number of trades and subsequently the upcoming retirements is much lower as a result of Teck having only one active mining operation in the United States at this time.

Figure 10 Teck Trades Employee Demographics for U.S.



Source: Figure by Author, data from Internal Teck Reports

## 4.2 Traditional Sources of New Employees

New trades employees traditionally come from two sources. The primary sources are Teck's internal trades apprenticeship programs, and external recruitment of certified trades and apprentices from other mining companies and other heavy industry.

Teck has a long history of success in developing trades through internal apprenticeship programs. The primary reason for this success is that the candidates for these apprenticeships come from the equipment operators and other unskilled positions within Teck's existing workforce. There is a ready supply of employees in the equipment operator job class as it is the largest employee group within Teck and to this point in time there has been no difficulty

recruiting into these positions. As discussed earlier and demonstrated in Figure 7, not only is this the largest employee group within Teck, it also has a very well balanced demographic profile.

Developing apprentices internally provides existing employees, working in lower skilled areas, the opportunity to develop skills and advance their career by receiving a certified trade. This developmental opportunity and career advancement leads to higher levels of engagement for employees that participate in the internal apprenticeship-training program, resulting in lower turnover within this group of employees. An additional factor contributing to the lower turnover within this group is the fact that we are training employees that are already working at the operation and are well established in the local communities. The lower turnover associated with employees in the internal apprenticeship program provides good return on the investment in developing these apprentices and long term value to the organization through the retention of these critical skills.

External recruitment within the area of certified trades has grown increasingly more difficult over the past three to four years. There is a significant shortage of experienced trades and a real competition for specialized skills and experience. In the Teck Coal Business Unit the shortage of skilled trades is a significant problem for the six coal mining operations. At any given time during 2010 there were approximately 40 trade vacancies that the coal business unit was actively trying to fill from external sources. As of January 2011 the Coal Business Unit had 52 trade vacancies that they were attempting to fill through external recruitment, with very limited success. This has contributed to a situation whereby there have been some reports that equipment is sitting idle due to a lack of sufficient trades employees to complete work on the equipment. Additionally, contractors who were previously utilized to fill the void have no longer been able to do so as they are having similar difficulty in attracting trades people. Attracting and retaining certified trades people is critical to Teck's ability to maintain its equipment and meet its business objectives.

### **4.3 Additional Sources for New Employees**

This section reviews the skills shortage in the area of certified trades and identify potential solutions to address the current and looming skills shortage in this area.

Reportedly, there will be a significant shortage of certified trades for at least the next 10 years. The recently released 2010 MiHR Canadian Mining Industry Employment and Hiring Forecast, estimates hiring requirements by occupation both nationally and by region. In this report the greatest hiring requirements in all regions are forecast to be trades and undesignated

occupations. The total estimate is that close to 32,000 certified trades workers will be required by 2020.<sup>10</sup>

Teck must develop solutions to address the shortage of certified trades employees or risk losing production at its operations due to its inability to maintain equipment. Potential opportunities include increasing the number of apprentices which will increase the ratio of apprentices to certified trades in the internal apprenticeship programs at our operations. There is also the opportunity for international recruitment of trades employees, and partnering with educational institutes and government to increase the number of trades related programs and graduates.

Teck's top priority must be to increase the number of apprenticeships that are offered through the Teck internal apprenticeship programs thereby increasing the ratio of apprenticeships to certified trades employees. Over time, this will create a steady supply of new certified trades. Teck must prioritize apprenticeships for a number of key reasons. First and foremost is the internal apprenticeship program has been successful in the past and the number of new apprenticeships started each year is within the control of management. Additionally, as pointed out in the previous section, there is a good supply of candidates for apprenticeships from the large pool of equipment operators at all of Teck's operations. There are several other reasons that support this as a top priority. Despite significant recruiting efforts, traditional external recruitment has been less and less successful over the past couple of years with very few hires. Also, as previously stated, when Teck develops certified trades employees through the internal apprenticeship program it has a much better success rate on retaining the employees as they come into the program from the existing employee base and they are well established in the local communities.

There is little or no risk to Teck in maximizing the number of apprentices. Teck's demographic profile is a built in self-correcting mechanism. The 50% of trades employees that are over the age of 50 will continue to retire each year creating an ongoing demand for more certified trades. If at any point, there was a concern that the number of apprentices was going to create a future surplus of certified trades, two additional options exist to correct this imbalance. The first option is that apprenticeship intake is done on a yearly basis and can be adjusted up or down based on the forecast number of retirements versus the number of anticipated graduating apprentices in each year. A second option is to slow or stop external trades recruitment for a period to adjust to the anticipated demand.

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<sup>10</sup> Canadian Mining Industry Employment and Hiring Forecast 2010

Teck must also develop an international trades recruitment strategy in an effort to supplement the development of apprentices. This would provide trades employees to fill the current vacancies and help bridge the gap while Teck is ramping up its expansion of its internal apprenticeship program. Teck could build on the recent pilot that was conducted in the Teck Coal Business Unit where four international trades employees were recruited in late 2010 with the assistance of an international recruiting agency. The feedback thus far on the four international candidates from Jamaica has been positive. All four new employees have been successful in achieving their Inter-Provincial trades certification requirements and have assimilated well into the workforce. This plan could be developed and implemented within a couple of months.

Even with developing additional trades employees and international recruitment, there is likely to be a future shortage of trades employees. Teck should review its maintenance practices to ensure it is making the best use of certified trades employees while also looking for ways to reduce the need or demand for trades.

Potential opportunities exist by improving preventative maintenance practices to reduce the number of breakdowns and subsequently the number of trades hours needed to complete required repairs and maintenance.

Teck should complete a detailed study of the type of work that the current certified trades employees are performing to determine areas of inefficient utilization of certified trades employees. For example, preventative maintenance checks could potentially be completed by a trained serviceperson and not by a certified trades employee. Some aspects of preventative maintenance such as lube and oil changes could also be completed by non-certified trained service people. For example, if 20% of the current trades work could be completed by noncertified trades people this would free up certified trades employees to complete more value-added work that requires their more advanced training and experience. This has the potential to reduce the overall trades requirements by the same amount of the work that could be completed by trained service people i.e. 20%. An added benefit to Teck would be that this is more cost effective as certified trades receive the highest wages at our operations while the wage rate of service people is lower. There could also be an additional benefit from this initiative in that the certified trades employees would be engaged in more meaningful work that more adequately utilizes their skills and experience. This would result in more engaged certified trades employees which could potentially lead to less voluntary turnover in this critical employee group. The above two options are beyond the scope of this paper and would more appropriately be evaluated as part of Teck's current Maintenance review initiatives.

These strategies can have a significant impact on reducing the current challenges that Teck is facing in this critical employee group. However, due to the significant current shortages that Teck is experiencing in this area and the forecast industry demand, this employee group will be a challenge for some years to come.

#### **4.4 Stock Flow Diagram of Employee Movement**

This section and the diagram below show the total stock of trades employees at Teck, the inflows and outflows of employees to this group and the total impact on the overall inventory of trades employees at Teck.

Currently, there are over 1900 trades employees at Teck. From this group the total current outflows would be approximately 170 employees. In 2010, 72 employees left as a result of turnover, 86 employees retired and the remaining 12 are an estimate of the number of trades employees that would have been promoted to maintenance supervisors due to retirements and turnover in the supervisory group. Inflow to the trades employee group would be an average of 58 graduating apprentices with the balance required from external recruitment. As outlined above there are currently in excess of 50 trades vacancies that external recruitment has been unable to fill.

The table below outlines the flow of employees through the trades group and demonstrates that the estimated shortfall is conservative. As the market for trades continues to become tighter, companies will become more aggressive in their recruitment efforts which generally results in an increase in turnover rates.

Table 1 Stock Flow Diagram of Teck Trades Employee Movement

Total Stock	Outflows	Inflows	Net Impact on Stock
<p>Currently over 1900 trades employees at Teck's North American Operations</p>	<p>Turnover - 72</p> <p>Retirements - 86 in 2010 with over 750 remaining trades employees over the age of 50</p> <p>Promotions to supervisor – estimate 12 ( varies year to year however 52% of supervisors are over the age of 50 with trades being the main source of replacements)</p>	<p>Apprentices - at current ratio an average of 58 apprentices per year will become certified trades</p> <p>External hires – becoming increasingly difficult with an average of 40 vacancies throughout 2010. At year end 2010 there were 53 open trades vacancies in Teck's N.A. operations</p>	<p>170 outflow per year of trades from the organization</p> <p>58 graduating apprentices leaving a shortfall of approx. 120 trades to be filled through recruitment. Currently in excess of 50 vacancies which recruitment has been unable to fill</p> <p>This does not include the additional shortfall due to project requirements such as Quintette</p>
<b>1900</b>	<b>-170</b>	<b>+58</b>	<b>-112</b>

Source: Table by Author, data from Internal Teck Reports



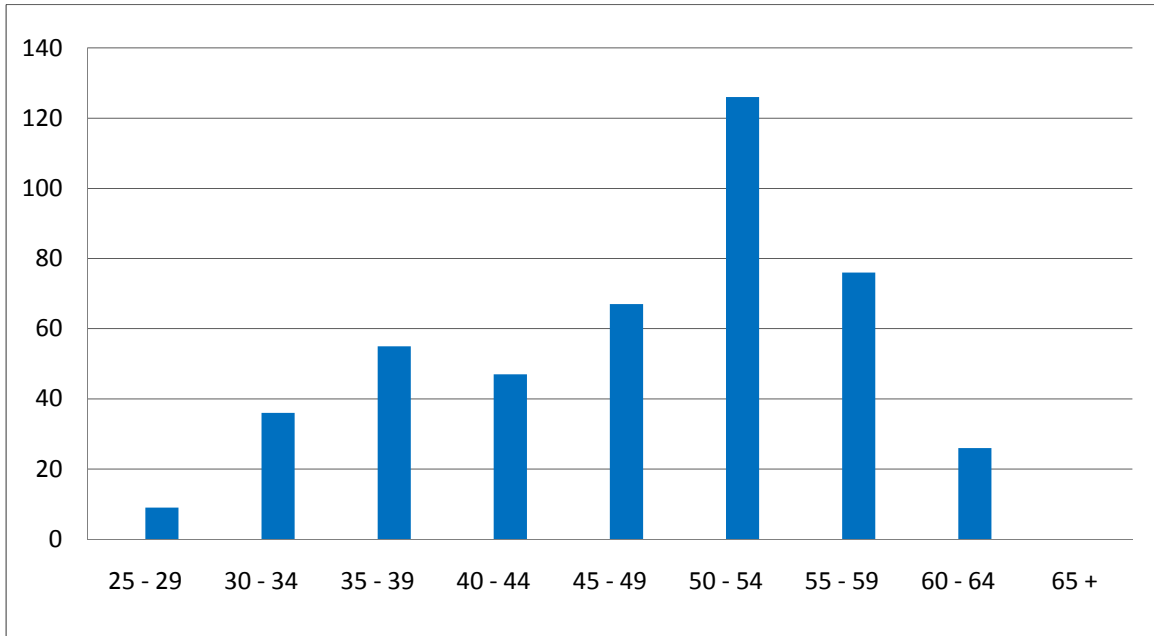
## **5: Frontline Leaders**

Frontline leaders are a key position for Teck as they are the point of contact for all hourly production, processing and maintenance employees. Having quality front line leaders is essential for achieving safe and efficient production requirements. In addition, having quality frontline leaders significantly affects the work environment, employee engagement, productivity and retention.

### **5.1 Current Situation**

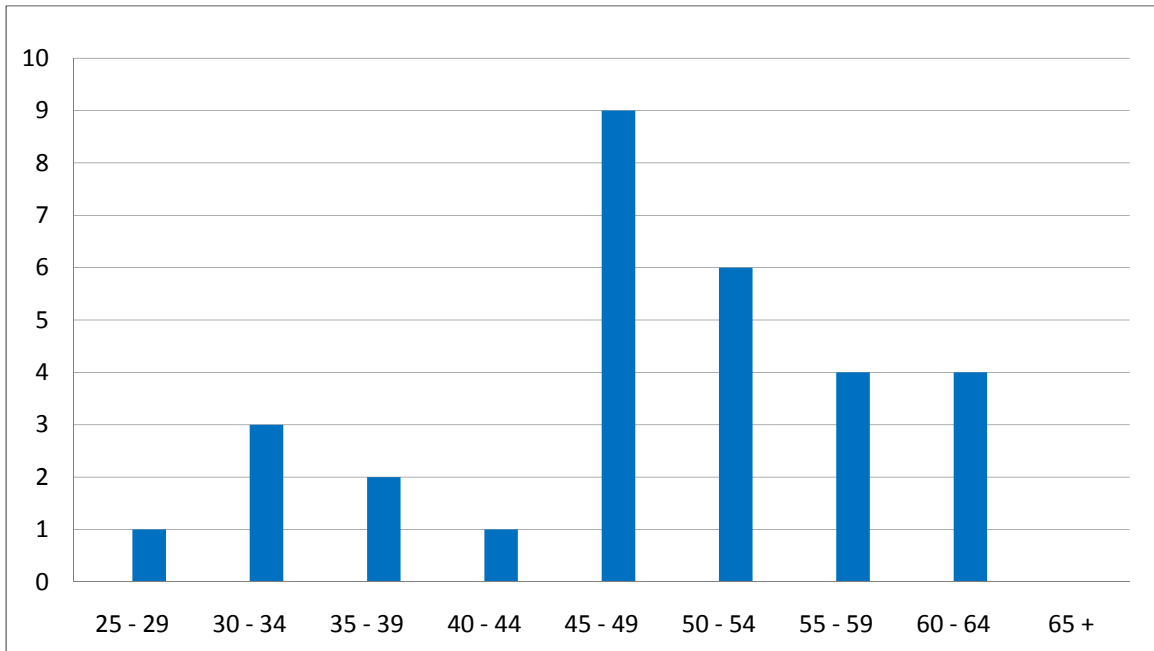
The current situation is that 52% of Teck's more than 442 supervisors in Canada are over the age of 50. Therefore, over the next five to ten years Teck's Canadian operations will experience a higher rate of retirements than has occurred over the past 20 years. Without taking into account expansion or new operations, 15 to 20 supervisors will retire in each of the next 5 years. That number will double in the following five-year period, with 30 to 40 retirees each year. The supervisors that will be retiring in the same ten-year period will have an average experience of in excess of 20 years and thus be taking tremendous knowledge and experience with them as they leave the organization. Figures 11 and 12 below outline the demographic profile of Front Line Supervisors at Teck's Canadian and United States Operations.

Figure 11 Teck Supervisory Employees Demographic for Canada



Source: Figure by Author, data from Internal Teck Reports

Figure 12 Teck Supervisory Employees Demographics for U.S.



Source: Figure by Author, data from Internal Teck Reports

## 5.2 Traditional Sources of New Employees

The vast majority of front line leaders come from the hourly ranks at Teck's operations. Typically, they have extensive experience and expertise in their respective functional areas of operations, maintenance or processing. Quite often, these individuals have 15 to 20 years of on the job experience and several years of experience functioning as a backup supervisor or lead hand. In the role of back up supervisor, these individuals would receive an opportunity to participate in supervisor training and would also have the opportunity to work as a supervisor for short periods of time, typically several days or weeks, while covering for regular supervisor vacation or illness.

Several factors are putting pressure on the traditional candidate pool of hourly workers and subsequently on the pool from which Teck draws its supervisory employees. First is the fact that four of Teck's Canadian operations, including the three largest, have Defined Benefit Pension Plans for hourly employees while the staff employees have a Defined Contribution Pension Plan. The challenge created is that the hourly Defined Benefit Pension Plan provides a fixed benefit based on years of service and a predetermined date at which employees can receive a full-unreduced pension. This has made it difficult to attract some of the longer service and more experienced candidates into accepting a supervisory role. This is primarily because they do not want to give up the certainty of their Defined Benefit Pension Plan, which they would not receive as a supervisory employee. This has become more of an issue as our demographic profile has shifted to a higher number of employees who are nearing retirement and as a result are more focused on pension values and retirement.

In the maintenance frontline leader role the key source of candidates has been the hourly certified trades positions. As outlined earlier, the demographic profile of the certified trades is also heavily weighted towards employees nearing retirement and is very similar to that of the frontline leaders. This compounds the problem as both the maintenance frontline leader position and the number one source of replacement candidates, certified trades, have demographic profiles that are heavily weighted to late career employees. This source of future maintenance front line leaders is further compounded by the difficulty in recruiting certified trades from external sources.

### **5.3 Additional Sources for New Employees**

In this section, potential solutions to address the current and looming skills shortage in the area of front line supervisors will be reviewed.

Teck should immediately create a “supervisor-in-training” program to develop its own supervisors internally at a faster rate than the traditional model whereby employees spend many years on the job in a functional area. Teck could create an on the job training program where identified internal candidates would be selected and brought into a Supervisor in Training or Assistant Supervisor role. Over the course of one to two years of working with an experienced supervisor, they would gain the knowledge and experience required to advance to a supervisory role. During the course of the training program, assistant supervisors would also receive formal training and education and commence the new front line leader development program training during year two of their supervisor in training program. To have the best candidates available for this program Teck should target a combination of current employees and recruit graduates from Operations Management programs such as the BCIT Operations Management or other similar programs.

The additional benefit of this supervisor in training program is that it creates a great opportunity to transfer organizational knowledge from the very experienced front line supervisors who will soon be transitioning into retirement over to the next generation of supervisory employees.

Teck could adjust the intake level of this program to correspond to the anticipated number of retirements in this employee group, thereby significantly reducing the risk that Teck is facing in this area.

## 5.4 Stock Flow Diagram of Employee Movement

This section and the diagram below show the total stock of frontline supervisor employees at Teck, the inflows and outflows of employees in this group and the total impact on the overall stock of frontline leaders at Teck.

Currently there are over 470 frontline supervisors at Teck's North American Operations. From this group the outflows would be approximately 40 employees per year with half being contributed to turnover and the remainder due to retirements. The outflow number is conservative as the average number of retirements is going to continue to increase over the next 10-year period from an average of 15 to 20 per year to 30 to 40 per year, five years from now. Inflows to the maintenance supervisory group is going to be particularly challenging due to the demographic profile and recruitment challenges within the trades employee group

The table below outlines the flow of employees through the frontline supervisor group and demonstrates that the estimated shortfall is conservative. As the market for supervisors continues to become tighter, companies will become more aggressive in their recruitment efforts, which generally results in an increase in turnover rates. Also of note is the fact the employee stock flow table is showing the impact of only one year. If you were to look at a five year period, the outflows would be 200 with a shortfall of 100. Over a 10-year period, the numbers become significantly greater due to the average number of retirees doubling over the second 5-year period.

Table 2 Stock Flow Diagram of Teck Supervisor Employee Movement

Total Stock	Outflows	Inflows	Net Impact on Stock
<p>Currently over 470 frontline supervisors at Teck's North American Operations</p>	<p>Turnover - 20</p> <p>Retirements - 20 in 2010 with over 240 remaining supervisors over the age of 50</p> <p>Promotions to mid management ( varies year to year however well over 60% of mid managers are over the age of 50 with supervisors being one of the sources of replacements)</p>	<p>Promotions from hourly ranks of 20 employees to new supervisors</p> <p>External hires – This is an option however becoming increasingly more difficult with very limited success. At year end 2010 there were over 20 open supervisor vacancies</p>	<p>40 outflow per year of supervisors from the organization</p> <p>Estimate being able to promote 20 hourly employees shortfall of approx. 20 supervisors to be filled through recruitment.</p> <p>Currently in excess of 20 vacancies which recruitment and promotion has been unable to fill</p> <p>This does not include the additional shortfall due to project requirements such as Quintette</p>
<b>470</b>	<b>-40</b>	<b>+20</b>	<b>-20</b>

Source: Table by Author, data from Internal Teck Reports

## **6: Middle Management**

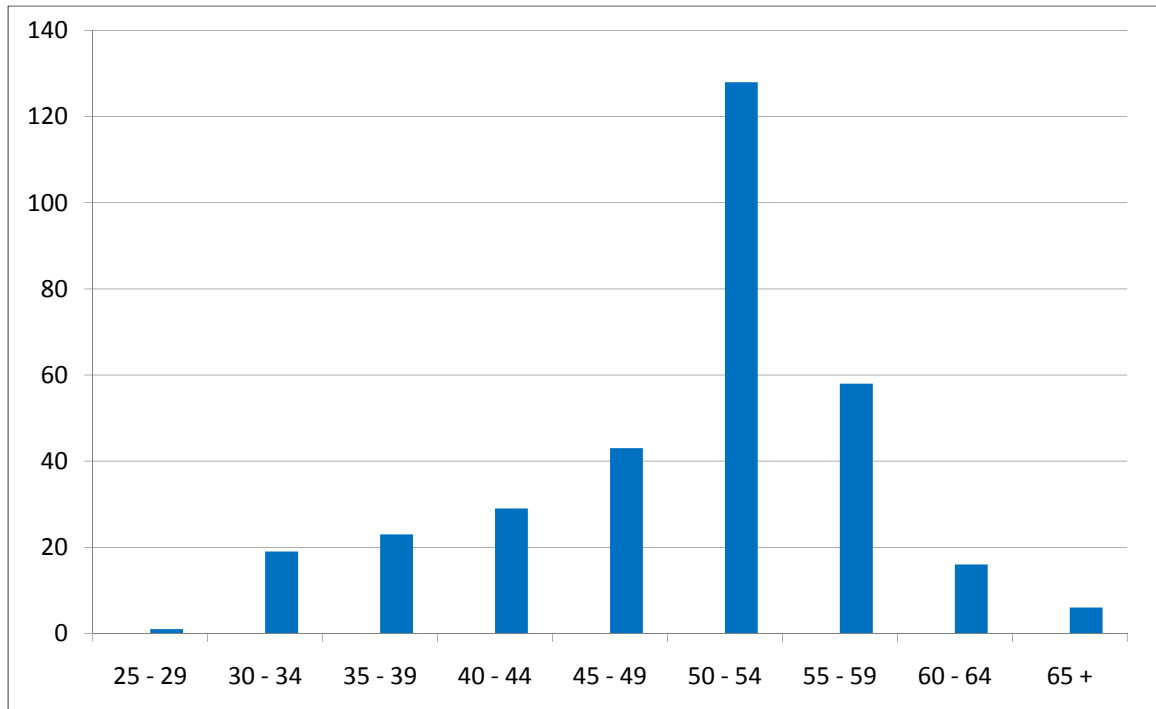
The middle management positions at Teck's operations are key leadership positions for Teck. These managers have responsibility for ensuring the safe and efficient operation of Teck's various operational facilities. These managers also have responsibility to ensure the security of Teck's assets and operations. Having high quality and experienced managers is essential to running efficient operations. These managers are also leaders of their respective departments or functional groups, and have significant influence on the work environment, employee engagement and retention.

### **6.1 The Current Situation**

As clearly outlined in Figures 13 and 14 below, within Teck's North American operations 64% of Canadian employees and 55% of U.S. employees at the Manager, Superintendent and General Foremen level are aged 50 or older. A full 20% of employees in these middle manager level positions will retire in the next 5 years and an additional 40% of employees in this group will retire in the following five year period. Over the next 10-year period, this will equate to more than 210 of the 350 plus employees in this group retiring.

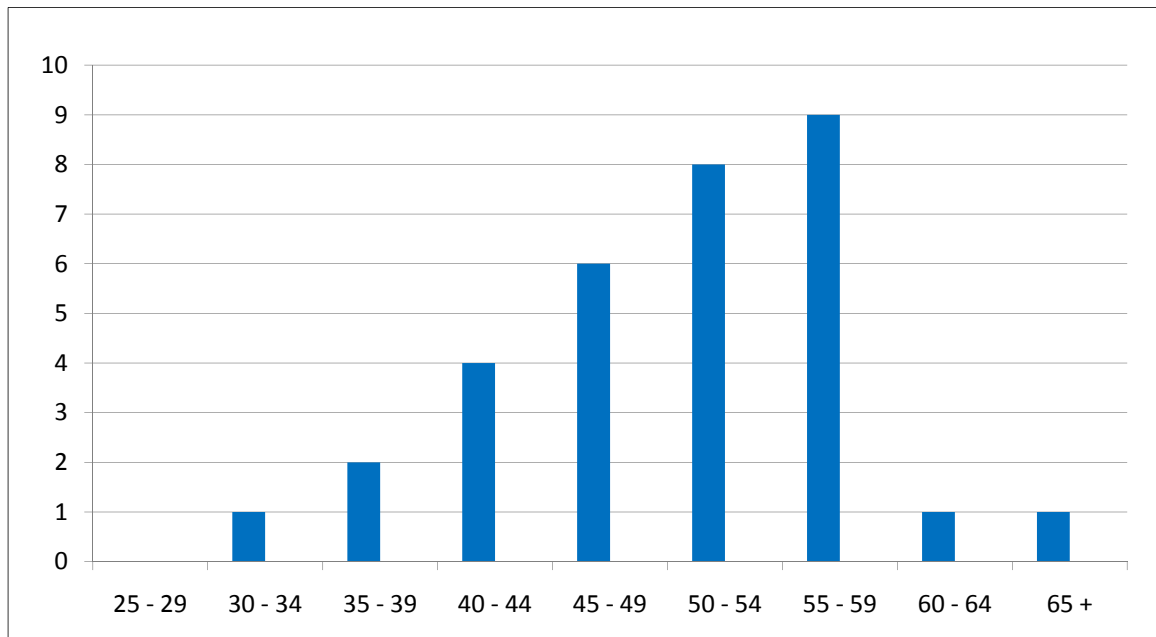
An additional challenge and demand on this critical middle management employee group will be Teck's new operations. As much as possible, Teck will attempt to staff its new operations with experienced managers, superintendents and general foremen. This will require anywhere from 7 to 10 experienced middle managers per new operation. This will place additional pressure on this employee group as these positions will have to be backfilled at existing operations.

Figure 13 Teck Middle Management Demographics for Canada



Source: Figure by Author, data from Internal Teck Reports

Figure 14 Teck Middle Management Demographics for U.S.



Source: Figure by Author, data from Internal Teck Reports



## **6.2 Traditional Sources of New Employees**

Traditionally, the sources for these middle management positions have come from three primary areas. Internally, candidates have come from both the technical employee group of senior engineers and geologists and from lower operations positions of supervisors and senior supervisors. The third source of candidates is external recruitment of candidates from other employers that have the relevant skills and experience. All three of these sources of candidates have come under pressure in recent years. As outlined earlier in the paper, the supervisor and senior supervisor category is challenged due to a similar demographic profile as that of the middle manager employee group. The Technical employee group has provided only limited candidates for middle management positions as the demographic profile of this employee group consists mostly of early career employees that do not yet have the experience to progress into middle management level positions. Recruitment of external candidates has become increasing more difficult as all employers are facing demographic challenges and are putting more effort into retaining existing employees. Where a candidate is interested in making a career move there is intense competition for their services, resulting in a war for talent within this critical employee group.

## **6.3 Additional Sources for New Employees**

This section reviews potential opportunities to address the large number of retirements that will be occurring in this critical management employee category.

A great new source of candidates for upcoming middle management vacancies is Teck's Front Line Leadership Development program. This new program is currently in the final stage of development and will be rolled out in mid 2011. This program focuses on developing front line leader management and leadership skills and capabilities and developing candidates that have the capacity to move into more senior middle management roles such as General Foremen, Superintendent and Manager. This program is scheduled to graduate approximately 144 front line leaders per year and will be a great source of candidates for senior supervisors, General Foremen, Superintendents and Managers.

Another source of candidates will be the large number of newly hired graduate engineers, geologists, and current engineer and geologist in training that Teck has hired in the last couple of years and will continue to hire into the future. These employees have the technical education required for these mid management positions but will require more experience and leadership

training and development to progress into these mid management level positions. The good news for Teck is that it has a large number of these employees within the organization that are eager to learn, develop and progress in their careers. Not only is it good for Teck to have a viable source of technically competent successors, but the training, experience and leadership development that these employees require will assist in keeping this employee group engaged, leading to higher retention.

Teck's Emerging Leader Program is a one year, cohort learning, leadership development program. The third group of 16 employees are currently progressing through the Emerging Leader Program. This program is designed to develop employees to move into senior management positions, however the program will also produce graduates that are candidates to fill some of the superintendent and manager level positions. The average age and level of position that the candidates are in is reduced with each new cohort. Teck is planning for a 4<sup>th</sup> Emerging Leader Program cohort to commence in late 2011. It is critical that Teck continue to commence a new cohort of the Emerging Leader Program each year as the graduates of this program are potential successors for the upper end of the middle management level positions and also for potential senior management and executive level positions.

Another of Teck's current employee development programs, is the Teck Business Education program which offers employees the potential of attaining a Graduate Business Diploma in Business Administration (GDBA) or a Master's of Business Administration (MBA) through Simon Fraser University. These two programs are also a source of future candidates for middle management positions. To date, close to 200 employees have participated in GDBA courses and the first cohort of 25 MBA's will graduate in June of 2011. Teck is scheduling to commence a second MBA cohort in the fall of 2011, which will graduate another 25 MBA's in the spring of 2015. It is critical that Teck commit to a continual stream of MBA programs to produce 25 MBA graduates every 3.5 years. Based on the number of Teck employees that have completed their GDBA and are eligible to progress to the MBA program, Teck may need to consider having overlapping MBA programs. An additional MBA cohort could commence when the current MBA cohort is in its second year. This would create 25 MBA graduates every two years resulting in a larger number of internally developed candidates to succeed into middle and senior management positions. This would also have the added benefit of ensuring that Teck does not lose employees due to the frustration of having to wait several years after completing their GDBA to have an opportunity to commence and complete their MBA. The frequency of GDBA

courses and MBA cohorts can be adjusted based on the needs of the organization and developmental requirements of employees.

Teck should consider an evaluation of each of these programs in terms of their ability to generate personnel with the needed competencies, and whether they meet other standards such as attraction and retention.

The added benefit to Teck of all three of the internal development programs outlined above is the impact that it will have on both the organizational culture and employee engagement and retention. As time progresses and Teck graduates more employees through these three development programs, it will create and build on an organizational culture of continual learning and development. Employees that graduate from these positions should make stronger candidates to progress into more senior positions. This will allow Teck to confidently fill more middle and senior management level positions with internal candidates, resulting in significant increases in employee engagement and commitment. This will in turn lead to a stronger Teck culture with higher retention of existing employees and greater attractiveness to top external candidates who will want to be part of Teck. These development programs are needed to build skills and knowledge in areas that were previously not as critical but now are vital to Teck's success. More than ever, Teck will need people who are good people managers, understand the business side of mining, not just the technical side, are attentive to the important Communities of Interest for Teck, and "get" sustainability.

These programs have the ability to significantly reduce the magnitude of the problem that Teck is facing in this employee group.

## **6.4 Stock Flow Diagram of Employee Movement**

This section and the diagram below show the total stock of middle management employees at Teck, the inflows and outflows of employees to this group and the total impact on the overall stock of middle management employees at Teck.

Currently there are over 350 middle management employees at Teck. As outlined above there will be outflows to retirement over the next 10 years of over 210 employees from this group.

The table below outlines the flow of employees through the middle management group and the estimated shortfall is very conservative. As the impact of over 60% of this middle manager group retirees over the next 10 years, Teck will be challenged to replace the significant knowledge and experience that these employees will be taking into retirement. There is also the

added risk of increased turnover as the market becomes tighter, companies will become more aggressive in their recruitment efforts, which generally results in an increase in turnover rates.

Table 3 Stock Flow Diagram of Teck Middle Management Employee Movement

Total Stock	Outflows	Inflows	Net Impact on Stock
<p>Currently over 350 middle management employees at Teck's North American Operations</p>	<p>Turnover in this group for 2010 was 2% which would total 7 employees leaving Teck as a result of turnover</p> <p>Retirements will average 15 per year over the next 5 years increasing to 30 per year over the subsequent 5 year period. Promotions to senior management (varies year to year however estimate 5 to 8 middle managers per year will be promoted to more senior positions within the organization)</p>	<p>Anticipate 10 graduates from the Emerging Leader Program and MBA programs that are not currently middle managers and would be prime candidates to move into middle management</p> <p>Anticipate an average of 5 promotions from other internal areas such as supervisors and technical employees that are not in the two programs listed above.</p> <p>External hires – averaging about 5 per year, becoming increasingly more difficult with an average of 3 or 4 vacancies in 2010</p>	<p>Outflow of 30 middle managers per year for the next 5 years increasing to 45 per year for the following 5 year period</p> <p>The anticipated short fall below will grow significantly as the number of retirements increase (15 per year for second 5 year period) and new project requirements such as Quintette where each new operation will require an entire new team of 7 to 10 middle managers</p>
<b>350</b>	<b>-30</b>	<b>+20</b>	<b>-10</b>

Source: Table by Author, data from Internal Teck Reports

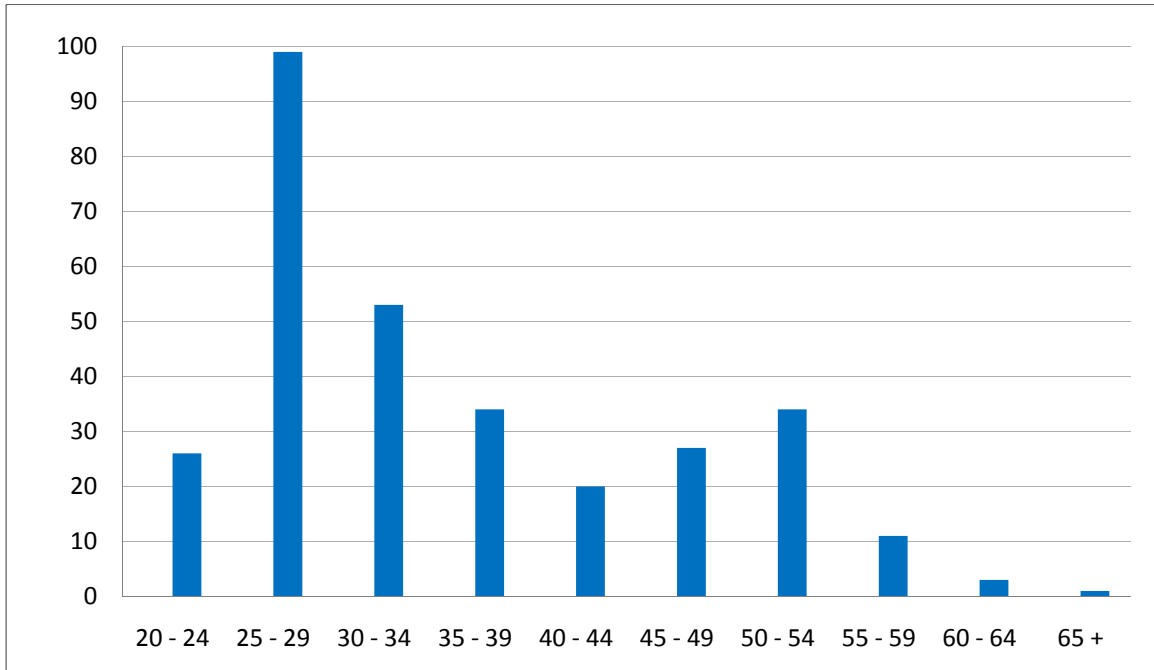
## **7: Engineers and Technical Employees**

Engineers and technical employees are an essential employee group for any mining and metals company. Their technical skills are required from the identification of potential resources at the exploration stage through to the building of projects and the mining, maintenance and processing of materials at Teck's operations. Engineers and technical employees are also a key source of future superintendents and managers.

### **7.1 The Current Situation**

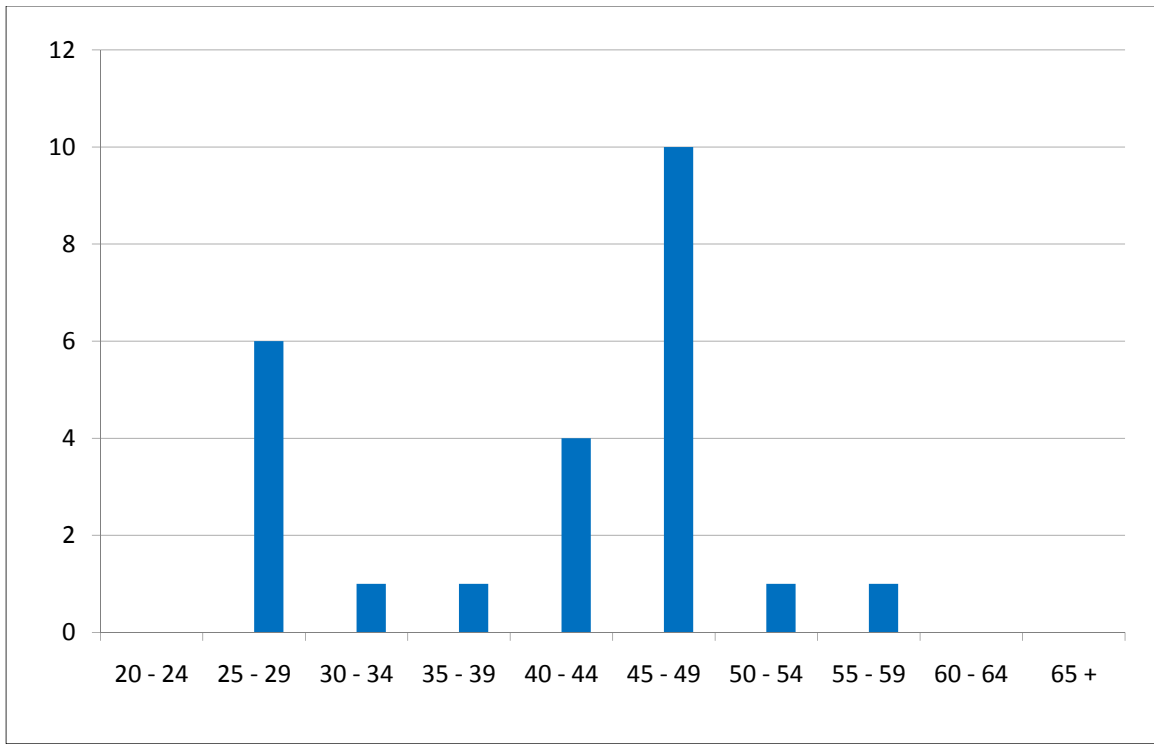
As demonstrated in Figure 15 the age demographic of the Canadian engineer, geologist and senior technical employees group is opposite to that of the other three employee groups reviewed in this paper. This technical employee group is heavily weighted with employees in the early years of their career. As a result of this employee group consisting of primarily early career technical employees, Teck is at risk of not having sufficient experience within these groups to ensure that work is being conducted according to the required standards. Additionally, there are a very limited number of experienced technical employees available to train, mentor and pass on knowledge to the younger generation of technical employees. The U.S. technical employee demographic profile shown in Figure 16 demonstrates this unbalance. There is a gap between the group of older employees and the group of young inexperienced employees and not much in between. This creates challenges when the older group retires and there are virtually no mid-career successors to take their place.

Figure 15 Teck Engineer and Technical Employee Demographics for Canada



Source: Figure by Author, data from Internal Teck Reports

Figure 16 Teck Engineer and Technical Employee Demographics for the U.S.



Source: Figure by Author, data from Internal Teck Reports

## **7.2 Traditional Sources of New Employees**

The majority of new employees in this group come from external recruitment through Teck's University recruitment program. Teck historically has had very good success in hiring quality new graduates from the key schools in Canada and the Northern United States. This success has continued through to 2010 with results from Teck's most recent university recruiting efforts resulting in approximately 50 new engineer and geologist graduates joining Teck during 2010.

The other source of new employees into the technical employee group is external recruitment from other companies. Teck has had good success in recruiting lower experience employees with less than three years of professional work experience; however the candidate pool for technical employees with more than five years of experience is extremely limited.

## **7.3 Additional Sources for New Employees**

This section focuses on a potential solution to address the shortage of experienced engineering and technical employees. As outlined in the section above, recruiting new graduates or low experience technical employees is not an issue for Teck.

Teck has had very limited exposure to recruiting international technical employees. Where Teck has been successful in recruiting international candidates, they often only remain with Teck for a couple of years and then return to their home country or move on to another international opportunity. Teck has also had some limited success in recruiting from non-traditional international markets such as Indonesia and Australia for experienced technical employees. Teck must aggressively expand its recruiting efforts into more non-traditional international locations such as China, India, and Indonesia. Canada is viewed as a desirable place to live and this should create opportunities to attract experienced technical employees. Teck will also need to be open to providing additional language and cultural training to these new employees to assist with the transition to Canada and increase the potential of retaining these employees for the longer term.

## **7.4 Stock Flow Diagram of Employee Movement**

This section and the diagram below show the total stock of engineering and technical employees at Teck, the inflows and outflows of employees to this group, and the total impact on the overall stock of engineering and technical employees at Teck.



Currently there are over 350 engineer and technical employees at Teck. As outlined above the demographic profile of this employee group is very different than that of the other three employee groups reviewed. Due to the heavy weighting of early career employees within this group, the primary outflow from this group is turnover. In 2010 total attrition in this group was 8.4% with 7.9% or 28 employees being turnover and only 0.5% or 2 employees leaving due to retirement. Another outflow for this group is internal promotions to middle management positions. The number of these employees moving into other positions within Teck varies from year to year, however, with more that 60% of middle management employees being over the age of 50, these numbers are expected to increase steadily over the next 10-year period. The total outflow would be approximately 40 employees. In 2010, 28 employees left as a result of turnover, 2 employees retired, the remaining 10 are an estimate of the number of engineering and technical employees that would have been promoted to middle management due to retirements and turnover in that group. The outflow number is conservative as it assumes turnover numbers consistent with 2010. As the large number of new mining projects come on line this group will come under extensive external recruitment pressure which will likely result in an increase to turnover levels. Inflows to the engineer and technical employee group would be primarily from the hiring of graduating engineer and technical employees with the balance needing to come from other external recruitment. At year-end 2010, external recruitment has been unable to fill 35 engineer and technical employee vacancies as they are primarily for experienced positions which are very difficult to fill.

The table below outlines the flow of employees through the engineering and technical employee group and shows that there is the potential to create a surplus of such employees within Teck that can be developed to address the significant pending shortage in the middle management employee group. A concern for this group is that as the market for natural resources continues to tighten and new projects receive approval and come on line, the demand for engineers and technical employees will increase significantly. As the market becomes tighter and more competitive, companies will become more aggressive in their recruitment efforts, which generally results in an increase in turnover rates.

Table 4 Stock Flow Diagram of Teck Engineer and Technical Employee Movement

Total Stock	Outflows	Inflows	Net Impact on Stock
<p>Currently over 350 engineers and technical employees at Teck's North American Operations</p>	<p>Turnover - 28 Retirements - 2 in 2010 for total attrition of 30 Promotions to middle management positions ( varies year to year however over 60% of middle managers are over the age of 50 with engineer and technical employees being a key source of replacements) Estimate 10 engineer and technical employees promoted to middle management in each of the next couple of years increasing significantly over the remainder of the next 10 years</p>	<p>New grad engineer hires (55 in 2010) Non new grad external hires 12 in 2010. Becoming increasingly more difficult to hire external experienced employees. At year end 2010 there were 35 open engineering and technical vacancies, of which most were for experienced or specialized technical experts that are very difficult to fill</p>	<p>40 outflow per year of engineer and technical employees from the organization Estimate 55 graduate hires and 12 experienced hires provided a total inflow of 67 employees which exceeds the outflows within this employee group. This surplus creates a potential opportunity for Teck to address shortfalls in other employee groups This does not include the additional requirements due to projects such as Quintette</p>
<b>350</b>	<b>-40</b>	<b>+67</b>	<b>+27</b>

Source: Table by Author, data from Internal Teck Reports

## **8: Employee Retention**

This section demonstrates why employee retention is a critical element to Teck's ability to address the looming skills shortage in each of the four identified critical employment categories. In addition, it also shows why retention is critical across the entire Teck employee base and can significantly influence new employee attraction requirements.

### **8.1 The Current Situation**

In 2010 Teck had turnover at its various operations that ranged from 1.4% to 20.9% with an average turnover across the organization of 4.4%.<sup>11</sup> Turnover for this purpose is defined as voluntary and involuntary terminations and does not include retirements, deceased or layoffs. Review of these turnover numbers, when compared to historic turnover numbers, indicates that Teck's current turnover is consistent with its long-term average turnover.

As outlined earlier in this paper, there will also be significant employee departures due to pending retirements. In the next ten years, approximately 50% of Teck's North American employees will retire. Due to the large number of upcoming retirements, it is important to consider this group of employees when reviewing retention challenges, as there may be programs that could reduce and/or delay the number of retirees. Reducing or delaying retirements has the potential of giving Teck more time to attract new employees and to utilize the experience of employees to train both new and existing employees thereby transferring their critical knowledge to the newer, less experienced. Teck will have to evaluate and manage the potential risks associated with this opportunity such as exacerbating the size or suddenness of the pending retirement wave. Carefully targeting incentives or other initiatives to specific groups or individuals may assist in managing potential risks.

### **8.2 Why it is Critical?**

The labour market is heating up with significant shortages anticipated both within North America and globally. A recent Mining Industry Human Resource Council (MiHR) report released in late 2010, estimates that in Canada alone there will be 53,150 new growth mining jobs

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<sup>11</sup> Teck Resources Internal Recruitment /Attrition Report

over the next 5 years and if we look ahead at the next 10 years MiHR forecast a total requirement of 100,000 new mining jobs.<sup>12</sup> A similar report on the Australian mining labour force released in 2010 anticipates that the Australian mining industry will require 62,500 new jobs over the next 5 years.<sup>13</sup> The Australian labour force report also indicates that 16,000 employees will be required each year to replace employees that are retiring or leaving the industry.<sup>14</sup> This creates a total Australian demand for mining jobs of 142,500 over the next 5 years. These numbers represent a 40% increase in employment in the Australian mining sector by 2015.

Managing turnover is an important initiative for Teck. Detailed analysis of voluntary turnover needs to be monitored on an ongoing basis to identify new trends. Teck will need to maintain low turnover levels in areas where turnover is currently low and increase the focus on reducing turnover in areas of the business where turnover levels are currently higher. Table 5 below highlights the impact on recruitment requirements for each 1% increase in turnover rates. A 1% increase in turnover would equate to Teck's turnover increasing from the 2010 average turnover rate of 4.4% to 5.4%. An overall look at the issue for Teck identifies why turnover is critical. A turnover increase of 5% would increase Teck's recruitment requirements by 2265 employees over a 5-year period. Some may claim that a 5% increase in turnover is unreasonable and not likely to occur at Teck. However, in a tight labour market a 5% increase could happen very easily and quickly. A case in point would be the significant increase in turnover that the Teck Coal Business Unit experienced in the first half of 2008. During this period there was significant targeted recruiting pressure from the Alberta Oil Sands expansion projects and turnover increased by 7%. Temptation to leave will increase as the gap between the relatively low number of skilled workers and increasing job opportunities widens. Teck does not want to be in the position of retaining and obtaining people by paying uncompetitive wages.

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<sup>12</sup> Canadian Mining Industry Employment and Hiring Forecast 2010

<sup>13</sup> Resourcing the Future: National Resources Sector Employment Taskforce Australian Labour Force Study page 2

<sup>14</sup> Resourcing the Future: National Resources Sector Employment Taskforce Australian Labour Force Study page 2

*Table 5 Impact of Increased Turnover on Recruitment Requirements*

Additional Hires Required if Turnover Increases			
1% increase would move Teck average turnover from 4.4% to 5.4%			
% Turnover Increase	1 Year	5 Years	10 Years
1%	91	455	910
3%	272	1360	2720
5%	453	2265	4530

*Source: Table by Author*

In addition to the significant increase in recruiting requirements, turnover is also a significant cost to an organization. In an article entitled “Employee Retention and Turnover: The Real Reasons Employees *Stay* or Go” author Merge Gupta-Sunderji estimates that the cost of turnover to an organization is equal to the one year salary of the employee that leaves the organization.<sup>15</sup>

Knowledge retention within the organization and having employees to train and pass on knowledge to the large number of new employees over the coming years is critical to Teck successfully managing this demographic challenge.

### **8.3 What Can Teck Do?**

In 2010 Teck’s Corporate HR group commenced a process of standardized exit interviews for all voluntary resignations from the company. This information is invaluable and can be used to address issues that are leading to employees leaving the organization.

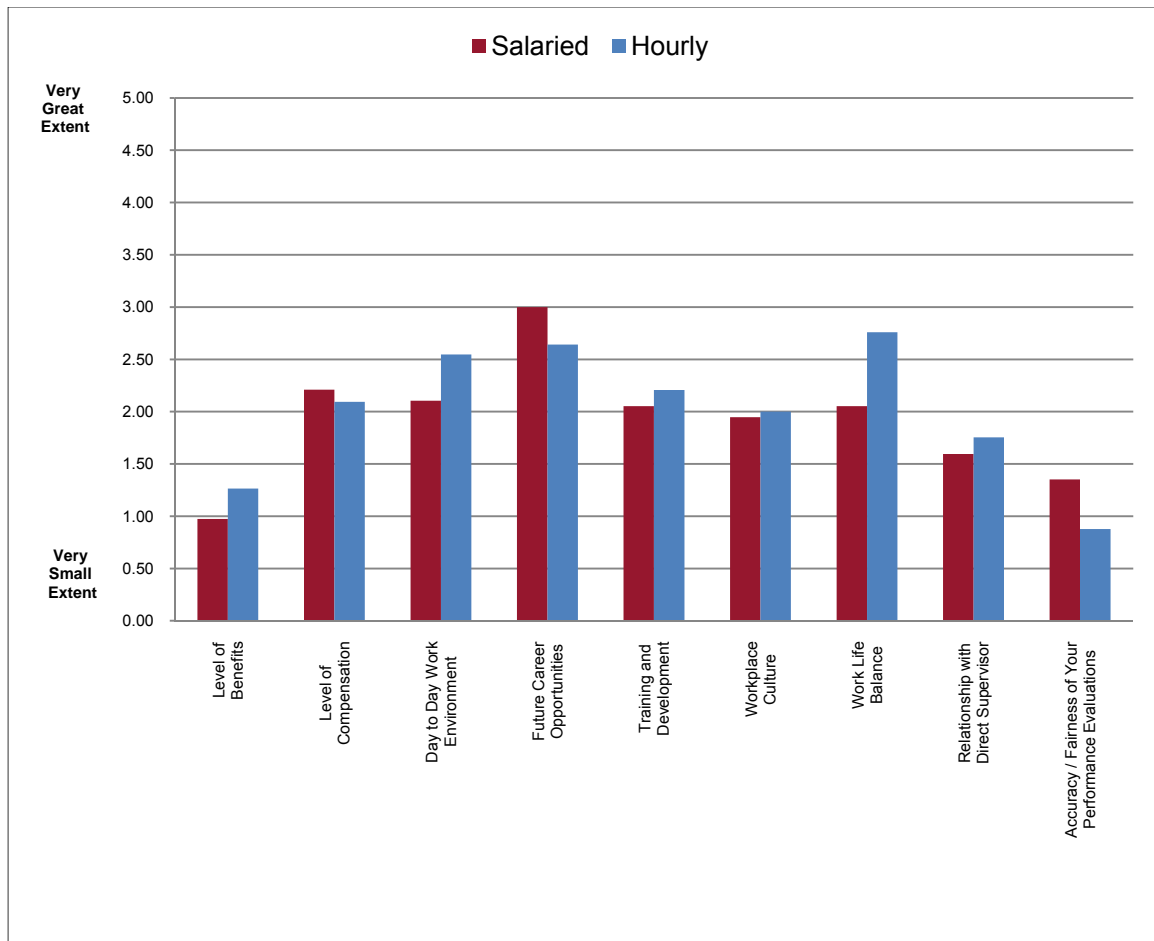
In reviewing the preliminary information from the exit interviews, this report identifies the top three factors influencing an employee’s decision to leave. The results of the exit interviews are summarized in Figure 17 below. For staff employees the top three reasons in order of importance were future career opportunities, followed by work life balance, and level of compensation. The top three factors influencing an hourly employee’s decision to leave Teck were work life balance, future career opportunities, and day to day work environment. This

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<sup>15</sup> Merge Gupta-Sunderji, The Real Reasons Employees stay or Go

information creates an opportunity to reduce future turnover by addressing and making improvements to the key factors influencing an employee’s decision to leave Teck. The organization may also be able to identify additional strengths that can be leveraged related to what employees liked about working at Teck.

Figure 17 Teck Exit Interview Factors Effecting Decision to Leave



Source: Figure by Author, data from Internal Teck Reports

Teck’s core staff employee performance management program is called Building Strength with People. This program is focused on three key areas of conversation between an employee and supervisor. These three areas of discussion are performance management, career, and development discussions. Each year Teck conducts a survey of a sample group of 10 to 15% of the employees in each business unit operation and functional areas. The focus of this survey is to assess the quality of discussions between the supervisor and employee on the areas of

performance, career, and development. This Building Strength with People survey has been conducted for the past four years.

Overall, the results changed very little between 2009 and 2010 with the average score across the company going from 62% in 2009 to 61% in 2010. As in previous years, the best results were in the area of performance management with an average score of 73%. The employee development and career discussions scored much lower with an average score across Teck of 53%. The lower scores in both the employee development and career discussion areas were also consistent with previous years. Comments from employees in these two areas indicate that either they did not have these discussions with their managers at all, or when they did, they were often not conducted well.<sup>16</sup>

The poor results in the development and career discussion elements of Building Strength with People are consistent with future career opportunities being the #1 ranked factor influencing peoples decision to leave Teck as outlined in the exit interview results above.

The results of both the exit interviews and the Building Strength with People assessment would indicate that further training is required for supervisors on both the importance and structure of the discussions between the employee and supervisor.

Teck must develop structured training sessions for managers, detailing the importance of these discussions with employees and providing the training and coaching required so that managers feel comfortable having meaningful discussions with employees around development and career. Developing a training module that can be delivered to supervisors at each location would ensure consistent training.

## **8.4 Employment Value Proposition**

As part of Teck's longer-term strategy, it must review the key retention elements of the employment value proposition that it currently offers, assess for gaps, and make changes as required to ensure maximum employee engagement and retention. This project should be rolled in with the broader EVP project discussed in the next section.

Based on my research through the Corporate Leadership Counsel, having a managed EVP that addresses key retention attributes leads to higher levels of commitment, effort,

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<sup>16</sup> Teck Resources Internal HR Report 2010 Building Strength with People Assessment.

performance and retention.<sup>17</sup> Having a longer-term strategy to develop a managed EVP will be critical for Teck in managing employee retention.

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<sup>17</sup> Corporate Leadership Council, Business Case for an Employment Value Proposition, 2010



## **9: Attraction**

This section demonstrates why employee attraction is critical to Teck being able to address the looming skills shortage in both its existing operations and for the projects that Teck has identified to meet its growth targets. Additionally, it shows why attraction of these new employees will become increasingly difficult and will require Teck to change the rules of the game around attracting new talent to Teck.

### **9.1 The Current Situation**

Teck employee recruitment requirements are driven by three key factors: the number of employees entering retirement, the number of employees leaving the organization as a result of non retirement voluntary and involuntary termination, and the number of new employees required due to operational expansion and to staff new operations.

Currently Teck's attraction requirements fall under the responsibility of the Manager Talent Development. The primary responsibility of this position is talent development program management and initiatives with little time to focus on attraction priorities and requirements.

### **9.2 Why it is Critical?**

Teck competes directly with several large diversified global mining and metals companies. The largest of these companies include: BHP, Vale, Rio Tinto, Anglo American, and Xstrata. Each of these companies has mineral exploration, mining, and metals refining operations in countries where Teck's major business units operate. Not only does Teck compete directly with other diversified metals and mining companies but it also competes with other resource industries such as Oil and Gas. Teck's future oil sands projects are located in Alberta, Canada where several large energy companies such as Shell, Total, CNRL Syncrude, Imperial Oil, and Suncor are well established with several large operations. Much of the recent and planned expansion in the Alberta oil sands is mined using the same type of truck and shovel open pit mining technology that Teck employs for its open pit operations. This reality adds significantly to the shortage of both skilled and unskilled workers as the oil sands operators target the same types

of skilled and unskilled labour as Teck. This increases competition for a scarce labour resource and the war for talent becomes even more competitive.

Just as Teck has aggressive growth plans to meet current and future global demand for resources, each of its major competitors does too. To successfully recruit and retain talent Teck must differentiate itself from its competitors. That being said, it has been well documented of late in several leading mining and exploration magazines and newsprint articles that the global mining industry in general will be faced with a significant shortage of people in the next decade or so, largely due to a combination of demographics and growth.<sup>18</sup> In a 2010 article written by Andrew Petrozzi in the Employment Paper titled “Mining for Tomorrow’s Talent Today: Demographics and industry growth is creating career opportunities”, David Bazowski, chair of the BC Mineral Exploration and Mining Industry Labour Shortage Task Force, refers to this labour shortage as one of the most critical strategic issues facing the mining industry.<sup>19</sup> Furthermore, according to Deloitte’s global Mining practitioners, this challenge is more prominent in developed nations with aging workforces such as South Africa, Canada, United States, and Australia where high growth sectors such as the mining industry are having difficulties replenishing their employees quick enough.<sup>20</sup>

Clearly the battle for talent is a global one. The mobility of skilled workers around the world is something competing resource companies must consider. As was described by Coenrad Alberts, Director, Johannesburg, Deloitte South Africa in a recent Deloitte report on mining trends for 2011, skilled workers can simply jump on a plane to change employers if the opportunity presents itself and they choose to accept.<sup>21</sup> Coenard suggests this gives these skilled workers a negotiating strength which ultimately forces mining companies to be more creative in their talent retention strategies.<sup>22</sup>

In a competitive industry such as the one in which Teck operates, the strategies of Teck’s competitors must be well understood in order to be able to effectively differentiate itself from others. For example, Rio Tinto, one of the world’s largest diversified metals and mining companies, significantly invests in a career and talent management strategy that its VP of Human

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<sup>18</sup> Petrozzi, Andrew, Mining for tomorrow’s talent today: Demographics and industry growth is creating career opportunities, From Employment Paper May 8, 2010.

<sup>19</sup> Petrozzi, Andrew, Mining for tomorrow’s talent today: Demographics and industry growth is creating career opportunities, From Employment Paper May 8, 2010.

<sup>20</sup> Deloitte, Tracking the trends: the top 10 issues mining companies will face in the coming year.

<sup>21</sup> Deloitte, Tracking the trends: the top 10 issues mining companies will face in the coming year.

<sup>22</sup> Deloitte, Tracking the trends: the top 10 issues mining companies will face in the coming year.

Resources feels differentiates them from the rest of the global competition.<sup>23</sup> In an online interview documented through Ochrehouse.com, Anne Stevens, VP, Human Resources, describes her view on a talent management strategy as end-to-end management of an employee's career with an organization, making sure the needs of the employee and the employer are satisfied.<sup>24</sup> This is similar to what is contemplated in the sample employment brand in section 9.4.

Another one of Teck's competitors, BHP Billiton, the world's largest diversified resource company, is heavily focused on their Foundations for Graduates Program.<sup>25</sup> BHP Billiton states on their website that recruiting, developing, and retaining talented graduates is a critical success factor and essential in order for them to achieve their project development and growth initiatives.<sup>26</sup> Clearly, BHP has committed themselves to new graduate development through their Foundations for Graduates Program. The program's objective is to establish a solid foundation for each graduate through learning about themselves, their team, and the BHP's organization.<sup>27</sup> BHP's program is provided across three continents and is supported by internationally recognized executive education.<sup>28</sup>

In the end Teck can certainly learn and build from the well developed career and talent management strategies of its competitors, but it must equally strive to create its own unique strategy that will differentiate Teck from the competition in order to attract future talent. Teck must readjust its goals beyond simply matching the best practices of the industry and instead become a recognized leader in employee development and retention.

### **9.3 Sources of Future Employees**

As a global diversified mining, mineral processing, and metallurgical company, Teck's markets for human resources are the large global talent pool of skilled and unskilled workers.

Moving forward, Teck must diversify its efforts to maximize its hiring potential for a successful recruitment and retention strategy. In consideration of the demographics laid out in previous sections, the company will be required to explore new areas for recruitment and become

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<sup>23</sup> Ochre House, Global Talent Management – the Rio Tinto approach, interview with Anne Stevens, VP, Human Resources, Rio Tinto, January 2010

<sup>24</sup> Ochre House, Global Talent Management – the Rio Tinto approach, interview with Anne Stevens, VP, Human Resources, Rio Tinto, January 2010

<sup>25</sup> BHP Billiton, People and Employment, Foundations for Graduates Program

<sup>26</sup> BHP Billiton, People and Employment, Foundations for Graduates Program

<sup>27</sup> BHP Billiton, People and Employment, Foundations for Graduates Program

<sup>28</sup> BHP Billiton, People and Employment, Foundations for Graduates Program

inventive in our hiring practices and initiatives. In addition to currently targeted labour markets, non-traditional markets need to be explored as well. Non-traditional markets include complimentary industries, women, aboriginals, and immigration.

### **9.3.1 Complimentary Industries**

Workers in industries such as forestry and manufacturing could have the skill sets required for a transition to mining. For example, Forestry workers may have the knowledge and expertise in operating heavy machinery. Training time for these individuals on the large mining equipment will be reduced as a result of their previous experience thereby reducing training budgets. Similar advantages apply to potential candidates from a manufacturing background comfortable working in an industrial setting. Entry level positions such as a utility person, haulage truck operator, and janitor can all benefit from complimentary industries. Similarly, certified trades positions such as Millwrights, Warehousemen, Electricians, Carpenters and Pipefitters can all be filled with individuals having the required training and a basic industrial background.

Further to complimentary industries, we must also consider individuals who work for Teck at locations that have a short remaining operating life. Teck's Duck Pond Operation in Newfoundland is an example of this and has a scheduled closure date of 2013 – 2014. The closure of this operation creates an opportunity to retain and relocate employees and fill vacancies at other operations.

### **9.3.2 Women**

As indicated in the Women in Mining (WIM) Canada study on the status of women in mining and exploration - women make up 14.4% of this workforce. This is the lowest in the primary industry categories in Canada.<sup>29</sup> Factors such as work culture, flexible work practices, and gender-specific challenges to career advancement were identified as barriers to entry. Teck will be required to draw on this knowledge to develop strategic initiatives to recruit and retain from this underutilized and represented labour pool.

In late 2010, Teck formed a light weight cross functional committee to study increasing the number of women in non-traditional roles within Teck. This committee will review barriers to entry and make recommendations on potential actions to increase opportunities for women to

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<sup>29</sup> Women in Mining (WIM) Canada, Ramp-Up: A Study on the Status of Women in Canada's Mining and Exploration Sector – Executive Summary, April 13th, 2010

work in non-traditional roles. As part of this committee’s review, this paper recommends that partnerships with government and training facilities such as Industry Trades and Training (ITT) should also be investigated and developed. This would assist with the recruitment of non-traditional positions such as certified trades and equipment operators. Adjustment to specific work assignments, more flexible work practices, and childcare programs and subsidies should be reviewed and pursued. Scholarship and bursary opportunities could also be offered at the high school level to female graduates considering mining and/or engineering as a profession.

Senior management can have an immediate positive influence on the outcome of this committee by providing strong leadership support and ensuring the availability of committee members to fully participate in the committee. Addressing and eliminating barriers to women entering the mining industry is critical to increase the representation of women in mining at Teck.

There are two immediate recommendations that can have a positive influence on this initiative. First, remove all gender specific job titles and replace them with gender neutral titles. Examples of this would be changing tradesman to certified trades or tradesperson and foreman to supervisor or leader. Provide diversity and sensitivity training to all current employees of Teck and add this training to all future new employee orientation training. These relatively small changes would demonstrate that Teck is committed to removing barriers to women entering the mining industry and assist the committee and the organization with the cultural change required for this initiative to be successful.

### **9.3.3 Aboriginal Peoples**

A study by Statistics Canada on the Aboriginal Labour Market for 2008-2009 states the following:

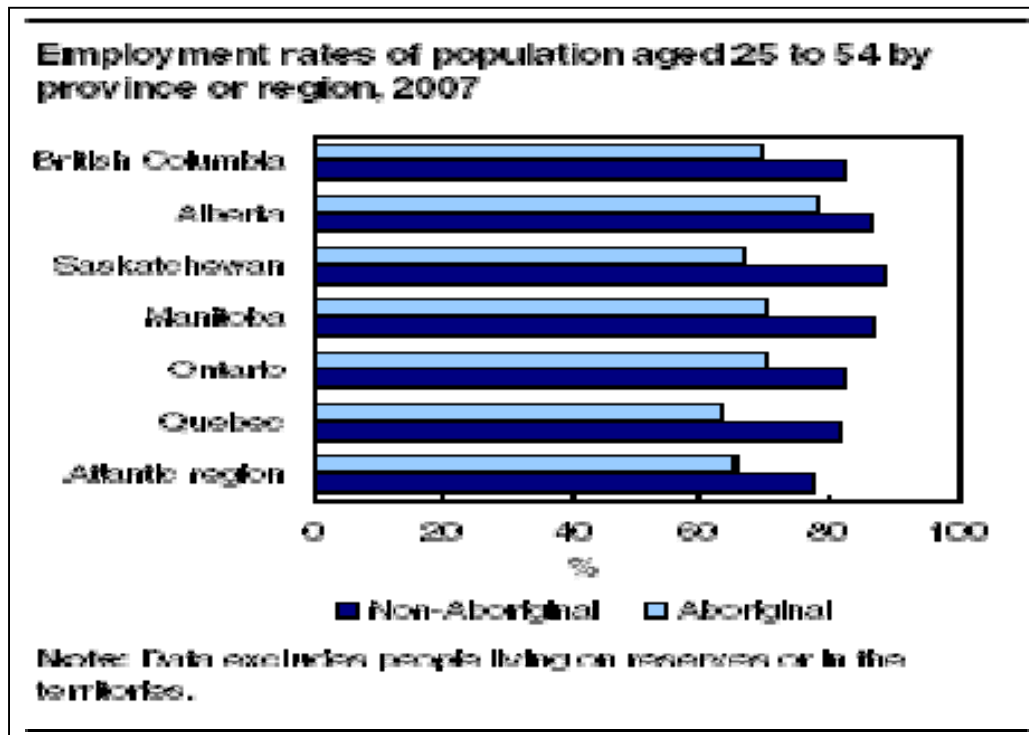
“The biggest employer of core-age (ages 25 to 54) Aboriginal people in 2009 was the health care and social assistance field, followed by trade, construction and manufacturing. For core-age non-Aboriginal people, trade was the top employer, followed by manufacturing, health care and social assistance and professional, scientific and technical services.”<sup>30</sup>

Information provided by Statistics Canada regarding employment rates of aboriginal versus non-aboriginal people is outlined in Figure 18 below.

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<sup>30</sup> Statistics Canada, Aboriginal peoples living off-reserve and the labour market

Figure 18 Aboriginal Employment Rates by Region



Source: Statistics Canada, *Aboriginal peoples living off-reserve and the labour market*, <http://www.statcan.gc.ca/daily-quotidien/081215/dq081215a-eng.htm>

Although BC had one of the higher employment rates in this graph, the trend of lower employment in the Aboriginal group is a Canada wide issue. This article further states that the unemployment rate for Aboriginal people (living off the reserve) declined from 2004-2007, most notably in British Columbia. While these statistics are encouraging, they also illustrate the need for additional employment opportunities for this group. The need for appropriate training programs and initiatives to provide the necessary skills is apparent. Training of Aboriginal groups in preparation for the workforce may be more expensive due to inadequate preparation, therefore requiring more extensive upgrading. Although more expensive, the payoff for improving Aboriginal participation in the workforce may be significant in terms of building relationships for future licensing and permitting, particularly in the case of new projects such as Galore Creek.

### 9.3.4 Universities

Universities present the greatest opportunity for recruiting new technical employees to fill the future labour shortage. Teck has many existing initiatives for recruiting graduates at specific universities in Canada, however it does not have strong relationships with all universities

across the country. With Teck being the largest integrated mining and metals company in Canada and many world renowned mining schools based in Canada, Teck should have an unequivocal position as the employer of choice at these universities. Furthermore, there is an opportunity for Teck to recruit international students and increase its presence at key universities outside of Canada. Canada's focus on natural resources presents employment opportunities for recent graduates from abroad, in addition to Canada's other desirable features as a country of choice for non-residents.

### **9.3.5 Immigration**

As the war for talent increases in intensity, the pool of available domestic employee candidates will continue to shrink. For Teck to be successful in meeting the demographic challenge and staff its expansion projects, it must develop a strategy to recruit international candidates.

Teck Coal is currently working with an international trade recruiter on a pilot project to hire international trade candidates and relocate them to Canada. This could be the first step in opening the door to recruiting international candidates and access to the large global pool of potential employees.

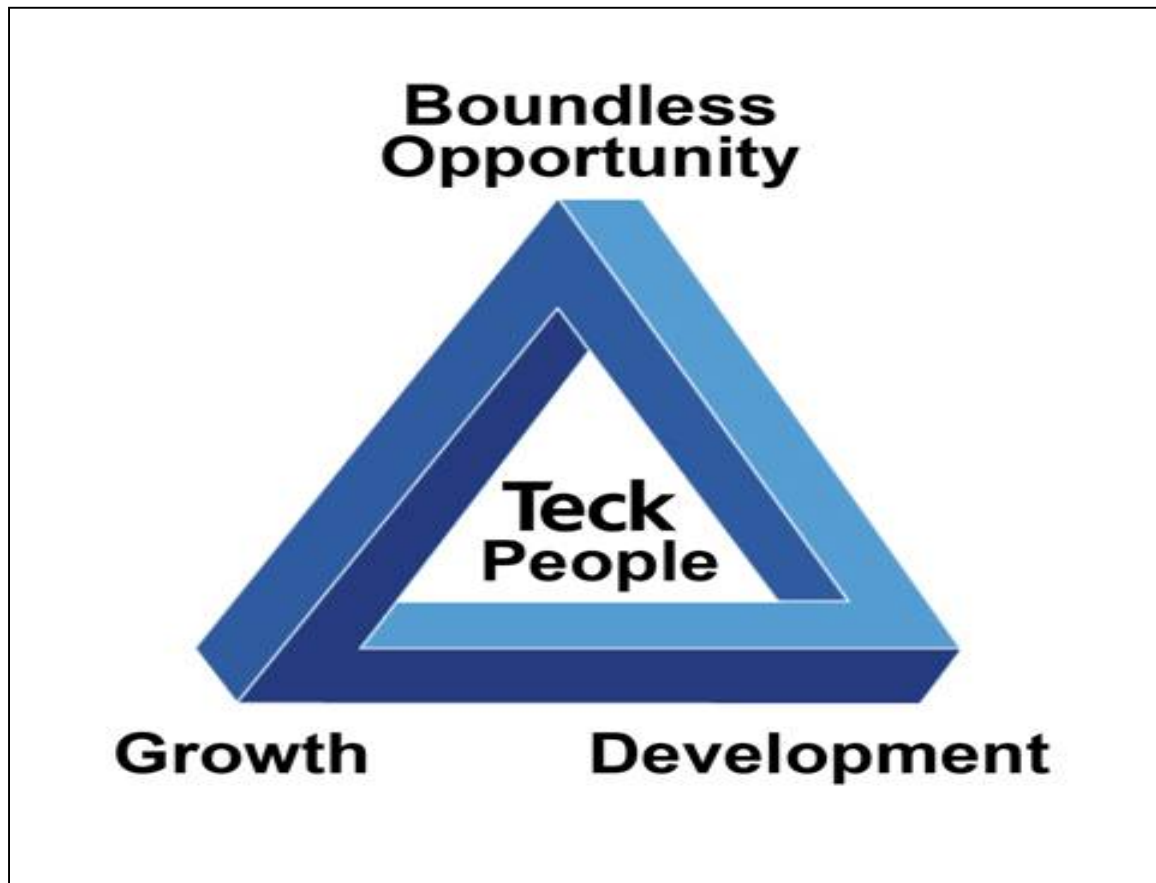
To assist in supporting international recruitment and immigration Teck should actively lobby government to reduce the red tape and time line on receiving the required approvals to hire international workers to work at Teck's operations in Canada.

## **9.4 Employment Branding**

The Teck employment brand should be at the core of a human resource strategy to recruit and retain employees. Having a fully developed and widely recognized Teck employment brand is becoming more critical as the talent shortage increases. Teck will need to leverage and build on its competitive advantage to be successful in recruiting and retaining the required employees.

The following figure is an example of the sort of employment branding that needs to be developed and communicated to the pool of candidates that Teck will be vying to attract into the organization.

Figure 19 Example of Potential Teck Employment Brand



Source: Figure by Author

I developed this brand while working with my MBA strategy course group as an example of the type of employment branding that Teck can create and lever to assist in attracting potential candidates. It is intended to highlight the development, growth, and boundless opportunity for both the employees and the company. This cycle for Teck's employees and the company are complementary. Teck offers a working environment that promotes career development and subsequently growth for its employees. As a result, employees have boundless career opportunities. At the same time, developing and growing its human capital allows Teck to take advantage of business opportunities to grow and expand the business; leading to greater revenues. In turn, Teck is able to invest more resources to develop and grow its employees, closing the continuous loop. Developing the Teck employment brand will require leveraging the company's competitive advantages such as long life resources in desirable and politically stable regions, company reputation, employee commitment, and Teck's commitment to corporate social responsibility.



Teck's Human Resources group currently has an initiative underway with an external provider, TMP Worldwide, to research, develop, and communicate an employment brand for its Canadian operations. The focus is on Canadian operations at this time as that is where the greatest demographic challenge exists for Teck.

I recommend that Teck immediately expand its Canadian employment brand initiative with TMP worldwide to include South American operations. During this paper, my research has clearly identified the upcoming recruitment needs for Teck's planned expansion in South America as a priority. Time is critical and for Teck to meet its growth plans for South America it must immediately increase its employment brand and attractiveness as an employer in South America.

Expanding Teck's employment brand initiative will be relatively easy and could be acted upon quickly. Teck could utilize the services and international expertise of TMP Worldwide to lead this initiative. The anticipated initial project costs would be similar to the \$80,000 to \$100,000 that Teck is investing in the Canadian branding initiative project. To put this cost in perspective, the entire employment branding initiative project expansion with TMP for South America would be equivalent to the cost of turnover associated with one employee leaving Teck.

## **9.5 Employment Value Proposition**

Teck should immediately commence a project to access, design, communicate and deliver Teck's Employment Value Proposition (EVP). EVP is a term used to denote the balance of the rewards and benefits that are received by employees in return for their performance at the workplace. My research through the Corporate Leadership Counsel attached in Appendix B indicates that an effective EVP increases candidate attraction, reduces compensation costs and drives employee commitment. My research shows that an effectively managed EVP increases attraction and allows an organization to source from 60% of the labour market compared to 40% for organizations with an unmanaged EVP. Similarly, a managed EVP reduces the amount of compensation increase required to attract candidates by as much as 20% if they feel the EVP is attractive.<sup>31</sup> In conjunction with the review and development of a new Teck EVP Teck should conduct a structured scenario planning exercise based on different commodity prices and the impact to Teck's human resource requirements. One scenario that could be review is commodity prices remaining at high levels for different time periods, such as 1, 3, 5 and 10 years.

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<sup>31</sup> Corporate Leadership Council, Business Case for an Employment Value Proposition, 2010

This EVP project and scenario planning exercise will provide a solid understanding of the Employment Value Proposition offered at Teck and any changes that may be required to meet future human resource challenges. This project could be completed in conjunction with the employment brand initiative that is currently under way with TMP worldwide as it draws on some of the same data and processes. TMP could be utilized to provide the resources and expertise to quickly move this initiative forward. Development and career opportunities are critical attributes of an EVP and the improvement and communication of Teck's EVP can assist with addressing the previously identified number one reason employees leave Teck. At the same time, employee development addresses the shortfall in management skill sets required for Teck's future. A key part of Teck's long term human resource strategy is linked to the development and communication of an effectively managed EVP. Completing this project is critical to Teck successfully retaining and attracting the employees required for sustaining and growing the business.

## **10: Recommendations**

There are many short-term recommendations contained throughout this paper particularly in the four employees groups identified as having specific age related human resource challenges.

### **10.1 Summary of Key Actions**

Following is a summary of additional key short-term recommendations to assist in positioning Teck to win the war for talent and mitigate the human capital related business risk involved in being able to sustain existing operations and meet forecast growth projections.

Increase human resource staffing at our operations to include a talent development coordinator at each location. The focus of this role is employee development including enhancing the people management skills of our supervisors to increase the ability of managers to have meaningful development and career planning discussions with employees. This increased focus on development and career planning should have a significant impact on employee engagement and retention. Total cost of this recommendation is between \$1,000,000 and \$1,500,000 annually.

Revise the corporate HR organizational structure to separate the Manager Talent Development and Attraction into two separate and distinct functional roles. As outlined throughout this paper, the human capital challenges that Teck is facing on both the employee development and attraction fronts, necessitates that these two functions require the focus and attention of a dedicated management employee. There would also need to be an attraction coordinator added to assist with the Teck wide attraction strategy, branding, university recruitment, initiative development and implementation. Total cost of this recommendation is approximately \$300,000 annually.

Expand Hire Desk Recruiting software to all Teck Operations. As was demonstrated in the Teck Coal Business Unit, recruiting and resume management software significantly increases efficiency and effectiveness of the recruiting process. These efficiency gains will be critical as recruiting demands increase across Teck. An additional benefit would be the ease of access to all resumes received across the broader Teck organization. Expanding access to all operations for all resumes received should increase candidate quality and reduce time to fill vacant positions. Total

cost of this recommendation is approximately \$300,000. Although this is classified as a shorter-term strategy, it will have long-term benefit to Teck's recruiting effectiveness and efficiency.

The following recommendations are part of the longer-term human resource strategy that this report recommends for Teck.

**Expand the employment brand initiative with TMP for Canada to include the development of a unique and competitive employment value proposition based on the executive interviews, employee surveys and focus groups.**

Total cost of the project phase of this recommendation is approximately \$100,000. There will be additional costs to Teck depending on the outcome of the EVP project and recommended changes that may be required to Teck's current benefits, compensation and development programs. These costs could range from the hundreds of thousands to several million dollars per annum. If the EVP is well developed and effective in retaining and attracting employees, the costs associated with the EVP project and program enhancements would be more than offset by savings related to recruiting, training and lost production. As discussed earlier in the paper, I would recommend that this project be combined with a human resource scenario planning exercise.

**Expand the employment brand initiative with TMP to South America including development of Employment Value Proposition with a view to having a Teck globally recognized employment brand.**

Total cost of this recommendation is approximately \$200,000. This project is critical and must commence as soon as possible if Teck is to be successful in meeting its growing recruiting demands in South America related to its existing operations and the QBII and Relincho projects. The cost of this project is insignificant when compared to the potential recruiting costs associated with staffing Teck's South American operations and even more insignificant when compared to the potential risk of revenue loss due to project delays.

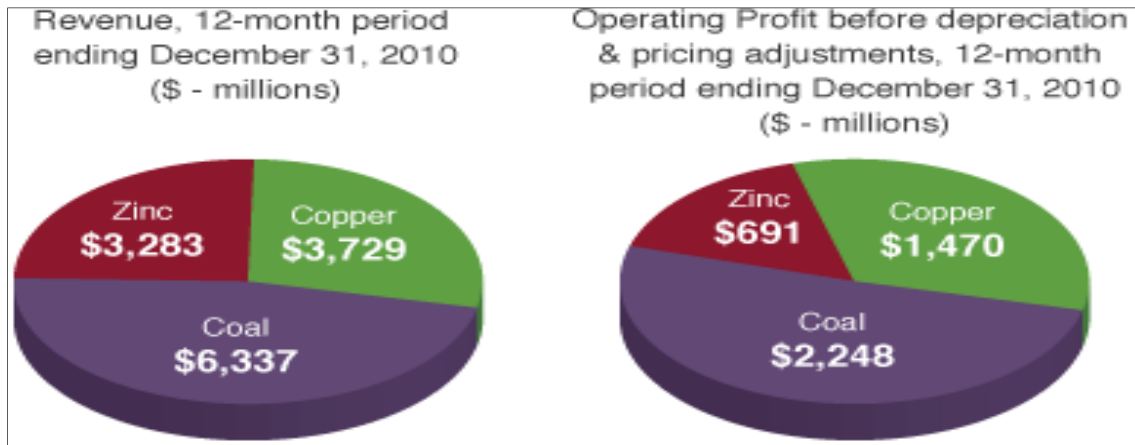
The total costs for the short-term recommendations above are in the range of 4,000,000 to 6,000,000. The costs of the longer-term strategies related to the assessment and development of a unique and managed EVP and employment brand to differentiate Teck from its competitors cannot be determined until the completion of the scenario planning exercise, employment branding and EVP projects. These costs may initially appear significant however they will be inconsequential when compared to the opportunity that exists for Teck to reap significant revenues due to high commodity prices.

## 10.2 Costs Associated with Action Steps

Teck's revenue model is based on production from operations and the prevailing commodity prices. Future revenue streams are increasingly dependent on projects currently in the evaluation phase. Figure 18 outlines Teck's 2010 revenues of over 13 billion dollars. The cost side of the business model is not expected to change materially. Costs associated with human resource, development, recruitment and retention initiatives are expected to be several million dollars. Costs of this magnitude are insignificant relative to the revenues generated at these operations. However, the costs of failure with regards to human resource strategies could be material. This is especially true in that it could mean delays in launching new projects or production curtailment at existing operations as well as a greater likelihood of increased voluntary turnover, which is a quantified cost.

The costs of these human resource initiatives will not negatively affect profitability. However, hiring the best people introduces a significant upside for safety, profitability, and innovation. A motivated and highly skilled workforce is more likely to accept a culture of safety, achieve better productivity, and offer innovative thought processes. The opposite also holds true for a less motivated and skilled workforce. In fact, the challenge of recruitment would be compounded as a result of lower productivity.

Figure 20 Teck 12 Month Revenue by Business Unit



Source: Teck Website Investor Section

Another potential cost to Teck is the significant market risk if it is unable to achieve the revenue growth anticipated by investors. Teck has publicly stated that it is positioned for growth.

As a result, investors will be sensitive to signals of trouble from Teck in converting its development projects to producing assets. This risk in the market place results in significant responsibility on the Human Resource department. Failure to find the people will jeopardize growth and could devalue the company.

One could argue that the costs associated with the action steps are actually investments in human capital and Teck's future as opposed to increased costs. The true cost would appear for Teck if the action steps proposed in this paper are not taken and Teck's ability to execute its business plan is hindered due to a critical shortage of employees.

## **11: Conclusion**

This paper discusses the significant risk posed by human resource shortages to Teck's ability to sustain and grow its business.

To demonstrate this risk the paper analyzed Teck's current demographic profile in conjunction with the demographic profile of North Americans, the projects that Teck has in its pipeline and Teck's turnover to determine Teck's total employee requirements. In addition, the paper also reviewed the increased global demand for natural resources and the subsequent impact on commodity prices leading to significant growth in the mining and energy sectors. The demographic challenges are compounded by an increasingly competitive labour market driven by the significant shortage in talent. The paper reviews potential short-term opportunities that exist and recommended specific actions to deal with the immediate short term human resource challenges. Teck can significantly reduce the business risks associated with its human capital challenges by employing the recommended short and longer-term actions outlined in this paper.

# Appendix

## Appendix A



### BUSINESS CASE FOR AN EMPLOYMENT VALUE PROPOSITION

#### Purpose:

- Get buy-in for a well managed employment value proposition (EVP)
- Describe your EVP challenges
- Introduce the concept of an EVP to your team

This presentation establishes the business case for an employment value proposition. The presentation also highlights the benefits of a managed EVP and how HR can misperceive the importance of attributes making up your EVP. This presentation can be used to rebuild your EVP to increase retention and commitment.

#### Suggested Presenter:

Senior HR Leader

#### Suggested Audience:

Business Leaders, Senior Executives, and HR Staff





## ROADMAP

### What Is an Employment Value Proposition?

- Definition of Employment Value Proposition
- EVP Attributes



Benefits of an EVP



The Current State: Poor EVP Management



Next Steps



» **Employment Value Proposition:** The set of attributes that the labor market and employees perceive as the value they gain through employment with an organization.

- These attributes fall into five categories: rewards, opportunity, work, people, and organization.

## Defining the Employment Value Proposition (EVP)

Five Key EVP Categories

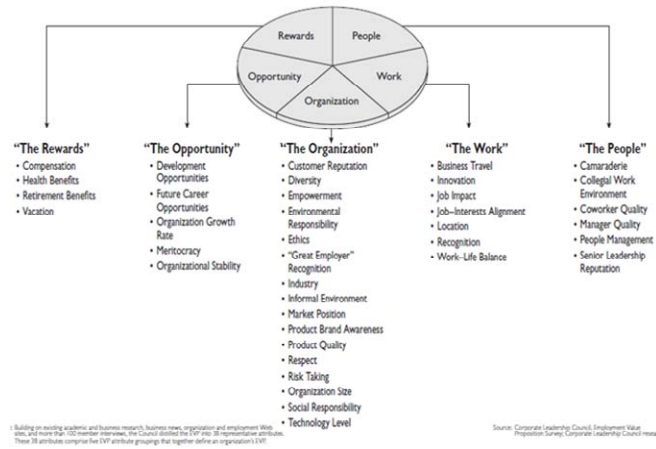




There are 38 attributes that together define an organization's EVP. These 38 attributes are categorized in the five key EVP attributes.

## EVP Attributes

The 38 Attributes that Comprise an EVP



## ROADMAP

What Is an Employment Value Proposition?



Benefits of an EVP



The Current State: Poor EVP Management



Next Steps

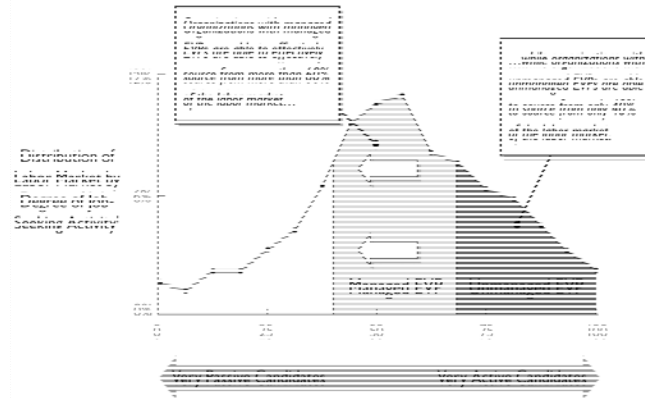
- Increases Candidate Attraction
- Reduces Compensation Costs
- Drives Commitment



Constructing and delivering an effective EVP allows us to source deeper in the labor market by increasing our access to passive candidates.

## A Managed EVP Improves Candidate Attraction

Degree of Activity in the Labor Market



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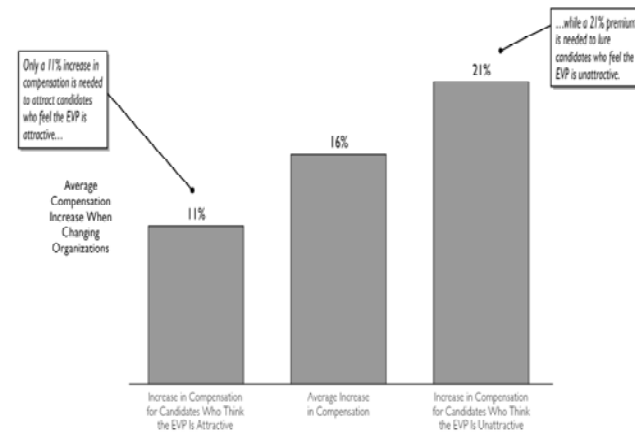


When candidates in the labor market view an organization's EVP as attractive, they demand less of a compensation premium when deciding to join.

- An attractive EVP reduces the amount of compensation increase (the "premium") the organization must offer, compared to the candidate's current salary, to convince them to accept the offer.

## A Managed EVP Decreases Compensation Costs

The Monetary Benefits of Increasing Attractiveness



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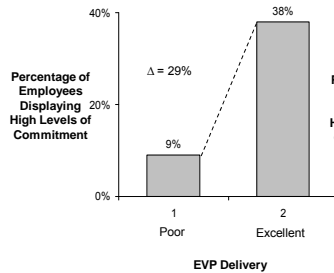


Excellent delivery on the EVP can yield a workforce where 38% of new hires display the highest level of commitment.

- These higher levels of commitment in turn lead to increased effort, performance, and retention.
- Organizations with the most effective EVPs have 30-40% of employees displaying high levels of commitment compared to less than 10% of employees in organizations with less effective EVPs.

## A Managed EVP Drives Employee Commitment

Commitment Levels: Less than 1 Month of Tenure  
Poor Versus Excellent EVP Delivery



Commitment Levels: 12 Months of Tenure  
Poor Versus Excellent EVP Delivery



## ROADMAP

What Is an Employment Value Proposition?



Benefits of an EVP



The Current State: Poor EVP Management



Next Steps

- Misalignment with Employee Preferences
- Poor Differentiation of the EVP
- Failure to Deliver on EVP Attributes

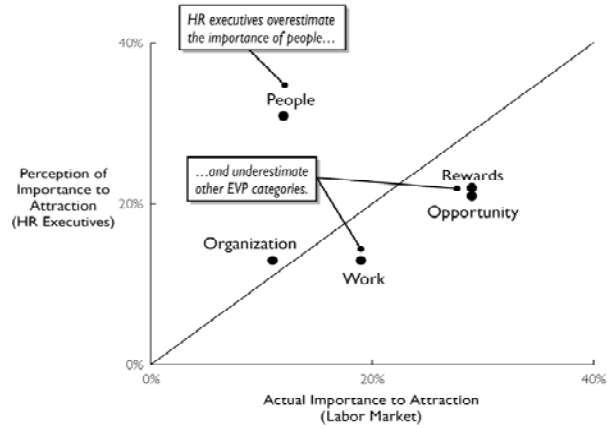


Our EVP overemphasizes unimportant characteristics and underemphasizes critical attributes.

- There is a disconnect between what the labor market prefers and what HR believes the labor market prefers.

## HR Misperceives EVP Attribute Importance

Relative Importance to Candidate Attraction  
HR Executives Versus Labor Market



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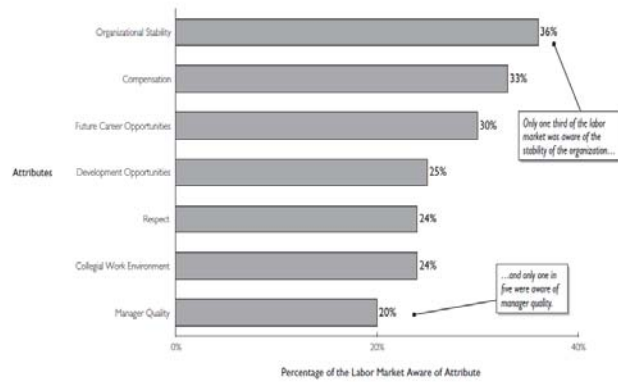


Most organizations struggle to differentiate their EVP in the labor market. There is little awareness about the core EVP attributes.

- Only 33% of candidates have a strong sense of compensation package's competitiveness. Awareness of other attributes is even lower.

## EVPs Look the Same

Labor Market Awareness of Core EVP Attributes



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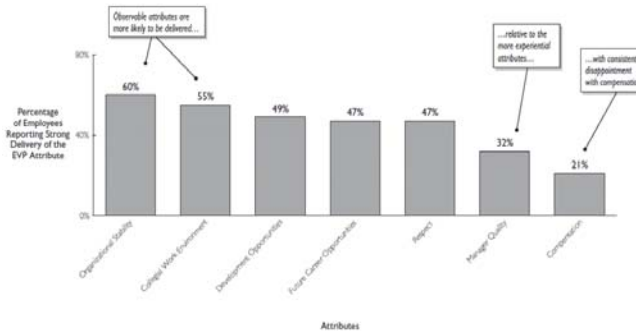


Most organizations fail to deliver the benefits they promise to their candidates.

- More than 50% of employees indicate that organizations fail to deliver on the less tangible aspects of the EVP, such as development opportunities, respect, and manager quality.

## EVP Reality < Expectations

Delivery on Core EVP Attributes



## ROADMAP

What Is an Employment Value Proposition?



Benefits of an EVP



The Current State: Poor EVP Management



Next Steps

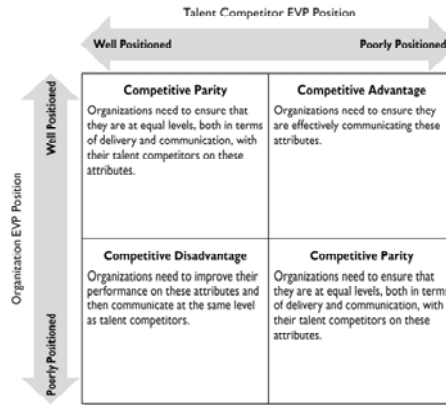
- EVP Rebuilding
- EVP Management



Creating a competitive advantage requires delivering and communicating well against attributes where competitors underperform: poor EVP awareness among candidates and poor EVP delivery by organizations.

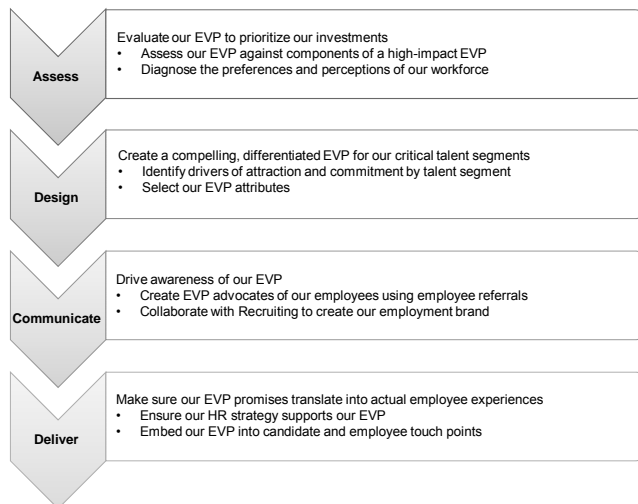
- The competitive advantage which attributes can provide in the labor market varies significantly based on differences in competitor delivery and organization delivery of the attribute.

## Proposal: Build an EVP that Delivers Competitive Advantage



Effective EVP management involves four steps: assessing current EVP, designing a competitive EVP, communicating EVP attributes to employees, and delivering on the EVP promises.

## EVP Management: Process Overview





There are four imperatives to rebuilding our EVP after a period of organizational disruption.

## Imperatives for Rebuilding Our EVP

	Stability	Work Environment	Job-Interests Alignment	Development
Challenge	Organizations are being told to highlight stability, but there are risks to over-focusing on it.	Work environments are less supportive, but more important now.	Job-interests alignment is key to commitment now, but threatened by organizational change.	Development has dropped as a commitment driver, but remains an organization priority.
Imperative	Set stability expectations; do not promise stability.	Re-establish networks to fuel engagement and productivity.	Enable employee self-selection into work and roles to increase alignment with interests.	Support career self-reliance on the part of employees to overcome organizational barriers.



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