

**Mobile Miners: Work, home, and hazards in Yukon's mining industry**

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## Abstract

This thesis examines the impacts that long-distance commuting operations have for workers in Yukon's mining industry. The Canadian mining industry has transitioned from the traditional Taylorist operations of the twentieth century to lean-production systems of work organization. Among other changes, this leaner industry now employs small, highly trained workers in precarious occupations. Mines are also now operated in more remote areas, forcing workers to commute long distances and live for weeks on-site. Yukon is currently experiencing a resource boom, and is in the process of developing several new mines in the territory--mines which the local population hope to benefit from, but which will likely be designed around lean production systems. Within this context, this thesis explores the impacts of long-distance commuting through in-depth interviews with 12 workers in Yukon's mining industry. The findings are organized into four major themes: 1) workplace culture, 2) safety in mining, 3) mobility and migration, and 4) home life for workers. These four themes represent what respondents felt were the most relevant impacts in terms of long-distance commuting.

Keywords: Taylorism, lean production, long-distance commuting, fly-in/fly-out (FIFO), drive-in/drive-out (DIDO), precarious employment, workplace safety, labour migration, Yukon, mining industry, Resources and Sustainable Development in the Arctic (ReSDA).

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### **Mobile Miners: Work, home, and hazards in Yukon's mining industry**

The purpose of this thesis is to examine how long-distance commuting operations in the contemporary Canadian mining industry affect mining workers' lives. Specifically, in-depth interviews with workers in Yukon's mining industry were conducted to record what they felt were their most important experiences. These experiences provide an understanding of the impacts of long-distance commute work in mining, specifically through issues of diversity, safety, the workplace, and family life. These issues are connected to changes which have occurred in the Canadian mining industry over the last three decades. Specifically, the mining industry has been restructuring in terms of the lean production system, and this has created new strains for workers and their families in terms of mobility, safety issues, and contract work. At the same time these changes are taking place, Aboriginal people and women are entering the mining industry in greater numbers, but in addition to the above issues these groups may face difficulties with the existing workplace culture in mining.

In the last three decades, the Canadian labour market has experienced a number of changes to industries in general, and specifically to the mining industry. In the twentieth century, labour was organized around the ideas of scientific management, or Taylorism, named for its founder Frederick Taylor. As a system, its purpose was to maximize efficiency, by having workers and managers work together to identify the best ways to organize and complete tasks in the workplace. In Taylor's own words:

...the most important object of both the workmen and the management should be the training and development of each individual in the establishment, so that he can do (at his fastest pace and with the maximum of efficiency) the highest class of work for which his natural abilities fit him. (Taylor 1911:12)

Taylor believed that both employers and employees would benefit from implementing scientific management in the workplace; employers would reap greater profits from increased production, and in turn pay their employees greater wages (Taylor 1911:10-11). One drawback to the efficiency of this system was that workers were deskilled; they were trained to specialize in a few repetitive tasks, without developing a full skill-set or understanding of the processes at their workplaces (Russell 1999:127-135). This organization of work also occurred at a time when trade unions were strong and jobs were widely available for workers in the industrial sector (Russell 1999:1-3). This was true until the early 1980s. The early 1980s saw declining mineral prices and an economic recession. It was during this period in Canada that the mining industry underwent restructuring (Storey 2010:28). This period marked a transition away from Taylorism to a new work environment focused on efficiency with fewer available human resources. At the same time, new technology was being introduced into Canadian industries, allowing for some processes to be automated, eliminating some labour-intensive positions, while still increasing the productivity of firms (Russell 1999:135-139; Storey 2010:25-27).

The term, lean production, was coined by Taiichi Ohno, referring to the implementation of these new practices at Toyota in the 1980s. Since that time, the term and practices have prevailed outside the Japanese auto-industry, and become standard practice for many industries worldwide. Proponents argue that there are many benefits to this new model of production, including efficiency and the elimination of waste (Roos, Womack, and Jones 1991). Under the lean production model, workers learn to perform a variety of tasks at their workplaces as old positions are collapsed into the new ones. But workers are aided in this endeavour through new forms of technology. They are to be trained to a higher standard than before to use this technology; they are to be knowledgeable. This new knowledge worker is supposed to have a

more fulfilling role in the workplace than in previous decades through an increase in decision-making, continuous learning, and a variety of tasks to perform (Russell 1999:15-23).

There are potential problems with this new arrangement. More responsibility is placed on the worker in these circumstances, which could have implications for blame when there are problems in the process, and in terms of safety in an industrial setting. Additionally, the era of lean production has witnessed a decline in the influence of trade unions in the workplace (Russell 1999:1-3). Workplaces today require flexibility in their workforces, both in terms of availability to work and in terms of tasks to perform; this runs counter to unions which set out specific tasks, pay-scales, and occupations of workers. In some cases, this flexibility could be a boon to workers, as noted above; in other cases, flexibility could lead to exploitation of workers by their employers (Russell 1999:15-23).

The Canadian mining industry serves as an excellent example of an industry that has experienced, and continues to experience, the processes discussed above. Historically, mining has been physically demanding work. Workers set up timber or steel supports, and operated small drills driven by air. Beginning in the early 1980s a number of changes began to take place in the industry. There was a recession, and a decline in the price of certain minerals; this led to several mine closures and layoffs across the industry (Storey 2010b:25-26). In Yukon, the historic Faro mine complex faced its first in a number of shutdowns over the next two decades, and witnessed outmigration of the miners and their families (Coates and Morrison 2005). New technologies were introduced during this period as well. For example, mechanized drills were introduced, new machines that required only a couple of trained workers to maintain and monitor it underground. Conveyor belts moved ore from underground to the surface. On the surface, the ore was then moved by truck to a nearby mill and processed, again with only a handful of

workers to monitor and maintain the process (Russell 1999:120-128). In other words, the Canadian mining industry became more automated during this time, requiring a small number of trained and knowledgeable workers compared to the decades before the 1980s.

Another major change took place during this time period in the Canadian mining industry. Historically, companies built towns around the sites of mines and attracted a labour force to live there. In Canada this practice has largely been abandoned--Tumbler Ridge, British Columbia was the last resource town of its kind, built in 1981 (Storey 2010b:24). In line with the need for lean production, both governments and mining companies felt that towns were too expensive to build, maintain, and then close when mines inevitably shut down. Additionally, the demand for minerals has led companies to develop mines in more rural areas than in past decades (Storey 2010b:28). Consequently, the modern Canadian mining industry often relies on fly-in, fly-out (FIFO) or drive-in, drive-out (DIDO) operations for its labour and supplies; small camps are built at mine sites to house workers who fly or drive in from for weeks at a time from their home communities (Storey 2010b:29). Taken together, the restructured Canadian mining industry requires an increasingly knowledgeable and skilled workforce to operate at its mines. Additionally, it requires its workforce to be more mobile than before, travelling between home and work for long periods of time.

Yukon serves as a good example of a resource-dependent territory that has experienced the above changes. The territory experienced a resources boom following the Second World War, and witnessed the growth of mine towns during this period. In the 1980s the territory experienced the same recession that was affecting the rest of Canada, and its large lead-zinc mine in Faro went through a series of closings and re-openings until finally closing down in 1998 (Mostyn 1994; Coates and Morrison 2005). More recently, the last five years have seen mining

return to Yukon, and the territory now has three producing mines, with another four in development. This new mining boom has the potential to enrich the territory and its peoples in several ways, including through employment in the mining industry (Pasloski 2012). Yet specific to Yukon, little has been written in terms of workers in this restructured mining industry. We know very little about their experiences. There is an increasing demand for knowledge workers in the industry, yet they are in short supply nation-wide (MiHR 2011b). Long-distance commuting could impact local and non-local workers in a number of ways. Additionally, this new resource boom is occurring in a political climate where both the territorial government and Yukon First Nations have more control over the region's lands and resources than in past decades (Horne 2010; Cameron and White 1995). As a result, Impact Benefit Agreements are signed between First Nations and mining companies, requiring a certain proportion of workers to come from local residents (Gibson and Klinck 2005). Women are also entering the Canadian mining industry in increasing numbers (MiHR 2011a). Yukon provides a good context for studying the labour force in the restructured Canadian mining industry, but it also provides a good context for studying what has not been discussed by literature yet. In other words, the experiences of a mobile workforce, including increasing numbers of First Nations and women have often been ignored by the existing literature on Canada's mining labour force.

This thesis contributes to the debate surrounding lean production systems in the Canadian mining industry. In *More with Less: Work Reorganization in the Canadian Mining Industry*, Russell (1999) argues that lean-production systems are becoming more prevalent in Canadian mining companies, and are replacing traditional systems in the workplace in order to operate at lower costs. One of Russell's major arguments is that lean production has resulted in a leaner workforce, with more production and flexibility expected from fewer workers. Additionally,

without the benefit of a unionized environment this workforce has become more temporary. While these arguments are true, Russell's focus is on the labour process at mines, and the work has become somewhat dated. This thesis attempts to update the work of Russell (1999), but within the context of labour migration, which has become more prevalent in recent years (Newhook, Neis, Jackson et al. 2011). As already mentioned, lean production in the mining industry has led to the need for temporary workforces in remote areas. The purpose of this research is to understand the process of working, commuting, and living in Canada's lean mining industry in contemporary times.

This thesis aims to contribute to this gap in knowledge. It was funded as a small project through Resources and Sustainable Development in the Arctic (ReSDA), a major collaborative research initiative which is examining ways to ensure that more benefits from natural resource developments remain in arctic communities. Specifically, this thesis investigates workers' experiences from a variety of backgrounds in Yukon's contemporary mining industry. These perspectives include local and non-local workers, knowledge workers and labourers, women, Aboriginal people, and young people. This thesis answers the following research question: What are the impacts of long-distance commuting operations for workers in Yukon's mining industry?

To answer the above question, this study begins with a review of the available literature of long-distance commuting. The literature review argues that long-distance commuting operations have grown in use since the 1980s due to companies in extractive industries implementing lean production models described above. More specifically, companies in mining and offshore oil have needed to cut their operating costs in a variety of ways, and these policies have had several impacts for workers. After a working definition of long-distance commuting and discussion of its origins, the literature review goes into further detail, describing how this

form of work organization impacts workers at the worksite, at home, and in-between the two spheres. The basic advantages and disadvantages of the lifestyle are discussed, but this is made more complex by the occupations, gender, and race of workers. Specifically, whether workers are contractors or company employees, men or women, or Aboriginal can all impact their experiences with long-distance commuting operations in offshore oil or mining. Others issues are discussed, such as concerns over safety in offshore oil and mining, as they may be compromised by lean production models. Last, the impacts of long-distance commuting on workers' home lives and transition between work and home are discussed, and are further complicated by occupation and gender. The literature review concludes with a summary of the general themes, which serve as the template for the interview schedule used in the study.

In the methodology section I argue for the use of in-depth interviews for exploring the experiences of workers in long-distance commuting operations. In-depth interviewing is a useful method for understanding the complexity of the contemporary mining industry, as gender, race, occupation, education, residence, and family all influence workers' experiences in the mining industry. In-depth interviewing allows respondents to discuss in detail the most important aspects of working in Yukon's mining industry. Snow-ball sampling was used to recruit participants for interviews, and this allowed for the collection of data from a largely inaccessible population--in this case, workers who commute to remote mines in the territory. In February 2013 I conducted interviews with twelve respondents in Whitehorse, Yukon Territory, who were all employed in Yukon's mining industry. The respondents came from a variety of backgrounds, giving detailed and unique interviews. The interviews were then transcribed, and analysed using Nvivo qualitative data analysis software. This section concludes with a description of Yukon's mining industry to give context for the findings that follow.

The findings from the interviews show many similarities with the existing literature of long-distance commuting. In some cases this is expected; lean-production models may have de-emphasized safety maintenance and equipment, and as a result safety has remained an issue in workplaces in spite of the deadly consequences. More recent literature has emphasized the precarious nature of contract labour, and respondents in Yukon's mining industry had a lot of experience with this. Workers also cited many of the same advantages that were described in the literature for long-distance commuting. Yet there were also some unexpected results. Many of the studies dealing with women in long-distance commuting were conducted in the 1980s, and these women described negative work environments. The results of this study show there have been changes for women in extractive industries since those studies, though some challenges still remain for women, particularly employment in underground mining. Another group, Aboriginal people, continue to experience negative work environments in mining, although Yukon's mining industry also offers some unique advantages for this group with benefits agreements signed between First Nations and mining companies. Last, experiences of long-distance commuting differ greatly between those commuting within the region to a mine-site, and those commuting from outside the region. Both groups experience different advantages and disadvantages. Specifically, workers from outside the region enjoyed good skilled positions, but may have experienced more problems with their home lives and travel, while workers from Yukon cited advantages with the commuting lifestyle but were often employed in unstable positions at mine sites.

The major contribution these findings make are to Russell's (1999) work, where lean production models of work organization were examined in the Canadian mining industry. While Russell examines the changing nature of work in mining companies well, little time is spent

examining the different groups which are impacted the most by these changes. In the case of Yukon, Aboriginal people, women, and local workers still experience many of the disadvantages of long-distance commuting in the mining industry.

## **Literature Review**

Long-distance commuting is a relatively recent phenomenon which emerged in the mid-twentieth century, and has become more relevant as mining companies have needed to minimize their costs and turn to supporting small, skilled workforces. The literature of this form of work organization has tended to be split between workers' experiences at home and work, despite interconnections between the two spheres. As such, following a definition of long-distance commuting, the first section discusses the impacts for workers at their workplaces. Specifically, long-distance commuting operations have effects for workers in general, their safety, and the experiences of women and Aboriginal people. The home lives of workers are then examined, as well as the idea of a transition stage between work and home, which has recently emerged in the literature. The studies reviewed here are not limited only to the Canadian mining industry, instead incorporating literature from other industries and countries. This is done for two reasons: first, the available literature on long-distance commuting in the Canadian mining industry is quite sparse, and second, the literature from other countries and industries--specifically the mining industry in Australia, and the offshore oil industry in UK and Norway--offer a number of interesting results that are relevant to the mining industry in Yukon. Where there are differences between industries or countries, I make this explicit.

### **Definition**

For the purpose of this thesis the term long-distance commuting is used to describe the process of workers travelling between their homes and workplaces. Long-distance commuting is used as it is the broadest possible term to describe the process in this thesis, and avoids a number of problems discussed by Storey (2010a). Commute work is inadequate as a concept, as all workers commute to some extent. There are other terms used in the literature, such as fly-in, fly-

out (FIFO) and drive-in, drive-out (DIDO) operations. These are also inadequate; they are too narrow and many of the impacts discussed in studies of one process are also applicable to studies in another process. Additionally, some operations--including those that participants in this study work--do not rely on a single form of commuting. Instead, some workers fly while other drive to the worksite. Even long-distance commuting not a perfect definition; it is not necessarily distance which is the deciding factor for the impacts workers experience in these work organizations. As a working definition for this thesis, long-distance commuting operations refer to workplaces where workers leave their homes for days or weeks at a time, and then commute to a remote worksite for an extended period of time (a shift rotation). Then, at the end of their rotation, workers return home for an extended period of time before repeating the cycle again. For example, a company may hire workers to work and live for two weeks at a mine site or offshore oil platform, followed by two weeks of time off at home (known as a two in, two out rotation). The workers would spend two weeks at the worksite, followed by two weeks at home.

Since the late 1970s, long-distance commuting as a form of work organization has grown in use in several industries and countries. In terms of mining, there is some literature examining long-distance commuting in Australia and Canada (Storey 2001; Storey 2010b; Ritter 2001). In the oil and gas sector, studies have examined the industry in Newfoundland (Anger, Cake, and Fuchs 1988; Lewis, Porter, and Shrimpton 1988a), the United Kingdom (Collinson 1998; Parkes, Carnell, and Farmer 2005), Norway (Heen 1988; Hart 2002), and more recently Russia (Stammler and Elmsteiner-Saxinger 2010a; Spies 2008). Outside of resource extraction industries, there is literature that has looked at long-distance commuting from rural regions of the UK to urban areas, where dual-location households have been established (Green, Hogarth, and Shackleton 1999). There are some similarities between the lives of workers in these dual-location

households and long-distance commuters in the resource extraction industries noted above. By the end of this section it should become clear that long-distance commuting have been used and continue to be used by a variety of organizations. It should also be clear that many of the advantages and disadvantages of this form of work organization are experienced by workers across contexts, and could apply to Yukon's mining industry. At the same time, Lewis et al. (1988a) note that the offshore oil industry is not a homogenous entity; there are a number of multi-national corporations operating in different countries. Each company has different workplace practices, and countries have different regulations governing their activity.

Additionally, much of the labour in the offshore oil industry is sub-contracted; the experiences of contract workers could differ from more permanent workers of the multi-national companies. If the offshore oil industry is not homogenous, then it is unlikely the mining industry discussed later is either. Therefore, in addition to examining the similarities that appear across long-distance commuting studies, I also examine the differences that emerge across these studies.

### **Long-distance commuting and work**

Long-distance commuting originated in the 1950s in the oil and gas industry as more platforms began to be built offshore. This practice began in the Gulf of Mexico and spread to the North Sea by the 1960s. As a result of these platform developments, long-distance commuting became a necessity. It was impossible for workers to commute to work daily, especially as platforms were built farther out from land (Storey 2010a). This new form of work organization, where workers spent long periods of time away from family and friends, had a number of impacts on workers' lives at home and at work. Originally, this lifestyle was perceived to be largely negative. One of the first studies (Taylor, Morrice, Clark, and McCann 1985) to look at long-distance commuting on off-shore platforms examined the wives of offshore workers from a

psychological perspective. They found negative experiences associated with the lifestyle. In particular, the researchers noted the feelings of loneliness and stress experienced by wives when male spouses were away, which they termed "intermittent husband syndrome." Since then, further studies have demonstrated that the long-distance commuting lifestyle is more complex, and can offer a number of advantages as well as disadvantages (Storey 2001; Parkes 2005). This complexity is broken down and discussed below in terms of the workplace and workers' home lives.

There are several reasons for the emergence of long-distance commuting as a form of work organization in the mining industry. Instead of emerging out of necessity as with the oil industry discussed above, a number of changes in the mining industry during the late 1970s and throughout the 1980s led companies to transition from towns built at the sites of mines to long-distance commuting arrangements (Storey 2010a). A major reason for the transition was the economic cost of maintaining mining towns in remote locations. Companies were expected to construct towns, provide services during their operations, and deal with closing down towns as well (Ritter 2001). This worked well when mines were expected to remain open for long periods, but many ore veins in recent decades have shorter life-spans and are located in more remote locations. Consequently, building and maintaining towns at the site of these ore veins would not be cost-effective for mining companies (Storey 2001). In recent decades long-distance commuting has also become more feasible for companies, as communications and air travel have become cheaper and more available. These economic issues are important to consider, as mining companies have become more conscious of their profit margins in lean production.

At the same time the economic changes described above were underway; technological innovations were also underway in the mining industry, which had several effects on the labour

force in mining, and helped spur companies to transition to long-distance commuting. In the 1980s, advances in computers and machinery allowed mining companies to become more capital-intensive (Russell 1999:40-41). More specifically, in underground mining large mechanized drills and other small vehicles were used by workers to move large volumes of ore to the surface. From the surface, ore was transported by truck to nearby mills to be processed. Mills themselves became largely computerized, with the ore treatment process almost entirely automated (Russell 1999:112-115). The introduction of this new labour process made many lower level occupations redundant, and as a result this period also witnessed large numbers of lay-offs in the mining industry (Russell 1999:40-41). The end result was a small yet highly productive labour force in mining. Because only a small number of workers needed to be transported to mines, this also made long-distance commuting more appealing to companies (Storey 2001).

Last, there were social reasons in Australia and Canada for the emergence of long-distance commuting in the mining industry. In terms of the labour force, companies required more knowledgeable and specially trained workers for their newly mechanized and computerized labour process. As noted above, mines have been built in remote regions, and companies have had difficulty hiring local workers who meet the qualifications and requirements for the new occupations in mining. As a result, companies have looked outside local regions for their labour, with the expectation that they could draw from a large and skilled pool of workers (Storey 2001). It was also perceived by companies that workers preferred to live in urban locations. Long-distance commuting allowed workers to live in these environments despite working in rural areas; therefore, it was expected that there would be lower turnover of personnel at mines (Storey 2010a). In the Canadian context, the introduction of long-distance commuting was also meant to

be beneficial for Aboriginal workers. With the introduction of Impact Benefit Agreements (discussed in detail below) Aboriginal people were supposed to be hired in greater numbers in exchange for mining development on their lands (Gibson and Klink 2005). Through long-distance commuting, Aboriginal people would be able to travel outside their community for high wages, yet still be able to return and carry on traditional activities on their lands. Additionally, it would allow Aboriginal people to develop skills for future work in industrial settings (Storey 2010b).

Workers often brought up their main reasons for taking occupations that involved long-distance commuting. In the offshore oilfields, the main reason was always income--almost all occupations offshore paid higher wages than were available locally (Parkes et al. 2005; Collinson 1998). In Russia, this was also one of the cited reasons for long-distance commuting in the onshore oil industry. In Russia, it was not only high wages which attracted workers, but also that there were jobs available at all. Many workers described high proportions of unemployment in their home regions, which led them to take up long-distance commuting in the oil and gas industry in Russia. (Spies 2008; Elmsteiner-Saxinger 2010). There was a similar situation in Canada, specifically in Newfoundland, where locally very little work was available. Unemployment has been described as the norm in this region, and many workers either commuted long distances or temporarily migrated to other regions for employment (Anger et al 1988; Newhook, Neis, Jackson et al. 2011:128). Another major reason workers chose occupations in long-distance commuting was for its rotation system. For some workers, travelling to remote work-sites and leaving their problems and responsibilities at home is very appealing--a kind of vacation. For others, the two weeks of continuous time off from work was the major attraction to this kind of work (Collinson 1998). These were the major reasons workers

looked to long-distance commuting: the pull factor of a high income at the work-site, the push factor of low job prospects in workers' home regions, and the perceived benefits of a rotation schedule.

On the job itself, long-distance commute workers often brought up the impact that lean work organization had on their lives at work. In an ethnographic study by Elmsteiner-Saxinger (2010), some workers described poor work conditions and issues surrounding their commuting. This was caused by their companies cutting back on operational costs. Specifically, workers described poor living conditions in containers, with overcrowding, as well as unsanitary bathroom facilities and plumbing. In terms of commuting, these workers brought up their company's recent policy change on travel expenses; workers had to pay their own way between home and work now, whereas before this was covered by the company. This policy change added days to workers' travel, as instead of a flight paid by their employer workers paid for a lower-cost train ride. Cost reductions also extended to personnel; finding work in the oilfields was perceived to be very competitive, and as a result companies could afford to offer less desirable terms of employment to new hires than in past years. One worker in Elmsteiner-Saxinger's (2010) study noted that he was forced to agree to a two month in, one month out rotation rather than a shorter, more desirable rotation in order to get hired. These cutbacks also extended to the number of personnel on site. This policy created problems when one worker called in sick or could not make their rotation; it forced the present workers to extend the length of their shifts, sometimes to illegal lengths.

Outside of Russia, in the UK and Norwegian offshore oil industries, workers also brought up issues surrounding the effects of lean production. Some of these issues were quite different from the ones listed above; workers across nations brought up safety issues in the workplace

(Elmsteiner-Saxinger 2010; Spies 2008; Hart 2002), but UK and Norwegian workers did not talk about overcrowding in living quarters or extremely unsanitary work conditions. Rather, these workers dealt with the precarious nature of contract work (Collinson 1998). As organizations require more flexible workforces, managers in the North Sea have contracted many of the functions on offshore platforms out to other companies. Some functions, such as in administration, were still composed of permanent employees at the parent company, but the majority of work in the North Sea was now outsourced to smaller companies. This allowed these organizations to expand or contract their workforce quickly and efficiently, but had a number of consequences for offshore workers. Contract workers in the UK reported signing twelve-month contracts, but were then laid off after a few rotations when they were no longer needed. Contract workers had little recourse in these situations because while working offshore there were few UK labour laws governing them. They could be laid off for a variety of reasons. As a result, there was some animosity between contract workers and permanent employees on the offshore platform. Additionally, the precarious nature of contractors' work had negative effects on their home lives and made financial planning difficult.

### **Safety in long-distance commuting**

Issues surrounding safety in long-distance commuting operations have been discussed in the literature. Generally, safety is believed by many to have improved a great deal in the last few decades, and oil platforms in the North Sea are perceived to be a model for safety standards (Collinson 1998; Hart 2002). An offshore explosion in the North Sea, the Piper Alpha disaster in 1988, led to regulatory changes in the industry that emphasized greater employee participation in health and safety at the workplace. Specifically, workers' safety committees were created on offshore platforms and required by regulations to take active roles, along with management, in

creating health and safety practices for the workplace. Additionally, these committees were to supervise any installation of new machinery bringing oil platforms up to code with regulations, and had the ability to report to government and law enforcement agencies if companies ignored safety concerns. Although this was perceived by workers to be a good solution to health and safety issues, Hart (2002) argued that this "Norwegian model" of health and safety may be undermined by lean production models of work organization. Specifically, though safety problems were identified by workers and ready to be acted upon by local managers, decisions were often made at a higher level of a platform's multi-national company to reverse the decision. The reason for these reversals was often as a way of cutting costs; paying to bring old platforms up to regulatory standards was viewed as too expensive. Second, maintenance had been reorganized across platforms as a cost-cutting measure; rather than stationing maintenance crews on each platform, there were only a few mobile teams available which moved between platforms to complete repairs (Hart 2002). This created an environment where repairs were delayed--sometimes for years--and maintenance crews were overworked. Ultimately, workers and local managers felt impotent, and that their ability to implement safe workplace practices was constrained by global forces over which they had little control.

Heavily masculine workplace cultures also have an impact on safety in long-distance commuting operations. Recent works (Abrahamsson and Somerville 2005; Laplonge and Albury 2013) have explored the effects that masculine work cultures have on workplace, and specifically workplace safety. Offshore oil workers have been almost entirely male (Lewis et al. 1988a). This has been true regardless of nation; UK, Norwegian, and Canadian offshore oilfields were all dominated by male workers (Lewis et al. 1988a). In the Canadian mining industry, roughly 85% of workers are male (Laplonge and Albury 2013). However, heavily masculine work cultures

represent more than large proportions of males in the workplace. Masculine work cultures emphasize a number of traits, including aggression, competition, risk-taking behaviour, and emotional control among their members (Abrahamsson and Somerville 2005). These heavily masculine, or hyper-masculine, cultures have been found in other industries, including oil and gas (Heen 1988), offshore fishing (Binkley and Thiessen 1988; Binkley 1995), and military organizations (Abrahamsson and Somerville 2005; Harrison and Laliberte 1994). Often, these traits have been encouraged by employers as they are believed to be necessary to perform tasks in dangerous and physically demanding industrial settings (Abrahamsson and Somerville 2005; Laplonge and Albury 2013). For example, competition between mining teams encouraged production, and risk-taking or aggressive behaviour was perceived as necessary to make progress on mine faces (Abrahamsson and Somerville 2005). Raising concerns over safety issues in these workplaces was also controlled through the workplace culture; it was perceived by workers to be complaining, effeminate, or a sign of weakness (Heen 1988; Laplonge and Albury 2013). This kind of workplace culture is not necessarily universal among long-distance commuting operations. It is more characteristic of American-style companies. As mentioned above, the Norwegian model of running offshore oil platforms emphasises worker involvement in safety and a less confrontational workplace environment (Hart 2002).

In recent years, some researchers (Abrahamsson and Somerville 2005; Laplonge and Albury 2013) have described how hyper-masculine cultures can influence safety practices in the Canadian and Australian mining industries. Above, it was noted how lean models of production could create safety issues at long-distance commuting workplaces, but masculine cultures in workplaces could also contribute to safety concerns. Therefore, some proposed solutions to these safety concerns have involved changing the meaning behind hyper-masculine work cultures. By

doing this, companies may be able to encourage safer behaviour, and workers' adherence to safety regulations at worksites. Practically, these changes could mean using mentors, such as veteran mining workers or mine rescue personnel, to introduce a different kind of masculinity to the workplace which emphasizes safe workplace practices, and adherence to safety regulations.

When there is a lack of safety in industrial workplaces, the consequences can be devastating. In 1992, an explosion at the Westray mine in Pictou County, Nova Scotia killed twenty-six underground miners (Comish 1993:2). Workers at Westray have since documented the issues that led up to the explosion at the mine. The ground that workers drilled beneath was notoriously poor, and they reported multiple cave-ins while working there (Comish 1993:19-20). Safety equipment, such as fire extinguishers, crushed limestone, and gauges to measure levels of methane underground, were often missing or removed from the workplace (Comish 1993:26-27). Training was perceived to be quite poor for new hires, and as a result these workers operated equipment or performed tasks in an unsafe manner (Comish 1993:14). According to some of the workers, management was aware of these issues, yet ordered employees to carry on working regardless (Comish 1993:52). It is unclear how safety is handled in Yukon's mining industry since the Westray disaster. However, there may be similarities between mining and offshore oil. Both industries have suffered disasters in their recent histories, and both have heavily masculine workplace cultures which may discourage reporting incidents, which are perceived as needless complaining. The offshore oil industry reacted to its disaster with stronger safety regulations. Yet in recent years, with cuts to the budgets of offshore platforms, their safety may be undermined. The same may be true for mines in Yukon.

### **Diversity in long-distance commuting**

A major problem with having excessively masculine work environments in long-distance commuting workplaces has been the recruitment and retention of female workers. There are several of reasons for this problem. Historically, when offshore oil platforms began, hiring managers actively avoided hiring women in the North Sea (Wybrow 1988). It was believed that introducing women to confined spaces, especially confined accommodations with men, would lead to increased incidents of sexual harassment. Additionally, some managers feared media reports of "love nests" on their platforms (Wybrow 1988:36). Another fear was that women would be unable to physically perform their jobs (Heen 1988). Beginning in the late 1970s these fears began to subside, and women began to enter the offshore oil industry in the North Sea. Depending on location, there was still some opposition to this; in Norway it was more acceptable and there were regulations put in place to encourage employers to hire women. By contrast, the UK had no such regulations and some managers were still opposed to hiring women for offshore work (Wybrow 1988). In Newfoundland, where managers were open to hiring women, there was another barrier to entry. Positions offshore were often filled by internal job postings, rather than by advertising in local communities. Because the offshore workforce was 98% male, information about open positions circulated mostly among male networks. In other words, women were often unaware of open positions offshore (Anger et al 1988).

Still, women were able to find work offshore, although they were limited in the types of work available, and as a result, opportunities for advancement. In the UK, Norway, and Newfoundland offshore fields, women primarily worked in service or support occupations. Among these three countries, Norway hired the largest proportion of women as caterers, followed by Newfoundland, with the UK last (Wybrow 1988). Heen (1988) and Anger et al. (1988) described the available occupations and environments for women in four major areas:

administration, catering, nursing, and traditionally masculine positions. The former three areas have traditionally been viewed as feminine work, and as a result women were encouraged to enter these positions. These positions on the offshore oil platforms were the lowest paying ones, with little room for advancement. For example, caterers were able to advance to head stewards, but not beyond that role. In order to advance in this kind of organization, one needed to work in one of the outdoor occupations on the platform. Yet for women, there were significant barriers to entry into these positions.

Women have described their experiences working on offshore oil platforms. As mentioned above, one of the main reasons people enter the offshore oil industry is for the high wages involved, and this is no less true for women (Anger et al. 1988). A myth existed in this industry, called the "oilfield ideology", that with enough work anyone can be promoted to the top of the hierarchy of an oil organization, and retire with a great deal of wealth (Anger et al. 1998:84-85). Yet the workers who are promoted that high in the hierarchy come from the ranks of the outdoor occupations on oil platforms. These positions include drillers, trades-people, and other labourers, and are all traditionally masculine occupations. Among drillers on an oilrig in Newfoundland, there were no women employed at all. The perception among the drillers was that physically and psychologically, they would be unable to perform the work. In the words of one driller, "you can't shit on a woman the same way you can a man" (Anger et al. 1988:95). Other positions were more open to hiring or transferring women from other sections, such as for trades. However, women also cited being passed over for these positions, despite having seniority (Anger et al. 1988). To summarize, women offshore have traditionally been constrained to work in low-paying, low-skilled work in administration or catering. In these cases, there is not much room to advance further--certainly not enough to make the popular myth of "striking it

rich" in the oilfields a reality. To do this, women have to be able to work in the outside occupations, but there are barriers to entering these positions.

Social relations on offshore oil platforms are also important to note. Despite initial concerns, many managers and workers in Norway have said that the introduction of women into the offshore oil industry has been positive. Rather than increases in sexual harassment, their introduction has created asexual worker relations, with male workers behaving respectfully (Heen 1988). Another added benefit of female participation is in terms of health and safety. Women are less constrained by masculine ideals on the platform, and therefore less likely to tolerate unsafe working conditions and more likely to report problems. Many women have been representatives on safety committees, despite being a low proportion of the overall offshore workforce. In sum, the result of introducing women to the offshore industry has been that it creates a more normal work environment, similar to onshore work environments (Heen 1988). Though, women have brought up their experiences when off-duty on oil platforms, and described it as being overwhelming. Specifically, some women have described feelings of constant surveillance in public areas. Some described having everything they did heavily scrutinized, from what they were eating to who they were talking to, and for how long. Some wished that there were a few more women around to take the focus off of them (Anger et al. 1988). In terms of how women's identity in offshore work, they identified themselves in terms of the work they did, rather than in terms of their gender (Wybrow 1988; Anger et al. 1988). A major reason for distancing themselves away from their gender was explained by some women as the introduction of employment equity legislation. Women wanted to be recognized for the work that they did, rather than thought of as having a job they didn't earn. Some women cited examples of female workers who were hired despite being unqualified, in order to bolster the number of women

employed by the company. These people would then be laid off shortly afterward, creating a negative attitude toward other women or future hires (Anger et al. 1988). In sum, the introduction of women to the offshore workforce has had some effect on social relations. It has normalized the work environment, making it similar to onshore workplaces. It may also improve safe work practices due to the high proportion of women who serve on safety committees. Yet because women make up such a small proportion of the offshore workforce, they find themselves more heavily scrutinized than their male counterparts, and this contributes to a more negative work environment for them.

Many of the issues and experiences of women discussed above are also relevant to the Canadian mining industry. Similar to the offshore oil industry, women have historically been employed not in the production process of mining itself, but in support roles such as catering, housekeeping, and administration (Costa, Silva, and Hui 2006). Also similar to the offshore oil industry, women began to enter mining in numbers in the 1970s, but during the 1980s the industry experienced a recession and subsequent restructuring. This meant that those working at the bottom of the hierarchy with the least seniority were laid off, and these were the positions that most women occupied. Since that time, women have remained largely underrepresented in the mining industry (Russell 1999:41).

Despite their underrepresentation, companies are eager to recruit and retain greater numbers of women into mining. Mining companies have stated that they want to provide good work environments for women (Costa et al. 2006). Costa et al. (2006) have described some of the perceived advantages and disadvantages of fly-in, fly-out mining for women. The authors found similar advantages to male workers, namely high wages at the workplace and the benefits of a rotation schedule. Single women in particular cited mainly advantages living a FIFO

lifestyle. The disadvantages of this lifestyle in mining fell on married women, who cited challenges caring for children and missed important events at home. Additionally, the nomadic lifestyle of long-distance commuting made it difficult to have a social life outside of work. Notably absent from Costa et al.'s (2006) work was any mention of a negative work environment for women in mining, as was often a focal point of studies conducted in the 1980s in offshore oil. Instead, respondents described a close-knit community in the mine camps they lived in (Costa et al. 2006:4). Another recent study noted the opposite; they found a negative work environment for women in Canadian mining, though the population being focused on was an Aboriginal one (Gibson and Klinck 2005). Currently, it is difficult to conclude what the experiences of women are like in mining. The available literature would suggest that single women enjoy more of the benefits of long-distance commuting, while married women suffer more of the negative aspects while being away from home. It is unclear whether work environments are still negative for women, as they were in offshore oil in the 1980s, but it is possible the work environment has improved for them.

Aboriginal people represent another group that have had similar experiences to women in the extractive industries. The studies in the offshore oil industry made no mention of First Nations, though they are represented in the literature on mining. Historically, Aboriginal people have made up a small proportion of the workforce in mining. In Russell's work, only 4.5% of the sample of workers claimed Aboriginal ancestry (Russell 1999:41). Mines have often been developed on Aboriginal lands, yet Aboriginal communities have often not benefitted from these resource developments. There have been a number of cases throughout Canada and the rest of the world where mining companies have extracted resources from the traditional lands of indigenous people, made a large profit, and then left environmental disasters and populations

underdeveloped despite promises (Ballard and Banks 2003; O'Faircheallaigh 2013:225-226). Specific to Canada, Aboriginal people experience many of the same economic and social impacts discussed above. High incomes from positions can lead to issues with alcohol and drugs, but they can also improve traditional activities in communities. For example, modern hunting is expensive and requires participants to go farther afield. This requires ammunition, snowmobiles, and gas. Mining activities can also have a negative impact on traditional activities. Roads and other developments can affect habitats, give outsiders easier access to game, and mining companies with poor standards could ruin the water supply (Gibson and Klinck 2005).

In an effort to improve benefits to First Nations, many companies now sign Impact Benefit Agreements with First Nations communities (Storey 2010; O'Faircheallaigh 2010; O'Faircheallaigh 2013). In exchange for the ability to extract resources from the land, certain benefits are guaranteed to the local population. These benefits can take different forms. At the broadest level, they could include royalty payments to Aboriginal communities, allowing some autonomy from governments in political decision-making, as well as the ability to establish capital funds to generate income after mines have closed (O'Faircheallaigh 2010:70-71). In terms of labour participation, originally agreements only promised that a certain proportion of the labour force at mines would be local workers. Today, Impact Benefit Agreements are much wider in scope; in addition to guaranteed hiring of local populations, newer benefits include training and education opportunities (Storey 2001:1169-1171; O'Faircheallaigh 2013:228-230). Then, with pick-up points located in communities they are able to fly directly from their community to the mine site. Once a mine closes, local workers can continue to fly-out to new mine-sites in the surrounding area (Storey 2010; O'Faircheallaigh 2010:72). While Impact Benefit Agreements have the potential to create environments which benefit First Nations as

much as they do mining companies, it is unclear what the specific consequences of these agreements have been in Canada. There is evidence that Aboriginal workers have experienced poor work environments in the mining industry. Specifically, Aboriginal workers have reported harassment in the workplace. There may also be cultural and language barriers for Aboriginal workers at mine sites, which reflect the difficult transition they make from their traditional lifestyles to an industrial setting (Gibson and Klinck 2005). The occupations Aboriginal people find themselves employed in within mining is also problematic. Though mining developments bring with them opportunities for work, without training or education these jobs are often at the bottom of the workplace hierarchy (O'Faircheallaigh 2013:225). Aboriginal people have often been employed as truck drivers and pump operators, but have less frequently been employed in trades (Russell 1999:43-46). These issues raise questions about the benefits in Impact Benefit Agreements. It is unclear to what extent Aboriginal people benefit from these jobs, and what their opportunities are for advancement or skills-training. Additionally, Aboriginal people could experience work environments similar to the types that women experienced when they first entered extractive industries in numbers.

Specific to Yukon, Aboriginal people are in arguably a more progressive position than elsewhere in Canada. As a political force, Yukon First Nations emerged in the 1970s. With settler society encroaching on Aboriginal lands in the north in search of natural resources, Yukon First Nations became concerned over the damages caused by oil and mining companies, and entered into negotiations with the federal government. Yukon First Nations had not entered into any of the historic treaties between Aboriginal people and the federal government; they had never ceded their land. The process of settling land claims was long, and drafted agreements in 1976 and 1983 were rejected by Yukon First Nations. One problem was that the parties were

trying to create a single agreement that would fit all 14 Yukon First Nations. In 1985 this strategy was changed; a general framework for land claim agreements, and separate agreements were created to suit the specific needs of First Nations (Cameron and White 1995). In 1993, the First Nations final agreement was signed by federal and territorial governments, which transferred roughly 8.5% of Yukon land to Yukon First Nations, and offered the signatory nations more control over their government, training and education, cultural issues, and resource development. Initially, only 4 First Nations signed the final agreement, but by 2003 almost every First Nation in the territory had signed (Coates and Morrison 2005; Horne 2010). As a result, through their modern treaties today Yukon First Nations have some autonomy over their traditional territories, and any mining development on their land requires extensive negotiations between First Nations, mining companies, and the territorial government. This includes developing plans to ensure social and economic benefits to Yukon First Nations communities, and environmental assessments to mitigate the impact of mining developments on resources like water and wildlife. Natcher and Davis (2007) brings up some challenges that Yukon First Nations face, despite the signing of the final agreement and devolution in the territory. After devolution, many federal government employees transferred to the territorial departments, and many of the old federal laws regarding water and land resources were recreated by the territory. There are still issues regarding training and education for Yukon First Nations members to be put in positions of power. As a result, many non-Aboriginal people run the natural resources departments in the territory. All of these factors may reproduce the same relationship between First Nations and the Canadian government that has existed up until now.

### **Transition in long-distance commuting**

A relatively new theme in long-distance commuting is the idea of a transition stage that workers experience. More specifically this is a distinct stage between work and home, discussed in the academic literature of long-distance commuting. This travel stage represents not just time spent travelling, but also has economic and social dimensions. Economically, there is a cost involved in long-distance commuting, but who pays for this cost can vary by country and company. In Elmsteiner-Saxinger's (2010) study of Vakhtovikki (mobile workers) in Russia, many respondents talked about oil companies paying for their flights to their work sites. More recently, these companies have looked for ways to cut back on costs. To do this, they force their workers to pay their own fare between work and home. The impact of this policy depends on occupation; managers still pay for flights, while labourers are forced to pay for cheaper train tickets in order to commute--the latter mode of transportation adds days to workers' journey, as well as additional costs for accommodations in stop-over towns. In the North Sea, the distance between home and work may be less extreme than in Russia, yet some UK workers experience similar problems, as explained by Collinson (1998). Specifically, contract workers are expected to pay for their helicopter rides between the mainland and the platform, as well as accommodations on mainland while they wait for helicopters. Preference is also given to company employees, which leads to contract workers being "bumped" from some flights home (Collinson 1998). The impact this economic dimension had on workers was not just in terms of money. The financial hardships experienced by contract workers translated into stress in their home lives. The added travel time and delays in commuting created irritable workers both at home and at work (Elmsteiner-Saxinger 2010). Spouses of workers have reported that their partners return home exhausted (Parkes et al. 2005). There are also concerns that when this style

of commuting is combined with shift-work at the work site, workers become exhausted, less productive, and work less safely (Elmsteiner-Saxinger 2010).

There is also a social dimension to the transition phase between home and work. Green, Hogarth, and Shackleton (1999), in their study of long-distance commuting in the UK labour force, discussed in their conclusion the function that travel served for workers. The time spent travelling allowed workers to transition between their roles at work and home. Specifically, workers used the time alone to reflect and change roles from "selfish devoted worker" to "selfless family person" (Green et al. 1999:52). The ability to do this was seen as a net positive by long-distance workers, as it allowed them to keep their work and home lives separate. Elmsteiner-Saxinger (2010) expanded on this aspect of long-distance commuting; she agreed with Green et al. (1999) that the travel period allows workers to switch between their work and home roles, but also argued that the "journey" phase is itself a social space. Workers spent their hours or days (in the case of trains) getting reacquainted with fellow workers, expanding their social networks, and through these networks learning about new work opportunities. At least in Russia, this form of long-distance commuting is considered by Vakhtovikki to be a way of life. Young workers travel with elder workers (fathers and uncles) on longer trips and are introduced to the lifestyle, its challenges, and ways of coping with those challenges.

### **Long-distance commuting and home**

Long-distance commuting has implications for the home lives of workers and their families. One of the first studies to address this topic (Taylor et al. 1985) was from a psychological perspective, and focused on the wives of offshore oil workers in the UK. It was believed that this lifestyle was largely negative, and that wives of offshore workers would suffer emotionally and psychologically during their husbands' absence. The illness was termed

"intermittent husband syndrome". This study has led to criticism from some researchers (Lewis, Shrimpton, and Storey 1988b; Parkes et al. 2005) who say that this created illness focuses too much on the individuals affected, while ignoring broader social issues, such as the structure of offshore oil work, the precariousness of employment, and ways in which roles are divided according to gender. Clark and Taylor (1988), two of the researchers from the original psychological study noted above, have responded to these issues. They agree that the broader context of offshore oil work is important for understanding its impacts on families, but note that it was outside the scope of their study. Additionally, they note that the existence of broader issues does not weaken their original argument; some wives of offshore workers do have negative experiences because of the lifestyle. Specifically, Clark and Taylor (1988) conclude that there are two distinct groups of married couples in offshore work, which are categorized as "novices" and "veterans" by the authors. Novice couples are those that have only been involved in the offshore oil industry for a few years and are still adjusting to its lifestyle. They tend to experience high rates of stress, marital conflict, and have trouble coping with the lifestyle. By contrast, veterans have been involved with the offshore industry for longer periods of time and have more fully adapted to the lifestyle.

But the lives of offshore families are more complex than the simple dichotomy of novices and veterans described above; they can't be reduced to groups that experience completely positive or negative impacts from a long-distance commuting lifestyle. Instead, the experiences of many families are ambiguous, with members recognizing and coping with negative aspects of the lifestyle while enjoying its benefits. Lewis, Shrimpton, and Storey (1988b) argue that these benefits are often extrinsic, in the forms of high incomes and material goods, while further studies (Collinson 1998; Parkes et al. 2005; Allan 2011) have detailed the more intrinsic benefits

of the lifestyle. As mentioned earlier, some of the greatest immaterial benefits for long-distance commute workers are the shift rotations, which give workers several weeks of uninterrupted time at home or with their families (Collinson 1998). Initially, time at home is taken up with celebration, which usually involves meeting old friends and substantial alcohol consumption (Collinson 1998). Time is also spent with family members, going for family outings and spending money on luxury goods (Allan 2011). For spouses, workers' time away at work was often also viewed positively. Some spouses noted changes in themselves since they began living the lifestyle, and found themselves becoming more independent; they would pursue part-time work, complete home repairs, and socialise with a wider circle of friends (Parkes et al. 2005). In this way, long-distance commuting offered both intrinsic and extrinsic benefits. These benefits were enjoyed not only by workers, but also by their family members, specifically spouses.

The negative aspects of long-distance commuting on home lives have also been well-documented. Although rotations are viewed by workers as one of the major benefits of the long-distance commuting lifestyle, this is not always the case with their spouses. Spouses of workers in different long-distance commuting industries, including oil and gas (Lewis et al. 1988b) and the military (Harrison and Laliberte 1994), have described issues related to their absence. Some spouses reported having to take on more responsibilities after their partners left for their rotations, in terms of child-rearing and housework (Lewis et al. 1988b; Harrison and Laliberte 1994:54-61). In the UK offshore oil industry, wives also tended to worry about the safety of their partners while they were away working, as the industry was known to be dangerous (Parkes et al. 2005). For contract workers, these worries were exacerbated by the fact injured contractors would not be compensated in offshore work. An injury at work for contractors could place a heavy financial burden on the entire family (Collinson 1998). When workers arrived home, the

tendency was to treat their weeks off as a vacation, having spent several weeks in an exhausting physical environment. Often this view came into conflict with spouses, who hoped that workers would take on responsibilities when they returned home. Instead, spouses reported having to take on even more responsibilities as their working partners enjoyed themselves (Harrison and Laliberte 1994:61-66; Parkes et al. 2005). For example, some wives reported husbands creating messes when they returned home after long absences (Binkley and Thiessen 1988; Lewis et al. 1988b), and others reported excessive drinking (Binkley and Thiessen 1988; Collinson 1998).

Though earlier studies have discussed work and home lives in detail for long distance commuters, home has usually been discussed as a fairly static environment. Some recent studies have discussed the relocation culture among long-distance commuters, in both oil and gas (Elmsteiner-Saxinger 2010) and mining (Allan 2011). Parkes et al. (2005) have noted the increasingly precarious nature of work in extractive industries, and as a result workers are often forced to relocate with their families in pursuit of new work opportunities. Some workers in Russia view this as a way of life, and are happy to move from place to place (Elmsteiner-Saxinger 2010). In Australia, families have described frequent moves in pursuit of work in the mining industry as well. For some families, this is viewed positively; they see it as an opportunity to move to more urban areas with better services and infrastructure. For wives, it could mean better opportunities for work outside the home (Allan 2011). This is not always the case, though. Because workers often cannot choose where they want to work, they could spend one contract in an urban centre, and the following contract in a boomtown. This can create instability for families who must follow the worker from community to community. Wives have reported difficulty finding employment in boomtowns, and social circles are often disrupted, leaving family members feeling isolated in new communities (Allan 2011).

Some recent studies have examined the home lives of workers in the mining industry and bear similarities to the offshore oil industry. Torkington, Larkins, and Gupta (2011) examined the psycho-social impacts of the fly-in, fly-out lifestyle for workers and their families in Australia. Among negative impacts were the time workers spent away from home, missing their children grow up and big events. As a result, some workers reported feeling depressed, and that there was no one they could turn to while at the mine. Another major negative impact was the difficulty workers had recognizing the additional problems and responsibilities their partners had to deal with while they were away. They reported that this strained their marriage. To some workers, their rotations were a relief; they were able to forget all of their responsibilities while back at home. Some workers also saw being away from their families as a positive for their families; if workers had a bad day at work they couldn't take it out on their wife or kids. It is interesting that these issues emerged in mining, as there are some clear similarities with the offshore oil issues discussed above. The positive aspect noted by workers of leaving their responsibilities at home and the negative aspects of workers having difficulty understanding the problems their homebound spouses face are similar to the issues explored by Collinson (1998), where offshore workers treated their time home as a kind of vacation, and spouses felt burdened to take up household responsibilities left behind by workers.

One aspect of miners' home lives which has recently been explored is the effect that public perception of mining has for families. As noted above, many long-distance commuters are contract workers, living with precarious employment (Collinson 1998). It has also been noted above that some mining families often relocate to new communities with new contracts (Allan 2011). Often, this transient lifestyle is associated with a number of problems in communities, particularly communities where a resource boom is happening. In a recent study, Shandro,

Veiga, Shoveller, Scover, and Koehoorn (2011) examined health issues of families in Tumbler Ridge, British Columbia. They found that healthcare resources were often strained in the community for different reasons depending on whether the town was facing a boom or bust period in the mining cycle. In periods of bust there were often cases of depression and suicide, and inadequate resources for counselling services. In boom periods, criminal activity, prostitution, violence against women, and drug abuse all strained the healthcare system in the town. Similarly, O'Connor (2010) examined young workers in Fort McMurray, Alberta. Fort McMurray is used as a base by resource extraction companies for long-distance commuting operations. The author's findings were similar to Shandro et al. (2011), where during a boom large numbers of transient labourers were migrating to the town, which placed a strain on community infrastructure. Additionally, young workers who made high wages were associated with developing drug and alcohol habits, and increases in criminal activity. Some of the issues described by the two studies above are beyond the scope of this thesis, and deal with broader societal issues. That said, because these issues are associated with transient labourers, transient labourers are often portrayed negatively in media (Pini, Mayes, and McDonald (2010). Specifically, in Australia during a mine closure there was little sympathy from residents in urban centres, who shifted blame for social ills onto the workers at the mine. This negative attitude toward mining workers was a source of stress for some workers (Pini et al. (2010).

### **Summary**

Long-distance commuting is a relatively new kind of work organization, which is best defined as workers travelling outside of their home communities or home regions to work for extended periods of time before returning home for substantial time off. These time periods can vary depending on occupation, company, and country, but generally range from a couple weeks

to a month spent at work and home. This kind of work emerged in part out of necessity in the offshore oil and gas industry, but has spread to other industries such as mining for other reasons. Specifically, long-distance commuting has become popular in recent decades as a cost-effective way of maintaining a skilled and knowledgeable workforce in remote regions. Though this study focuses on the mining industry, it draws on studies of the oil and gas industry for their similarities to mining. The academic literature has tended to divide the impacts of long-distance commuting on workers into a few distinct stages. Traditionally, these studies have focused on workers' lives in the workplace and home, and have acknowledged the ways in which these two stages are interconnected. More recently, studies have also described a unique transition stage between work and home which affects long-distance commute workers. These three major stages of workplace, transition, and home life are further complicated by issues surrounding safety, gender, race, and occupations.

The major findings of the workplace section of the literature review suggest that the main advantages of long-distance commuting are the high wages offered, and the enjoyment of having several weeks off from work due to working a rotation schedule. It is likely that there are differences between occupations in terms of pay, advancement, and job security. Full-time workers employed by resource extraction companies have better prospects for advancement and job security, while contract workers experience more precarious work. Contract workers appear to be used in large numbers in the front lines of mining, oil and gas industries, as this allows companies to grow or shrink their workforce as they need to. Support positions also tend to be contract work, such as catering or housekeeping, and tend to pay less than front-line work, while offering little room for advancement. Safety is another major issue surrounding long-distance commuting operations, as historically there have been major disasters on both offshore oil

platforms and in the Canadian mining industry. In recent years there have been concerns that safety regulations put in place after these disasters have been eroded, due to companies cost-cutting in a lean economic environment.

Two groups have historically had difficulty entering and retaining work in resource-based industries like oil and gas or mining. The findings of the literature show that both women and Aboriginal people have faced challenges. Both groups have been underrepresented in extractive industries despite legislation or agreements to employ them in greater numbers. For both groups, there have been histories of poor work environments, leading women and Aboriginal people to leave these industries. Additionally, when these groups have found employment, they tend to be employed in support roles, or at the bottom of the workplace hierarchy. For Yukon First Nations, these issues may be minimized, as IBAs represent agreements between companies and First Nations, and may be concluded on more favourable terms for Aboriginal people. For women, a recent study in long-distance commute work has shown that many women cite advantages to the work. As a result, the environment for women and Aboriginal people may have improved in recent years.

The home lives of workers and families of long-distance commuting lifestyles have also been discussed above. Generally, the major advantage of the lifestyle has been the large amount of time workers enjoy away from work, due to their weeks on and off duty in shift rotations. For workers, this time off was treated as a vacation, and used for celebrations with friends and families. The other side to this is the impact of this lifestyle for families, who endure more of the negative aspects. Specifically, they must bear the responsibilities of home life while the worker is away. Once workers are back home there is sometimes conflict, as workers want to enjoy time off while the spouses want the worker to remove the burden of responsibilities from them.

There were also problems for family units associated with the relocation culture of extractive industries, which require families to trail after the member employed in an industry. Yet this conflict is not always certain in these situations, as there is evidence of family units adapting to the long-distance commuting lifestyle over time. Last, another phase between home and work, a transition stage during workers' travel, has been described by recent literature. This unique phase represents more than just travel. It serves a social role of introducing new workers to the lifestyle, establishing networks between workers, and giving workers time to change their roles between parents, spouses, and workers. The remainder of this thesis attempts to answer whether the above issues are still relevant, and if new issues have emerged in the long-distance commuting operations of Yukon's mining industry. The issues discussed above serve as the basis for the questions asked of respondents in the interview schedule, discussed in the methodology section.

## **Methodology**

In-depth interviews were chosen as the primary method for this study. Based on the literature review, there had been a number of studies of rural single-industry towns and fly-in, fly-out operations using both quantitative and qualitative methodologies. However, studies of single-industry towns or regions tended to use quantitative methodologies, likely because of the availability of data for these communities. In contrast, studies of long-distance commuting tended to use qualitative methodologies, likely for two reasons. One reason could be because of a lack of available data. This problem was raised by Green et al. (1999), who analysed census and labour force survey data before concluding it was insufficient to study the process of long distance commuting. Some researchers, such as Spies (2008), were able to administer surveys at mine sites through companies, and collect good quantitative data in this way, but for many researchers long distance commuters are a difficult population to reach. A second reason could be that surveys do not allow for the in-depth understanding of the impacts of long distance commuting on workers. There is also a third reason for a qualitative methodology, which is context-specific. To the best of my knowledge, Yukon has never had a study of long-distance commuting operations. Due to major changes in recent decades, including the decline of single-industry towns, the growth of FIFO mining, and the restructuring in the Canadian mining industry, there is a need to examine long distance commuting again; in other words this is exploratory research. For these three reasons--access to target population, a need to understand respondents' perspectives, and exploratory research--in-depth interviews with Yukon mining workers were chosen to gain a better understanding of the process of long-distance commuting in Yukon.

## **Ethical considerations**

In early January 2013, the Lakehead Research Ethics Board granted approval for this study. In early February 2013, the Yukon government issued a Research Licence for this study as well. Interviews were carried out over a two week period, between February 17, 2013 and March 2, 2013. Before interviews were conducted, it was ensured that each respondent had given the researcher their informed consent. This was done as follows: the researcher told the participants about the study and explained it orally to them. Respondents were also given an information letter (Appendix A) which outlined the study in writing. Once the respondent understood the study, the researcher asked for their signature on a consent form (Appendix B) stating that they understood the study and gave their informed consent to participate. Respondents were also asked for a signature stating that they agreed to an audio recording of each interview. Only one respondent declined this audio recording, and as a result notes were taken during their interview.

Confidentiality was ensured by making the interviews collected anonymous, and by collapsing some of the data collected into broader categories. To protect respondents' identities, each person was assigned a number from 001 to 012, along with a pseudonym. Table 1 below summarizes the results of participant recruitment, with respondents' anonymity in mind. The Gender, Marital Status, and Children columns are self-explanatory. The Age, Occupation, and Residence columns require additional explanation. Respondents' exact ages and occupations have been collapsed to protect their identities, as Yukon mines are often small workplaces with only a few workers in each department. For example, in large mines there may be entire teams of workers in the same trade, while in small ones only a few individuals fill that role. By collapsing exact ages into five years intervals and occupations into three classes (Labourer, Trades-person, and Professional) respondents can retain their anonymity without losing much information. The Professional class refers to respondents who work in some capacity that requires a university

education. In mining this would include managers, engineers, and geologists. Trades-people are simply respondents who are in a trade apprenticeship or have completed an apprenticeship and have a trade designation, such as mechanic or electrician. Labourer is perhaps the most general category; in this case it refers to a number of occupations in mining. These include: helpers, blasters, drillers, and heavy-equipment operators. Some positions are entry-level ones which require no training, while others require certification on machines, college training, or advancement through on-the-job experience. The criterion that groups all these positions under the Labourer class is they are all on the front-line of operations in the mine, at the actual site of production.

Last, anonymity was the reason for reporting residence in terms of region rather than exact community. Some rural communities in Yukon only number in the hundreds, and it may be quite simple to figure out who a respondent is with the other demographic information. Several categories were omitted from this final table in order to protect respondents' identities: Age, Children, Company, and Mine. Some respondents raised concerns after mentioning their contractor or the mine that they worked at. Age and Number of Children were also removed as categories, as it was believed that this was too much information and may compromise respondents' anonymity.

### **Instruments for data collection**

Before data collection was carried out in Whitehorse, an interview schedule (Appendix C) was designed to help facilitate discussions about long-distance commute work. The questions in this schedule were based on the results from the literature review discussed above. Specifically, three of the major themes dealt with workers' experiences at the workplace, at home, and in transition between these two spheres of experience. Within these themes

respondents were asked questions related to the work environment for women and Aboriginal people. Questions that related to safety and training issues were also asked, as these issues had emerged from the literature review. The works of Glesne (2011), Kvale (1996), and Rubin and Rubin (2005) were consulted to help design this interview schedule. These writers advocated using open-ended questions to generate rich data and thick description from respondents, and many of these questions were incorporated into the schedule design. The schedule began with basic demographic questions of respondents, which would be useful for comparison in the analysis stage. Glesne (2011) notes that specific questions of respondents' past and present experiences generate richer data than vague hypothetical or future-oriented questions. For that reason many questions focused on specific experiences that respondents had had in the past with their work. Glesne (2011) also notes the importance of the “grand tour” question, a kind of initial open-ended question to get respondents to walk researchers through an event or a process. Once these questions have been asked, researchers can ask follow-up questions of specific parts. These questions were included at the beginning of each major theme in the interview schedule.

Once informed consent was given by respondents, in-depth interviews were conducted using a digital audio recorder. These interviews were conducted in locations around Whitehorse that were comfortable for the participants. The audio recorder worked well and resulted in clear recordings of the respondents which could be transcribed accurately. There were a couple issues though. As I mentioned earlier, respondent 011 declined to be interviewed using an audio recorder, and their interview had to be recreated from notes taken during the interview. Some of the locations in Whitehorse were bars, or restaurants, with variable levels of noise pollution. If the noise was consistently low or high, the audio recorder would capture the interview well. But when noise levels varied over an interview the recording suffered, and transcription became an

issue. This was a rare problem, though, and where there were issues in the transcription process I included brackets around the word with a question-mark. In sum, the digital audio recorder that was used for these interviews worked well as an instrument for data collection.

### **Participant recruitment**

This section addresses the question of access to respondents for in-depth interviews. Purposive sampling was used to recruit the initial three respondents. From these key respondents, snow-ball sampling was then used to recruit the remaining nine respondents. I travelled to Whitehorse in February 2013 to recruit participants within the city limits at several locations. Formal locations that were used to help recruit respondents included the Yukon Mine Training Association (YTMA), Yukon Employment Centre, and Yukon Social Services building. Respondents were also recruited informally from the Ninety-Eight bar and the Capital Hotel. This approach worked well, and a total of twelve respondents were recruited for twelve in-depth interviews.

The end result of this recruitment strategy was the collection of a variety of perspectives on long-distance commuting in Yukon's mining industry, which cut across gender, age, race, occupation, and geography. Both men and a woman have been interviewed. Workers from a variety of occupations in the mining industry have been interviewed, including general labourers and helpers, diamond drillers, skilled trades-people, and professionals such as engineers and geologists. Respondents ranged in age from early twenties to over sixty-five. Both married and single workers have been interviewed. Aboriginal people, as well as Anglophone and Francophone whites have been interviewed. In terms of location, residents from Yukon, Quebec, and British Columbia have been interviewed. Below a table is presented which summarizes the respondents and basic demographic information:

Table 1. Respondent Profiles

Number	Name	Sex	Race	Marital Status	Occupation	Residence
001	Adam	Male	Aboriginal	Divorced	Labourer	Yukon
002	Barry	Male	White	Married	Professional	Yukon
003	Charlie	Male	White	Common-law	Trades	Quebec
004	David	Male	White	Married	Professional	Yukon
005	Elvis	Male	Aboriginal	Divored	Labourer	Yukon
006	Frank	Male	White	Common-law	Labourer	Yukon
007	Grace	Female	White	Single	Labourer	Yukon
008	Hugh	Male	White	Divorced	Labourer	Yukon
009	Irving	Male	White	Common-law	Labourer	Yukon
010	Jeremy	Male	White	Single	Trades	Yukon
011	Kirk	Male	White	Single	Labourer	Yukon
012	Leo	Male	White	Married	Trades	B.C.

### Data analysis

Once data collection was completed, all twelve interviews were transcribed into a text format. The next stage was to formally analyse the data. According to Mason (2002), the first stage in this process is to physically organize all data or create an effective filing system. For this project, interview transcripts were kept digitally and imported into Nvivo software for analysis. This Computer Assisted Qualitative Data Analysis Software (CAQDAS) allowed data to be organized effectively; it allowed for easy retrieval and more efficient coding of data. Open coding was the second major phase of analysis. Literal readings of transcripts were conducted individually, line-by-line, as advocated by Mason (2002) and Esterberg (2002) to generate lots of

initial codes. By the end of open-coding 153 codes had been generated across all twelve interviews, although many were redundant and were condensed or collapsed into each other. At this stage relevant codes were grouped together under a number of early themes. The next stage was focused coding, and each transcript was read over multiple times with each of these early themes in mind. With each pass, the researcher looked for patterns in the data, and how codes were related to one another. In the end, the early themes were collapsed into four final themes: *Workplace culture*, *Safety in mining*, *Mobility and migration*, and *Home Life*. These themes were then compared back to the literature, and similarities and differences between the results and literature were described and connected back to the research question.

### **The Yukon setting**

In this section I discuss some background information relevant to the interviews. This section is meant to provide context for the interview results that follow. This section is organized into three sub-sections. First, some general trends in employment and migration with the Yukon are discussed. Second, some labour force challenges for the mining industry in the territory are presented. Finally, a discussion of three mining companies and their relationships with Yukon First Nations is presented. The three companies discussed below have employed this study's respondents in the past, but to preserve anonymity specific respondents are not tied to specific companies.

#### *Migration and employment in the Yukon*

The modern Yukon Territory has its capital, along with the majority of its population, in Whitehorse. According to the 2011 Census, the territory's population is 33,897 while Whitehorse's population is 23,276 (Statistics Canada 2012). In addition to having most of its population in Whitehorse, the territory has seen a continuing trend toward urbanization.

Migration within the territory between 2005 and 2010 has seen residents from most small communities move to Whitehorse, with the exception of Tagish, Carcross, and the Mayo area (Yukon Bureau of Statistics 2010a). This isn't certain, but one explanation for migration to Mayo could be the current mine development in the area. In terms of migration outside the territory, between 1999 and 2002 the territory saw negative net-migration. This was particularly large in 1999, with a loss of 888 people from the territory (Yukon Bureau of Statistics 2008). One accepted reason for the large number of emigrants during this time-period was the Faro mine closure in 1998. From 2003 onward, the territory has seen positive net-migration (Yukon Bureau of Statistics 2010a). One can see the overall effect of urbanization and growth in the population between the 2006 and 2011 censuses. During this period, the Yukon Territory has seen a population change of +11.6% and Whitehorse has seen a population change of +13.8% (Statistics Canada 2012).

In terms of employment the Yukon Bureau of Statistics (2010b) surveyed 3067 businesses that operated in the territory. Of all businesses surveyed, 2792 were headquartered in the Yukon, with 11,870 employees. The remaining businesses were headquartered outside of the Yukon, with British Columbia accounting for 140 businesses and 728 employees. Interestingly, 173 of all surveyed businesses were in Mining, Oil, and Gas, employing a total of 836 people. When one looks at the types of industries operating outside the Yukon, the Mining, Oil, and Gas industry is the largest, with 58 businesses employing 212 employees. Unfortunately, in either Census or survey data, it is not possible to isolate mining as it is combined with oil and gas as a category. It is still possible to say that Mining, Oil and Gas businesses in the Yukon employ a fair proportion of workers in the territory, and that many of these businesses are headquartered outside of the region, possibly British Columbia. In fact, all three producing mines in the

territory are headquartered or have main offices in British Columbia.

The data above may be inadequate in describing the proportion of businesses and employees involved in or connected to the territory's mining industry. This is because a number of other industries are linked to mining in both development and production stages. Professional and technical services are necessary for taking core samples in exploration camps and assessing environmental impacts, just to name a few--this would include geologists and other scientists. Construction companies were discussed by respondents and employ trades-people and labourers. They are necessary not only for mines, but also for constructing camps for workers to live in. Food services are also necessary to feed labour forces in remote camps. It is unclear to what extent these services are linked and contracted in the Yukon mining industry.

#### *Labour force challenges in the Yukon mining industry*

Many businesses in the Yukon have had difficulty finding staff. According to the Yukon Bureau of Statistics (2008), in their survey of businesses, they asked businesses if they had had difficulty finding staff, whether this difficulty was local or from outside the territory, and what the reasons were for this difficulty. It is important to note that the number of responses to these questions was relatively small; only 438 businesses responded to these questions. That said, 59% of businesses surveyed said that they had difficulty recruiting staff, and 70% of businesses said they had difficulty recruiting staff in the Yukon. When asked for reasons, the most cited reason by 22.6% of responses was that there was a lack of educated or trained workers.

Although data for mining in the Canadian territorial north is sparse, there have been studies conducted by the Mining Human Resources Council (MiHR) which discussed current and future challenges to the labour force in the mining industry across Canada. These studies were meant to generate labour market information for communities and mining companies, to

identify problems in terms of human resources, and to form plans of action to solve these problems. These data do not address the Yukon specifically but they do address the territories as a region. According to MiHR's forecasts to 2021, under a baseline scenario (i.e. where the industry is neither expanding nor contracting) there will be overall decreases in mining employment across Canada, with the exception of the prairies and the territories, which will experience a growth rate of +1.0% and +1.1% annually. For the territories, this translates to growth from 4,000 employees in 2013 to 4,100 employees in 2016, to 4,500 employees in 2021. When one takes into account forecasts for turnover and retirement among the ageing workforce, under a baseline scenario the territories will need to cumulatively hire 1,420 workers by 2013, to 2,070 workers by 2016, to 3,020 workers by 2021. Interestingly, the highest numbers of available positions are forecast to be in truck driving, mine labourers, and heavy equipment operators (MiHR 2011a).

It is clear that the territories, specifically the Yukon, face significant challenges for its labour force in mining. There have been a number of solutions suggested by MiHR (2011a) to these problems. They noted a need to attract participation among women in mining, a need to attract young workers to replace the ageing workforce, and a need to continue recruiting Aboriginal people into mining, who currently make up 7% of the mining workforce nationally. Another solution to the demand for labour is computerization or automation of processes to eliminate jobs. However, according to the Yukon Bureau of Statistics (2010) only 5% of businesses responded that they did this in response to the labour market shortage.

Although the survey mentioned above suggests few businesses are turning to computerization or mechanization of work processes, the MiHR (2011b) study of knowledge workers in Canada discusses their increasing importance in the Canadian mining industry, and

mining industries globally. Knowledge workers, as used by MiHR, is defined broadly to include workers who have attended post-secondary institutions. They could include trades-people, technicians, scientists, engineers, and other professionals. This is divided into three tiers: workers with college education, workers with a bachelor's degree, and workers with a graduate degree. The overarching theme is that the knowledge worker either creates and disseminates knowledge, or is able to take knowledge and apply it. Unfortunately, there is a gap in available data on knowledge workers in general, and especially Yukon. Canada-wide, in a baseline scenario, MiHR (2011b) forecasts cumulative hiring needs in professional and physical science occupations to grow from 1,095 workers in 2012, to 1,990 workers in 2015, to 3,810 workers in 2020.

*Some actors in the Yukon mining industry*

This section gives a brief overview of some of the larger actors in terms of communities and organizations in the Yukon mining industry. It is not meant to be exhaustive, but here I focus on some of the central actors that respondents talked about during interviews. Specifically, I focus on two of the territory's three producing mining companies, one non-producing mine company, and the three First Nations that have signed Impact Benefit Agreements (IBAs) with those companies (Natural Resources Canada 2013). I do not discuss Yukon's third producing mine, YukonZinc's Wolverine mine, simply because respondents either did not talk about their experiences there, or did not work there at all.

Alexco Resource Corp. currently operates the Bellekeno silver mine, located near the towns of Mayo and Keno. The mine also operates on the traditional lands of the Nacho Nyak Dun First Nation, which is based in Mayo. Alexco is a young company, founded in 2005. It is headquartered in Vancouver, although it also has a local office in Whitehorse. The company

completed development of the Bellekeno mine and mill in 2010, and began production in 2011. The Nacho Nyak Dun First Nation are a self-governing Yukon First Nation with 602 registered members in their community. They have signed a Comprehensive Cooperation Benefits Agreement (CCBA) with Alexco which lays out a number of policies meant to benefit the First Nation in exchange for use of their land (Alexco 2013). Unfortunately, Impact Benefit Agreements (IBAs) or in this case, CCBA's, are private matters between First Nations and mining companies (Natural Resources Canada 2013). Still, according to Alexco's website the Nacho Nyak Dun are involved in food catering at the mine camp, as well as underground mining through Procon Tunnelling, a regional mining contractor. Other details of the CCBA are scarce, but according to Alexco's website there are a number of benefits:

...the CCBA also provides significant social and financial components, including a drug and alcohol policy, regular business liaison meetings, a full time NND Liaison Officer, scholarships, funding to hire consultants so they can participate in environmental permitting reviews, and more. (Alexco 2013)

According to media accounts, NND Chief Simon Mervyn has said that the relationship between the Nacho Nyak Dun and Alexco has been prosperous. In his own words: "We're not opposed to development to any degree of the imagination." (Unrai 2012)

The Canadian mining corporation Capstone Mining Corp., through its subsidiary Minto Explorations Ltd. operates the Minto copper-gold mine, located between the towns of Carmacks and Pelly Crossing. Capstone is headquartered in Vancouver. The mine also operates on the traditional lands of the Selkirk First Nation, who reside mainly in Pelly Crossing. The company purchased the site from a predecessor in 2005 and began open-pit production mining in 2007. They are also developing an underground mine, which is expected to be completed by summer 2013. The Selkirk First Nation are a self-governing Yukon First Nation with a population of roughly 500. They are working together with Capstone under a cooperation agreement (CA)

(Natural Resources Canada 2013), and according to Capstone's website their workforce in 2012 was comprised of 51% local population, and 26% First Nations. They are also involved with Yukon College in developing a training program to train local skilled workers in mining. The company has also recruited a Selkirk First Nation Liaison officer to recruit and train local First Nation youth (Capstone 2013a).

Last, the Chinese mining corporation New Pacific Metals Inc. owns Tagish Lake Gold, a junior mining company which is currently in the exploration stage at the deactivated Mt. Skukum and Goddell mine sites. These mines rest in the traditional lands of the Carcross/Tagish First Nation (CTFN). Though there is no mine in operation, Carcross/Tagish First Nation and New Pacific Metals signed a Memorandum of Understanding (MOU) in 2007. As with other agreements discussed above, the details are private between the two parties and there is little information available publicly. Tagish Lake Gold's president Robert Rodger said this about the MOU:

The Company appreciates and welcomes the CTFN interest and participation in the exploration and development of the Skukum Mineral District. The Company is confident that both the CTFN and the Company will benefit from the cooperation and support envisaged in the Memorandum of Understanding. Both parties can benefit from the development of resources in the CTFN traditional territory when the two work together with mutual respect. (Martineau 2007)

As of 2013, Tagish Lake Gold still has an exploration licence, but there have been issues surrounding the company's treatment of the environment as well as workplace safety conditions. In terms of the environment, Carcross/Tagish First Nation officials have expressed concerns about dangers to wildlife due to exploration, especially with more roads developed in the area which could lead to overhunting (Unrai 2012). In terms of the workplace, mine inspectors in 2011 found several safety violations at one of the mine sites, including equipment without fire extinguishers, and a scoop tram with no protection from falling objects. The company was

ordered to shut down and bring their operation up to code, but when inspectors returned a month later the operation was still running and the orders had been ignored. Tagish Lake Gold was fined \$24,000 and New Pacific Metals blamed the mine's manager and supervisor for the violations, firing both of them (Kerr 2013).

## **Findings**

This section discusses the findings of the twelve in-depth interviews conducted in Whitehorse between February 17, 2013 and March 2, 2013. The experiences of twelve workers are presented here as four main themes: Workplace culture, safety in mining, mobility and migration, and home life. These four themes represent different impacts that long-distance commuting operations have for workers in Yukon's mining industry. Respondents described the remote mine sites they travelled to and lived at for weeks as having a distinctly masculine workplace culture. This workplace culture was also linked to the experiences of women and Aboriginal people at mining operations. Safety issues were also discussed by respondents, which were linked to the workplace culture, but also to the remote nature of mines, which create geographical obstacles for obtaining equipment. Mobility and migration appears to have become a more important impact of long-distance commuting operations for workers. Both local and non-local respondents described changing conditions of employment in the Canadian mining industry, which has forced them to migrate longer distances, and more frequently, to find work. Last, long-distance commuting operations have different impacts for workers and their families at home, depending on marital status, with single respondents describing more benefits of the lifestyle while married respondents describing some challenges.

### **Workplace culture**

This section examines the workplace culture that emerged as a theme through interviews with respondents. First, I discuss the different types of mines and how these differences influence the relationships among workers. Second, I discuss masculinity in mining and some of the ways this manifests in the workplace and among workers. Finally, two distinct groups emerged through discussions and deserve special attention: women in mining, and Aboriginal people in

mining.

*Type and size of mine*

Respondents brought up some important differences between mines. I discussed three different companies above, but did not describe their operations. Here I discuss open-pit mining, underground mining, and big and small mines. This is important because these types of mines involve different work processes, regardless of the company that owns the operation. The major difference respondents talked about between small and large mines was the type of work they were required to do. In large mining operations with lots of workers available, there is a higher division of labour, with workers performing one job, or having a narrow set of duties to perform. For example, some workers will only work as drillers, or only maintain equipment. Small operations are perceived by respondents to require a wider variety of skills and adaptability because fewer workers must perform a wide range of duties. Charlie (003) and Elvis (005) summarized the differences between small and large mines well:

Well, it was a lot different...when you're workin' with a small company everything changes, one minute to the next, eh? Depends on how shit happens underground. But a big company, they regiment your lifestyle. They tell you what to do. When you can do it. And when you can't. (Interview 005)

'Cause like we're driving one, one ramp. We have one heading. And, um, there's only three to four guys, per shift, for miners for example, and one electrician and one or two mechanics. Whereas in a large mine you've got a big group of mechanics, a big group of electricians, big group of miners all taking off to their various areas, and they just do their thing for the day, ya know? (Interview 003)

Charlie (003) brought up how this created problems when foreign workers came from outside the Yukon to work at a small mine. He felt that these workers had trouble adapting to the different workload and performing different jobs. As a result, these workers would look for work elsewhere and quit.

Other workers have had different experiences working in small mines. Charlie (003)

enjoyed working at a small mine exactly because it required him to be adaptable. As a tradesperson, he could have stayed in his home-region and worked for a lower wage, doing similar work each day. He noted that the mine he worked at “wasn't ready for [him]” when they were contracted (Interview 003). He felt that there was little organization at the mine, but that this brought with it opportunities to learn new skills and become adaptable. He felt that in a short period of time working for this small mine he has gained a lot of valuable experience in his trade, getting the mine running by installing equipment, but also by reacting to machine breakdowns and dealing with emergencies as they happened.

The difference between open-pit and underground mining is discussed in great detail by Russell (1999) but still needs to be addressed here. As the name suggests, companies that engage in open-pit mining are digging a large, open pit to get at the ore they're trying to mine. In this situation, communication and supervision is relatively easy; everyone is above ground and equipped with radios, and supervisors can oversee operations from a high vantage point. The work, as some of the respondents described (Interview 001; Interview 004), is notoriously boring in open-pit mining. Essentially, workers operate heavy equipment such as scoops or ore trucks their entire shift, moving from one point to another, loading and unloading ore. Adam (001) brought up the monotony of open-pit mining and described it:

If it's open-pit, it's the same thing. One day you might be haulin' fuel, another day you might be drilling a hole, CAT or whatever. The biggest thing is... try to keep cool [laugh]. (Interview 001)

David (004) agreed with Adam's (001) assessment of open-pit mining, but he also brought it up in the context of women in mining. According to him, women were well accepted in open-pit mining. To him, women were well-suited to open-pit mining because of its monotonous nature. He saw women as more conscientious than men, and it was this attribute

which allowed them to deal with the boredom and maintenance required of heavy machinery throughout the shift. In his own words:

Interviewer: Why do you think women were more accepted in open-pit mining instead of underground mining?

David: More conscientious. You know, the big thing about open-pit is having people operate the equipment in a safe and proper manner...These big hundred, hundred and fifty ton trucks that would--ya know, payload--they would jump these berms with these trucks ya know? And do tremendous damage, not at that time, but repeatedly they would break suspension, wheel bearings, all kinds of stuff. Women, they handle monotonous jobs much better than men do. (Interview 004)

By contrast, underground mining is perceived by workers as dirtier and more dangerous than open-pit mining. Operations are underground, and involve workers drilling down to an ore body before beginning production. Underground mining is considered more dangerous than open-pit mining for a few reasons. It requires workers to work in conditions that are wet, dirty, and dark for long periods of time. To advance down a tunnel, often workers have to blast apart rock with dynamite, which can create cave-ins, even in other parts of the mine. Cave-ins are not the only hazards though. Even small rocks falling from up high can be enough to seriously injure workers. If tools like jacklegs aren't operated properly, they can backfire and injure workers as well. Hugh (008) gave a vivid account of the process of drilling and blasting during a recent shift, and I present a large excerpt here to give readers a better sense of what the work environment is like in underground mining:

So, anyways, ya, ya, run in and you wait. You wait, for uh, you listen, eh? You listen for everything to stop falling. You listen for the rock to stop falling. So and then we'd run in there and we'd blast in there, fuckin' just drill two feet in there and then, you're doing it eh, and you're waiting for this son of a bitch thing to give you a knock on the head and just kill ya. And we'd just do the two feet, and we'd run out and all of the sudden the shit would come down. [whistle]. 'We made 'er. We made 'er.' And then we gotta drill another two feet. Hit the same hole. And it's pitch fuckin' black, all you got is yer miner light, eh? Just pitch fuckin' black, and I mean when you're in a rush and you're spooked it's kinda crazy, eh? You're drilling and goin', and we gotta get 'er done, eh? So anyways we wait and we wait, and then okay everything quiets around...All the water, we're wet—soaking

wet—and we run back in there, we got a four foot now, eh? [motions planting drill into ground] 'Fuck! Fuckin' drill that in,' eh? And you're just hopin' to Christ you don't have no ton of rock comin' in on ya. And then you pull that back out and, 'We got 'er done buddy! We got 'er done! Now we gotta go in there and stick dynamite in there.' Hmm? Eh? And that's the thing, we gotta run back in there--we fuckin' take a ride. We got fuckin' sticks like this [with hands motions about 12 inches length and 3 inches diameter], stick six or seven sticks of dynamite in there. Then you know, fuckin' cord. And blow that fucker up. (Interview 008)

Underground, supervision and communication is also more difficult. Adam (001) talked about the amount of noise underground from operating scoops and other machinery. This potentially created problems while workers are in close proximity. For example, Adam (001) almost injured someone behind him with the equipment he was operating; he claimed that he was unable to hear the warnings of the worker behind him. In other words, this was a near miss, as discussed below in the *Safety in mining* section. In terms of supervision, management typically stays above ground, and front-line supervisors occasionally check in on workers. Elvis (005) talked about how he enjoyed the minimal role of management while he worked:

Interviewer: How was management? How was the relationship with management?

Elvis: Um it was minimal. They told you what to do in the morning and... sometimes the mine captain come to talk to you underground, but just as long as you were doing your work it didn't bother ya... ya know? They knew what was going on, ya know? They was management. If you weren't there doin' your job they were there givin' ya *shit*. If you were doing your job they were there saying, 'oh right on, you're doin' a good job, well we'll see ya tomorrow.' And away they'd go. (Interview 005)

Finally, workers in underground mining tend to develop into tight-knit groups or “crews”. Kirk (011), Adam (001), Charlie (003), David (004), Hugh (008), and Irving (009) all talked about the strong friendships they developed in mining, many of which exist to this day. Adam (001) brought up a number of reasons for this. First, one's rotation is typically two or three weeks in at the mine site, and two or three weeks out. Workers spend long periods of time together, both in camp and at the mine. In Adam's (001) words: “Soon you're spending half your life with them.

They're like a second family.” Second, the perceived danger of the work underground requires the workers to support one another. Hugh (008) told a story about pulling his friend out of waist-high water, who was pinned down by an eighty pound jack-leg. As a result, a strong sense of trust develops between workers underground.

### *Masculinity in mining*

From interviews with respondents, mining is perceived as a masculine occupation and is still considered to be male-dominated. This is reflected both in available statistics (MiHR 2011a) and in the eleven of twelve respondents of this study being male. Unsurprisingly, masculinity is a major feature of mining culture--particularly underground mining culture. From what I learned through interviews, there were two major ways in which masculinity manifests itself. First, and most explicitly, there is an emphasis on toughness among workers. Second, some workers talked about the concept of workers going “haywire” (Interview 003), particularly among supervisors. This could be seen as a special example of toughness, but it is also related to safety issues and procedure. Third, occupation could play a role in the way masculinity is presented in mines. Fourth, competition in the workplace between crews could play another role.

Elvis (005), Frank (006), Grace (007), Hugh (008), Jeremy (010), and Kirk (011) all talked about the element of toughness that one needed if they were going to succeed in mining. Elvis (005), Hugh (008), and Kirk (011) were the biggest proponents of this. The first thing Hugh (008) said when I asked him about the mining industry was: “You gotta be tough, put it that way” (Interview 008). He went on to talk about the kind of equipment that workers have to operate underground and their weight. There was a point in the interview when he talked about the importance of maintaining a strong body; this was necessary to operate jack-legs and other equipment for long periods. He showed off his forearms and biceps to make the point even more

clear. This emphasis on toughness and physical conditioning also reflected a love for the work of mining. To succeed in mining one had to love the dirty, hard, physical nature of it. The respondents who worked as labourers were all unanimous in this:

Oh I loved the physical work. I loved it. I looked forward to it, every day. I even did things the long way [laughing]. No you, you have to get to love it, otherwise you might as well forget it, eh? (Interview 005)

There's a big rivalry there, eh? We're not allowed to play hockey in the camp anymore because we used to play against the mill guys and the miners. And the mill guys were always getting hurt so... lost time accidents. The old saying, 'rough and tough miners need only apply.' Yeah. Other than that, it was pretty good. (Interview 006)

"I'm a very strong worker. I'm a workaholic. And I like, I've been doing a lot of, how you say, manly work, like physical work. (Interview 007)

Toughness didn't apply only to physical conditioning, though. It also applied to injuries and accidents. Although safety is preached by mining companies, some respondents brought up the existence of "whiners" and "cry-babies" in the workplace. Elvis (005) talked about how some workers injured themselves in what he perceived to be minor ways, and received compensation for it. He brought up a time before the existence of the Worker's Compensation Board (WCB) when injured workers would get treated by the mine's first-aid attendant and sent immediately back to work. He believed that if one lacked the toughness or love of mining discussed above, they wouldn't last. In his own words: "I see a lot of cry-babies there, 'wah wah wah,' crying about everything. They never last. Just... a couple of weeks they're gone, eh?" (Interview 005)

This point about cry-babies and whiners is important in terms of safety. Adam (001) brought discussed this as a problem when attending safety meetings. He didn't want to be perceived as someone who "rocked the boat", and described being scolded by supervisors for bringing missing safety equipment or problems up in meetings. This behaviour by supervisors caused him to stop speaking up in safety meetings, despite what he perceived to be legitimate

safety concerns. Additionally, this behaviour could reflect an attitude where concerns are ignored or safety issues are not taken seriously. This attitude does not appear to be isolated among supervisors. Charlie (003) talked about his own experiences working in a small underground mine and dealing with his supervisor. He brought up the limited supervision underground, but he also talked about the quality of his supervision:

Occasionally the supervisors or superintendents will come down, but uh... ya know the shift boss who is supposed to be that, that front-line supervisor, who's a step below our superintendents, and he takes care of his mining crew uh... some of these guys are just as haywire as some of these bad operators y'know? (Interview 003)

As with Elvis (005), Charlie (003) didn't mind the low level of supervision, but he did have a problem with the kind of supervision he was getting. He referred to his supervisor as "haywire", a term that came up several times in the interview. A person going haywire meant that they were doing their job recklessly, in an unsafe way. He gave examples of workers using equipment improperly, almost running over electrical cables with vehicles, and other acts of carelessness. Due to budgetary constraints respondent Charlie's (003) supervisor came from a different department, so Charlie (003) would often try to explain the reasons for conducting the work he was doing, and the parts that he needed ordered. His supervisor would often go "haywire" on him; he would get frustrated, cancel orders for parts, and yell at Charlie (003).

This isn't the 70s or 80s anymore where people just yell and scream at each other, and yet, there's still guys in the industry who figure that's the best way to communicate with someone. (Interview 003)

Another element of masculine mining culture was the "swaggering" that went on between shifts. Workers liked to compete with each other. Sometimes this took the form of hockey games played between mill and mine workers, while other times it took place between different shifts underground. Frank (006) talked about the hockey games played between mill and mine workers, and how they needed to be cancelled by management because of the number of injuries among

the mill workers which led to lost-time reports. Charlie (003) felt there was a lot of machismo underground, and talked about competition between shifts underground. Often shifts were composed of workers from different regions who would argue over which crew was better:

...some certain regions of Canada some guys think they're topnotch cowboys of the mining industry, and they, they were just constantly bickering about the other crews and how they were the best. Very negative comments were going on, and very negative attitudes. And it was very tiring to listen to, and yet at the same time they were making a mess on their shift, at random moments y'know, where they weren't following the grade that was supposed to be surveyed or that was supposed to be on the mine plan, stuff like that. So you get a laugh out of that, y'know? (Interview 003)

Swaggering among mining workers wasn't limited only to work underground. This same kind of swaggering was also noted by a professional, Barry (002), who talked about the culture at mining camps. He noted that it wasn't a feature of life for certain professions like geologists, but that diamond drill crews he had worked with tended to be rowdy and drink in camps, even if it was a dry camp. He noted that this wasn't seen as a major issue, just something that happened "once in a while" (Interview 002). If the workers were caught with alcohol in a dry camp they would be sent home.

### *Aboriginal people in mining*

As mentioned above, the three producing mines in the Yukon operate on the traditional lands of three First Nations; the Selkirk First Nation at Minto, the Nacho Nyak Dun at Bellekeno, and the Ross River Dena at Wolverine. All three First Nations have signed Impact Benefit Agreements (IBAs) with the mining companies, and while the contents of these agreements have not been disclosed to the public, in general they set out specific conditions that allow the mining companies to operate on First Nations' traditional land. These conditions include: hiring a certain proportion of local Aboriginal people in their workforce, training workers for certain occupations, including cultural sensitivity training for the mine's workforce in general, and

creating company regulations regarding drugs and alcohol. Leo (012) and Grace (007) both brought up some positive aspects of these arrangements in Yukon mines. They both talked about companies' requirements to hire certain proportions of Aboriginal workers, and that companies were following through with this requirement. Leo (012) also brought up training Aboriginal people for trades, citing an example from his workplace: "Yeah I think they're treated fairly. We have a gentleman that's in their electrical apprenticeship now, so he's going through to get his ticket." (Interview 012)

Barry (002) brought up a possible attempt by mining companies to improve relations with First Nations in the area, as he noticed a new rotation being advertised for a local mine where workers would work rotations of four days in, and three days out. He believed that this would allow Aboriginal people more flexibility in their lives, and the ability to see friends and family more often. If that is the purpose of these new rotations, it might also benefit Aboriginal people by allowing them flexibility in pursuing traditional activities during certain periods of the year.

On the surface, it seems these policies are working well at these mine sites (Capstone 2011a; Alexco 2013). First Nations talk about their desire to develop resources--they are not anti-development, so long as they can see some of the benefits from these resources (Unrai 2012). Some of the workers I interviewed offered a different perspective on this. Jeremy (010) and Kirk (011) talked about the requirement of companies to hire certain proportions of Aboriginal people at the workplace. Kirk (011) said that a lot of the Aboriginal people he worked with were motivated, hard workers. At the same time, he also brought up a lot of Aboriginal people who worked at the bottom of the hierarchy in terms of occupation, who never advanced to higher positions: "I know a lot of Aboriginals who have been a helper for thirty years." (Interview 011)

Helper is an entry-level position, where workers change bits on machines, clean

machinery, carry materials, and perform other general labour. First Nations are often employed in this type of work. According to Kirk (011), after being hired many Aboriginal workers leave after a week on the job. I asked him why this happened. According Jeremy (010) and Kirk (011), the issues are wide-ranging; some people find the work too hard and leave on their own. Some are sent home for not doing their jobs. Others are found using drugs or alcohol and sent home. To Kirk (011), the main problem is that companies are forced to keep a certain ratio of Aboriginal workers, even if they can't find ones they need. Jeremy (010) largely agreed with Kirk (011), in that because Aboriginal people were guaranteed a certain proportion of jobs, they saw themselves as “just a statistic” (Interview 010).

Elvis (005) and Adam (001) were both Aboriginal respondents, and specifically Adam (001) had an important counter-point to Jeremy's (010) and Kirk's (011) perspectives. He addressed the point that Aboriginal people believe they are “just a statistic” and guaranteed jobs in mining, citing the negative work environment that he has experienced. In his own words:

Interviewer: Do you think racism is a big problem in the mining industry?

Respondent: Yes, it is. People think we got a job just because we're natives. 'Cause they're workin' our First Nation's lands. A lot of them feel that the only reason you're out here is 'cause you got a land claims settlement, it's the only reason you got a job. So they make it hard for you, a lot of times you don't want to go back. Or you're not a happy camper. So, a lot of times people won't go back because they're being abused. So it's like, 'oh you guys don't wanna work.' No, we don't wanna be abused. And there's nobody there to defend us. Nobody in our central government. Nobody in the Yukon government, our First Nations government. They just think 'oh we're gonna get jobs.' Well once we get the jobs, we gotta fight to keep 'em. And it's a big struggle to get respected and appreciated, no matter how hard you work. (Interview 001)

For Adam (001), initially getting hired was not the issue at the mines he worked at. He recognized that Impact Benefits Agreements laid out that companies had to hire a certain proportion of workers. The real problem was the negative work environment. From the perspectives of Jeremy (010) and Kirk (011) Aboriginal people believe they're guaranteed a job,

and have no incentive to work hard. But it is this prevalent attitude which Adam (001) has a problem with, and leads to conflict between Aboriginal people and other workers. I asked Adam (001) for specific examples. He talked about how he had been passed over for training opportunities despite working for longer periods of time than the people who were being trained. He also talked about preferential treatment of people by managers and supervisors. The example he cited had to do with camp rules. According to Adam (001), many workers smoke marijuana underground and bring alcohol into the camp. As mentioned above, camps have explicit rules against alcohol and drug use, but workers who break these rules are treated differently.

You'll see other guys getting drunk, written up, and whatever. They'll get rides back to camp and all that. You'll see a native guy do the same thing and he gets fired. So Yukoners get treated worse here than people from outside comin' in to work. All the time. Yeah, I see it all the time. (Interview 001)

Adam (001) experienced this personally when he had an accident with a vehicle underground. Following the accident, he underwent a drug test for marijuana which returned a positive result. As a result, he was fired. He understood that Aboriginal people in many cases were still dealing with problems of alcohol and drug-abuse, but his general feeling was that his workplace did not understand these problems. There was no one on-site to help Aboriginal people at the workplace, especially important considering his concerns above about fearing for his job when speaking up to managers or supervisors.

### *Women in mining*

I asked respondents about the environment for women in mining. Unfortunately, only one woman was actually interviewed, and she worked in the nearby mill--but commuted and lived in the same camp as the miners. Barry (002) and David (004), both professionals, talked about the demographic shift that has been underway for the last few decades in the mining industry. Barry (002) has noticed that for both men and women, the gender proportions for different occupations

at mine sites have become more balanced. By this he meant jobs that were traditionally male-dominated, such as mill labourers or open-pit mining workers, now have more women entering these occupations. Conversely, work at these sites that were traditionally female-dominated, such as clerical jobs, cooks, and first-aid attendants, now have more men entering these occupations. David (004) agreed with this assessment, and added that women were in some ways better than men in open-pit mining because they were more conscientious, and able to handle the repetitive nature of the work as described above. There was a major exception to this trend that Barry (002) noted:

I would say that, that the construction and the drilling and that stuff is really, still extremely dominated by the, the, by males. I've never even seen a diamond driller, or a diamond driller helper that is female. (Interview 002)

David (004) agreed with this, and noted that women were more accepted in open-pit mining than in underground mining. I asked Barry (002) why this was the case, but he wasn't sure of the reason. One possible explanation is an old miner's superstition that having women underground is bad luck. David (004) even told a story about this superstition, reproduced here for full effect:

'I had a hot date, so [female miner],' I said, '[female miner], do you mind getting dressed up as a woman? I think we can put you underground.'...She said, 'Ok, I'm fine with this.' And she was quite a large girl, but who would show up that day but the mine manager, the chief engineer. And he's okay, a good friend. But boy he went up one side of me and down the other. And he said, 'ya know, you're lucky that I didn't fire ya.' But there was such a stigma in regions of Canada where women underground was not a good omen. And [mine manager] was one of those. (Interview 004)

Grace (007), the only woman among the respondents interviewed, talked about gender in the workplace. She said that she felt welcome working there, and corroborated what Barry (002) and David (004) had said. She echoed that women were viewed as more conscientious workers and took good care of machinery in the mill. She talked about the hiring practices at her

workplace, that they had to hire a certain proportion of women and Aboriginal people, and that “a good number” of them were hired. In terms of the jobs women occupied, she said that they largely occupied clerical jobs, cooking, cleaning, and labour in the mill. She couldn't recall any women working at the underground mine itself.

The main focus among respondents seemed to be on the hiring practices of the companies they worked at, which seem to be balancing the gender differences at mine companies, with the exception of underground work. In terms of culture, workers have said that women feel welcome in the workplace, and get along well. For Grace (007), any conflict that she talked about in the workplace was framed in terms of problems with management, administration, or lazy workers, rather than in terms of gender. An important perspective missing from this discussion could be married women, or women with children, who work at these mine sites.

### **Safety in mining**

It may seem strange for an interview study of the impacts of commuting to address safety issues as a theme, but many respondents voiced a number of concerns related to safety in mining. According to these respondents, safety in the workplace plays an important role in determining where they work, or at the very least they will only tolerate unsafe conditions to a certain extent before looking elsewhere for work. That said, many respondents also expressed how safe they felt in their workplace, and that accident rates were quite low in Yukon mines. First, this section describes some basic issues in safety: the physical environment of the mine, and training and equipment available to workers. Following this, safety meetings and near misses are discussed. This section concludes with a discussion of some safety practices in mining.

#### *Physical Environment*

In the previous section on workplace culture I described differences between open-pit and

underground operations and the solidarity which breeds underground among workers. Recall that the reason for this solidarity, as discussed by Adam (001), was that the work was more dangerous than open-pit mining and that workers underground needed to develop a high level of trust with each other. Although many respondents had worked in both open-pit and underground operations, underground sites were discussed frequently in terms of safety, with the two main problems being quality of ground and the potential for cave-ins from blasting. Yukon mines were notorious for having poor ground. Respondents Charlie (003), Elvis (005), Frank (006), and Kirk (011) all brought up the concept of poor ground, and how it affected their work.

“We took our first blast for the portal in September. But the ground was so crappy that we actually, sorta, put a halt to the whole mining for over a month...It’s very unstable. Took us a long while to start mining our...tunnel, our ramp to carry on underground.”  
(Interview 003)

For workers like Charlie (003) and Kirk (011), bad ground made for a harder work conditions. It slowed down progress on developing a mine or in production. But bad ground could also be dangerous.

Interviewer: What didn’t you like about [Yukon mine]?

Respondent: Oh I just didn’t like the ground. It’s too dangerous. And you can go to work over in Yellowknife and somewhere like that the ground is fuckin’ solid. No timber nowhere. [Yukon mine] is just covered in timber. Every time you break a piece of ground you gotta put up timber. (Interview 005)

Some regions of the country are known for having ground that is easier to work with, while areas such as Keno Hill and Minto are areas notorious for their poor ground. When workers are drilling under poor ground the risk of a cave-in is greater due to the rock being more unstable. To proceed safely, workers drill into the face and put up mesh safety netting to prevent rocks from falling on them. Certain types of work underground are perceived to be more dangerous. For example, Frank (006) brought up shaft work as the least desirable type of work.

The worker is in a hole, with a long distance above them. In this situation, even a small rock falling a couple hundred feet can be deadly for workers who aren't wearing safety equipment. Frank (006) added that he lost a friend this way, crushed by a large rock. He also added that in his twenty years of mining, that was the only death he had witnessed. According to him, mining was safe as long as the person paid attention to their surroundings and learned from experienced workers.

Adam (001) and Hugh (008) both brought up situations where they were sent by their employers into areas of mines or deactivated mines that workers deemed too dangerous to work in. Adam (001) recalled a time when they did this and experienced a cave-in where they were working, caused by blasting in another area. Hugh (008) brought up a similar situation when he and his co-workers were opening up a deactivated mine.

[Experienced miner], he's a big gun. He can drill. He's a good driller, he's a good driller underground. I mean, he can do 'er. He can get shit done. So when this guy has been drillin' all his fucking life... and he walks into a mine for uh, three days... and says, 'Fuck this guys. I'm outta here. You're all gonna get killed.' And me and fucking [partner] continue to work after our driller is gone. (Interview 008)

In this situation, Hugh (008) saw experienced workers, and non-local workers with formal training tickets, leave the site because of the perceived danger there. He recalled being paid less than these people for the same work because he didn't have a ticket. I asked Hugh (008) why he would stay, and he replied that he loved the work. It's interesting that local workers without formal blasting or drilling tickets still find work, but that this work is "off the books" or not recognized by the company that hired them. In this case, the company was reopening a mine and hired Hugh (008) when it appeared other drillers and blasters were not willing to do the job because of the perceived danger. I asked 008 for more detail on why he decided to work for them.

Yeah, it's pretty pathetic shit. But we're tough, and we do this stuff because it's our type of job. I don't mean to piss and moan about it, but the fuckin' thing is that seriously, we shouldn't've been doin' it, right? The mine's been closed for twenty four fuckin' years. Yeah, [mine site] has been closed for twenty four fuckin' years because it was deemed dangerous. Back in the fuckin' seventies it was deemed, fuckin', done. They were all wooden, everything was wooden, there was no steel or anything, nothing. It was old time mining. (Interview 008)

Again, Hugh (008) loved the physical labour, and loved his work as a blaster and driller.

He didn't bring up money as a reason for doing it. He did recognize that the mine he was unofficially working in was dangerous, the environment had been deemed dangerous. The incident he brought up is interesting, because it was in Yukon news last year. The company that owned this mine site had mine inspectors shut down one of their sites for violating three safety regulations. The company was told to shut down operations until it had brought itself up to code, but one month later they were still operating and had ignored the inspectors demands. The company was fined a small sum but at the time of writing, the company has paid its fine and resumed operations (Kerr 2013).

### *Training and equipment*

When I asked respondents about their training prior to entering the mining industry, Hugh (008) and Leo (012) brought up their first-aid training as the only requirement to get work. Grace (007) and Kirk (011) didn't need any training. Grace (007) felt that she was hired by the mill on her experience alone. The critical thing here is the timing of entry into mining. The mining industry today requires more formal training than in earlier decades, as evidenced by MiHR reports on skilled training (MiHR 2011b), and formal qualifications laid out in job descriptions and advertisements by Yukon mining companies (Capstone 2011b). Both Hugh (008) and Leo (012) started working in mining over two decades ago, when there were fewer barriers to entry. That said, some entry-level jobs still do not require much formal training. Grace (007) was hired

to work at a mine's nearby mill only a year prior to the interview; her occupation was mill helper. Once respondents began working in mining, they were trained on different machines and picked up different certifications. Grace (007) received her mechanic diesel, and Leo (012) received mine rescue training, industrial first-aid, and eventually gained entry into an apprenticeship program.

Professionals and trades-people didn't mention their training; both Barry (002) and David (004) had completed university programs in engineering or science in the past. Respondents Charlie (003) and Jeremy (010) were trades-people when they started in their industries, although Charlie (003) is currently taking a correspondence course as a Programmable Logic Controller (PLC) technician, as he is trying to advance in his career. Adam (001), Elvis (005), Frank (006), Hugh (008), Irving (009), and Kirk (011) all brought up hands-on training on equipment; they spent time around experienced workers when they were first starting in the industry and learned their occupations in this way.

Issues surrounding equipment came up frequently among Adam (001), Charlie (003), Frank (006), Grace (007), and Kirk (011). One major problem in terms of safety was the condition of equipment. Specifically, Adam (001) and Kirk (011) reported problems of poorly maintained equipment left by previous shifts. Adam (001) believed the problem to be with new workers.

But if you got them comin' in there, not doin' their job, like if they're your cross shift, they're not lookin' after that piece of equipment, and they're not reportin' things that they break... it's frustrating. And after day after day, if you're workin' three weeks on, three off or two on, two off however weeks, twelve hours a day, sometimes longer... it wears you down. Fuck man, if you broke something down, fix it. At least report it to me, ya know, so we can get it fixed. Ya know, like, clean it up. It's a mess. Grease it. Ya know, check it out. So a lot of these greenhorns, they don't do that and then they beak off at you.  
(Interview 001)

Kirk (011) echoed this as an issue, though didn't distinguish between new hires and

experienced workers. He simply stated that there were issues of drilling crews not maintaining equipment where he worked, and that “getting a competent crew is one of the hardest things in the mining industry.” (Interview 011)

Adam (001), Charlie (003), and Grace (007) all brought up issues surrounding the availability of safety equipment and tools in their workplaces. In terms of tools, Charlie (003) talked about the budget that his department had to work with. According to him, companies normally purchase certain expensive shop tools which get shared by everyone. Charlie's (003) department proposed a list of tools that they considered modest and necessary to do their jobs. The company responded that they were willing to cover about ten percent of those costs, which worked out to one good power tool. Charlie (003) found this frustrating, as they didn't have the proper equipment needed to perform their work. I asked him why the company wouldn't buy the department the tools it needed, and he responded that the project they were working on was underbid--there was not much money invested in it. This lack of funding for their department had other consequences, including no truck to travel underground (they use a small tractor instead), and shared space in a main shop (rather than a separate shop for their department).

Both Adam (001) and Grace (007) talked about the absence of safety equipment. Adam (001) described a situation where he found equipment without a nearby fire extinguisher. He then reported it, but it was not replaced. Grace (007) brought up multiple issues with safety equipment at her work. As a mill helper she worked around chemicals, and required work gloves, safety glasses, coveralls, a hard hat, and a safety vest to perform her work in a safe manner. The chemicals used in the mill were used to separate ore from soil; as a result, the chemicals were very corrosive and would wear out equipment. If skin was exposed, the chemicals could also enter workers' blood stream. Other equipment, like glasses or gloves, tore or became scratched.

Unfortunately, Grace (007) reported that equipment was sometimes unavailable and had to be ordered in. As she worked in a remote area, this took time; she reported waiting three months for a pair of coveralls. In the meantime, she used what was available on-site. As a small woman, older pairs of coveralls and vests didn't fit her well; they would catch on corners and tear open.

### *Safety meetings and near misses*

This section discusses the daily safety meetings which respondents brought up when asked about safety in mining. Daily safety meetings seem to be a routine feature of work in mine settings. Adam (001), Charlie (003), and Jeremy (010) gave descriptions of their safety meetings and what was discussed in them. Safety meetings take place at the beginning of each shift between a supervisor and workers, and are used by companies for several activities. The supervisor discusses work for the day, any precautions workers should take during their shifts, and opens the floor for anyone with safety concerns. Accidents or near misses are mentioned and ways to prevent incidents from happening in the future are discussed. Sometimes required safety videos are shown as well. Adam (001) brought up a problem with safety meetings, as he believed participation in them was actually discouraged.

There's always gonna be whiners or whatever, but sometimes you'll mention something and you're not whining...especially if you run into the same shit every day, like 'I thought you guys were gonna deal with that and this and this' and they don't, ya know. So, a lot of times if you want to keep your job you just shut up. (Interview 001)

Although meetings at Adam's (001) workplace were formally meant to let workers bring up safety issues, he feared that by reporting issues he was endangering his job. He never experienced this firsthand, but said that he had seen fellow workers speak up and become more heavily scrutinized, and in some cases lose their jobs. For example, Adam (001) said he knew one worker who spoke up at safety meetings, and had his room searched for marijuana. Another point in the statement above is the idea that workers who speak up are “whiners” rather than

voicing legitimate concerns. This may be connected to the masculine work environment described earlier, where the ideal miner is tough and does not complain about their work conditions. If that is the case, then workers would not want to be labelled by fellow workers as a whiner or complainer by speaking up at meetings. This could be another explanation, in addition to preserving one's job, as mentioned by Adam (001).

In contrast to Adam's (001) experiences, respondents Charlie (003) and Jeremy (010) did not feel there were any problems during their daily safety meetings. They both felt that safe practices were advocated by the meetings. Near misses deserve a bit more attention. They are discussed in safety meetings, and are basically incidents where workers are almost injured on the job. To prevent near misses, or actual injuries in the future, precautions to be taken by workers are discussed by supervisors during safety meetings.

### *Safety practices*

In addition to safety meetings, respondents brought up other practices related to safety in the workplace. In general when I asked respondents about safety practices they responded positively. Grace (007) represents an answer typical of most of the respondents: "It was well done. It was a high priority. And people were following the rules." (Interview 007)

Safety being a high priority of companies was brought up by several respondents, including Charlie (003), Grace (007), Kirk (011), and Leo (012). Similarly, in newspapers and on company websites safety practices are always presented as being their first priorities. I probed further and asked what made their workplaces safe, and respondents Grace (007) and Leo (012) brought up that there were a large number of rules in camp at the mines, and in the mills. For example, Grace (007) brought up the number of signs in camp regarding laundry and showering before entering the cafeteria. The safety reasons for these rules were that workers coming off

shift would be covered in chemicals which are dangerous to ingest. Leo (012) said “sometimes it feels like you're back in high school” because of the large number of rules, but at the same time he recognized their importance in creating a safe environment.

Other respondents talked about their daily procedures that made the job safe. According to Leo (012), these procedures are put together by first aid attendants, and are very thorough. As an example, Charlie (003) talked about tagging in and out of the portal to the mine. Everyone on site has an identification card, which they tag in at the entrance to the mine so that everyone else knows that they are going underground. If there is an emergency, workers return to the entrance and tag out, allowing for everyone to be accounted for. Another important procedure is the inspection Charlie (003) carries out before beginning his work; this means checking that the ground is stable, the roadway is clear, his tools are all accounted for, and all equipment is functioning properly. If there are any problems, he reports them to his supervisor, who tries to remedy any problems “to the best of their ability,” but as noted above in the Workplace Culture section, some supervisors can go “haywire”.

I asked about accidents in the workplace, and respondents were unanimous in saying that they were very few. Adam (001) reported that he had a minor accident, and was wrongfully fired for it. Respondents Charlie (003), Grace (007), and Leo (012) all agreed that safety practices at their sites were well done, and had not experienced any accidents--though Charlie (003) had experienced near misses. Respondents Jeremy (010) and Kirk (011) had seen minor accidents happen, but noted that they were rare. Kirk (011) noted that the one accident he had witnessed was due to one worker being careless on the job. Respondents Elvis (005) and Franks (006) had either been injured, or experienced serious injuries in their long careers, but again noted that they were rare occurrences. It is important to note that both of these respondents have been employed

in mining since the 1970s, when safety standards were potentially more lax. Even respondent Hugh (008), who talked about how dangerous his workplace was, had not experienced any accidents firsthand. Respondents Barry (002) and David (004) were both professionals and did not comment on experiencing accidents, though both noted the high priority mining companies place on safety. To summarize, respondents experienced few or no accidents and injuries in their workplaces.

### **Mobility and migration**

In this section I examine the theme of mobility and migration among Yukon miners. I begin by examining the journey between work and home, with an emphasis on time, distance, and location of workers. Related to the journey is the use of vehicles by local workers, and the tension this creates between labour and management. Next, I look at the miner as a migrant, as many respondents tended to move between jobs as well as locations. This is related to the last category, precarious work.

#### *The journey*

Before beginning, it is worth discussing the shift rotations of mining companies in the 1970s as a comparison to current rotations in the mining industry. Several respondents have been active miners since that decade, and discussed their current situation in reference to the 1970s. It is also important to note that there are different rotations depending on mine sites, although the general trend since the 1970s seems to be shorter shift rotations. David (004) was just starting his career as a mining engineer in 1971, and discussed the working conditions of developing a mine in arctic Quebec. Labourers were required to stay for periods of six months in a camp, while managers were often able to leave once a month to carry out business in the outside world. He found this situation to be stressful for labourers; according to him if workers spent more than six

weeks in a mining camp their ability to perform their work began to wane. This situation was not universal in the 1970s though, and Elvis (005) and Frank (006) both talked about their experiences when they entered the Yukon mining industry. Elvis (005) started around 1972 working at a mine with a rotation of three weeks in, one week out. Of course, in the early 1970s he drove rather than flew between Whitehorse and the mine-site. Frank (006) started mining in the late 1970s, with his shifts being six weeks in, two weeks out. According to him, the Workers Compensation Board (WCB) disliked having workers in a camp for such long periods, and now most rotations have changed to be two weeks in, two weeks out or three weeks in, three weeks out. Barry (002) talked about seeing some mining companies introduce even shorter rotations in newspapers. For example, the Minto mine advertises some work rotations of four days in, three days out. Respondent Jeremy (010) worked this kind of rotation in the Yukon, and compared it to a normal work week similar to people who do not commute long distances; he stayed in camp for four days, but was able to enjoy a weekend at home in Whitehorse every week. Still, Adam (001), Charlie (003), Grace (007), Kirk (011), and Leo (012) all talked about two or three week rotations as typical for fly-in, fly-out mining operations in current times. While on duty, respondents typically worked shifts between ten and twelve hours.

I asked respondents to take me through their commute, including the time leading up to it, the commute itself, and the time shortly after the commute, going both ways--from work to home and from home to work. An association emerged between the residence of respondents and the impact commuting had on them. For local workers commuting was somewhat inconsequential, while for non-local workers the impact of commuting was mixed.

Typically, local respondents commuted about two or three hours to get to their mine sites. Ten of the twelve respondents were local Yukoners, and most respondents travelled distances of

two or three hours to get to mine sites. Elvis (005) and Frank (006) had talked about times when there was little mining in the Yukon in the early 1980s; during these periods they had to either migrate to different areas of the country for work, or commute longer distances from Whitehorse. In Frank's (006) case, he commuted about ten hours from Whitehorse to a mine on the border of the Yukon and Northwest Territories. Respondents Grace (007), Jeremy (010), and Kirk (011) recalled their commutes from Yukon workplaces. These were the youngest respondents interviewed, and all three were single. In addition, like many local workers they preferred to drive to work rather than fly-in. They viewed their trips home as relaxing. Grace (007) and Jeremy (010) provided two common feelings about the commute:

Releasing. It's easy. It's fun. I'm sitting in the truck and I'm listening to my music and I'm smoking my cigarette and [laughing] planning, 'oh what am I gonna do my first day? Oh drink beer? And the second thing I'm gonna do? [laughing] Oh eat a good meal.' And that's the two things, I'm sure that's the two things coming out of the head of anybody coming out of the camp. (Interview 007)

Awesome, just blare music and drink beer, except for the driver of course—the driver stays sober til we get there [laughing]. And then we have a bit of an evening party and then all go back to our ways, and meet together... two days from now. (Interview 010)

The return trip back to the mine site carried a different meaning for respondents. It gave them time to reflect on their relationships at work and home. For some, this trip to the mine carried with it some anxiety. Grace (007) had to deal with some conflict with some of her co-workers, but used the time in her truck to prepare herself for her rotation.

It was harsh. It was hard. 'Cause I knew that I wasn't getting along with everybody, that I had to prove myself on certain things, and close my eyes on other things and, and uh much like myself I'm saying, 'you're making money [Grace] for a good reason, you're doing a good job.' It's just like to motivate myself... (Interview 007)

For respondents Jeremy (010) and Kirk (011), the return trip to the mine was a more positive experience. As with Grace (007), it allowed them to prepare themselves mentally for their rotation. But it also gave them time to forget about personal problems at home. In Jeremy's

(010) own words:

Respondent: I kind of dreaded it to tell you the truth, because like, the weekends weren't long enough, ever [laugh]. But at the same time I, I enjoyed leaving town and just forgetting all the stuff that didn't really matter [laugh].

Interviewer: What kind of stuff?

Respondent: ...stuff that didn't matter. I don't know. Not really relevant to work. Just makes it so that I can... the drive out was more just to clear my head-space. And it was worth the two hours. We always drove slower there than on the way back. (Interview 010)

Other local respondents drove to their mine-sites as well, but didn't talk about the trip. It seems that for many local Yukoners, commuting two to three hours to mines is normal, and is viewed as more positive and enjoyable than the alternative of travelling long distances outside the territory. One recurring complaint that was raised by local workers was that commuting, even if only a few hours, ends up being a wasted day. They can neither enjoy home-life nor work a shift at their mine, so the day itself feels as if it is wasted. Grace (007) said that she wouldn't mind switching to flying into mine sites, but that her truck gives her more freedom. I asked Grace (007) if her attitude towards commuting would change if she had to travel longer distances. I brought up the situation of two non-local workers who lost two days in travel. Her response:

“Yes. I would say that my opinion would change and I would say, 'fuck it, I'm going to move closer to the mine.' [laughing] I wouldn't fly that long. I fly that long to go visit my family, and I don't complain because it's my family, and it's only one flight a year... but it's a long flight. And that ends up being a big waste of time for me. Because I know that a girl was saying that she often had to take like two days. She had to fly out from Calgary to Vancouver, a layover, like on overnight. She slept there, and take the flight to come to here to Whitehorse, and after that to the mine. So that's two days. That's not even one day.” (Interview 007)

This appears to be the major challenge of fly-in, fly-out mining for non-local workers.

From my field notes, I talked with staff at Erik Nielsen International Airport in Whitehorse

before mine charters arrived. Staff members brought up that I was meeting miners before their charters left for the mines, and that to meet them as they arrived in Whitehorse I would have to come a day early, as workers typically arrive the night before they leave for the mine. Using Charlie (003) as an example, on his first day of travel he would fly from Quebec to Vancouver, then from Vancouver to Whitehorse. Once in Whitehorse he would stay at a hotel for the night. In the morning Charlie (003) would go to the airport and take a chartered flight to the mine. This journey, combined with shift-work, left him fatigued:

Yeah it can be a little overwhelming. I, I always take the [flight] back east from Vancouver to [eastern Canada], so I arrive at seven in the morning. By the time I usually get my bags and on the road I'm usually home just before lunchtime...It takes time to adjust. Plus, the rotation that we do up at [Yukon mine] right now was, we come in and we do two weeks of day shift, and then halfway through that four week run we switch to nights for the last two weeks. So, y'know, not only am I overwhelmed when I get home, I am sleep deprived. So it takes definitely a few days to adjust. (Interview 003)

Leo (012) had a different perspective, though. He also took two days to travel between home and work, but reported no additional stress or time needed to adjust. For him, commuting to mine sites was a normal fact of life. He did bring this up as an issue in the past, when he first began commuting long distances. Travelling between work and home gave him some anxiety, especially on longer trips overseas. As time passed, he became used to long-distance commuting:

I've worked at places where you've worked a week in and a week out, and it's a four or five hour drive each way, and... I've worked, when I worked overseas it took you two days to get there and two days to get home. So, I guess the travel part of it I'm kind of used to. (Interview 012)

There are some key differences between respondents Charlie (003) and Leo (012). Charlie (003) is in his early forties and has recently started a family. Additionally, he only has a few years of experience in underground mining. In contrast, Leo (012) is in his fifties, established his family over two decades ago, and has over twenty-five years of experience working in remote mines. He has worked in mining operations all over the world, and once he is

done at his current workplace he plans on commuting to mining operations that are developing in Asia. So, for non-local workers starting families, long-distance commuting may be tiring and stressful. For non-local workers with years of experience, long-distance commuting may be a normal part of life.

### *Vehicles and conflict*

Many local workers preferred to drive to mine sites, and this was the source of some conflict with management. This section discusses the two conflicting positions. Specifically, respondents Adam (001), Elvis (005), Frank (006), Grace (007), Irving (009), Jeremy (010), and Kirk (011) explicitly talked about commuting to their work-sites in their own vehicles. Only respondents Adam (001) and Grace (007) talked extensively about the vehicles they had at their work-sites though. Adam (001) and Kirk (011) both brought up that management disliked workers having vehicles in camp. Barry (002) gave a manager's perspective on why companies preferred to have workers fly-in, rather than drive-in.

Grace (007) preferred to drive from Whitehorse, simply because it gave her freedom after her shift was finished. She had problems dealing with some of the workers in the mill, so rather than stay around the camp she preferred to drive into town for food and drink. The area was also remote, which allowed her to enjoy the outdoors, go swimming, hiking, and fishing. In a similar way, Adam (001) also brought his vehicle to the mine for the freedom it gave him. In addition, Adam (001) was also born in the area of the mine, and liked to visit family and friends after his shifts were finished. Other workers--many from outside the Yukon--also wanted to go into town for alcohol, so Adam (001) provided a service to these workers with his vehicle. This service created tension with management. In his own words:

You know, you'd drive there, just so you can get out of camp once in a while, which is your right, but you'd always have these miners like, beggin' you to give 'em a ride to

town or whatever, or to the pub. Management didn't like that. They want control over you. Even though they don't have the right to. But you challenge 'em, okay... those kinda similar reasons they looked at getting rid of me 'cause I liked to drive to camp. I didn't like being controlled. If I want to go hunting, fishing, I do it. Or if I wanna go visit some people in [town] or [town], whatever, I do it. (Interview 001)

Barry (002) had managed mining camps before and encountered workers with their own vehicles. He recognized that companies are only paying workers during their shift, and that companies can't control their workers after their shift when they're not being paid. Still, workers with their own vehicles had created some problems for him in the past. Barry (002) talked about a satellite camp which had road access. Despite being instructed to stay in the camp some workers would leave for the nearest town for drugs or alcohol, and not return for several days. For managers, workers having vehicle access created problems with regard to keeping shifts staffed properly.

It's a bit of a hard line to walk, 'cause technically you're not paying them after six o'clock right? They should be able to do whatever they want. If the road is there and they have their own truck, well then maybe they should be allowed to go to town and do whatever... and come back by the beginning of their shift the next day. But unfortunately, a lot of the time that, they didn't do that [laugh]. They didn't come back. Anyway, I can see that being a problem for a lot of companies. (Interview 002)

Two other problems were discussed by respondents in interviews regarding access to vehicles. Adam (001) and Kirk (011) talked about the temptation to jump in a truck and leave the site when work became too stressful. If that is the case, vehicle access could increase turnover. Without access to a vehicle, this would be impossible and workers would be stuck at the site until their rotation ended. In terms of alcohol, Grace (007) confessed that she would sometimes use her vehicle for "bootlegging." She would bring alcohol into camp from the nearby town for workers in the camp.

### *The migrant miner*

Above I discussed fly-in, fly-out miners' journeys between home and work. This section

deals with the idea of the migrant miner: workers who move frequently between workplaces over the course of their careers. Six of the twelve respondents--Adam (001), Charlie (003), David (004), Elvis (005), Frank (006), and Leo (012)--talked at length about how mobile they had been in their careers in the mining industry. The remaining six respondents--Barry (002), Grace (007), Hugh (008), Irving (009), Jeremy (010), and Kirk (011)--either did not talk about migration, or talked about it outside of the mining industry. The latter group had settled down in Whitehorse at the time of the interviews, though some had future plans to leave the territory. Adam (001) and Charlie (003) summarized the mobile mentality of miners well:

Miners are known to just up and quit at the drop of a hat...it's the top, number one industry where people just quit numerous times in a year [laughs]. To go with another contractor, or go back with another contractor they were with three years previous. It's hilarious. They bounce around. (Interview 003)

Yeah I kinda float around. (Interview 001)

Among respondents, there was a general consensus that miners were migrant workers who moved from job to job over their careers. It's interesting that recruiting and retaining workers in the mining industry is still seen as an issue today, as according to respondents the mining industry has always had high turnover. In the words of David (004), for many workers it is their "modus operandi." He has personally encountered people in Whitehorse working in the mining industry that he met across the country in other mines. Elvis (005) and Frank (006) talked about their own transient nature in the 1970s, before the recession of the early 1980s. They were both living in Whitehorse at the time and described their primary method of securing employment:

It was going good. Miner could get a job. Fuck, walk in the Capital hotel, you had a job an hour later. The Capital hotel used to be called the home of the miners then. Back in the late seventies and early eighties. I got more jobs outta there than I ever got outta [employment agency]. I never got one outta [employment agency] [laughing]. Fuck, all I had to do was walk in there and fuck, I had a job. (Interview 005)

Two in the camp, two at the Cap. (Interview 006)

Based on respondents Elvis's (005) and Frank's (006) accounts, Whitehorse has at least two bars that cater to miners: The Capital hotel, and the Ninety-Eight. In the 1970s, workers would gather in these bars and sign up for work contracts. In these days work contracts were plentiful and competitive; a company that paid fifty cents an hour more than another would cause workers to quit and migrate to the better paying company. During the recession of the 1980s, and restructuring in the Canadian mining industry, there were fewer available jobs for miners, though the Capital hotel and the Ninety-eight to this day remain gathering places for miners in Whitehorse.

There are multiple opinions on what caused the “good old days” described above to end. Elvis (005) talked about the NDP government being elected, which “shut down all the mining”. According to Barry (002), the “good old days” of plentiful work described above have been replaced with a “lean mining industry”. As he described it, the Canadian mining industry today is more aware of its costs, and many jobs have been collapsed into one due to computerization and mechanization. In the past, he would have a technician and secretary supporting him. Today, those positions have been collapsed into his own. The end result is that there are fewer jobs available, which make the scenarios Elvis (005) and Frank (006) talked about less likely; mine workers are less likely to quit and move to another company that offers a slight pay raise. That said, a similar scenario was described by Charlie (003):

...even at the wage I'm making now, for us blue collar kids back home it's fantastic. But these guys, they're used to making 60 dollars an hour bonus... in some places. Ya know, 'mrah mrah mrah I could go here and go make this and blah blah blah,' and eventually they quit and take off somewhere else. (Interview 003)

According to Charlie (003), workers do still frequently quit and migrate to other mining

companies over pay. There are two key differences here. One is the difference in pay, which may be higher between mines in the Yukon and outside the territory. Respondents Charlie (003), Grace (007), and Leo (012) all agreed that the mines they worked at paid below their occupations' averages. According to Grace (007), she could make ten dollars more an hour working the same position in other parts of the country. The second difference is that Charlie (003) was talking about skilled trades-people, who are in demand not only in the mining industry, but across other industries, like construction. Multiple industries are competing over the same supply of trades-people. Charlie (003) talked about the many job offers he has had recently:

I'm getting all kinds of job offers. Most of them have required—asked me—to relocate and work in a town somewhere, like Timmins, Ontario or somewhere like that. My family and I are not willing or prepared to relocate. We're very happy where we are. We're very happy with my schedules. I mean four and two is always long, but for right now that's all I have, that's all there is right now. There's very few openings for mining electricians right now. This is what I like to do, and so I'm staying put until... maybe something else comes along. Let's say a three week in, three week out rotation, somewhere else. (Interview 003)

Charlie (003) discovered many of these job offers through websites like LinkedIn and InfoMine, where available jobs in trades are posted frequently and company recruiters routinely contact potential workers about job offers. The major problem for him is that none of these jobs are available where he lives in Quebec. His original plan after he became certified in his trade was to work locally, but there were very few jobs available and he began to look farther afield. It is interesting to note that his main reason for moving to another company is not pay--as mentioned above he is content with his pay--but it is over personal interest and better rotations. Frank (006) agreed with rotations as a major factor in miners migrating to other companies, and Barry (002) agreed that personal interest was another major factor.

### *Precarious work*

Skilled workers who travel long distances to work in the Yukon may have some good job

opportunities, despite requirements to relocate, but local workers in the Yukon had very different experiences. Adam (001) talked about turnover in current times:

Interviewer: I guess is turnover really frequent there? Can you go back to a site and-

Respondent: Uh, not as much as the old days if you, if you're unhappy you'd go to a new job. You can't do that now. There's not that many jobs out there. So you gotta suck it up, put up with whatever bullshit's goin' on. (Interview 001)

Local labourers and heavy equipment operators appear less fortunate. The “old days” of the 1970s where workers could pick and choose between companies and contracts are over. Workers such as Adam (001) and Hugh (008) were unemployed or underemployed when I interviewed them. They were eager to work--as brought up in the workplace culture section they loved physical work and mining in general--but there were fewer jobs available for them in the territory. For them, work is more precarious. They still migrate from job to job, but the reasons for this are different. In the above migrant miner section, Adam (001) mentioned that he “floats around.” He described some of the reasons for this “floating” in his most recent jobs:

...before that it was [contractor #1] at the same mine and, well, they lost their contract; [contractor #2] took over, so I just went to [contractor #2]. But that was kinda like for, four months, five months between [contractor #1] and [contractor #2]. And then with [another company] it was like a month, but they went down to one truck and I'm the low man on the totem pole so they let me go. So uh right now I'm kinda drivin' taxi on the side and touchin' my money I have saved once in a while. I definitely gotta get the hell to work. So I'm on-call, hopefully to go back to work for [contractor #3]... who I finished working for in uh, July. I worked for them for a year and a half this last go-around at [Yukon mine]... (Interview 001)

His reasons for moving between mines are different from workers like Charlie (003) and Leo (012). Charlie (003) and Leo (012) were able to choose between different contracts and jobs, while for Adam (001) changing jobs was more forced. In the last two years, he had switched companies due to the loss of a contract, where he worked for roughly five months. He then worked for another month at a different company before being laid off due to a lack of seniority.

He is now waiting to be called by a mining contractor for the local mines, who he had relatively stable employment up until about seven months before the interview took place. It appears to be instability, lay-offs, and contract work that characterize migration between jobs for local workers; choice seems to be less of a factor. Respondent Hugh (008) talked about what he believed to be a central reason for this:

Yeah they don't have training up here for anybody. And if they do have it, you gotta pay through the friggin' nose, and it's not credible for any frickin' thing. Any BC job, or any Alberta job. You got Yukon mine training, you got this and that, you go in there and try to get a job, they just think, laugh, 'he-he-he, fuck off, see ya later' eh? You spend money then go there to get a fuckin' job, with the tickets that you get. I mean there's...all those tickets down south. They don't give 'em up here. They gotta give 'em up here. (Interview 008)

According to Hugh (008), there are two reasons local workers have trouble finding work: the lack of available training, and the credibility of the training given. This is an interesting point, as field notes in November 2012 I asked the executive of the Yukon Chamber of Mines, Michael Kokiw, who brought up the need for skilled labour, and the problem with an undereducated labour force in the territory. As a result, many local workers work as general labour.

I looked at the requirements for many of the occupations at the Bellekeno and Minto mines. For trades-people, the minimum requirement for employment was a journeyman ticket. For other heavy equipment, other formal training certifications were required for employment. Experience was also listed on these job postings, but they were usually in conjunction with tickets and formal training requirements (Capstone 2013b). Hugh (008) brought this up as a major problem; he had years of experience operating different pieces of equipment as a miner, but didn't have the formal qualifications. As a result, he often had a hard time finding work. It is also interesting to note the importance Hugh (008) placed on Yukon training being credible for jobs in BC and Alberta. It could have indicated a desire, or necessity, to work outside of the

territory in neighbouring provinces, but one that is not possible without the right credentials.

Disregarding training, local workers at the professional level also face challenges. Barry (002) works in a professional capacity in the Yukon mining industry and was finishing a contract when I spoke with him. He noted his experiences with workers being laid off, and his own contract ending soon.

...it seems to me it's getting tougher out there, despite what everybody keeps saying about we need more and more people. It just doesn't look that way to me. But, so I think it's getting tougher out there, people are more willing to stay a lot of the time. I know in fact a couple, I've been working for a company this last winter that's, well basically my contract is finished with them next week. And uh, it won't be renewed. Well we had several people last summer, um, that, that we can't hire back, and they know that, and they're starting to look at some very... um... remote camps, things that they wouldn't consider normally...people are uh, moving to wherever the jobs are now. They're more, they have a higher tolerance for rougher situations, and I think, lower pay. (Interview 002)

Although professionals generally have university training, as in Barry's (002) case, they still face the challenges of a “lean mining industry” and contract work. He and his fellow coworkers are currently looking for work outside the territory.

### **Home life**

In this theme respondents discussed their lives at home, both in terms of when they were present and in terms of their family members when they were away at work. I start with respondents' communications home from work; this was brought up by many respondents and had several consequences for their home lives. Many workers, particularly single workers, celebrated when they were back from their rotation, so celebrations are also discussed. Next, many respondents had families, and the impact of fly-in situations are discussed in that section. Last, I conclude this section with some discussion of the time period when workers arrive home and leave for their rotations.

#### *Communicating home*

Over half of respondents brought up their communications with home; Adam (001), Barry (002), Charlie (003), Frank (006), Grace (007), Jeremy (010) and Kirk (011) all brought up communications while they were at work. Communications technology has changed over the last few decades in mining, as noted by Barry (002). When he began in the mining industry in the 1970s, remote camps only had access to radios and channels were generally kept clear for emergencies, grocery orders, or business reasons. Barry (002) noted that occasionally he experienced some new workers trying to use equipment to get through to their girlfriends. They would be told to stop or get sent home. Since that time, remote camps have gained access to more sophisticated equipment, including satellite phones and in many cases, internet. This has important implications for workers and their families; now they are able to speak or e-mail one another on a daily basis. It also has negative implications for some workers, who feel too connected to their families at the work-site. Charlie (003) and Frank (006) were both married with two children, and called home on a daily basis. The conversations would usually be just a check-in to make sure there were no problems, and to speak with their kids. I asked if internet was ever used, but Charlie (003) and Jeremy (010) brought up that internet access was often very slow; it would have been impossible to use video chat services like Skype to talk to family.

For respondents who were not married, communications home were rarely discussed. Frank (006) noted that he got married late in life, and that before he started a family he usually didn't call home or back into town. Respondents Adam (001), Grace (007), and Kirk (011) were all unmarried at the time of their interviews, and talked about their communications. For Grace (007), calls were occasionally made to her mother across the country, roughly once a month. Adam (001) and Kirk (011) had girlfriends and brought up some negative consequences of having ready access to phones and internet.

Yeah, I mean my girlfriend bein' drunk. I know she's screwin' around. Bullshit, like on facebook or whatever. I mean I've seen it with other guys, screamin' away at their wives, fuckin' slammin' phones down, getting drunk. Fuckin' dear john letters. When I worked in the Beaufort Sea I used to work eight weeks on, two weeks off. I seen a guy go crazy, put a fuckin' axe against the wall and go crazy. We had to spray him down with a fuckin' fire hydrant. He lost it. And, so shit that's happenin' at home can affect you at work. So that guy's that was hardly pissin' you off yesterday, today he's really pissin' you off. So a lot of that anger outta your buddy... is shit that's happenin' at home. Or you can't go to sleep because of it so you're tired at work (Interview 001)

For both respondents, they worried about their girlfriends getting into other relationships while they were away at camp. Kirk (011) had experienced a breakup with his girlfriend over the phone in the past, while he was away at camp. Adam (001) felt that conflicts over the phone or internet negatively impacted his work, his sleep patterns, and his relationships with other workers. At the same time, he recognized that both he and his past girlfriends got lonely when they were separated for weeks at a time. It seems that being connected to the internet or a phone-line gives workers information about what is happening at home, yet at the same time they can't act on that information, so it can become stressful.

### *Celebrations*

Respondents Adam (001), Elvis (005), Grace (007), Jeremy (010), and Kirk (011) all discussed celebrations when they returned from their rotations. For respondents Barry (002), Charlie (003) and Leo (012), who had families, there were no large celebrations when they returned home.

“A lot of guys will be...ready to head into a tear and go off to the bar...on my weekend home—any weekend home—I'm not the kind of guy that goes out a lot. It's more like the misses and I will go out for supper and we'll get a babysitter occasionally, ya know? I stick close to home when I am home.” (Interview 003)

For the respondents without families, their return to town meant a period of partying and leisure activities. Respondent Adam (001) brought up that this celebratory period was not always immediate; it depended on whether the workers were on day or night shifts at the mine, as well

as the distance travelled. This ties in with Charlie's (003) description under mobility and migration, who noted his night shifts and long distance home left him exhausted. If Adam (001) worked similar shifts, the first two or three days back home were spent resting at home. In the words of Kirk (011), workers “catch up on [their] zees hard” before the celebration begins.

So yes, I like, I used to like to go having good food at like the big restaurants, and uh drinking cocktails, and just spending money, having fun with people in the bar and getting drunk. I was doing that just for one or two nights, not for the full week but... it was a party. (Interview 007)

Workers who returned to Whitehorse were eager to spend their high wages on consumer goods and services. For Adam (001) and Grace (007) this meant good food at restaurants, a welcome change from what they considered to be poor food that was served at mine camps. Adam (001), Elvis (005), Grace (007), Jeremy (010), and Kirk (011) all talked about the first couple of nights back in town being a party, visiting friends around town, and going out to bars. Alcohol was stressed by these five respondents as a major expenditure. The celebrations were described as “chaotic”, “a release”, “going crazy”, and “living luxuriously” by respondents. Within a span of a couple days back from the mine respondents would meet their old friends and attempt to make up for the time they were away from friends or family.

### *Family*

Respondents talked about their time spent with family during their time off from work. To begin, Elvis (005) talked about the disadvantages of the old system of rotations, where workers were away for three months at a time, and the overall impact this had on their lives.

Well, it's just the shits, ya know? Like, your kids will grow up and you don't even know 'em. You only see 'em once every three months or once every six months and, ya know? Like my kids now... my youngest boy the last time he was here was before Christmas. I think they're payin' me back now [laughing]. (Interview 005)

For some respondents, there was a general feeling that they were missing out on the lives

of their families and friends. Other respondents like Jeremy (010) and Kirk (011) talked about missing out on big events, like birthdays and other celebrations. Of course, the quote above referred to a time when shift rotations were three or six months in length, so respondents nowadays see their family and friends more frequently. Both Adam (001) and Elvis (005) brought up that their wives disliked their shift rotations. Spouses became lonely when their husbands were gone. Respondent Elvis's (005) last wife felt that he should have found a job in town, working a white collar job as a “pencil pusher” instead of the dangerous work of an underground miner.

Grace (007) and Jeremy (010), both relatively young and single, brought up that although they missed some events while they were away, it wasn't a major issue. Jeremy (010) lived alone in Whitehorse, and said that his time off was his own, and revolved around drinking and video games. When I asked about his family, his reply was: “What family?” Grace (007) said that her mother across the country didn't approve of her lifestyle and called her occasionally, asking when she would return home and settle down. Apparently, her mother thinks she has missed her calling as a white collar worker.

I asked respondents what their families thought about their shift rotations. Leo (012) noted that both his wife and children had gotten used to it long ago; they had adapted well to rotations. He said that this took about a year. Respondent Barry (002) agreed with this; he had been working as a professional for decades as well, and said that after about a year his wife had gotten used to his absence. Additionally, both of these respondents brought up that their time away from home was beneficial for their spouses. It gave them space to run the households as they wanted and raise children as they wanted; it gave their spouses independence while their husbands were away. Leo (012) brought up that his wife had a wide social circle while he was

away; she curls and goes to the gym. Barry (002) brought up similar points:

Yeah, then I think she liked it, ya know. Cause then she could run her own show at home when I wasn't there, ya know? No arguments about what the five-year old wasn't supposed to be doin, (Interview 002)

Independence also meant Barry's (002) wife had to deal with problems or repairs at home as they came up. Respondent Charlie (003) brought up the other side of this in his home; while he was away his wife had to take on his responsibilities in addition to her own. She had to care for two children, take care of household chores and bills, while running her side business--a daycare--and studying for a correspondence course. Charlie (003) brought up that he tried to do his part when he was home from his rotation, but she was on her own for three weeks at a time.

Some respondents talked about the short period of time after arriving home as unique. Most respondents didn't talk about this; especially single, young, and local workers in Whitehorse. There was not much difference between the time they arrived home and the time they left; most wanted to enjoy their time off from work and described the celebrations described above. Respondents Barry (002), Charlie (003), Elvis (005), and Leo (012) did talk about these two periods though.

For Leo (012), despite being someone who travelled long distances and had a family, reported that there was no difference. Respondent Barry (002) talked about arriving home and feeling "...out of your element for a little while." What he meant by this was that his family had gotten used to a certain routine during his rotation and his arrival meant they had to switch to a new routine. "You almost feel like you don't really fit in for a little while." As mentioned above, his wife would be raising their child and taking care of chores in the house. He would return home and then spend time with their child, and try to take care of some of the chores in the house that had piled up. Respondent Charlie (003) experienced his return home differently. His wife

and children were excited to see him, and immediately wanted to spend time with him. At the same time, he would be exhausted from his night shifts and long travel and would need time to rest. He said that his wife found this period a little bit stressful, as above it interferes with their routine while he was away. For Elvis (005), it also took time to adjust to his family's routine when returning home. The above four respondents all had families, and Charlie (003) and Leo (012) travelled long distances. For Elvis (005), the reason it took time for him to readjust to family life was the long shift rotations rather than distance. Most respondents described missing big events in their close ones' lives because of their rotations.

### **Summary**

The twelve interviews with mining workers in Whitehorse were organized according to four general themes: Workplace culture, safety in mining, mobility and migration, and home life. These four themes help to provide a detailed understanding of the impacts that long-distance commuting operations can have on the lives of mining workers and their families in the contemporary Yukon mining industry. The workplace culture theme described hyper-masculine environments in mining, as well as the experiences of Aboriginal people and women in these environments. The masculine environment referred specifically to workers' emphasis on physical strength, emotional control, and strong social bonding with the other males. According to respondents, this masculine environment was necessary in order to complete their tasks, which were described as dirty, tough, and sometimes dangerous. The masculine environment also referred to the idea of workers and managers going "haywire", through risk-taking behaviour, harassment, and otherwise unsafe activities. Women were described by respondents as welcome in mining, and treated well, though the major jobs they participated in appeared to be limited to catering, housekeeping, or administration. Respondents said women were found increasingly in

open-pit mining or mill work, but rarely underground. Aboriginal workers in mining may experience a negative workplace environment. Some respondents associated IBAs and Aboriginal people with negative attributes, and one of the Aboriginal respondents described harassment and unfair treatment during his employment.

The safety in mining theme was closely connected to the workplace culture theme. This was because some respondents linked risk-taking behaviour and some aspects of masculine workplace culture to safe practices. Though many respondents emphasized their workplaces as safe--through trained safety personnel, available equipment, reporting, and safety meetings--some respondents said that in practice safety standards were not always followed. Respondents cited issues with inadequate safety equipment, tools, and machinery being made available at their sites. Some respondents discussed issues with reporting incidents at safety meetings. Though this existed as a formal avenue to deal with safety issues, some respondents believed it was discouraged by management, labelled oneself as a "whiner", or lead to no further action being taken to correct the issue.

The mobility and migration theme described the different experiences of local and non-local workers in their travel between home and work. Prior to the 1980s recession and restructuring in the Canadian mining industry, local respondents expressed that employment was widely available. Today, work in mining is more precarious due to short-term work with contractors. Additionally, fewer jobs are available as labourers due to computerization and mechanization in the industry. For local workers, who are largely employed in labourer positions and lack access to training opportunities, this means travel between home and work varies due to frequently changing workplaces. This includes time driving to and from workplaces, as well as different shift rotations. For non-local workers, employment was still gained through contractors,

but these workers tended to be trades-people. They travelled to Yukon for high wages, as their local economies had fewer available opportunities. Single workers enjoyed this travel period as a liberating time from the stresses of work or home, while non-local workers with families found it long and exhausting.

Last, respondents described their lives once they had arrived home from their travels. For single respondents, home life was marked by rest, relaxation, and few responsibilities. For these respondents, their weeks home were for spending their hard-earned wages in celebration with friends, or on luxury items. By contrast, married respondents described their time home as quiet. These respondents would also spend their first few days resting, but would also take on the responsibilities that their spouses had been burdened with while they were away. According to married respondents, their spouses enjoyed the weeks to themselves. Respondents acknowledged that their spouses worked hard while they were away, and said their spouses enjoyed the independence rotation schedules gave them.

In sum, the four themes described above help provide an understanding of long-distance commuting operations, and their impacts on mining workers and their families. Each theme describes an important aspect of workers' lives during the process. Mining operations in Yukon are remote operations, and require their workers to travel long-distances, where they face a hyper-masculine workplace culture for weeks at a time. This dominant culture can have negative effects for Aboriginal people, women, and workplace safety. Because of the remote nature and expenses of long-distance operations, safety equipment, tools, and machinery are sometimes not available to workers. Long-distance commuting has become more necessary in recent decades for both local and non-local workers. Local workers in Yukon tend to work in precarious labourer positions, and travel to different workplaces, sometimes outside the territory. For non-

local workers, who tend to work as trades-people, poor employment prospects in home regions force them to find employment in Yukon's mining industry. This means travelling great distances, which is exhausting and long, but offers high wages for their in-demand occupations. The impact long-distance commuting has for workers' home lives depends on their marital status. Single workers reported long-distance commuting as largely positive and filled with celebrations, while married workers reported more responsibilities once they arrived home. They also reported burdens for their spouses while they were away, although they also believed their spouses found long-distance commuting to be beneficial as it made their own lives more independent.

## Conclusion

This thesis attempted to answer the following research question: What are the impacts of long-distance commuting operations for workers in Yukon's mining industry? To answer this question, in-depth interviews were carried out with twelve mining workers in Whitehorse in late February 2013. These workers came from a variety of backgrounds in terms of education level, age, ethnicity, residence, and occupation. Additionally, within the broader context of lean production systems and labour migration, this thesis attempted to update Russell's (1999) work on the Canadian mining industry.

The major impacts of long-distance commuting operations for workers in Yukon's mining industry were described in the previous section as four themes: workplace culture, safety issues, mobility and migration, and home life. This section discusses these findings, and concludes that long-distance commuting operations in mining impact groups in different ways. More specifically, the masculine workplace culture of these operations may have a negatively impact women and Aboriginal people. Additionally, it could be tied to unsafe practices in the workplace. The ways that safety practices, training, and equipment are considered in long-distance operations also impact groups differently, with front-line workers disproportionately experiencing unsafe conditions. Long-distance operations also offer benefits to workers over traditional operations, as local workers' commuting and home lives were described positively. For non-local workers, this may be less true, as disadvantages in terms of longer trips and time spent away from family were described as problems in long-distance commuting.

One of the most interesting similarities in terms of the workplace is between the experiences of Aboriginal people and women in Yukon's mining industry, and the experiences of women described in the many chapters of Lewis et al (1988) dealing with the offshore oilfields.

Beginning with women, Wybrow (1988) was writing at a time when women were less welcome in offshore oil work and reported negative attitudes toward them from managers and fellow workers. One way women dealt with these attitudes, or tried to fit in, was to identify themselves as workers first rather than in terms of gender (Anger et al 1988). Alternatively, some women put on a more masculine front to fit in with the other male workers (Wybrow 1988). The female respondent may have done this as well; she talked about her love of "manly work" or physical labour, and identified herself in terms of her experiences as a worker at the mine, rather than in terms of being a woman. This can also be seen in the way the respondent framed incidents. For example, the negative attitudes from some workers were never directed at her because she was a woman, rather it was because of her strong work ethic.

Demographically, there are still similarities between the offshore oil industry of the 1980s and the present day Yukon mining industry. Though they were writing in the late 1980s, Wybrow (1988) and Anger et al. (1988) discussed the types of work women entered into in the UK and Newfoundland offshore oil industry. Women were most likely to be found in service occupations that supported the oil platforms, including catering, housekeeping, and secretarial work. These occupations tend to be low paying and offer little room for advancement. The higher paying occupations, which can also lead to advancement, are the drillers, labourers, and trades. Yet women described being passed over for many of these opportunities (Anger et al. 1988). In the Newfoundland study, there were no female drillers employed on the rig (Anger et al. 1988), and in the UK study, there was hostility to women geologists giving orders to male drillers (Wybrow 1988). Some comparisons can be made with Yukon in 2013. Both the female respondent and retired mining manager brought up that women in mining camps worked mainly in the services noted above: administration, housekeeping, and catering. They also noted, along with other

respondents, that few women entered underground drilling. There was no apparent reason for this; there is a long-standing belief among miners that women underground is a bad omen, but respondents did not cite this as a reason. That said, the other manager interviewed did bring up the "swaggering", hyper-masculine culture of diamond drillers and problems this created in mining camps. As described above, there could be a clash between this culture and women in mining. One change that several respondents talked a lot about, but for which there is little available quantitative data, is the increasing numbers of women entering open-pit mining. The occupations have traditionally been male-dominated, so there appears to be progress being made, at least in this part of the mining industry.

One of the greatest differences between Yukon's mining industry and other industries is the existence of First Nation land claims, including the existence of Impact Benefit Agreements (IBAs) between companies and local populations. Ritter (2001) and Storey (2001) have brought up the use of these IBAs by Aboriginal groups in securing more employment and other benefits for their communities; in exchange mining companies are able to develop on their traditional lands. These agreements are unique, and not found in the literature of offshore oil platforms. There is also an interesting connection between perceptions of affirmative action policies in Heen (1988), the working environment for Aboriginal people in Canada in Gibson et al. (2005), and the perceptions of IBAs among workers interviewed in Yukon. In Heen (1988), some workers described affirmative action policies as a major problem in the offshore oil industry because they believed females were hired to fill a quota, rather than because of their qualifications. Multiple respondents in Yukon described similar issues with Impact Benefit Agreements. They described high hiring rates for Aboriginal people, but also that Aboriginal people were hired regardless of qualifications. One Aboriginal respondent felt that this created a

toxic work environment for him and other Aboriginal people, and felt that he was scrutinized more heavily and passed over for promotion because of this. The end result was that many Aboriginal people quit their jobs to avoid these environments. This corroborates with Gibson et al. (2005), who discussed the negative attitudes from other workers that Aboriginal people often face in mining. To address these issues, some companies and Aboriginal communities, through Impact Benefit Agreements, have required cultural sensitivity training for all workers. To conclude the first major impact of this study, within the heavily masculine environment of Yukon's remote mines, women and Aboriginal people may be at a disadvantage in terms of employment because of their differential treatment. Workers at long-distance commuting operations experience different treatment depending on their gender or their race.

Issues surrounding safety were also described by workers in Yukon, and comparisons with the literature can be made here. Safety concerns have been brought up by workers about the dangers of offshore environment (Anger et al 1988; Collinson 1998), and by spouses of offshore workers, who worried about their significant others while they were away (Parkes et al. 2005). These concerns are not unwarranted, as workplaces offshore have experienced cost-cutting measures in recent decades which have created work environments with less available equipment, and fewer maintenance crews to repair or bring operations up to regulations (Hart 2002). These cost-cutting measures and their impact on workers are important to highlight because of how devastating accidents can be in offshore work, or more relevantly, in mining. In 1988 the Piper Alpha oil platform in the North Sea exploded due to unsafe conditions for workers, killing 167 people (Hart 2002). To cite a Canadian example in mining, in 1992 the Westray mine in Nova Scotia also exploded, killing 26 people (Comish 1993). Shaun Comish, a trained equipment operator who worked at Westray, detailed the environment there. Some of the

major issues he observed included: workers being improperly trained around equipment, inadequate or improper equipment used in the mine, and a poor relationship between managers and workers. Comish recalled being ordered into areas of Westray which managers knew were unsafe, and escaping multiple cave-ins while there (Comish 1993). The Westray mine was well known for its dangerous ground, and hundreds of lives had been lost there in the last two centuries it had been mined (Comish 1993:1-2). While a major workplace accident like Piper Alpha or Westray has not happened recently in Yukon, there have been safety violations within the last year in the territory, and workers' responses shared similarities with the issues noted above.

Specifically, workers across occupations brought up how cost-cutting measures at their companies impacted their work. For the manager, it meant collapsing jobs into his own but didn't necessarily impact safety. For one trades-person, it meant the company was unable to provide him with adequate tools to perform his work. For labourers on the front-line of operations, the impacts are more striking. They reported working with dangerous ground at their mines, and the cave-ins that would happen on occasion. Although it was an accepted part of the job by most workers (respondent 008 believed that one of the mines he was working at should never have been opened because of the risk), the dangerous nature of mining work also points to the importance of safety procedures. Yet workers also talked about improper or missing equipment at their sites. This was believed by respondents to be due to the remote nature of their mines; it took time and money to ship equipment and parts to their sites. Several respondents brought up toxic work environments between managers and workers. There is also the issue of managers and workers going "haywire", and ignoring safety procedures to get through their tasks, brought up by one trades-person. This indicates a hyper-masculine culture in Yukon mines, which could

impact workplace safety negatively (Abrahamsson and Somerville 2005; Laplonge and Albury 2013). One respondent brought up a possible reason for his supervisor's actions; his supervisor was looking after multiple departments, and was not knowledgeable about the respondent's field. In this way the supervisor could have had multiple jobs collapsed into his own, increasing his workload, as was the case of the respondent in management. In this way, the cost-cutting measures of Yukon mining companies may be compromising safety for workers, especially front-line workers.

The availability of training at Yukon mines was also brought up by respondents. Older respondents entered the industry at a time before many kinds of courses and training were required. Younger workers entering Yukon's mining industry today must complete these courses to be employed. While some of the older and experienced respondents have retrained, others have not, and the latter have had more difficulty finding employment in the industry. The jobs that these workers found were less safe and lower paying. This is a similar situation to Nova Scotia's offshore fishing industry, where there is also a generational difference in terms of training. Younger workers in fishing had to complete training courses for employment, while many of the older workers--because they entered the industry before these courses were required--have continued working without additional training. This has led to different levels of awareness about safety in the fisheries, with younger workers being critical of their workplaces, while older workers have become desensitized to safety issues from years of work (Binkley 1994:142-144). In Yukon's mining industry, safety issues could also be seen as normal and acceptable risks by older workers.

At the same time, there are important differences between Yukon's mines and Westray. According to Comish (1993), there were never safety meetings at Westray, and there was poor

record-keeping of accidents or near misses. All of the respondents brought up the existence of safety meetings at the beginning of their shifts, and many respondents felt that safety practices at their mine site were well done. They cited the existence of safety officers and development of procedures, including good record-keeping of near misses at their sites. As a result, most respondents felt safe at their workplaces. Combined with the responses noted above, it seems that respondents are split on whether their workplaces are safe. It is important to remember here that Yukon's mining industry is comprised of many companies, all with different policies, procedures, and hiring requirements. The work environment described by respondent 008, who feared for his life in some situations, was different from the environments at other mines. Another possibility is that the respondents who felt their workplaces were safe cited the existence of specially trained workers and safety procedures, which respondents who felt unsafe cited specific incidents when they felt unsafe, or when equipment or procedures were not there to help them. There could be a difference between safety on paper and safety in practice at Yukon's mine sites. In conclusion, several safety issues were raised by respondents in this study, and associated with cost-cutting, the masculine culture described above, and issues of geography. Still, many workers felt that safety practices were well done at their workplaces. Therefore, workers at long-distance commuting operations, especially front-line workers, may be experiencing unsafe workplace environments.

There were some similarities between the experiences of workers in Yukon and the available literature in terms of migration. Both local and non-local respondents discussed inter-provincial migration for the purpose of employment, and older local respondents experienced internal migration within Yukon over their decades of working as miners. This included the two Aboriginal respondents, who migrated between Whitehorse and smaller communities in Yukon.

Southcott (2010) discussed recent migration trends in Yukon. Local workers, specifically Aboriginal workers in Yukon, tend to migrate around the territory but not outside of it. People across Canada have traditionally migrated to Yukon in order to exploit its rich natural resources, and this trend continues even today. These people spend a short time in the territory for employment, before returning to their home regions. Finnie (2004) explored this population of inter-provincial migrants in Canada, and found that they are more likely to come from home regions with low populations and high rates of unemployment or otherwise poor economic conditions. The non-local respondents in this study fit the descriptions of migrants well; they migrated for work opportunities in Yukon's mining industry, came from rural areas with poor economic conditions, and planned on leaving the territory again once their current contracts ended.

One of the greatest differences between the experiences of Yukon workers and available literature was the way workers experienced their transition period between home and work. This could be due to differences in the structure of Yukon's mining industry, which separates it somewhat from the offshore studies cited in the literature. Respondents in offshore industries, whether in Newfoundland, the UK, or Norway, were stranded for weeks at a time on their platforms for their rotations (Lewis et al. 1988a). While the same is true for the two respondents who commuted from outside the territory, many of the local respondents drove to their workplaces, and following their shifts were not trapped at their work camps. Not surprisingly, these respondents viewed commuting this way as liberating, and had few issues with the commuting lifestyle. As for the two respondents who commuted from outside Yukon, their situation bears resemblance to the Vakhtovikki discussed in Elmsteiner-Saxinger's (2010) study. Elmsteiner-Saxinger brought up a unique social space that connected the home and work lives of

long-distance workers in Russia. Many of these workers commuted by train, and were forced by their companies to pay for their travel and accommodations along the way. This does not appear to be the norm in Canada; the two non-local respondents in this study did not describe their travel in comparable ways to Russian Vakhovikki, although one did find the trip exhausting. These two respondents were also fortunate to have their companies pay for their travel and accommodations between work and home.

Many of the respondents, both local and non-local, reported relocating numerous times for work over the course of their careers. This trend was noted by Elmsteiner-Saxinger (2010), who described long-distance commute workers and their families as "passionate travellers." In her study, moving from job to job was celebrated as a way of life. Indeed, many local respondents shared this sentiment, and described themselves and fellow miners as mobile. Though they were local, they described many times over their careers when employment prospects were poor in Yukon, and they were forced to move to other regions for work. Similarly, in Allan's (2011) account of the relocation culture in Australian mining, some long distance commute workers described the many opportunities that came with relocating their families; some felt it allowed their family to move from small towns to urban centres with better infrastructure and access to services. This was certainly the case for one non-local respondent; he left his last job and moved his wife and newborn child to an urban centre so that they could live well, and commuted across the country for his new job. Allan (2011) also discussed numerous negative aspects of the relocation culture in mining, including poor employment prospects for women and being cut off from one's social network. These issues were usually experienced by wives and children who were forced to trail their working husbands and fathers. These negative aspects of relocation did not emerge over the course of this study's interviews. There are several

possible reasons for these results. First, these negative aspects were disproportionately experienced by women and children in male-headed households, yet this study only focused on workers. Second, all of the respondents in this study were men, with the exception of one. Lewis et al. (1988b) experienced an issue during their own work where they interviewed male workers regarding their home lives, yet were only able to elicit responses around work. In sum, local and non-local workers experienced labour migration differently in Yukon, with local workers mainly internally migrating in Yukon over their careers, while non-local workers migrated inter-provincially. For local workers long-distance commuting was described positively and normal for mining, while non-local workers found it exhausting to lose days to travel. Therefore, long-distance commuting operations are largely positive in terms of travel for local workers.

This study experienced a similar issue to Lewis et al. (1988b) above, where workers preferred to talk about their time on the job rather than their time at home. It is interesting that male workers did not find their home lives problematic, and could point toward their belief that the home is a sanctuary from work, or a vacation as discussed by Parkes et al. (2005). Of course, it could also be true that respondents found no issues with home life because there simply were no issues at home. Last, the majority of respondents were local workers and either single or divorced. While the available literature focuses on married couples or families, there is very little on single workers in mining or offshore work. Respondents who were single or divorced had fewer responsibilities, and as a result, their time at home was their own. As Parkes et al. (2005) described above, they did treat their time off as a vacation, but there was no family or significant other to be burdened with responsibilities while they were back.

The two non-local workers, who travelled longer distances than the other respondents, appeared to be impacted the most from their rotations at work. It is here where a connection can

be made between Clark and Taylor's (1988) concepts of novices and veterans in offshore work, where veterans are supposed to have adapted very well to the changes. One participant had been married and commuting long distances for over twenty years. His description of home life was that it was not stressful; the family had adapted well to the problems of the lifestyle, while the other participant who travelled from eastern Canada was still adapting to it, he was considering leaving the industry altogether, and had just started a family. He was somewhere between these ideal novice and veteran stages.

The changes in communications technology over the last couple decades appear to have had an impact on the home lives of long-distance mining workers. The studies in Lewis et al. (1988), and more recently Collinson (1998) cited lack of communication as a major issue for workers and their families. Some oil platforms had poor access to phones, or intermittent service, making communication between home and work difficult. In 2013 these issues appear to have been solved in Yukon. Respondents had access to phones and even internet access, and the non-local respondents talked about frequent communication with their wives and children. That said, access to new communications systems in work camps appears to have created a new problem where workers have unlimited access to information from home, yet are not able to act on that information when problems arise at home. To conclude, local workers, especially those who were unmarried, found long-distance commuting operations to have few impacts on their home lives. When impacts were discussed, they were often found to be positive. This was not always the case for non-local workers. While workers and families with decades of experience appear to have adapted to long-distance commuting lifestyles, those who are novices appear to face more problems. Additionally, both types of workers acknowledged the advances in communications technology at remote workplaces in recent years. Therefore, long-distance commuting operations

appear to have positive or insignificant impacts on local workers' home lives, and mixed impacts on non-local workers' home lives. It is important to note here that these results refer to workers, not necessarily the impacts for their families, which are discussed below.

### *Significance of Research*

This thesis explored a variety of impacts that long-distance commuting lifestyles have on workers in Yukon's mining industry. Yukon's mining industry has followed a growing worldwide trend that has been underway for the last two decades in mining, where workforces commute long distances to remote mining camps for work, rather than the old system of building entire towns around mine sites. These impacts were explored through a series of twelve in-depth interviews with workers in the territory. The interview questions were focused towards developing a better understanding of workers' workplaces and home lives. Respondents in this study came from a variety of backgrounds, and these backgrounds highlighted some of the inequalities experienced by workers in Yukon's mining industry.

Above, respondents' experiences were compared to the available literature on long-distance commuting. In some ways, many of the issues in mining have not changed, as there were many similarities across studies conducted between the late 1980s and the time of writing. Women continue to make up a small proportion of the mining workforce, and although they have entered open-pit mining in greater numbers, their highest concentration is still in support roles. There is also still resistance to hiring policies surrounding diversity, although the resistance is directed at the hiring of Aboriginal people laid out by new Impact Benefit Agreements in Yukon, rather than employment equity legislation. Aboriginal people continue to experience negative workplace environments in mining. More recent issues emerged from respondents' experiences as well, and these are more closely connected to restructuring in the Canadian mining industry.

Safety and training issues continue to be concerns among some respondents. While many respondents have cited the existence of safety procedures and trained personnel, others have claimed there is inadequate training or equipment missing in some locations. The respondents who described these issues felt they were due to cost-cutting measures on the part of their companies. The precarious nature of mining work, especially for those at the bottom of the hierarchy, was also a common experience. Companies have moved from hiring their own employees to sub-contracting workers for their front-line operations. These positions are often occupied by local workers, including workers from First Nations communities. For skilled trades, where there are often shortages, companies also rely on contractors. Out of necessity these contractors currently hire non-local trades-people, who must then bear the negative aspects of long-distance commuting discussed above.

The issues described above are connected to the lean production models that have become the norm for mining companies in Canada. In the last three decades companies have used a number of cost-cutting methods to run their operations more efficiently. For mining, one of the primary methods has been long-distance commuting operations, which is cheaper than the alternative of constructing towns at the site of mines. Instead, camps are set up in remote regions near mines, and small numbers of skilled, and flexible workers commute from their home communities for extended rotations. They are small in number, as mining is more capital-intensive therefore reducing the number of jobs; they are more skilled, as mining equipment is more technologically advanced; They are more flexible, as companies hire contractors for their front-line operations, making work unstable for workers and less expensive for companies. This thesis contributes to this literature by adding that certain groups experience more of the negative aspects of long-distance commuting and lean production models than others. Russell discusses

these issues briefly (1999:41-45) but discusses the labour process at mine sites more generally. The pieces which are missing from this discussion are the ways that different groups are impacted by long-distance commuting. Local workers, Aboriginal people, and women tend to work at the bottom of the workplace hierarchy, deal with precarious employment, fewer opportunities for advancement, and in some cases unsafe work environments.

### *Further Research*

There are several avenues for new research on long-distance commuting in the mining industry. One of the most major ones is in terms of female perspectives. Though women are entering the mining industry in greater numbers, this study was dominated by male respondents. Although I feel variation in the mining workforce was captured fairly well (at least two of twelve respondents being Aboriginal, white, local, non-local, labourers, trades-people, and professionals), the experiences of women in mining was represented in this study by only one respondent. Though I am thankful for that respondent's participation, what are missing from my findings are the experiences of women starting families, women with established families, and women in different occupations. It would have been very interesting to talk to women who work in underground mining, as this appears to be the area with the lowest employment of women--some respondents noted that they had never even seen a female underground miner.

There are other perspectives which would make interesting studies. I have talked with workers in the mining industry, but two other points of view come to mind: company perspectives and family perspectives. Due to time constraints as well as access, I was not able to talk with representatives from mining companies about the impacts of long-distance commuting, although I did get the personal experiences of two managers. The perspectives of spouses as well as children is another story left untold; what are their experiences like when the working partner

is away at camp for weeks at a time? When they return? Workers did talk about this during the interviews, but their responses to home life were often shorter than their responses to work life, and they could only answer what they perceived to be the impacts of their lifestyle on their spouses and children; it would be better to get these perspectives firsthand, as these issues have been studied in other industries. For example, the coping mechanisms of children and spouses in the Navy and fisheries appear to be important in determining their integration into those industries (Binkley and Thiessen 1988; Harrison and Laliberte 1994), and they are likely also important in mining.

There seems to be two other ways one can go about further research on long-distance commuting in mining. In the words of respondent 008: "If you really want to get your hands into it, come to work." He went on to suggest visiting Yukon's mine sites directly. I agree that this is a great idea. By taking a job as a cook in a mining camp, or as a labourer and working in an underground mine, one could write an ethnography of fly-in, fly-out miners. The results from that hypothetical project would be rich, and allow for first-hand experience of what respondents talked about in the above interviews. The greatest barriers to that project would be similar to any field observations--time and money--but also in terms of access; would it be possible to get a mining company to agree to this? Second, there are several gaps in the quantitative data available in Yukon in terms of the mining labour force. For mining, collection of this data is made difficult by the frequent turnover and migration of workers between regions. I raised several points about the different experiences of professionals, trades-people, and labourers; non-local and local workers; Aboriginals and non-Aboriginals in the industry. It is unclear if the associations are real, whether we can generalize about these associations, or what are the strengths of the associations. Survey methods could be used to gain a better understanding of these issues in the Yukon,

especially if a researcher could work with the three producing mining companies in the region to administer the surveys to their workforces.

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## Appendix A: Consent Form

### The Impacts of Fly-in, Fly-out Commuting on Mining Workers in Whitehorse

I have read and understand the information letter for this study. I agree to take part in this study.

I understand that there could be benefits to this study, such as a better understanding of the experiences of commute workers in northern communities. I also understand that the risks involved in taking part in this study are minimal.

I understand that I am volunteering to be in this study, and at any point I may refuse to answer any question or leave the study. I understand that records of the interview(s) I take part in will be stored at Lakehead University for 5 years, and will be destroyed after that time.

I understand that at the end of the study the results will be available to me. By contacting Chris Jones I can obtain a copy of the research results. I also understand that I will remain anonymous in any presentation or published version of the research results. If I wish to have my identity revealed, I must agree to it in writing with a third party present.

Name of Potential Participant (Print): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

I consent to have my interview(s) recorded on an audio recorder.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contact Information:

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## **Appendix B: Information Sheet**

### **The Impacts of Fly-in, Fly-out Commuting on Mining Workers in Whitehorse**

Dear Potential Participant,

My name is Chris, and I'm a graduate student at Lakehead University who is doing a research project on the lives of mining workers in Whitehorse. I'm hoping to interview miners who travel from here to the Bellekeno, Minto, or Wolverine mines to get a better understanding of what it's like for workers. I want to know how this kind of travel affects their work and home lives. This research is being funded by Resources and Sustainable Development in the Arctic (ReSDA), a large social science project that you can read more about online here: <http://dl1.yukoncollege.yk.ca/resda/>.

I invite you to participate in this study because you are, or recently were, a miner in Whitehorse. You could be a long-time resident or planning on living here temporarily, but your experiences are valuable either way. If you do decide to participate, it would be voluntary. You could leave the interview at any time or decide not to answer any questions. The interview would run between 45 minutes and 1 hour, but we could talk longer if you want. We could do the interview anywhere you feel comfortable in Whitehorse (e.g. coffee shop, home). The questions would be about your experiences as a miner at work, your time spent travelling, and how you spend your time off work or at home. I want to hear about what you think is most important. You would be able to withdraw from this study at any time, even after completing the interview, and anything you've contributed to this project could be withdrawn if you wish.

If you do agree to an interview, I would like to use an audio recorder to take down everything you say. If you aren't comfortable with this, we can do the interview without it. There shouldn't be any risks in doing this interview, and there could be benefits for communities like Whitehorse, since companies and governments could get a better understanding of what life is like for mining workers.

Any information that you potentially share with me will be kept private and confidential. The personal information that I collect from the interview would be seen only by my supervisor and I. Your name and any information that could identify you would be given a code and stored safely in a locked office at Lakehead University during the research project. At the end of the project I would give this information to my supervisor for safekeeping. After 5 years this information would be destroyed, making your interviews anonymous.

At the end of this research project there may be public presentations and publications made using information from interviews. In this case, your identity would still remain anonymous, and there would be no identifying information left in the interview. The research results would also be available to you. If you would like a copy of the results, you just need to contact me using the information below.

This research study has been approved by the Lakehead University Research Ethics Board. If you have any questions related to the ethics of the research and would like to speak to someone

other than the researchers, please contact Sue Wright at the Research Ethics Board at 807-343-8283 or [research@lakeheadu.ca](mailto:research@lakeheadu.ca).

Thank you for your consideration,

Chris Jones

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## Appendix C: Interview Schedule

### Whitehorse FIFO mining Interview Schedule

#### Demographic Questions:

What is your sex?

What is your age?

What is your marital status?

Do you have children?

How long have you worked in mining?

What mine(s) do you work at/have you worked at?

What is your occupation?

Do you have another job?

Where do you live right now? (current residence)

Where are you originally from? (Home region)

#### Opening:

First, thank you for sitting down to share your experiences with me. I'd like to start by talking a bit about the purpose of this interview. I'm interviewing mining workers to get detailed perspectives on what life is like for people who have to travel long distances for work and spend long periods of time away from home. This is an important topic, even outside the mining industry, and a lot of professionals are living these kinds of lifestyles. In the Yukon, and all over the north, more mining, oil and gas developments are starting up, so more workers will be experiencing this way of life soon as well. Mining companies are eager to recruit and retain qualified workers, and one of their biggest concerns is keeping their workers. I have an interview schedule with a few questions ready to ask you, but if you think I'm missing important details, I'd like you to tell me. If you think there are better questions that I should be asking, feel free to let me know. So, with all this in mind, I'd like to begin the interview. Before we begin, do you have any questions?

1. **ENTRANCE** Let's start with when you began working in the mining industry. I'd like you to take me back to when you decided to go into the mining industry. Tell me about what made you go into it?

1a. What was going on in your life at this time?

1b. What did you think the industry would be like before you started? (preconceptions)

1c. What kind of training did you have to do before starting your job?

1d. What kind of training did you have to do after starting your job?

1e. What made you decide to move to Whitehorse or the Yukon?

2. **WORKPLACE** I'd like to talk about your workplace a bit. Could you tell me about an average day there? For example: what you do, the people you deal with, and anything else you think is important. Starting with when you wake up, and ending with when you go to sleep, walk me through one of these days.

2a. Tell me about a typical good day at the workplace?

2a(i). When do these days happen during your rotation?

2a(ii). How frequently do you have good days at the mine?

2b. Tell me about a typical bad day at the workplace?

2b(i). When do these days happen during your rotation?

2b(ii). How frequently do you have bad days at the mine?

2b(iii). How do you cope with these days?

2c. Some workers have a lot to say about the culture of mining work. This culture could include the attitudes people bring with them to the site, how workers talk to each other, common practices in the workplace, and many other aspects. From your experiences, could you tell me about the culture at your workplace?

2c(i). What is the culture like for women at your workplace?

2c(ii). What is the culture like for Aboriginals at your workplace?

2c(iii). Tell me about safety practices at the workplace? (culture of safety)

2d. How do you spend your time at the workplace when not on-duty?

2d(i). Do you ever contact home?

2d(ii). What are your feelings about camp rules? (too strict, necessary, too lenient, etc)

2e. Is there anything else you'd like to tell me about working for a mining company?

3. **TRANSITION** Some workers have talked about a transition period between work life and home life in mining that happens when they fly or drive between the worksite and home. This could create a number of positive or negative feelings for workers. Some workers might not even feel there is a transition period. From your own experiences, could you tell me about this transition period?

3a. Tell me about the time leading up to the end of your rotation at work?

3b. What is the trip like, leaving the mine site and going back home?

3c. What is the trip like, leaving home and going back to the mine site?

3d. Tell me about the time leading up to the end of your stay at home?

3e. How far do you travel and how long does it take?

4. **HOME** Some miners have talked about the differences between their home lives and workers in other industries. Others have said there are no differences. From your own experiences, could you tell me about your home life?

4a. What are your first few days back home like? (conflict, transition still)

4a(i). Some workers talk about big celebrations when they're home. Could you tell me about an example of these from your own experiences?

4b. What is it like for your family when you're away at work?

4c. Lots of families experience problems when workers spend long periods of time away from home. Does your family ever have to deal with any problems?

4b(ii). What kinds of problems does your family have to deal with?

4b(iii). How do they deal with these problems?

4c. Lots of families experience problems when workers have returned home. Does your family ever have to deal with problems in these situations?

4c(i). What kinds of problems does your family have to deal with?

4c(ii). How do they deal with these problems?

4d. Is there anything else you'd like to tell me about your home life?

**5. FUTURE AND OPINION** In this last section I'd like to end the interview by asking you a bit about your future plans and for your perspective on some issues. First, could you tell me about your future plans with work?

5a. What are your future plans with residence?

5b. One major problem mining companies claim to be having is retaining skilled workers. Turnover has been an issue across the industry. What do you think the reasons are for this?

5b(i). Why do you think workers leave the company you work at?

5b(ii). Why do you think workers leave the mining industry in general?

5c. Overall, what are your feelings about having to Fly-in and Fly-out of your worksite?

That concludes the interview. Thank you for your time. Do you have any questions, comments or concerns for me? Are there any other questions you'd like to see asked?