

**MANAGEMENT OF SOCIO-POLITICAL RISK ARISING FROM CORPORATE  
TRANSITIONS: THE MT. MILLIGAN EXPERIENCE**

by  
GARTH CONNOR THOMSON

B.A. (Political Science), The University of Victoria, 2010

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE  
DEGREE OF

MASTER OF APPLIED SCIENCE

in

THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES

(Mining Engineering)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

February 2016

© Garth Connor Thomson, 2016

## ABSTRACT

Changes in management and/or ownership at mineral exploration and mining projects can cause a regression in corporate-stakeholder relationships, as the changing faces and attitudes can lead to breakdowns in communication, misunderstandings, and heightened risk of conflict. Failure to maintain positive relationships with stakeholders can lead to significant costs for proponents, and is frequently cited as one of the most pressing issues facing the mining industry. By examining the Mt. Milligan mine in central British Columbia, Canada, as a case-study, this thesis provides an analysis of how successive management teams endeavored to mitigate socio-political risk by building relationships with local stakeholders, and specifically how these relationships were impacted by successive changes in management and ownership.

Interviews with managers from the three most recent proponents of Mt. Milligan were conducted to collect data on perceptions of socio-political risk and the execution of corporate transitions. The study also incorporates perceptions of the Mt. Milligan experience drawn from interviews with local and regional stakeholders, including First Nations groups and neighbouring municipalities. Information from the interviews was scrutinized using data analysis software, and collectively reviewed for main themes and patterns over time. The research also included a historical document review, and a field visit to the mine region.

This study finds that the levels of socio-political risk arising from a transition are linked to: effective due-diligence, corporate culture and experience of the proponent, and community experience and capacity. Effective mitigation of this risk is linked to: transfer of personal relationships, quality and frequency of communication, creation of institutionalized stakeholder engagement mechanisms, and preserving an institutional record of social engagement and commitments to communities. A strong relationship is noted between the experience of managers and community members during Mt. Milligan's development history, and the ideas conveyed by the current literature on socio-political risk management in the mining industry.

In summary, this study delivers a review of the historic mitigation of socio-political risk at Mt. Milligan arising from multiple changes in management and ownership. Lessons drawn from this review inform key strategies that can be employed in the management and mitigation of socio-political risk at future projects. The study advances the current dialogue surrounding stakeholder relations in the mining industry, and contributes to an improvement of industry practices addressing the management of socio-political risk through transitions in the management and ownership of mining projects.

## **PREFACE**

This dissertation is the original, unpublished work of the author, G. Thomson. All research design, data collection, and analyses are the independent work of the author.

The qualitative data collection methods for this research were approved by the UBC Behavioral Research Ethics Board, identification number: H15-00070.

# TABLE OF CONTENTS

Abstract.....	ii
Preface.....	iii
Table of Contents.....	iv
List of Tables .....	vii
List of Figures .....	ix
List of Acronyms.....	x
Acknowledgements.....	xii
1. Introduction.....	1
1.1 Overview.....	1
1.2 Research Question and Objectives.....	2
1.3 Thesis Outline .....	2
2. Literature Review.....	3
2.1 Introduction.....	3
2.2 The Need for Socio-Political Risk Management .....	3
2.3 The Social License to Operate .....	5
2.4 Corporate Social Responsibility.....	9
2.5 Impacts .....	12
2.5.1 Impact Assessment.....	13
2.6 Canadian Aboriginal Peoples.....	15
2.6.1 Negotiated Agreements.....	17
2.7 Guidelines for Sustainable Deveopment.....	19
2.7.1 Industry-led Guidelines.....	20
2.7.2 Government Guidelines & Regulation.....	22
2.7.3 International Organizations & Financial Institutions Guidelines.....	23
2.7.4 Consultation Guidelines.....	25
2.7.5 Reporting Guidelines .....	26
2.7.6 Summary of Sustainable Development Guidelines .....	27
2.8 Discussion.....	27
3. Setting .....	29
3.1 Mining in British Columbia.....	29
3.2 Developing a Metal Mine in British Columbia.....	30
4. Methodology .....	36
4.1 Introduction.....	36
4.2 Choice of Methodology .....	36
4.2.1 The Researcher.....	37

4.2.2	The Participants .....	37
4.2.3	The Audience .....	39
4.3	Procedure .....	39
4.4	Interview Questions .....	40
4.5	Document Review.....	40
4.6	Methodological Limitations.....	40
4.7	Ethical Considerations .....	41
5.	Case Study.....	42
5.1	Introduction.....	42
5.2	Regional Profile .....	43
5.2.1	Fort St. James.....	43
5.2.2	Mackenzie .....	44
5.2.3	McLeod Lake .....	44
5.2.4	Nak'azdli .....	44
5.3	Company Profiles.....	45
5.3.1	Placer Dome Inc.....	45
5.3.2	Terrane Metals Corp. ....	45
5.3.3	Thompson Creek Metals Corporation Inc.....	45
5.4	Mt. Milligan Timeline.....	46
5.4.1	Introduction.....	46
5.4.2	Timeline .....	47
6.	Results and Analysis .....	51
6.1	Introduction.....	51
6.2	Overview.....	52
6.3	Setting the Stage .....	53
6.3.1	Background.....	55
6.3.2	Comparable Projects .....	56
6.3.3	Handovers and Reputation.....	58
6.3.4	Perception of Risk.....	59
6.4	Addressing the Issue .....	62
6.4.1	Stakeholder Engagement.....	64
6.4.2	Communication and Transparency .....	67
6.4.3	Legislation and Regulation .....	70
6.4.4	Impacts and Benefits.....	72
6.5	Reflection and Progression .....	76
6.5.1	Planning for the Future .....	78
6.5.2	Key Challenges for Transitions.....	81
6.5.3	Lessons Learned.....	84
7.	Discussion.....	90
7.1	Limitations .....	93
8.	Conclusion, Recommendations, and Next Steps .....	95
8.1	Recommendations.....	96

8.2	Future Work .....	97
References .....		98
Appendices.....		112
Appendix A: Introductory Letter.....		112
Appendix B: Interview Consent Form .....		113
Appendix C: Interview Questionnaire .....		115
Appendix D: NVivo Stopped Words List.....		121

## LIST OF TABLES

Table 3.1: Development history of current and proposed mining projects in British Columbia .....	34
Table 6.1: "Setting the Stage" top 25 words by frequency .....	54
Table 6.2: Corporate experience of Placer Dome - Interview comments by manager .....	56
Table 6.3: Experience with the mining industry - Interview comments by community .....	56
Table 6.4: Comparable mining projects - Interview comments by managers .....	57
Table 6.5: Mt. Milligan vs Endako - Interview comments by manager .....	57
Table 6.6: Previous community experience with mining - Interview comments by manager and community .....	57
Table 6.7: Influence on future projects - Interview comments by community .....	58
Table 6.8: Existing relationships at Mt. Milligan – Interview comments by managers .....	58
Table 6.9: Goodwill after transition - Interview comments by managers .....	58
Table 6.10: Prior engagement with First Nations - Interview comments by manager .....	59
Table 6.11: Community perceptions of companies – Interview comments by manager and community .....	59
Table 6.12: Historic perceptions of socio-political risk - Interview comments by managers .....	60
Table 6.13: Perceptions of socio-political risk – Interview Comments by Managers .....	60
Table 6.14: Technical risks - Interview comments by managers .....	61
Table 6.15: First Nation perceptions of risk - Interview comments by community .....	61
Table 6.16: Settler population perception of risk - Interview comments by community .....	61
Table 6.17: "Addressing the Issue" top 25 words by frequency .....	62
Table 6.18: Placer Dome as a CSR leader - Interview comments by manager .....	65
Table 6.19: Placer Dome and stakeholder engagement - Interview comments by manger and community .....	65
Table 6.20: Terrane and stakeholder engagement - Interview comments by managers .....	65
Table 6.21: Mandate of the CSC – Interview comments by managers .....	66
Table 6.22: Perceptions of the CSC - Interview comments by manager and community .....	66
Table 6.23: Community perception of engagement - Interview comments by community .....	67
Table 6.24: Prior experience of Thompson Creek - Interview comments by manager .....	67
Table 6.25: Need for regular and transparent communication – Interview comments by managers...	68
Table 6.26: Managing expectations - Interview comments by managers .....	68
Table 6.27: Community perception of communication strategy - Interview comments by community .....	68
Table 6.28: Communication different with Thompson Creek - Interview comments by managers and community .....	69
Table 6.29: Potential for misunderstandings - Interview comments by manager and community ....	70
Table 6.30: Shift in EA timelines - Interview comments by manager .....	70
Table 6.31: Challenges with the EA process - Interview comments by managers .....	71
Table 6.32: Challenges with EA process - Interview comments by community .....	71
Table 6.33: Dissatisfaction with EA process - Interview comments by community .....	71
Table 6.34: Commitments in EA certificates - Interview comments by managers .....	72
Table 6.35: Modern design of Mt. Milligan - Interview comments by managers .....	73
Table 6.36: Economic climate of the mine region - Interview comments by managers .....	73
Table 6.37: Concern about impacts - Interview comments by community .....	74
Table 6.38: Perception of benefits - Interview comments by community .....	74

Table 6.39: Challenge in fulfilling expectations - Interview comments by managers .....	75
Table 6.40: Direct benefits to First Nations - Interview comments by community .....	75
Table 6.41: Adopting voluntary standards - Interview comments by manager .....	76
Table 6.42: "Reflection and Progression" Top 25 words by frequency .....	76
Table 6.43: Placer Dome's write down - Interview comments by managers .....	79
Table 6.44: Early community perception of the project - Interview comments by community .....	79
Table 6.45: Terrane built for success - Interview comments by managers .....	80
Table 6.46: Terrane's decision to sell - Interview comments by managers .....	81
Table 6.47: Reaction to sale - Interview comments by community .....	81
Table 6.48: Construction costs - Interview comments by manager .....	81
Table 6.49: CSR challenges in British Columbia - Interview comments by manger .....	82
Table 6.50: The challenge of the construction phase - Interview comments by managers .....	82
Table 6.51: Challenges with capacity - Interview comments by community .....	83
Table 6.52: Transition to new company team - Interview comments by community .....	83
Table 6.53: Transition to new community leaders - Interview comments by manager .....	83
Table 6.54: Shifting attention of community - Interview comments by managers .....	84
Table 6.55: Development inexperience of Thompson Creek - Interview comments by manager and community .....	84
Table 6.56: Personal nature of company-community relationships - Interview comments by managers .....	85
Table 6.57: The need to act in good faith - Interview comments by manager .....	85
Table 6.58: The acute need for good engagement - Interview comments by managers .....	86
Table 6.59: Legacy of Placer Dome's false starts - Interview comments by managers .....	86
Table 6.60: Importance of transparency - Interview comments by managers .....	87
Table 6.61: Lessons from the regulatory process - Interview comments by community .....	87
Table 6.62: EA certificate as a guarantor - Interview comments by manager and community .....	88
Table 6.63: Complex nature of mine development - Interview comments by managers .....	88
Table 6.64: Importance of core values - Interview comments by manager .....	88
Table 6.65: Positioning for future corporate transitions - Interview comments by manager .....	88
Table 6.66: Institutional transfers of knowledge - Interview comments by managers .....	89
Table 7.1: Summary of themes and sub-themes from Section 6 .....	91

## LIST OF FIGURES

Figure 2.1: The "pyramid" model of SLO proposed by Thomson & Boutilier (2011) .....	6
Figure 2.2: Moffat & Zhang's (2014) overview of relationships between concepts leading to SLO ...	7
Figure 2.3: Summary of the BC Environmental Assessment process (BC EAO, 2015) .....	14
Figure 2.4: First Nations communities in northern British Columbia (INAC, 2015) .....	16
Figure 2.5: MMSD Seven Questions to Sustainability (MMSD, 2002) .....	22
Figure 3.1: Distribution of the world's larger exploration companies, by domicile, 2010 (Drake, 2012) .....	29
Figure 3.2: Mining projects in British Columbia (MABC, 2015) .....	31
Figure 4.1: Distribution of interviewees across three project proponents .....	38
Figure 4.2: Distribution of interviewees across the four impacted communities .....	38
Figure 5.1: Mt. Milligan mine and surrounding region .....	42
Figure 5.2: Exploration and development history of Mt. Milligan (adapted from Bradshaw, 2014)..	46
Figure 6.1: Comparison of word clouds for main themes .....	52
Figure 6.2: Cluster analysis of main themes .....	53
Figure 6.3: "Setting the Stage" word cloud .....	54
Figure 6.4: "Setting the Stage" cluster analysis tree .....	55
Figure 6.5: "Addressing the Issue" word cloud .....	63
Figure 6.6: "Addressing the Issue" cluster analysis tree .....	64
Figure 6.7: "Reflection and Progression" word cloud .....	77
Figure 6.8: "Reflection and Progression" cluster analysis tree .....	78

## LIST OF ACRONYMS

AMEBC	Association for Mineral Exploration British Columbia
BC	British Columbia
BREB	Behavioral Research Ethics Board
CDA	Community Development Agreement
CEAA	Canadian Environmental Assessment Agency
CIM	Canadian Institute for Mining, Metallurgy, and Petroleum
CSC	Community Sustainability Committee
CSR	Corporate Social Responsibility
EA	Environmental Assessment
EAO	Environmental Assessment Office
ECDA	Economic and Community Development Agreement
ECPM	Engineering, Construction and Procurement Management
EIA	Environmental Impact Assessment
EIS	Environmental Information System
EITI	Extractives Industry Transparency Initiative
EPFI	Equator Principles Financial Institutions
FPIC	Free Prior and Informed Consent
GAC	Global Affairs Canada
GDP	Gross Domestic Product
GRI	Global Reporting Initiative
IA	Impact Assessment
IAIA	International Association for Impact Assessment
IFC	International Finance Corporation
ISO	International Standards Organization
IBA	Impact and Benefit Agreement
ICMM	International Council on Mining & Metals
IISD	International Institute for Sustainable Development
INAC	Indigenous and Northern Affairs Canada
JV	Joint Venture

KPI	Key Performance Indicator
MABC	Mining Association of British Columbia
MAC	Mining Association of Canada
MEM	Ministry of Energy and Mines
MMSD	Mining, Minerals and Sustainable Development
NA	Negotiated Agreement
NGO	Non-Governmental Organization
NRCAN	Natural Resources Canada
SCC	Supreme Court of Canada
SD	Sustainable Development
SIA	Social Impact Assessment
SLO	Social License to Operate
TCM	Thompson Creek Metals
TOR	Terms of Reference
TSM	Towards Sustainable Mining

## ACKNOWLEDGEMENTS

This research could not have been completed without the guidance of an incredibly supportive committee. Thank you to my supervisor Dr. Dirk van Zyl, for having the faith to take me on as a student, and for your steadfast guidance since I first came to UBC. Thank you to Dr. Peter Bradshaw for emboldening my ideas, and pushing me to ask the big questions. And thank you to Dr. Scott Dunbar for your council and encouragement through the final stages of my writing.

Thank you to the all the professors and staff at UBC Mining Engineering for creating such a cheerful and stimulating environment. The diversity of people and ideas welcomed to Norman B. Keevil creates a truly unique atmosphere for learning, and I will be privileged to call it my alma mater.

This thesis would not have been possible if not for the gracious support I received from the many industry players involved in Mt. Milligan. Thank you to all those involved in the Mt. Milligan mine, past and present, who made time to share their experiences, insights, and wisdom. Without the support of industry, research in this field is impractical, and I am humbled to have had the opportunity to learn from a group of exceedingly accomplished people.

Thank you to the people of Fort St. James, Mackenzie, McLeod Lake, and Nak'azdli for welcoming me into your communities, and specifically to the tireless community leaders who paused their busy schedules to share their stories with me.

I could not be where I am today without the support of my parents. Thank you to my father, my 'second supervisor' throughout this research, you pushed me to greater heights than I thought possible. I am immensely fortunate to have you in my corner. To my mother, thank you for your unwavering belief in me, your compassion, and your humour. The right words always came when they were needed.

Finally, thank you to my unparalleled friends. Upon moving to Vancouver to attend UBC, I was immensely lucky to find myself surrounded by a special blend of old and new friends, who were by my side through every step of my masters. Specifically, my comrades in the UBC Mining graduate program, I don't know how I could have figured out grad school without you. I feel blessed to have shared my masters experience with such special people; in the last two years at UBC I have gained both colleagues, and life-long friends.

# 1. INTRODUCTION

## 1.1 OVERVIEW

Management of socio-political risk, the fabled 'social license to operate', has become one of the most pressing issues facing the mining industry today (Ernst & Young, 2014). Failure to develop mutually beneficial relationships with local and regional stakeholders can lead to significant costs to proponents. These include project delays, reputational damage, increased costs and even the abandonment of projects (Browne et al, 2011; Davis & Franks, 2011; Prno & Slocombe, 2012; Thomson & Boutillier, 2011.)

Changes in management and/or ownership at mineral properties and mining projects can cause regression in corporate-stakeholder relationships, as the changing faces and attitudes can lead to breakdowns in communication, misunderstandings, and conflict (Botta et al, 2014; Thomson & Boutillier, 2011). There is currently a lack of dialogue on the management of risk through these changeovers, and this study sets out to fill an acute need for an industry where the standard business model includes the transactional exchange of mineral properties and projects in various stages of exploration, development, and exploitation.

This study explores the impact that these corporate transitions have on corporate-stakeholder relationships at an exploration or mining project. Through the review of a case study, the author analyzes how successive management teams incorporated stakeholder concerns and regulatory requirements in mitigating socio-political risk during their tenure, and specifically how this risk was mitigated through successive changes in management and ownership.

The Mt. Milligan mine, located 155km northwest of Prince George, British Columbia (BC), entered production in 2013. The open-pit copper-gold mine is currently owned and operated by Thomson Creek Metals Company. Since the property was first explored in 1937, the project has been advanced from grass roots discovery to operation by seven owners, including two that took the project to the mine feasibility stage. As one of the newest mines in British Columbia, Mt. Milligan is an ideal case to study the evolution of this issue.

In addition to a review of public company documents, and an analysis of historical submissions to the BC Environmental Assessment Office, this study interviewed past managers to collect data on perceptions of socio-political risk. Interviews were analyzed with data analysis software, and collectively reviewed for main themes and patterns over time. The study also incorporates perceptions of the Mt. Milligan experience drawn from local and regional stakeholders. These include First Nations groups, neighbouring municipalities, and government. The evolving influence of outside actors will also be noted, including the provincial and federal environmental assessment processes, and Supreme Court of Canada decisions relating to land tenure and First Nations' rights.

In the end, this study delivers a review of the historic mitigation of socio-political risk at Mt. Milligan arising from multiple changes in management and ownership, in an environment where the legal framework and political policy were also in flux. Lessons drawn from this review inform strategies that can be employed in the management and mitigation of socio-political risk at future projects. The study advances the current dialogue surrounding stakeholder relations in the mining industry, and contributes to an improvement of industry practices addressing the management of socio-political risk through transitions in the management and ownership of mining projects.

## **1.2 RESEARCH QUESTION AND OBJECTIVES**

The overarching research question explored in this research study is:

How can corporate transitions at mineral exploration and mining projects be best managed to mitigate socio-political risk, resulting in lasting and mutually beneficial corporate-stakeholder relationships?

Based on the idea that:

- Developing and maintaining corporate-stakeholder relationships is important to the socially stable, economic, and sustainable development and operation of mining projects;
- The mining and minerals industry is an inherently transactional business which sees regular transitions in the management and ownership of mineral properties and mines throughout the world;
- These corporate transitions have the potential to negatively impact corporate-stakeholder relationships, resulting in an increase of risk to a company's operations;
- The successful management of a corporate transition will contribute to a reduction of socio-political risk at an exploration or mining project, resulting in lasting and mutually beneficial corporate-stakeholder relationships;
- Maintaining these constructive corporate-stakeholder relationships can open the door to projects achieving long-term sustainable development goals.

The objectives of this research are:

- To assess the state of the literature on socio-political risk management in the mining industry;
- To gather information on how corporate transitions impact corporate-stakeholder relationships at mining projects;
- To determine the roles of various actors throughout corporate transitions;
- To identify successful strategies from past corporate transitions;
- To propose guidelines for the successful execution of corporate transitions.

## **1.3 THESIS OUTLINE**

Chapter Two provides a literature review encompassing the standard industry approaches to the management of socio-political risk at mining projects. Chapter Three describes the setting where the research and case study took place. Chapter Four describes the research methodology used to gather and analyze data collected from interviews with past and present managers involved in the development and operation of the Mt. Milligan mine. Chapter Five details the background of the case study mine – Mt. Milligan, the project proponents, impacted region and communities involved in its history, and presents a timeline of events. Chapter Six provides a detailed overview of themes emerging from interviews, illustrated with quotes from interviewees. Chapter Seven presents a discussion of the major themes that emerged during the analysis of interviews, discusses findings, and reviews study limitations. Chapter Eight concludes the thesis by making recommendations and presenting recommendations for future work. Finally, references cited in this document are listed and appendices are provided containing details regarding data and analysis in this study.

## **2. LITERATURE REVIEW**

### **2.1 INTRODUCTION**

In a 2014 speech to the Vancouver Board of Trade, Pierre Gratton, president of the Mining Association of Canada, reflected on a realization his industry came to over a decade prior:

*"It had become clear to us that the old world where mining projects were big deals welcomed almost uncritically by governments and communities for the wealth and jobs they brought, was over. Industry came to accept that we may, at times, have to walk away from a project. The challenge was to make sure this happened as infrequently as possible."*

(Gratton, 2014)

Clearly, the management of socio-political risk has become a recognised concept in the mining sector. Subsequently, there exists a strong body of scholarly work in related areas, particularly the general management of social issues around mining and other resource development projects. However, there is a significant gap in the literature on issues pertaining directly to the management of this risk through corporate transitions.

This chapter provides a review of these topics, and connects them to the central research question of this study. The review will provide background on the topics central to the management of social risk at mining projects by building corporate-stakeholder relationships. These topics include the social license to operate, corporate social responsibility, Canadian aboriginal people, impacts of mining, and guidance documents.

### **2.2 THE NEED FOR SOCIO-POLITICAL RISK MANAGEMENT**

The need to manage socio-political risk has emerged as a core concept in the mining industry (Deloitte, 2014; ERM, 2014; Ernst & Young, 2015). Risk management had long been a well-defined concept throughout the sector, but was traditionally focused on the technical and financial segments of the business, adding environmental issues in the 1970s. Starting in the late 1990s, a growing group of scholars, consultants, and mining executives advanced awareness that stakeholders around mining projects could exert tangible influence on the success or failure of these projects, and that a failure for mining companies to build broad-based stakeholder support around their projects would expose them to massive risk (Thomson & Boutilier, 2011). This concept came to be known as the social license to operate.

Today social license to operate and its associated ideas have established themselves in the mining's mainstream (Nelsen, 2006), and now inhabit the boardrooms of industry's biggest companies (Keevil, 2015). Mining is considered to be a 'dirty business' by much of the general public, and the sector increasingly faces social opposition (Joyce & Thomson, 2000; Kemp & Owen, 2013). Many scholars and industry practitioners have demonstrated the consequences of failing to adequately address the social environments around project sites. More recently, regular reviews of the mining industry by some of its largest service providers offer further evidence of the risk these issues can pose to miners.

Ernst & Young (2015) publishes an annual list of top business risks facing the mining and metals industry, with social license to operate (SLO) consistently registering among the highest risks. The 2015 review puts SLO as the number 5 risk, noting:

*"Maintaining a SLTO is an increasingly multi-faceted and multi-stakeholder risk with a complex array of relationships to negotiate. . . . With billions of dollars in project investment at stake, ongoing engagement, collaboration and effective communication with all of these stakeholders is crucial and mutually-beneficial solutions are increasingly expected." (Ernst & Young, 2015)*

Similarly, Deloitte (2014) ranked social issues at number six in their "Top 10 issues mining companies will face in the coming year." And a report by Goldman Sachs Global Investment Research (2009) found that 70% of project delays on capital investment projects are related to sustainability issues, of which socio-political concerns are a major part. This exceeded that of more traditional risk areas like commercial factors (63%) and technical issues (21%). Data published by the consultancy ERM (2012) notes that only 30% of the mining projects studied from 2008 to 2012 were delivered on time. Of these delayed projects, 42% listed social opposition a contributing factor, closely followed by environmental opposition with 35%.

In addition to industry led studies like the primers mentioned above, significant scholarly work has been conducted on the need to reduce social risk. A 2014 study from Harvard & the University of Queensland (Davis & Franks, 2014) notes that the mining industry has seen many examples of company-community conflict in recent history. This conflict can result in protests and violence, international activism and media campaigns, heightened shareholder and government scrutiny, project interruptions, and even complete shutdown (Browne et al, 2011; Davis & Franks, 2011; Prno & Slocombe, 2012; Thomson & Boutillier, 2011.). Project delays caused by conflict can cost an operator from \$10,000 per day at an exploration project, to \$20 million per week at a large operating mine (Davis & Franks, 2014).

Nartey et al (2013) focuses on the potential positives of company led engagement to avoid conflict. Companies who build strong relationships between company and stakeholders send an important signal to other stakeholders about what type of company they are dealing with. With the increasingly global reach of all actors involved in mining, establishing positive relationships can help establish positive company reputation, enhancing industry's ability to build further relationships at other project sites. Conversely, if a company fails to build effective relationships with stakeholder groups, interaction will become less frequent and less cooperative, potentially leading to conflict (Nartey et al., 2013).

Even if in cases where direct conflict around a mining project are less likely, increasing stakeholder support enhances the value of the firm (Henisz et al, 2014). Companies that make material commitments to build social and political support around their operations are recognized for it by an increasingly savvy investment community that is seeking sustainable shareholder value, with guarantees that project proponents can deliver a business plan on schedule and on budget. Henisz et al. (2014) provide empirical evidence of this shareholder preference, noting: "Up to half of the discount on the value of the gold mining companies had in the ground, as reflected in their stock market valuations, depended on the level of conflict or cooperation with local stakeholders."

The need for effective social risk management is not limited to large mining companies or those with operating mines. Small explorers and miners are also embracing the need to incorporate the social

licence to operate in their operational policy. Even more so than the large companies, the financial constraints of juniors in the sector means they are exposed to more risk by social factors, with their future increasingly beholden to the perceptions of outsiders – namely stakeholders, the investment community, and major miners who they hope to sell to (Boutillier, 2009).

Indeed, challenging market conditions coupled with the potential negative impacts of conflict means SLO is increasingly connected to company survival (Boutillier & Thomson, 2011; Owen & Kemp, 2013), and the transactional nature of the industry means companies are increasingly being vetted to assess socio-political climate around their project. Social due-diligence is now being performed, in addition to the geological, financial, and engineering audits that are undertaken prior to a project acquisition.

### **2.3 THE SOCIAL LICENSE TO OPERATE**

In today's mining industry obtaining stakeholder support for projects is a vital part of a company's risk management strategy (Nish & Bice, 2012). The social license to operate (SLO) has become a catch-all term for this type of socio-political risk management (Parsons et al., 2014). SLO is now in common parlance in mining, and it is expected that companies incorporate the concept as best practice (Kemp & Owen, 2013).

The term was first coined by Placer Dome executive Jim Cooney in 1999 in response to the negative pressures mining companies were seeing from stakeholders in their areas of operation (Boutillier, 2014). Today, the term is ubiquitous in mining circles, and one would be hard pressed to find a company that does not allude to the term on their website or in company publications (Boutillier & Thomson, 2011; Nelsen, 2006). However, the increased use of the term results in a variance of interpretation, and defining exactly what the term means and who really possesses a social license is often hazy (Boutillier, 2014; Moffat & Zhang, 2014).

There is a wide body of work defining SLO as it relates to the mining industry. It is most commonly defined as the ongoing acceptance, approval, or consent from the local community or the presence of public consent to an activity (Boutillier & Thomson, 2011; Franks & Cohen, 2012; Joyce & Thomson, 2000; Nelsen, 2006; Prno & Slocombe, 2012). Franks & Cohen (2012) note that it is intangible and unwritten, and cannot be granted by formal civil, political or legal authorities.

Even in jurisdictions with strict regulatory regimes, it is no longer enough for exploration and mining companies to satisfy regulatory requirements and depend on formal licenses to operate from governments (Moffat & Zhang, 2014). The industry's status quo has been challenged by public expectations that mining should make a greater contribution to its stakeholders (Brueckner et al., 2014; Parra & Franks, 2011). SLO is seen as a way to encourage more sustainable resource development by integrating social, environmental, and economic considerations in all stages of the mine life-cycle (Prno & Slocombe, 2012).

Companies cannot count on a legal license without addressing stakeholder concerns (Prno, 2013). SLO suggests communities have as much power as governments in authorizing projects (Boutillier, 2014), and companies are being forced to come to terms with this new reality (Prno & Slocombe, 2012). The economic benefits historically offered to local communities are no longer enough (Brueckner et al., 2014). They are now seen as just one of a number of components necessary to achieve social acceptance (Moffat & Zhang, 2014).

Boutilier & Thomson (2011) determined four ascending levels of social license that a company can achieve from stakeholders – 'withheld', 'acceptance', 'approval', and 'psychological identification'. Their "pyramid" framework (Figure 2.1) notes the lowest levels of social license are characterized by a 'transactional' relationship, conditional on short-term benefits. Rather, including stakeholders in decision making processes has been found to be more important than solutions based on transactions (Moffat & Zhang, 2014; Thomson & Boutilier, 2011).

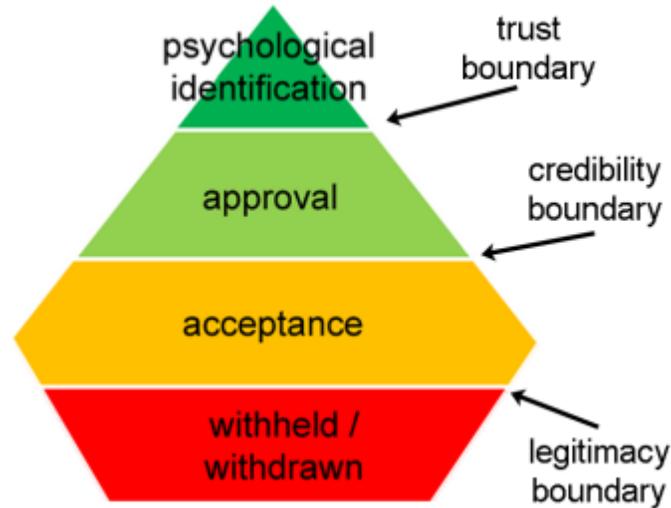


Figure 2.1: The "pyramid" model of SLO proposed by Thomson & Boutilier (2011)

Moffat & Zhang (2014) found four key components to achieving a social license that is made up of acceptance and trust: impact on social infrastructure, contact quality, contact quantity, and procedural fairness (Figure 2.2). Of these variables, contact quality and procedural fairness were found to be the most important with the authors noting: "The way companies engage with communities (quality and quantity), and treat community members (procedural fairness) will shape community members trust in a mining company." Impacts on social infrastructure were found to be the least influential variable. Stakeholders can be open to changes in their communities, provided companies engage with them effectively and include them in decision making.

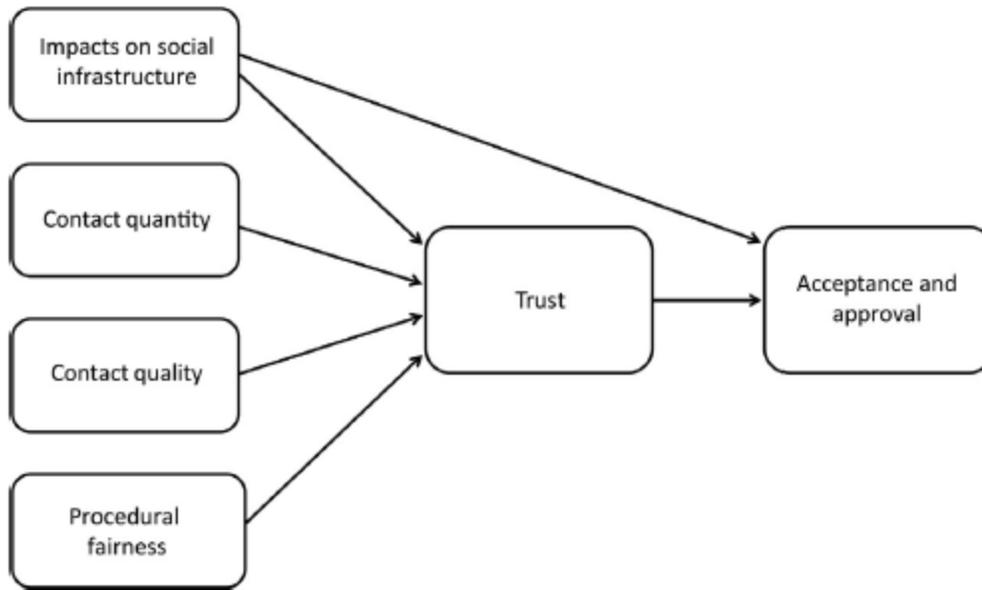


Figure 2.2: Moffat & Zhang's (2014) overview of relationships between concepts leading to SLO

Procedures that stakeholders feel are fair allow for transparency of the decision making process, and the development of mutually beneficial and mutually owned solutions (Nelsen, 2015). In fact, the study found that "perceptions of impacts were less negative when stakeholders felt that: they were involved in company decision-making processes, they were respected, and that their concerns were acted upon. This applied irrespective of the actual level of impacts from the operation." (Moffat & Zhang, 2014)

These processes to build trust are an essential element and strong predictor to gaining community acceptance of a mining operation, and in turn winning a SLO (Moffat & Zhang, 2014). Thomson & Boutilier (2011) list gaining stakeholder trust as the entry point to the highest level of their pyramid model of SLO (Figure 2.1). Moffat & Zhang (2014) argue that there are two distinct type of this trust:

*"Integrity-based which relates to the trustor's perception that the trustee is adhering to a set of principles;*

*Competence-based trust refers to the trustor's view that the trustee (mining operation) has the skills and knowledge necessary to manage the particular issues of interest to the trustor or community."*

With both types of trust, a company's current and past behavior is relevant to stakeholders. For example, the extent to which a company is directly addressing operational impacts will influence stakeholder trust in the company (Moffat & Zhang, 2014). Equally, stakeholders may also look to a company's past behavior to infer their future action. Parsons et al. (2014) associate SLO with this reputational capital, and observe that by managing reputation companies can advance their agenda of securing stakeholder approval. However, stakeholders may paint all companies with the label of 'the miners' or 'the mining companies', complicating reputation management (Bice, 2013)

In these instances, companies can be criticised for being disingenuous in their actions. By promoting SLO simply to enhance their reputation, companies reduce a complex and crucial concept to a public relations exercise (Wilburn & Wilburn, 2011). This strategy is apt to backfire, as any perceived violation of trust can lead to negative relational consequences (Moffat & Zhang, 2014), and the global reach of modern mining affected communities can rapidly translate this deterioration of trust into negative reputational publicity (Boutilier, 2014; Nish & Bice, 2012), which will often precede a company's entry to a new area (Harvey & Bice, 2014).

Context is also key when considering the SLO (Jijelava & Vanclay, 2014; Prno, 2013). Generalizations about SLO cannot be made between project sites, and some contexts may be more suited to the concept than others (Prno & Slocombe, 2012). For example, regions with a historic cultural and/or economic association with resource development may have different reactions to a mining project than that where this type of activity is new (Newbold, 2006).

As discussed in the previous section, stakeholders in impacted areas have become very influential in decision making around extractive projects (Prno & Slocombe, 2012). This influence has been expanded by the growth of NGOs and global communications technologies (Nish & Bice, 2012), which can magnify the voice of stakeholders and influence public opinion. The success of the SLO concept has seen many companies throughout the industry turn to it as a risk management strategy (Nish & Bice, 2012). For mining companies and their investors, SLO can create project certainty and helps avoid potentially costly conflict and exposure to socio-political risk (Prno & Slocombe, 2012).

However, this risk management interpretation of the term also fuels critics of the concept. Owen & Kemp (2013) argue that adopting SLO is simply an extension of a business model that is driven to minimize risk to maximize profits. They suggest that 'business case' arguments are focused on short term production, and do not provide tangible benefit for stakeholders. An overt focus on risk mitigation limits the benefits to stakeholders to those which also provide benefit to the company (Kemp & Owen, 2013).

Parsons et al (2014) argue SLO prioritizes local issues that a company can easily address, rather than tougher big-picture issues, like resource nationalism or global warming. Similarly, the goal of finding middle ground and consensus that some iterations of SLO advocates for effects the silencing of minority voices (Parsons et al., 2014; Ruckstuhl et al., 2014). This can be problematic for an industry that frequently operates in regions with significant minority populations, and has a history of dispossessing indigenous peoples (Banerjee, 2008; Toledo Orozco, 2013).

Despite criticism, SLO has been widely supported in the mining industry. The SLO invokes the type of regulatory language that industry is comfortable with (Kemp & Owen, 2013), and recent historic shifts in environmental and safety best practices suggest that the industry is well equipped to incorporate SLO into its business model. Furthermore, the 'business case' that accompanies SLO is comfortable for executives and investors who are beholden to profit motives (Prno & Slocombe, 2012). Indeed, financial gains and social responsibility can now be framed as complimentary goals (Lacey et al., 2012; Prno & Slocombe, 2012), in what Henisz et al. (2014) deem "enlightened self-interest."

SLO is also a comfortable concept for stakeholders (Bice & Moffat, 2014). The term transfers well across cultures and jurisdictions, and is easily and widely understood. In many areas, it is not uncommon for stakeholders to discuss their position and expectations around a project in terms of

SLO, and may be especially quick to invoke it if they feel their rights are threatened (Bice & Moffat, 2014; Parsons et al., 2014).

Lacey et al (2012) note the challenges in operationally defining SLO, finding companies, governments, stakeholders, all use the evocative language surrounding the term to further their own stances. SLO is arguably more effective for those who oppose projects, as it is much easier to accuse a proponent of lacking stakeholder support, than it is for a proponent to prove its SLO (Kemp & Owen, 2013).

While SLO has become widespread in the mining industry, it is challenging to determine which companies are integrating it into their operations and which are merely paying it lip service to further their own interests. While there are cases of development projects being delayed or even shut down by stakeholder opposition, it is more difficult to shut down an operating mine (Kemp & Owen, 2013), and companies know this. Mining companies can and do operate without a SLO (Kemp & Owen, 2013). Indeed, in both the United States and Canada, companies with large projects turned down by regulators in the face of public opposition have responded by launching legal challenges (Brehmer, 2015; Burgmann, 2015). This suggests that despite a greater industry movement to adopt its tenets, not all miners feel SLO is a necessary foundation for operating a mine.

At this time no clear standard exists for the quantitative measurement of SLO. Companies report on their activities related to SLO through various means including: sustainability reporting, annual reports, and news releases (See Section 2.7.5). Reporting is often qualitative in nature, relying on description of events or initiatives, case study type descriptions of positive social activities, or testimonial statements from community leaders.

## **2.4 CORPORATE SOCIAL RESPONSIBILITY**

The expectations of corporate behavior have evolved significantly in recent years. Practices have shifted away from Milton Friedman's shareholder theory model towards a broader stakeholder theory approach (Carroll & Shabana, 2010). Increasingly, the public requires companies to incorporate social and environmental considerations into corporate activity, in addition to the traditional economic approach (Bondy et al, 2012; James, 1999). These three tenets comprise the triple-bottom-line of sustainable development (Eggert, 2009), and companies who align their operations accordingly are rewarded, as investors look to avoid companies with poor environmental and/or social records (Papmehl, 2002).

Particularly in the mining industry, where some level of negative impact is unavoidable (Moffat & Zhang, 2014), mining companies take a variety of approaches to conducting their operations in a way that will be palatable to impacted stakeholders. This includes the mitigation of negative impacts and compensation for the activities carried out. This activity is broadly known as Corporate Social Responsibility (CSR), and encompasses the idea that companies have responsibility to society beyond their shareholders (Carroll & Shabana, 2010). As articulated by Goldcorp CEO Chuck Jeannes in a 2015 interview:

*"The reality is we have a lot more people to convince in order to be given the broad social license we need to continue to conduct our business. We have to operate in a way that benefits more than just our shareholders."*

(Keevil, 2015)

Like SLO, CSR has become firmly ingrained in corporate discourse (Bondy et al., 2012). It is widely endorsed by the corporate sector and has become a well-established component of corporate policy for the mining industry (Parsons & Moffat, 2014). Also like SLO, definitions of CSR continue to evolve (Parsons et al., 2014; Parsons & Moffat, 2014), but for the purposes of this review will include all activity undertaken by a company outside of the regulatory system to engender goodwill from stakeholders.

Well planned and executed CSR can be an effective way to build relationships with stakeholders, and is one of the most commonly used tools to attain a social license to operate (Prno & Slocombe, 2012). Policy is created at a corporate level, and operationalized through CSR strategy, including engagement, communication, negotiation, conflict resolution and development programming (Kemp & Owen, 2013).

Philanthropic CSR is familiar throughout the corporate world (Carroll & Shabana, 2010), and one of the more visible forms of CSR in the mining industry. It can be comprised of donations to community projects, or sponsorship of local sports teams (Bice, 2013). While philanthropic CSR can come without any strings attached directly, it can often be characterized as strategic philanthropy, in that it is designed to advance corporate interests by enhancing company legitimacy and reputation (Carroll & Shabana, 2010).

A more strategic approach to CSR is increasingly becoming commonplace in the mining industry. Particularly when experiencing challenging market conditions, companies are coming under increasing pressure to justify expenses incurred on CSR, and proving the positive returns from this investment to shareholders. This puts the modern mining company in the unenviable position of walking the tightrope of shareholder concerns – they need to keep the peace, while keeping costs down. Well planned and well executed CSR can allow a company to walk this tightrope.

Specifically in the mining sector, pressure to justify the cost of non-core expenses like CSR have led managers to move away from philanthropic initiatives towards more results oriented strategies. In particular, the stakeholder management aspect of CSR emerged prominently in the mining sector due to the heightened risks operators can face from the social environment at their projects (Prno & Slocombe, 2012). Indeed, the level of perceived risk around a project can be a key factor in shaping CSR strategy (Bice, 2013).

This strategy is challenging to execute effectively, as the perception of being managed can alienate stakeholders (Waddock & Googins, 2011). But if implemented in a manner palatable to stakeholders, the resulting engagement can shape stakeholder's evaluations of operations depending on the nature of the relationship (Parsons & Moffat, 2014). Parsons & Moffat (2014) also note that the quality of corporate-stakeholder interactions can have as much impact on the resulting relationship as project impacts.

Designing effective stakeholder engagement that will result in these positive relationships is easier said than done. Communities are not homogenous units, and stakeholder management and engagement strategies must be adjusted in order to cater to the needs of the diverse range of stakeholders who fall inside the project sphere (eg. women, minorities, indigenous peoples, etc.) (Jijelava & Vanclay, 2014; Prno, 2013). However, Prno & Slocombe (2012) find stakeholders are not all equal in practice, but rather their importance hinges on their relative power, legitimacy, and urgency of claim.

When companies design strategic CSR initiatives, the strength of stakeholders is also determined by the degree to which their concerns and objectives align with corporate interests (Friedman & Miles, 2002; Nartey et al., 2013). Dashwood (2012) found that a company's own identity also influences CSR strategy, with internal structure and corporate culture influencing an organization's response to external pressures and overall commitment to CSR.

Implementing CSR initiatives on the ground effectively is challenging, and often different than policy planned at the corporate level (Bice, 2013; Frynas, 2005; Kemp & Owen, 2013). A study by Kemp & Owen (2013) found that despite corporate commitment to CSR, practitioners in Australian mining companies found their work isolated from core business objectives. CSR initiatives are difficult to value in traditional business models (Frynas, 2005), leading managers to direct resources only when a negative issue arises (Kemp & Owen, 2013).

Indeed, viewing CSR in terms of 'risk to the business' or presenting a 'cost-benefit analysis' may drive corporate policy towards a 'firefighter' approach and away from the type of consistent engagement that provides the foundation for constructive company-community relationships (Kemp & Owen, 2013; Zandvliet & Anderson, 2009). The adoption of purely market-driven CSR approaches loses sight of long term company-community goals: that is, a social license to operate (Brueckner et al., 2014). As Owen & Kemp (2013) note:

*"The implications of internally inconsistent approaches to relationship building and development, suggests that the trajectory of heightening tensions over development and company–community conflict is a foregone conclusion."*

Following this, an effective CSR strategy is one that incorporates consistent engagement, creating the trust, transparency, respect, and understanding that can lead to a SLO (Bice, 2013; Moffat & Zhang, 2014; Prno & Slocombe, 2012; Prno, 2013; Thomson & Boutilier, 2011). Many miners have recognized this, and adjusted CSR programs accordingly (Prno & Slocombe, 2012).

The most effective CSR plans blend strategic and philanthropic CSR by involving stakeholder groups directly in the decision making (Jijelava & Vanclay, 2014). Participatory processes can move company-community relationships away from a donor-beneficiary focus toward a more collaborative approach (Martinez & Franks, 2014). Community development plans can then be flexible to stakeholder feedback (Jijelava & Vanclay, 2014), lending them legitimacy (Bice, 2013).

Given that the resulting relationships between company and stakeholders are more important than the benefits it delivers (Zandvliet & Anderson, 2009; Moffat & Zhang, 2014); can shape stakeholder perceptions of impacts (Martinez & Franks, 2014; Parsons et al., 2014); and improves the credibility of a project (Zandvliet & Anderson, 2009); participatory CSR is the most beneficial CSR strategy for mining companies. Martinez & Franks (2014) argue this approach can contribute to SLO.

Following this, multi-stakeholder mechanisms like community advisory boards (also known as sustainability committees, liaison committees, etc.) can be effective in aligning project goals with community interests (Deloitte, 2014). These forums also entrench regular engagement and maintain a reciprocal flow of information between company and community. By invoking CSR strategy that seeks participatory and collective support from stakeholders, both company and community can benefit, with both actualizing enlightened self-interest.

However, while beneficial, using collaborative multi-stakeholder groups to identify and implement CSR strategy collectively can be challenging (Jijelava & Vanclay, 2014). It is difficult to ensure all stakeholders and sub-groups are included (Jijelava & Vanclay, 2014), and some may be negatively affected by the decisions of the majority (Parsons et al., 2014; Ruckstuhl et al., 2014). Companies must work to ensure they do not only respond to the input of the most outspoken (Prno, 2013).

## **2.5 IMPACTS**

At mining projects, it is inevitable that some level of negative impacts will be experienced by local stakeholders (Moffat & Zhang, 2014). Stakeholders are cognisant of mining's impact, and the cumulative social and environmental impacts can also influence the social legitimacy of mining (Franks et al, 2013), and the distribution of these impacts have significant influence on project outcomes as any imbalance may galvanize project opposition (Franks, 2012).

Therefore, it is imperative that miners take necessary steps to manage impacts and in turn build positive relationships with stakeholders. Genuine community engagement, participation, and collaborative approaches to the development of strategies to mitigate project impacts will likely create greater community trust and acceptance in the longer term. These strategies are key to establishment of the social license to operate (Parsons & Moffat, 2014), as discussed in section 2.3.

This is especially true in Canada, where the remote nature of many project sites mean surrounding populations are especially vulnerable to negative impacts. These populations do not have access to the same services as those in more populated areas, and are often economically dependent on the resource development sector (Shandro et al., 2011).

Mining can have a positive impact on communities. Employment rates, wages, contracting opportunities, community tax base, and other economic indicators often rise when mining enters a region (Shandro et al, 2009). However, this prosperity can come with underlying instability, as mining communities are vulnerable to the boom-and-bust nature of resource development. Increased industry activity also has been shown to lead to an increase in rates of domestic violence, drug use, mental health issues, and disruption of social order (Shandro et al., 2011). These negative social effects disproportionately affect the most vulnerable community members, including those living below the poverty line, aboriginal people, and women (Stockwell, 2015).

The potential environmental impacts of mining are well known (Barkemeyer et al., 2015). Thomson & Joyce (2006) summarize the intensification of the environmental debate through the 1990s. A shift in public opinion and mounting criticism of contemporary environmental practice led to a revamp of the mining industry's environmental best practices, and of the government's regulatory framework.

In Canada, industry initiatives like the Whitehorse Mining Initiative (1991) brought a diverse array of stakeholders together to propose a progressive and mutually beneficial vision of the mining industry (Thomson & Joyce, 2006). Similarly, legislation such as the Environmental Assessment Act in British Columbia (1995) reflected a shift in public values toward environmental management and industrial use of the land base (Nelsen, 2015).

While environmental practices in the mining industry have improved significantly (Hilson, 2006), it continues to lack widespread public trust (Boutilier, 2014) and the reputation as a "dirty business" remains intact (Joyce & Thomson, 2000). Environmental issues around mining projects still remain a

highly contentious issue for stakeholders, and can contribute pointedly to conflict when projects are perceived to endanger precious environmental resources, like water (Adler et al., 2007; Bebbington & Williams, 2008; Bebbington et al., 2008; Perreault, 2013).

Following this, adequate assessment of potential impacts is essential to assuring stakeholders that a proponent or operator takes these issues seriously, and that there are corresponding measures in place to mitigate or offset any negatives. Engagement is needed to ensure impacts are fully understood and accepted, and to develop mutually agreeable solutions to mitigate negative impacts. These processes should be inclusive and collaborative for them to have the best chance of being effective (Jijelava & Vanclay, 2014; Moffat & Zhang, 2014; Zandvliet & Anderson, 2009).

### **2.5.1 Impact Assessment**

Impact Assessment (IA), or the processes for assessing the impacts of major projects, allows for the expectations of affected communities to be explored, articulated, and incorporated into the assessment itself, and corresponding conditions stipulated by regulatory agencies (Franks, 2012). Parsons & Moffat (2014) argue it is one condition a proponent must meet to gain a SLO. IA is widely used by governments and proponents, and has become one of the most widely practiced management tools in the world (Noble, 2002).

In Canada, IA originated with the 1973 federal Environmental Assessment and Review Process (EARP) (Sadar & Stolte, 1996). The framework was further evolved by the Berger Inquiry on the proposed Mackenzie Valley Pipeline (1977), which incorporated broader social and cultural aspects into IA for the first time (Gamble, 1978; Joyce & Macfarlane, 2001). Prno & Slocombe (2012) contend that IA is arguably one of the most important (and in many cases the only) state institutions addressing environmental considerations for mining projects and the broader goal of sustainability.

Proponents rarely carry out IA themselves, instead turning to a wide range of global service providers and consultancies (Bice & Moffat, 2014). This arrangement has been criticized, as the work of these service providers is a reflection of client – not stakeholder – interests. With securing of permits as the ultimate goal, these studies often cover the minimum of assessment as required by local legislation (Bice & Moffat, 2014). While common, this type of compliance based impact assessment is less effective for building company-community relationships than a collaborative model (Harvey & Bice, 2014).

In British Columbia, understanding and planning for the impacts of major projects, including mining development, is legislated through the Environmental Assessment Act. The Act defines Environmental Assessment ("EA") as "a legal means to ensure the potential for adverse environmental, social, economic and health effect, or potentially adverse effects on Aboriginal people and local communities are considered before the project gets an approval" (BC EAO, 2014).

The federal government also has legislation on environmental assessment. In BC, two thirds of projects that require a provincial EA also require a federal EA (BC EAO, 2011). A federal EA is triggered when a project meets certain criteria under the Canadian Environmental Assessment Act. Some of the key criteria for mining projects are: an operating capacity greater than 3000 tonnes per day in a metal mine or 600 tonnes per day for a gold or rare earth element mine; the expansion of any operation beyond a certain threshold; the use of federal land; or the need for a permit from a federal agency such as the Department of Fisheries and Oceans (CEAA, 2013).

An agreement between provincial and federal governments allows proponents to submit one set of application materials that meets both provincial and federal requirements, and receive a separate decision from each agency. Assessment efforts are then coordinated by a joint working group (BC EAO, 2008). A summary of the BC EA process is outlined in Figure 2.3.

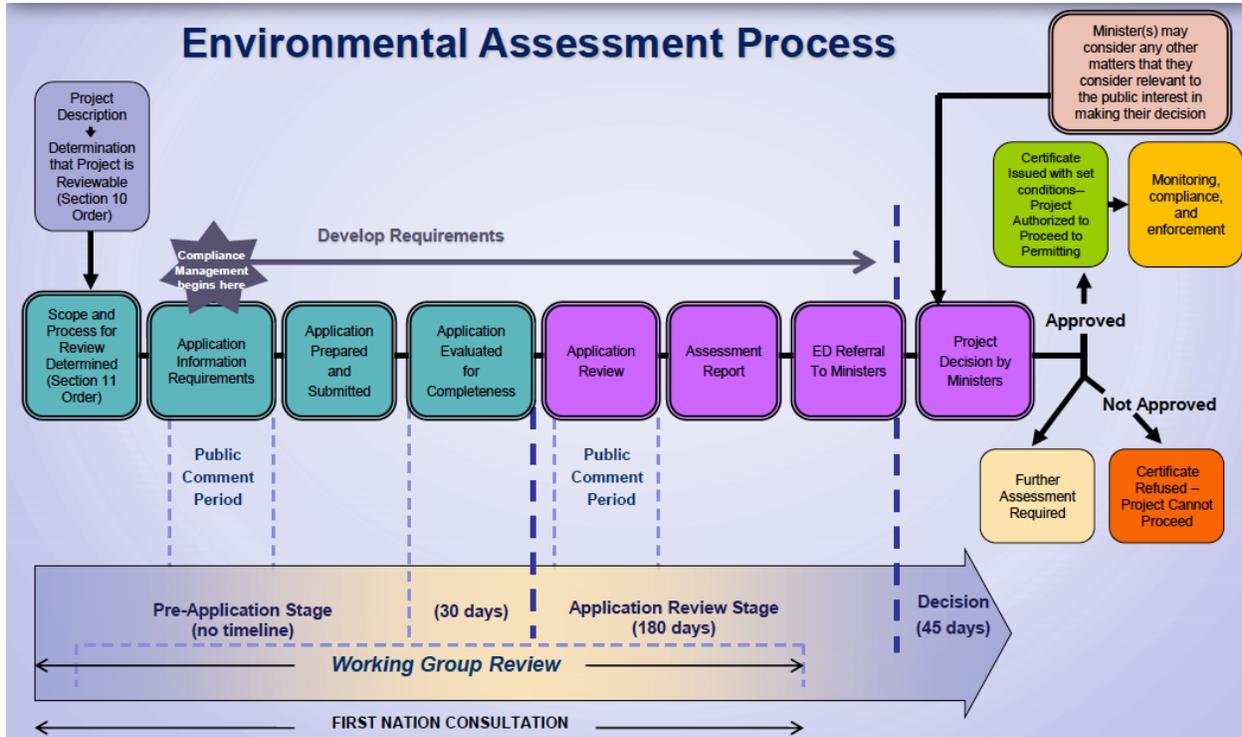


Figure 2.3: Summary of the BC Environmental Assessment process (BC EAO, 2015)

As suggested by its title, Environmental Assessment, impact assessment in Canada is heavily focused on environmental components. Both federal and provincial EA processes include a Social Impact Assessment (SIA) component, encompassing social, economic, and direct health impacts, which is relatively minor by comparison. There is no mention of SLO in Canadian mining law. However, Bice & Moffat (2014) suggest it may only be a matter of time before SLO is linked by legislation to Impact Assessment in some jurisdictions.

Esteves et al., (2012) note that the most effective SIAs are:

*"...participatory, seeks to maximize benefits and minimize negative impacts of operations, and supports all operational stakeholders to develop strategies for understanding the nature of the development trajectory and for developing capacity for reflexive responses."*

In contrast, the less effective, traditional SIA is driven by basic regulatory compliance and:

*"...represent little more than social profiles of the affected communities, drawing on publically available data without any additional inspection of context or issues that resource development may bring." (Esteves et al, 2012)*

Harvey & Bice (2014) add that the latter form of compliance driven SIA does not build the type of company-community trust that is a predicator of creating the type of collaborative relationship that predicates a SLO. Indeed, a lack of trust in regulatory processes inhibits SLO (Martinez & Franks, 2014).

With this in mind, improving SIA best practices in British Columbia is potentially the low-hanging fruit for improving existing EA processes and in turn the broader industry-public relationship. While far from a comprehensive remedy, adopting an SIA guidelines like that of the IAIA (Vanclay et al., 2015) or IFC (See section 2.7.3) in practice, if not in regulation, could prove rewarding for all actors (Harvey & Bice, 2014).

## **2.6 CANADIAN ABORIGINAL PEOPLES**

Aboriginal peoples are among the most influential actors related to the mining industry (Prno & Slocombe, 2012). In Canada, this is due to the proximity of mining to many aboriginal communities – There are approximately 1200 First Nations communities within 200 km of mines and exploration projects in Canada (MAC, 2009), and the strong influence – legal and otherwise – aboriginal people have on activities within their traditional territories (Ruckstuhl et al., 2014).

In Canada, aboriginal peoples is a collective term for First Nations, Inuit, and Metis peoples, the original inhabitants of Canada (Indigenous and Northern Affairs Canada, 2008). Due to this study's focus on the British Columbian context, its content relates to First Nations peoples – a modern term for peoples classified as Indians under the *1985 Amendment to the Indian Act* (1985) and Section 35 of the *Constitution Act* (1982) (Indigenous and Northern Affairs Canada, 2008). The term First Nations will be used most commonly throughout this study.

Aboriginal groups are not conventional stakeholders (Poelzer, 2002; Ruckstuhl et al., 2014). In Canada, they possess a unique portfolio of rights that distinguish them from other Canadians (Poelzer, 2002), which have been established by historic treaties with the crown and more recently, a litany of legal clarifications (eg. *Calder v. British Columbia*; *Delgamuukw v. British Columbia*; *R. v. Sparrow*; *Haida Nation v. British Columbia*; *Taku River Tlingit First Nation v. British Columbia and Redfern Resources*; *Tsilhqot'in Nation v. British Columbia*) (Olynyk, 2005; Prno & Slocombe, 2012).

First Nations communities consider themselves to be sovereign nations with rights to the land (Brooks, 2013). Many consider it incorrect to group First Nations communities with other stakeholders (Poelzer, 2002; Joseph, 2014). Rather, as with provincial governments, First Nations communities should be considered rights holders (Poelzer, 2002; Collins, 2015).

While the author recognizes this, throughout this study First Nations rights holders will be grouped collectively with stakeholders when referencing collective project stakeholders. This follows the classic stakeholder theory definition of a stakeholder as "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Friedman & Miles, 2006). When discussing subjects unique to First Nations rights holders, the author will indicate First Nations specifically.

The importance of engaging with First Nations rights holders when developing a mining project in British Columbia cannot be overstated. There are almost 200 distinct First Nations groups in BC,

making up about one third of those in Canada (Shandro et al., 2014). Of these, 25% are located in northern BC (See Figure 2.4), where the majority of mining activity in the province is located (INAC, 2015).



Figure 2.4: First Nations communities in northern British Columbia (INAC, 2015)

Without the support of First Nations groups, it can be very challenging to proceed with mineral development. Indeed, First Nations opposition to projects can result in protests (Tsilhqot'in National Government, 2012), delays (Gilbert, 2012), and even shut down (Hume, 2014).

Building relationships with First Nations peoples may require a change in approach for mineral exploration and mining companies. There are often inherent differences in the values and worldview of indigenous people compared to the western science based frameworks that ground the work of the extractive sector (Collins, 2015; Danard, 2010; Haalboom, 2014). For example, in examining the proposal for a pipeline through the Mackenzie Valley in Canada's far north, the Berger Commission revealed a classic collision of cultures with different visions and values. For the oil and gas companies the focus was on promoting development and material well-being measured by income and employment. For the First Nation native communities it was social well-being, self-determination and the centrality of traditional cultural values and social institutions (Berger, 1988).

Similarly, First Nations' attitude to risk is traditionally constructed in a different manner than that of western science. They take a more holistic view of the greater environment and their interaction with it, and focus on long term and cumulative impacts, rather than examining technical elements and multiplying probability of failure by consequence (Collins, 2015; Haalboom, 2014).

Prno & Slocombe (2014) note the negative consequences of failing to build aboriginal support in Canada and around the world, and highlight the benefits of having positive relationships and agreements in place. This importance has been recognized by industry, with rhetoric from both companies and industry associations confirming their commitment to building positive relationships

with First Nations groups where mineral exploration and/or mining are taking place (AMEBC, 2015; MAC, 2012).

A more challenging relationship is frequently that between First Nations and the provincial and federal governments. As Fidler (2010) writes, the crown has a constitutional duty to consult First Nations on activity that may impact them:

*"Namely, consultation is delegated by the Crown and carried out in the federal and provincial statutory EIA process. In practice, however, this is often controversial because the degree of required consultation is determined by the Crown, based on its understanding of how a potential or established Aboriginal right or title may be infringed by the project. While Aboriginal and treaty rights are constitutionally protected, they are not absolute, meaning these rights can be infringed upon, if justifiable under the right circumstances."*

(Fidler, 2010)

While the law mandates the government must consult with First Nations on development that will impact them, the level of consultation is set by the Crown, and is often deemed insufficient by communities involved (Nak'azdli Band Council, 2009; Prno & Slocombe, 2012).

Despite efforts at reconciliation the relationship between the provincial and federal governments and Canadian aboriginal people remains strained, tainted by historic injustices including, loss of land, the residential school system, lack of services, and historic lack of engagement on development activity. This is particularly true in British Columbia, where the vast majority of First Nation land claims are unsettled (Dacks, 2002), and residential schools operated as recently as 1984 (TRCC, 2015).

### **2.6.1 Negotiated Agreements**

While the entrenchment of the Environmental Assessment in the regulatory framework has been progressive step in Canada's mining history, it has failed to address a lack of economic development in First Nations communities that neighbor mining projects (Prno & Slocombe, 2012). The lack of benefits from mining projects distributed to First Nations has been a point of contention across the country, and in some instances has resulted in conflict (Prno, 2013).

In British Columbia, the provincial government has begun to share revenues from mining projects with impacted First Nations. Economic and Community Development Agreements (ECDA) share the direct mineral tax revenue on new mines and expansions (MARR, 2015). The first EDCAs were signed in 2010 with First Nations communities neighboring the New Afton and Mt. Milligan mines. To date, ECDAs have been signed at nine projects around the province (MARR, 2015).

In an effort to avoid conflict, and the subsequent project delays that come with it, Canadian mining companies were among the first to step outside the government mandated regulatory framework and begin negotiating separate agreements with First Nations groups (Hitch, 2006; Nelsen, 2015). These Negotiated Agreements (NAs), Community Development Agreements (CDAs) or Impact and Benefit Agreements (IBAs) have become standard practice in the mining industry (Hitch, 2006). They are a formal and legal method of securing project support, and in theory ensure that a fair portion of revenues and compensation reach those impacted most by the project (Owen & Kemp, 2012).

Unlike EAs, there is no standard blueprint for IBAs. IBAs are defined on a project by project basis, and tools like Gibson & O'Faircheallaigh's (2015) IBA Community Toolkit have been developed to assist navigation of the process. IBAs have become a prominent feature of mining projects for a number of reasons. Fidler (2010) suggests that their emergence addresses deficiencies in corporate social responsibility, EAs, and Crown consultation.

IBAs have become commonplace in the mining sector, and are now seen by both communities and industry as a standard step in the mine planning process (Galbraith., 2007; Owen & Kemp, 2012). By 2008, there were over 120 negotiated agreements between industry and aboriginal communities throughout the country (Fidler, 2010).

The emergence of IBAs coincide with a global trend towards more socially and environmentally responsible operations throughout the mining industry (Fidler, 2010). IBAs also increase business certainty around prospective projects, as an increase in conflict surrounding mining projects around the world have put the impetus on mining companies to establish positive relations with First Nations early in the project life-cycle (Fidler, 2010; Harvey & Bice, 2014; Prno & Slocombe, 2012).

Aside from there being a strong business case for IBAs, they are also favored by First Nations groups as they can entrench access to benefits from mining projects (Fidler, 2010). Economic benefits are addressed through a number of different avenues such as Aboriginal employment guarantees, training programs, contracting opportunities, and royalty payments and revenue sharing. They can also serve to alleviate concerns relating to activities on First Nations' traditional lands, or those that may impact First Nations' communities by agreeing upon proper company conduct, grievance mechanisms, cultural provisions, and environmental performance and monitoring (Fidler & Hitch, 2007; Fidler, 2010; Galbraith et al., 2007; Heisler & Markey, 2014).

Other stakeholder groups, such as non-aboriginal municipalities and regional governments, do not typically receive the same kind of attention from mining companies or the provincial government (Heisler & Markey, 2014). Instead of IBAs and ECDAs, local governments must depend on more indirect benefits such as infrastructure development, employment opportunities, and a small portion of provincial tax revenues (Heisler & Markey, 2013). In some cases mining companies are known to provide financial support or sponsorship for community projects (Heisler & Markey, 2013).

Critics note that the emergence of IBAs generates a host of new concerns. The techno-scientific nature of mining development can put inexperienced First Nations communities at a capacity disadvantage (Haalboom, 2014). This puts proponents in a powerful position, as mining companies will typically have significantly more expertise and resources at their disposal than First Nations groups (Fidler & Hitch, 2007), and aggressive negotiation timelines may not allow First Nations enough time to properly vet proposals (Sosa & Keenan, 2001).

Boutilier (2014) counters the idea of the ignorant community, noting: 'they hold significant power regardless of scientific prowess, the straightforward nature of most proposals, and the proliferation of NGOs, activists, consultancies, and legal firms that support communities involved with extractive projects.' Indeed, project proponents are known to fund consultants and negotiators for the First Nation they are engaged with to ensure adequate capacity. An agreement that is good for both sides is good for business as it decreases the potential for future conflict (Fidler & Hitch, 2007).

A potential barrier to the legitimacy of IBAs is their often confidential nature (Fidler & Hitch, 2007; Heisler & Markey, 2014; Nelsen, 2015). The agreements contain sensitive information, including financial arrangements, and thus both parties may seek a non-disclosure agreement. Indeed, contents of IBAs can be unknown to a Band's own membership until post-ratification (Williams, 2012), prompting internal divisions or accusations of the First Nation being 'paid off' (Fidler & Hitch, 2007; Heisler & Markey, 2014). Fidler and Hitch (2007) suggest that confidentiality could be a calculated move on the part of the mining industry to deprive First Nations of the ability to collaborate on IBA experiences.

Despite efforts of both industry and First Nations leaders to improve their relationship, the two groups share a wary and at times adversarial relationship, shadowed by the mining industry's unfortunate legacy of environmental mismanagement (Donald, 2013), and dispossession of indigenous peoples (Banerjee, 2008). However, with shifts in industry best practices (environmental management, aboriginal engagement, IBAs), and positive rhetoric being espoused by both sides, there is optimism for the future of industry-First Nations relationships in Canada.

## **2.7 GUIDELINES FOR SUSTAINABLE DEVELOPMENT**

A variety of guidelines have been developed in response to the need for the mining industry to improve best practices in social and environmental sustainability. These include both guidelines for designing and implementing practices that support sustainable development, and systems for results based reporting. Gaining a social license to operate is not explicitly stated as a goal of these guidelines, but the language and tone endorse a movement toward gaining the type of support, respect, and trust from stakeholders that echo a SLO.

These guidance documents come from a variety of sources, and their origin is reflected in the tone and focus of the document. Guidelines developed by industry tend to convey the benefits of continued sustainable economic benefits, environmental protection, and social development that can occur throughout the life-cycle of a mine (AMEBC, 2015; MMSD, 2002; PDAC, 2014). Guidance documents often reference the Bruntland Commission definition of sustainable development: "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (Bruntland Commission, 1987)

There is considerable variability in reporting approaches taken by different companies and across different industries (Herzig & Schaltegger, 2011). Furthermore, quantitative analysis of both sustainability performance and SLO is not common, making it difficult to draw correlations or investigate cause and affect relationships between sustainability performance and SLO for a single operation or company.

Government guidelines, codes, or legislation tend to be more technically detailed and specific to the challenges faced in each jurisdiction. They require attention to specific components that need to be addressed, but do not provide exact criteria to be applied to the components (Collins, 2015).

Guidelines from international financial institutions such as the IFC and World Bank are broad in scope, and focus on a more holistic approach to environmental and social risk management (Collins, 2015). Given the global reach of these organizations, their guidelines are generalized with the goal of being applicable to projects worldwide.

The site specific nature of mines results in guidelines that rarely attempt to give exact criteria for sustainable development planning and practice. Rather they provide a wide scope, leaving operators to develop their own set of criteria and objectives that is acceptable to stakeholders at each of their operations. Specific to the topic of this thesis, existing guidelines do not address the maintenance of company-community relationships through corporate transitions. Therefore, one of the goals of this research is to fill gaps in these guidelines specific to the research topic.

### 2.7.1 Industry-led Guidelines

Canada wide, two organizations advocate for the mining and mineral exploration industry. The Prospectors and Developers Association of Canada (PDAC), is made up of Canadian based professionals, companies, and services providers who work in the mineral exploration industry. Its sister organization, the Mining Association of Canada (MAC), fills the same role for mine operators and related companies. Membership overlap between the two organizations is extensive. Each has designed its own guidance frameworks for sustainable development planning, catering to the specific needs of their membership.

PDAC's set of guidance documents, e3 Plus, focuses on the activity of exploration companies through the early stages of exploration and development. They also cater to the smaller, junior explorer, as a significant portion of PDAC's membership falls into that category. Their "Principles for Responsible Exploration" relate directly to the early establishment of constructive company-community relationships:

1. *Adopt Responsible Governance and Management*
2. *Apply Ethical Business Practices*
3. *Respect Human Rights*
4. *Commit to Project Due Diligence and Risk Assessment*
5. *Engage Host Communities and Other Affected and Interested Parties*
6. *Contribute to Community Development and Social Wellbeing*
7. *Protect the Environment*
8. *Safeguard the Health and Safety of Workers and the Local Population*

(PDAC, 2014)

MAC uses its Towards Sustainable Mining (TSM) framework to give guidance to its members on a wide range of topics relating to sustainability. In its guiding principles, TSM outlines the recommended conduct for its members:

*"[O]ur actions must demonstrate a responsible approach to social, economic and environmental performance that is aligned with the evolving priorities of our communities of interest. Our actions must reflect a broad spectrum of values that we share with our employees and communities of interest, including honesty, transparency and integrity. And they must underscore our ongoing efforts to protect our employees, communities, customers and the natural environment."* (MAC, 2015)

TSM has been adopted by many of Canada's largest miners (MAC, 2014). Companies that have signed on to the program are required to self-audit their operations using the TSM system and report their findings in annual sustainability reporting (See section 2.7.5).

In British Columbia, two local industry organizations compliment the roles of PDAC and MAC - the Association for Mineral Exploration British Columbia (AMEBC), and the Mining Association of British Columbia, respectfully. Three of AMEBC's six key priority areas are related to sustainable development and social-political risk mitigation. These are aboriginal relations and engagement, public awareness and stakeholder education, and socially responsible exploration (AMEBC, 2014). AMEBC's advocacy in these areas is in addition to guidance documents published on aboriginal relations and engagement (See section 2.7.4), and presentation of an annual award for social and environmental excellence.

MABC is primarily an advocacy group for mining in the province, and recommends MAC's TSM guidelines to its membership. MABC also presents a Mining and Sustainability Award in conjunction with the BC Ministry of Energy and Mines. The award is billed as an "opportunity to publicly recognize the diverse companies, communities, First Nations, non-governmental organizations, government agencies and individuals committed to advancing and promoting sustainable development in the B.C. mining sector." (MABC, 2015)

Internationally, the International Council on Mining and Metals (ICMM), is made up of 23 of the biggest mining companies in the world, in addition to 34 national and regional mining associations and global commodity associations (ICMM, 2015). The ICMM works at the executive level to advocate on issues relating to mining and sustainable development. ICMM's guidance document takes the shape of their 10 Principles to Sustainable Development, and requires member companies to make a public commitment to improve their sustainability performance and report against their progress on an annual basis (ICMM, 2015).

Lastly, the Mining, Minerals and Sustainable Development (MMSD) project developed the 7 Questions to Sustainability in 2002 (See Figure 2.5). MMSD was an international project with local partners creating a profile of regional mining industries, reviewing the current contributions to sustainable development, and evaluating contributions and implications of mining practices as viewed by impacted stakeholders. Much like the other guidance documents discussed above, the 7 Questions do not in themselves address specific industry issues, like corporate transitions. Instead, they broadly define standards for company behavior at projects, which if adopted can contribute to the development of progressive corporate cultures.



Figure 2.5: MMSD Seven Questions to Sustainability (MMSD, 2002)

## 2.7.2 Government Guidelines & Regulation

Federally, Canadian mining regulation and guidance falls under the jurisdiction of Natural Resources Canada (NRCan) and Environment Canada. NRCan controls mining regulations, which do not reference sustainable development or related topics. NRCan does publish guidance notes on Community Engagement and Readiness, accompanied by illustrative case studies. Global Affairs Canada (GAC), publishes guidelines and a guidance report on CSR strategy for Canadian companies operating abroad. These guidelines relate well to the literature, stating:

*"[T]hose that go above and beyond basic legal requirements to adapt their planning and operations along CSR lines are better positioned to succeed in the long term, and to contribute to a more stable and prosperous environment for all affected parties. This is best done as early as possible, taking into consideration the project's life cycle from initial exploration to closure and beyond." (GAC, 2014)*

Included in this strategy is the office of the Extractive Sector Corporate Social Responsibility Councillor, charged with providing advice and dispute resolution to Canadian mining companies (GAC, 2015). However, this office has been criticised as lacking independence, and the ability to sanction offending parties (Coumans, 2010; Coumans, 2016). Like the guidance document, it is directed at Canadian companies operating abroad, and does not account for issues that may occur domestically.

Environment Canada has an Environmental Code of Practice for Metal Mines, included in the Canadian Environmental Protection Act (1999). This includes detailed environmental best practices

for mining activities throughout the entire mine life-cycle. Environment Canada also plays a regulatory role through Environmental Assessment, as discussed in Section 2.5.1.

British Columbia's ministries are similar to those in Ottawa, with the Ministry of Energy, Mines, and Petroleum Resources (MEMPR) and the Ministry of Environment providing oversight for mining activity. MEMPR governs through the Mineral Tenure Act (2010) and the Mines Act (1996). The Ministry of Environment is responsible for much of the permitting mines must go through, as well as Environmental Assessment (See Section 2.5.1).

In addition to the regulatory capacity, the provincial ministries provide support and guidance to the mining sector and impacted stakeholders through a variety of initiatives relating to the topics discussed in this literature review. MEMPR's 2014 Annual Service Plan report (2014) devotes space to sustainable development goals, particularly First Nations, stating a major objective as to:

*"Foster working relationships among industry, the public, First Nations and landowners by clarifying and simplifying resource exploration and development management processes, enhancing dispute resolution methods, and offering more support and information. Continue to collaborate with other ministries, agencies and Crown corporations to provide information to promote greater public understanding of the exploration and development of resources. Support the development and continuous improvement of Strategic Engagement Agreements with First Nations to make consultation processes more predictable." (MEMPR, 2014)*

Furthermore, the BC Mineral Exploration and Mining Strategy (2012) also includes commitments to environmental protection and improving relationships with First Nations communities. Specifically, improving engagement and strategic engagements, and promoting revenue sharing agreements, ECDAs, and IBAs (See Section 2.6.1). With the goal of building "strong enduring relationships between the mining industry, communities, and First Nations; the development and implementation of a BC approach to sustainable exploration, mines, and communities." (MEMPR, 2012).

### **2.7.3 International Organizations & Financial Institutions Guidelines**

A number of International organizations and financial institutions have become very involved in the mining and metals as the industry expands into a wide variety of countries. Motivated by poor industry practices in the past, international financial institutions such as the International Finance Corporation (IFC) division of the World Bank have underlined the importance of social and environmental stewardship at projects they underwrite.

As a member of the World Bank Group, the IFC provides financing to many mining and other extractive sector projects, particularly in developing countries to aid development and. As part of their development oriented mandate, the organization publishes eight performance standards it expects clients to adhere to during project development and operation. These are:

- 1. Assessment and Management of Environmental and Social Risks and Impacts*
- 2. Labor and Working Conditions*
- 3. Resource Efficiency and Pollution Prevention*
- 4. Community Health, Safety, and Security*
- 5. Land Acquisition and Involuntary Resettlement*

6. *Biodiversity Conservation and Sustainable Management of Living Natural Resources*
7. *Indigenous Peoples*
8. *Cultural Heritage*

(IFC, 2012)

The identification and avoidance of adverse social and environmental impacts is entrenched throughout this document. This is especially true in relation to issues highly relevant to the Canadian context, such as working with indigenous peoples, impact assessment and management, and community health. The standards also state that if any impacts are deemed unavoidable, that minimization, restoration, and compensation in a contextually appropriate manner are required for the affected stakeholders. Proponents that source funding from the IFC are required to meet these requirements, and are regularly audited to assure their compliance (IFC, 2012).

Much like the IFC Performance Standards, the 10 guidelines that make up the Equator Principles are designed to be used by financial institutions to manage risk to investments, particularly in developing countries. The Equator Principles have been adopted by financial institutions in 36 countries, and cover over 70 percent of international project finance debt in emerging markets (Equator Principles, 2013). These guidelines mirror those of the IFC, but lend more weight to specific instruments:

1. *Review and Categorization*
2. *Environmental and Social Assessment*
3. *Applicable Environmental and Social Standards*
4. *Environmental and Social Management System and Equator Principles Action Plan*
5. *Stakeholder Engagement*
6. *Grievance Mechanism*
7. *Independent Review*
8. *Covenants*
9. *Independent Monitoring and Reporting*
10. *Reporting and Transparency*

(Equator Principles, 2013)

These principles lend themselves well to the mining context, as tools such as environmental assessment, stakeholder engagement, and grievance mechanisms see widespread use at project sites around the world. However, as with the IFC standards, their intended use as guidelines for bank-funded projects means there are unlikely to be binding in Canada, where mining projects routinely seek funding from other sources.

Other guidelines, such as ISO 26000, the Voluntary Principles on Security and Human Rights, and the United Nations Guiding Principles on Human Rights contain many similarities to the previously mentioned guidelines. A main difference being they are strictly voluntary guidelines with no enforcement capacity (ISO, 2010; UNHRC, 2011). Indeed, while some Canadian operations have adopted parts or all of these guidelines, critics note their use within Canada lacks credibility due to their voluntary nature and lack of independent auditing.

## 2.7.4 Consultation Guidelines

The guidelines review in the previous sub-sections cover a wide array of practices. In particular, consultation with stakeholders – a key theme of this study – is a central subject throughout. The consultation guidelines vary in accordance with the intended audience and the context of the social-political environment they are working. For example, Canadian based organizations highlight the importance of building constructive relationships with aboriginal peoples, due to the significant influence they have on resource development across the country (See section 2.6).

AMEBC outlines recommended engagement principles for working with Aboriginal communities in their document: *Aboriginal Guidebook: A Practical and Principled Approach for Mineral Explorers*. The guiding principles for building sustainable relationships with Aboriginal communities are outlined by AMEBC (2015) as follows:

1. *Work proactively with Aboriginal communities to build mutually beneficial relationships based on a shared understanding of our respective rights and interests.*
2. *Respect existing and asserted Aboriginal and treaty rights.*
3. *Respect Aboriginal communities' assertions regarding their traditional territories.*
4. *Respect the diversity of interests and cultures among Aboriginal Peoples and their respective relationships and views towards land and its resources.*
5. *Assist, to the extent reasonable, governments in carrying out their duty to consult and, where appropriate, accommodate Aboriginal Peoples regarding government decisions that may affect existing and asserted Aboriginal and treaty rights.*
6. *Ensure early and timely discussions with local Aboriginal communities regarding activities that may affect them.*
7. *Provide potentially affected communities with the information needed to encourage open, meaningful dialogue that addresses their interests and concerns.*
8. *Encourage the governments to carry out their duty to consult in a manner that reasonably balances existing and asserted Aboriginal and treaty rights with the interests of AME BC and its members.*

(AMEBC, 2015)

Like AMEBC, working with aboriginal peoples is a core section of MAC's consultation guidelines. Their guidance document, *TSM Protocol: A Tool for Assessing Aboriginal and Community Outreach Performance* (2012), includes four performance indicators:

1. *Community of Interest (COI) Identification:*
2. *Effective COI Engagement and Dialogue*
3. *COI Response Mechanism*
4. *Reporting*

(MAC, 2012)

Each of these performance indicators is further broken down into various assessment criteria, and supported with supplemental information on frequently asked questions. The protocol aims to ensure mining operations engage in meaningful dialogue with communities of interest and that their feedback is being considered in decision-making. TSM also emphasizes the need for effective mechanisms for receiving complaints and concerns, and communicating solutions to stakeholders (MAC, 2012).

### 2.7.5 Reporting Guidelines

The guidelines discussed in the previous sub-sections are eminently useful tools that can add value to projects for proponents and stakeholders alike. However, the degree to which they are effective is debatable, which is where reporting metrics can prove useful.

Many of the aforementioned guidelines include reporting mechanisms used by mining companies for their annual sustainability reporting (Jenkins & Yakovleva, 2006; van Vlaenderen & Neves, 2011). Towards Sustainable Mining and the Equator Principles, for example, include provisions for reporting and transparency as the final step in their sequence. TSM in particular, includes assessment protocol and performance indicators for each of its focus areas, including a scale ranking performance from C to AAA (MAC, 2012).

The Equator Principles address reporting in Principle 10 – Equator Principles Financial Institutions (EPFI) Performance, which states:

*“Each EPFI adopting the Equator Principles commits to report at least annually about its Equator Principles implementation processes and experience, taking into account appropriate confidentiality considerations.*

*“Such reporting should at a minimum include the number of transactions screened by each EPFI, including the categorization accorded to transactions (and may include a breakdown by sector or region), and information regarding implementation.”*

(Equator Principles, 2012)

Like the Equator Principles, the Extractive Industries Transparency Initiative (EITI) is a framework of international standards. Supported by the World Bank, the EITI is designed to improve transparency relating to extractive sector revenues in countries around the world. EITI reporting standards oversee the payments made by extractive sector companies to the state government, with each actor's disclosures verified by an independent auditor (EITI, 2014).

The EITI has seen significant uptake worldwide, with 49 countries currently signed on to the initiative (EITI, 2014). However, it has come under criticism due to the inability to address the redistribution of extractive sector revenues (Moiana, 2012).

Lastly, the Global Reporting Initiative reporting guidelines represent the world leading group in sustainability reporting systems (Brown et al., 2007), aiming to bring sustainability reporting to the level of financial reporting (Willis, 2003). The GRI publishes the G4 Guidelines, designed to allow companies in all sectors to evaluate the environmental, social, and financial impact of their activities and quantify them in sustainability reports. GRI guidelines align with other international standards for environmental performance, health and safety, emissions, and others (GRI, 2014).

The GRI guidelines have been widely adopted by mining companies as a tool for establishing organizational legitimacy (Hedberg & Von Malmborg, 2003). While the guidelines themselves are acclaimed as the high standard for sustainable development reporting (Brown et al., 2007), critics note many companies listed as adopting GRI guidelines do not employ them strictly, rather alluding to them as a source of inspiration (Hedberg & Von Malmborg, 2003).

### **2.7.6 Summary of Sustainable Development Guidelines**

The sustainable development frameworks discussed through section 2.7 are valuable tools that can have positive effects on company practice. Furthermore, the vetting and reporting of practices can add a level of accountability and transparency to company activities. By adopting sustainable development guidelines, companies can improve levels of transparency, trust and reputation in the communities where they operate.

Indeed, the consultation guidelines alone provide a strong foundation for positive company-community relationships. Companies that launch respectful, fair and early engagement with stakeholders improve their chances of establishing the type of constructive relationships that can lead to a Social License to Operate (Moffat & Zhang, 2014).

However, sustainable development guidelines have also encountered criticism. Larner & Mason (2014) write that it can be challenging for companies to move past the 'box-ticking' approach to sustainable development and corporate social responsibility that guidelines can entrench.

Due to the voluntary nature of sustainable development guidelines, critics note some companies who publicize their adoption of guidelines do not employ them strictly, rather alluding to them as a source of inspiration (Hedberg & Von Malmberg, 2003). Guidelines can also be applied with varying rigor to exploration projects versus operating mines, and indeed to different mines operated by the same company. By attempting to leverage reputational capital from sustainability reporting without accompanying checks and balances, companies risk appearing insincere in their commitments.

When auditing and reporting of sustainability performance in the mining industry does take place, it is often undertaken by global accounting firms or related service providers. Much as with Impact Assessment, this arrangement has been criticized, as the work of these service providers is reflective of client – not stakeholder – interests (Bice & Moffat, 2014). Given a common corporate ambition of improving organizational legitimacy and reputation through sustainability reporting (Hedberg & Von Malmberg, 2003; Simnett et al., 2009), skepticism is understandable.

Kemp et al. (2012) explain that a dependence on quantitative reporting has created an 'audit culture' around CSR and accountability in the mining industry. Measuring performance data against pre-selected indicators can miss more nuanced stakeholder perceptions on what sustainability means to them. While the quantitative approach instigates an internal dialogue on company practices (Kemp et al., 2012), it may miss intricacies specific to the operational context.

Indeed, while a useful tool, it appears sustainability guidelines do not on their own assist companies in building effective relationships with stakeholders. They are only one aspect of a comprehensive plan for sustainable development.

## **2.8 DISCUSSION**

This review does not touch specifically on corporate transitions at mining projects due to a gap in the literature. Instead it makes the assumption that current best practices on general management of socio-political risk – as defined by the literature – could play an important role in examining how to manage these issues in the corporate transition context.

Following this, the literature suggests that socio-political risk at mining projects is a valid concern for mining companies, with the potential for significant economic and reputational consequences if these issues are not given the proper credence (See Section 2.2).

To address the issue of socio-political risk, industry has accepted the need to obtain stakeholder support for projects and began to adopt the Social License to Operate model – the concept that the ongoing acceptance, approval, or consent from local stakeholders must precede activity. In order to move toward a social license, project proponents and operators must conduct meaningful engagement with stakeholder groups. Characterized by maintaining regular and transparent communication, this engagement aids the development of trust and reputational capital around corporate-stakeholder relationships (See Section 2.3).

Mining companies must also ensure that negative impacts of their operations are properly assessed and mitigated, and expand from the traditional 'jobs at the mine' benefit narrative that has historically underwritten the industry's social contract. More modern constructs like IBAs have formalized the flow of direct benefits, particularly with Canadian aboriginal peoples (See Section 2.6.1).

These ideas and activities fall under the umbrella of Corporate Social Responsibility, which reinforces the SLO model by demonstrating that there is a need for mining companies to provide some benefit to stakeholders other than their shareholders (See Section 2.4).

A number of guidelines for best practices in fields associated with socio-political risk management are published by industry, government, and international organizations (See Section 2.7). These guidelines provide support for companies on a range of topics relating to social and environmental sustainability. While these guidelines are useful, they vary in reach and effectiveness, and most relevant to this study – do not address transitions specifically (See Section 2.7.6).

In order to minimize socio-political risk, miners must integrate the concepts discussed above with their employees and operations, and maintain them throughout the mine life-cycle. Following this, a key to managing corporate transitions is the prior existence of strong corporate-stakeholder relationships underpinned by concepts such as SLO and CSR, the continuity of these practices through the transition, and their preservation after the transition is completed.

To further examine these factors and their impact on corporate transitions, interviews in the case study portion of this study sought to explore their role in relation the interviewees' experience and perceptions of transitions at the Mt. Milligan mine before, during, and after they occurred. This design is further discussed in Sections 4 and 6.

### 3. SETTING

Canada is an important global player in the mineral exploration and mining industry, both in terms of domestic operations and the global reach of Canadian companies. Drake (2012), notes that 48% of the world's "larger exploration companies" (as defined by NRCAN) are based in Canada (Figure 3.1). The experience of miners at domestic Canadian operations are important for informing and developing mining practice and policy worldwide, and are subsequently disseminated through domestic industry organizations such as MAC, CIM, and PDAC.

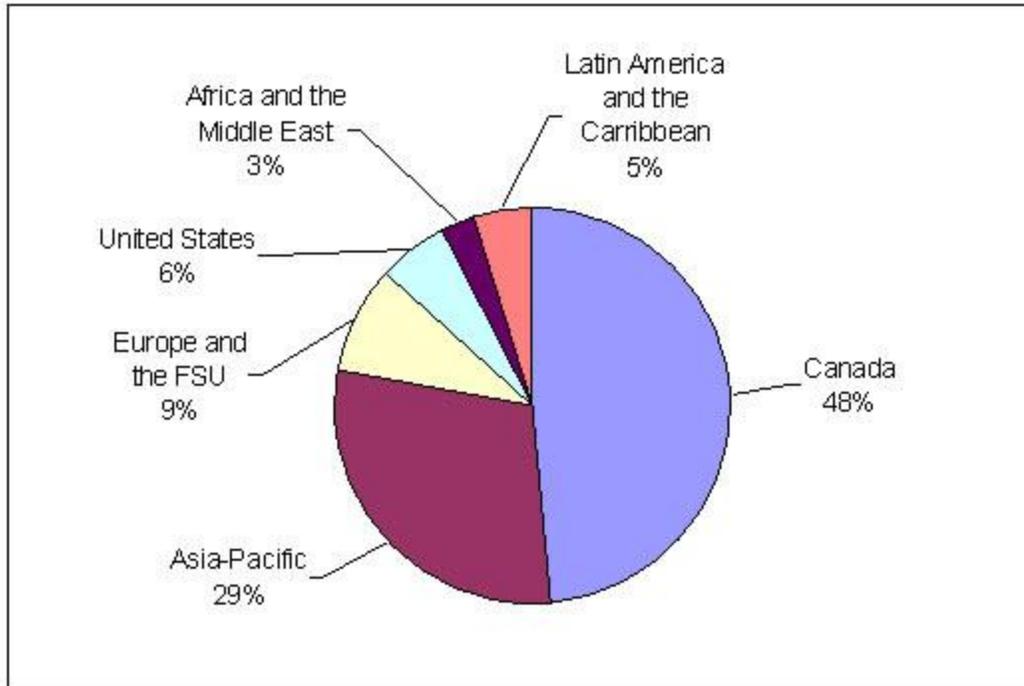


Figure 3.1: Distribution of the world's larger exploration companies, by domicile, 2010 (Drake, 2012)

This chapter examines the Canadian mining industry – particularly in British Columbia – and how the structure of the industry results in a transactional business model. The regular occurrence of ownership transitions in all stages of the project life-cycle contributes to the challenges faced by the industry explored in the previous chapter, and supports the hypothesis that special attention must be paid to managing socio-political dynamics in these situations.

#### 3.1 MINING IN BRITISH COLUMBIA

Mining is a core industry in British Columbia, and one of the province's most important economic drivers. In 2014, the mining sector employed 9,954 people and gross mining revenue was C\$8.2 billion. This revenue resulted in payments to government of \$467 million (PwC, 2015).

British Columbia has the world's largest concentration of mining and exploration companies and mining professionals (MEMPR, 2009), and the province is home to over 1200 exploration companies (MABC, 2014). Exploration and development expenditures for 2014 totaled C\$234 million (PwC, 2015). British Columbia is Canada's largest producer of copper, its only producer of molybdenum and the largest exporter of coal (BCGS, 2014). Over 50 percent of all Canadian rail-freight revenues

and port tonnage comes from the BC mining industry. In 2012, mining contributed 4.5 percent to BC's GDP (MAC, 2013).

Both the current federal and provincial governments are supportive of the mining industry. The provincial government funded the British Columbia Mineral Exploration and Mining Industry Labour Shortage Task Force from 2007- 2015 to ensure the industry continues to develop adequate human resources capacity (CTEM, 2015). Since 2005, the Province has contributed over \$4.8 million in funding for mining education and skills training for communities and First Nations. The mining industry is the largest employer of First Nations people in BC (MABC, 2014). The government also helps fund Geoscience BC, an industry led NGO that generates research to stimulate mineral plus oil and gas exploration (MEM, 2014).

Since 2011, four new mines have begun production in BC – New Afton, Copper Mountain, Mt. Milligan, and Red Chris. Another six mines have been approved for expansion (PwC, 2015). In 2011 the BC government initiated the BC Jobs Plan, projecting that new and expanded mines will create approximately 2,000 construction jobs, 2,000 new direct jobs and 3,000 indirect jobs, in addition to sustaining existing employment levels (Government of BC, 2013).

Despite this support, a recent Fraser Institute study (Cervantes et al, 2015) dropped BC to 42<sup>nd</sup> worldwide in jurisdictions that have positive policy potential for mineral development, and tenth out of the twelve Canadian provinces and territories reviewed for investment attractiveness. Uncertainty around environmental regulations, status of protected areas, and First Nation's rights and title were cited as reasons for the low ranking.

While mining has traditionally been strong in BC, the industry has faced challenging market and operational conditions through 2014 and 2015. A recent industry profile by PricewaterhouseCoopers (2015) notes that gross and net mining revenues, exploration and development expenditures, payments to governments, shareholders returns, and employment numbers all declined in 2014.

A drop in commodity prices has also created a challenging environment for investment in the sector. Prices for coal, copper and gold have fallen, and investor confidence is low. Junior companies in particular are finding it difficult to access capital (MABC, 2013). Low commodity prices have also forced miners to delay expansions and project starts, and in 2015 six operations around the province were moved into care and maintenance (PwC, 2015).

Additionally, Nelsen (2015) notes four factors that make the development of large open pit copper mines (like Mt. Milligan) challenging in British Columbia: a strong environmental movement, complex metallurgy and low grades, high construction and operation costs, and a shortage and high cost of skilled labour.

### **3.2 DEVELOPING A METAL MINE IN BRITISH COLUMBIA**

A typical mining project takes decades to develop from exploration into an operating mine. In addition to robust planning processes that are typical of large industrial projects, mines in British Columbia, and indeed around the world, are characterized by long exploration and development stages. They are also not developed by one entity. A mineral property is usually worked by a number of different entities, from grassroots prospectors to the exploration and engineering divisions of major mining companies, before it becomes a mine.

To demonstrate the complex timeline common to mine development projects in British Columbia, this section will review the history of proposed and operating mining projects in BC, from grassroots exploration through construction and operation. This review will highlight the time involved in turning a promising exploration target into an operating mine, and the veritable carrousel of proponents that are typically involved throughout.

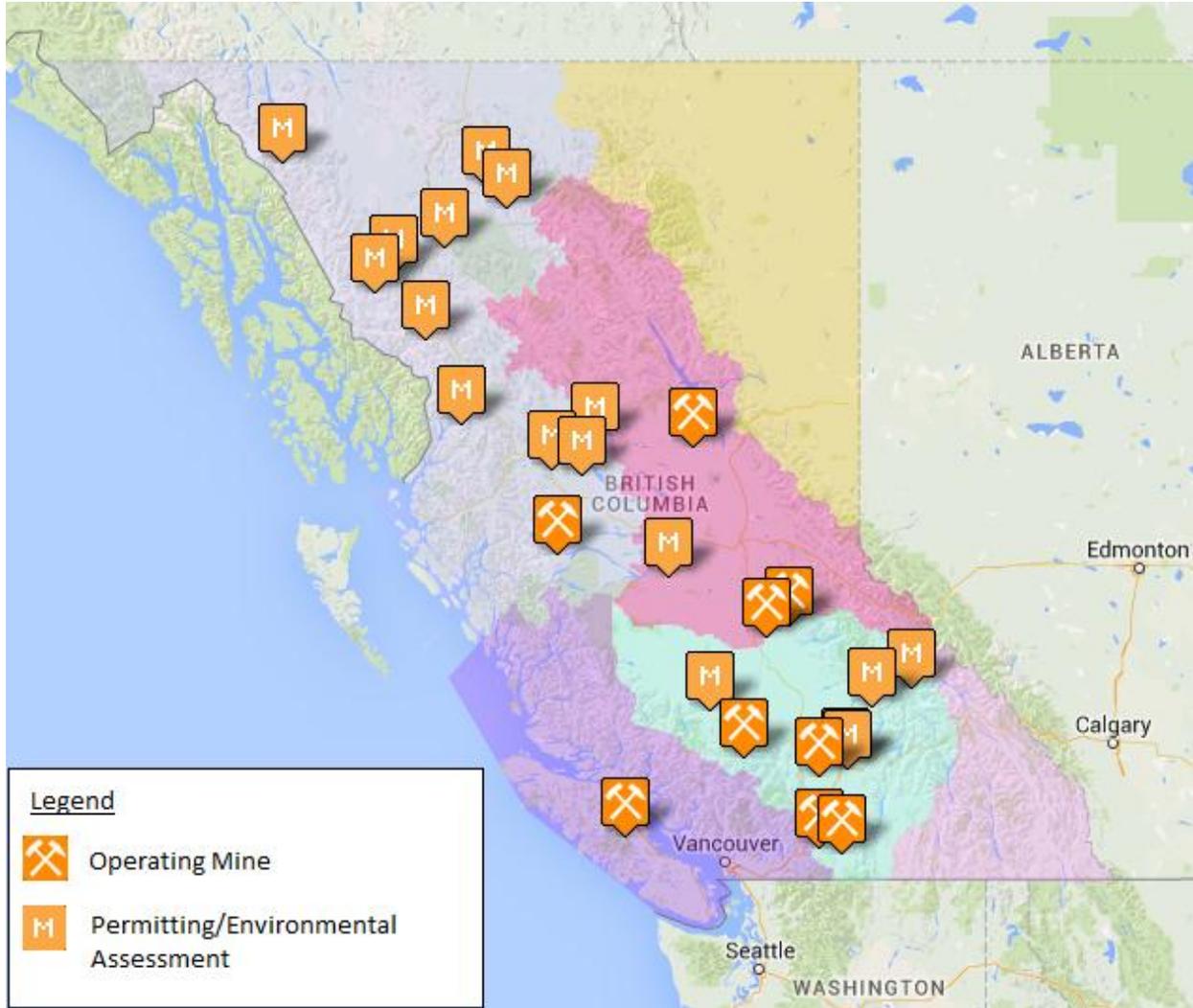


Figure 3.2: Mining projects in British Columbia (MABC, 2015)

The Mining Association of British Columbia currently lists 11 operating metal mines in British Columbia, with a further 15 proposed projects in the permitting stage or undergoing an environmental assessment. Only metal mines are included in this analysis, as coal and industrial mining projects follow a different development profile, cost breakdown, and risk profile (MacDonald, 2002). These mines are spread throughout BC (Figure 3.2), and produce a wide range of precious and base metals, including gold, silver, copper, zinc, molybdenum, and nickel.

These 26 projects represent only a fraction of the total exploration work in British Columbia by project volume – only 1 in 10,000 mineral claims explored are turned into economically viable mineral deposits (NRCAN, 2006). MacDonald (2002) notes "[t]here is no comparable industry when it comes to the percentage chance of failure that any given exercise is faced with." Given the

challenges in proving an economically viable deposit, these operating and advanced-exploration projects represent significant accomplishments for the Canadian mineral exploration and mining industry.

An economically viable mineral deposit takes a long time to prove. Exploration work – activities such as geophysical surveys, diamond drilling, and economic and technical studies – are time consuming and expensive. Prospective exploration targets are often in remote areas, and may only be accessible seasonally. Additionally, even the most attractive target is subject to market volatility, where a sustained period of adverse share and/or metals prices can drive the small 'junior' exploration companies that characterize grassroots development in British Columbia to suspend operations, or even out of business.

Once proven, however, a deposit must go through an environmental assessment and be fully permitted before it can be mined. The assessment evaluates potential adverse environmental, economic, social, heritage, and health effects that the proposed project could cause (MoE, 2015). Proposed projects are vetted by the British Columbia Environmental Assessment Office (BC EAO), and depending on the parameters of the project, a concurrent review by the federal Canadian Environmental Assessment Agency (CEAA)(See Section 2.5.1).

The permitting process is, like the exploration program that preceded it, time consuming and expensive. The recently permitted and operating Mt. Milligan mine took a total of 39 months to navigate the process (BC EAO, 2013), and is considered a success story within the industry (Northern Miner, 2013; Nelsen, 2015).

The rigorous assessment process is a relatively recent addition to the numerous hurdles a proponent must clear in order to take a mineral project to production. In Table 3.1, the 26 operating and proposed mines from Figure 3.2, along with their current proponent, are charted along with a basic history of development.

The number of operating metals mines in BC regularly fluctuates, as varying commodity prices impact the profitability of mining operations, and can cause them to be placed on care and maintenance for extended periods. Furthermore, the number of projects in the permitting/assessment phase also fluctuates, as proponents submit new projects to the BC EAO, and withdraw projects to revise application documents or wait for a more favorable economic, political, or social climate to advance the project. For the purposes of this review, only mines in operation or permitting/assessment during the spring of 2015 (as per MABC, 2015) were reviewed.

Mine	Owner/Proponent	Initial Discovery	Past Production	Current Operating Period	Time lapsed in Years (Discovery-Operation)	Project Proponents
<i>Operating</i>						
Bralorne	Avino Silver & Gold Mines Ltd	1928	1928-1971	2010-	82	4
Copper Mountain	Copper Mountain Mining	1884	1923-1957; 1979-1985; 1988-1996	2011-	127	7
Gibraltar	Taseko Mines Ltd	1917	1972-1993; 1994-1998	2004-	87	8
Highland Valley Copper	Teck Resources	1914		1962-	48	5
Huckleberry	Huckleberry Mines Ltd/Imperial Metals Corp	1962		1997-	35	7
Mt. Milligan	Thomson Creek Metals	1937		2013-	76	8
Myra Falls	Nyrstar	1917		1966-	49	5
New Afton	New Gold Inc	1887	1977-1991	2012-	125	15
QR	Barkerville Gold Mines Ltd	1975	1994-1997	2012-	37	6
Treasure Mountain	Huldra Silver Inc.	1892	1930-1932	2011-	119	5
Red Chris	Imperial Metals Corp	1956		2015-	59	9
				<b>Average:</b>	<b>77</b>	<b>7</b>
<i>Permitting/Environmental Assessment</i>						
Ajax Project	KGHM Ajax Mining Inc	1928			87	8
Avanti Kitsault Mine	Alloycorp Mining	1911	1968-1972; 1981-1982		104	7
Chu Molybdenum	TTM Resources	1965			50	5
Davidson Property	Thomson Creek Metals	1957			58	3

Mine	Owner/Proponent	Initial Discovery	Past Production	Current Operating Period	Time lapsed in Years (Discovery-Operation)	Project Proponents
Dome Mountain	Metal Mountain Resources	1923	1991-1993		92	5
Galore Creek	NovaGold/ Teck Resources	1955			60	6
Harper Creek	Yellowhead Mining Inc	1966			49	7
Kerr-Sulphurets-Mitchell	Seabridge Gold	1965			50	10
Kutcho Creek	Capstone Mining Corp	1968			47	7
Morrison	Pacific Brooker Minerals	1962			53	2
New Prosperity	Taseko Mines Ltd	1935			80	6
Ruddock Creek	Imperial Metals Corp	1960			55	6
Shaft Creek	Copper Fox Metals Inc	1957			58	5
Tulsequah Chief	Chieftain Metals Inc	1925			90	4
Turnagain	Hard Creek Nickel	1956			59	4
				<b>Average:</b>	<b>66</b>	<b>6</b>

*Table 3.1: Development history of current and proposed mining projects in British Columbia*

The projects detailed in Table 3.1 vary widely, from one of the biggest copper mines in the world at Highland Valley Copper, to the 100 ton per day Bralorne Gold Mine – a micro-mine by comparison. What all these mines do have in common, however, are long and complex exploration and development histories. Operating mines in BC experienced a minimum of 35 years of work on the property before operations commenced, with some projects experiencing over 100 years of exploration and development.

During this long journey from discovery to operation, these projects were managed by a variety of proponents. Historically most mining companies had their own exploration team. More recently the mining industry is built on a transactional business model that is characterized by small 'junior' companies identifying attractive mineral tenures, trying to add value through exploration and/or development, and then selling the property (or interest in the property). As shown in Table 3.1, a

property changes hands an average of seven times until it is taken on by a larger miner – one who has the financial and technical capacity to move the project into operation (Nelsen, 2015).

Larger miners prefer growth through acquisition because they see these projects as partially de-risked. The scarcity of economically viable mineral deposits means it is cheaper to develop vetted projects than spread the wide net that exploration requires (Nelsen, 2015).

Of the 15 projects in the permitting/environmental assessment stage, only four were advanced by less than five ownership groups during their histories. More common is the profile of Mt. Milligan, where initial discovery of mineralization by a prospector in 1937 was followed by the property remaining dormant for a long period. A 1980s rebound in metal prices led to a renewal of activity, with the project changing hands seven times before the mill started processing ore in 2013. The timeline of this project will be discussed in detail in Section 5.4.

A review of project proponents resulted in an average of seven successive 'owners' for operating mines, and six for those in permitting/assessment, stage although these properties may well change hands one or more times before construction starts. These transitions occurred over an average exploration and development span of 77 years for the operating mines reviewed and 66 years and counting for those in permitting/assessment.

The project timeline and the number of proponents that worked on a project was determined by reviewing project descriptions and technical reports, and the BC Ministry of Energy and Mines' Minfile mineral property listings. For the purpose of this review project proponents were determined by noting each time a new group purchased the mineral tenures, or took control of the project through option agreement or joint venture.

There are two limitations to this review. The first is the lack of data from independent prospectors and private companies, as they are not subject to the same reporting requirements as publically traded firms. Private companies and independent prospectors were routinely involved in almost all of the projects reviewed, particularly around discovery and early in their history. Due to lack of historical data, successive individual prospectors and/or private entities with minimal information were grouped as one proponent in this review.

Secondly, project management changes that occurred under the umbrella of one proponent are not reflected. This was due to the difficulty in reliably delineating these types of transitions across all projects equally. These changes are not always publically disclosed, and a more detailed inquiry on a project by project basis was outside the scope of this study. The result of these caveats is that the number of management teams for each project is likely underestimated.

The long and disjointed exploration and development timelines, advanced by a number of proponents, creates challenging conditions for the development of effective and continuous corporate-community relationships. Rather, the conditions are ripe for communities to develop a critical idea of the mining and mineral exploration industry, characterized by a rotating cast who come when times are good, and leave when they turn bad.

An understanding of this historical profile and the potential pitfalls it creates should be understood by those working on any mineral exploration or mining project. The many actors involved in the complex backgrounds of these projects require detailed documentation if a record of activity, knowledge, and commitments are to be transferred from one proponent to the next.

## **4. METHODOLOGY**

### **4.1 INTRODUCTION**

This chapter discusses the methodology used for the interview portion of this study. It outlines the choice of methodology, research procedures, participants, analysis methods, and ethical considerations.

### **4.2 CHOICE OF METHODOLOGY**

To address the research questions outlined in Section 1.2, this study used a participant observation approach and mixed methods of qualitative research methodology. Qualitative research is a "pragmatic, interpretive and grounded in the lived experiences of people" (Marshall & Rossman, 2011). Furthermore, as Denzin and Lincoln (2005) state, "Qualitative research is a field of inquiry in its own right. It crosscuts disciplines, fields, and subject matters. A complex, interconnected family of terms, concepts, and assumptions surround the term qualitative research."

The study uses a case study report to explore how corporate transitions impact corporate-stakeholder relations at mining projects. Case studies are reports of research on a specific organization, program, or process (Yin, 2010; Marshall & Rossman, 2011). This type of research relies on historical and document analysis and interviewing to gather data, provide depth and detail on specific instances of a phenomenon, and address the research question with a vividness and detail absent from more analytic formats (Marshall & Rossman, 2011).

Yin (2010) and Baxter & Jack (2008) note that case study methodology is particularly useful when:

- The focus of the study is to answer "how" and "why" questions;
- You cannot manipulate the behaviour of those involved in the study;
- You want to cover contextual conditions because you believe they are relevant to the phenomenon under study;
- The boundaries are not clear between the phenomenon and context.

Qualitative research using case studies typically:

- Draw on multiple methods that are interactive;
- Incorporates interviews, field notes, recordings etc.;
- Focuses on content;
- Is emergent and evolving;
- Is fundamentally interpretive (Marshall & Rossman, 2011; Yin, 2010; Denzin & Lincoln, 2005).

This study used interviews, a blend of 'guided' and 'dialogic,' with pre-selected participants to explore the central research question. Guided interviews ask questions about pre-determined topics/questions, while dialogic interviews use conversational inquiry that allows the interviewee to expand on related topics (Marshall & Rossman, 2011). This combined approach was selected in order to address the research questions while leaving room to generate new meanings with participants.

The study used a participant observation approach as data was also collected through the researcher's own observations during data collection. The research included field visits to both the case study region and to mining company headquarters. These visits were primarily to conduct interviews, but also allowed the researcher to observe both the context and experience of stakeholders in the case study region, and both broad and case-specific approaches and attitudes to socio-political risk mitigation in the mining industry. Participant observation allows the researcher to analyze for the nuance, subtlety, and other phenomena that is not possible with other methods (Yin, 2010).

It is important to note that the process of qualitative research can be subjective, and each qualitative researcher brings their own distinct frame of reference. Patton (2002) proposes a range of questions to explore the researcher's bias, and how the participants and those receiving the study (audience) influence the data. These reflexive questions will be discussed in the following sub-sections.

#### **4.2.1 The Researcher**

The researcher's background and position can influence research participants and how they perceive the interview process (Marshall & Rossman, 2011). The researcher holds prior background knowledge of the fields of mineral exploration and mining. The researcher is looking at the topic from a mining industry viewpoint, and has analyzed this case study primarily to identify best practices for mining companies around corporate transitions. The researcher's background and position were openly shared with all interviewees.

#### **4.2.2 The Participants**

The present study used a purposeful sampling approach to identify prospective interviewees for this study. Palinkas et al. (2013) describe purposeful sampling as "widely used in qualitative research for the identification and selection of information-rich cases related to the phenomenon of interest."

Current and past management of the Mt. Milligan project were sought for their experiences during corporate transitions at varying stages of the project life cycle. Stakeholders involved with and affected by the Mt. Milligan project were sought for their experiences and interactions with the project proponent through corporate transitions. This included leaders from local First Nations communities affected by the project, leaders from local communities affected by the project, leaders from local business interests affected by the project, and leaders from the local and regional government of the project area's jurisdiction.

These participants were identified through public company reports, and public submissions to the British Columbia Environmental Assessment Office that took place during the public comment period of permitting the mine. Any potential participants that were found to not have experience relevant to the study were excluded from the study.

All interview participants previously held or currently hold positions of leadership in their organizations or communities. For the purposes of this research, they are what Marshall and Rossman (2011) deem "elite individuals," as they are considered influential, prominent, and/or well informed in their organization or community. Challenges of interviewing elites were recognized when designing this study, and include difficulty in gaining access, sophistication in managing interview process, and the need for the interviewer to establish prior competence and credibility on interview topics (Marshall & Rossman, 2011).

Selecting a proper sample size can be a complex task based on many factors (Marshall & Rossman, 2011). To gain a robust and well-rounded understanding of the views and approaches of the companies involved, the author attempted to interview an equal number of management from Placer Dome, Terrene Metals, and Thompson Creek Metals. The author also attempted to interview a representative sample of stakeholders from each of the impacted communities.

A total of 24 interviews were conducted for this study. Fifteen interviews were with current and former management from Mt. Milligan. These participants were distributed across the three companies. Many of the participants had worked for two of the companies involved, as illustrated in Figure 4.1.

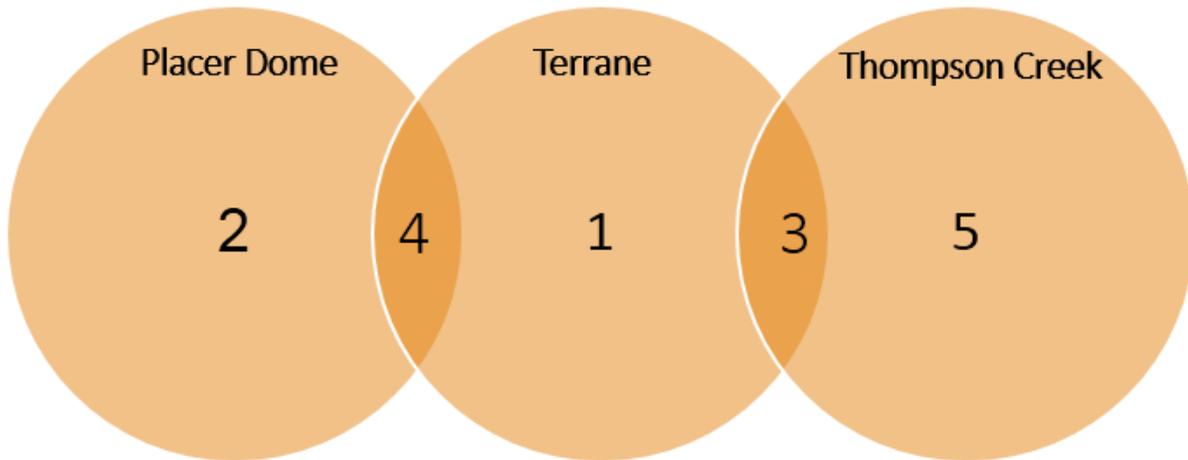


Figure 4.1: Distribution of interviewees across three project proponents

An additional 9 interviews were obtained from leadership of the communities of McLeod Lake, Nak'azdli, Mackenzie and Fort St. James (See Figure 4.2). While these interviews were with people in leadership positions who interacted directly with the Mt. Milligan, due to the low number it is difficult to determine if they are representative of these communities.



Figure 4.2: Distribution of interviewees across the four impacted communities

### **4.2.3 The Audience**

This study is intended for a broad audience. Firstly, this study is intended for the academic community by adding to the literature on socio-political risk management in the mining industry. Secondly, it is intended for mining and mineral exploration companies and their employees by providing constructive analysis of the challenges and opportunities that resulted from past corporate transitions, in order to inform work on current and future projects. Finally, the study is intended for the host communities of current and future mining projects – both First Nation and settler – to outline the potential challenges and opportunities to which corporate transitions can contribute.

## **4.3 PROCEDURE**

The author of this study was based out of the University of British Columbia, in Vancouver, British Columbia. Drawing upon Vancouver's position as a global mining hub, and former head office location of Placer Dome and Terrane Metals, the researcher was able to contact many former managers involved in the case study mine.

Additionally, the relative proximity of Vancouver to the case study project area aided the researcher in establishing contact and communication with community leaders involved in the development of Mt. Milligan. Telephone and email contact was supplemented by a one week field-visit to the communities of Prince George, Vanderhoof, Nak'azdli, Fort St. James, Mackenzie, and McLeod Lake.

This helped to facilitate communication to perspective participants, as well as to establish the interview protocols and procedures. Prospective interviewees were identified by reviewing historic company reports, environmental assessment submissions, and media reports. Prospective participants were contacted by telephone or email, and provided with a letter of introduction to the study (Appendix A). If a prospective interviewee expressed interest in participating, they were sent a consent form (Appendix B), and an interview was scheduled.

Interviews averaged approximately 60 minutes, and were recorded on a digital recording device if consented to by the interviewee. The recordings were then transcribed verbatim, or in the event the interviewee did not consent to being recorded, detailed notes of the interview were taken and transcribed to reflect the interviewee's sentiment as closely as possible.

Interview transcriptions were input to NVivo10, a qualitative research data management software. The recordings were then analyzed for themes and patterns using open coding. Open coding refers to when the researcher "constantly compares his/her codes of events and behaviors and words and soon starts to generate theoretical properties of the category" (Marshall & Rossman, 2011). Using a term called clustering, the codes were analyzed for points of intersection and grouped into clusters. This process resulted in the emergence of three main themes and 11 sub-themes, or nodes.

Once themes emerged from this process, it was critical to ensure that the categories/themes maintain internal consistency, but remain distinct from each other (Marshall & Rossman, 2011). Finding complete mutual exclusivity is not the goal of this process, but rather finding the principal categories of meaning from the participants (Marshall & Rossman, 2011). Indeed, during the coding process overlap between themes was evident, and will be discussed in Chapter 6.

#### **4.4 INTERVIEW QUESTIONS**

Following a review of the literature, a list of interview questions was created. These questions were informed by current best practices on socio-political risk management in the mining industry as defined by the literature review. They sought to explore the context of this case, and how corporate transitions were managed at this mine.

Questions were further designed to elicit insights into the role that corporate transitions played in the evolution of corporate-stakeholder relationships at the Mt. Milligan mine. Interviews were semi-structured, with the drafted question list providing a guide, but allowing room for the interviewee to deviate from the question list to speak to points as they saw fit. A list of the interview questions can be found in Appendix C.

Questions covered a range of sub-topics, including many discussed in the literature review. These topics included: interviewee background, view of transitions, engagement tools, comparison to other projects, regulatory aspects, transparency, challenges, perspectives, and lessons learned. The weighting of sub-topics throughout the interview varied depending on interviewee background. Some participants were more familiar with specific time periods, stages, and aspects of corporate transitions than others and having the flexibility to elaborate on that was important for this work.

#### **4.5 DOCUMENT REVIEW**

The researcher conducted a review of related documents in order to establish a timeline of events at the Mt. Milligan mine, and to better understand the factors at play over the mine's history. This review also afforded the researcher background knowledge in advance of interviews. Historical data gleaned from the document review was supplemented by interview data to develop a timeline of events at the Mt. Milligan mine.

Documents reviewed include the Environmental Assessment study, NI 43-101 reports, preliminary economic assessment (PEA) reports, pre-feasibility and feasibility reports, public presentations, statements and press releases from proponents and stakeholders, proponent policy documents, public submissions to the Environmental Assessment Office, and previous academic studies related to Mt. Milligan.

#### **4.6 METHODOLOGICAL LIMITATIONS**

All studies have limitations (Patton, 2002), and this study is no different. A discussion of the study's limitations is essential, as it demonstrates the boundaries of generalizability and conclusiveness (Marshall & Rossman, 2011).

This study is limited by the historic nature of the data being examined. Events discussed in the study occurred between 1990 and the present day. As such, some documentation is unavailable, and the recollections of interviewees are imperfect. Also, this case study mine is currently operating, so the findings of this study are not definitive. Future actions of the operator or stakeholders could alter perception of the corporate-stakeholder relationship at the Mt. Milligan mine.

Due to time and resource constraints, only nine interviews with community leaders were carried out. While still eminently useful to the study, it is difficult to conclude if the interview data can be considered representative of these communities.

Furthermore, there are a multitude of differences between mines, mining companies, and stakeholder groups across the mining industry. It is difficult to determine how transferable the findings from this study are to other contexts throughout the industry, or even throughout British Columbia.

#### **4.7 ETHICAL CONSIDERATIONS**

The design of this study was subject to review and approval by the University of British Columbia's Behavioral Research Ethics Board (BREB). The Behavioral Research Ethics Board required discussions on the research topic, prospective interviewees, consent process, the possible risks participants faced participating in the research, confidentiality, interview protocol, and data storage. This study received a Certificate of Approval (H15-00070) from BREB in February of 2015.

Data security and storage is discussed in the BREB ethics approval application. Copies of the data, including audio recordings and transcribed notes, will be stored in a locked cabinet at the University of British Columbia for a period of five years. The final thesis and its findings are to be provided to all participants. The final thesis will be publically available on the UBC library's cIRcle website.

While the majority of participants in the study agreed to have their identity published, a small number declined. In order to assure the anonymity of these participants, pseudonyms are used for all participants cited in the study. Each consent form indicates a number for the participant. That number was used when transcribing information from the interview to data collection forms, and when incorporating information into the thesis.

## 5. CASE STUDY

### 5.1 INTRODUCTION

This section uses a case study of the Mt. Milligan mine to explore how mining companies manage socio-political risk at their operations, and specifically how this risk was managed through transfers in management and ownership. The Mt. Milligan mine in northern British Columbia was selected due to its complex history, relatively recent transition into operation, and profile as an industry success story. As one of the newest mines in British Columbia, Mt. Milligan is an ideal case to study the evolution of this issue.

The Mt. Milligan mine is an open-pit copper-gold mine located 155km northwest of Prince George, British Columbia (Figure 5.1). The mine entered production in 2013 and is owned and operated by Thomson Creek Metals Company. The project site is located in a dynamic socio-political environment and subject to competing interests from various communities, First Nations, and levels of government.

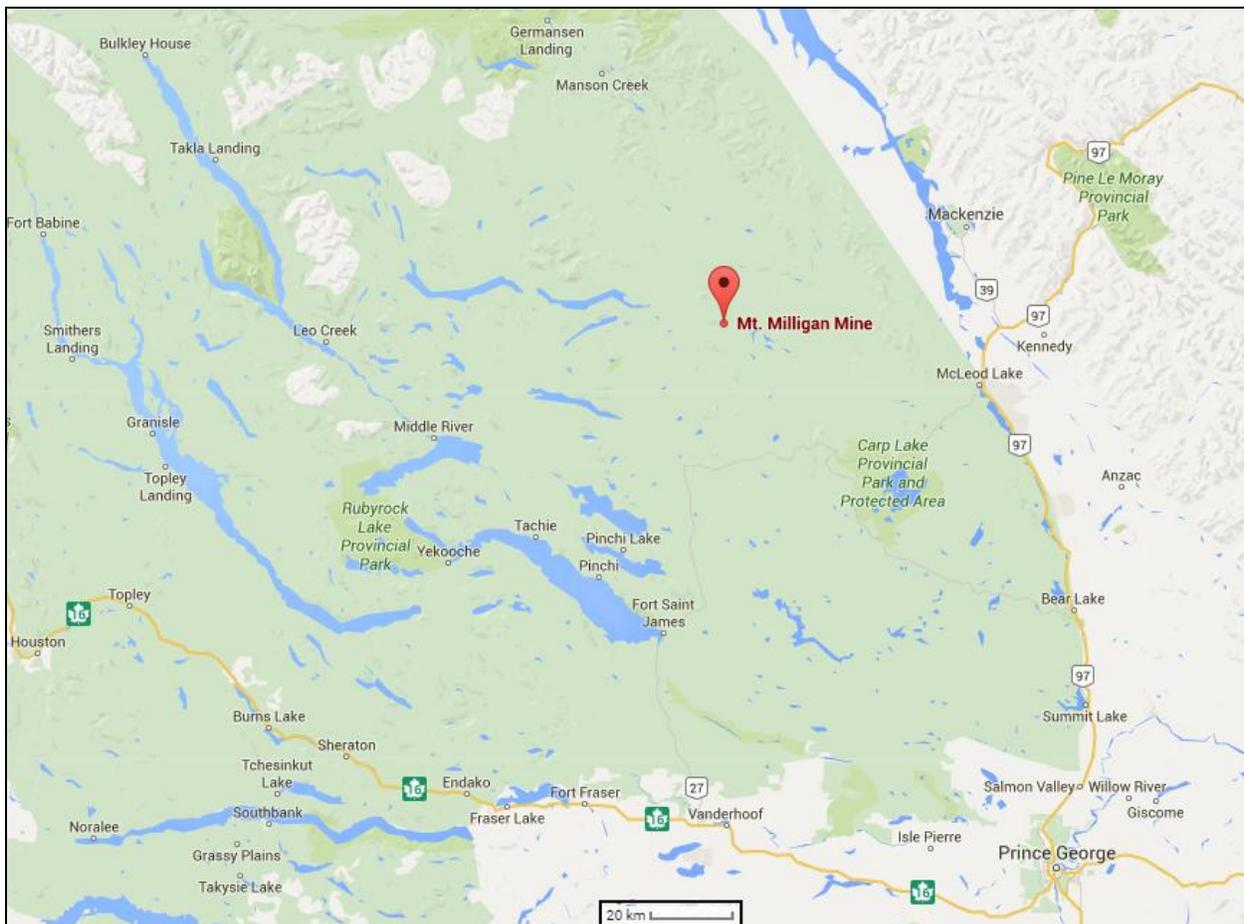


Figure 5.1: Mt. Milligan mine and surrounding region

In an attempt to get a full picture of the evolution of company-community relationships at this project, the author interviewed actors who were historically involved with Mt. Milligan from company, local municipality, and First Nations government perspectives. Prior to discussion of the

interview process and results, background on the project is provided through profiles of the communities and proponents involved in the advancement of this mine.

## **5.2 REGIONAL PROFILE**

The Mt. Milligan Mine is located in the Omineca resource region, in the northern interior of British Columbia, Canada. Omineca is within the Ministry of Energy and Mines Northeast/Central Mines and Mineral Resources Division. This region is home to approximately 150,000 people, with the majority residing in the regional centre of Prince George.

The primary economic driver of the region is forestry, followed by construction, and professional scientific and technical services (PCIC, 2013). While the region has a long history of mining and mineral exploration, dating back to the Omineca gold rush in the 1860s and 1870s, it is not a bellwether industry for the region's economy and employment in the sector is low relative to forestry and other industries (Colombo, 2012).

Mt. Milligan is located 155km from the regional centre of Prince George, and three additional sizable municipalities are located within a 160km radius of the mine site – Fort St. James, Mackenzie, and Vanderhoof (AMEC, 2006). To keep the research within a manageable scope, this study focuses on Fort St. James and Mackenzie, the two municipalities closest to Mt. Milligan.

The Omineca resource region is home to the traditionally asserted territory of several First Nations groups. Two First Nations communities, the Nak'azdli First Nation and the McLeod Lake Indian Band, are in the vicinity of Mt. Milligan and have asserted that the mine site lies in their traditional territory.

### **5.2.1 Fort St. James**

Fort St. James is located 160km northwest of the regional centre of Prince George, on the eastern shore of Stuart Lake. It lies within the administrative region of the Bulkley-Nechako Regional District. The municipality has a population of 1,350, and serves a total of 4,500 residing in the greater rural area. Fort St. James was first founded by explorer Simon Fraser of the North West Company in 1806, and is one of the oldest continually inhabited European settlements in British Columbia.

The primary economic driver of Fort St. James is forestry and related industries. There are three sawmills in the area and several logging and forestry support companies. As of summer 2015, construction is underway on a Biomass Energy Plant, which is expected to further diversify the economy. Mining has been a constant presence in Fort St. James since prospectors visited the area in the 1800s. The Pinchi Lake Mercury mine operated north of the town between 1940 and 1943 as part of the war effort and again from 1968 to 1975, resulting in significant environmental damage to the area after closing, which has since been largely mitigated by the historic owner. Small scale placer miners have worked claims in the area through the twentieth century to the present day, and the area has seen significant prospecting and exploration work, including the development of the Mt. Milligan mine. Other advanced exploration projects in the area include the Inza property (Strongbow Resources and Xtrata Copper), the Tchentlo and Choo projects (Serengeti Resources and Freeport McMoRan), and the Decar property (First Point Minerals) (Shandro, 2012).

### **5.2.2 Mackenzie**

Mackenzie was originally a settlement purpose built in the late 1960s to service the British Columbia Forest Products mill in the area. The forest products industry is still the lifeblood of the town, with four mills currently operating in the area. Located 185km north of Prince George in the Fraser-Fort George administrative area, Mackenzie has a population of approximately 5,000 (Smith, 2012).

Similarly to Fort St. James, prospecting, mineral exploration, and small scale mining has been present in the greater Mackenzie area for many years. However, prior to the development of the Mt. Milligan mine, the community's involvement with large scale mining was limited to hosting a load-out facility for the now dormant Kemess mine, and being home to a smattering of workers commuting to the Tumbler Ridge coal fields.

### **5.2.3 McLeod Lake**

The community of McLeod Lake sits on the north end of its namesake lake, 140km north of Prince George on highway 97. The town is the main settlement and administrative centre for the McLeod Lake Indian Band (MLIB), and lies on McLeod Lake Indian Band reserves no. 1 and no. 5 (ABIC, 2014). Approximately 100 people live in McLeod Lake, making up about one fifth of the Band's membership. The remainder of the Band's members live off-reserve, mainly in other areas of northern British Columbia and the Vancouver area (MLIB, 2013). In addition to historic habitation by First Nations peoples, McLeod Lake is the site of Fort McLeod, the first continuously inhabited European settlement west of the Rocky Mountains.

The Mt. Milligan project was McLeod Lake's first exposure to the mining industry. MLIB is active in the forestry industry through its company Duz Cho Logging, and currently owns and operates four companies in various industries. MLIB signed onto Treaty 8 in 2000, settling their land claims with the crown, receiving provincial crown land and other benefits, and defining their area of traditional territory (ABIC, 2014). McLeod Lake has an Economic and Community Development Agreement with the provincial government and an Impact and Benefit Agreement with Thompson Creek Metals to share revenue from the Mt. Milligan mine.

### **5.2.4 Nak'azdli**

The community of Nak'azdli lies directly adjacent to the municipality of Fort St. James, and is the main community and administrative centre for the Nak'azdli First Nation. The community of 700 represents 38% of the First Nation's membership (Nak'azdli, 2013). Nak'azdli is a member of the Carrier-Sekani Tribal Council. The group do not have a treaty with the government of British Columbia, and is currently in stage four of treaty negotiations with the province (Government of BC, 2015).

Nak'azdli's proximity to Fort St. James means the neighboring communities share many of the same experiences with mining and other resource development. The First Nation is involved in a variety of business initiatives including forestry, a grocery store, two gas stations, and a mill. Nak'azdli currently has an ECDA with the provincial government relating to royalties from Mt. Milligan, and is currently in negotiations with Thompson Creek Metals regarding prospective revenue sharing from Mt. Milligan (Hoekstra, 2015).

## **5.3 COMPANY PROFILES**

Mt. Milligan was advanced by several proponents before entering operation in 2013. This study will focus on the work done by the most recent three proponents, who undertook the majority of the development work on the project, encompassing the time period of 1990 to 2015. Proponents prior to 1990 were omitted from the case study due to challenges locating a representative sample of actors involved.

### **5.3.1 Placer Dome Inc.**

Placer Dome Inc. ("Placer Dome") was formed in 1987 from the merger of major Canadian mining companies, Placer Development Ltd. and Dome Mines Inc. (Dashwood, 2012). The company specialized in the mining of gold. Placer Dome was headquartered in Vancouver, BC, and operated as a global miner with operations in Canada, the United States, Australia, Papua New Guinea, the Philippines, Tanzania, Chile and South Africa. In 2005 the company had a market capitalization of \$6.7 billion and employed over 13,000 people (Placer Dome, 2005).

Placer Dome held Mt. Milligan from 1990 until 2006. In addition to advancing Mt. Milligan, the company was also involved in other mines in northern BC such as Equity Silver, Gibraltar, and Endako. In 2006 Placer Dome was subject to a hostile takeover bid from Barrick Gold Corporation, and was subsequently assimilated into Barrick.

### **5.3.2 Terrane Metals Corp.**

Terrane Metals Corp. ("Terrane") was formed in 2006 through a reverse takeover of Atlas Cromwell Ltd. Atlas Cromwell has previously purchased a package of mineral properties from Goldcorp Inc, who held Placer Dome's Canadian assets after their sale by Barrick (AMEC, 2006). Terrane then moved forward with Mt. Milligan as their flagship project. Terrane was purchased in its entirety by Thompson Creek Metals Corporation in 2010.

Headquartered in Vancouver, BC, Terrane had about 15 employees at its peak. The junior mining company was founded with a market capitalization of \$125 million. The company was primarily focused on the advancement of one project – Mt. Milligan – toward production, but also held interests in several other exploration properties in Canada (Owram, 2010).

### **5.3.3 Thompson Creek Metals Corporation Inc.**

Thompson Creek Metals Corporation Inc. ("Thompson Creek") is headquartered in Denver, Colorado. It was previously known as Blue Pearl Mining, before purchasing the privately held Thompson Creek Metals Company and taking the newly acquired company's name in the process. Throughout the late 2000s Thompson Creek was one of the largest Molybdenum producers in the world. In addition to Mt. Milligan, the company also owns the Endako molybdenum mine in northern BC, the namesake Thompson Creek molybdenum mine in Idaho, and a metallurgical roasting facility in Pennsylvania. Thompson Creek also has a portfolio of exploration properties in Canada (TCMC, 2015).

Thompson Creek is a mid-tier miner, and held a market capitalization of \$2.19 billion and 875 employees when it acquired Mt. Milligan in 2010 (Jordan, 2012; TCMC, 2010). Recent market trends have been hard on the company, with its market capitalization dropping to \$135 million in

August of 2015. A drop in molybdenum prices forced the company to put its Endako and Thompson Creek mines on care and maintenance in 2014 and 2015 respectively (TCMC, 2015).

## 5.4 MT. MILLIGAN TIMELINE

### 5.4.1 Introduction

This section will detail the exploration and development history of the Mt. Milligan project. An initial timeline was constructed using information gathered from a document review. Documents reviewed include the Environmental Assessment study, NI 43-101 reports, preliminary economic assessment (PEA) reports, pre-feasibility and feasibility reports, public presentations, statements and press releases from proponents and stakeholders, proponent policy documents, public submissions to the Environmental Assessment Office, previous academic studies related to Mt. Milligan, and press reports.

This review also afforded the researcher background knowledge in advance of interviews. Interview data was subsequently used to supplement the timeline of events created from public documents. These interviews expanded upon and gave clarity to information gained from public reports, and allowed the researcher a window into decisions, policies and events not addressed or fully explored previously in the public domain.

Figure 5.2 offers a rough breakdown of the complex exploration and development history of Mt. Milligan. Each color line represents a different company working on the project, with their trajectory representing time and activities based on the x and y axes. This figure is intended for illustrative purposes only; it is not to scale, and does not represent all activity at Mt. Milligan.

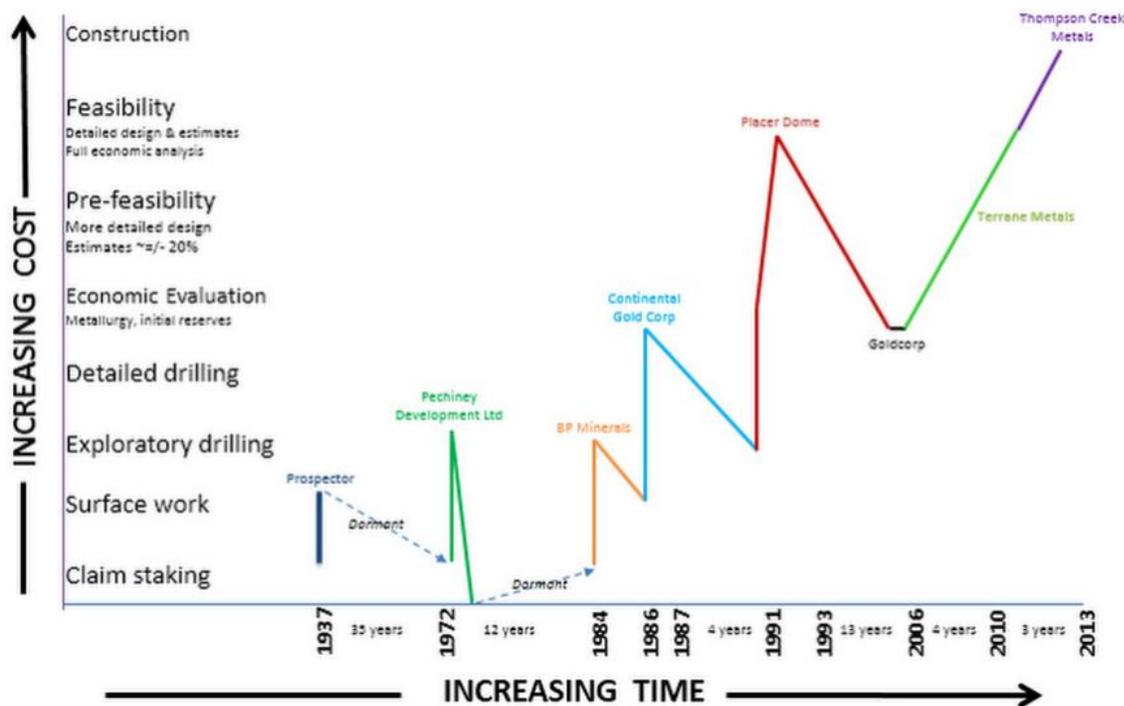


Figure 5.2: Exploration and development history of Mt. Milligan (adapted from Bradshaw, 2014)

## 5.4.2 Timeline

Exploration activity at the Mt. Milligan project site was first recorded 1937, when a surface mineral occurrences were noted by prospectors working in the area. However, no claims were staked and no further recorded exploration activity was undertaken for 35 years. In 1972, Pechiney Development Ltd staked the area and conducted a short exploration program, including induced polarization, geochemistry work and a 5-hole drill program. This work failed to uncover significant mineralization at contemporary commodity prices and the claims were allowed to lapse (Meredith-Jones, 2013).

In 1983, Selco Inc staked claims in the area and conducted an extensive grassroots geochemical survey, identifying a gold-arsenic geochemical anomaly. The following year Selco Inc amalgamated with BP Resources Canada ("BP"), the mineral exploration arm of BP Petroleum.

In 1984, BP optioned the adjacent claims, which had been staked earlier that year by prospector Richard Haslinger. Between 1984 and 1986 BP conducted extensive geological, geochemical, litho-geochemical, magnetic, induced polarization, and trenching work (AMEC, 2006).

Lincoln Resources Inc. optioned the claims from BP in 1986 and completed a diamond drilling program in 1987. Drill Hole #12 led to the discovery of significant copper-gold mineralization, the MBX Zone. In the late 1980s, Lincoln Resources Inc. reorganized, amalgamated with Continental Gold Corp ("Continental") and continued drilling in a joint-venture partnership with BP Resources Canada Limited (Meredith-Jones, 2013).

In 1989, Continental drill hole #199 intersected the Southern Star Zone, expanding the deposit significantly (Meredith-Jones, 2013). Continental announced a gold/copper discovery, publically claiming gold reserves of 2.5-3 million ounces (Reuters, 1989).

In the spring of 1989, Continental President Robert Dickenson touted the Mt. Milligan project as the next big mine in Canada, with production imminent on a 3 million ounce gold reserve. Continental publicized an aggressive development timeline; operations starting in 1992, with 350 direct jobs and 525 spinoff jobs in Mackenzie, Fort James and Prince George (Robinson, 1989). However, it would be 24 years before a mine actually commenced production on the site.

Community and investor expectations around the project were inflated by the speculative promotional tactics of the day. In the pre-Bre-Ex, pre-NI 43-101 environment, optimistic and speculative promotion of mineral deposits was a common tactic to encourage investment. Continental's projections were based on a drill program of 95 test holes at 100-metre spacing, without the completion of a feasibility study (Robinson, 1989). Industry critics noted the optimistic projections did not account for possible fluctuations in the grade, structure, continuity, and recoveries of the deposit (Northern Miner, 1989). Such aggressive, promotional statements would not be permissible in the modern regulatory climate.

Continental failed to find financing for the project, and in 1990, major miner Placer Dome Inc. ("Placer Dome") acquired the company and its main asset. Placer resumed exploration drilling at Mt. Milligan and completed a Pre-feasibility Study for the development of a 60,000 t/d open pit mine and flotation process plant. This study was closely followed by an application for a Certificate of Development from the Government of British Columbia (Terrane, 2008) that would open the door for mine construction.

Public consultations were carried out by Placer in conjunction with a socio-economic assessment in 1990 and 1991. Consultation consisted of meetings and open houses in Fort St. James, Mackenzie, Vanderhoof, Prince George, and Burns Lake (AMEC, 2006).

Placer Dome also conducted an Environmental Assessment in 1991 to support the Mine Development Certificate application. This included extensive environmental baseline studies in the area surrounding the project (AMEC, 2006). Additional baseline data were obtained in 1991 (fisheries), 1997 (fisheries, ARD studies, water quality, geotechnical and hydrology), and 2006 (fisheries and water quality)(BC EAO, 2009; Terrane, 2008).

Poor economics caused the company to shelve the project in 1992, and the company took a \$266 million write down on the project (Canada News-Wire, 1992). Placer received a Mine Development Certificate in 1993, and a second Pre-feasibility Study was completed in 1996. However, unfavourable metals prices restricted the project's economic potential.

Placer Dome was criticized for the purchase of Mt. Milligan after taking write-downs related to the project. However, shortly after their purchase of Mt Milligan, analysts had lauded the company's expansionist growth strategy (Durr, 1990).

Placer Dome renewed the Mine Development Certificate in 1998, but the project remained dormant for the length of the extension. The Certificate expired in 2003 and could not be renewed (AMEC, 2006).

When Barrick Gold Corporation purchased Placer Dome in 2006 it was not interested in the Canadian assets, which were sold to Goldcorp Inc., who then sold Mt. Milligan and several other properties to Atlas Cromwell Ltd. Atlas Cromwell Ltd changed its name to Terrane Metals Corp ("Terrane") through reverse take-over, and initiated a comprehensive work program at the property (AMEC, 2006).

Between 2006 and 2007 Terrane completed 18,507 metres of drilling in 60 holes with the purpose of upgrading the resource (Meredith-Jones, 2013). As a result of this work, Terrane released a new NI 43-101 study, reporting a combined measured and indicated mineral resource of 590.8 million tonnes grading 0.193 per cent copper and 0.352 grams per tonne gold (Meredith-Jones, 2013).

Terrane also restarted the environmental assessment process in 2006. (Terrane, 2008). The project required both provincial and federal environmental assessments, and received certification in March 2009, and December 2009 respectively.

The environmental assessment process was opposed by one of two local First Nations bands, the Nak'azdli First Nation. In a press release the Band's leadership outlined their opposition to the Mt. Milligan project based on perceived deficiencies in the existing EA, and government and company consultation processes (Sam, 2009). The Nak'azdli later filed a petition with Supreme Court of British Columbia against the provincial government, contending that it was not properly consulted (Stueck, 2010).

This opposition culminated with members of the Nak'azdli First Nation constructing a road block on an access road to the project site in November, 2010 (Stueck, 2010), and January, 2012 (Gilbert, 2012). In both instances the road blocks were ended peacefully after several days.

Alternatively, the other main First Nation group in the area, the McLeod Lake Indian Band (MLIB), expressed general support for the project (Chingee, 2008). The surrounding municipalities of Fort St. James, Mackenzie, and Prince George, also supported the project, citing economic benefits to the region. Local business owners and residents from Fort St. James and Mackenzie expressed support of the project citing potential economic benefits from increased population, infrastructure, and job opportunities (Ji et al., 2008).

In August of 2010, the provincial government signed a royalty revenue sharing agreement with McLeod Lake Indian Band. This agreement resulted in the McLeod Lake Indian Band receiving 15 per cent of the provincial royalties on the mine -worth an estimated \$35 million to \$70 million over the projected life of Mt. Milligan. This was only the second mining royalty revenue sharing agreement signed in British Columbia. On the same day, MLIB also signed a Socio-Economic Agreement with Terrane Metals worth \$24.5 million in payments over the 23-year life of the mine, and including a \$1.5 million upfront payment to the band (Williams, 2012).

Terrane sought joint-venture partners to assist with financing construction of the \$900 million project. Potential partners included Goldcorp Inc., who declined a potential joint venture opportunity in 2010. Terrane continued seeking a partner to move ahead with project construction before the company and all its assets were acquired by an American miner, Thompson Creek Metals Company ("Thompson Creek"), in 2010.

In April 2012, the new proponent applied to the BC EAO for an amendment to the EA certificate for Mt. Milligan. The amendment would make two major changes to the original mine plan: to establish a camp for operations rather than transporting workers from Mackenzie and Fort St. James; and to locate the rail load out facility in Mackenzie rather than building a new facility in Fort St. James. These amendments required additional changes to the haul-out route for ore concentrate (Thompson Creek Metals, 2012).

The amendments were met with significant community opposition. Letters from the Nak'azdli First Nation and Municipality of Fort St. James argued that their analysis of the application was based on the fact that the original plan would provide economic benefits from employment opportunities (in both the mine and the load-out facility) and infrastructure. Under the amendments, these benefits would be transferred to Mackenzie. Local authorities in Fort St. James had already begun planning for the load-out facility (Nak'azdli First Nation, 2013; BC EAO, 2013a).

The Municipality of Fort St. James had anticipated the project to trigger residential development in the community as mine workers would need lodging. The Municipality expressed opposition to the amendment to build an on-site camp, as it would eliminate this potential economic benefit, upon which they had offered their support for the project (BC EAO, 2013a). In March of 2013, the BC EAO approved the proposed amendment, citing that the assessment of impacts on benefits that had not yet been received by communities were out of the scope of the EA Amendment Assessment, and that there were not significant adverse environmental, economic, or social impacts resulting from the amendment (BC EAO, 2013b).

An economic development agreement between Nak'azdli First Nation and the provincial government was signed in 2012. This agreement saw the Nak'azdli receive 12.5% of mineral tax revenue throughout the life of the Mt. Milligan mine. The estimated value of this deal was \$24 million based on projected mine life and current metal prices (Lloyd, 2012).

Construction on the mine commenced in early 2011. Approximately 650 people were employed through the two year construction period, the majority of which were housed in an on-site construction camp (Thomson Creek, 2013). During construction project costs ballooned from \$900 million to \$1.57 billion (Penner, 2013).

On September 24, 2013 Thompson Creek Metals announced the start of commercial production at Mt. Milligan (Meredith-Jones, 2013), signalled by the first shipment of concentrate to smelter. Thompson Creek Metals continues to own and operate the Mt. Milligan Mine today.

## 6. RESULTS AND ANALYSIS

### 6.1 INTRODUCTION

This chapter will review the results from qualitative analysis of 24 semi-structured interviews. Interviews were recorded, transcribed, and imported into NVivo10 qualitative analysis software.

All interviews followed a semi-structured format – a blend of guided and dialogic interview styles. A questionnaire provided the interviewer with a guide for the interview, but allowances were made for the interviewee to elaborate on certain points. Some participants were more familiar with specific time periods, stages, and aspects of corporate transitions than others and having the flexibility to expand on that was important for this work.

Questions were designed to elicit insights into the role that corporate transitions played in the evolution of corporate-stakeholder relationships at the Mt. Milligan mine. Questions were informed by current best practices on socio-political risk management in the mining industry as defined by the literature review.

Interview transcripts were coded section by section into three main themes, or to use NVivo10 terminology, “nodes” – based on relationship to the experience and perceptions of transitions at the Mt. Milligan mine before, during, and after they occurred.

These three nodes/themes were further broken down into 11 sub-nodes. These sub-nodes were identified by examining topics emerging from word cluster analysis trees of each main theme in conjunction with the literature review. Some of these themes and sub-themes were identified in the literature and initiated in interviews by questionnaire design, while others entered interview transcripts without prompting.

This section will present results from each node using NVivo10’s word count/clouds/cluster, to identify trends in the interviews. Conjunctions or prepositions and minor and insignificant words were omitted from analysis in NVivo10. This “stopped word list” can be seen in Appendix D. Specific person and place names were also omitted to maintain participant confidentiality (See Section 4.7), and to avoid unnecessary repetition.

Specific quotes from the interview data are presented to highlight and expand upon key themes. These themes were developed to help answer the research questions outlined in Chapter 1. In several instances there is an overlapping of coding, as some themes are closely related, and interviewees at times addressed two or more topics in the same response.

Word frequency queries were performed on these sets of interview data to further examine their content and the topics discussed. Results of these word frequency queries are presented throughout this section as word frequency tables, word frequency clouds, and word frequency cluster analysis trees or horizontal dendrograms – which use an algorithm (Pearson Correlation Coefficient) to cluster words by relationship in terms of co-occurrence in interview transcripts. These tables and figures are generated using NVivo10 qualitative data analysis software.



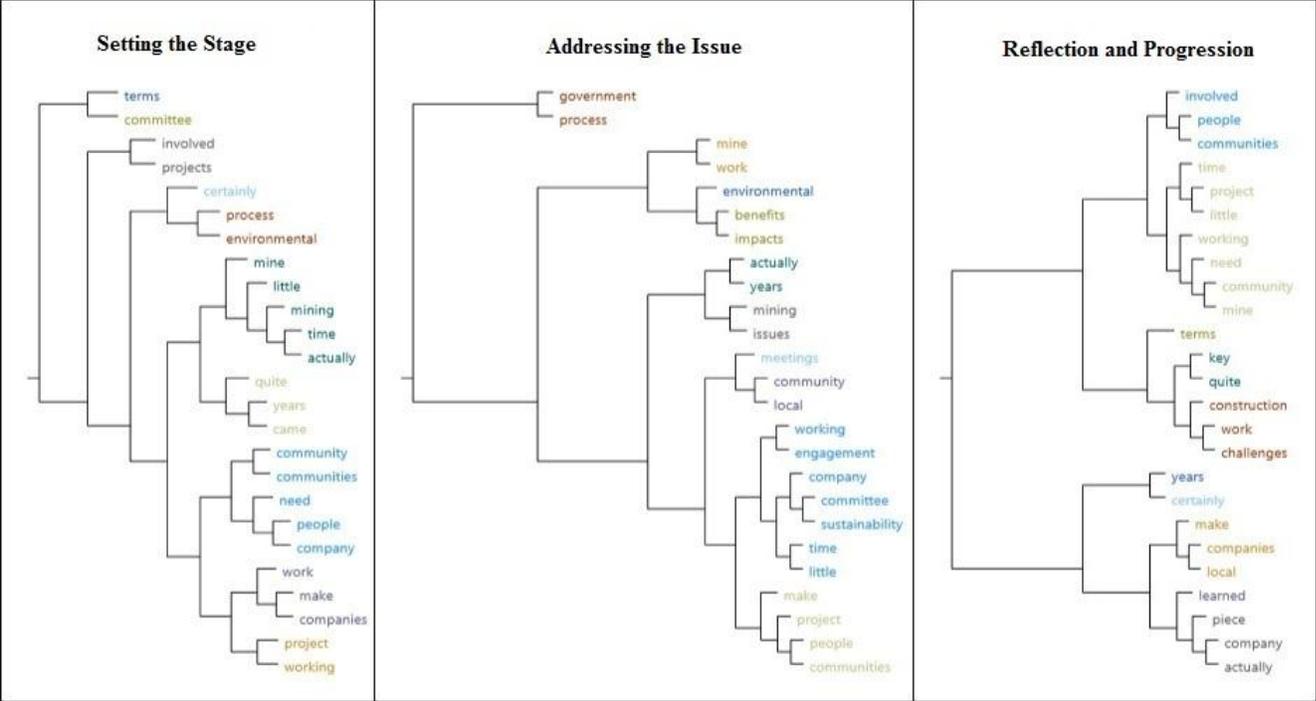


Figure 6.2: Cluster analysis of main themes

Themes emerging from these cluster analysis trees (Figure 6.2) were compared to concepts explored in the literature review. From this, patterns in association led to the development of sub-themes or sub-nodes, from which to further explore the interview data. In the following sections, interview data will be broken down by theme, and with word clouds and word cluster trees generated for each. Analysis will be further broken down by sub-theme, with quotes from interviews used to illustrate the findings of each sub-theme in the context of the case study.

**6.3 SETTING THE STAGE**

The first group of themes relates the individuals and companies working at various stages and the respective experiences and perceptions that they brought to Mt. Milligan. This theme incorporates dynamics that actors brought with them that 'set the stage' for the corporate transition, in both positive and negative aspects.

Table 6.1 and Figure 6.3 present the top 25 terms of coded interview data in the "Setting the Stage" node.

Word	Length (letters)	Count	Weighted Percentage (%)
People	6	161	1.61
Project	7	160	1.60
Time	4	129	1.29
Company	7	80	0.80
Community	9	79	0.79
Work	4	74	0.74
Mine	4	70	0.70
Actually	8	59	0.59



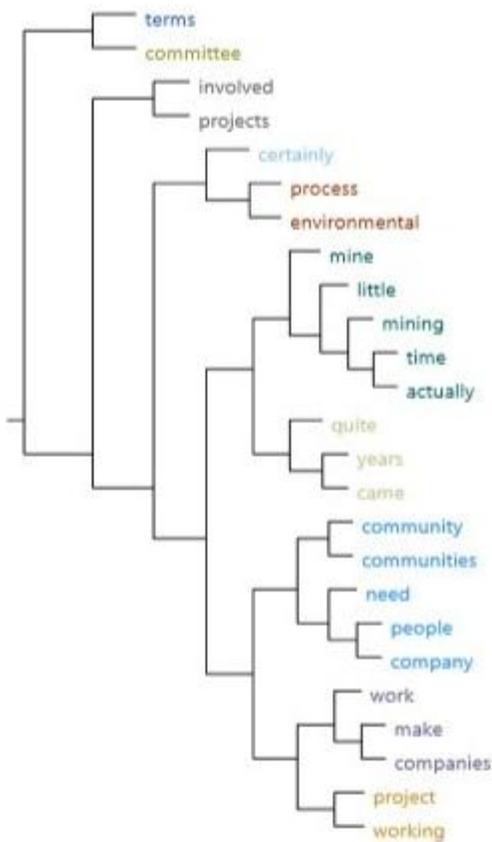


Figure 6.4: "Setting the Stage" cluster analysis tree

Through analyzing the word clusters in Figure 6.4, and comparing outputs with topics in the literature review, sub-themes from this node emerge. In this cross section of interview data, the most commonly captured terms were those relating to the histories of the people and companies involved, the perception of these histories, and how these histories influenced work on this project. To capture these trends, this theme was broken out into four sub-themes: background, comparable projects, handovers and reputation, and perception of risk. These sub-themes are presented in the next section. The context of each sub-theme is explained in relation to the case study and illustrated with interview quotes.

### 6.3.1 Background

The first sub-theme that emerges is "Background." This sub-theme relates to the backgrounds of the various actors involved in Mt. Milligan – both that of the individuals interviewed for the study, and broader organizational backgrounds of the groups involved.

Those interviewed previously or currently hold management and/or leadership positions when involved with Mt. Milligan. This includes positions both in the three companies discussed in Section 5.3, and the communities discussed in section 5.2. This meant interviewees brought a variety of experience to the table when involved in Mt. Milligan. In some cases this is what had led them to be involved in the project, and in all cases influenced their work.

Company subjects were characterized by extensive experience in the mining industry. Typical respondents had careers spanning one or more decades, with involvement in projects all over the world. Seven of the fifteen company interviewees had experience with more than one of the companies involved in advancing Mt. Milligan.

Prior experience in the mining industry, and particularly experience developing mining projects in British Columbia put managers in a strong position to understand the local context and execute at the project level. Those involved with Mt. Milligan during the Placer Dome years benefited from the institutional knowledge of a company with extensive experience developing and operating mines in British Columbia (Table 6.2). Immediately preceding and during their ownership of Mt. Milligan, Placer Dome held interests in several mines and development projects in British Columbia, including Endako, Equity Silver, and Gibraltar. Placer Dome also had significant experience developing and operating mines globally, including many jurisdictions with challenging socio-political risk profiles.

I mean, one thing I have to say is Placer to a large degree grew up in British Columbia. I mean, they built and operated Gibraltar, Endako, Equity, and Craigmont. So, Placer had a long history here. A lot of the senior staff in Placer were from British Columbia and the issues in terms of consultation, environmental protection... BC is, you know, has been a leader in those areas in the mining sector, for a long, very long time. Partly due to the value of the environment here and the complexities of, lack of, First Nation treaties. It's always been, there's always been a lot more in, I think, consultation and environmental protection in BC. So, you know the company already had that, I think, to a large degree within its culture.
Manager6

*Table 6.2: Corporate experience of Placer Dome - Interview comments by manager*

In contrast, community leaders interviewed had significantly less experience with mining. The impacted communities (See section 5.2) have historically been highly dependent on the forest industry, and have had limited exposure to the mining and mineral exploration industry. Only one community interviewee characterized themselves as familiar with the mining industry (Table 6.3).

I was obviously a strong proponent, and I think, I was strong because I come from a mining background and I understand the industry and the system.
Community5

*Table 6.3: Experience with the mining industry - Interview comments by community*

While inexperienced with the mining industry, community leadership was comfortable in governance roles. The communities reviewed were characterized by stable government, with multi-term councilors, mayors, and chiefs common.

### **6.3.2 Comparable Projects**

While the "Background" sub-theme explores the general experience and history of interviewees, the "Comparable Projects" sub-theme more specifically examines the mining and mineral exploration projects comparable to Mt. Milligan, and how interviewees' involvement (or lack thereof) influenced their approach to this case.

The development of large copper-gold porphyry deposits is widespread globally (Nelson, 2015). However, knowledge of the development of open pit mines in the British Columbian context is highly specialized, even within the mining sector. In addition to the common technical and environmental challenges, BC's socio-political context is unique.

Following this, ascertaining interview subjects' prior experience with this type of mining projects, or industrial projects in general, is valuable. Company interviewees generally had extensive experience with this type of project (Table 6.4). Indeed, they were usually brought on board as a direct result of their prior experience.

I think that the basics are pretty similar. And if take Cominco at Red Dog, or if you take Syncrude, or if you take Musselwhite Mine, or Mt. Milligan, I mean, the general approach is probably pretty similar. If you want to do it the right way, you know. But I think the group of people you're talking to, that's a pretty good collection of observations for doing things, 5 years or 10 years from now but I'm sure the basic principles apply.	Manager3
Sure we did the Granny Smith Mine, I came in at the tail end of that. There was Big Bell Mine. There was Misima. Those ones I came in on the tail end of. We were building the Coipa in South America. We constructed Zaldivar. Went over to do Osbourne in Australia. Then we did the Cortez Gold Mines, Musselwhite.	Manager5

Table 6.4: Comparable mining projects - Interview comments by managers

However, despite significant experience with mining at their other operations, Thompson Creek did not have experience developing a greenfields project like Mt. Milligan (Table 6.5).

There is a big difference between Milligan and Endako. Especially from a CSR point of view. Endako is a legacy operation and Milligan is greenfields. There is no community sustainability committee or other initiatives at Thompson Creek's legacy mines. We would like to look more into that, but it is a challenging market climate to explore these ideas, and some of the mines are moving towards care and maintenance anyways.	Manager11
---	-----------

Table 6.5: Mt. Milligan vs Endako - Interview comments by manager

As referenced in Section 6.2.1, community respondents had limited knowledge of mining (Table 6.6). While other industrial projects familiarized their knowledge factors related to heavy industry, their lack of experience in mine development may have restricted their foresight for how this project would play out.

[L]ike I said lots of industry over the years dealing with them. So we've had a lot of experience dealing with lots of logging and lots of, I don't know, I think they dealt with BC hydro and they dealt with the train lines through places, and they dealt with power lines through places, and long time ago through that pipeline that went through that you probably passed over when you came here.	Community2
With the Mackenzie, that community was entirely organized for the forestry industry.	Manager2

Table 6.6: Previous community experience with mining - Interview comments by manager and community

While these communities were naïve to mine development prior to the Mt. Milligan experience, the Mt. Milligan experience has been highly educational for community leadership (Table 6.7). Involvement with Milligan has shaped their approach to future mining projects in their region, in addition to their engagement with other proposed industrial projects, like hydro projects, energy pipelines, and other mining projects.

Yeah, there's a number of things that we learned about in dealing with Mt. Milligan, about how exploration takes place and, just the EA process. I think we, after Mt. Milligan, we ended up fully participating in all the LNG reviews. I think it helped in looking at what to look for in mining and exploration proposals.	Community1
New Gold has been looking at the Community Sustainability Committee (See Section 6.4.1) and have adapted something similar, and I think what they have done over the years is they're looking at lessons learned. You know,	

how could we improve on things that have gone on with Milligan?

Community4

Table 6.7: Influence on future projects - Interview comments by community

### 6.3.3 Handovers and Reputation

This section reviews how the specific transitions at this project were carried out at this project. Specifically, the "Handovers and Reputation" sub-node looks at how the handovers were completed, and how reputation played a role in shaping community attitudes toward the new team taking over the project.

The transfer of assets that takes place during a corporate transition is clear. However, relationships between the mining company and community are less tangible. Interview comments noted the company-community connection is often characterized by personal relationships which are challenging to transfer effectively. In this case, the reputation of companies or individuals can be important in determining if a positive relationship can be established quickly by a new corporate entity and its agents (Table 6.8).

So on a personal level, you have personal relationships with these people at this point, so you're trying to reassure them because that's your mandate as part of the team. At the same time, you're still evaluating this new company. . . So your job is to try to smooth the transition, give the new company a chance to kind of let new company people establish their reputation with the communities.

Manager8

[T]he Terrane people had some existing relationships because of the Placer legacy which perhaps was helpful for them, I don't know. But they seemed like they were well regarded in the community from the conversations that I had in the early days of the project.

Manager10

Table 6.8: Existing relationships at Mt. Milligan – Interview comments by managers

Continuity may have been a factor at Mt. Milligan, as a number of proponent managers remained in similar roles through each transition that was examined in this case study. Such continuity had a positive impact on maintaining goodwill with stakeholders immediately after each transition (Table 6.9). Of course, this goodwill is temporary, and more enduring stakeholder opinions of the operation are shaped by further actions.

[W]hen a company acquires another company, you acquire the assets, but trust is not a transferrable asset. So there is no question you have to almost start at the ground level and try to build your own relationships. And in places where people have done a good job then you know you have a bit of an easier introduction into it, I think. I think Terrane did a very impressive job and I mean I think before Terrane – Placer Dome had done good job, so it was an interesting project and that there wasn't a legacy of ill feeling and hard feeling towards the project. I mean that made it a lot easier.

Manager10

So, you see when Thompson Creek came in initially, there wasn't, there wasn't a huge change really over all I think. I mean, you saw a bit of a different approach, but I don't know that the communities saw that initially. It wasn't until probably about 6 months later that they started to see kind of that change.

Manager9

Table 6.9: Goodwill after transition - Interview comments by managers

Reputation can also present challenges. Placer Dome, took over an exploration property that had seen limited, if any, engagement with local stakeholders (Table 6.10). The company had to build a relationship from scratch, at a time when strong stakeholder relationships were less customary.

And you know, when I walked in to the Nak'azdli, McLeod Lake the first time, yeah, I spent a fair amount of time telling them who the company was, what our orientation was, and what we hoped to achieve in our relationship with them and so forth. Although, I have to say, this was potentially an issue. At those three operating mines in BC we had no relationship to speak of with any First Nations. They were invisible. Those mines had been developed in the era before the possible outreach to and inclusion of First Nations in a very proactive and positive manner had become the norm, and had become the expected industry practice.

Manager2

*Table 6.10: Prior engagement with First Nations - Interview comments by manager*

Furthermore, the reputation of the mining industry in general influences community perceptions around mining projects. Not least for the communities around Mt. Milligan, who had a direct reminder of mining's negative history, the nearby Pinchi Lake mercury mine. When Thompson Creek took over the property, they also had to shift community perceptions that came with being a much bigger and American company influenced community perceptions (Table 6.11).

Yeah. We had a smaller company before and then it went into... it was taken over by Thomson Creek, which is an American company. I think yeah, it was a different... I didn't really meet with the company a lot so, I just heard from the tribe council really... they were dealing with, I guess it was different American attitudes, we're different from them, different from Canadian people I guess. Yeah. I don't think they were... too keen on dealing with aboriginal people who were... we're starting to... like the nation is operating on the basis that the aboriginal rights and title exists, and we're still operating on the basis that we do own the land. That's something that American companies probably don't have much... don't understand it enough.

Community1

There's no question we represent a corporate entity though, working on the project team. There's always going to be some tension, both I think within the team and the communities because you "come from away." I put that in quotation marks, but I find on all the projects that I've ever done, my past experience, where I grew up, my background, is really of no interest in the communities. They just simply don't trust you to start out with because you come from the south, or you come from Vancouver, or you come from a corporate entity, or you work for an American company. So these are all things that you need to anticipate and, you know, it's not personal, it's just the way it is. If you put your time against it, you can build your own relationships.

Manager 10

*Table 6.11: Community perceptions of companies – Interview comments by manager and community*

### 6.3.4 Perception of Risk

A range of academic and industry studies have highlighted the importance of taking social and political factors into account when assessing project risk (Deloitte, 2014; Ernst & Young, 2015; PwC, 2015). However, this advice is not always applied in practice. This sub-theme examines the extent to which those advancing the Mt. Milligan mine perceived these factors as contributing to their risk profile.

Company perceptions of socio-political risk around the project evolved depending on which proponent was involved, and the time the company was involved (Table 6.12). The mining industry has always been beholden to commodity prices, and economics are ultimately what drives projects forward. However, incorporating socio-political consideration into the risk profile has evolved over time, and resulted in an improvement in best practices, specifically with regard to engagement with First Nations communities.

[B]asically, there was then, and in many cases there is still today, the general assumption that whatever the social issues are, we'll manage them. And they're not going to be project breakers or anything like that, you know, there will be some incremental cost, but the cost of managing social issues or even political issues around a project is less meaningful to the company than a \$20 drop in the average price of gold. And gold fluctuates quite a bit, so it's

marginal. The cost is marginal, it's not that these issues are not important, they are from a corporate culture point of view. The company was oriented towards, you know, we wanted to be proud of who we are and what we are doing sort of thing. And from a corporate image, and reputational point of view. So it can affect you, impact your business in subtle ways, but as part of the acquisition due diligence it's not a significant concern.

Manager2

And maybe we were sort of on the cusp of, you know, you could go to meeting with the Mining Association and not all the players around the table... oh, we even had a working group within the Mining Association of BC and there were a number of people within the Mining Association, that particular case, there were some people that weren't terribly sympathetic I suppose to getting too involved. There'd been more people that been around quite a bit of the time, "Oh yeah I've heard of all this before." But I think the vast bulk were very quickly starting to realize how important this was. Because we weren't the only company, there are a lot of other companies that were starting to work with the aboriginals too. I think you get to a point where you realize that if you really, you can, if you have a really good relationship with the aboriginal communities, even if it takes an awful lot of time, that is to your competitive advantage and I think a lot of companies were starting to realize that.

Manager3

*Table 6.12: Historic perceptions of socio-political risk - Interview comments by managers*

Overall, company respondents characterized socio-political risk around the project as highly important, but manageable (Table 6.13).

We clearly had a government here in BC that was extremely pro-mining. Not just in Victoria but in the immediate Prince George, north-central British Columbia area. Very pro mining. The MLAs, the mayors, the councils, highly supportive of trying to get something going on at the project. Very supportive of responsible resource development, and those were always the key words I was always using. Highly supportive, so I knew that, that was good, big check mark there.

Manager4

It's BC, and the evolution of the mineral projects in BC every year becomes in some ways more complex, in some ways not. But certainly at that point in time the interplay between the two primary First Nations we're engaged with was extremely challenging to manage at times. So it definitely was a risk. Secondarily was the project economics: around, is there enough copper and gold in the porphyry deposit sustain a mine for the amount of time and to be able to build it for a reasonable price and operate it at a profitable level?

Manager7

Yeah I was hired specifically because two of the people on the project team, two of the most senior people, had come off a project where you know no matter how you define a social license to operate, the project had lost it and it experienced a protracted period of conflict with the local community. And as a result of that experience those two individuals sort of said, "Hey, we want to plan this project in a different way." So taking into account social issues and social responsibility at the start of the construction and planning through with the view to hopefully getting the project into production without having significant community opposition.

Manager10

*Table 6.13: Perceptions of socio-political risk – Interview Comments by Managers*

Technical risks, such as environmental and economic risk, were also at the forefront for company leadership (Table 6.14). Economic risk, specifically, was a significant concern on a project that had been significantly marginal for most of its life.

[T]he challenge was which you always saw was, as time rolled on we had some good ideas that we could build it, but your basic economics of what the value of the ton of rock is, versus the cost to process that ton of that rock. Just, there was never a big enough gap to pay for the capital. So just came down to simple economics. Never really, really quite worked.

Manager5

Milligan, there was always a lot of pressure around budget there for obvious reasons, and we went way over our budget on Milligan.

Manager9

So the environmental side was certainly of interest to a lot of people. But when they saw our approach to just to

minimize footprint, you had a mine that was designed to never discharge water, we didn't have acid rock problem, we were developing a mine that was underneath the ground where about 65% in the area that have been previously been clear-cut. It had been approved before. It was a relatively benign mine that you know, of course there are localized impacts, no one would ever say there wouldn't be. But these sort of the broader scale impacts were really very, very negligible.

Manager7

*Table 6.14: Technical risks - Interview comments by managers*

Community attitudes toward risk can be different, but are no less relevant to successful project advancement. Interviews with community leaders found significant differences between the risk profiles of First Nations and settler communities. First Nations leaders spoke to significant concerns about potential environmental and social impacts. First Nations leaders also alluded to a longer risk horizon, and spoke in terms the generational impact that a mining project could have on their community (Table 6.15).

I don't know if you've heard it before but we I just saw the projects came in the companies come and say, "jobs and money, jobs and money, jobs and money," but I was really concerned about the bigger picture of what comes of the jobs and money and all of the social effects.

Community2

And if they want to have a mine there then they had to do the things we wanted them to do, you know, the clean drinking, clean make sure that the contaminants that are staying on that site do stay there, and then if there's contaminants then they have to clean those contaminants out somehow. Burying it there is just not addressing the problem, it has to be done in a way where pristine land gets backs to the same normal pristine way it's always been for thousands of years.

Community6

[T]hey're trying to sell it to us, telling us it's safe, but if you were in my shoes there's always that hesitation that everything is going to stay in one place. What happens if it leaches out? How much of it's starting to leach? Where does it stop that it's not going to get out of that containment? What kind of guarantees are you going to give me then? And I guess they put certain type of soils that were, that contains water, say like line it with clay. But how long is that going to sit there? 20 years, 30 years, 50 years. What happens in 50 years if it breaks down? Does that mean that all the contaminants get out there and start doing harm to us? We want to make sure that, when you leave, that none of those things are harmful to us.

Community6

*Table 6.15: First Nation perceptions of risk - Interview comments by community*

In contrast, interviewees from impacted settler communities, while acknowledging the environmental impact, focused on economic and social factors. The risk horizon also appeared shorter, with a focus on the more immediate risks to their community (Table 6.16). A full analysis of responses to impacts and benefits of the project will be explored in Section 6.3.4.

But we definitely have shadow populations, and while we're talking about we might as well talk about cumulative impacts too. I mean these projects aren't happening in isolation.

Community3

Environmental concerns were minimal. The decline of forestry led to a desire for jobs in the region.

Manager14

We're resource extractors. You know, resource extractors understand I guess, that there is gonna be an impact to the environment and they just need to look at it. Well, it's just something, how you make that work. So, and the other piece of it too is, Terrane came back with a revised mine plan and dramatically decreased the footprint and it's closed circuit loop, where there's no, no discharge, no effluent. So, it was pretty easy to support that.

Community5

*Table 6.16: Settler population perception of risk - Interview comments by community*

## 6.4 ADDRESSING THE ISSUE

The second theme is comprised of issues, challenges, factors and strategies for navigating corporate transitions, and particularly transitions at the Mt. Milligan project. This theme incorporates successful, and in some instances unsuccessful, strategies for building constructive corporate-community relationships. Many interviewees addressed these topics in broad terms – not only specific to transitions, and these instances were included as the literature supports the need to plan for these approaches at the start of project development, and maintain them on an ongoing basis (Kemp & Owen, 2013). Following this, it is crucial that these topics are addressed not just at the transition stage, when socio-political risk is heightened, but throughout the project life-cycle.

Table 6.17 and Figure 6.5 present the top 25 terms by word frequency of coded interview data in the "Addressing the Issue" node.

Word	Length (letters)	Count	Weighted Percentage (%)
People	6	235	1.45
Community	9	215	1.33
Time	4	156	0.96
Company	7	141	0.87
Mine	4	130	0.80
Project	7	115	0.71
Work	4	110	0.68
Communities	11	101	0.62
Committee	9	91	0.56
Government	10	86	0.53
Process	7	83	0.51
Actually	8	82	0.51
Environmental	13	81	0.50
Mining	6	65	0.40
Benefits	8	58	0.36
Make	4	58	0.36
Working	7	58	0.36
Impacts	7	57	0.35
Little	6	55	0.34
Engagement	10	53	0.33
Sustainability	14	53	0.33
Issues	6	51	0.32
Years	5	50	0.31
Local	5	49	0.30
Meetings	8	48	0.30

Table 6.17: "Addressing the Issue" top 25 words by frequency



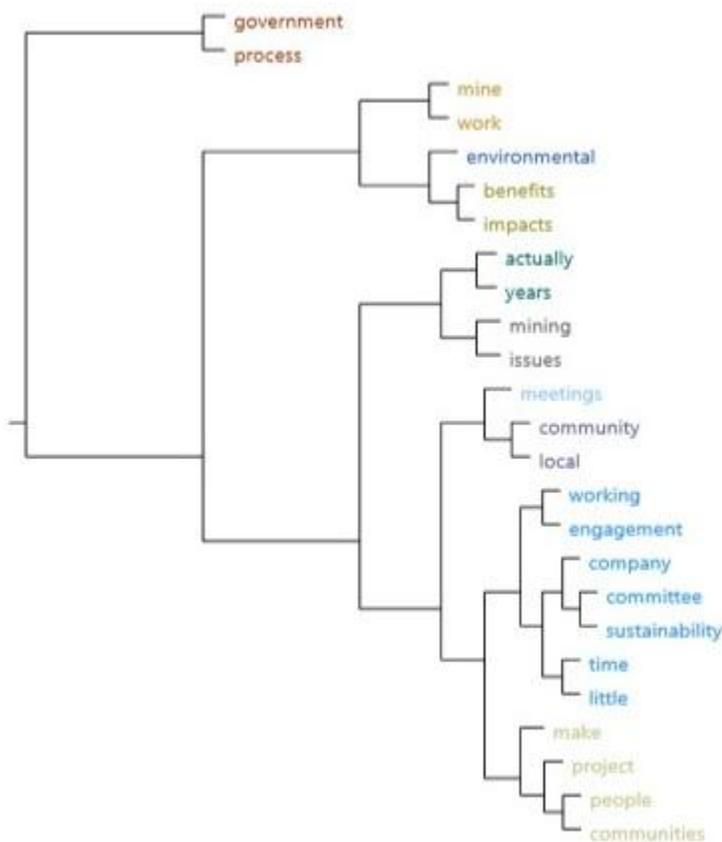


Figure 6.6: "Addressing the Issue" cluster analysis tree

The word frequency table and word cloud for this theme are similar to the previous theme; what has changed is the context. Through analysis of the word clusters in Figure 6.6, and comparison with topics in the literature review, sub-themes from this node emerge. Instead of talking about the actors at the Mt. Milligan mine, respondents focused on the actions of these actors. To fully capture these actions as they influenced the socio-political context of the mining project, this theme is broken out into four sub-themes: stakeholder engagement, communication and transparency, legislation and regulation, and impacts and benefits. These sub-themes are presented in the next section. The context of each sub-theme is explained in relation to the case study and illustrated with interview quotes.

### 6.4.1 Stakeholder Engagement

The first sub-theme in this section looks at stakeholder engagement, and what strategies the three companies involved in this case study adopted to build support for the Mt. Milligan project. As discussed in section 2.4, stakeholder engagement is a vital piece of a company's CSR strategy. Appropriately planned and executed stakeholder engagement can be the difference between building strong community support for a project and facing a wall of opposition.

Mt. Milligan's history is characterized by progressive stakeholder engagement. Interviewees noted Placer Dome was an early leader in the CSR field, and they initiated what was a high level of engagement with local First Nations for the time (Table 6.18).

The good thing about it was Placer was a world leader, we were so far ahead of what a lot of other companies were doing at that time, that we probably had a significant amount more social engagement and social license that we were trying to maintain.

Manager5

*Table 6.18: Placer Dome as a CSR leader - Interview comments by manager*

Stakeholder engagement strategy at that time can be considered basic compared to modern's best practices, with a focus on basic meetings with key stakeholder groups. Attempts to strengthen local knowledge of the mining industry were also a priority (Table 6.19).

Yup, they came up here. Bought us lunch and stuff like that, and talked about the mining project. . . . Some kind of consultation phase was happening. They just came out here and said there's likely to be a project there, but at the same time we didn't know what the project would look like.

Community6

[W]e ended up going on the tour, and the thing that sparked the tour is we realized when we were going up that sooner or later we would want to start working on an agreement. But I think there was the assumption that... quite often through the process, we'd hear about holes in the ground, you know, "It's going to leave a big hole in the ground." And I think finally I remember saying, "Well, have you ever seen a hole in the ground like that, have you been to Gibraltar, have you been to Endako?" Thinking, yeah, they've seen it. But no, they hadn't, they'd never seen an open pit.

Manager3

*Table 6.19: Placer Dome and stakeholder engagement - Interview comments by manger and community*

Terrane continued with a similar level of consultation with local stakeholders when they took over the project in 2007. As the project progressed they expanded the stakeholder engagement strategy to support permitting and other project activities (Table 6.20).

We did pretty regular open houses. We did certainly quarterly. Were out there, doing open houses in, kind of, all four of the main communities. So, it would be Fort St. James, Mackenzie, Prince George and Vanderhoof. Sometimes, it was more often than that.

Manager9

We did things that you didn't certainly have to do and we did things that were a little bit different. I'm not saying we invented them or anything, but, you know, we did things to try to engage the communities around the Mt. Milligan project in the project. We put a fair amount of effort in those development years. So, we understood what the project was, and those local communities could understand. They understood what's good, what's bad. They understand what their challenges are.

Manager4

Probably a good 50 percent of my job was stakeholder management. So, I met with the First Nations chiefs lots, I knew the mayors really well in both communities. I spent a lot of time on just managing expectations and trying to get them to understand what it was that we were actually doing up there.

Manager9

*Table 6.20: Terrane and stakeholder engagement - Interview comments by managers*

Encountering a more robust permitting process than their predecessors, it was essential Terrane build community support for their project. To aid this process, Terrane established a multi-stakeholder working group, the Community Sustainability Committee (CSC), in an attempt to gather the diverse range of stakeholders in one forum (Table 6.21).

<p>And again, this is the liaison committee model that Placer set up at Equity almost 20 years ago. So, that was one of the first projects in Canada, I think, actually to do that, with the idea to establish a group with representatives from the community and First Nations that you meet regularly with. And so, that's just, I see that as another tool, another way of doing consultation. One of the main advantages of it, though, is that you have a group, and hopefully the same people, but not necessarily, that will continue through the Environmental Assessment process, permitting, into construction, operation and even into closure. And I get that the people will change, but, you have again, you have a continuation, if you like, of involvement and you have a mechanism for getting information out.</p>	<p>Manager6</p>
<p>When I joined, the intention was that, that that committee would come under the auspices of corporate social responsibility. But we, my philosophy around that is, it shouldn't be a company committee. It should be a committee that looks at issues and the company should be a participant. So, rather than having the company at the center and all the stakeholders are on the outside, I prefer that the issues at the center and put the stakeholders around the outside. So that was the theory. The theory for the committee was that it was to look at regional sustainability and really how the mine could make a contribution to post-mining certainty in the communities.</p>	<p>Manager10</p>

*Table 6.21: Mandate of the CSC – Interview comments by managers*

The CSC was the centerpiece of Terrane's engagement strategy, and its conception was positively reviewed by community interviewees. However, the diverse group of stakeholders and interests it brought to the table had the potential to create tension (Table 6.22).

<p>[I]t reflects really where Terrane was at, and the people that were there in their management, because as a group, as that committee formed, we developed our own terms of reference. Agreed to them. And it was really, it was supported and guided I guess, you know, they provided a skeleton framework, but the decisions were really made by the members of the community, on the interests of the community.</p>	<p>Community5</p>
<p>But yeah, it was a new initiative and it was to... yeah, better inform communities during the construction period and I think it's supposed to continue throughout the operation. So it's a good... I found it's really informative in keeping on top of where they were at, and, but it wasn't a place that they wanted to address issues for like... for us, we didn't find it was addressing some of our issues.</p>	<p>Community1</p>
<p>It was a forum for discussion and a forum that highlighted the tension and the competitiveness between the communities. . . Some people on the Community Sustainability Committee were there because they had environmental concerns. Other people were there because they wanted to see commercial advantage occur in their community. Or you know, in one instance we had somebody who is on the committee for a short period of time who was looking for opportunities for commercial advantage to occur to his business. So there were different motivations for people to come on to the committee and those very seldom were, the motivation was rarely, I think, the primary motivation was rarely regional sustainability.</p>	<p>Manager10</p>

*Table 6.22: Perceptions of the CSC - Interview comments by manager and community*

When Thompson Creek took over Mt. Milligan in 2010, the CSC was a permanent fixture at the project. The committee would be made mandatory throughout the life of the mine as a stipulation of the Environmental Certificate. With a shift towards operation, stakeholder engagement strategy would shift with it.

While almost all company interviewees expressed positivity regarding their stakeholder engagement strategies, interviews with community leaders provided a more critical view (Table 6.23). These interviews were especially insightful, as they were precisely the people proponents sought to bring onside. The views of community leaders varied, some found the stakeholder engagement initiative insincere, while others reported a change in attitude resulting from a transition.

[C]ompanies come to community members and they kind of pick them off and try to deal with the family or the individuals and the band tries gives support to them. But there's so much industry coming and proposals coming to the band that it's hard to keep up with, and so I see there's lots of 'divide and conquer.'	Community2
I definitely do not like the wine and dine aspect of when companies come in . . . It felt like we were being pitted against Mackenzie, that communities were being played off each other. But, again, coming through that competitive nature of communities, because you want to advantage your community . . . Me, I feel like we got wined and dined big time with lots of promises, and those promises didn't necessarily come to fruition.	Community4
But every company is going to be really positive and proactive and great when they're going through their environmental certification process. And it's only when they actually start having to build the project, and do the project that you're going to see, I think, a more accurate nature about what the project is going to be like. When they need you, they'll be the best neighbors they can be, but when they no longer need your approval, why would they?	Community3

Table 6.23: Community perception of engagement - Interview comments by community

Observers noted the transition between Terrane and Thompson Creek resulted in a shift in initial stakeholder engagement strategy with the latter company. This could have been reflective of Thompson Creek's previous experience as a mine operator, moving into a mine development role for the first time (Table 6.24).

And I think that probably one of the unique things with Thompson Creek and Milligan was more the fact that they, they didn't have a lot of expertise within the company on the sustainability side, 'cause they never really had to . . . There was no corporate oversight on any of that, so, and they just kind of did it at the operations level and there wasn't any need to bring corporate into that. But when you're starting up a new operation, you kind of need to have that, that corporate help to go through it. Or you need to find, you need to have somebody to trust with building that culture at the new operations. Whether that's a corporate person or a project person, you've gotta figure that out . . . And most companies now, whether they're big or small, have some sort of sustainability piece to the company, where Thompson Creek just really didn't before. So they were kind of playing catch up for a good bit of time.	Manager9
--	----------

Table 6.24: Prior experience of Thompson Creek - Interview comments by manager

## 6.4.2 Communication and Transparency

While related to stakeholder engagement strategy, communication and transparency were found important enough to warrant their own sub-theme. This theme investigates the ways in which companies maintained a flow of information to and from stakeholders.

As discussed in Section 2.3, regular and transparent communication is key to building trust with stakeholders, and in turn gaining a Social License to Operate. Company respondents recognized the value of open lines of communication between actors, and spoke to their efforts in keeping stakeholders up to date on project progress (Table 6.25).

So we're pretty aware of all that, and our strategy was always transparency, and it was a big way we ran Terrane. We just said, "Look, there's no locks on the filing cabinets here guys." Whenever we talked to First Nations, we just said, "This is what we're up to, we want to listen to what your concerns are, we want to have a dialogue with you about this because we want to develop this mine and we would like to have your support in getting that done."	Manager4
It became a very important, again that was something, if you are perceived to be transparent than this also to your competitive advantage.	Manager3
It's a matter of getting out there and continuously talking, and not just once, but you gotta go to where people want to listen to you. It's not just, "I'm going to hold a forum tomorrow, everybody come."	

Manager5
I met with the mayors, the regional district folks, the chiefs and councils, you name it. We met on a regular basis. We dispersed information through the paper. We certainly had a lot of information on our website. We provided regular updates to the community at large. We spoke at conferences. We were just very open about how to connect with us and that we spent a lot of time reaching out on a local basis.
Manager7

*Table 6.25: Need for regular and transparent communication – Interview comments by managers*

However, practical application of these principals is more nuanced. Varying corporate policies around the sharing of information, plus the regulatory realities of publicly traded companies, make it difficult for a proponent to be fully transparent. A proponent's primary role is to further their project, and the risk of inflating expectations is genuine (Table 6.26).

We were sensitive to measuring the dynamic of promoting the project, as you have to do as a developer, and not overselling, and so the initial response was, "Great, starting construction!" But no, wait, that pending financing means nothing has changed the since the last time we talked. We're still working very diligently, but until there's financing there's not the contracts and the jobs. So giving them a chance to interpret.	Manager8
But, I think that was one of the things I kind of come back to in the use this word, "transparency." But we were also, because it tied us to the relationship or this professional sort of relationship piece, as I said, "Look, I can't..." As I would often tell it to people, "Look this kind of mine is going to cost a billion dollars to build. I don't have a billion dollars. Don't misrepresent me here. I don't have a billion dollars to build it. I'm going to have to find that money, there are ways I can find that money. One of the ways I may do it is by selling the project or another joint venture or some other company is going to become heavily involved." And I said, "Look, that is going to be potentially part of the future." So I think we were always open about it, and clear and transparent about it.	Manager4
[I]t's very difficult sometimes for these communities. You go there and say you're going to build a mine and then a year later nothing has happened. They'll go, "What's going on?" And we'd say, "Wow look, here's what we're doing." We were trying to always fill and keep them informed, and keep them filled in. "Here's the challenges we're working on now and this is what we got to solve, and these are the things we have to fix." So we did a lot of that with the local community and we established a community liaison council's sort of thing where we did that.	Manager6

*Table 6.26: Managing expectations - Interview comments by managers*

The community interviewees reported a variety of experiences in this sub-node. They recalled transparency throughout the mine development period, and reported positively on work of the CSC to encourage communication (See Section 6.4.1). Community respondents did question traditional communication strategies, and noted a lack of adaptation to the local context (Table 6.27)

I think, you know, it has been, honestly, an open and transparent process. But, of course, this is the first time that any of us have gone through this sort of model.	Community5
They would buy advertisements in the local newspaper. I think they had some public open houses? Although I can't remember, there's been so many projects come through since that time.	Community3
I mean, and now you have large industry operating in small town Northern BC. We understand how the communities work. And I don't know if large industry really understands that with very minimal effort that communication, you know, constant heads up kind of communication makes, a world of difference. Because you have ambassadors who get out there and everybody knows each other, and the message gets around town really fast, right? So, yeah, I guess that's a, a good point for large industry to use as a tool. Because as you're making changes, if you use, if you use a network well, it can make, you know, a big difference for public perception and stuff like that.	Community5

*Table 6.27: Community perception of communication strategy - Interview comments by community*

Multiple respondents also reported differences in quality of communication and transparency between the Terrane and Thompson Creek (Table 6.28). Some attributed this to project stage, while others noted a different operations style altogether.

So, kind of a lower profile. I guess Thompson Creek probably communicates directly to the community less than Terrane has done. Not really sure why.	Community5
So, and probably the biggest change that I heard a lot from the communities, and it's certainly something that I struggled with, was that Thompson Creek was much more protective of information. I guess that's probably the best way to put it. They didn't like to share what was going on up there with people.	Manager9
They ( <i>Thompson Creek</i> ) closed the local office. But it does feel like a lot of their efforts presently to get the word out, they're trying to do through people like myself and others who are involved, but not on the project. So we become the communication lines, because who's the local face? You don't have one.	Community3
And when you're in a small community, regardless of technology, there's still that face to face thing that happens. And this is a big US company, it's not like it's someone you can drag to Prince George and talk to. And that was a frustration in the past. "Well, who do I talk to if I want to ask questions?" Because no one's at the office. Or, "I went to the office and they told me, I have to apply online." Or, I mean, if you're in municipal politics or in the know or whatever, you kind of know who to reach out to. But for Joe Public, that's not necessarily the case.	Community4
Well we continued the things that Terrane had done, but in addition, well I think we formalized a few things. So Terrane, I think, had come on and done briefings with mayor and councils but they hadn't done it in a systematic way. So with Mackenzie and Fort St. James we formalized that. So we went twice a year to council, made the official application, went to council, publicized it so committee members could come if they wanted to. We started a monthly column that ran in the newspapers that served the communities to provide updates on the project. We just thought that would be a good way to reach people who maybe wouldn't come out.	Manager10
I'd say, sort of the concept of transparency, that was probably the main, that would probably be the main thing that really, it was a shift from . . . Whether it's a just a corporate thing within Thompson Creek or whether, it might be a Canadian or American thing. I mean, it's like, kind of, kind of, the American culture of the litigious society, just makes it difficult to be transparent. That was kind of part of it certainly. When you don't have that transparency and you're used to having that.	Manager9

Table 6.28: Communication different with Thompson Creek - Interview comments by managers and community

All respondents spoke to the need for consistent and transparent communication throughout at all points in the project life-cycle. By keeping open communication lines open, misunderstandings and conflict can be avoided. Miscommunication around something as simple as the project name can lead to tension (Table 6.29).

Not a lot of people really knew where it was. I mean, you had to really explain to people where it even was. And it was eight kilometers away from Mt. Milligan itself. So, I mean, there was a conception in the community, and I remember seeing a poster of – someone drawing up a picture at some point, of us blowing the top off of Mt. Milligan. And that's, we were not actually near the mountain itself. The mountain itself was 8 kilometers away. It just happened to get that name at some point. So, we actually talked about changing the name because the confusion that that created. But we thought that would probably create more confusion if we changed the name.	Manager9
There was always... There was a perception of this, the mine actually being built on the mountain, on Shad Mountain as opposed to... and so that's become important too, that some of the First Nation realize that it isn't built on the mountain. So that helped a little bit. I'm not going to speak directly to First Nations being comfortable with everything, but as I understand their not... there was some... sort of understanding or better understanding once people realize that it wasn't being built on the mountain. But that goes back to what how information was conveyed,	

vs. reality of the information.

Community4

Table 6.29: Potential for misunderstandings - Interview comments by manager and community

### 6.4.3 Legislation and Regulation

This sub-theme reviews the role that legislation and regulation played in the evolution of corporate-stakeholder relationships at the Mt. Milligan project. The regulatory aspects of the project, specifically Impact Assessment, influenced community perceptions of the project. Stipulations put in place as a result of Environmental Assessment live on with the project, and thus are carried over to any operator that takes over the mine.

Placer Dome obtained an environmental certificate for Mt. Milligan in 1991, but the certificate lapsed several years after the company failed to move the project into operation. Company interviewees from that era noted the regulatory process was more straightforward to navigate than in later years (Table 6.30).

In retrospect, when I look back at that point of time, it was sure easier then than now. Now, it almost, in my point of view, it takes so long trying to get through and it's so frustrating. And at that time we didn't think it was easy, but you used to have rules and there were reasonable timelines, you know. You could expect that if you got started into the EA process itself – there was still some preliminary steps – once you started the process, you had your open houses, you are pretty sure that if you were doing everything properly and honorably etc. etc. you could be pretty sure that in 2 1/2 to 3 years are going to get your EA. No longer.

Manager3

Table 6.30: Shift in EA timelines - Interview comments by manager

After Terrane took over, they would have to restart the permitting process, including a new Environmental Assessment. As discussed in section 2.5.1, understanding and planning for the impacts of major projects in British Columbia, including mining development, is legislated through the Environmental Assessment Act. The Act defines EA as "a legal means to ensure the potential for adverse environmental, social, economic and health effect, or potentially adverse effects on Aboriginal people and local communities are considered before the project gets an approval" (BC EAO, 2014).

Due to its size and potential impacts, Mt. Milligan also triggered federal legislation on environmental assessment. In order to streamline the assessments, the provincial and federal governments initiated a harmonized assessment process, allowing the proponent to submit one set of application materials that meets both provincial and federal requirements, and receive a separate decision from each agency. Mt. Milligan was one of the first projects to utilize the harmonized process.

Both company and community interviewees noted challenges with the regulatory process. Company respondents, especially, spoke to the challenges with the timing and bureaucracy of the process (Table 6.31).

Well, as anybody will tell you, to get mine approved BC is a daunting challenge. At the time, we knew we had to do a BC process and the Canadian Environmental Assessment process and that was really unfortunate because it drags . . . So there was a lot of repetitive of questions asked, and despite the fact that they were repetitive you can't just say, "Well we answered that in the previous one." You actually have to address it fully, which not only requires a lot more work by the proponent, in this case Terrane Metals, but also requires a level of consultation and engagement with both area First Nations as well as the communities.

Manager7

I mean, it's a huge process. It's like four years to get through it. And that's really, that's just the actual formal process. There was, we had 20 years of data behind us that were reviewed to get us through. So, its, yeah, I would say, it was an interesting learning experience for me personally when you see what it is to actually go through and do what you need to do to get the permits.

Manager9

*Table 6.31: Challenges with the EA process - Interview comments by managers*

Community respondents spoke to the challenges with navigating the EA process. Unlike proponents, communities lack both expertise in evaluating regulatory submission, and the resources to fully evaluate EA documents (Table 6.32). Municipalities particularly, receive no funding or assistance to evaluate EAs for projects near their communities.

[T]he process itself was challenging relationship wise, in large part because the company has given as long as they need to prepare their application, right. They could take two years to prepare what they want. It's dense. It's really thick. For our community we had about 30 days to respond and everyone is already super busy, flat out. We don't have a lot of time or resources to be able to put into working on EA certificates.

Community3

The current Environmental Assessment process doesn't give municipalities any resources to help navigate it. And municipalities have no recourse if issues come up later.

Community8

Well, one thing we've learned with the provincial and federal government, especially the federal government, they agreed to minimize the environmental safety process, to make it from one to two years to one year or something or... the process, to quicken it. That bothers us, because if you know the capacity of ourselves as a band, our land referral office or land management and all that, now we're under the gun even more. But the timeline of these companies, the time thing, it isn't flexible.

Community7

*Table 6.32: Challenges with EA process - Interview comments by community*

In addition to capacity, some community interviewees voiced dissatisfaction with the whole EA process, noting they felt it was both poorly designed and did not meet the needs of their community (Table 6.33).

So, I always find with that EA process, it's a cookie cutter process. "This is what we're going to study. This is how we're going to study it." They look at fish, this period, but what about the whole year of the fish, that fish are all different. And they said, "Oh, we didn't see animals at this time." No tracks when they went out tracking, and our hunters said, "Well, you're not going to see tracks because the snow is too deep. You don't go tracking then because animals aren't out as the snow is too deep." "We didn't see any amphibians in March." Well you don't see amphibians in March here because there's still lots of snow. And they looked at grizzly bears instead of black bears, because that's what they look at – grizzly bears everywhere else. But we have a lot of black bears, and there is no report on black bears. "We didn't see any butterflies in April." Because it's too cold for butterflies here in April. So they just take what they do everywhere else and they plop it and say, "This is what we're going to do here." Rather than being specific to this area.

Community2

Well, with Mt. Milligan, I think we ended up not being involved. The band council chose to not be involved in the EA process because it was flawed, and it is still flawed. Not having to deal with aboriginal rights and title at that level or even at a higher level; the government hasn't included them in any of the review processes or EA review process of projects.

Community1

*Table 6.33: Dissatisfaction with EA process - Interview comments by community*

It appears the execution of an EA is challenging for both proponents and their stakeholders. It is both a time consuming process, and one that leaves all parties unhappy. The challenges don't stop once the EA is approved, either. Once an EA is approved, conditions of the subsequent EA Certificate live

with the project throughout the life-cycle (Table 6.34). A proponent can apply for an amendment to the EA – as Thompson Creek did to move Mt. Milligan's load-out facility and shift to a camp operation – but otherwise commitments are transferred to the new operator in the event of a corporate transition.

<p>You're very conscious of the commitments you're making early on in the process, that you're just not making them to get the EA. And it's the challenge of having a company that's not necessarily gonna operate to do the permitting. So, it is, sometimes you just do whatever it takes to get permitted and deal with it, kind of afterwards. And certainly, that wasn't the case with Terrane.</p>	<p>Manager9</p>
<p>That the EA's had been worked through and been approved and Thompson Creek needed to commit to carrying on the project in light of the regulatory commitments have been made. Both on the Environmental Assessment side as well as more on the true operational side.</p>	<p>Manager7</p>
<p>There was a table of commitments of course for the environmental certificate, and so that was one of the things that guided a lot of the action, was taking a look at the table of commitments and making sure that the, for want of a better term, the infrastructure was in place to support delivering on those commitments.</p>	<p>Manager10</p>
<p>There were commitments around some of the, things like monitoring, water monitoring, things like that. But also, some of the bigger ones, like, the one that they are still struggling with now, was that it is actually written in the EA that people would be bussed from the communities into the site. And even when they went for their amendment, to allow that the camp on the site, they still ended up with that in there.</p>	<p>Manager9</p>

Table 6.34: Commitments in EA certificates - Interview comments by managers

#### 6.4.4 Impacts and Benefits

Impacts and benefits are an important factor of any industrial development. This sub-theme explores how impacts of Mt. Milligan were balanced by benefits from the project. Perceptions of both expected and actual impacts and benefits (to date) were reviewed, and compared to expectations that were developed early in the mine development process.

Community and company interviewees had a wide range of experiences related to this node. Company respondents looked at the significant economic impact the project had on the region, and the relatively minor environmental impact the modern mine design provided (Table 6.35). Terrane's eventual design of the mine anticipated stakeholders concerns, and later won awards for excellence in mine design (AMEBC, 2015).

<p>Mt. Milligan is a big project. Does it have environmental impact? Yes. What are those impacts? How were they mitigated? How significant they are? We thought we did a pretty good job of designing this site to minimize environmental impact, and that was not just an accident. We took the view, right from the start, that let's imagine what this place looks like closed. And we work backwards.</p>	<p>Manager4</p>
<p>The whole footprint of Milligan is designed around that, having a very small footprint that closes easily that you can actually work with. And that caused a lot of traction through the whole permitting process and really was very easy to sell in that way, but also worked well operationally.</p>	<p>Manager9</p>
<p>And really that thinking was because we looked at it, let's imagine what this place looks like closed and then let's work backwards to where we are today. And we managed to kind of build that into the design so there are no waste dumps. Now part of the reason is strip ratios are relatively low so there are no legacy waste dumps. All of the waste rock either goes into the tailings facility, either into the dam or inside the facility itself. So all of the waste rock is contained in one man-made structure. The pits are left to become lakes afterwards, so there's no backfilling of pits,</p>	

and we think that's a good solution. And it will take some time, of course, they fill very slowly but they will become lakes there.

Manager4

It's what's the right way to do it. You know, the response to stakeholder concerns, we definitely went out with it, looked at it, we would get feedback on the design. There are things like where the power line went, to minimize the visibility from people in the local parks. The feedback from the neighbors on what they did or didn't want in terms of traffic. There was that. But if I was to say I have a memory of that having a huge change in the design concepts, I'll probably say no. You know, it really came down with the right way to do it.

Manager5

*Table 6.35: Modern design of Mt. Milligan - Interview comments by managers*

However, they also spoke to the challenges with managing expectations in the community, and addressing the varied interests held by the diverse range of communities and stakeholders around Mt. Milligan. The region's poor economic climate at the time of mine development had an impact on stakeholder perception of the project (Table 6.36).

There was a heightened interest by communities and First Nations and everybody in general about improving the employment picture for that region of the province. Virtually every sawmill between Mackenzie and Fort St. James had shut down due to market conditions. And you know we were continually challenged, "Are you going to hire local? Are you going to get as many jobs locally as possible?" There was definitely a pull between Fort St. James and Mackenzie on who would get the most benefit and it was very challenging to try and manage that at times. You had two very strong mayors, they were advocating effectively for their communities and you had to maintain balance on that.

Manager7

In the case of Milligan, the jobs were very big. At that time Mackenzie was quite depressed, and Fort St James certainly needed more economic benefits. So, I think, there was probably a little more interest in the economic benefit side, but the environment certainly wasn't ignored by any stretch by the communities and definitely not by the First Nations.

Manager6

*Table 6.36: Economic climate of the mine region - Interview comments by managers*

Some community interviewees were conflicted about the project. Most felt that project impacts, to this point, had been well managed. However, they expressed uncertainty about future impacts, and were concerned about striking a balance between opening the community up to negative social and environmental impacts, and bringing economic benefit (Table 6.37).

Terrane wanted to be as environmentally conscious as possible. Terrane also talked about the fact that the footprint was going to be much smaller and to the benefit of them. Thompson Creek, same thing. I can't remember what the total square footage is for the whole mine, but it's quite small in comparison to what it could have been, if it had been developed in the '90s.

Community4

Yeah, I think it did to some part but I think when you say, "Jobs and money, jobs and money," we're a big logging town where we were losing sawmills and workers and companies were shutting down, that kind of overshadowed the history that we dealt with, because we had Pinchi Lake Mine, right, the mercury mine here. And so, they, I think they forgot about it. There was some people that still had it, but it wasn't as big as the people that wanted that mine here, for jobs and money for the town.

Community2

[H]earing about all the buzz that was going on when the mine was... the community went through, "Oh there's going to be a mine, there's not going to be a mine, there's still going to be a mine, there's not going to be mine." So, when they got more serious there was all these buzz going around the community. And I just started hearing different things - people renovating places, putting their rent up, people not being able to afford with the rent and going, leaving, being kicked out of their places, and even the drug dealers coming in to claim stake on the area because their money is going to be coming and [the mine] wasn't even approved.

	Community2
Well, someday there, our children that are going to be looking after the land, and they want things to look after, they want animals to look after, they want to eat the animals that live there. And at the same time too, you know, like, you want infrastructures for a community. You want, you want to build offices and buildings there where your children can work out of. You have to look far into the future all the time and try to make sure there is a safe balance there.	
	Community6
So, the community, because of the downturn, started already getting educated around mining, and interestingly enough, it provided people with the opportunity to develop the skill sets to be able to come back to Mackenzie and work for the mine, which worked out really well.	
	Community5

Table 6.37: Concern about impacts - Interview comments by community

Social and health impacts of mine development on communities can be difficult for companies to address directly, because much of the impact takes place off their work site and they have limited ability to influence activity in the community. Therefore, collaboration with local community leaders and service providers is necessary to mitigate these impacts. At Mt. Milligan, the establishment of a Social Effects Monitoring Committee was a requirement of the EA certificate. The committee was newly established when this research was carried out, and outcomes from this initiative did not come up in interviews.

Community benefits were also discussed, with many community respondents feeling they had not experienced the type of benefits alluded to by the proponent in the project's early stages (Table 6.38). However, they also expressed understanding that tempered their unease. The challenging market conditions facing the mine, the current position early in the mine life, and a recognition that some may have let their own anticipation get the better of them, all contributed to a feeling that a shortage of benefit to the community is unfortunate, but not acrimonious.

[T]here was a lot of expectation at that time, and I'm not too sure why the community felt that projected benefits were promises, and maybe it's just a lack of knowledge and experience around EA certificates. But when a company makes a proposal, they project what the economic benefits and social economic benefits might be for community, but those aren't guarantees.	Community3
The mine has benefited the community for sure, but not to the lengths professed. It created some friction for sure. The company suggested benefits, they were stated in good faith, and the community acted in good faith.	Community8
So I think that the community is still just adjusting to this idea that the things that were promoted as going to be benefits for the community, they weren't realized. It's not a broken promise, it was our false expectation and also probably the company making that an expectation.	Community3
We see other big corporations in other communities making big financial contributions. They are contributing and sharing benefits. I'd like to see them make a donation for the community center or some other projects that would contribute to their legacy in the community.	Community8
We need that critical mass of people, and so, having, you know, when they made the decision to go to camp based jobs, and put in a really nice hotel, the challenge was the road transportation, getting there, you know. It's just on the cusp of making sense as a drive in access camp, right? Instead of an overnight one. You know, and that's the reality of what it was. Community members, you know, perceived; I just heard it the other day you know, "They lied to us." It was like, "Uh, I was there. They didn't lie. They tried to do their very best, but at the end of the day, it's a business, and it is just 30 minutes on the cusp of being different, right?" But that ability of being able to house people in Fort St. James or Mackenzie would've obviously created a much stronger benefit.	Community5

Table 6.38: Perception of benefits - Interview comments by community

Company respondents also spoke to challenges around meeting community expectations once Mt. Milligan began operating (Table 6.39). Operational and financial factors mean the realities of the operating mine are different than projected in the planning stages.

So I'm a big believer in under promising and over delivering versus the other way around. And from a planning perspective, I think this is sometimes challenging, because as these projects move to the approval process it is natural that companies want to earn community support, and I think sometimes they inadvertently often create expectations on the part of the communities. That when you're actually moving into construction and production to fulfill those can sometimes be challenging.	Manager10
During the construction phase, people were concerned with money and contracts. During the operations phase there is less of this type of activity, things are more stable. It is more challenging for the community to see the benefits.	Manager11
There were promises made by the previous operator. They didn't overpromise, but, when you're looking at these things from an operational perspective it is difficult to match what was proposed in the design stage. We're trying hard to make it work, and it is difficult, but many people on the sustainability committee understand the challenges the company is facing and that it is trying.	Manager11

*Table 6.39: Challenge in fulfilling expectations - Interview comments by managers*

Some benefits to stakeholders were formalized, particularly with First Nations. Placer Dome had basic agreements in place with First Nations in the area in the 1990s, but these agreements lapsed after Placer Dome shelved the project. An IBA with McLeod Lake Indian Band was signed in 2010, and Thompson Creek is currently in IBA negotiations with Nak'azdli. Revenue sharing agreements – or ECDAs – were also signed between the provincial government and McLeod Lake and Nak'azdli in 2010 and 2012, respectively. While these agreements are symbolic and important partnerships between the mining company, community, and province, tangible benefit, as seen by First Nations, varies. The construction stage saw a flurry of commercial activity, but the revenue and royalty sharing during mine operations is highly dependent on external factors (Table 6.40).

[I]t takes courage to have on our territory and it's going to be over a long term, long time. So this is our first experience with something this big and we're kind of at the management stage of it now, where they have been going for about 2, 3 years now that they've been actually in operation, passed the construction stage. So the construction stage gave some of our companies some work, so that was helpful in that piece. Since then we do have royalties coming from there. Not a lot. Again, what we're finding at McLeod Lake is, getting into a project like this, it becomes so much about what the market is doing and stocks and stuff.	Community7
--	------------

*Table 6.40: Direct benefits to First Nations - Interview comments by community*

Municipalities do not receive formalized benefits in the same way as First Nations communities (See Section 2.6.1), but instead rely on spin-off economic activity such as contracting opportunities and attracting new residents who contribute tax revenue to municipal coffers. Community interviewees noted this resulted in reduced economic impact post-construction.

In addition to regulation by the federal and provincial governments, voluntary industry standards such as MABC's TSM or PDAC's e3 Plus (See Section 2.7.1) could also have been employed by one or more of the proponents. Voluntary standards were not employed officially at Mt. Milligan, but managers were aware of them and some of their content was applied when developing company policies (Table 6.41).

They were on the radar, but we didn't adopt them because we didn't know where all this would end up. All those things were too far off in front of us to capture and bring in as a junior. There weren't any particular reasons for avoiding it other than the fact that while we knew at some point there are chances for development by us, but it was going to be challenging for us to raise enough money to go forward, and we want to maintain as much of that corporate flexibility for a future suitor of ours to move forward with whatever system they may want to do. And TSM at that point in time was more in its formation stage. It was being deployed by a number of member companies but it wasn't as prevalent in BC as it is now.

Manager7

Table 6.41: Adopting voluntary standards - Interview comments by manager

## 6.5 REFLECTION AND PROGRESSION

The third and final theme encompasses the reflections of interviewees on company-community relationships at Mt. Milligan, and specifically their thoughts on corporate transitions at this project. The interviewees address what worked and did not work during their involvement in the project, what could be done differently, and what outcomes may be transferable to other projects.

Table 6.42 and Figure 6.7 present the top 25 terms by word frequency of the coded interview data in the "Reflection and Progression" node.

Word	Length (letters)	Count	Weighted Percentage (%)
People	6	175	1.98
Project	7	102	1.15
Time	4	99	1.12
Community	9	86	0.97
Communities	11	75	0.85
Mine	4	74	0.84
Company	7	67	0.76
Work	4	60	0.68
Need	4	56	0.63
Key	3	46	0.52
Make	4	42	0.47
Construction	12	41	0.46
Piece	5	37	0.42
Years	5	37	0.42
Little	6	36	0.41
Involved	8	35	0.40
Certainly	9	34	0.38
Challenges	10	34	0.38
Working	7	34	0.38
Companies	9	33	0.37
Quite	5	33	0.37
Terms	5	33	0.37
Actually	8	32	0.36
Learned	7	31	0.35
Local	5	31	0.35

Table 6.42: "Reflection and Progression" Top 25 words by frequency



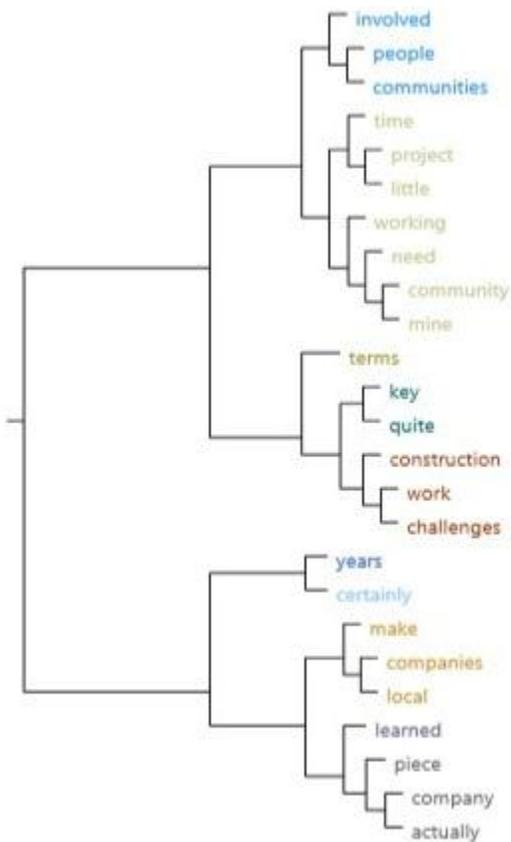


Figure 6.8: "Reflection and Progression" cluster analysis tree

Again, the word frequency table and word cloud look similar to those of the previous two themes. The language used by interviewees is consistent across topics. But again, the context for this theme shifts (See Figure 6.8), and looks at how actors are looking back and reflecting on their work at Mt. Milligan. To capture this thinking, this theme was broken out into three sub-themes: planning for the future, key challenges for transitions, and lessons learned. These sub-themes are presented in the next section. The context of each sub-theme is explained in relation to the case study and illustrated with interview quotes.

### 6.5.1 Planning for the Future

The "Planning for the Future" sub-theme looks at how the various actors involved in Mt. Milligan looked ahead at how the project would evolve, and especially if and/or how they would anticipate major changes such as corporate transitions. With the benefit of hindsight it is possible to appreciate which actors anticipated these changes, and how their work positioned them to navigate the transition with minimal disruption.

Familiarity with the mining industry was a strong factor in this sub-theme. As discussed in Section 3, British Columbia's mining and mineral exploration industry is largely built on a transactional business model. Smaller junior companies – like Terrane Metals – typically identify attractive mineral tenures, add value through exploration and/or development, and then sell the property (or

interest in the property) to a larger miner who has the financial and technical capacity to move the project into operation.

Even for larger miners like Placer Dome or Thompson Creek, developing a project is not a sure thing. Market and operational conditions can turn an attractive property into a marginal one in a short period of time. Placer Dome took over Mt. Milligan in 1990 ready to build a new gold mine, but by 1992 Placer could not make the economics work. Managers had to explain to stakeholders what had gone wrong (Table 6.43).

<p>So, you know, we first did the acquisition and the whole concept of it was immediately go on to build. I mean we were at the point where we had placed orders for the mills already. So it's all the equipment orders and everything were placed . . . You know, team on the social side at that point started engagement . . . You know, on the construction side or on the feasibility side we just moved straight into a feasibility study and paralleled a lot of the site activities right away. But, by the time the feasibility study was done, the economics weren't as good as people hoped.</p>	<p>Manager5</p>
<p>And that one hurt, because we were just a few words away from getting the agreement with Nak'azdli. I wasn't overly concerned about McLeod Lake as I knew we could get that one. We were just that far away when the project was shelved again because of metal prices.</p>	<p>Manager3</p>
<p>Well, went back for concluding First Nation meetings, and I remember the Nak'azdli one very well. I explained to them what had happened, that it was a great shock to me personally, and I thought an embarrassment to the company. And a significant financial loss to the company, as the whole project ended up being written off. We took a write down. And I remember, I think it was one of the comments, it was probably Leonard Thomas, who said, "When you come back, we'll still be here." Those were the parting words.</p>	<p>Manager2</p>

*Table 6.43: Placer Dome's write down - Interview comments by managers*

In addition to hurting their bottom line, Placer Dome's inability to put the project into production also impacted the communities' perception of the mining projects. When Terrane took over, there was a risk the community would respond negatively to the project due to their prior experience. However, as the project gained momentum, so did stakeholder anticipation (Table 6.44).

<p>And Placer Dome actually owned the Milligan property at that point, and they were a micro millimeter away from apparently going forward with the project in 1990, as I understand it, and then . . . the metal prices took a big dip so that postponed everything. I remember reference to marginal property value at that point too. So, for them to mothball wasn't going to be any big issue, but when you hype community and they come and wine and dine you, so to speak, and then get deflated... that's very difficult for a community.</p>	<p>Community4</p>
<p>Yeah, like somebody building their restaurant on that road because they thought they were going to get big business when Placer Dome came in, then they ended up not having a restaurant anymore because it didn't service a lot of people. So people were kind of hesitant too. But I think this, as it moved forward, people were thinking this has gone a lot further than Placer Dome, so they started taking it more seriously.</p>	<p>Community2</p>
<p>It was, people just thought that it was a bit of a joke because it has been tried before and it never happened. So, it's kind of like, "Yeah, I'll believe it when I see it." And you would hear that a lot.</p>	<p>Community5</p>

*Table 6.44: Early community perception of the project - Interview comments by community*

Terrane Metals' management team was able to position the project well for the technical transition into operation. Even though they were a junior, with a reasonable expectation that they may not be

able to finance, build, and operate the mine, Terrane boasted a team that had extensive experience doing just that (Table 6.44).

<p>So that was a key part of our success, I think looking back, is that we weren't just seen as a group that was trying to take advantage of an asset, market speculation, try the value up and sell it, right. I mean we were actually trying to really do this in serious mind and developed mind. We had full visions, as I would tell people.</p>	<p>Manager4</p>
<p>I would say that there was definitely, that was the, certainly the approach that we took all the way through. We wanted to operate this and we worked the feasibility study and really everything around progressing the project forward as if we were gonna do it ourselves. So, that's the right way to do it. I mean, I can't imagine any other way to do it.</p>	<p>Manager9</p>
<p>I think, having that sort of background and knowledge and the objective to actually build the thing, I think really does help. Cause sometimes, you get junior companies that maybe only, people have been involved only in exploration or whatever. They take the project to a certain stage, but they really don't have an understanding as to what it takes to get it into operation and what it is to actually operate a mine.</p>	<p>Manager6</p>
<p>We see that lots of times, wherein an exploration company that's trying to move the project forward, but doesn't necessarily have people that understand the development and the kind of production stages of the mine itself. They've worked in exploration their entire careers. So that's more where you could end up with the people that are just trying to move it through a process, to flip it. They just don't have the right skillset in there. We had a whole bunch of people in the company that built and operated in mines all over the world.</p>	<p>Manager9</p>
<p>Well the intent was always for Terrane to operate the mine. We always wanted to build and operate the mine. However, that is extremely challenging,</p>	<p>Manager7</p>

*Table 6.45: Terrane built for success - Interview comments by managers*

The challenge of taking the mine to production proved to be unfeasible for the junior company. It would have been difficult for a small company to finance the project at any time, but financing was particularly scarce in the midst of an industry downturn on the heels of the 2008 global financial crisis. Terrane's senior management was forced to explore a wide range of financing options, including selling the project (Table 6.46). With their Endako molybdenum mine already operating in the region, Thompson Creek soon took note of Mt. Milligan's potential to diversify their holdings.

<p>Well, you know we raised the hundred million dollars and we started moving through that time period and we kept going just as if we were well on our way to build it. Now we did have plan A, B, C, D, E and F in the back pocket, so to speak . . . So we carried on doing what we said we were going to do, at the same time looking for financing options.</p>	<p>Manager5</p>
<p>Look, selling the company to Thompson Creek wasn't the first choice, but it became clear that that was the way we were going to get to finance it. So that was the motivation, it was kind of, a bit of way to get it done.</p>	<p>Manager4</p>
<p>We just kind of got to a point, you know what, this just gonna, it's not the best thing for the shareholder for us to try to continue to do this. So, that's when we, kind of started the, started the process basically and Thompson Creek came along fairly quickly after that.</p>	<p>Manager9</p>
<p>It was a tough one, actually, because you invest so much personal time and effort into that, and then you kind of walk away from it. So it's a bit of a tough thing to deal with, when you go through those. At the same time that's the business model, so at some point you say grow up, get over it, be professional, do your job.</p>	<p>Manager5</p>
<p>It was always a big ask for us to raise a billion dollars, to build that project ourselves. I mean, really, that would have been a big bite for a company our size, pretty much no matter what. But, there are companies who have done it. So,</p>	

it is possible. But it's, yeah, it has to be there, yeah, all the stars have to align for that to happen.

Manager9

*Table 6.46: Terrane's decision to sell - Interview comments by managers*

Most community respondents did not have the benefit of prior experience with the mining industry. While they were knowledgeable about industry and business in general, mining was an unknown, and the sale of Mt. Milligan took some by surprise (Table 6.47).

I didn't think they were going to sell it, I thought they were going to be the ones out running the company, but now looking back, like, I didn't realize that is not how the whole industry works. Junior companies come in and they do the legwork and they sell it off. They don't do mines, they don't build mines. They do the legwork and then they sell it off. They're in the business of making money; they're not in the business of actually doing the mine.

Community2

I think there was probably some speculation. I wasn't surprised, but I was surprised, but then I'm not a mining expert. So, this sounds like when you're looking at how companies merge and turn over, that is probably quite common to the mining industry.

Community4

You know it wasn't really difficult for me per se because I'm in mining. I think that is probably a different experience for other people that aren't connected that way to the industry.

Community5

*Table 6.47: Reaction to sale - Interview comments by community*

## 6.5.2 Key Challenges for Transitions

This sub-theme analyses the challenges that interviewees reported as impacting transitions the most. Responses from interviewees varied throughout this sub-theme, but trends emerged from both company and community respondents.

Company interviewees spoke to challenges with ensuring stakeholders maintained realistic expectations; an especially challenging task if expectations were influenced by a previous operator. Indeed, changing market conditions throughout the project's start-up period were trying for the proponent, and may not have been fully appreciated by all stakeholders (Table 6.48).

Look when we started the project, the capital budget on the project was \$950 Million and the market capital of the company was \$1.5 Billion. When we finished the project, the capital cost on Mt. Milligan was \$1.6 Billion and the market capitalization on the company was around \$400 Million. And of course during construction you're not generating any revenue, it's just a cash burn. So very difficult to manage community expectations around that, "Why aren't you doing more for us?"

Manager10

*Table 6.48: Construction costs - Interview comments by manager*

Similarly, stakeholders become used to one style of operation, so the relationship with a new operator can be uncomfortable simply by being different, rather than any blatant decline in sincerity. Specifically at Mt. Milligan, the transition from successive companies with deep roots in British Columbia, to one that had limited experience developing greenfields projects in the province (Table 6.49), may have unintentionally created tension through lack of understanding.

Look there are CSR issues that need to be paid attention to in BC that are unique to that area. It took a while for the company to learn the lay of the land there, to get to know stakeholders' individual perceptions and goals. There are some things where the communities work well together on, but with other things they are very competitive.

Table 6.49: CSR challenges in British Columbia - Interview comments by manger

Transitions in ownership are often accompanied by transitions in project stage, which can be as, or more, disruptive. At Mt. Milligan, the transition from Terrane to Thompson Creek was accompanied by the transition from late-stage exploration and permitting to construction (Table 6.50).

I've always thought that the transition periods when mine goes from various phases, when they go from exploration to development, it's not quite as critical, but when you go from development to construction, construction to operation, and operation to closure, those transition points quite commonly cause a lot of difficulties. And it because quite often, the people that are involved in, say, the development of the design of the project are not necessarily the people that were involved in construction. And the people that were involved in the construction are not involved in the operation. I've seen, just so often, that those are the times where the information and knowledge doesn't get transferred very well over to that next group of people. And so, it's so important to get those things documented. But document it in a way that people can actually use them.

Manager6

I think that things do get frayed during construction just because you end up bringing in a lot of large contractors. And maybe the local guys don't get as many jobs as they would like, and you generate some animosity within the community because of that. There was some of that going on. I think a lot of it was that there wasn't a strong understanding within the company of what it was to operate a new mine in North America. A lot of the construction guys coming in were coming from third world projects. They'd built multiple mines before, but mostly they'd built mines in the third world, which is very, very different from what we were trying to do up there. And I think there wasn't an appreciation for the amount of time and effort that it took to actually manage those relationships.

Manager9

I mean, absolutely construction is somewhat chaotic. The way construction people tend to be rewarded, remunerated – quality/budget/schedule. You get these guys who go from project to project around the world and they don't really care where they are. They have a job, they've got bonuses tied to milestones, and so it could be the Atacama desert, could be in Fiji, could be in Australia, you know. "The community is just externalities and the permitting are just hindrances that some other people manage, and just tell us what we can do, what we can't do, and we'll just go execute." That's kind of a stereotype, a negative stereotype, and isn't representative of all contracting people, but construction people, they come and they go and they don't live with the operation. So they're just less invested in the ongoing relationships.

Manager8

And that's a large part of why construction projects struggle with that relationship with the community. Cause I mean, inevitably you're gonna end up with the guys who go into town and wreck a bar or hotel or whatever, just do something stupid like that. And that happened a number of times in both Mackenzie and Fort St. James and Prince George. So, there was a lot of social challenges around that. And then the perception of that then goes back into the community and is not positive. So how you manage that is a difficult thing for sure.

Manager9

Table 6.50: The challenge of the construction phase - Interview comments by managers

For communities, respondents reported inexperience and capacity factors as key challenges (Table 6.51).

Yeah, that's something that we have to do. We're trying to work on getting more people that are trained in different areas and understanding different areas. But yeah, that's a big. One of the big things is all these companies have all of this money and all of these resources that they can use, but we really had to get help. And that's not just our community, but everybody has to deal with it, right? It is understanding the language, understanding the science, understanding the law. There's so many different things that you have to be involved with. When you think you're getting ahead in one area there's something else that comes up in another area, and it's so overwhelming for the communities.

Community2

With a big project like this we do not have capacity. We do have a land referral office, but we didn't have that working well in place at the time. I think we had one or two people in the office, so if there's any... We don't have

our own data. So that's one difficulty or problem or negotiating piece further, is to when companies come in we have to go with what they have. So they have environmental studies, people, the project, they have all sort of what they want to find, whether it's the birds, the moose, the fish or something. We have to go with what they do. That's the big problem for us now, and we're looking more to get our own environmental people and office in that sense. So we own the information, instead of them gathering the information and they keep it.

Community7

*Table 6.51: Challenges with capacity - Interview comments by community*

Community interviewees also noted that the rotating faces that accompanied the transition were difficult. Having worked with a core group of Terrane managers extensively, the transition to new and team members and approach may have fractured the relationship initially (Table 6.52).

Yeah, you have to start all over; you have to build a new rapport. You don't really get a head's up, all of the sudden this happens, right. That all of a sudden it's sold and these are the new people that you're dealing with, and you built these relationships with people in the past and it's all gone. Then you got to start from scratch again, and you got to explain again our position, our stories, our concerns, our issues and what we want, all over again, to a company that does a lot of mines, right? So they have to cookie cutter approach.

Community2

Well, just in terms of that period of time, when they had pretty rapid succession of management changeover all the way to the general manager level. Yeah, you'd meet somebody, and then one or two meetings later you're meeting somebody else. So, they had a fairly significant period of time when they were in flux like that. And, anytime you're changing over people, you're starting from ground zero again, right? "This is what it is. This is what we need." So, you're not moving forward, you're just kind of educating, you just need to build that relationship. So, you know, that period of time was definitely, definitely challenging for sure.

Community5

I think getting them to understand that you live here through your entire life, and not just like a newcomer into an area. When they leave that things have to be put the same way. And you always have to ask for the guarantee. Everybody says, "We'll do it in a safe way." Prove it to me. Give me an example.

Community6

*Table 6.52: Transition to new company team - Interview comments by community*

In addition, while this section has focused on key challenges for corporate transitions, transitions within the communities themselves can change the socio-political landscape of the project area, requiring a mining company to adjust (Table 6.53).

So all of a sudden, you know, the chief isn't there anymore. And the new chief, he's the current chief, really a good guy. But he also had a different package. The chief had a different package to deal with in his community. You know, you could get an agreement signed relatively – I shouldn't use the word, easy – with much less difficulty with one group than with another group. You know, so that there are a lot of players.

Manager3

*Table 6.53: Transition to new community leaders - Interview comments by manager*

Company interviewees also spoke of difficulty fully engaging stakeholders throughout this process (Table 6.54). The mining project was one of many events competing for attention in the region, and keeping people interested and engaged can be difficult. Events can happen outside the company's control, which pull attention away from the specifics of their project, creating a climate with potential for misunderstandings when stakeholders refocus on the project.

But you know, community residents have a lot of things that they need to be informed about and they need to be engaged with. And it's difficult to get attention on something that's, you know, what's in it for them to truly understand the business reality that the company is facing the building a 1.5 Billion dollar project, right? I think it's challenging.

Manager10

The local nature of employment changed again up there because the forest industry kind of came back into a rebirth and a lot of people who'd lost their jobs in the forest industry were able to re-establish themselves working in area mills or logging, whatever the case may be. The outflow of that, of course, is that their interest in working on Mt. Milligan had waned.

Manager7

It gets clouded because you're not the only company that these guys ever talked to. There are other mining companies in the area, they've done things, they've made promises, maybe they haven't kept, they've said things that maybe haven't happened, maybe they have meetings and it didn't happen, whatever, I don't know.

Manager4

*Table 6.54: Shifting attention of community - Interview comments by managers*

### 6.5.3 Lessons Learned

The eleventh and final sub-theme is "Lessons Learned." This sub-theme is composed of responses that relate to all previous themes, but oriented toward future projects. Mt. Milligan was built without major interruptions and continues to successfully operate today, making the case instructive for both proponents and stakeholders looking towards future corporate transitions.

Interviewees, both from the company and community sides, reported many lessons that could be transferred to future projects. These relate to all of the previous sub-themes, but are summarized in this sub-theme to provide an overview, and follow roughly the same order as the previously covered sub-themes above.

A number of respondents – both community and company – noted the background of companies and their personnel as important to evaluating the socio-political setting of Mt. Milligan. Companies like Placer Dome and Terrane, staffed with managers who had extensive experience developing mines in British Columbia and around the world, were well equipped to face these challenges. A company like Thompson Creek, while an experienced mine operator, may have been less primed to navigate the socio-political setting of northern British Columbia while building their first greenfields mine (Table 6.55).

Going through a permitting process, it has a kind of refining effect on companies. I mean you're expected to do certain things, act certain ways, make statements about how you engage with First Nations and then communities of interest. And so, there is a process of figuring out, "Ok, how do we do this, and what statements do we need to make, and how we need to resource ourselves to respond to these pressures." Thompson Creek was a company that was put together with legacy assets, hadn't permitted projects, flew under the radar, you know, had been privately owned, which means less scrutiny. And so big companies like Teck or Placer Dome have been in the limelight, you try to permit projects, you understand, you know the reputational impact of poor performance on projects around the world, in trying to develop another project. So you develop systems to respond to those pressures.

Manager8

And if you don't know the lay of the land, don't come in with a level of arrogance assuming that you're going to be able to assuage everybody. That's not going to be the case.

Community4

*Table 6.55: Development inexperience of Thompson Creek - Interview comments by manager and community*

Perhaps the most intuitive reality is that most company-community relationships are personal at their base level (Table 6.56). This means any type of transition, and the exchange of people that come with it, will be disruptive to the relationship. Following this, it is imperative that time is taken in the midst of a corporate transition to attempt to pass on these personal relationships.

A big part of it is personal. It's very hard when it's personal, it becomes very, very hard to pass on. Its human nature and all that stuff, you're dealing with a different person now. So even though they may be in the same role as the last

person, you know, effectively it's exactly the same role, but it's a different person, so it's a little more of a challenge. So I think the onus is that when you're the new guy, if the old guy is still around, you need to glean as much as you possibly can in terms of introductions, what's going on and having you introduced. And I did that.

Manager4

Well, I think the main thing you need to do, we did do, is that we had a series of meetings with the Thompson Creek management people to explain to them the work that have been done. And the other thing is, some people continued on for a period of time with Thompson Creek and the project. And so, that's a very important way to have continuity, and you know, keep it going.

Manager6

Table 6.56: Personal nature of company-community relationships - Interview comments by managers

In the context of British Columbia, failure to properly maintain corporate-stakeholder relationships can have negative consequences. The diverse range of stakeholder groups and interests, highlighted by the at times tenuous relationship between First Nations communities and the extractive sector, means that significant attention must be paid to the specific risk characteristics of the region (Table 6.57). The Mt. Milligan experience highlights this.

You just absolutely have to present yourself as a credible professional that is interested in the community and wanting to build a great relationship, and show benefit to that community. However you do that, if it's through an IBA or if it's through some other process, c'est la vie. But you know, the age of First Nations watching major projects coming to their traditional territories and sort of watching them develop and sort of standing on the side, those are over. You'll never see them again.

Manager7

Table 6.57: The need to act in good faith - Interview comments by manager

The Mt. Milligan experience also highlights the importance of stakeholder engagement strategies that create and maintain regular dialogue with community leaders (Table 6.58). In the case of Terrane Metals, initiating the Community Sustainability Committee created a way to bring the diverse range of stakeholders in the area to the same table on a regular basis. Company management also spent considerable time in the communities in an effort to build rapport and create literacy around the project.

Clearly the local relationships, getting community buy-in, knowing at times you're not gonna get it, it's gonna be tough but staying open, transparent, willing to meet, willing to talk are critical factors. You have to keep pushing those angles, and it can be unpleasant at times as soon as people are dead set against what you are proposing. You have to keep going back and take some hits from time to time. You really need to be very immersed in the community . . . and so it really is imperative that you don't just say, "Well, I'm Joe Mining Company from Vancouver and we'll send the person up there once a quarter to meet with the community." That doesn't cut it anymore. You got to have somebody really immersed in the community, that's willing to go into any event and any opportunity to reach out and establish good relationships.

Manager7

Yeah, you really just have to get into the communities and start just talking to people. There's really no magic way. That's how we did it. We talked with local councils. So it's good place to start, to talk to local councils, mayors and councilors, and then try to identify what are key kind of business people. We were talking about relatively small communities here, right. So it's usually, you know, there's two or three prominent business people maybe in a small community. You want to, kind of, get to them and interview them and see what makes them tick and what they're concerned about, and how they think when you talk about your project, and what they think and what's the right way to go. So that is how we kind of did it. The tools? It's really just boots on the ground, get into the communities, find out what's going on, talk to people.

Manager4

But, the key thing you got to remember is that (*the CSC*) is only one of the ways, and you can't rely on that information to get out to the broader community or to other people in the First Nation. And so, you still need to go into the community and have discussions with them, with the Chambers of Commerce and that sort of thing, with the

First Nations community members and that sort of thing. So, it's only one of the tools. It's a very valuable one and hopefully those people will become opinion makers within the community and within the First Nation groups. But, you can't rely totally on that.

Manager6

*Table 6.58: The acute need for good engagement - Interview comments by managers*

While Terrane was able to jumpstart much of the corporate-stakeholder relationship upon taking over the project in 2006, they were unable to construct meaningful dialogue with the Nak'azdli First Nation. There are several of possible reasons for this, but Placer Dome managers interviewed reported a positive relationship a decade prior, meaning a gap in engagement in the intervening years could have contributed to the change, and later managers noted that this experience influenced stakeholder perceptions of the project (Table 6.59).

[J]ust because the metal price drops, doesn't necessarily mean that you should end all activity on a project. Particularly in the relationship business. And if you're in a big company, you know projects, you've got to maintain those somehow. It's going to be at a reduced rate, but if you really think that project is going to come again, you shouldn't just stop any relationship building with those groups. It should be maintained at a lower level. Because the next time you go back, and if you haven't been talking to anybody, they're going to think, "Well, gee, we were really working on a relationship, but of course, a relationship is secondary to the metal price."

Manager3

[T]here was some views voiced, "What happened to you guys? You were here in the early 1990's. We hardly saw you at all, and now, suddenly, you're back." And so, there was certainly a great need to revise and to improve discussions and I think, that's maybe one of the lessons in these things. That these mining projects quite often take a very long time. And it's easy – it's not right – but, it's easy on the part of the mining company to back off a lot of that consultation. And to some degree that's understood. But if you want to keep a project alive, you really do have to go back to the stakeholders periodically and say, "Look, this is what we're doing or were not doing anything, but we still have hopes for the project to go ahead." Otherwise, you're gonna have to re-start. And the other thing is, those people change. The ones that you met on the Chief and Council of the First Nation or people in the community are quite often completely different. And so, you have absolutely no history with those ones.

Manager6

I mean there wasn't a lot of past commitments that have been made at that point. Like, when I joined really, Placer hadn't really made any real commitments. So, Terrane was kind of forging new ground with that, I would say. I mean, they'd certainly set some precedents out there, certainly within the communities. Some of them good, some of them bad. I mean, we dealt with that all the way through. A lot of it, I mean the bad stuff would've been around the fact that everyone thought that it was gonna be built in '93. So, again that and then when it ended up getting shut down at that point, there was definitely some unhappy people, and we had a lot of doubt in the communities all the way through that we were actually gonna make this happen this time, and so on. Even once we were in construction on the site, we actually had to take people right out into the site, and show them we're actually building this thing now, like, before they believed that you're actually doing it.

Manager9

*Table 6.59: Legacy of Placer Dome's false starts - Interview comments by managers*

When a company executes their stakeholder engagement strategy, the level of transparency they operate on will shape perceptions of their activity. At Mt. Milligan, respondents indicated clear and candid communication regarding both positive and negative project impacts lent credibility to the Terrane team's messaging (Table 6.60).

That may be one of the things that got me more local in the community, again this is a transparency thing, because I was the guy there talking about that stuff. They usually have the guy from the mining company show up, "So everything will be great, let's get this mine built everything will be great, I'm going to bring a whole bunch of money," You know, money brings all sorts of undesirable parts of our society, it all comes with that, right? Or can come with it. So how do you, kind of, manage that?

Manager4

It's funny, because sometimes we say what I do is complicated, but your challenge as a leader is taking a complex subject and putting it together so that everybody can understand what you're talking about. And sometimes we say it's complicated because we don't understand it ourselves too well. So it's taking the time and effort to really grasp the subject matter. And then you can chunk it up and simplify for a communication document. You also have to know who your audience is when you're communicating to, for that matter.	Manager5
I think you say, "Here's what we can say and here's what we can't say." And for them to understand that, "You know what, there's no certainty that we get financing. There's these risk factors." And then they can hedge their bets.	Manager8

Table 6.60: Importance of transparency - Interview comments by managers

Both company and community interviewees reported the regulatory system around major project development to be deficient, albeit for different reasons. Company respondents noted the long waits and significant bureaucracy at both provincial and federal regulatory bodies. Community respondents noted learning experiences around capacity and an aspect of inertia to the process (Table 6.61).

Yeah, things keep happening anyways, whether or not we get what we want or not.	Community3
[W]hat I would have done differently is be involved in the EA process, and made sure that we have our own resources. Had the company and the government paid for our own independent experts to do some of our own planning around, to have some of our own planning like for the mine or anything, the social and cultural impacts, planning for all of that, at the beginning, before construction started, to have all of that completed would have been a lot more helpful than challenging the EAs.	Community1
I think we dealt with it with less capacity, before we had lots of experience of it but not as much capacity. And today we have more capacity but we also have just have learned along the way how to conduct our business and conduct ourselves. And we always, I always try to say that this is our territory and they're guests here, and we need to really work on our standards for them.	Community2
So what we're hoping is that, at the end of three years or before, we'll have government to government agreements on everything, forestry, mining, everything; water, air... everything in the territory. Hopefully all those agreements will be BC recognizing and properly addressing aboriginal rights and title when they're allowing developments, and I guess hopefully, also, share decision making.	Community1

Table 6.61: Lessons from the regulatory process - Interview comments by community

However, both interview groups also noted positive aspects. Conditions written into the EA, which at the time were seen as cumbersome, instead provided lessons in continuity around core stakeholder engagement initiatives (Table 6.62).

I guess how changes in ownership and management affects communities, I would have to say that, that Community Sustainability Committee, that was written into the EA, made a massive impact in terms of ensuring, of mitigating, mitigating disruptions in terms of changes of ownership and management occurred. Yeah, in my perspective, it's something that, that underpinned you know, a continued relationship.	Community5
I think one of them that was counterintuitive is, going through the permitting process you make a bunch of commitments that form an EA certificate or permit conditions or management plans, and so you typically want to give yourself the greatest operational flexibility with those. And that can be real challenge around permitting process. People want to nail something down when projects evolve and are dynamic. So usually when you get less specific, not more specific, to give yourself flexibility . . . But, so in terms of how I'd approach the project working for junior where it would be required, I'd be more willing to offer up commitments that had enough flexibility for them not to be really cumbersome and inappropriate, but that would effectively bind the acquiring party to do things I thought were important.	

*Table 6.62: EA certificate as a guarantor - Interview comments by manager and community*

Mt. Milligan is a large open pit mine, and follows that a project like this may impact those around it – both positively and negatively. Company respondents noted challenges with maintaining benefit projections, especially as operational realities were tweaked from initial designs (Table 6.63). While attempts were made to manage expectations, it is very difficult to maintain full control of the public narrative on a project like this.

Building a big mine, and Mt. Milligan is a big mine, it ain't easy, right? So when you're building, you're very focused on that. I mean, and they manage, to manage all the community stuff at the same time – does stuff slip through the cracks a little bit? And some things happen that maybe aren't the perception in the communities of how things were going to happen.

Manager4

And you'd be amazed how little rigor there is sometimes around employment estimates for projects. Construction estimates, like multipliers etc. there's wide range, and the media gets numbers wrong in their report that goes into their file, and they'll use the same wrong numbers again. And so those numbers you get thrown around and people lock into there's going to be at peak 700 jobs here, and that's the number they lock into. But that's a peak for maybe a few weeks or month, you know. The average is somewhat lower in the construction. So in press releases you pick the high numbers, because that's what everyone uses and they're the most impressive numbers, but those aren't the most useful kind of things for communities to plan around.

Manager9

*Table 6.63: Complex nature of mine development - Interview comments by managers*

Lastly, respondents reported a variety of lessons taken from Mt. Milligan when considering long term planning at mining projects. Lessons such as committing to the core values that define a group's corporate culture and underwrite action at a project (Table 6.64).

So what are our core values, what are we going to do? No compromise on safety, no compromise environment, no compromise social engagement. So, those are our driving factors. "Guys, we may screw up on cost assessments on how much to build a dam, well we'll figure that out and that's acceptable, but you can't screw up on environmental commitment. If we have a commitment on that we are going to do it and we're going ahead, there's no compromise. And the same on our social license, whether it be First Nations or community engagement. Whatever we told them we're going to do, we're going to do it, full stop."

Manager5

*Table 6.64: Importance of core values - Interview comments by manager*

Respondents also noted that the structure of the mining industry required mining companies to act in good faith towards their stakeholders, but also to retain flexibility. Due to the transactional nature of the mining industry (See Section 3.2), companies understand that a corporate transition may occur down the road, and need to position their projects to navigate that process at a later date.

In terms of how to position for the future, I think that the word that I used before was, you know, you need to commit to your area communities and First Nations and local governments, and obviously be wholly compliant with the statutes that regulate mining. At the same time you want to maintain some degree of flexibility for someone that may take you out, that they can develop their own strategies, plans and the techniques to advance the project. So there's a balancing act in there.

Manager7

*Table 6.65: Positioning for future corporate transitions - Interview comments by manager*

By acknowledging that a future transition is possible, if not likely, a management team can then undertake the necessary planning. Respondents highlighted the necessity of recording and

documenting important information so there is a clear record for the group that takes over the project (Table 6.66). Recording geological or financial data is standard industry practice, but keeping diligent records of company-community interaction is an area where industry has room for improvement.

So I think it's, you have to plan, which you know, but I think I'd be more cognizant of this, that expect the default case to be that you are acquired or at least there's a JV where there's new kind of ownership influence. So understand in that lens how would someone pick this up? Both in terms of practical sense of how you document commitments you make so it's easy for them to follow it, even with good intentions if you just do a sloppy job of recording your engagement or tracking your commitments, someone is going to come in and make a lot of mistakes because you haven't given them a toolkit to kind of do that.

Manager8

I've seen, just so often, that those are the times where the information and knowledge doesn't get transferred very well over to that next group of people. So important to get those things documented. But document it in a way that people can actually use them. And I think we're moving to those systems now. For example, where we're developing on the environmental side, environmental management plans, at the EIS stage, at the detailed design stage, but trying to get them into a form that the operators can actually take them, and say, "Oh! You know, this is what they had in mind." Or, "This is what I need to do." And then they add to it and they take ownership of it and it becomes a part of their environmental system, for example.

Manager6

*Table 6.66: Institutional transfers of knowledge - Interview comments by managers*

## 7. DISCUSSION

The objective of this research was to analyze how corporate transitions impact corporate-stakeholder relationships at mining projects. In more detail, the investigation sought to determine the roles of various actors throughout corporate transitions, to identify successful strategies from past corporate transitions, and to propose guidelines for the successful execution of corporate transitions. Ultimately, the goal of this research was to determine what lessons can be drawn from the Mount Milligan experience to manage socio-political risk arising from corporate transitions at future mining projects.

Interview questions were designed to elicit insights into the role that corporate transitions played in the evolution of corporate-stakeholder relationships at the Mt. Milligan mine, and investigate what did and did not work throughout the project's history. Interview topics were linked to those covered in the literature review, and included: interviewee background, view of transitions, engagement tools, comparison to other projects, regulatory aspects, challenges, perspectives, and lessons learned.

Through the coding of interview texts into three main themes and 11 sub-themes, links were drawn between the interview data and key topics in the literature. The titles of these themes and sub-themes reflect these links. A summary of the themes and sub-themes can be seen in Table 7.1. From the analysis of information gained through these interviews, and supplemented by field visits and document review, a number of lessons can be taken from the Mt. Milligan experience.

The first relates to the background and experience of companies involved in mine development. The experience of Placer Dome (See Table 6.2), and by extension Terrane's senior management, in developing greenfields mineral properties in British Columbia and around the world positioned these companies well to navigate the socio-political landscape of Mt. Milligan (See Table 6.45). In contrast, Thompson Creek's inexperience in developing greenfields properties put them at an immediate disadvantage when they acquired the project (See Table 6.5).

Communities typically have little, if any, experience with mining before it enters their region (See Table 6.51). They lack both technical capacity and experience with the industry, and may not anticipate a corporate transition (See Table 6.47). They may have some familiarity with the reputation of big mining companies, if not the reputation of a specific company (Harvey & Bice, 2014). This reputation may precede a company's entrance to an area – perhaps unfairly so (See Table 6.11).

<b><u>Main Theme</u></b>	<b><u>Sub-Theme</u></b>	<b><u>Summary of Findings</u></b>
<b>SETTING THE STAGE</b>	Background	Background key to informing culture of proponent and employees.
	Comparable Projects	Communities unlikely to have experience with mine development.
	Reputation and Handovers	Reputation of company/industry can precede entry into area.
	Perception of Risk	Each project has unique socio-political risk characteristics that must be understood.
<b>ADDRESSING THE ISSUE</b>	Stakeholder Engagement	Effective engagement brings together multiple stakeholders together collaboratively solve problems.
	Communication and Transparency	Consistent and transparent communication is a precursor to constructive corporate-stakeholder relationships.
	Legislation and Regulation	Commitments entrenched in permits are potential method of institutionalizing practices.
	Impacts and Benefits	Benefits are unlikely to meet expectations – both proponent and community potentially responsible.
<b>REFLECTION AND PROGRESSION</b>	Planning for the Future	Plan in terms of life-of-mine, rather than planning to the next transition.
	Key Challenges for Transitions	Transitions between stages (ie. construction) may be as or more disruptive than those in management or ownership.
	Lessons Learned	Maintaining a record of all activity, but particularly of social engagement and commitments, can preserve an institutional record that will greatly assist a future operator.

*Table 7.1: Summary of themes and sub-themes from Section 6*

This creates a climate where communities may be hesitant to embrace mine development (See Table 6.15), and companies may act with overconfidence due to inexperience (See Table 6.55). This is particularly true in British Columbia, where socio-political risks pose a threat to mine development if not managed correctly (PwC, 2015). This risk diminishes somewhat after securing permits, but at no time disappears, and should not be ignored.

This suggests the importance of continuity in stakeholder engagement strategy through transitions (See Table 6.58). Effective engagement brings multiple stakeholders together to collaboratively solve problems (Jijelava & Vanclay, 2014; Moffat & Zhang, 2014; Zandvliet & Anderson, 2009), and Mt. Milligan's CSC was designed to do just that (See Table 6.21). A strong engagement forum such as this can maintain two-way communication and can help bridge the gap between companies during a corporate transition. By creating an engagement forum that could be sustained after a transition, Terrane effectively institutionalized part of the engagement strategy for Mt. Milligan.

This gave Thompson Creek the opportunity to carry on from Terrene's work when they took over the project, and maintain goodwill built through their tenure (See Table 6.9). However, the institutionalization of this engagement mandates only its composition and its regularity, and it is the quality of engagement that most influences stakeholder perceptions (Moffat & Zhang, 2014). Interview comments suggest stakeholders perceived the quality of engagement to have declined with Thompson Creek (See Table 6.29).

The shift in companies appears to have resulted in different management styles, which can be influenced by differing corporate cultures and corporate experience (Dashwood, 2012). Companies should take time to understand the level of communication and transparency of the previous operator, as stakeholders will judge behavior against it.

Given the asymmetry of knowledge and experience in mining (Fidler & Hitch, 2007; Haalboom, 2014), cultures (Collins, 2015; Danard, 2010), and near term objectives between the mining company and the community (Collins, 2015; Haalboom, 2014), developing and maintaining a relationship between the company and stakeholders is vital. Interview comments note personal relationships drive corporate-stakeholder relationships – and they are challenging to pass on to another person, let alone another corporate entity (See Table 6.56). This is further evidenced by interview comments on the transition between Terrane and Thompson Creek (See Table 6.52).

Given the challenges in transferring personal relationships, an overlap of staff, and particularly that of community engagement personnel, during transition(s) could be very beneficial in smoothing the transition. This is supported by the pattern of overlap at Mt. Milligan. A number of managers that worked on this project did so for more than one of the proponents involved, including many interviewed in this study (See Figure 4.1, Section 4.2.2).

Originally initiated to support permitting activities, the CSC lives on at Mt. Milligan in part because it is was entrenched in the project's EA certificate by the regulators (See Table 6.62). Permits and regulatory certificates live with a mine regardless of its owner. Conditions placed on a project made during the permitting process may create challenges for the next operator, and/or serve as assurances to stakeholders (See Table 6.34).

Benefits, however, are rarely guaranteed. It can be challenging for an operating mine to deliver on the benefits suggested in the exploration or design stage (See Table 6.39). For communities, expectations often trump reality irrespective of circumstance (See Table 6.38), and it is challenging for a proponent to balance the promotion of their project with keeping their stakeholders grounded (See Table 6.63). This underscores the importance of relationships at Mt. Milligan and elsewhere, as the literature suggests stakeholders value the quality of company-community interaction as much or more than impacts or benefits received (Zandvliet & Anderson, 2009; Martinez & Franks, 2014; Parsons et al., 2014; Parsons & Moffat, 2014).

Planning in terms of life-of-mine, rather than planning to the next transition, was noted as an important part of Terrane's success at Mt. Milligan. With an experienced team of mine developers, they were planning to build a mine, not simply move it to the next stage for a sale (See Table 6.45). This principle is as valid in industry downturns as it is when times are good – interviewees noted a dip in engagement after Placer Dome shelved the project may have negatively influenced community sentiment (See Table 6.59).

Transitions between stages in the mine life-cycle – such as the transition into construction – were not studied extensively in the preliminary stages of this research. However, interview comments from Mt. Milligan suggested this stage of mine development may be as or more disruptive to corporate-stakeholder relationships than transitions at the management or ownership level (See Table 6.50), and companies need to understand and plan for this. There is potential for additional research in this area (See Section 8.2).

Lastly, interviewees suggested a key lesson from the Mt. Milligan experience was the need for maintaining a detailed record of all plans and actions throughout a mine's life. Not just what was done, but why and how, and where it was headed. Particularly in the field of social engagement and commitments to communities, preserving this type of institutional record will greatly assist future operators (See Table 6.66).

As one of British Columbia's newest mines, the conclusions gathered from this study of Mt. Milligan are relevant to much of the mining and mineral exploration activity taking place in the province. The limitations of the analysis and conclusions of this research are discussed in section 7.1, and should be noted in companion with the concluding statements. Further recommendations, new questions, and potential future studies are discussed in Section 8.

## **7.1 LIMITATIONS**

This section discusses the limitations that could cause the greatest potential impact on this research study's findings and ability to answer the aforementioned research questions.

The first limitation is that the interviewees may not be fully representative of the range of opinions and experiences around corporate transitions over the life of the Mt. Milligan mine. Company interviewees involved fifteen managers from three proponents and involved those involved in all aspects of mine development, but an inability to contact and interview all involved means some insights on the Mt. Milligan experience may have been missed.

This is also a limitation related to community interviews. Due to a lack of resources, only nine interviews were completed with community leaders from Mackenzie, Fort St. James, McLeod Lake, and Mackenzie. It is difficult to determine if this group is representative of their communities.

Additionally, the tight knit nature of both the mining industry and the impacted communities means those interviewed may not have been fully candid during interview. Interviewees may have been hesitant to impact the reputations of both themselves and others involved in Mt. Milligan, and a full range of opinions and experiences may not have been captured in this study.

Particular to interactions with community leaders, research fatigue may have limited this research. A number of academic studies have been completed both directly and peripherally related to these communities and the impact of the Mt. Milligan mine. Study fatigue may have caused potential interviewees to restrict or decline their participation in this research.

This study is limited by the historic nature of the data being examined. Events discussed in the study occurred between 1990 and the present day. As such, some documentation is unavailable, and the recollections of interviewees are imperfect. Also, this case study mine is currently operating, so future actions of the operator or stakeholders could alter perceptions of the corporate-stakeholder relationship at the Mt. Milligan mine.

Methodological limits also impacted the scope of this study. The selection of one case study was necessary due to resources available to the researcher. The selection of one case study makes it difficult to determine how applicable the findings of this study are to other mines and project sites. These findings are specific to this site, project stage, socio-political setting, and time period. Considering this, this study is not a conclusive analysis of the socio-political impacts of corporate transitions at mining projects, but rather illuminates challenges and opportunities produced through these events and aims to contribute to ongoing dialogue on these issues.

Finally, the researcher's own biases and background could be considered as a limitation. In addition to growing up in Canada, the researcher also has an educational background in political science from a Canadian university. The researcher also holds prior background knowledge of the fields of mineral exploration and mining, and the researcher is based in the mining engineering department of a Canadian university. The researcher is looking at this topic from a mining industry viewpoint, and has analyzed this case study primarily to identify best practices for mining companies. The researcher's background and position were openly shared with all interviewees, but concedes it may have influenced the analysis of this case. Through acknowledging the researcher's background and bias, this research aims to be transparent with all possible limitations.

Despite these limitations, this study achieves the goals for its audience as stated in Section 4.2.3:

1. The research contributes to the academic dialogue on corporate-stakeholder relationships in the mining industry;
2. The research provides for mining and mineral exploration companies and their employees constructive analysis of the challenges and opportunities that can result from past corporate transitions, in order to inform work on current and future projects;
3. The research outlines for host communities of current and future mining projects – both First Nation and settler – potential challenges and opportunities to which corporate transitions can contribute.

## **8. CONCLUSION, RECOMMENDATIONS, AND NEXT STEPS**

The findings of this study (as discussed in Section 7) relate well to the current literature on the management of socio-political risk in the mining industry. Most interviewees did not explicitly mention terms like Social License to Operate or Corporate Social Responsibility. However, the rhetoric of interviewees on best practices through corporate transitions align with the type of language used in discussion of these concepts. This suggests that further academic discussion of this topic is justified, particularly due to the prevalence of corporate transitions in the mining industry.

The lessons and conclusions of this study also align well with guidelines to sustainable development, as discussed in Section 2.7. The lack of accredited standards for navigating corporate transitions could leave a gap for both mineral exploration and mining companies, and stakeholders. Development of voluntary guidelines, standards, or KPIs by an industry body, international organization, or government could provide industry with improved clarity on this subject in the short term.

In the long term, there is room for the regulatory process to address corporate transitions. The Environmental Assessment is one of the biggest drivers of corporate-stakeholder interaction in the entire mine life-cycle, and the main opportunity for stakeholders to formally voice opinions on project development. It is also one of the biggest 'obstacles' for mine developers, and gaining an EA certificate is a major milestone in the mine development process. Adjusting the process to reflect the long term objectives and concerns of stakeholders could be beneficial, although any further complication of the process is unlikely to be supported by industry, nor many stakeholders.

Finally, this study highlights the importance of prospective buyers doing proper due-diligence on all aspects of an asset before the transition. Placer Dome's ownership of Mt. Milligan was defined by the massive write down they took soon after acquiring the property, probably due to not fully understanding the geology, metallurgy, and economics of what they were buying. In contrast, Terrane was built by former Placer Dome managers, who brought with them a comprehensive knowledge of the property and were able to maintain a level of continuity. Lastly, Thompson Creek was initially unfamiliar with the socio-political landscape of the area and development of a greenfields project, resulting in an initial learning process.

These experiences point to the importance of understanding the work of the previous operator as a factor in the management of socio-political risk at the time of corporate transitions. If the predecessor had a positive relationship with stakeholders, the new operator will have to meet that level or be seen as deficient. Of course, this works both ways; if stakeholders have a negative view of the previous operator, a successor will have to counteract this legacy.

A number of recommendations, new questions, and potential future work arise from the analysis and findings of this study. These topics will be discussed in the following sub-sections.

## 8.1 RECOMMENDATIONS

A number of recommendations can be made based on the findings in Section 7.2. These recommendations are also informed by the themes and sub-themes that arose from analysis in Section 6, and the conclusions in Section 7. From this research study, it is recommended that mining managers:

- Establish strong a corporate culture with an emphasis on core values that include sustainability, corporate social responsibility, and social license to operate;
- Build a team with the skills to support the previous recommendation, and experience on similar projects in comparable social, political, and cultural contexts;
- Fully evaluate and understand the socio-political risks inherent to the operating jurisdiction, and develop strategic and operational plans to manage these risks;
- Establish and maintain a multi-stakeholder engagement forum throughout all stages of the mine life-cycle – including slow-downs and/or stoppages. Seek opportunities to collaborate and address asymmetries in capacity;
- Maintain regular, transparent, and two-way communication between the company and all stakeholders, and be candid about the potential for future corporate transitions. Tailor communications to the needs and concerns of specific stakeholder groups;
- Meet or exceed all statutes that regulate mining. If possible entrench best practices within regulatory commitments to provide long-term certainty to stakeholders;
- Identify key challenges, including those that may be unique to the operational context. Continually self-evaluate to review and redefine potential challenges;
- Implement long-term planning organization wide, particularly regarding the potential for corporate transitions;
- Buffer transitions by retaining community relations/management personnel by incoming owner/operator of a project to assure some level of continuity in relationships;
- Create institutional frameworks that support continuity in relationships through corporate transitions; and,
- Maintain an institutional record of social engagement and commitments that can be easily understood and adapted by a future operator.

By incorporating these recommendations into their best practices, mining companies may be able to mitigate potential socio-political risk that can arise in the process of corporate transitions. Corporate transitions may be challenging for both companies and communities to navigate, but with care they

can be managed effectively, maintaining a social chain of custody that runs from exploration through to closure.

## **8.2 FUTURE WORK**

There is a gap in the current literature on corporate transitions, and there is ample space for further research. Future studies should look at other stages of the mine life, and if possible review and compare corporate transitions throughout the full life-cycle of a mine. Research observing corporate transitions in-situ would generate valuable insights, as it would eliminate challenges locating vital documents and research subjects, and memory of the events would be fresh. Comparative studies would also be useful to observe the outcomes of different approaches to navigating corporate transitions. Finally, reviewing corporate transitions in different jurisdictions is necessary to determine the respect to which cultural, political, and regulatory issues influence these events.

A study of this issue undertaken, or sponsored, by a mining company of one or more of its mines would be valuable. With company support a researcher could have unfiltered access to company staff, documents, and institutional knowledge. This could improve the quality of the research and prove to be a constructive review of a company's practices.

Specific to the Mt. Milligan project, the mine is early in its life-cycle, and future studies of transitions in owner and/or project stage are possible. The future actions of the operator and/or stakeholders could alter perceptions of the corporate-stakeholder relationship at the Mt. Milligan mine, and could possibly be studied.

A more in depth study of the stakeholder experience of corporate transitions at Mount Milligan is also possible. The communities in question host a diverse range of people despite their small size, and the present study may not have captured the full range of experiences. However, future researchers should be cognisant of potential study fatigue in these communities.

Transitions among the leadership of these communities themselves are also an important variable, and one that warrants future study. Interviewees alluded to these changes as potentially impacting company-community relations at Mt. Milligan, but detailed study was outside the scope of the present research.

Mt. Milligan also offers opportunities to carry out comparative studies on corporate transitions. The advanced stage Blackwater Gold Project is being progressed by New Gold Inc. approximately 200km south of Mount Milligan, near the town of Vanderhoof. Several subjects interviewed for this study referenced Blackwater and its current development process in comparison to Mt. Milligan, and its similar setting to Mt. Milligan could make for an instructive comparison.

Finally, the construction phase of mine development was highlighted by interviewees as being a particularly challenging period for corporate-stakeholder relationships. This study found some ambiguity about the level to which the mine's construction period created corporate-stakeholder tension, when compared to the transition between Terrane Metals and Thompson Creek Metals shortly before the start of construction. This period of the mine life-cycle is ripe for more detailed study, both at Mt. Milligan and at other projects.

## REFERENCES

- ABIC. (2014). McLeod Lake Indian Band. *Aboriginal Business & Investment Council*. Retrieved September 10, 2015, from <http://www.bcabic.ca/content/mcleod-lake-indian-band>
- Adler, R. a, Claassen, M., Godfrey, L., & Turton, A. R. (2007). Water, mining, and waste: an historical and economic perspective on conflict management in South Africa. *Economics of Peace and Security Journal*, 2(2), 33–41. Retrieved from <http://www.epsjournal.org.uk>
- AMEBC. (2015, December 8). Mount Milligan team awarded excellence in mine development by AMEBC. *Mining.com*, pp. 1–4. Retrieved from <http://www.mining.com/web/mount-milligan-team-awarded-excellence-in-mine-development-by-amebc/>
- AMEC. (2006). Mount Milligan Project Description.
- Association for Mineral Exploration British Columbia. (2014). *2014 Annual Report*. doi:10.1136/bjo.2010.193169
- Association for Mineral Exploration British Columbia. (2015). *Aboriginal Guidebook: A Practical and Principled Approach for Mineral Explorers*. Vancouver, BC. Retrieved from <http://www.amebc.ca/resources-publications/publications/ame-bc-publications>
- Banerjee, S. B. (2008). Corporate Social Responsibility: The Good, the Bad and the Ugly. *Critical Sociology*, 34(1), 51–79. doi:10.1177/0896920507084623
- Barkemeyer, R., Stringer, L. C., Hollins, J. a., & Josephi, F. (2015). Corporate reporting on solutions to wicked problems: Sustainable land management in the mining sector. *Environmental Science & Policy*, 48, 196–209. doi:10.1016/j.envsci.2014.12.021
- Baxter, P. & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13(4), 544–559.
- Bebbington, A., Bury, J., Bebbington, H., Langan, J., Muñoz, P., & Scurrah, M. (2008). *Mining and social movements: struggles over livelihood and rural territorial development in the Andes*. Brooks World Poverty Institute.
- Bebbington, A., & Williams, M. (2008). Water and Mining Conflicts in Peru. *Mountain Research and Development*, 28(3/4), 190–195. doi:10.1659/mrd.1039
- Berger, T.R. (1988). *Northern frontier, northern homeland*. Mackenzie Valley Pipeline Inquiry, 1974-1977: Berger Commission reports & community transcripts. Government of Canada: Ottawa.
- Bice, S. (2013). No more sun shades, please: Experiences of corporate social responsibility in remote Australian mining communities. *Rural Society*, 22(2), 138–152.
- Bice, S., & Moffat, K. (2014). Social licence to operate and impact assessment. *Impact Assessment and Project Appraisal*, 32(4), 257–262. doi:10.1080/14615517.2014.950122

- Bondy, K., Moon, J., & Matten, D. (2012). An Institution of Corporate Social Responsibility (CSR) in Multi-National Corporations (MNCs): Form and Implications. *Journal of Business Ethics*, 111(2), 281–299. doi:10.1007/s10551-012-1208-7
- Botta, N. a., McFaul, S., & Xavier, A. M. (2014). Economic diversification and mine closure : An analysis of the Misima Mine case. In D. van Zyl (Ed.), *Proceedings of Mine Closure Solutions 2014*. Retrieved from <http://static1.1.sqspcdn.com/static/f/1535489/25088509/1403300319623/Misima+Final+Paper+AB-AX-SM.pdf?token=meuU3GE1tc3WYXmJygu49tjdCGw=>
- Boutilier, R. G. (2014). Frequently asked questions about the social licence to operate. *Impact Assessment and Project Appraisal*, 32(4), 263–272. doi:10.1080/14615517.2014.941141
- Boutilier, R. G., & Thomson, I. (2011). Modelling and Measuring the Social License to Operate: Fruits of a Dialogue Between Theory and Practice. *Social Licence to Operate ...*, 1–10. Retrieved from <http://sociallicense.com/publications/Modelling and Measuring the SLO.pdf>
- Brehmer, E. (2015, May 15). Pebble, EPA agree that lawsuit should continue. *Alaska Journal of Commerce*. Anchorage, AK. Retrieved from <http://www.alaskajournal.com/Alaska-Journal-of-Commerce/Breaking-News-2015/Pebble-EPA-agree-that-lawsuit-should-continue/>
- British Columbia Environmental Assessment Office (BC EAO) (2008). *Operational Procedures to Assist in the Implementation of the Environmental Assessment of Projects Subject to the Canada-British Columbia Agreement for Environmental Assessment Cooperation*. BC Environmental Assessment Office. Retrieved from: [http://www.eao.gov.bc.ca/pdf/CEAA\\_EAO\\_Agreement\\_20081219.pdf](http://www.eao.gov.bc.ca/pdf/CEAA_EAO_Agreement_20081219.pdf)
- British Columbia Environmental Assessment Office (BC EAO) (2011). *Environmental Assessment Office User Guide*. BC Environmental Assessment Office. Retrieved from: [http://www.eao.gov.bc.ca/pdf/EAO\\_User\\_Guide%20Final-Mar2011.pdf](http://www.eao.gov.bc.ca/pdf/EAO_User_Guide%20Final-Mar2011.pdf)
- British Columbia Environmental Assessment Office (BC EAO) (2013a). *Public comments on proposed amendments*. Retrieved from: [http://a100.gov.bc.ca/appsdata/epic/documents/p285/1350060881383\\_8c49d591dab379cf04f394cf9549b349f300da034f3b9ce82b041e7277d49dba.pdf](http://a100.gov.bc.ca/appsdata/epic/documents/p285/1350060881383_8c49d591dab379cf04f394cf9549b349f300da034f3b9ce82b041e7277d49dba.pdf)
- British Columbia Environmental Assessment Office (BC EAO) (2013b). *Mount Milligan Copper-Gold Project Amendment Assessment Report*. Retrieved from: [http://a100.gov.bc.ca/appsdata/epic/documents/p285/d35403/1362419148265\\_7663b740436f6524ba2a1c5cf145e0cee79912c6feb99d7932b630eaeaf6fae0.pdf](http://a100.gov.bc.ca/appsdata/epic/documents/p285/d35403/1362419148265_7663b740436f6524ba2a1c5cf145e0cee79912c6feb99d7932b630eaeaf6fae0.pdf)
- British Columbia Geological Survey. (2014). *OPPORTUNITIES TO EXPLORE British Columbia Geological Survey Information Circular 2014-8*. Retrieved from <http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/InformationCirculars/Documents/IC2014-8.pdf>
- Brooks, C. (2013). Rights Holders, Not Stakeholders. *Seven*, 3. Retrieved from <http://indigenuity.ca/wp-content/uploads/2013/02/SEVEN-Spring-2013-Article.pdf>

- Brown, H. S. (2007). The Rise of the Global Reporting Initiative: A Case of Institutional Entrepreneurship. *Corporate Social Responsibility Initiative, Working Pa.* doi:10.1080/0969160X.2011.593840
- Brueckner, M., Durey, A., Pforr, C., & Mayes, R. (2014). The civic virtue of developmentalism: on the mining industry's political licence to develop Western Australia. *Impact Assessment and Project Appraisal*, 32(4), 315–326. doi:10.1080/14615517.2014.929784
- Bruntland Commission. (1987). *Report of the World Commission on Environment and Development: Our Common Future (The Brundtland Report)*. doi:10.1080/07488008808408783
- Burgmann, T. (2015, January 19). Court battle begins for Taseko Mines over B.C.'s Fish Lake project. *The Globe and Mail*. Retrieved from <http://www.theglobeandmail.com/news/british-columbia/court-battle-begins-for-taseko-mines-over-bcs-fish-lake-project/article22530026/>
- Canadian Environmental Assessment Agency (CEAA) (2013). *Process Diagram: Environmental Assessments Managed by the Agency*. Retrieved from: <http://www.ceaa-acee.gc.ca/default.asp?lang=en&n=B053F859-1>
- Canadian Environmental Assessment Agency (CEAA). (2014). Frequently Asked Questions. Retrieved from: <http://www.ceaa-acee.gc.ca/default.asp?lang=en&n=CE87904C-1#faqQuestions>.
- Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research and practice. *International Journal of Management Reviews*, 12(1), 85–105. doi:10.1111/j.1468-2370.2009.00275.x
- CBERN. (2014). Impact and Benefit Agreements. Retrieved from: [http://www.cbern.ca/research/projects/workspaces/cura\\_project/case\\_studies/impact\\_and\\_benefit\\_agreements/](http://www.cbern.ca/research/projects/workspaces/cura_project/case_studies/impact_and_benefit_agreements/).
- Centre for Training Excellence in Mining. (2015). About Us | BC Task Force. Retrieved September 13, 2015, from <http://www.acareerinminingbc.ca/about-us>
- Cervantes, M., Green, K. P., & Wilson, A. (2015). *Survey of Mining Companies 2014*. Retrieved from <http://www.fraserinstitute.org/research-news/display.aspx?id=20902>
- Chingee, A. (2008). *Consultation with the McLeod Lake Indian Band on the Mt. Milligan Project*. Letter dated Dec. 10, 2008 from McLeod Lake Indian Band. Retrieved from: [http://a100.gov.bc.ca/appsdata/epic/documents/p285/1230927811497\\_5e2db5308162e8b071867167ed53412c43ae12046930b937810ae7464bd4e066.pdf](http://a100.gov.bc.ca/appsdata/epic/documents/p285/1230927811497_5e2db5308162e8b071867167ed53412c43ae12046930b937810ae7464bd4e066.pdf)
- Collins, B. (2015). *Mine Closure Planning With First Nations Communities: The Stk'emlupsemc Te Secwepemc and the New Afton Mine*. University of British Columbia.
- Colombo, E. (2012). *Fort St. James: Investment-Ready Community Profile*. Retrieved from <https://fortstjames.civicweb.net/Documents/DocumentList.aspx?ID=4095>
- Coumans, C. (2010). Alternative Accountability Mechanisms and Mining: The Problems of Effective Impunity, Human Rights, and Agency. *Canadian Journal of Development Studies/Revue*

*Canadienne D'études Du Développement*, 30(1-2), 27–48.  
doi:10.1080/02255189.2010.9669280

- Coumans, C. (2016). Time to Axe the Conservative Government's Ineffective CSR Counsellor Office. *MiningWatch Canada*. Retrieved February 2, 2016, from <http://miningwatch.ca/news/2016/1/22/time-axe-conservative-government-s-ineffective-csr-counsellor-office>
- Dacks, G. (2002). British Columbia after the Delgamuukw Decision: Land Claims and other Processes. *Canadian Public Policy*, 28(2), 239–255.
- Danard, D. (2010). *RESPECTING OUR ANCESTORS, ENSURING OUR FUTURE: Traditional Knowledge Primer for First Nations*. Toronto.
- Dashwood, H. (2012). *The Rise of Global Corporate Social Responsibility: Mining and the Spread of Global Norms*. Cambridge University Press: New York.
- Davis, R., & Franks, D. (2014). *Costs of Company-Community Conflict in the Extractive Sector*. Cambridge, MA.
- Deloitte. (2014). *Tracking the trends 2014: The top issues mining companies will face in the coming year*. Retrieved from: [https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Energy-and-Resources/dttler-Tracking-the-trends-2014\\_EN\\_final.pdf](https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Energy-and-Resources/dttler-Tracking-the-trends-2014_EN_final.pdf)
- Denzin, N. K., & Lincoln, Y. S. (2005). *The SAGE Handbook of Qualitative Research* (3rd ed.). Sage Publications, Thousand Oaks, CA.
- Donald, B. (2013). *Decommissioning and Remediation of the Pinchi Lake Mine*. In; Proceedings of the British Columbia Mine Reclamation Symposium 2013.
- Drake, A. (2012). *Canadian Global Exploration Activity | Natural Resources Canada*. Retrieved from <http://www.nrcan.gc.ca/mining-materials/exploration/8296#F2>
- Durr, B. (1990). Placer Dome puts a shine on its activities. *Financial Times*, p. 29.
- Eggert, R. G. (2009). What Sustainability and Sustainable Development Mean for Mining. In J. A. Botin (Ed.), *Sustainable Management of Mining Operations*. Littleton, Co: Society for Mining, Metallurgy, and Exploration.
- Equator Principles. (2012). *Guidance Note on Equator Principles Implementation Reporting*. Retrieved from: [http://www.equator-principles.com/resources/ep\\_implementation\\_reporting\\_guidance\\_note.pdf](http://www.equator-principles.com/resources/ep_implementation_reporting_guidance_note.pdf)
- Equator Principles. (2013). *About the Equator Principles*. Retrieved from: <http://www.equator-principles.com/index.php/about-ep>
- ERM. (2014). Balancing Performance in Uncertain Times : The Relationship Between Capital Markets and Environmental and Social Risks Table of Contents. In *Prospectors and Developers Association of Canada Conference Proceedings- 2014*.

- Ernst & Young. (2015). *Business risks facing mining and metals 2015–2016*. Retrieved from: <http://www.ey.com/GL/en/Industries/Mining---Metals/Business-risks-in-mining-and-metals>.
- Esteves, A. M. ., Franks, D. ., & Vanclay, F. . (2012). Social impact assessment: The state of the art. *Impact Assessment and Project Appraisal*, 30(1), 34–42. doi:10.1080/14615517.2012.660356
- Extractive Industry Transparency Initiative. (2015). *Executive Summary - Annual Report 2015*. Retrieved from: <https://eiti.org/files/progrep/PR2015-Executive-summary-EN.pdf>
- Fidler, C. (2010). Increasing the sustainability of a resource development : Aboriginal engagement and negotiated agreements. *Environ Dev Sustain*, 233–244. doi:10.1007/s10668-009-9191-6
- Fidler, C., & Hitch, M. (2007). Impact and Benefit Agreements : A Contentious Issue for Environmental and Aboriginal Justice. *Environments Journal*, 35(2).
- Franks, D. (2012). *Social impact assessment of resource projects*. Perth. Retrieved from [http://im4dc.org/wp-content/uploads/2012/01/UWA\\_1698\\_Paper-02\\_Social-impact-assessment-of-resource-projects1.pdf](http://im4dc.org/wp-content/uploads/2012/01/UWA_1698_Paper-02_Social-impact-assessment-of-resource-projects1.pdf)
- Franks, D. M., & Cohen, T. (2012). Social Licence in Design: Constructive technology assessment within a mineral research and development institution. *Technological Forecasting and Social Change*, 79(7), 1229–1240. doi:10.1016/j.techfore.2012.03.001
- Friedman, A. L., Miles, S. (2006). *Stakeholders: Theory and Practice*. Oxford University Press. Retrieved 20 November 2015, from: <http://www.myilibrary.com?ID=90557>.
- Frynas, J. G. (2005). The false developmental promise of corporate social responsibility: evidence from multinational oil companies. *International Affairs*, 81(3), 581–598. doi:10.1111/j.1468-2346.2005.00470.x
- Galbraith, L., Bradshaw, B., & Rutherford, M. B. (2007). Towards a new supraregulatory approach to environmental assessment in Northern Canada. *Impact Assessment and Project Appraisal*, 25(1), 37–41. doi:10.3152/146155107X190596
- Gamble, D. J. (1978). The Berger Inquiry: An Impact Assessment Process. *Science*, 199(4332), 946–952.
- Gibson, G., & O’Faircheallaigh, C. (2015). *IBA COMMUNITY TOOLKIT Negotiation and Implementation of Impact and Benefit Agreements*. Retrieved from [www.ibacommunitytoolkit.ca](http://www.ibacommunitytoolkit.ca)
- Gilbert, R. (2012). Construction resumes after road blockade removed on Highway 27 in northern British Columbia. *Journal of Commerce*. Retrieved from <http://journalofcommerce.com/Home/News/2012/1/Construction-resumes-after-road-blockade-removed-on-Highway-27-in-northern-British-Columbia-JOC048354W/>
- Global Affairs Canada (GAC). (2014). *Doing Business the Canadian Way: A Strategy to Advance Corporate Social Responsibility in Canada’s Extractive Sector Abroad*. Retrieved from <http://www.international.gc.ca/trade-agreements-accords-commerciaux/topics-domaines/other-autre/csr-strat-rse.aspx?lang=eng>

- Global Affairs Canada (GAC). (2015). *Appointment of Canada's Extractive Sector Corporate Social Responsibility Counsellor*. Ottawa. Retrieved from <http://www.international.gc.ca/media/comm/news-communiques/2015/03/01a.aspx?lang=eng>
- Global Reporting Initiative. (2014). G4 Sustainability Reporting Guidelines, 97. Retrieved from <https://www.globalreporting.org/standards/g4/Pages/default.aspx>
- Gogal, S., Riegert, R., and Jamieson, J. (2006). Aboriginal Impact and Benefit Agreements: Practical Considerations. *Alberta Law Review*, 43(1).
- Government of BC. (2013). *BC's Mining and Energy: Fueling a Job Growth in the Regions*.
- Government of BC. (2015). Nak'azdli Band. *First Nations Negotiations*. Retrieved September 11, 2015, from <http://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/consulting-with-first-nations/first-nations-negotiations/first-nations-a-z-listing/nak-azdli-band>
- Gratton, P. (2014). *The Canadian Public: Perspectives on Mining and Resources Extraction*. Vancouver, BC. Retrieved from [http://mining.ca/sites/default/files/documents/Pierre\\_Gratton\\_VBOT\\_Speech\\_Sept\\_11\\_2014\\_0.pdf](http://mining.ca/sites/default/files/documents/Pierre_Gratton_VBOT_Speech_Sept_11_2014_0.pdf)
- Haalboom, B. (2014). Confronting risk: A case study of Aboriginal peoples' participation in environmental governance of uranium mining, Saskatchewan. *The Canadian Geographer*, 58(3), 276–290. doi:10.1111/cag.12086
- Harvey, B., & Bice, S. (2014). Social impact assessment, social development programmes and social licence to operate: tensions and contradictions in intent and practice in the extractive sector. *Impact Assessment and Project Appraisal*, 32(4), 327–335. doi:10.1080/14615517.2014.950123
- Hedberg, C. J., & Von Malmborg, F. (2003). The global reporting initiative and corporate sustainability reporting in Swedish companies. *Corporate Social Responsibility and Environmental Management*, 10(3), 153–164. doi:10.1002/csr.38
- Heisler, K. G., & Markey, S. (2014). Navigating jurisdiction: local and regional strategies to access economic benefits from mineral development. *The Canadian Geographer / Le Géographe Canadien*, 58(4), n/a–n/a. doi:10.1111/cag.12121
- Heisler, K., & Markey, S. (2013). Scales of Benefit: Political Leverage in the Negotiation of Corporate Social Responsibility in Mineral Exploration and Mining in Rural British Columbia, Canada. *Society & Natural Resources*, 26(4), 386–401. doi:10.1080/08941920.2012.695858
- Henisz, W. J., Dorobantu, S., & Nartey, L. J. (2014). Spinning gold: The financial returns to stakeholder engagement. *Strategic Management Journal*, 35(12), 1727–1748. doi:10.1002/smj.2180
- Herzig, C., & Schaltegger, S. (2011). CORPORATE SUSTAINABILITY REPORTING: Interdisciplinary Perspectives and Theoretical Foundations. In J. G. M. Godemann (Ed.), *Sustainability Communication* (pp. 151–169). Springer.

- Hilson, G. M. (2006). Introduction to this special issue, “Improving Environmental, Economic and Ethical Performance in the Mining Industry”. Part 1: Environmental Management and Sustainable Development. *Journal of Cleaner Production*, 14(May 2005), 1039. doi:10.1016/j.jclepro.2005.05.020
- Hitch, M. W. (2006). *Impact and Benefit Agreements and the Political Ecology of Mineral Development in Nunavut*. University of Waterloo.
- Hoekstra, G. (2015, June 5). Nak’azdli getting cut of resource wealth in traditional territory. *Vancouver Sun*. Retrieved from [http://www.vancouversun.com/technology/First+Nations+series+azdli+getting+resource+wealth+traditional+territory/11104978/story.html?\\_\\_lsa=f796-a2e1](http://www.vancouversun.com/technology/First+Nations+series+azdli+getting+resource+wealth+traditional+territory/11104978/story.html?__lsa=f796-a2e1)
- Hume, M. (2014, September 9). First Nations protesters shut down northern B.C. drilling site. *The Globe and Mail*. Vancouver. Retrieved from <http://www.theglobeandmail.com/news/british-columbia/first-nations-protesters-shut-down-northern-bc-drilling-site/article20507396/>
- Indigenous and Northern Affairs Canada. (2008, November 3). Terminology. *Aboriginal Peoples and Communities*. Retrieved November 27, 2015, from <http://www.aadnc-aandc.gc.ca/eng/1100100014642/1100100014643>
- Indigenous and Northern Affairs Canada. (2015). *First Nations in British Columbia*. Retrieved from [https://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-BC/STAGING/texte-text/inacmp\\_1100100021016\\_eng.pdf](https://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-BC/STAGING/texte-text/inacmp_1100100021016_eng.pdf)
- International Council on Mining and Metals. (2015). ICMM About Us. Retrieved November 12, 2015, from <https://www.icmm.com/about-us/about-us>
- International Finance Corporation. (2012). *Performance Standards on Environmental and Social Sustainability*. Retrieved from: [http://www.ifc.org/wps/wcm/connect/c8f524004a73daeca09afdf998895a12/IFC\\_Performance\\_Standards.pdf?MOD=AJPERES](http://www.ifc.org/wps/wcm/connect/c8f524004a73daeca09afdf998895a12/IFC_Performance_Standards.pdf?MOD=AJPERES)
- International Organization for Standardization. (2010). *ISO 26000: Guidance on Social Responsibility*. Retrieved from <https://www.iso.org/obp/ui/#iso:std:iso:26000:ed-1:v1:en>
- James, P. M. (1999). 1999 Jackling lecture: The miner and sustainable development. *Mining Engineering*, 51(6), 89–92.
- Jenkins, H., & Yakovleva, N. (2006). Corporate social responsibility in the mining industry: Exploring trends in social and environmental disclosure. *Journal of Cleaner Production*, 14, 271–284. Retrieved from [http://ac.els-cdn.com/S0959652605000375/1-s2.0-S0959652605000375-main.pdf?\\_tid=9b47725e-d1cb-11e4-a109-00000aacb35e&acdnat=1427163494\\_d2e077b7ff7a546e44b5cf37e2930626](http://ac.els-cdn.com/S0959652605000375/1-s2.0-S0959652605000375-main.pdf?_tid=9b47725e-d1cb-11e4-a109-00000aacb35e&acdnat=1427163494_d2e077b7ff7a546e44b5cf37e2930626)
- Ji J, Neary K, and Gladue A (2008). Letters posted on E-PIC by local residents, under “Public Comments/Submissions”. Retrieved from Project Information Centre: [http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic\\_project\\_doc\\_index\\_285.html](http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_project_doc_index_285.html)

- Jijelava, D., & Vanclay, F. (2014). Social licence to operate through a gender lens: The challenges of including women's interests in development assistance projects. *Impact Assessment and Project Appraisal*, 32(42014), 283–293. doi:10.1080/14615517.2014.933505
- Jordan, P. (2012, May 31). Mount Milligan project weighs on Thompson Creek. *The Globe and Mail*. Retrieved from <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/mount-milligan-project-weighs-on-thompson-creek/article4223718/>
- Joseph, B. (2014). Six “Must Dont’s” for an effective First Nations Engagement Strategy. Retrieved June 25, 2015, from <http://www.ictinc.ca/blog/six-must-donts-effective-first-nations-engagement-strategy>.
- Joyce & Thomson. (2000). Earning a Social License to Operate: Social Acceptability and Resource Development in Latin America. *The Canadian Mining and Metallurgical Bulletin*, 93(1037). Retrieved from <http://oncommonground.ca/wp-content/downloads/license.htm>
- Joyce, S., & Macfarlane, M. (2001). Social Impact Assessment in the Mining Industry: Current Situation and Future Directions. *Mining, Minerals, and Sustainable Development*, (46), 28.
- Keevil, M. (2015). Goldcorp's Jeannes at Roundup 2015: Gold's comeback is underway. *The Northern Miner*, 100(52). Retrieved from <http://www.northernminer.com/news/goldcorps-jeannes-at-roundup-2015-gold-sector-on-its-way-back-to-relevance/1003452545/>
- Kemp, D., & Owen, J. R. (2013). Community relations and mining: Core to business but not “core business.” *Resources Policy*, 38, 523–531. doi:10.1016/j.resourpol.2013.08.003
- Kemp, D., Owen, J. R., & Van De Graaff, S. (2012). Corporate social responsibility, mining and “audit culture.” *Journal of Cleaner Production*, 24, 1–10. doi:10.1016/j.jclepro.2011.11.002
- Lacey, J., Parsons, R., & Moffat, K. (2012). *Exploring the concept of a Social Licence to operate in the Australian minerals industry: Results from interviews with industry representatives*. Brisbane. Retrieved from <https://publications.csiro.au/rpr/download?pid=csiro:EP125553&dsid=DS3>
- Larner, J., & Mason, C. (2014). Beyond box-ticking: A study of stakeholder involvement in social enterprise governance. *Corporate Governance*, 14(2), 181–196. doi:10.1108/CG-06-2011-0050
- Lloyd, R. (2012). Nak'azdli signs agreement on Mt. Milligan - Caledonia Courier. *Caledonia Courier*. Retrieved from [http://www.caledoniacourier.com/breaking\\_news/158959945.html?mobile=true](http://www.caledoniacourier.com/breaking_news/158959945.html?mobile=true)
- MABC. (2014). Mining Association of Canada, Facts & Figures. Retrieved September 13, 2015, from <http://www.mining.bc.ca/mining-facts>
- Marshall, C., & Rossman, G. B. (2011). *Designing Qualitative Research* (5th ed.). Sage Publications, Thousand Oaks, CA.
- Martinez, C., & Franks, D. M. (2014). Does mining company-sponsored community development influence social licence to operate? Evidence from private and state-owned companies in Chile. *Impact Assessment and Project Appraisal*, (September 2014), 37–41. doi:10.1080/14615517.2014.929783

- MEM. (2014). Geoscience BC receives \$3 million for resource development research | BC Gov News. *News Release*. Retrieved February 6, 2016, from <https://news.gov.bc.ca/stories/geoscience-bc-receives-3-million-for-resource-development-research>
- Meredith-Jones, S. (2013). Minfile Record Summary No 093N 194. *British Columbia Ministry of Energy and Mines*. Retrieved May 19, 2015, from <http://minfile.gov.bc.ca/Summary.aspx?minfilno=093N++194>
- Mining Association of British Columbia (MABC). (2014). Mining Facts. [Online] Retrieved from: <http://www.mining.bc.ca/mining-facts>
- Mining Association of British Columbia (MABC). (2013a). Competitiveness. [Online] Retrieved from: <http://www.mining.bc.ca/our-focus/competitiveness>
- Mining Association of British Columbia (MABC). (2013b). Mining Facts. [Online] Retrieved from: <http://www.mining.bc.ca/mining-facts>
- Mining Association of Canada. (2014). *Towards Sustainable Mining Progress Report 2014*. Retrieved from [http://www.mining.ca/www/media\\_lib/TSM\\_Documents/2008\\_Aboriginal\\_Relations/Final\\_Aboriginal\\_Framework\\_November\\_19\\_2008.pdf](http://www.mining.ca/www/media_lib/TSM_Documents/2008_Aboriginal_Relations/Final_Aboriginal_Framework_November_19_2008.pdf)
- Mining Association of Canada. (2015). *TSM Guiding Principles*. Retrieved from [http://mining.ca/sites/default/files/documents/TSMGuidingPrinciples\\_0.pdf](http://mining.ca/sites/default/files/documents/TSMGuidingPrinciples_0.pdf)
- Mining Association of Canada (MAC). (2012). *TSM ASSESSMENT PROTOCOL A Tool for Assessing Aboriginal and Community Outreach Performance*.
- Mining Association of British Columbia. (n.d.). Mining & Sustainability Award. 2015. Retrieved November 11, 2015, from <http://www.mining.bc.ca/award/mining-sustainability-award-2013-0>
- Ministry of Aboriginal Relations and Reconciliation. (2015). Economic and Community Development Agreements. Retrieved November 25, 2015, from <http://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/consulting-with-first-nations/first-nations-negotiations/economic-and-community-development-agreements>
- Ministry of Energy Mines and Petroleum Resources - Mining and Minerals Division. (2012). *British Columbia's Mineral Exploration and Mining Strategy: Seizing Global Demand*. Victoria, BC.
- MLIB. (2013). *McLeod Lake Indian Band Baseline Profile*. Retrieved from [http://a100.gov.bc.ca/appsdata/epic/documents/p371/d36122/1380318352065\\_66f3b88afcaac7cb9ae774fa3b7d03a4a9e63f1dff65c76d10f49be20a710534.pdf](http://a100.gov.bc.ca/appsdata/epic/documents/p371/d36122/1380318352065_66f3b88afcaac7cb9ae774fa3b7d03a4a9e63f1dff65c76d10f49be20a710534.pdf)
- MMSD. (2002). *Seven Questions to Sustainability: How to Assess the Contribution of Mining and Minerals Activities*. Winnipeg, Manitoba: Mining Minerals and Sustainable Development North America.
- Moffat, K., & Zhang, A. (2014). The paths to social licence to operate: An integrative model explaining community acceptance of mining. *Resources Policy*, 39, 61–70. doi:10.1016/j.resourpol.2013.11.003

- Moiana, A. (2012). The Challenges of Extractive Industry Transparency Initiative in Zambia. Retrieved from: [http://www.ctpd.org.zm/index.php?option=com\\_phocadownload&view=category&download=14:the-challenges-of-eiti-in-zambia&id=5:policy-briefs&Itemid=121](http://www.ctpd.org.zm/index.php?option=com_phocadownload&view=category&download=14:the-challenges-of-eiti-in-zambia&id=5:policy-briefs&Itemid=121).
- Nak'azdli. (2013). *Nak'azdli Community Plan Framework*. Retrieved from <http://www.nakazdli.ca/pdf/ComprehensiveCommunityPlan.pdf>
- Nak'azdli Band Council. (2009). Proposed Shus Nadloh (Mt. Milligan) Mine Cannot Proceed without Nak'azdli. Fort St. James.
- Nak'azdli First Nation (2013). *Proposed amendment to the Mt. Milligan Gold/Copper Project – Environmental Assessment Certificate*. Letter dated Feb. 18, 2013 from Nakazdli First Nation. Retrieved from: [http://a100.gov.bc.ca/appsdata/epic/documents/p285/1362417960133\\_7663b740436f6524ba2a1c5cf145e0cee79912c6feb99d7932b630eaeaf6fae0.pdf](http://a100.gov.bc.ca/appsdata/epic/documents/p285/1362417960133_7663b740436f6524ba2a1c5cf145e0cee79912c6feb99d7932b630eaeaf6fae0.pdf)
- Nartey, L., Witold, H. J., & Dorobantu, S. (2013). What Brings Us Together Tears Us Apart: The Inherent Tension in Stakeholder Engagement Strategies, 0–51.
- Nelsen, J. L. (2006). Social license to operate. *International Journal of Mining, Reclamation and Environment*, 20(3), 161–162. doi:10.1080/17480930600804182
- Nelsen, J. L. (2015). *British Columbia Copper Mining Development: A Sixty-Year Economic and Political Retrospective*. University of British Columbia.
- Newbold, J. (2006). Chile's environmental momentum: ISO 14001 and the large-scale mining industry - Case studies from the state and private sector. *Journal of Cleaner Production*, 14, 248–261. doi:10.1016/j.jclepro.2004.05.010
- Nikiforuk, A. (1997). *The Nasty Game: The Failure of Environmental Assessment in Canada*. Walter & Duncan Gordon Foundation.
- Nish, S., and Bice, S. (2011). Community-based agreement making with land-connected peoples. In: F. Vanclay and A.M. Esteves, eds. *New directions in social impact assessment: conceptual and methodological advances*. Cheltenham: Edward Elgar, 59–77.
- Noble, B. F. (2002). The Canadian experience with SEA and sustainability. *Environmental Impact Assessment Review*, 22(1), 3–16. doi:10.1016/S0195-9255(01)00093-2
- Northern Miner. (1989, April 10). Editorial - World class ? *The Northern Miner*. Retrieved from <http://www.northernminer.com/news/editorial-world-class/1000124917/>
- Olynyk, J. M. (2005). The Haida Nation and Taku River Tlingit Decisions: Clarifying Roles and Responsibilities for Aboriginal Consultation and Accommodation. *The Negotiator: Canadian Association of the Petroleum Landman*, (April), 2–7. Retrieved from [http://www.landman.ca/publications/Negotiator/2005/april/2005\\_April.pdf](http://www.landman.ca/publications/Negotiator/2005/april/2005_April.pdf)
- Owen, J. R., & Kemp, D. (2012). Assets, Capitals, and Resources: Frameworks for Corporate Community Development in Mining. *Business & Society*, 51(3), 382–408. doi:10.1177/0007650312446803

- Owen, J. R., & Kemp, D. (2013). Social licence and mining: A critical perspective. *Resources Policy*, 38(1), 29–35. doi:10.1016/j.resourpol.2012.06.016
- Owram, K. (2010). Thompson Creek acquires Terrane Metals. *The Globe and Mail*, p. 15 July 2010.
- Pacific Climate Impacts Consortium. (2013). CLIMATE SUMMARY FOR : OMINECA REGION PART OF A SERIES ON THE RESOURCE REGIONS OF BC. Retrieved from [https://www.pacificclimate.org/sites/default/files/publications/Climate\\_Summary-Omineca.pdf](https://www.pacificclimate.org/sites/default/files/publications/Climate_Summary-Omineca.pdf)
- Palinkas, L. a, Horwitz, S. M., Green, C. a, Wisdom, J. P., Duan, N., & Hoagwood, K. (2013). Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Administration and Policy in Mental Health and Mental Health Services Research*, (December), 1–12. doi:10.1007/s10488-013-0528-y
- Papmehl, A. (2002). Beyond the GAAP: Triple-bottom-line reporting changes how businesses and shareholders view corporate imperatives. *Management for Strategic Business Ideas*, 76(5), 20–25.
- Parra, C., & Franks, D. M. (2011). Monitoring social progress in mining zones — the case of Antofagasta and Tarapacá , Chile. In *SRMining2011: First International Seminar on Social Responsibility in Mining* (pp. 1–8).
- Parsons, R., Lacey, J., & Moffat, K. (2014). Maintaining legitimacy of a contested practice: How the minerals industry understands its “social licence to operate.” *Resources Policy*, 41, 83–90. doi:10.1016/j.resourpol.2014.04.002
- Parsons, R., & Moffat, K. (2014). Integrating impact and relational dimensions of social licence and social impact assessment. *Impact Assessment and Project Appraisal*, (September), 1–10. doi:10.1080/14615517.2014.936107
- Patton, M. Q. (2002). *Qualitative Research & Evaluation Methods*. Sage Publications, Thousand Oaks, CA.
- Penner, D. (2013, August 8). Mount Milligan mine on verge of production. *Vancouver Sun*. Retrieved from [http://www.vancouversun.com/business/mount+milligan+mine+verge+production/8766339/story.html?\\_\\_lsa=efc6-1a1a](http://www.vancouversun.com/business/mount+milligan+mine+verge+production/8766339/story.html?__lsa=efc6-1a1a)
- Perreault, T. (2013). Dispossession by accumulation? Mining, water and the nature of enclosure on the bolivian altiplano. *Antipode*, 45(5), 1050–1069. doi:10.1111/anti.12005
- Placer Dome. (2005). *Fact Sheet - August 2005*.
- Poelzer, G., (2002). Aboriginal peoples and environmental policy in Canada: no longer at the margins. In: Van Nijnatten, D., Boardman, R. (Eds.), *Canadian Environmental Policy: Context and Cases*. Oxford University Press, Toronto, Ontario, pp. 87–106.
- PricewaterhouseCoopers. (2015). *Proving Resilient: The Mining Industry in British Columbia 2014*. Retrieved from <http://www.pwc.com/ca/en/mining/publications/pwc-mining-industry-british-columbia-2015-05-en.pdf>

- Prno, J. (2013). An analysis of factors leading to the establishment of a social licence to operate in the mining industry. *Resources Policy*, 38, 577–590. doi:10.1016/j.resourpol.2013.09.010
- Prno, J., & Slocombe, D. S. (2012). Exploring the origins of “social license to operate” in the mining sector: Perspectives from governance and sustainability theories. *Resources Policy*, 37(3), 346–357. doi:10.1016/j.resourpol.2012.04.002
- Prno, J., & Slocombe, D. S. (2014). A Systems-Based Conceptual Framework for Assessing the Determinants of a Social License to Operate in the Mining Industry. *Environmental Management*, (53), 672–689. doi:10.1007/s00267-013-0221-7
- Prospectors and Developers Association of Canada. (2014). *Principles and Guidance Notes. e3 Plus: A Framework for Responsible Exploration*. Retrieved from <http://www.pdac.ca/programs/e3-plus/principles>
- Robinson, A. (1989). Some left cold by promoter’s hurry to start gold-copper mine. *The Globe and Mail*, pp. 1–4.
- Ruckstuhl, K., Thompson-fawcett, M., & Rae, H. (2014). Māori and mining: Indigenous perspectives on reconceptualising and contextualising the social licence to operate. *Impact Assessment and Project Appraisal*, 32(4), 304–314. doi:10.1080/14615517.2014.929782
- Sadar, M. H., & Stolte, W. J. (1996). an Overview of the Canadian Experience in Environmental Impact Assessment (Eia). *Impact Assessment*, 14(2), 215–228. doi:10.1080/07349165.1996.9725897
- Sam, A. M. (2009). *Proposed Shus Nadloh (Mt. Milligan) Mine Cannot Proceed without Nak’azdli*. Press release dated March, 2, 2009 from Nak’azdli Band Council. Retrieved from: <http://www.nakazdli.ca/Press%20Releases/Press%20Release%20March%202%2009.pdf>.
- Shandro, J. (2012). *Opportunities to Meet the Health Needs of the Stuart Lake/Na’kal Bun Area: A Baseline Study of Community Health , Community Health and Social Services and Reported Impacts from Local Mining Developments*. Retrieved from: <http://bchealthycommunities.ca/res/download.php?id=1818>
- Shandro, J. a., Veiga, M. M., Shoveller, J., Scoble, M., & Koehoorn, M. (2011). Perspectives on community health issues and the mining boom-bust cycle. *Resources Policy*, 36(2), 178–186. doi:10.1016/j.resourpol.2011.01.004
- Shandro, J., Koehoorn, M., Scoble, M., Ostry, A., Gibson, N., & Veiga, M. (2011). Mental Health, Cardiovascular Disease and Declining Economies in British Columbia Mining Communities. *Minerals*, 1(1), 30–48. doi:10.3390/min1010030
- Simnett, R., Vanstraelen, A., & Chua, W. F. (2009). Assurance on sustainability reports: An international comparison. *Accounting Review*, 84(3), 937–967. doi:10.2308/accr.2009.84.3.937
- Smith, D. (2012). *Mackenzie: Investment-Ready Community Profile*. Retrieved from [http://www.district.mackenzie.bc.ca/Files/Docs/InvestmentReadyProfile/Mackenzie\\_Investment\\_Ready\\_Profile\(web\).pdf](http://www.district.mackenzie.bc.ca/Files/Docs/InvestmentReadyProfile/Mackenzie_Investment_Ready_Profile(web).pdf)

- Sosa, I., & Keenan, K. (2001). *Impact Benefit Agreements Between Aboriginal Communities and Mining Companies: Their Use In Canada*. Canadian Environmental Law Association, Environmental Mining Council of British Columbia, CooperAcción.
- Stockwell, A. M. (2015). *Capturing Vulnerability: Towards a Method for Assessing, Mitigating, and Monitoring Gendered Violence in Mining Communities in British Columbia*. University of British Columbia. Retrieved from <https://open.library.ubc.ca/cIRcle/collections/ubctheses/24/items/1.0223120>
- Stueck, W. (2010). Not all native bands are happy with the Mount Milligan mine - The Globe and Mail. *The Globe and Mail*. Retrieved from <http://www.theglobeandmail.com/news/british-columbia/not-all-native-bands-are-happy-with-the-mount-milligan-mine/article1314696/>
- TCMC. (2010, December 17). Thompson Creek Metals Company Announces Application Filing Relating to the Approval of Terrane Acquisition. *Environmental Health Perspectives*.
- Thompson Creek Metals Company (2010). Thompson Creek Metals Company Completes Acquisition of Terrane Metals Corp. Retrieved from: [www.thompsoncreekmetals.com/s/News\\_Releases.asp?ReportID=424094](http://www.thompsoncreekmetals.com/s/News_Releases.asp?ReportID=424094)
- Thompson Creek Metals Company (2012). *Proposed Amendments to Mount Milligan EA Certificate*. Letter dated Apr. 16, 2012 to EAO Executive Director. Retrieved from: [http://a100.gov.bc.ca/appsdata/epic/documents/p285/d34487/1347395834666\\_863b94b4aa7f308bd7bcf91b0589a5e3944e908b836d66334d585e803c9c9922.pdf](http://a100.gov.bc.ca/appsdata/epic/documents/p285/d34487/1347395834666_863b94b4aa7f308bd7bcf91b0589a5e3944e908b836d66334d585e803c9c9922.pdf)
- Thompson Creek Metals Company. (2015). Fact Sheet - August 2015, (August). Retrieved from [http://www.thompsoncreekmetals.com/i/pdf/fs/TCM\\_Factsheet.pdf](http://www.thompsoncreekmetals.com/i/pdf/fs/TCM_Factsheet.pdf)
- Thomson, I., & Boutilier, R. G. (2011). Social License to Operate. In P. Darling (Ed.), *SME Mining Engineering Handbook* (Third Edit., pp. 1779–1796). Littleton, Co: Society for Mining, Metallurgy, and Exploration.
- Thomson, I., and Joyce, S, (2006). Changing Mineral Exploration Industry Approaches to Sustainability. *Society of Economic Geologists Special Publication 12*. 2006, pp. 149-169.
- Toledo Orozco, Z. (2013). *Mobilizing Identity in Defense of the Land: a comparative study of indigenous groups' strategies against mining in Canada and Peru*. Carlton University.
- Truth and Reconciliation Commission of Canada. (2015). *Honouring the Truth, Reconciling for the Future*. Retrieved from [www.trc.ca](http://www.trc.ca)
- Tsilhqot'in National Government. (2012). Tsilhqot'in determined to fight “new” Prosperity proposal -- TSILHQOT'IN TERRITORY, BC, Feb. 29, 2012. *Canadian Newswire*. Retrieved November 27, 2015, from <http://www.newswire.ca/news-releases/tsilhqotin-determined-to-fight-new-prosperity-proposal-509728481.html>
- United Nations Human Rights Commission. (2011). *Guiding Principles on Business and Human Rights: Implementing the United Nations “Protect, Respect and Remedy” Framework*. doi:U.N. Doc. E/CN.4/2006/97

- Van Vlaenderen, H., & Neves, D. (2011). Community development: Building on contradiction. *Community Development Journal*, 46(January 2011), 83–95. doi:10.1093/cdj/bsq054
- Vanclay, F., Esteves, A. M., Group, C. I., Aucamp, I., Services, C., & Franks, D. M. (2015). *Social Impact Assessment: Guidance for assessing and managing the social impacts of projects*. International Association for Impact Assessment.
- Waddock, S., and Googins, B. K. (2011). The Paradoxes of Communicating Corporate Social Responsibility. In: Ihlen, Ø., Bartlett, J., May, S., Editors. *The Handbook of Communicating Corporate Social Responsibility*. John Wiley and Sons.
- Wilburn, K., & Wilburn, R. (2011). Achieving Social License to Operate Using Stakeholder Theory. *Journal of International ...*, 4(2), 3–16. Retrieved from [http://www.americanscholarspress.com/content/BusEth\\_Abstract/v4n211-art1.pdf](http://www.americanscholarspress.com/content/BusEth_Abstract/v4n211-art1.pdf)
- Williams, A. (2012). McLeod Lake Indian Band divided over mine deal. *Prince George Citizen*. Retrieved from <http://www.princegeorgecitizen.com/news/local-news/mcleod-lake-indian-band-divided-over-mine-deal-1.1035295>
- Willis, A. (2003). The Role of the Global Reporting Initiative's Sustainability Reporting Guidelines in the Social Screening of Investments. *Journal of Business Ethics*, 43(3), 233–237. doi:10.1023/A:1022958618391
- Yin, R. K. (2010). *Qualitative Research from Start to Finish*. Guildford Press: London, UK.
- Zandvliet, L., and Anderson, M.B. (2009). *Getting it Right: Making Corporate–Community Relations Work*. Greenleaf Publishing, Sheffield, UK.

# APPENDICES

## APPENDIX A: INTRODUCTORY LETTER



**UNIVERSITY OF BRITISH COLUMBIA**  
NORMAN B. KEEVIL Institute of Mining Engineering

tel: 604-822-2540 fax: 604-822-1599 517-6150 Street Road, Vancouver, BC V6T 1Z4 www.mine.ubc.ca

16 June, 2015

Dear Sir or Madam,

My name is Garth Thomson and I am a Master of Applied Science student in the Norman B. Keevil Institute of Mining Engineering at the University of British Columbia. With the help of my Supervisor and Principal Investigator, Dr. Dirk van Zyl, I am conducting a research project that will comprise my Master's thesis. The research project is named: The management of socio-political risk arising from corporate transitions at mining projects.

This research will analyze how corporate transitions at mining projects can be best managed to mitigate socio-political risk, resulting in lasting and mutually beneficial corporate-stakeholder relationships. Throughout the mining industry these transitions – such as the acquisition of a project, management turnover, or change in the development stage of a project – can lead to regression in corporate/stakeholder relationships, conflict, and/or loss of social license to operate. The research will look specifically at the Mount Milligan mine in central British Columbia as a case study.

I am contacting you to gauge your interest in participating in an interview to discuss your experiences relating to historical corporate transitions at the Mount Milligan mine. In particular, I would like to go into more detail on your point of view on any or all of the following topics:

- How corporate transitions impacted corporate/stakeholder relationships at this project.
- Successful strategies from past transitions.
- Role of various actors throughout transitions.
- View on completing a transition if given the chance to repeat. *"What to do differently?"*

The research seeks to gain broader understanding of the multiple changes in management and/or ownership at the case study mine throughout its history. Findings from this and other interviews will be analyzed and used to identify key performance indicators that can be used mitigate risk for future projects.

If you agree to participate, you will be asked questions about your views and opinions of historical corporate transitions at the Mount Milligan mine. The interview will take no more than 60 minutes, and you may withdraw your participation at any time.

If you have any questions about this research, the interview process, or any other matters relating to this letter, please contact me by email at \_\_\_\_\_ or by phone at \_\_\_\_\_. Alternatively you can contact my supervisor, Dr. Dirk van Zyl, by email at \_\_\_\_\_.

If you have any concerns about your rights as a research participant in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail [RSIL@ors.ubc.ca](mailto:RSIL@ors.ubc.ca) or call toll free 1-877-822-8598 (Toll Free: 1-877-822-8598).

Sincerely,

Garth Thomson  
MASc. Candidate  
Norman B. Keevil Institute of Mining Engineering  
University of British Columbia

## APPENDIX B: INTERVIEW CONSENT FORM



# UNIVERSITY OF BRITISH COLUMBIA

## NORMAN B. KEEVIL Institute of Mining Engineering

tel: 604 822 2540 fax: 604 822 5598 517, 6150 Stores Road, Vancouver, BC V6T 1Z4 www.mining.ubc.ca

Consent form # \_\_\_\_\_

### Research Consent Form

As part of the research project: The management of socio-political risk arising from corporate transitions at mining projects, you are asked to participate through the provision of an interview.

This research will to analyze how corporate transitions at mining projects can be best managed to mitigate socio-political risk, resulting in lasting and mutually beneficial corporate-stakeholder relationships. Throughout the mining industry these transitions – such as the acquisition of a project, management turnover, or change in the development stage of a project – can lead to regression in corporate/stakeholder relationships, conflict, and/or loss of social license to operate. The research will look specifically at the Mount Milligan mine in Central British Columbia as a case study.

The research seeks to gain broader understanding of the multiple changes in management and/or ownership at the case study mine throughout its history. Findings from this and other interviews will be analyzed and used to identify key performance indicators that can be used mitigate risk for future projects.

This research is to be undertaken by Master of Applied Science Candidate Garth Thomson, under the supervision of Dr. Dirk van Zyl, at the Norman B. Keevil Institute of Mining Engineering. By signing this form, the research participant understands:

- My signature on this form will signify that Garth Thomson, Master's student at the University of British Columbia, has explained the research procedures for this study, that you have received adequate opportunity to consider any personal risks (physical, psychological, emotional and social), and that you voluntarily agree to participate in the project.
- My participation will involve answering questions about my views and opinions.
- I may be asked to participate in a follow-up interview.
- I understand that I may withdraw my participation in this research at any time.
- I may obtain copies of this study upon its completion by contacting the student at \_\_\_\_\_ and/or his supervisor Dr. Dirk van Zyl at \_\_\_\_\_
- The results of my contribution will be preserved in a hard hand written copy, audio recording and transcribed copy. The hard copies will be put in a folder with the electronic data on a USB, and stored in a locked file cabinet in the office of Dr. Dirk van Zyl, at the Norman B. Keevil Institute of Mining Engineering at the

Dirk van Zyl, at the Norman B. Keevil Institute of Mining Engineering at the University of British Columbia for a period of five years. They will be available for review at any time.

- This consent form indicates a number for the participant. That number will be used when transcribing information from the interview to data collection forms. Only the researcher (Garth Thomson) and his supervisor (Dr. Dirk Van Zyl) will have access to these forms.
- I may request for my name to be specifically mentioned for acknowledgement. I may indicate this on this written consent form or during the oral consent process.
- I understand that I may register any complaint that I might have about the research or the student named above with the Norman B. Keevil Institute of Mining Engineering at the University of British Columbia. Email: [info@mining.ubc.ca](mailto:info@mining.ubc.ca) Phone: (604) 822-2540

*If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at 604-822-8598 or if long distance e-mail [RSPL@ora.ubc.ca](mailto:RSPL@ora.ubc.ca) or call toll free 1-877-822-8598.*

I, ..... (PRINT NAME HERE) give consent to participate in this study and:

- I agree to have my interviews recorded.
- I do not agree to have my interviews recorded.
- I allow direct quotes from my interview to be used.
- I do not allow direct quotes to be used.
- I allow my name to be used during publication.
- I do not allow my name to be used during publication, and instead request an alias be used.

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

*Once signed you should receive a copy of this consent form.*

## APPENDIX C: INTERVIEW QUESTIONNAIRE



UNIVERSITY OF BRITISH COLUMBIA  
NORMAN B. KEEVIL Institute of Mining Engineering

tel: 604 552 2540 fax: 604 922 5300 517, 2350 Steeles Road, Vancouver, BC V6T 1Z4 www.mining.ubc.ca

### **Interview Script for research project: *The management of socio-political risk arising from corporate transitions at mining projects.***

#### *Intro to the project:*

This research will analyse how corporate transitions at mining projects can be best managed to mitigate socio-political risk, resulting in lasting and mutually beneficial corporate-stakeholder relationships. Throughout the mining industry these transitions – such as the acquisition of a project, management turnover, or change in the development stage of a project – can lead to regression in corporate/stakeholder relationships, conflict, and/or loss of social license to operate. The research will look specifically at the Mount Milligan mine in Central British Columbia as a case study.

The research seeks to gain broader understanding of the multiple changes in management and/or ownership at the case study mine throughout its history, the resulting impacts on corporate/stakeholder relationships, and strategies for mitigation and/or rectification of negative impacts. Findings from this and other interviews will be analysed to identify key performance indicators that can be used to mitigate risk for future projects.

#### *Consent:*

Citation in the report by name: y/n

Citation in the report anonymously: y/n

Review excerpts where you are cited prior to publishing?

#### *Purpose of interview:*

- To find out how corporate transitions impacted corporate/stakeholder relationships at this project.
- Provides an overview these impacts from varying perspectives, and from varying periods in the project life.
- Description of status of coordination between company and stakeholders during transitions
- Account of challenges faced by varying parties during corporate transitions.
- Mitigation measures employed by actors in the face of negative consequences
- View on completing a transition if given the chance to repeat. "What to do differently?"
- The extent to which outside actors can/should influence transitions
- Do capacity issues within stakeholder groups influence communication breakdowns?
- General account of challenges in completing past transitions.
- Identify successful strategies from past transitions.
- Develop KPIs to successfully navigate future transitions.



### **Background**

- What is your background with the Mount Milligan Project?
- What was your direct role in relation to the Mount Milligan Project?
  - How long did you hold this role?
- Have you been involved with mining projects comparable to Mount Milligan? **Yes/No**
  - Where there any characteristics that made the corporate-community relationship at Mount Milligan unique?

### **Key aspects of a transition**

- What constitutes a transition to you?
- Which corporate transition were you involved in?
  - What type of transition was this?
    - Acquisition
    - Internal handover
    - Change in project stage
  - What stage was the project in?
    - Grassroots Exploration
    - Advanced Exploration
    - Construction
    - Operating Mine
  - What was the time period for this event?

### **Comparison of transitions?**



- Do you feel the transition you took part in was comparable to others at this project?

Yes/No

- How was this transition different/the same?
- In your opinion, which type of transition is the most disruptive?
  - Acquisition
  - Internal handover
  - Project stage
    - Why?

- Did you feel the potential for corporate–community relationships breakdown was an acknowledged risk during the transition? Yes/No

- How do you judge efforts to mitigate risk on this risk?
- Was there anything you would do differently? Yes/No
  - If yes, what?

- How do you think projects undergoing corporate transitions account for community concerns?

- Which mitigation strategy do you think best serves the company/community?

#### Stakeholder involvement

- Were stakeholder relations considered to be a significant part of the transition process?

Yes/No

- Who are the key stakeholders initiating/involved in this transition and what are their roles?
- What are the key processes and procedures of engagement initiatives?



- How do you describe involvement of the government/regulators with respect to the different initiatives?
- Were multi-stakeholder groups involved in the transition process? **Yes/No**
- How do you feel input of stakeholders and/or multi-stakeholder groups was valued by the major actors through this transition?
  - Weakly
  - Moderately
  - Strongly

**Legislation and regulations**

- Did any mining regulations impact this transition? **Yes/No**
  - If yes, how?
- Was the local / provincial / federal government involved in this transition? **Yes/No**
- In your opinion, do the current mining regulations account sufficiently for corporate transitions? **Yes/No**
- Should the government play a greater/lesser role in corporate transitions?
  - Greater
  - Lesser
  - The same
- How could the government better assist the company and/or stakeholders in navigating a successful corporate transition?
- In your opinion, what were the government's goals with respect seeing this transition carried out?



- Where did the government encounter challenges with respect to meeting those goals?  
Yes/No

#### Engagement

- Were external stakeholders directly involved in this transition? Yes/No
- Did stakeholders have the capacity to fully engage in this transition? Yes/No
- Did the company have processes in place to assure that staff selected to engage with the community through the transition had a specific skill set? Yes/No
- What engagement techniques did the company employ with stakeholders during the transition process?
  - In your opinion, was this engagement effective? Yes/No
  - In your opinion, was this engagement sufficient? Yes/No

#### Information sharing

- Did the company(ies) share information about the transition to the general public?
- What was the lead time for this transition?
  - Was this information public? Yes/No
- Would increased transparency on behalf of the company impact the risk of corporate-community relationship breakdown? Yes/No

#### Challenges, and perspectives, lessons

- What do you consider to be the key challenges for a corporate transition?
  - Were these challenges anticipated by those carrying out the transition?
- How could actors from community and company complement each other's work during a transition?
- Given the benefit of hindsight, is there anything you would do different with the transition you were involved in? Yes/No



- If yes, what?
- What types of indicators signify a successful transition?
- If you were to advise a company/community on how best to navigate a corporate transition, what would you tell them?

## APPENDIX D: NVIVO STOPPED WORDS LIST

a able about above absolutely after again against all along also always am amount an and another any anything are area areas aren't aren't around as aside ask asked at away back band barrick basically be because become becomes been before being below between big bit both brought but by call called calling can can't cannot can't cause certain clear clearing come comes coming continental could couldn't couldn't creek creeks day days definitely did didn't didn't difference different do does doesn't doesn't doing dome don't done don't down during each early end even evenly ever every everything few first firsts for fort from further get gets getting given going goldcorp gone good got had hadn't hadn't happen happened happening happens hard has hasn't hasn't have haven't haven't having he he'd he'll he's he'd he'll her here here's here's hers herself he's hey him himself his how how's how's i i'd i'll i'm i've i'd if i'll i'm in into is isn't isn't it it's its it's itself i've james just kind kinda know knowing knows lake last let's let's like long look looked looking looks lot lots mackenzie made many may maybe mcleod me mean means milligan more most Mt. much mustn't mustn't my myself nak'azdli nations never next no nor not nothing nothings now number numbers of off on once one ones only or other ought our ours ourselves out over own part parts placer point pretty probably put putting q10 q11 really right said same say says see seen set shall shan't shan't she she'd she'll she's she'd she'll she's should shouldn't shouldn't show showed showing shows side sides significant significantly so some something sort sorts start started starting state stay stayed stays still stuff such sure take taking terrane than that that's that's the their theirs them themselves then there there's there's these they they'd they'll they're they've they'd they'll they're they've thing things think thinking this thompson those though through throughout to too towards tried try trying turn under until up upon us very want was wasn't wasn't way we we'd we'll we're we've we'd well we'll went were we're weren't weren't we've what what's what's when when's when's where where's where's which while who who's whole whom who's whose why why's why's will with won't won't would wouldn't wouldn't would've yeah you you'd you'll you're you've you'd you'll your you're yours yourself yourselves you've