Preface

Pretium Resources Inc. (Pretivm) is proposing to develop the Brucejack Gold Mine Project (the Project) located 65 km north-northwest of Stewart in northwestern British Columbia (BC). The proposed Project is an underground gold and silver mine which is designed to process approximately 2,700 tonnes per day (tpd) of gold and silver ore over a 22-year mine life. During the life of mine operations, the Project will produce an anticipated 7.1 million ounces of gold and 31.6 million ounces of silver.

The Brucejack Project is subject to a review under the BC *Environmental Assessment Act* (BC EAA; 2002), and the federal *Canadian Environmental Assessment Act, 2012* (CEAA 2012). This document represents both the Application for an Environmental Assessment (EA) Certificate (Application) pursuant to the BC EAA and an Environmental Impact Statement (EIS) pursuant to the CEAA 2012. The Application/EIS is being submitted to the British Columbia Environmental Assessment Office (BC EAO) and the Canadian Environmental Assessment Agency (CEA Agency) to meet the requirements of the BC EAA and CEAA 2012.

The BC EAO and CEA Agency have committed to coordinate respective EA review processes and, where possible, to be consistent with the terms of the 2004 Canada-British Columbia Agreement for Environmental Assessment Cooperation (CEA Agency 2004).

After receiving Pretivm's Project Description (Provincial), the BC EAO initiated the provincial EA process by issuing an order under Section 10 of the BC EAA on February 6, 2013. The Order confirmed that "the proposed Project constitutes a reviewable project pursuant to Part 3 of the Reviewable Projects Regulation (BC Reg. 370/2002) since the proposed Project would have a production capacity of greater than or equal to 75,000 tonnes per year of mineral ore."

The proposed Project is a "designated project" under Section 15(c) of the Regulations Designating Physical Activities (SOR/2012-147) as the production rate will exceed the threshold for a gold mine of 600 tpd. Additionally, Section 8 of the Regulations Designating Physical Activities (SOR/2012-147) may apply due to the construction of a facility that requires the extraction of more than 200,000 m^3 per year of groundwater. The federal EA process was initiated when the CEA Agency posted Pretivm's Project Description (Federal) to the CEA Agency registry on February 8, 2013 and invited the public to submit written comments on the Project and its potential effects on the environment in order to assist the federal government in deciding whether an EA is required. After the 20-day public comment period, the CEA Agency posted the Notice of Environmental Assessment Determination to the registry on March 25, 2013 that indicated a federal EA is required pursuant to the CEAA 2012. In making this determination, the Agency considered the following factors as indicated in Section 10 of the CEAA 2012:

- the description of the Project provided by Pretivm on January 28, 2013;
- the possibility that the carrying out of the Project may cause adverse environmental effects; and
- comments received within the 20-day comment period.

The CEA Agency issued the Notice of Commencement of an Environmental Assessment on March 26, 2013 which indicated a federal EA pursuant to the CEAA 2012 had commenced.

The BC EAO issued an order pursuant to Section 11 of the BC EAA on July 4, 2013, which establishes the scope, procedures, and methods for the EA of the proposed Project. The Order also identifies Aboriginal and public consultation and reporting requirements. The Application/EIS complies with the Section 11 Order.

The Application/EIS has been developed pursuant to the EIS Guidelines (CEA Agency 2013) issued by the CEA Agency on May 24, 2103 and the Application Information Requirements (AIR; BC EAO 2014) issued by the BC EAO on May 2, 2014. The CEA Agency issued the EIS Guidelines after a 30-day public comment period. The EIS Guidelines specify the nature, scope, and extent of the federal information that must be included in the EIS. The BC EAO approved the AIR after considering comments from federal and provincial government agencies, local governments, Nisga'a Nation, other First Nations, and the public. The AIR identifies the provincial information that must be included in the Application.

The proposed Project is located on Crown land within the Nass Area as defined in the *Nisga'a Final Agreement* (NFA; NLG, Province of BC, and Government of Canada 1998). Accordingly, in undertaking the EA for the Project, the Province of British Columbia and the Government of Canada are required to comply with Chapter 10 of the NFA. The Project is also located within the traditional territories of the Skii km Lax Ha and Tahltan Nation, and the Métis also have a historical presence in the area.

The BC EAO and CEA Agency established an EA Working Group for the Project on September 4, 2013, which includes representatives of Skii km Lax Ha; Tahltan Nation; Nisga'a Lisims Government; BC Ministry of Energy and Mines; BC Ministry of Environment; BC Ministry of Forests, Lands and Natural Resource Operations; BC Ministry of Jobs, Tourism and Skills Training; BC Ministry of Transportation and Infrastructure; Environment Canada; Fisheries and Oceans Canada; Transport Canada; Health Canada; Natural Resources Canada; the Regional District of Kitimat-Stikine; the Alaska Department of Natural Resources; and the United States Forest Service. The EA Working Group has reviewed and commented on key EA documents, including the draft AIR and EIS Guidelines, and is a key mechanism through which Project information has been and will continue to be exchanged.

The public has been involved in developing the Application/EIS by having an opportunity to comment on the draft AIR and draft EIS guidelines during the public comment periods and attend open houses related to the Project. Additional consultation and public comment periods will be provided during the Application/EIS review stage.

ORGANIZATION OF THE APPLICATION/EIS

The Application/EIS is organized as follows:

- **Table of Concordance** — indicates where the information specified in the AIR (BC EAO 2014) and EIS Guidelines (CEA Agency 2013) can be found in the Application/EIS.
- **Preface** — identifies the purpose and describes the organization of the Application/EIS.
- **Executive Summary** — provides a stand-alone document containing sufficient information to equip the reader with an overview of the proposed Project and the findings of the Application/EIS.
- **Acknowledgements** — identifies the companies who contributed to, or provided information for, the Application/EIS.
- **Table of Contents** — provides a detailed listing of the major content headings of the Application/EIS.
- **Acronyms and Abbreviations** — comprises a list of commonly used abbreviations and acronyms used in the Application/EIS.
- **Glossary** — comprises a list of commonly used terms and phrases and their definitions used in the Application/EIS.

PART A. INTRODUCTION AND BACKGROUND

Chapter 1: Overview of the Proposed Project

This chapter presents general information on Pretivm, the guiding principles and purpose of the Application/EIS, the Project's geographical and regional setting and history, Project tenure, Project scope and schedule, and Project benefits.

Chapter 2: Assessment Process

This chapter describes the provincial and federal regulatory framework that applies to the Project, including the EA obligations as described in the NFA, as well as the assessment and authorization process, and transboundary effects.

Chapter 3: Information Distribution and Consultation

This chapter describes the information distribution and consultation that was undertaken with Nisga'a Nation, Aboriginal groups, Canadian provincial and federal government agencies, local government, and the public. Information distribution and consultation planned during the Application/EIS review stage is also described.

Chapter 4: Project Design and Alternatives Assessment

This chapter describes the processes and criteria used to develop, evaluate, and eventually screen the alternative options for developing the Project and summarizes how some of these alternatives influenced design changes to the proposed Project.

Chapter 5: Project Description

This chapter presents details about the proposed Project in the context of regional geology and mineral resources, the development of the proposed mine, the required facilities and the activities associated with Construction, Operation, Closure, and Post-closure phases, including the management of water, waste (including rock and tailings), ancillary infrastructure (including access road and transmission line), and workforce and operating requirements.

Chapter 6: Assessment Methodology

This chapter describes the methods applied in undertaking the effects assessment of potential direct and indirect, Project-related, and cumulative environmental effects (both biophysical and human) of the proposed Project. This includes the period from the establishment of a baseline and scope for the assessment to the characterization of residual effects post mitigation.

PART B. PREDICTIVE STUDIES

Part B contains the Predictive Studies in Chapters 7 to 11, comprising the following intermediate component subject areas:

Chapter 7: Air Quality Predictive Study

Chapter 8: Noise Predictive Study

Chapter 9: Hydrogeology Predictive Study

Chapter 10: Surface Water Hydrology Predictive Study

Chapter 11: Terrain and Soils Predictive Study

Each of these five chapters includes the following:

- a description of the regulatory framework and the existing environmental conditions of the predictive study subject area;
- definition of the spatial and temporal boundaries of each subject area;
- identification of the intermediate components used to evaluate Project-related changes on the subject area;
- a description of the outcomes from the predictive studies ;
- identification of possible mitigation measures, where appropriate;
- an assessment of Project related changes for their potential to interact cumulatively with other regional projects and activities;
- a description of how the subject area may serve as a pathway to receptor Valued Components (VCs); and
- a summary of the subject area predictive study with final conclusions.

PART C. ASSESSMENT OF POTENTIAL EFFECTS, MITIGATION, AND SIGNIFICANCE OF RESIDUAL EFFECTS — BIOPHYSICAL ENVIRONMENT

Part C contains the effects assessments of the receptor VCs of the biophysical environment subject areas, in Chapters 12 to 18, comprising:

Chapter 12: Assessment of Potential Climate Effects

Chapter 13: Assessment of Potential Surface Water Quality Effects

Chapter 14: Assessment of Potential Aquatic Resources Effects

Chapter 15: Assessment of Potential Fish and Fish Habitat Effects

Chapter 16: Assessment of Potential Terrestrial Ecology Effects

Chapter 17: Assessment of Potential Wetlands Effects

Chapter 18: Assessment of Potential Wildlife Effects

Each of these seven chapters includes the following:

- a description of the regulatory framework and the existing environmental conditions pertaining to the particular VC subject area;
- definition of the spatial and temporal boundaries applied to the subject area;
- identification of the VCs used to evaluate the effect of the Project on the subject area;
- a description of the outcomes of the subject area effects assessment in terms of potential effects, possible mitigation, residual effects remaining after mitigation, and possible risk analyses where levels of significance or confidence warrant it;
- a re-assessment of the residual effects after mitigation for their potential contribution to regional cumulative effects; and
- a summary of the subject area effects assessment in terms of the determination of significance and conclusions.

PART D. ASSESSMENT OF POTENTIAL EFFECTS, MITIGATION, AND SIGNIFICANCE OF RESIDUAL EFFECTS — HUMAN ENVIRONMENT

Part D contains the effects assessments of the receptor VCs for the human environment subject areas, in Chapters 19 to 25, comprising Chapters 19 to 25:

Chapter 19: Assessment of Potential Economic Effects

Chapter 20: Assessment of Potential Social Effects

Chapter 21: Assessment of Potential Health Effects

Chapter 22: Assessment of Potential Heritage Effects

Chapter 23: Assessment of Potential Navigation Effects

Chapter 24: Assessment of Potential Commercial and Non-commercial Land Use Effects

Chapter 25: Assessment of Potential Effects to Current Use of Lands and Resources for Traditional Purposes

Each of these seven chapters includes the following:

- a description of the regulatory framework and the existing environmental conditions pertaining to the particular VC subject area;
- definition of the spatial and temporal boundaries applied to the subject area;
- identification of the VCs used to evaluate the effect of the Project on the subject area;
- a description of the outcomes of the subject area effects assessment in terms of potential effects, possible mitigation, residual effects remaining after mitigation, and possible risk analyses where levels of significance or confidence warrant it;
- a re-assessment of the residual effects after mitigation for their potential contribution to regional cumulative effects; and
- a summary of the subject area effects assessment in terms of the determination of significance and conclusions.

PART E. ABORIGINAL GROUPS AND NISGA'A NATION

Part E makes special reference to the affected Aboriginal groups and the Nisga'a Nation in two chapters, comprising:

Chapter 26: Assessment of Asserted or Established Aboriginal Rights and Interests

This chapter provides a summary of consultation activities with potentially impacted Aboriginal groups—including the Skii km Lax Ha, Tahltan Nation, and Métis Nation BC—and presents an assessment of potential impacts on asserted or established Aboriginal rights and interests.

Chapter 27: Assessment of Nisga'a Nation Treaty Rights and Interests, and Information Requirements

This chapter provides an overview of Nisga'a treaty rights and interests; social, cultural, economic, and health environments; summary of consultation activities; and assessment of potential effects on Nisga'a Nation interests and treaty rights and potential impacts on residents of Nisga'a Lands and the Nisga'a Lands themselves.

PART F. ENVIRONMENTAL MANAGEMENT PLANS AND REPORTING

Part F contains the chapters that focus on the environmental management framework and specific environmental management plans and reporting. These chapters and sections are titled as follows:

Chapter 28: Environmental Management System

This chapter presents Pretivm's environmental objectives, Environment Management System principles, overarching policy commitments, allocation of roles and responsibilities, associated resources, and transition from the initial Environment Management System to the implementation of environmental management plans.

Chapter 29: Environmental Management and Monitoring Plans

This chapter provides a summary of environmental management and monitoring plans for an array of subject areas. Each plan generally includes a description of the regulatory and policy framework relevant to the subject area, definition of the relevant performance objectives, a description of the relevant environmental protection measures, a description of the required monitoring and work planning to bring about the protection measures, a description of follow up actions (where necessary), and a description of reporting requirements.

Chapter 30: Closure and Reclamation

This chapter presents a conceptual closure and reclamation plan which includes an overview of the regulatory framework, closure and reclamation objectives, research programs during Operation, conceptual plans for closing and reclaiming each Project component, scheduling, monitoring, costs, and Post-closure activities.

PART G. OTHER REQUIREMENTS

Part G includes chapters required by the BC EAO and CEA Agency as follows:

Chapter 31: Accidents and Malfunctions

This chapter presents an assessment of potential accidents and malfunctions and their potential residual environmental effects on subject areas following implementation of design standards, as well as preventative and contingency measures.

Chapter 32: Effects of the Environment on the Project

This chapter presents an assessment of the potential effects of the environment on the proposed Project, including physical activities related to the Project.

Chapter 33: Federal Summaries

This chapter presents synoptic descriptions of changes to components of the environment within federal jurisdiction, on federal or transboundary lands, or incidental to federal decisions.

Chapter 34: Federal Cumulative Effects Assessment

This chapter presents cumulative effects assessment of the effects that are anticipated to arise from the interaction of residual Project-related effects with other activities and projects in the area.

PART H. SUMMARY AND CONCLUSIONS

Part H include the following chapter:

Chapter 35: Summary and Conclusions

This chapter provides an overall summary of and conclusion to the Application/EIS. The chapter includes summaries of the residual Project-related and cumulative adverse biophysical or human environmental effects and associated mitigation measures, provides an outline for follow-up program and a table of Pretivm's commitments, and includes a final conclusion with respect to whether the Project is predicted to result in significant adverse residual biophysical or human environmental effects.

APPENDICES

The appendices provide materials in support of the main body of the Application/EIS, including volumes of baseline information for all aspects of the biophysical and human environment, detailed effects assessment modelling reports, and engineering design reports.

REFERENCES

2002. *Environmental Assessment Act,* SBC. C. 43.

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