TITAN

ANNUAL INFORMATION FORM

For the Year Ended December 31, 2017

Dated: March 22, 2018

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PRELIMINARY NOTES

This Annual Information Form ("AIF") takes into account information available up to and including December 31, 2017 unless otherwise indicated. Throughout this document the terms we, us, our, the Company and Titan Mining refer to Titan Mining Corporation (the "Company" or "Titan Mining").

All financial information in this AIF is prepared in accordance with International Financial Reporting Standards ("IFRS"). Additional financial information may be found in the Company's audited consolidated financial statements and management's discussion and analysis for the year ended December 31, 2017.

Currency

All dollar amounts are expressed in US dollars unless otherwise indicated.

Cautionary Note Regarding Forward-Looking Information

Certain information contained in this document constitutes forward-looking statements. All statements, other than statements of historical facts, are forward looking statements, including but not limited to the Company's expectation for the refurbishment and restart of Empire State Mines' #4 mine. Forward-looking statements are often, but not always, identified by the use of words such as may, will, seek, anticipate, believe, plan, estimate, budget, schedule, forecast, project, expect, intend, or similar expressions.

The forward-looking statements are based on a number of assumptions which, while considered reasonable by the Company, are subject to risks and uncertainties. The Company cautions readers that forward-looking statements involve and are subject to known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to differ materially from those expressed in or implied by such forward looking statements and forward-looking statements are not guarantees of future results, performance or achievement. These risks, uncertainties and factors include general business, economic, competitive, political, regulatory and social uncertainties; actual results of exploration activities and economic evaluations; fluctuations in currency exchange rates; changes in project parameters; changes in costs, including labour, infrastructure, operating and production costs; future prices of zinc and other minerals; variations of mineral grade or recovery rates; operating or technical difficulties in connection with exploration, development or mining activities, including the failure of plant, equipment or processes to operate as anticipated; delays in completion of exploration, development or construction activities; changes in government legislation and regulation; the ability to maintain and renew existing licenses and permits or obtain required licenses and permits in a timely manner; the ability to obtain financing on acceptable terms in a timely manner; contests over title to properties; employee relations and shortages of skilled personnel and contractors; the speculative nature of, and the risks involved in, the exploration, development and mining business; and the factors discussed in the section entitled "Risks and Uncertainties" in this document.

Although the Company has attempted to identify important risks, uncertainties and other factors that could cause actual performance, achievements, actions, events, results or conditions to differ materially from those expressed in or implied by the forward-looking information, there may be other risks, uncertainties and other factors that cause performance, achievements, actions, events, results or conditions to differ from those anticipated, estimated or intended. Unless otherwise indicated, forward-looking statements contained herein are as of the date hereof and the Company disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise, except as required by applicable law.

National Instrument 43-101

Canadian reporting requirements for disclosure of mineral properties are governed by National Instrument 43-101 ("NI 43-101"). The definitions given in NI 43-101 are adopted from those given by the Canadian Institute of Mining Metallurgy and Petroleum.

Definitions

Mineral Reserve	The term "mineral reserve" refers to the economically mineable part of a measured or indicated mineral resource demonstrated by at least a preliminary feasibility study. The study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A mineral reserve includes diluting materials and allowances for losses that might occur when the material is mined.
Mineral Resource	The term "mineral resource" refers to a concentration or occurrence of diamonds, natural, solid, inorganic or fossilized organic material including base and precious metals, coal and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge.
Measured Mineral Resource	The term "measured mineral resource" refers to that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.
Indicated Mineral Resource	The term "indicated mineral resource" refers to that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.
Inferred Mineral Resource	The term "inferred mineral resource" refers to that part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The

	estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
Qualified Person	The term "qualified person" refers to an individual who is an engineer or geoscientist with at least five years of experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these, has experience relevant to the subject matter of the mineral project and the technical report, and is a member in good standing with a professional association.

About Reserves and Resources

This AIF uses the terms measured, indicated and inferred resources as a relative measure of the level of confidence in the resource estimate. Readers are cautioned that: (a) mineral resources are not economic mineral reserves; (b) the economic viability of resources that are not mineral reserves has not been demonstrated; and (c) it should not be assumed that further work on the stated resources will lead to mineral reserves that can be mined economically. In addition, inferred resources are considered too geologically speculative to have any economic considerations applied to them. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimates of inferred mineral resources may not form the basis of feasibility or pre-feasibility studies or economic studies except for preliminary economic assessments as defined under NI 43-101. Readers should also refer to the Company's Management Discussion and Analysis for the year ended December 31, 2017 and other continuous disclosure documents available at www.sedar.com, which is subject to the qualifications and notes set forth therein.

CORPORATE STRUCTURE

Name, Address and Incorporation

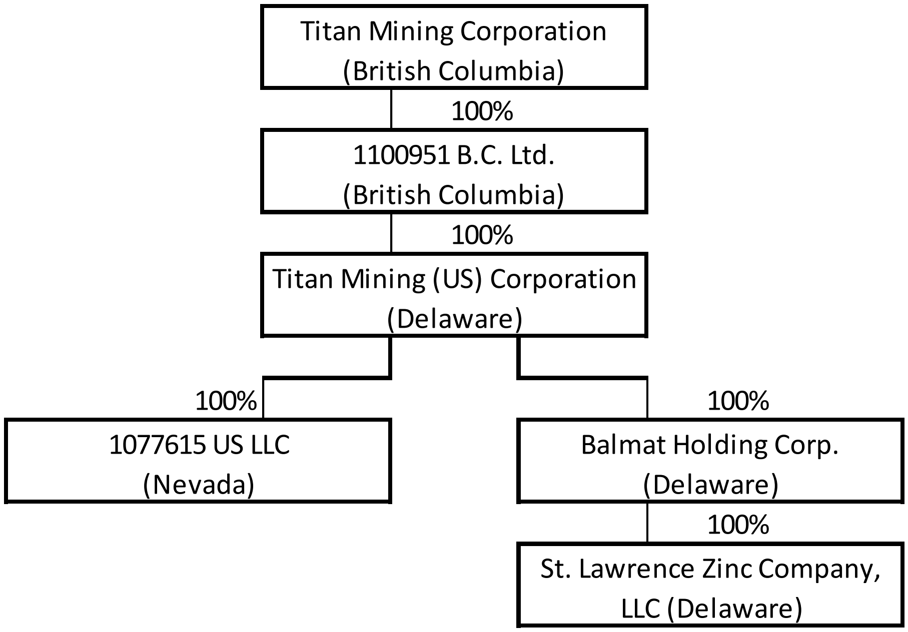
The Company was incorporated under the *Business Corporations Act (British Columbia)* on October 15, 2012. On November 10, 2016, the Company amended its articles of incorporation to change the name of the Company from "Triton Mining Corporation" to "Titan Mining Corporation". On June 13, 2017, the Company filed a notice of alteration to amend its authorized share capital by re-designating its Class A shares as Common Shares. A copy of the Company's Articles of Incorporation is available on SEDAR at www.sedar.com.

Titan Mining is listed on the Toronto Stock Exchange ("**TSX**") under the symbol TI.

At the date of this AIF the Company's head office is located at Suite 555 – 999 Canada Place, Vancouver, British Columbia, V6C 3E1 and the registered office is located at Suite 2900, 550 Burrard Street, Vancouver, BC V6C 0A3.

Intercorporate Relationships

The following chart identifies Titan's subsidiaries (including jurisdiction of formation or incorporation of the various entities).



GENERAL DEVELOPMENT OF THE BUSINESS

Titan Mining Corporation is a natural resource company engaged in the acquisition, exploration and development of mineral properties. The Company's principal asset is a group of 100%-owned high-grade zinc mines, the Empire State Mines, in St Lawrence County, New York. These past-producing operations (the Empire State Mines' #2, #3, #4, Hyatt, Pierrepont and Edwards mines) were acquired on December 30, 2016 and have been on care and maintenance since 2008. The Company is currently re-commencing operations at the fully-permitted Empire State Mines' #4 mine and anticipates achieving commercial production in the second quarter of 2018. Titan also has a base metals exploration program on its unpatented mining claims in New Mexico.

Three Year History

The Company was incorporated on October 15, 2012 and did not have any operations from the date of incorporation until December 30, 2016 when it completed the Acquisition of the Empire State Mines.

On November 10, 2016, the Company amended its articles of incorporation to change the name of the Company from "Triton Mining Corporation" to "Titan Mining Corporation".

In November and December, 2016, the Company completed non-brokered private placement offerings of 59,377,000 Class A shares (subsequently redesignated as common shares) for proceeds of $8,157,680.

On December 30, 2016 the Company, through its wholly owned subsidiary Titan Mining (US) Corporation ("Titan US"), completed the acquisition (the "Acquisition") of Balmat Holdings Corp. ("Balmat") and its wholly owned subsidiary, St. Lawrence Zinc Co. LLC, which own the Empire State Mines from Star Mountain Resources Inc. ("Star Mountain"). Star Mountain had previously acquired the same two entities from Hudbay Minerals Inc. ("Hudbay") on November 2, 2015. As consideration for the Acquisition, the Company:

- issued 2,968,900 shares of the Company to Star Mountain, representing approximately 5% of the then issued and outstanding shares of the Company valued at $2,211,237 (Cdn$1.00 per share);
- made a cash payment of $1,000,000 to Star Mountain, which was paid on January 4, 2017;
- issued Star Mountain a promissory note in the principal amount of $2,000,000 (the "Promissory Note"), payable in four quarterly installments of $500,000 each;
- assumed $3,318,794 in debts owed to Augusta Investments Inc. ("Augusta") (a company controlled by the Company's President and CEO) by Star Mountain for advances made on the Company's behalf by Augusta to settle certain liabilities of Star Mountain;
- paid certain pre-closing liabilities on behalf of Star Mountain totaling $51,854 (subject to minor adjustments); and
- assumed Star Mountain's remaining purchase obligations to Hudbay stemming from Star Mountain's acquisition of Balmat on November 2, 2015.

Concurrent with the closing of the Acquisition the Company entered into a debenture agreement (the "Original Debenture") with Augusta whereby the amounts owed were to be paid on demand or December 31, 2017, if earlier. The Original Debenture bore interest at 12% per annum payable monthly in arrears.

Concurrent with the closing of the Acquisition, the Company also entered into a separate standalone agreement (the "Letter Agreement") with Hudbay that modified the options for payment of the remaining purchase price obligation owed to Hudbay under the 2015 purchase agreement between Hudbay and Star Mountain and assumed by the Company in its acquisition from Star Mountain. Under this Letter Agreement and in addition to the two repayment options already provided for in the 2015 Hudbay/Star Mountain agreement, the Company, at its option, can elect to:

i. make a one-time payment to Hudbay of $5,000,000 in cash on the earlier of: (a) the date the Company completes an initial public offering ("IPO") of its common shares; and (b) June 28, 2017; and

ii. issue to Hudbay, as soon as reasonably practicable after the IPO date, such number of common shares of Titan Mining that is equal to $2,500,000 divided by the per share price of the common shares issued in such IPO, for no additional consideration.

For additional details related to the Acquisition please see the "General Development and Business of the Company" section of the Company's Prospectus filed on October 12, 2017 available under the Company's profile on SEDAR at www.sedar.com.

On January 1, 2017 the Company appointed Mr. Lenard Boggio Mr. Gregory Clark and Ms. Purni Parikh, to its board of directors. Mr. Boggio was formerly a partner of PricewaterhouseCoopers LLP (PwC) where he served for more than 30 years until his retirement in May 2012. During that time, he was Leader of the B.C. Mining Group of PwC, a senior member of PwC's Global Mining Industry Practice and an auditor of Canadian, U.S. U.K. and other internationally-listed mineral resource and energy clients. Mr. Boggio is a Fellow of the Chartered Professional Accountants of Canada (FCPA, FCA) and has served as president of the British Columbia Institute of Chartered Accountants and chairman of the Canadian Institute of Chartered Accountants. Mr. Clark worked as a Licensed Aircraft Technician in the Heavy Maintenance Department at Canadian Airlines and, subsequently, Air Canada. He holds a Transport Canada Aircraft Maintenance Engineer License. Ms. Parikh has 27 years of experience in business administration. She has a Certificate in Business from the University of Toronto and has 25 years' experience working with public companies in the areas of legal and regulatory administration, corporate finance, governance and investor relations. Ms. Parikh is also an Accredited Director with ICD. D certification.

On March 20, 2017 the Company appointed Saurabh Handa as Chief Financial Officer and Corporate Secretary of the Company. Mr. Handa has over ten years of experience in the mining industry with prior positions including Vice President, Finance of Imperial Metals Corp., CFO of Meryllion Resources Corp., CFO of Yellowhead Mining Inc. and Corporate Controller for SouthGobi Resources Ltd. Before that, Mr. Handa worked at Deloitte and Touché LLP in its audit and valuation practices, primarily on international mining companies. He is a Chartered Accountant and holds a diploma in accounting and a Bachelor of Science in cellular biology and genetics from the University of British Columbia, and a diploma in computer systems from the British Columbia Institute of Technology. Mr. Handa ceased to be the Company's CFO effective January 10, 2018.

On March 30, 2017 the Company paid Star Mountain the first $500,000 instalment payable under the Promissory Note.

On June 1, 2017 the Company appointed Jerrold Annett as Senior Vice President, Corporate Development of the Company. Mr. Annett has over 11 years of experience with Teck Resources Limited and Falconbridge Ltd. and an additional ten years in capital markets, most recently with Scotiabank. He worked for Cominco Ltd. as a metallurgist at the lead-zinc Polaris Mine, Sullivan lead-zinc mine, and the Quebrada Blanca mine. He was ranked a Brendan Woods Top Gun Super League Sales Professional during the last two surveys in 2015 and 2012.

On June 1, 2017 the Company appointed Susan Muir as Vice President, Investor Relations and Corporate Communications of the Company. Ms. Muir is a seasoned Investor Relations executive, and was most recently Vice President, Investor Communications at Barrick Gold Corporation following a series of increasingly senior roles since 2007. Prior to Barrick, Susan also has 25 years of experience analyzing and covering large and small cap precious metals equities, respectively, for several major Canadian investment banks.

On June 13, 2017, the Company filed a notice of alteration to amend its authorized share capital by re-designating its Class A shares as Common Shares.

On June 29, 2017, the Company appointed Mr. George Pataki to its board of directors. Mr. Pataki is the co-founder and Chairman of the Pataki-Cahill Group, a specialized development firm, and serves as Senior Counsel to the international law firm Norton Rose Fulbright. Previously, he served three terms as the 53rd Governor of the State of New York from 1995 to 2006, being elected after serving consecutively as the mayor of Peekskill, an assemblyman in the New York State Legislature, and as a senator in the New York State Senate. Mr. Pataki has vast experience serving on the boards of international conglomerates, private equity firms, and venture capital funds.

On June 30, 2017 the Company paid Star Mountain the second $500,000 instalment payable under the Promissory Note.

In August 2017, Hudbay extended the timing of the payment of the $5,000,000 which was due on June 28, 2017 to October 31, 2017. As consideration for the extension, the Company increased the value of the common shares to be issued upon completion of an IPO from $2,500,000 to $3,000,000.

On August 1, 2017 the Company appointed Keith Boyle as Chief Operating Officer of the Company. Mr. Boyle has over 30 years' experience in building and operating narrow vein and bulk underground mines as well as open pit mines with a strong focus on safety, efficiency and cost control. He has successfully led the completion of numerous exploration programs, NI 43-101 feasibility studies, independent reviews, financing due diligences and the construction and development of mines. He has led the implementation of industry leading health, safety and environmental management systems. Mr. Boyle was also recognized by the mining industry with a second J.T. Ryan trophy for the Stobie Mine for managing the safest mine in Ontario.

On August 23, 2017, Titan US borrowed an additional $500,000 from Augusta pursuant to the Second Additional Debenture.

On September 19, 2017, Titan US borrowed an additional $175,000 from Augusta pursuant to the Third Additional Debenture. Under the Third Additional Debenture, Titan US may borrow up to an aggregate of $300,000 at any time prior to December 31, 2017.

On September 20, 2017 the Company filed a technical report entitled “NI 43-101 Preliminary Economic Assessment Technical Report on the Empire State Mines’ #4 mine, Gouverneur, New York, USA” (“PEA”) dated effective August 17, 2017. The results of the PEA are discussed subsequently in this filing.

On September 25, 2017 the Company's New York State Department of Environmental Conservation (“NYSDEC”) Chemical Bulk Storage permit for the Empire State Mine was renewed for a further two years to October 1, 2019.

On October 2, 2017, Titan US entered into the Promissory Note Amendment with Star Mountain, to defer payment of the $500,000 third instalment from September 30, 2017 to the earlier of (a) five days from the closing date of the Company’s IPO and (b) October 31, 2017. Consideration for the deferral consisted of an additional payment by Titan US to Star Mountain of $25,000, plus any interest accrued on such amount from October 2, 2017 to the new payment date.

On October 3, 2017, Titan US borrowed the remaining $125,000 available under the Third Additional Debenture with Augusta.

On October 19, 2017, 35,750,000 common shares were issued at CDN$1.40 per share for gross proceeds of CDN$50,050,000 ($40,110,595) upon completion of the initial public offering (“IPO”). In connection with the IPO, on November 6, 2017, the Company issued another 1,200,000 common shares at CDN$1.40 per share for gross proceeds of CDN$1,680,000 ($1,318,061) upon the exercise of the over-allotment option by the underwriters.

On October 20, 2017, the Company paid Hudbay in full by paying $5,000,000 in cash and issuing 2,673,857 common shares of the Company. On October 20, 2017, the Company also fully paid Augusta paying $4,475,552 cash representing the debenture principal of $4,118,794 plus interest and fees of $356,758.

On November 30, 2017 the Company signed a commitment letter for a senior secured credit facility with Scotiabank for up to $15 million. The Company is currently finalizing the definitive loan documents.

DESCRIPTION OF THE BUSINESS

General

The Company is engaged in the acquisition, exploration and development of natural mineral resource properties and is currently refurbishing its Empire State Mines #4 mine and has recommenced mining operations.

Production and Services

The Company is currently completing the refurbishment of the Empire State Mines’ #4 mine and has restarted mining and milling operations ultimately producing a zinc concentrate that will be acquired by Glencore pursuant to its recently executed long-term zinc concentrates offtake agreement. The Company anticipates achieving commercial production in the second quarter of 2018.

Specialized Skill and Knowledge

Various aspects of the Company's business require specialized skills and knowledge. Such skills and knowledge include the areas of permitting, geology, drilling, engineering, mine planning, metallurgy, logistical planning and implementation of exploration and production programs as well as financing and accounting. While competitive conditions exist in the industry, the Company has been able to locate and retain employees and consultants with such skills and believes it will continue to be able to do so in the future.

Competitive Conditions

Competition in the mineral exploration and mining industry is intense. The Company competes with other mining companies, many of which have greater financial resources and technical facilities for the acquisition and development of, and production from, mineral concessions, claims, leases and other interests, as well as for the recruitment and retention of qualified employees and consultants and, to a lesser extent, for the supply of raw materials. Such competition may result in the Company being disadvantaged in the acquisition of attractive mineral properties

Business Cycles

The mining business is subject to mineral price cycles. The marketability of minerals and mineral concentrates is also affected by worldwide economic cycles. The ultimate economic viability of the Empire State Mines is primarily sensitive to the market price of zinc. Metal prices fluctuate widely and are affected by numerous factors such as global supply, demand, inflation, exchange rates, interest rates, forward selling by producers, central bank sales and purchases, production, global or regional political, economic or financial situations and other factors beyond the control of the Company.

Economic Dependence

In February, 2018 the Company concluded an offtake agreement with Glencore for 100% of the zinc concentrate from its Empire State Mines' #4 mine. The long-term contract will commence on the first production of concentrate. Zinc concentrate is expected to be transported within North America.

Environmental Protection

The Company's exploration, development and production activities are subject to United States laws and regulations regarding the protection of the environment. If required, Titan will make expenditures to ensure compliance with applicable laws and regulations. New environmental laws and regulations, amendments to existing laws and regulations, or more stringent implementation or enforcement of existing laws and regulations could have a material adverse effect on the Company's business, cash flows, earnings, results of operations, financial condition and prospects, by potentially increasing capital and/or operating costs and/or delaying or preventing the exploration and/or development of mineral properties. The Company intends to control and mitigate the environmental impact from the exploration, development and production of its projects and their future operation. Reclamation plans approved by the NYSDEC are in place for the Empire State Mines' #4 mine (formerly the Balmat No. 4 Mine) and the Balmat No. 2 shaft area (which is still in use as an alternate exit route and ventilation shaft for the Empire State Mines' #4 mine) and are the ongoing responsibility of SLZ. The Empire State Mine and mine tailings reclamation is assured with a $1,662,870 certificate of deposit.

Employees

The Company currently has six employees in its British Columbia office, four employees in its Toronto office, and 65 employees and 98 long-term contractors at the Empire State Mines' #4 mine. As operations require, the Company also retains geologists, engineers, geophysicists and other consultants on a fee for service basis. Certain of the employees have responsibilities with other publicly traded companies and, as such, the Company pays a pro-rata portion of the costs of such employees based on their time spent working on the Company's business.

Foreign Operations

Substantially all of the Company's long-term assets, primarily comprising its mineral properties, are located in St. Lawrence County, New York, USA. The Company also has an exploration project in New Mexico, USA.

Social and Environmental Policies

The Company has an Environmental, Health and Safety Policy. The focus of the policy is concern for the environment and the health and safety of individuals and the communities in which it operates. The Company endeavors to provide and maintain safe and healthy working conditions to safeguard its employees and the communities in which it operates. In doing so, the Company considers compliance with the regulatory standards as a minimum.

Risks and Uncertainties

The Company's activities and related results are subject to a number of different risks at any given time. Exploration and development of mineral resources involves a high degree of risk. A summary of the Company's financial instruments risk exposure is provided in the Financial Instruments section of the Company's MD&A. The following are additional risk factors which the Company's management believes are most important in the context of the Company's business. It should be noted that this list is not exhaustive and that other risk factors may apply.

The Company has a limited operating history

The Company has a limited operating history upon which an evaluation of the Company, its current business and its prospects can be based. Further, its sole near-production mineral property, the Empire State Mines' #4 mine, has been on care and maintenance since 2008. If the Company is unable to generate significant revenues from the Empire State Mines' #4 mine, it will not be able to earn profits or continue operations. There can be no assurance that the Company will be successful in ever developing a commercially viable mine at the Empire State Mines' #4 mine or ever achieving profitable operations. The Company has a limited operating history from which its business and prospects can be evaluated, and forecasts of any potential growth of the business of the Company are difficult to evaluate. The Company's prospects must be considered in light of the risks, expenses and difficulties frequently encountered by single asset companies in the early stages of development, including under-capitalization, cash shortages, limitations with respect to personnel, financial and other resources, and lack of revenues.

Dependence on the Empire State Mines' #4 mine

The only material property interest the Company currently has is the Empire State Mines' #4 mine, and the only near-production mineral property the Company has is the Empire State Mines' #4 mine. Because the Empire State Mines' #4 mine has a limited life based on mineral resource estimates, once the Company recommences production at the Empire State Mines' #4 mine, the Company will be required to replace and expand its mineral resources and convert mineral resources into mineral reserves. In the absence of additional producing mineral projects, the Company will be solely dependent upon the Empire State Mines' #4 mine for its revenue and profits, if any, and the Company's ability to maintain or increase its annual production will be dependent in significant part on its ability to expand its mineral resource base at the Empire State Mines' #4 mine and increase throughput at its Empire State Mines' #4 mine mill above its initially targeted rate.

Refurbishing and re-commencing mining operations

The Empire State Mines' #4 mine has been on care and maintenance since 2008. Titan has substantially completed the refurbishment and rehabilitation of the Empire State Mines' #4 mine with a view to re-commencing commercial operations. The Company has successfully mined and skipped ore to the surface and run test batches of the ore through the process plant to produce zinc concentrate, and is in the process of ramping up operations. However, several risks remain before the mine has achieved commercial production including: (i) Titan may encounter unforeseen obstacles or costs in operating the mine, some of which may be material and could cause Titan's estimates of time and costs to complete the re-opening to be significantly understated, (ii) certain lower levels of the mine are considered unsafe, (iii) some equipment may be more unreliable as operations ramp-up, and (iv) production rates and ore grades may not be as predicted. Any of these factors may adversely affect Titan's ability to re-commence commercial mining operations and could place Titan in a position where it has insufficient cash resources to fully reinstate mining operations, or which could result in mining operations being uneconomic.

Mining is inherently risky and subject to conditions or events beyond the Company's control

The development and operation of a mine or mine property is inherently dangerous and involves many risks that the Company may not be able to overcome, including:

- unusual or unexpected geological formations;
- metallurgical and other processing problems;
- metal losses;
- environmental hazards;
- power outages;
- labour disruptions;
- industrial accidents;
- periodic interruptions due to inclement or hazardous weather conditions;
- flooding, explosions, fire, rockfalls, rockbursts, cave-ins and landslides;
- ground or soil conditions including seismic activity;
- mechanical equipment and facility performance problems;
- poor ventilation in all or part of the Empire State Mine; and
- the availability of materials and equipment.

These risks could result in damage to, or destruction of, mineral properties, production facilities or other properties, personal injury or death, including to the Company's employees, environmental damage, delays in mining, increased production costs, asset write downs, monetary losses and legal liability. The Company may not be able to obtain insurance to cover these risks at economically feasible premiums, or at all, or it may choose not to insure against these risks. Insurance against certain environmental risks, including potential liability for pollution and other hazards as a result of the disposal of waste products occurring from production, is not generally available to companies in the mining industry. The Company may suffer a material adverse effect on its business if the Company incurs losses related to any significant events that are not covered by the Company's insurance policies.

Mineral resource calculations are only estimates based on interpretation and assumptions

Any figures presented for mineral resources will only be estimates. There is a degree of uncertainty attributable to the calculation of mineral resources. Until mineralized material is actually mined and processed, the quantity of metal and grades must be considered as estimates only and no assurances can be given that the indicated levels of metals will be recovered. In making determinations about whether to advance any of its projects to development, the Company must rely upon such estimated calculations as to the mineral resources and grades of mineralization on its properties.

The estimation of mineral resources is a subjective process that relies on the judgment of the persons preparing the estimates. The process relies on the quantity and quality of available data and is based on knowledge, mining experience, analysis of drilling results and industry practices. Estimates made at a given time may significantly change when new information becomes available. By their nature, mineral resource estimates are imprecise and depend, to a certain extent, upon analysis of drilling results and statistical inferences that may ultimately prove to be inaccurate.

Estimated mineral resources may have to be recalculated based on changes in mineral prices, further exploration or development activity or actual production experience. This could materially and adversely affect estimates of the volume or grade of mineralization, estimated recovery rates or other important factors that influence mineral resource estimates. The extent to which mineral resources may ultimately be reclassified as mineral reserves is dependent upon the demonstration of their profitable recovery. Any material changes in mineral resource estimates and grades of mineralization will affect the economic viability of placing a property into production and a property's return on capital. The Company cannot provide assurance that mineralization can be mined and processed profitably.

The Company's mineral resource estimates have been determined and valued based on assumed future prices, cut-off grades and operating costs that may prove to be inaccurate. Extended declines in market price for zinc may render portions of the Company's mineralization uneconomic and result in a reduction in reported mineral resources, which in turn could have a material adverse effect on the Company's results of operations, financial condition or the market price of the Common Shares. The Company cannot provide assurance that mineral recovery rates achieved in small scale tests will be duplicated in large scale tests under on-site conditions or in production scale. In addition, if the Company's projects produce concentrate for which there is no market, this may have an impact on the economic model for the Empire State Mine.

Production based on mineral resources

The Company is basing its production decision on the PEA and not on a feasibility study of mineral reserves demonstrating economic and technical viability, and as a result there is increased uncertainty and there are multiple technical and economic risks of failure which are associated with this production decision. These risks, among others, include areas that would be analysed in more detail in a feasibility study, such as applying economic analysis to mineral reserves and mineral resources, more detailed metallurgy and a number of specialized studies in areas such as mining and recovery methods, market analysis, and environmental and community impacts.

Uncertainty exists related to inferred mineral resources

There is a risk that inferred mineral resources referred to in the PEA cannot be converted into measured or indicated mineral resources as there may be limited ability to assess geological continuity. Due to the uncertainty that attaches to inferred mineral resources, there is no assurance that inferred mineral resources will be upgraded to mineral resources with sufficient geological continuity to constitute mineral reserves as a result of continued exploration and economic evaluation.

Title

There is no guarantee that the Company's title to the properties that constitute the Empire State Mines will not be challenged or impugned. The Company's claims may be subject to prior unregistered agreements or transfers and title may be affected by unidentified or unknown defects. If title to the Company's properties is disputed, it may result in the Company paying substantial costs to settle the dispute or clear title and could result in the loss of the property, which events may affect the economic viability of the Company.

The Company received notice on October 10, 2017, that Aviano Financial Group LLC ("Aviano"), a creditor of Star Mountain, intended to amend a pre-existing action initially filed in February 2017 in Colorado against Star Mountain to collect debts owing by Star Mountain to Aviano aggregating approximately $800,000. The Company acquired the Empire State Mines from Star Mountain in December 2016. The amended action of Aviano against Star Mountain was filed in the state of Colorado on October 10, 2017, adding claims for damages and a claim to set aside the conveyance of the Empire State Mines by Star Mountain to the Company alleging that it was a fraudulent conveyance. In addition, the Aviano notice stated that it intends to file an analogous action in New York alleging fraudulent conveyance, naming Star Mountain and the Company as defendants. As at the date hereof, no litigation has been commenced by Aviano against the Company. The Company believes that claim of fraudulent conveyance is wholly without merit and Star Mountain has informed the Company that Star Mountain believes that the claim of fraudulent conveyance is wholly without merit and that it intends to defend against the amended action and assert counterclaims against Aviano.

Irrespective of the merits of the claim, if the fraudulent conveyance claim is resolved adversely against the Company or Star Mountain, this could materially adversely affect the value of the Company by terminating its interest in the Empire State Mines and the Company's ability to develop the Empire State Mines. Such a result would have a significant negative impact on the value of the Company and could have a significant effect on the price of the Common Shares.

Pursuant to the Share Purchase Agreement, Star Mountain has agreed to indemnify the Company against certain claims including the proposed action by Aviano against the Company. On or about February 21, 2018, Star Mountain filed a Voluntary Petition for Non-Individuals Filing Bankruptcy in the United States Bankruptcy Court for the District of Arizona.

Mining operations from time to time may rely on an expired lease or option that the Company is unable to renew. Currently, several leases and options on which the Company does not currently foresee operating have expired. If the Company were to be in default with respect to leases or options for properties on which it has mining operations, the Company may have to close down or significantly alter the sequence of such mining operations, which may adversely affect its future production and future revenues. If the Company mines on property that it does not own or have a valid lease in respect of, the Company could incur liability for such mining. Also, in any such case, the investigation and resolution of title issues would divert management's time from the Company's business and its results of operations could be adversely affected.

In order to obtain leases or options to conduct mining operations on property where defects or impairments exist, the Company may in the future have to incur unanticipated costs. In addition, the Company may not be able to successfully negotiate new leases or options for properties containing attractive mineralization, or maintain its leasehold interests in properties where the Company has not commenced mining operations during the term of the lease or exercised the option.

Fluctuations in demand for, and prices of, zinc

As the Company's expected sole source of revenue is the sale of zinc in separated and/or mixed form, changes in demand for, and the market price of, zinc are expected to have a significant effect on the Company's revenues and results of operations. The value and price of the Common Shares and the Company's financial results may be significantly adversely affected by declines in the prices of zinc. The price of zinc is influenced by many factors beyond the control of the Company. The level of interest rates, the rate of inflation, global and regional consumption patterns, the world supply of and demand for zinc, including zinc's intermediate and end product uses, market behaviour of current supply sources for zinc and the variation in exchange rates can all cause significant fluctuations in prices of zinc. Such external economic factors are in turn influenced by changes in international investment patterns, monetary systems and political developments. The effect of these factors cannot be accurately predicted. The price of zinc and mineral commodities more generally has fluctuated widely in the past decade and future declines in the price of zinc received could cause commercial production to become uneconomic, thereby having a material adverse effect on the Company's business and financial condition and the value and price of the Common Shares. The Empire State Mines’ #4 mine was closed and placed on care and maintenance in the fall of 2008 in the face of a general economic turndown and resulting fall in zinc prices. The Company's results of operations will also be heavily dependent on the costs of consumables, particularly fuel, energy, chemical reagents and other products which may be required to be used in future exploration, development, mining and treatment operations.

A prolonged or significant economic contraction worldwide could put further downward pressure on market prices of zinc. Protracted periods of low prices for zinc could significantly reduce revenues and the availability of required development funds in the future. This could impair asset values and reduce the Company's mineral resources.

In contrast, extended periods of high commodity prices may create economic dislocations that may be destabilizing to supply and demand of zinc and ultimately to the broader markets. Strong prices for zinc may create economic pressure to identify or create alternate technologies using substitutes for zinc that ultimately could depress future long-term demand for zinc, and at the same time may incentivize development of otherwise marginal mining properties that would compete with the Company.

The Company's current production projections and cost estimates for the Empire State Mines’ #4 mine may prove to be inaccurate

A reduction in the amount of, or a change in the timing of, the zinc production as compared to the Company's current projections for the Empire State Mines’ #4 mine may have a material adverse impact on the Company's anticipated future cash flows. The actual effect of such a reduction of the Company's cash flow from operations would depend on the quantity and timing of any such changes in production and on actual prices and costs. A change in the timing of these projected cash flows due to production shortfalls or labour disruptions would result in delays in receipt of such cash flows and in using such cash to fund operating activities and, as applicable, reduce debt levels or fund capital expenditures. This could result in the Company being required to raise additional equity capital or incur additional indebtedness to finance capital expenditures in the future.

The level of production and capital and operating cost estimates which are used for determining and obtaining financing and other purposes are based on certain assumptions and are subject to considerable uncertainties. Actual results of operations at the Empire State Mines’ #4 mine are likely to differ from the Company's current estimates, and these differences may be significant. Moreover, experience from actual mining or processing operations may identify new or unexpected conditions that could decrease production below, and/or increase capital and/or operating costs above, the current estimates. If actual results are less favourable than the Company currently estimates, the Company's business, results from operations, financial condition and liquidity could be materially adversely affected.

There may be requirements for additional capital in the future

Any future mining, production, processing, development and exploration by the Company may require substantial additional financing, including capital for the continuation or expansion of mining operations at the Empire State Mines' #4 mine. Failure to obtain sufficient financing may result in delaying or indefinite postponement of the Company's business plans. In addition, certain forms of financing may not be available on terms that the Company believes are acceptable, or at all, as the Company does not have mineral reserves. There can be no assurance that additional capital or other types of financing will be available if needed or that, if available, the terms of such financing will be favourable to the Company.

Profitability of the Company

There can be no assurance that the Company's business and strategy will enable it to become profitable or sustain profitability in future periods. The Company's future operating results will depend on various factors, many of which are beyond the Company's direct control, including the Company's ability to develop its mining projects and commercialize its mineral resources, its ability to control its costs, the demand and price for zinc and general economic conditions. If the Company is unable to generate profits in the future, the market price of the Common Shares could decline.

The Company may experience difficulty attracting and retaining qualified management and employees to sustain and grow its business

The Company is dependent on the services of key executives and its skilled employees to advance its corporate objectives and to identify new opportunities for growth and funding. The loss of any executive of the Company and the Company's inability to attract and retain a suitable replacement, or additional highly skilled employees required for the Company's activities, would have a material adverse effect on the Company's business and financial condition.

Competition

The Company competes with other mining companies, many of which are better capitalized, have greater financial resources, operational experience and technical capabilities or are further advanced in their development or are significantly larger and have access to mineral reserves, for the acquisition of mineral claims, leases and other mineral interests as well as for the recruitment and retention of qualified employees and other personnel. If the Company requires and is unsuccessful in acquiring additional mineral properties or qualified personnel, the Company will not be able to grow at the rate it desires, or at all.

Significant governmental regulations

The Company's mining activities are subject to extensive federal, state and local laws, regulations and policies governing various matters, including:

- environmental protection, including regulations with respect to processing concentrates;
- the management and use of toxic substances and explosives;
- the management of natural resources and land;
- the exploration of mineral properties;
- exports;
- price controls;
- taxation and mining royalties;

- labour standards and occupational health and safety, including mine safety; and
- historic and cultural preservation.

Failure to comply with applicable laws and regulations may result in civil or criminal fines or penalties or enforcement actions, including orders issued by regulatory or judicial authorities enjoining or curtailing operations or requiring corrective measures, installation of additional equipment or remedial actions, any of which could result in significant expenditures. The Company may also be required to compensate private parties suffering loss or damage by reason of a breach of such laws, regulations or permitting requirements. It is also possible that future laws and regulations, or more stringent enforcement of current laws and regulations by governmental authorities, could cause the Company to incur additional expenses or capital expenditure restrictions, or suspensions of the Company's activities and delays in the exploration and development of its properties.

Market events and general economic conditions

Adverse events in global financial markets can have profound impacts on the global economy. Many industries, including the zinc mining industry, are affected by these market conditions. Some of the key effects of the financial market turmoil experienced over the past decade include contraction in credit markets resulting in a spread of credit risk, devaluations, high volatility in global equity, commodity, foreign exchange and precious metal markets, and a lack of market liquidity. A continued or worsened slowdown in the financial markets or other economic conditions, including but not limited to, consumer spending, employment rates, business conditions, inflation, fuel and energy costs, consumer debt levels, lack of available credit, the state of the financial markets, interest rates and tax rates, may adversely affect the Company's growth and profitability, financial liabilities and results of operations.

Environmental laws and regulations

All of the Company's exploration, development and production activities are subject to regulation by governmental agencies under various environmental laws. These laws address emissions into the air, discharges into water, management of waste, management of hazardous substances, protection of natural resources, antiquities and endangered species and reclamation of lands disturbed by mining operations. Environmental legislation is evolving and the general trend has been towards stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and increasing responsibility for companies and their officers, directors and employees. Compliance with environmental laws and regulations may require significant capital outlays on the Company's behalf and may cause material changes or delays in the Company's intended activities. Future changes in these laws or regulations could have a significant adverse impact on some portion of the Company's business, requiring the Company to re-evaluate those activities at that time. Non-compliance thereof may result in significant penalties, fines and/or sanctions imposed on the Company by the relevant environmental regulatory authority resulting in a material adverse effect on the Company's reputation and results of its operations.

Threat of legal proceedings

Due to the nature of its business, the Company may be subject to numerous regulatory investigations, civil claims, lawsuits and other proceedings in the ordinary course of its business. The results of these legal proceedings cannot be predicted with certainty due to the uncertainty inherent in litigation, the difficulty of predicting decisions of regulators, judges and juries and the possibility that decisions may be reversed on appeal. The Company's efforts to respond to the legal proceedings could result in a diversion of management time and attention from revenue-generating activities. There can be no assurances that these matters will not have a material adverse effect on the Company's business. See "*Title*", above and "12.1 Legal Proceedings".

Rights, concessions and permits

The Company's current and anticipated future operations, including further exploration, development and production on its mineral properties, including the Empire State Mines' #4 mine, require concessions and permits from various governmental authorities. Obtaining or renewing governmental concessions and permits is a complex and time-consuming process. The duration and success of efforts to obtain and renew permits are contingent upon many variables not within the Company's control.

The Company cannot provide assurance that all rights, concessions and permits that it requires for its operations will be obtainable or renewable on reasonable terms, or at all. Delays or a failure to obtain or renew such required concessions and permits, or the expiry, revocation or failure to comply with the terms of any such concessions and permits that the Company has obtained, would adversely affect the Company's business.

Social and environmental activism can have a negative effect on exploration, development and mining activities

There is an increasing level of public concern relating to the effects of mining on the natural landscape, on communities and on the environment. Certain non-governmental organizations, public interest groups and reporting organizations ("NGOs") who oppose resource development can be vocal critics of the mining industry. In addition, there have been many instances in which local community groups have opposed resource extraction activities, which have resulted in disruption and delays to the relevant operation. Local communities in St. Lawrence County, NGOs or local community organizations could direct adverse publicity and/or disrupt the operations of the Company in respect of the Empire State Mine or another of the Company's properties, regardless of its successful compliance with social and environmental best practices, due to political factors, activities of unrelated third parties on lands in which the Company has an interest or the Company's operations specifically. Any such actions and the resulting media coverage could have an adverse effect on the reputation and financial condition of the Company or its relationships with the communities in which it operates, which could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

Land reclamation requirements for the Company's properties may be burdensome

Land reclamation requirements are generally imposed on companies with mining operations or mineral exploration companies in order to minimize long term effects of land disturbance. Reclamation may include requirements to:

- control dispersion of potentially deleterious effluents; and
- reasonably re-establish pre-disturbance land forms and vegetation.

In order to carry out reclamation obligations imposed on the Company in connection with exploration, development and production activities, the Company must allocate financial resources that might otherwise be spent on exploration and contemplated development programs. If the Company is required to carry out unanticipated reclamation work or provide security for further reclamation work, the Company's financial position could be adversely affected.

Tailings management facility and environmental reclamation

The embankment for the tailings management facility ("TMF") at the Empire State Mines' #4 mine will need to be raised to fully contain the estimated tonnage for the Empire State Mines'#4 mine as set out in the current mine plan. The Company is not certain how the native surface of the TMF was prepared, what design features were included, what sub-surface conditions existed prior to construction or the material properties of the fill used for construction. If the Company is unable to complete the embankment raise at the TMF, or if the TMF were to subsequently breach, the Company would be required to delay or cease operations at the Empire State Mines’ #4 mine for a significant period of time. This may also necessitate extensive response and rehabilitation activities. The Company may not receive approvals and consents necessary to proceed with the remaining rehabilitation plans in a timely manner. The Company cannot anticipate the timing and amount of the costs and the liabilities relating to any such TMF failure, or whether such failure would result in the Company being subject to regulatory charges or claims, fines and penalties or the potential quantum thereof.

Insurance

The Empire State Mines’ #4 mine is subject to numerous risks and hazards. Such risks could result in personal injury, environmental damage, damage to and destruction of the facilities, delays in production and liability. For some of these risks, the Company maintains insurance to protect against these losses at levels consistent with industry practice. However, the Company may choose not to insure certain risks or may not be able to maintain current or desired levels of insurance coverage, particularly if there is a significant increase in the cost of premiums. The Company's current policies may not cover all losses and the Company currently does not have specific coverage for environmental risk. Moreover, in the event that the Company is unable to fully pay for the cost of remedying damages, particularly environmental problems, the Company might be required to suspend or significantly curtail its activities or enter into other interim compliance measures.

Health & safety

Mining, like many other extractive natural resource industries, is subject to potential risks and liabilities due to accidents that could result in serious injury or death. The impact of such accidents could affect the profitability of the operations, cause an interruption to operations, lead to a loss of licenses, affect the reputation of the Company and its ability to obtain further licenses, damage community relations and reduce the perceived appeal of the Company as an employer.

There is no assurance that the Company has been or will at all times be in full compliance with all laws and regulations or hold, and be in full compliance with, all required health and safety permits. The potential costs and delays associated with compliance with such laws, regulations and permits could prevent the Company from proceeding with the development of a project or the operation or further development of a project, and any non-compliance therewith may adversely affect the Company's business, financial condition and results of operations.

Amendments to current laws, regulations and permits governing operations and activities of mining companies, or more stringent implementation thereof, could have a material adverse impact on the Company and cause increases in exploration expenses, capital expenditures or production costs, reduction in levels of production at producing properties, or abandonment or delays in development of new mining properties.

The Company is dependent on information technology systems

The Company's operations depend, in part, upon information technology systems. The Company's information technology systems are subject to disruption, damage or failure from a number of sources, including, but not limited to, computer viruses, security breaches, natural disasters, power loss and defects in design. Although to date the Company has not experienced any material losses relating to information technology system disruptions, damage or failure, there can be no assurance that it will not incur such losses in future. Any of these and other events could result in information technology systems failures, operational delays, production downtimes, destruction or corruption of data, security breaches or other manipulation or improper use of the Company's systems and networks, any of which may result in a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

Zinc hedging activities

The Company has not entered into forward contracts or other derivative instruments to sell zinc that it might produce in the future. Although the Company has no near term plans to enter such transactions, it may do so in the future, if prudent from a risk management perspective or required under off-take agreements, to secure zinc sale revenues during periods of significant capital expenditure. Regardless of the risk management intent when entering forward contracts or other derivative instruments to sell zinc, these types of hedging contracts can create significant financial liabilities, especially in times of market volatility.

Conflicts of Interest

Certain of the Company's directors also serve or may serve as directors or officers of, or have significant shareholdings in, other companies involved in natural resource exploration, development and production or mining-related activities, including in other companies involved in the exploration, development and production of zinc. To the extent that such other companies may participate in ventures in which the Company may participate, or in ventures which the Company may seek to participate in, the Company's directors and officers may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. In all cases where the Company's directors and officers have an interest in other companies, such other companies may also compete with the Company for the acquisition of mineral property investments. Such conflicts of the Company's directors and officers may result in a material and adverse effect on the Company's profitability, results of operation and financial condition. As a result of these conflicts of interest, the Company may miss the opportunity to participate in certain transactions, which may have a material adverse effect on the Company's financial position.

Risks inherent in acquisitions

The Company may actively pursue the acquisition of exploration, development and production assets consistent with its acquisition and growth strategy. From time to time, the Company may also acquire securities of or other interests in companies with respect to which it may enter into acquisitions or other transactions. Acquisition transactions involve inherent risks, including but not limited to:

- accurately assessing the value, strengths, weaknesses, contingent and other liabilities and potential profitability of acquisition candidates;
- ability to achieve identified and anticipated operating and financial synergies;
- unanticipated costs;
- diversion of management attention from existing business;
- potential loss of the Company's key employees or key employees of any business acquired;
- unanticipated changes in business, industry or general economic conditions that affect the assumptions underlying the acquisition; and
- decline in the value of acquired properties, companies or securities.

Any one or more of these factors or other risks could cause the Company not to realize the anticipated benefits of an acquisition of properties or companies, and could have a material adverse effect on its financial condition.

Labour and employment retention relations

Production at the Empire State Mines' #4 mine will be dependent upon the ability of the Company to hire qualified employees and to maintain good relations with its employees. In addition, relations between the Company and its employees may be impacted by changes in the scheme of labour relations which may be introduced by the relevant governmental authorities in the United States. Adverse changes in such legislation or in the relationship between the Company and its employees or the ability to attract employees to the Empire State Mines' #4 mine may have a negative impact on the Company's business, results of operations and financial condition.

Anti-corruption and bribery regulation, including the Canadian Extractive Sector Transparency Measures Act ("ESTMA") reporting

The Company is required to comply with anti-corruption and anti-bribery laws in Canada and the United States. In recent years, there has been a general increase in both the frequency of enforcement and the severity of penalties under such laws, resulting in greater scrutiny and punishment of companies convicted of violating anti-corruption and anti-bribery laws. Furthermore, a company may be found liable for violations by not only its employees, but also by its contractors and third-party agents. Although the Company has adopted a Code of Conduct that addresses these matters, no assurance can be given that the Company, or its employees, contractors or third-party agents will comply strictly with such laws. If the Company is the subject of an enforcement action or in violation of such laws, it may result in significant penalties, fines and/or sanctions imposed on the Company resulting in a material adverse effect on the Company's reputation and results of its operations.

In addition, ESTMA requires public disclosure of payments to governments by mining and oil and gas companies engaged in the commercial development of oil, gas and minerals who are either publicly listed in Canada or with business or assets in Canada. Mandatory annual reporting is required for extractive companies with respect to payments made to foreign and domestic governments at all levels, including entities established by two or more governments, and including aboriginal groups. ESTMA requires reporting on the payments of any taxes, royalties, fees, production entitlements, bonuses, dividends, infrastructure improvement payments, and any other prescribed payment over CDN$100,000. Failure to report, false reporting or structuring payments to avoid reporting may result in fines of up to CDN$250,000 (which may be concurrent). The Company will be required to commence reporting in 2017. If the Company finds itself subject to an enforcement action or in violation of ESTMA, this may result in significant penalties, fines and/or sanctions imposed on the Company resulting in a material adverse effect on its reputation.

Infrastructure

Mining, processing, development and exploration activities depend on the availability of adequate infrastructure. Reliable roads, bridges and power sources are important factors that affect capital and operating costs. Sabotage, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Company's operations, financial condition and results of operations.

Enforceability of judgments

A director of the Company resides outside of Canada. As a result, holders of Common Shares may not be able to effect service of process within Canada to such director or such expert, or to enforce Canadian court judgments obtained against such director in jurisdictions outside of Canada, including those predicated upon the civil liability provisions of applicable Canadian securities laws. Furthermore, it may be difficult for the holders of Common Shares to enforce, in original actions brought in courts in jurisdictions outside of Canada, liabilities predicated upon Canadian securities laws.

MINERAL PROPERTIES

Empire State Mines

The Company owns the Empire State Mines indirectly through its wholly owned subsidiary, St. Lawrence Zinc. The Empire State Mines are located in the Balmat–Edwards mining district in northern New York State, near Gouverneur, and is 25 mi south of the Port of Ogdensburg.

Empire State Mines is located approximately 1.3 miles southwest of Fowler, New York State, in St. Lawrence County. St. Lawrence Zinc owns a total of 2,699 acres of fee simple surface and mineral rights in three towns in St. Lawrence County. The majority of the property consists of the 1,754 acres in the town of Fowler where the Empire State Mines, mill and tailings disposal facility are located. There are also an additional nine parcels totaling 703 acres owned in the town of Edwards and four parcels totaling 242 acres in the town of West Pierrepont.

Empire State Mines is a past producer with over 100 years of history, and has been in on care and maintenance since 2008. Empire State Mines' #2, #3 and #4 mines have historically produced a total of 33.8 million tons ("Mt") grading 8.6% zinc. The Empire State Mines' #4 mine is fully developed with shaft access and mobile equipment on site. Existing surface facilities at the mine include a maintenance shop, offices, mine dry, primary crusher, mine ventilation fans, 12,000 ton covered concentrate storage building, rail siding, warehouse and storage buildings. The mine has an existing permitted 250-acre Tailings Management Facility ("TMF") which is categorized as a low-risk dam by the New York State Bureau of Flood Protection & Dam Safety. Ultimate capacity of the 250-acre foot print has been estimated at 20.0 Mt, with immediate capacity of 2.7 Mt, before further embankment construction will be needed. The mine and its facilities have been maintained to good standards during this period of care and maintenance. The mine is currently being refurbished.

Empire State Mines Technical Information

The following information on the Empire State Mines is the Executive Summary included in and extracted from the PEA. The PEA was prepared following the guidelines of NI 43-101. Portions of this information are based on assumptions, qualifications and procedures which are not fully described herein but are set out in the PEA. Authors of the PEA are: Garett Macdonald, Michael Makarenko, Matt Moss and Indi Gopinathan, each of JDS Energy and Mining Inc. ("JDS") , Michel Creek, formerly of JDS, Allan Reeves of Tuun Consulting Inc. and Robert Raponi of TR Raponi Consulting Ltd. Each is a "qualified person" for the purposes of NI 43-101.

The full report, which is available on SEDAR at www.sedar.com or the Company's website at www.titanminingcorp.com, is incorporated by reference herein and readers are encouraged to review it for additional details. In particular, the following matters not detailed below can be located in the full report:

- Means of access to the project;
- Information with respect to mineral leases, options to lease and royalties;
- Exploration other than drilling;
- Drilling information in addition to that included in the current resource;
- Sampling, analysis and data verification; and
- Social or community factors

Executive Summary of the PEA

1.1 Introduction

St. Lawrence Zinc Company, LLC (SLZ) is an indirect, wholly owned subsidiary of Titan Mining (US) Corporation (Titan). SLZ owns the Balmat No. 4 Zinc Mine (the Mine) which is now known as Empire State Mines' #4 mine (ESM). ESM is located in the Balmat-Edwards mining district in northern New York State, near Gouverneur and is 25 miles (mi) south of the Port of Ogdensburg. SLZ commissioned JDS Energy & Mining Inc. (JDS) to complete a Preliminary Economic Assessment (PEA) for the potential re-opening of the mine.

The last Technical Report prepared for the mine was produced in 2005 by Hudbay Minerals Inc. (Hudbay), from which time the mine went into production for three years and has since been on care and maintenance.

This Technical Report summarizes the results of the 2017 PEA study and was prepared following the guidelines of NI 43-101.

All currency in this report is United States dollars (US$), unless stated otherwise. Imperial and metric units are used and defined as required.

This PEA is preliminary in nature and includes the use of Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the results of the PEA will be realized.

1.2 Project Description

ESM is a past producer with over 100 years of history, and has been in a state of care and maintenance since 2008. The mine is fully developed with shaft access and mobile equipment on-site. Existing surface facilities at the mine include a maintenance shop, offices, mine dry, primary crusher, mine ventilation fans, 12,000-ton (t) covered concentrate storage building, rail siding, warehouse and storage buildings. The mine and its facilities have been maintained to good standards during this period of care and maintenance.

Mineralization is hosted within an Upper Marble rock unit, comprised of metamorphosed and complexly folded (silicified) marbles. The mineralization is located primarily in hinges of large fold structures.

The mine has historically used a combination of selective longhole stoping, modified or stepped room and pillar and mechanized cut and fill as mining methods. The PEA envisions that rehabilitation, development, and production are planned to take place approximately 3,100 ft below surface. An underground crusher is in place and is capable of feeding a surface flotation concentrator with name plate capacity of 5,000 tons per day (t/d). PEA mine production is planned to start at 800 t/d and grow to 1,800 t/d with an average 1,465 t/d of mill feed over the 8- year mine life.

Tailings will be placed in the existing permitted 260-acre conventional impoundment. The Tailings Management Facility (TMF) is categorized as a low-risk dam by the New York State Bureau of Flood Protection & Dam Safety.

The ultimate capacity of the 260-acre foot print has been estimated at 20 million tons (Mt), with immediate capacity of 2.7 Mt, before further embankment construction will be needed.

1.3 Location, Access and Ownership

ESM is located approximately 1.3 mi southwest of Fowler, New York State, in St. Lawrence County. SLZ owns a total of 2,699 acres of fee simple surface and mineral rights in three towns in St. Lawrence County. The majority of the property consists of the 1,754 acres in the town of Fowler where the ESM, mill and tailings disposal facility are located. Nine parcels totaling 703 acres are owned in the town of Edwards, which includes the Edwards mine. The remainder of the fee ownership covers the Pierrepont mine which is located on four owned parcels totaling 242 acres.

1.4 History, Exploration and Drilling

The Balmat-Edwards district consists of four mines. Edwards produced from 1915 to 1980, Balmat from 1930 to 2008, Pierrepont from 1982 to 2001 and Hyatt from 1974 to 1998 on an intermittent basis. The Balmat mine operated continuously from 1930 to 2001 when production ceased due to depressed zinc metal prices. Production resumed in 2006 until Hudbay Minerals placed the Balmat mine on care and maintenance in the third quarter of 2008 in response to depressed metal prices. Since that time all typical care and maintenance tasks have been performed. The mine remains dewatered and is readily accessible and the mill is in good condition.

The Balmat mine (now ESM) has produced a total of 30.7 Mt grading 8.6% zinc. A history of mine ownership is listed in Table 1.1.

Table 1.1: Balmat (now ESM) Ownership History

Date	Company
1930	St. Joe Minerals Corporation, purchased by Fluor Corporation in 1981.
1987	Zinc Corporation of America
2003	OntZinc (renamed Hudbay Minerals in December 2004)
2015	Star Mountain Resources Inc.
2017	Titan Mining (US) Corporation

Source: SLZ (2017)

1.5 Geology and Mineralization

The mine's mineral resources are in seven mineralized zones, known as Mud Pond, Mahler, New Fold, NE Fowler, Davis, Sylvia Lake and Cal Marble, between 1,400 feet (ft) and 5,500 ft below surface. The zones are aerially scattered and all zones except NE Fowler and Cal Marble are connected by existing development to the shaft. The zones are up to 50 ft thick but average 8 ft and dip between 20º and 35º, with local variations from 10 to 90º. The elongated mineralized zones are up to 500 ft wide and in the order of 6,000 ft long. The mineralized zones while generally continuous, display considerable geometrical variability.

The Balmat deposits are classified as Sedex in origin, forming initially in a marine sequence of carbonates and evaporates. They were deeply buried, metamorphosed to amphibolite grade and strongly deformed during the late Precambrian Grenville Orogen.. Historical mining and diamond drilling have shown that the geometry and continuity of the mineralized zones is consistent.

1.6 Metallurgical Testing and Mineral Processing

A test program was undertaken in 2005 to confirm the processing requirements of selected mineralized material zones from the ESM mine. These mineralized material zones were selected based on projected tonnage, mineralized material type, and sample availability. The results were used to confirm concentrate grades and recoveries for the re-start of operations in 2005.

Flotation tests were completed under the guidance of Fred Vargas, the metallurgical consultant who developed the pHLOTEC flotation process in use at ESM since 1984.

No additional metallurgical testing will be undertaken for the current re-opening. The mineralized zones to be mined are a continuation of the mineralization mined from 2005 to 2008.

The 2005 metallurgical test results and operational results from 2006 to 2008 support a zinc recovery of 96% and a zinc concentrate grade of 56% for the re-start of operations.

1.7 Mineral Resource Estimates

1.7.1 Drill Hole Database

The drilling database consists of historical drilling totalling 4,317 holes. A total of 633 of these holes were used for the Resource Estimate contained in this report. The majority of these holes were drilled during the most recent mining campaign by Hudbay Minerals Inc. from 2006 to 2009. All other holes were either distal exploration holes or holes defining the historic underground workings not relevant to this study.

Table 1.2: Drill Holes Used in Resource Estimate

Year	No. of Holes	Drilled Footage
Pre-2000	142	126,407
2000	33	23,384
2001	12	3,539
2004	5	3,143
2005	98	47,312
2006	120	42,446
2007	77	31,028
2008	140	36,931
2009	6	3,567
TOTAL	**633**	**317,758**

Source: Tuun (2017)

1.7.2 Geologic Model

ESM geologists provided 12 key domains which are constrained by the well-documented geologic horizons described in Sections 7.4 and 7.5 of this report. The mineralized zones are identified in Table 1.3.

Table 1.3: Mineralized Zones

Mineral Zone	Zone Code
1. Davis	10
2. Cal Marble	20
3. Cal Upper	21
4. Sylvia Lake	30
5. Mud Pond Main	40
6. Mud Pond Apron	41
7. Mud Pond Quartz Diopside	43
8. Mahler Main	50
9. Mahler White Dolomite	51
10. Mahler Quartz Diopside	52
11. NE Fowler	60
12. New Fold	70

Source: Tuun (2017)

Decades of face-mapping were used to develop the wireframes in 2009. These wireframes had been constructed along vertical cross-sections. That methodology was updated in February - March 2017 by re-interpretation and adjustment of polylines to 'snap' to drill hole intercepts. The revised 2017 mineralized zone wireframes were used for this resource estimation.

1.7.3 Block Model

A 3D block model was created using Geovia GEMS to represent the lithological and structural characteristics specific to ESM. This model was used as a framework for the grade model, which relied on statistical analysis of the sample data and a detailed understanding of the geology to produce a robust estimate of the resource.

The GEMS model of 15 ft x 15 ft x 15 ft was subsequently sub-blocked to 2.5 ft x 2.5 ft x 2.5 ft in Maptek Vulcan™ software for mine planning exercises.

Table 1.4: Block Model Parameters

Origin	Block Dimension (ft)	# of Blocks
12,750 E	15	630
7,425 N	15	745
-925 El (max)	15	200
Rotation	-25^{o}	

Source: Tuun (2017)

Block model grades were estimated in three passes using the Inverse Distance Squared (IDS) method. Models for the Nearest Neighbour (NN) and the Mean Value of Composites Used (MVCU) were also created. The NN and MVCU block models were used for comparative and validation purposes. The grade models were visually validated by comparing the blocks estimated by the various techniques with actual drill hole composite data on both section and in plain view.

In order to determine the quantities of material satisfying "reasonable prospects for economic extraction", The Qualified Person (QP) assumed a minimum mining cut-off grade of 6.0% Zinc, representing an approximate operating cost of $70/t, a zinc price of $1.00/lb and 96% recovery.

The QP is unaware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political issues that may adversely affect the mineral resources presented in this report.

The QP considers that the blocks with grades above the cut-off grade satisfy the criteria for "reasonable prospects for economic extraction" and can be reported as a Mineral Resource. Mineral resources for each of the mineralized zones at ESM are summarized in Tables 1.5 and 1.6.

Table 1.5 outlines the Mineral Resource estimate effective as of April 6th, 2017, at the selected cut-off zinc grade of 6.0%.

Table 1.5: Empire State Mines Mineral Resource Estimate

Cut-Off (% Zinc)	Measured		Indicated		M&I		Inferred	
	tons	% Zinc	tons	% Zinc	tons	% Zinc	tons	% Zinc
>10%	543,000	16.15	840,600	16.27	1,383,600	16.22	1,499,200	16.02
>9%	617,500	15.34	962,500	15.42	1,580,000	15.39	1,772,600	15.01
>8%	696,100	14.57	1,080,000	14.67	1,776,100	14.63	1,970,400	14.36
>7%	770,200	13.89	1,200,500	13.96	1,970,700	13.93	2,100,600	13.94
>6%	850,100	13.19	1,307,900	13.35	2,158,000	13.29	2,276,000	13.37
>5%	932,800	12.51	1,416,700	12.76	2,349,500	12.66	2,393,400	12.98
>4%	1,004,900	11.94	1,524,400	12.18	2,529,300	12.08	2,887,100	11.88
>3%	1,074,300	11.39	1,612,400	11.70	2,686,700	11.58	2,824,300	11.60

Notes:

1. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all, or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
2. The UG mining economics used operating costs of $70.00/t, and a commodity price of $1.00/pound at 96% recovery.
3. Mineral resources are reported 'in-situ' using a 'new development' cut-off grade of 6% Zn to determine 'reasonable prospects for eventual economic extraction'.
4. Mineral resources are also reported 'in-situ' using an incremental cut-off grade of 2% Zn to determine 'reasonable prospects for eventual economic extraction'.
5. Tonnages are reported to the nearest 100 tons, and grades are rounded to the nearest two decimal places.
6. Rounding as required by reporting guidelines may result in apparent summation differences between tons, and grade.

Source: Tuun (2017)

Table 1.6: Mineral Resources by Zone at 6.0% Zn Cut-Off Grade

Mineralized Zone	MEASURED		INDICATED		M&I		INFERRED	
	tons	% Zinc	tons	% Zinc	tons	% Zinc	tons	% Zinc
Davis	400	6.24	600	8.53	1,000	7.61	200	8.10
Cal Marble	0	0.00	35,600	9.58	35,600	9.58	440,200	11.46
Sylvia Lake	44,500	10.77	47,300	10.62	91,800	10.69	38,200	12.86
Mud Pond	231,400	10.38	148,700	11.48	380,100	10.81	369,300	10.80
Mud Pond Apron	43,400	11.98	115,800	10.34	159,200	10.79	23,600	9.18
Mud Pond QD	61,900	9.37	9,400	8.43	71,300	9.25	0	0.00
Mahler Main	311,800	15.14	590,900	15.11	902,700	15.12	329,100	12.76
Mahler WD	82,100	18.75	80,300	17.97	162,400	18.36	180,700	20.95
Mahler QD	6,600	15.85	29,700	11.21	36,300	12.05	6,800	9.92
NE Fowler	0	0.00	0	0.00	0	0.00	348,500	14.61
New Fold	68,000	12.75	249,600	11.72	317,600	11.94	539,400	13.97
Total	**850,100**	**13.19**	**1,307,900**	**13.35**	**2,158,000**	**13.29**	**2,276,000**	**13.37**

Notes:

1. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all, or any part of the Mineral Resources estimated will be converted into Mineral Reserves.
2. The UG mining economics used operating costs of US$70.00/ton, and a commodity price of US$1.00/pound at 96% recovery.
3. Mineral resources are reported 'in-situ' using a 'new development' cut-off grade of 6% Zn to determine 'reasonable prospects for eventual economic extraction'.
4. Tonnages are reported to the nearest 100 tons, and grades are rounded to the nearest two decimal places.
5. Rounding as required by reporting guidelines may result in apparent summation differences between tons, and grade.

Source: Tuun, 2017

Mineral resources were estimated in conformity with CIM "Estimation of Mineral Resource and Mineral Reserve Best Practices" Guidelines. Mineral resources are not mineral reserves and have no demonstrated economic viability. This PEA does not support an estimate of mineral reserves, since a Pre-Feasibility Study (PFS) or Feasibility Study (FS) is required for reporting of Mineral Reserve estimates. This report is based on mine plan tonnage (mine plan tons and/or mill feed).

Inferred mineral resources are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that all or any part of the mineral resources or mine plan tons would be converted into mineral reserves.

1.8 Mining

The ESM deposit is proposed to be mined using four underground mining methods, based on the geometry and the grade of the mineralized zones:

- Longhole stoping (LH) for mining blocks dipping steeper than 45°, which represents about 50% of the mine plan tonnage. This is the preferred mining method from a productivity and operating cost perspective;
- Mechanized Cut and Fill (C&F), for mining blocks with dips of less than 45° and zones not amenable to LH stoping, is more selective and represents about 7% of the mine plan tonnage;

- Modified or Stepped Room and Pillar (RP), for mining blocks with dips of less than 45° and grades, do not warrant the application of a fill to permit multiple panel extraction, representing 11% of the mine plan tonnage;
- Sub-level drift slashing and pillar slashing (SLS) for mining blocks which require lateral extension from the sub-level drift to either accommodate long hole drills to drill LH stopes, or to recuperate remnant pillars left between rooms in the existing workings, representing 19% of the mine plan tonnage; and
- The remaining 13% of the mine plan tonnage comes from sub-level drives, access, and stope cross-cut development.

Un-cemented rock fill will be used as backfill to maximize mining recovery. Where availability of fill material is not present, structural pillars will be left within the mineralization. Approximately 8% of the mineralization targeted for extraction will be left behind as pillars.

The deposit will be accessed from the existing No. 4 shaft and level development, which is extensive. On level, access ramps will be driven at maximum grade of 15% at a 15 ft x 17.5 ft profile to accommodate 40-ton haul trucks.

Level spacing is variable up to a maximum of 70 ft. Mineralized zone development will be driven using a 13 ft x 13 ft profile.

The mine requires drift rehabilitation and utility refurbishments, as well as mobile equipment servicing. These activities commenced in March of 2017 with completion scheduled for end of July.

The initial mine design was based on basic assumptions to generate lower limits for cut-off grades (COG) for the planned mining methods. A value of 6.0% Zn was determined as the COG for mining. These COG's were used to design initial mining shapes. An incremental COG of 2.0% Zn was applied to mined development material which covers costs for processing and administration only.

The PEA mine plan focusses on accessing and mining higher operating margin material early in the mine life. As such, the plan commences with the mining of Mahler, Mud Pond, and New Fold, followed by Cal Marble, Davis, and NE Fowler. The mine production rate is targeted to maximize utilization of existing equipment while maintaining ventilation limits. Production rates start at 800 t/d and grow to 1,800 t/d with an average 1,465 t/d over the life of mine.

Mining recovery and dilution factors were applied to each mining shape based on the mining method used. The PEA production plan for the ESM mine is summarized in Table 1.7.

Table 1.7: Mine Production Schedule

	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Total
Mine Plan Tonnage	kt	276	639	657	657	657	657	553	183	**4,278**
Production Rate	tpd	756	1,751	1,800	1,795	1,800	1,800	1,514	499	**1,630**
Zn Grade	%	9.5	8.2	10.9	10.1	9.3	10.5	6.5	5.9	**9.2**
Zn Tons	kt	26	52	72	66	61	69	36	11	**394**
Lateral Development (Excl. Rehab)	ft ('000)	12	17	27	23	19	23	38	5	**165**
Vertical Development	ft	96	79	330	370	93	146	92	56	**1,261**
Waste Fill	ft^3 ('000)	2.7	6.5	6.1	4.2	4.4	3.4	4.0	1.1	**32.4**

Note: totals may not add due to rounding.
Source: JDS (2017)

Approximately 50% of the mine plan tons are Inferred. 80% of the mine plan in the first two years is sourced from Measured and Indicated zones.

1.9 Recovery Methods

Mineralized material mined from the ESM deposits will be processed at the existing concentrator that was commissioned in 1970 and last shut down in 2008. The existing plant flotation circuit consists of a lead flotation circuit followed by zinc flotation. Lead grades for the mill feed material will be less than 1%, and as such, a lead concentrate will not be produced.

The concentrator flowsheet includes crushing, grinding, sequential lead and zinc flotation circuits, concentrate dewatering circuits, and loadout facilities.

The zinc flotation circuit consists of rougher flotation followed by scavenger flotation. The scavenger concentrate returns to the head of the rougher circuit. Rougher concentrate undergoes two stages of cleaner flotation. Cleaner tailings are returned to the previous stage of flotation in the traditional manner.

The nameplate capacity of the concentrator is 5,000 t/d. Throughout the history of the ESM operation, the capacity of the concentrator has exceeded that of the mines. The traditional operating strategy has been to operate the concentrator at its rated hourly throughput of 200 to 220 t/h, but for only as many hours as necessary to suit mine production. In the last full year of production (2008), the concentrator was operated at 25% of the total available hours in the year.

Similar to past operations at ESM, mine production rates will not be able to sustain the fulltime use of the concentrator. A single 10-hour shift will operate four days per week to process mill feed at an equivalent operating rate of 5,000 t/d.

All major circuits in the ESM concentrator have been reviewed to ensure they are suitable to process the design throughput. The concentrator will require minimal work to be placed back into operation.

1.10 Infrastructure

Access to the ESM facility is by existing paved state, town and site roads. All access to the mine/mill facility as well as concentrate haulage from the facility is by paved public roads and/or an existing CSX rail short line. The existing facilities at ESM mine are well established and will generally meet the requirements of the planned operations.

The ESM mine site is located adjacent to State Highway 812, approximately 1.5 mi from the junction with State Highway 58. A mile long stretch of Sylvia Lake Road currently handles traffic to and from the site, including truck haulage of concentrate to the Port of Ogdensburg should overseas shipping be used. Road maintenance is carried out by the Town and State Government Department of Highways.

There are currently two entries from Sylvia Lake Road providing access to the site. The main entry gives access to the parking lot and the access to the office complex, and the tailings line entry is the waste truck haulage route to the tailings impoundment.

The ESM No. 4 Mine surface infrastructure includes 15 buildings, most of which were constructed in 1969 to 1970, including and not limited to:

- Office complex;
- Maintenance and warehouses;
- Maintenance vehicle storage, boiler room, and change rooms;
- Headframe & hoist house;
- Concentrator & concentrate storage;
- Maintenance shop;
- Storage facilities for timber, tires, electrical, pine oil, warehouse, and miscellaneous; and
- Three pump houses for lake water, booster station, and fuel and oil.

Power to site is fed by line from Niagara Mohawk’s substation at Battle Hill-ESM #5 circuit. On-site power is distributed to the plant and mine. SLZ owns two portable generators for emergency use. One is a 125 kVA portable used for general 480 V / 220 V / 110 V applications. The other is a 100 kVA portable generator which will run the No. 2 emergency egress hoist.

Mill process and cooling water (non-potable) for the site will be pumped from the Sylvia Lake pump house to two 100,000 gallon (gal.) each concrete deluge tanks near the concentrate storage building/rail loadout shed. Water will be pumped from the reservoir tanks to the concentrator. Mine water will be pumped from the mill basement sump down the 4" shaft water line to the various mine levels.

The tailings disposal facility covers 260 acres approximately 4,000 ft north of the mill. Water from tailings flows through a series of retention ponds before discharge into Turnpike Creek. Discharge is regulated by NYSDEC under permit NY0001791.

The mineralized materials and waste rock from the development and operation of the mine is non-acid-generating due to the alkaline nature of the host rock. The designated surface pads were designed such that any run-off will drain to the concentrator pond. The capacity of this stockpile area is sufficient for the tonnages in the contained mine schedule

1.11 Environment and Permitting

The mine has licenses and permits for air, water withdrawal, mining, water discharge, explosives storage and use, petroleum and chemical storage, radiological equipment, and other miscellaneous licenses and permits. There are no additional permits or licenses required prior to returning the property to production.

During mine operations prior to the 2006 re-start, discharge limits for Fe and Zn were exceeded. To avoid such exceedance in the future, a new water treatment plant, satisfactory to the NYSDEC, has been constructed and is in operation today.

There are no Notices of Violation outstanding for the mine site on any environmental matter. In 2003, a $1.663 M cash deposit reclamation bond was put in place for five years for site reclamation of 432 acres at mine closure. Remaining SLZ liabilities include reclaiming the tailings impoundment area, the mine site area, capping of underground openings to surface, and re-vegetating the area to blend in with the surroundings. Closure costs for the mine and associated facilities and severance pay have been assumed to be paid by the sale of the mine assets at closure.

1.12 Operating and Capital Cost Estimates

Estimated life of mine capital costs total $69.2 M, consisting of the following distinct stages:

- **Initial Capital Costs** – includes all pre-production costs to replace, repair and upgrade the infrastructure and resource to support the mine plan production. Initial capital costs total $10.7 M and are expended over a 5-month refurbishment and commissioning period;
- **Sustaining Capital Costs** – includes all costs related to the capital development and acquisition, replacement, or major overhaul of assets during the mine life required to sustain operations.

The capital cost estimate was compiled using a combination of quotations, labour rates and database costs.

Table 1.8 presents the capital estimate summary for initial, sustaining, and closure capital costs in Q1 2017 US dollars with no escalation.

Table 1.8: Summary of Capital Cost Estimate

Area	Pre-Production (M$)	Production (M$)	LOM (M$)
Mining	5.3	40.4	45.7
Mineral Processing	1.1	0.7	1.8
Tailings Management	0	4.7	4.7
Infrastructure	0.8	0	0.8
Indirect Costs Incl. EPCM	0.4	0.2	0.5
Owners Costs	0.1	0.1	0.2
Closure Costs	0	11.9	11.9
Salvage Value	0	-4.0	-4.0
Subtotal Pre-Contingency	**7.6**	**53.9**	**61.6**
Contingency	1.0	4.6	5.6
Subtotal	**8.6**	**58.5**	**67.2**
Capitalized Operating Cost	7.6	0	7.6
Revenue Credit	-5.5	0	-5.5
Total	**10.7**	**58.5**	**69.2**

Source: JDS (2017)

Table 1.9: Summary of Site Operating Cost Estimate

Site Operating Costs	Unit Cost ($/t milled)	Unit Cost ($/lb Zn payable)	LOM Cost (M$)
Mining	42.27	0.28	180.9
Processing	8.89	0.06	38.0
G&A	9.60	0.06	41.1
Total	**60.77**	**0.40**	**260.0**

Source: JDS (2017), RT (2017)

Table 1.10: Main OPEX Component Assumptions

Item	Unit	Value
Electrical power cost	$/kWh	0.04
Average power consumption	MW	5.1
Overall power consumption (all facilities)	kWh/t processed	8.3
Diesel cost (delivered)	$/gallon	1.89
LOM average manpower (including contractors, excluding corporate)	Employees	151

Source: JDS (2017), SLZ (2017)

1.13 Economic Analysis

1.13.1 Main Assumptions

An economic model was developed to estimate annual cash flows and sensitivities of the project. Pre-tax estimates of project values were prepared for comparative purposes, while after-tax estimates were developed to approximate the true investment value. It must be noted that tax estimates involve many complex variables that can only be accurately calculated during operations and, as such, the after-tax results are approximations to represent an indicative value of the after-tax cash flows of the project.

The results of the economic analysis are shown in Table 1.11.

This PEA is preliminary in nature and includes the use of Inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the results of the PEA will be realized.

Sensitivities to metal prices, operating cost estimate (OPEX), and capital cost estimate (CAPEX) were conducted by adjusting each variable up and down 20% independently of each other. As with most metal mining projects, the project is most sensitive to metal prices.

Table 1.11: Economic Assumptions

Item	Unit	Value
NPV Discount Rate	%	8
Federal Income Tax Rate	%	35
State Income Tax Rate	%	4.9
Capital Cost Allowance Rate	%	Per New York State schedule
Capital Cost Allowance Term	Years	7
Depletion Charge	%	Lesser of: 50% of Taxable Income Before Depletion or 22% of EBITDA* less Royalties
Capital Contingency (Overall)	%	10

*Earnings before interest, tax, depreciation and amortization

Source: JDS (2017)

Table 1.12: Net Smelter Return Assumptions

Off-site Costs and Payables	Unit	Estimated Value
Payables	%	85.0
Treatment Charges	$US/dT	150
Losses and Penalties	$US/dT	15.0
Transport, Marketing, Insurance, etc.	$US/dT	85
Royalties	%NSR	0.3

Source: JDS (2017)

1.13.2 Results

Table 1.13 below outlines the pre- and post-tax economic results at a 0% and 8% discount rate.

Table 1.13: Economic Results

Parameter	Unit	Pre-tax Results	After-tax Results
$NPV_{0\%}$	M$	295	206
$NPV_{8\%}$	M$	216	150
Internal Rate of Return (IRR)	%	153	121
Payback period	Production years	1.2	1.3

Source: JDS (2017)

1.13.3 Sensitivities

Sensitivity analyses were performed using metal prices, mill head grade, CAPEX and OPEX as variables. The value of each variable was changed plus and minus 20% independently while all other variables were held constant. The results of the sensitivity analyses are shown in Table 1.14.

Table 1.14: Sensitivities Analyses

Variable	Pre-tax NPV @ 8% (M$)			Post-tax NPV @ 8% (M$)		
	-20% Variance	0% Variance	20% Variance	-20% Variance	0% Variance	20% Variance
Price	98	216	335	65	150	232
CAPEX	227	216	205	161	150	139
OPEX	253	216	179	176	150	122
Grade	108	216	324	75	150	223

Source: JDS (2017)

1.14 Project Development

As of March 2017, ESM is undergoing mine rehabilitation activities, including shaft utility refurbishments, installation of new hoist cable, and reconditioning of the mobile equipment fleet and underground ground support installations.

A two month refurbishment period will take place upon completion of project financing, followed by initial mine production.

1.15 Conclusions

It is the conclusion of the QPs that the PEA summarized in this Technical Report contains adequate detail and information to support the positive economic result. The PEA proposes the use of industry standard equipment and operating practices. To date, the QPs are not aware of any fatal flaws for the project.

Approximately 50% of the mineralization within the PEA mine plan is classified as Measured and Indicated with the remainder in the Inferred classification.

1.15.1 Risks

The most significant potential risks associated with the project are commodity prices, uncontrolled dilution, mineral recovery, operating and sustaining capital cost escalation, ventilation limitations, Inferred resource confidence, and unforeseen schedule delays.

These risks are common to most mining projects, many of which may be mitigated, at least to some degree, with adequate engineering, planning and pro-active management. The first two years of production focuses on Measured and Indicated mineralized zones to mitigate risk within the payback period of the project. Eighty percent (80%) of the mineralization mined in the first two years is classified as Measured and Indicated.

1.15.2 Opportunities

Mine production may be limited by the ability to ventilate the underground workings. As such, there is opportunity in investigating alternate hauling methods that reduce or eliminate the diesel particulates produced from traditional diesel powered truck haulage. Railveyor and electric motor technology has become a viable source for underground haulage which does not rely on diesel engines and may provide the ability to meet and/or beat the estimated production rate proposed in this report.

Dilution is important to manage in any mining operation, and especially so in narrow resources. The implementation of grade control geologists on shift with electronic survey and mapping software is an opportunity to better control the excavations and follow the mineralization.

The dark mineralization hosted within a light dolomitic rock may lend itself to optical sorting technology, which could provide an increase to mill feed head grade while simultaneously providing a source of crushed waste rock for cemented and un-cemented backfill. A sorted mill feed may additionally permit a lower mine cut-off grade which could increase the mineral resources with the PEA mine plan without additional exploration.

The resource potential has not been fully defined, and as such there is opportunity for resource expansion. The mine historically operated with little definition drilling in comparison to greenfield exploration properties. Much reliance was placed on the ability to follow the resource through mine development for the replacement of reserves. Additional exploration drilling may yield high returns in the discovery and upgrade of additional mineralized resources.

Opportunities may exist to improve the mill feed grades by detailing level designs and identifying pillar locations upon completion of geotechnical analysis. Detailed production schedules integrating backfill schedules may provide opportunities to reduce the volume of structural pillars currently planned to be left within the mineralized resource.

1.15.3 Recommendations

The items shown in Table 1.15 are recommended for the ESM to improve confidence and performance of the PEA mine plan and economics.

Table 1.15: Project Recommendations and Cost

Item	Cost ($)
Infill drilling	1,000,000
Surface and underground exploration drilling	4,300,000
3D lithology Model	50,000
Digitize maps and survey plans	150,000
Updated mine survey	150,000
Geotechnical review	30,000
Sorting test work and integration study	100,000
Alternate haulage investigation (Railveyor)	45,000
Total Estimate	**5,825,000**

Source: JDS (2017)

Other Projects

The Company began prospecting for base metals in an area of New Mexico in 2017 after being introduced to the area pursuant to an agreement with Arizona Minerals Inc., a company related by virtue of certain common directors and management. The agreement enables the Company to explore the area and take title to any claims subject to a back-in right whereby Arizona Minerals can acquire a 60% interest in the claims on payment of two times the exploration expenditures at that time. The right is exercisable on the earlier of the Company expending $2.5 million on exploration or three years. During the fourth quarter of 2017 the Company registered 92 unpatented mining claims in the area.

During the first quarter of 2018, the Company received approval to perform an 18 hole drill program on the claims, with a first phase of 7 holes totalling approximately 3,500 feet at a total cost estimated at $250,000.

DIVIDENDS

The Company has not paid any dividends and has no particular policy on paying dividends or distributions and does not expect to pay dividends in the near future. The Articles of the Company stipulate that subject to the rights, if any, of shareholders holding shares with special rights as to dividends, the directors may from time-to-time declare and authorize payment of any dividends the directors may deem advisable.

CAPITAL STRUCTURE

General Description of Capital Structure

The Company is authorized to issue an unlimited number of common shares. The common shares of the Company are all without par value and rank equally as to dividends, voting powers and participation in assets and as to all other benefits which might accrue to holders of the common shares. No shares have been issued subject to call or assessment. Each common share carries one vote at shareholder meetings of the Company. All of the common shares outstanding as at the date of this AIF are fully paid and non-assessable. There are no pre-emptive or conversion rights, and no provision for redemption, purchase for cancellation, surrender or sinking funds attached to any of the Company's common shares. Provisions as to the modification, amendment or variation of such rights or provisions are contained in the Company's Articles of Incorporation.

As at the date of this AIF there were 101,970,757 common shares issued and outstanding.

MARKET FOR SECURITIES

Trading Price and Volume

The common shares of the Company commenced trading on the TSX on October 19, 2017. The following table presents the high, low and closing sale price and volume traded on the TSX for the Company's common shares during fiscal 2017 after trading commenced.

Period	High	Low	Close	Volume
December 2017	1.29	0.92	1.22	1,063,700
November 2017	1.40	1.21	1.25	1,924,900
October 2017	1.40	1.27	1.38	2,873,300

Prior Sales

At the date of this AIF the Company had 7,015,000 stock options outstanding with an exercise price ranging between $1.35 and $1.40 and expiring between June 1, 2022 and March 22, 2023. The Company has no other convertible securities outstanding.

DIRECTORS AND OFFICERS

At the date of this AIF the following were the directors and officers of Titan Mining:

Name, Occupation and Security Holdings

Name, Province and Country of Residence	Date First Appointed	Position Held with the Company and Present and Principal Occupation During the Past Five Years(1)
Richard W. Warke West Vancouver, BC Canada	October 15, 2012	**President, Director and CEO and Executive Chairman of the Company**; Executive Chairman and Director of Arizona Mining since July 2008; Executive Chairman and Director of NewCastle Gold from May 2016 to December 2017; Director, President of Catalyst Copper Corp. from September 2014 to May 2016; Executive Chairman and Director of Augusta Resources until July 2014.
Purni Parikh(2) (3) (4) Burnaby, BC Canada	January 1, 2017	**Director of the Company**; Senior Vice President, Corporate Affairs and Corporate Secretary of Arizona Mining since February 2010 and November 2007, respectively; Senior Vice President, Corporate Affairs of NewCastle Gold from May 2016 to December 2017; Vice President, Corporate Secretary of Catalyst Copper Corp. from September 2014 to May 2016; Vice President of Augusta Resources from July 1999 to July 2014.
Lenard Boggio(2) (3) (4) West Vancouver, British Columbia, Canada	January 1, 2017	**Director of the Company**; Independent corporate director of several publicly listed corporations; Partner of PricewaterhouseCoopers LLP from 1988 and senior member of the firm's mining industry group in Vancouver until his retirement from the firm in May 2012.
Gregory Clark(2) (3) (4) Richmond, BC Canada	January 1, 2017	**Director of the Company;** Retired since 2013 prior to which he was Licensed Aircraft Technician in the Heavy Maintenance Department at Canadian Airlines and, subsequently, Air Canada.
George Pataki Garrison, NY USA	June 29, 2017	**Director of the Company;** Senior Counsel at Norton Rose Fulbright since March 2007, Co-founder and Chairman or the Pataki-Cahill Group.

Name, Province and Country of Residence	Date First Appointed	Position Held with the Company and Present and Principal Occupation During the Past Five Years[(1)]
Keith Boyle Toronto, ON Canada	August 1, 2017	**Chief Operating Officer of the Company**; Acting COO of the Company from January 2017 to July 2017; independent consultant from September 2016 to July 2017; Professional Engineer; Chief Operating Officer of Chieftain Metals Inc. and Chieftain Metals Corp. from February 2011 to September 2016.
Paul Ireland Vancouver Island, BC Canada	January 10, 2018	**Interim Chief Financial Officer of the Company;** CFO of NewCastle Gold Ltd. from 2016 to 2017, Arizona Mining Corp. from 2009 to 2017 and Catalyst Copper Corp. from September 2014 to May 2016.
Jerrold Annett Toronto, ON Canada	June 1, 2017	**Senior Vice President, Corporate Development of the Company**; Head of Mining Equity Sales at Scotiabank from 2008 to May 2017.
Jacqueline Allison Toronto, ON Canada	January 29, 2018	**Vice President, Investor Relations and Strategic Analysis of the Company**; Vice President, Investor Relations at Dominion Diamond Corporation from November 2016 to January 2018; Director, Investor Relations at Hudbay Minerals Inc. from January 2015 to March 2016; Financial Analyst at BMO Asset Management Inc. from August 2012 to September 2013.
Scott Burkett	March 8, 2018	**Vice President, Exploration of the Company**; Chief Geologist at Arizona Mining Corp. from 2016 to 2018; Project Geologist at Metal Mining Consultants from 2012 to 2016.
Eric Strom Toronto, ON Canada	March 5, 2018	**Vice President, Projects and Innovation of the Company**; Director of Underground Mining (Corporate Office) and Manager Projects, Environment and Social (Peak Gold Mines) at New Gold Inc. from 2016 to 2017; Manager, Mining and subsequently Manager, Life of Mine and Exploration at China Molybdenum Company from 2012 to 2016.
Susy Horna Surrey, BC Canada	November 6, 2017	**Corporate Secretary of the Company**; Paralegal at Pacific Northwest LNG Ltd. from March 2015 to August 2017; Paralegal at the Augusta Group of Companies from February 2011 to March 2015.

(1) Information has been provided by the directors and officers of the Company.
(2) Member of the Company's Audit Committee
(3) Member of the Company's Compensation Committee
(4) Member of the Company's Nominating and Corporate Governance Committee

The directors of the Company are elected annually and hold office until the next annual meeting of shareholders or until their successors are elected or appointed. There are three committees of the Board, an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee.

To the knowledge of the Company, the number of common shares of the Company which are beneficially owned, or controlled or directed, directly and indirectly, by all directors and officers of the Company, as a group, as at the date of this AIF is 44,112,200 (approximately 43.26% of the Company's issued and outstanding share capital).

Cease Trade Orders

No director or executive officer of the Company is, as at the date of the AIF, or was within 10 years before the date of the AIF, a director, chief executive officer or chief financial officer of any company (including the Company), that (a) was subject to an order that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer, or (b) was subject to an order that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer.

Bankruptcies

Except as disclosed below, no director or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, or a personal holding company of any such persons, as at the date of this AIF, is or has been within the 10 years before the date of this AIF, a director or executive officer of any company (including the Company) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or was subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold its assets; or has, within 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or become subject to or instituted proceedings, an arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer or shareholder.

Mr. Boggio was a director of Great Western Minerals Group Ltd. ("GWMG") from January 2013 until his resignation together with all the then current directors in July 2015. On April 30, 2015 GWMG announced that a support agreement was entered into with the holders of a majority of GWMG's secured convertible bonds and GWMG was granted protection from its creditors under the Companies Creditors Arrangements Act upon receiving an initial order from the Court. On May 11, 2015, an order was issued by the Financial and Consumers Affairs Authority of the Province of Saskatchewan that all trading in the securities of GWMG be ceased due to its failure to file financial statements for the year ended December 31, 2014. In December, 2015 GWMG entered bankruptcy proceedings.

On September 6, 2016 a receiver was appointed for Chieftain Metals Inc. and Chieftain Metals Corp. by the Superior Court of Justice (Commercial List) in Ontario. Mr. Boyle was an officer of Chieftain Metals Inc. and Chieftain Metals Corp. until terminated by the receiver on September 8, 2016.

Penalties or Sanctions

No director or officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, has been subject to any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement since December 31, 2000 that would likely be important to a reasonable investor in making an investment decision, with a securities regulatory authority; or been subject to any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

Conflicts of Interest

The directors of the Company are required by law to act honestly and in good faith with a view to the best interest of the Company and to disclose any interests which they may have in any project or opportunity of the Company. If a conflict of interest arises at a meeting of the Board, any director in a conflict will disclose his interest and abstain from voting on such matter. In determining whether or not the Company will participate in any project or opportunity, that director will primarily consider the degree of risk to which the Company may be exposed and its financial position at that time.

To the best of the Company's knowledge, there are no known existing or potential conflicts of interest among the Company, its promoters, directors, officers or other members of management of the Company as a result of their outside business interests except that certain of the directors, officers, promoters and other members of management serve as directors, officers, promoters and members of management of other public companies, and therefore it is possible that a conflict may arise between their duties as a director, officer, promoter or member of management of such other companies. See "Directors and Officers".

The directors and officers of the Company are aware of the existence of laws governing accountability of directors and officers for corporate opportunity and requiring disclosures by directors of conflicts of interest and the Company will rely upon such laws in respect of any directors' and officers' conflicts of interest or in respect of any breaches of duty by any of its directors or officers. Such directors or officers, in accordance with the Business Corporations Act (British Columbia), will disclose all such conflicts and they will govern themselves in respect thereof to the best of their ability in accordance with the obligations imposed upon them by law.

PROMOTORS

Richard W. Warke, the President and CEO of the Company, took the initiative in founding and organizing the Company and in pursuing the Acquisition on behalf of the Company and may be considered to be the promoter of the Company within the meaning of applicable securities legislation. To the Company's knowledge, as at the current date, Mr. Warke beneficially holds, controls or directs, directly or indirectly 41,287,600 Common Shares and 2,000,000 Options, representing approximately 40.49% of the outstanding Common Shares on a non-diluted basis and 39.72% of the outstanding Common Shares on a fully diluted basis (assuming the exercise of the Options held by Mr. Warke). During the year ended December 31, 2017, other than in connection with the repayment of the indebtedness of the Company to Augusta (see "Three Year History" earlier in this AIF) and the $275,000 remuneration Mr. Warke received in connection with his role as President and CEO, Mr. Warke has not received anything of value, including money, property, contracts, options or rights of any kind from the Company or from a subsidiary of the Company.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

Legal Proceedings

In addition to matters disclosed in "Risks and Uncertainties-Title", on or about March 12, 2018, the Company received a letter from legal counsel to SGS Acquisition Company Limited ("SGS") dated March 9, 2018. The letter states that in 2016 SGS filed an action in the U.S. District Court for the District of Colorado against certain parties and Star Mountain. The Company is not a named party in this case. SGS alleges the Company (a) has obligations to SGS under mutual indemnification provisions to Star Mountain for the breach of any representations, warranties or breaches of covenants under the Purchase Agreement and (b) failed to conduct its due diligence in connection with the Purchase agreement, which interfered with SGS's ability to recover from Star Mountain. SGS is not a party the Purchase Agreement. SGS states that "the net economic benefits lost to SGS resulting from Star Mountain's acts, and by extension, the Company, amount to approximately $28.3 million." The Company believes these claims are wholly without merit.

Regulatory Actions

There are no: (a) penalties or sanctions imposed against the Company by a court relating to securities legislation or by a securities regulatory authority during the Company's most recently completed financial period and up to the date of this AIF; (b) other penalties or sanctions imposed by a court or regulatory body against the Company that would likely be considered important to a reasonable investor in making an investment decision; or (c) settlement agreements the Company entered into with a court relating to securities legislation or with a securities regulatory authority during the Company's most recently completed financial period and up to the date of this AIF.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than as set forth earlier in this AIF, to the knowledge of the Company, no director, executive officer, person or company that beneficially owns, or controls, or directs, directly or indirectly, more than ten percent of the Company's voting securities, or associates or affiliates of the foregoing, has had any material interest, direct or indirect, in any transactions in which the Company has participated within the three most recently completed financial years or in the current financial year prior to the date of this AIF, which has materially affected or is reasonably expected to materially affect the Company:

TRANSFER AGENTS AND REGISTRARS

The Registrar and Transfer Agent for the common shares in British Columbia is Computershare Investor Services Inc., at its offices at 4th Floor, 510 Burrard Street, Vancouver, British Columbia, V6C 3B9.

MATERIAL CONTRACTS

The only material contracts, which the Company or its subsidiaries have entered into in the last financial year, or previously if still in effect, other than in the ordinary course of business, are as follows:

(i) Promissory Note dated December 30, 2017 issued to Star Mountain with respect to the Acquisition in the principal amount of $2,000,000 payable in four quarterly installments of $500,000 each. The Promissory Note was subsequently amended to defer the third instalment due on September 30, 2017 to the earlier of (a) five days from the date of the Company's IPO and (b) October 31, 2017.

(ii) Share Purchase Agreement dated December 30, 2017 with respect to the Acquisition – see Three year History earlier in this AIF for more information.

(x) Underwriting Agreement dated October 12, 2017 with Scotia Capital, Cannacord Genuity, National Bank Financial and PI Financial Corp to underwrite the public sale of 35,750,000 common shares of the Company at $1.40– see Three year History earlier in this AIF for more information.

(xi) Letter Agreement dated December 30, 2016 with Hudbay providing a further option for payment with respect to the amounts owing pursuant to Star Mountain's original acquisition. On August 17, 2017 this agreement was amended to extend the date for the payment of the $5 million cash to October 31, 2017. See Three year History earlier in this AIF for more information.

Copies of the material contracts set out above are available under the Company's profile on SEDAR at www.sedar.com.

INTERESTS OF EXPERTS

The following are names of persons or companies (a) that have prepared or certified a report, valuation statement or opinion described or included in a filing, or referred to in a filing made under NI 51-102 by the Company during, or relating to, the Company's most recently completed financial period and (b) whose profession or business gives authority to the report, valuation statement or opinion made by the person or company:

Each of Garett Macdonald, Michael Makarenko, Matt Moss and Indi Gopinathan, Michel Creek, Allan Reeves and Robert Raponi, being an author of the Technical Report, is a "qualified person" for the purposes of NI 43-101. Each such qualified person has reviewed certain scientific and technical information relating to certain of Titan Mining's mineral properties as more fully described in this AIF or has supervised the preparation of information upon which such scientific and technical information is based as detailed in the Technical Report. None of such persons received or will receive a direct or indirect interest in any property of Titan or any of its associates or affiliates.

Keith Boyle, P. Eng., Chief Operating Officer of the Company, a qualified person for the purposes of NI 43-101, has reviewed and approved the scientific and technical information contained in or incorporated by reference in this AIF. Mr. Boyle is an officer of the Company. Mr. Boyle has not received and will not receive a direct or indirect interest in any property of the Company or any of its associates or affiliates. As of the date of this AIF, Mr. Boyle owns, beneficially, directly or indirectly, 70,000 common shares of the Company and 750,000 stock options, each to acquire one common share of the Company.

The auditors of the Company are Ernst & Young, LLP, Chartered Professional Accountants, of Vancouver, British Columbia. Ernst & Young, LLP, has advised the Company that it is independent within the meaning of the CPA Code of Professional Conduct.

As of the date hereof, to the best of the Company's knowledge, the experts beneficially own, directly or indirectly, less than 1% of the outstanding securities of the Company and have no other direct or indirect interest in the Company or any of its associates or affiliates. Other than Mr. Boyle, none of the experts is or is expected to be elected, appointed or employed as a director, officer or employee of the Company or of any associate or affiliate of the Company.

AUDIT COMMITTEE INFORMATION

Multilateral Instrument 52-110 – Audit Committees ("MI 52-110") requires companies to provide disclosure with respect to their audit committee including the text of the audit committee's charter, the composition of the audit committee and the fees paid to the external auditor.

The text of the audit committee's charter is attached as Schedule "A" to this AIF.

For the year ended December 31, 2017, the Company's audit committee consisted of Ms. Parikh and Messrs. Boggio and Clark. All are independent and financially literate as defined in MI 52-110. The Audit Committee did not hold any meetings during the year ended December 31, 2017.

The following is a description of the education and experience of each member of the audit committee during the year ended December 31, 2017 that is relevant to the performance of their responsibilities as an audit committee member.

Lenard Boggio (Chair of Audit Committee) - Mr. Boggio was formerly a partner of PricewaterhouseCoopers LLP ("PwC") where he served for more than 30 years until his retirement in May 2012. During that time he was Leader of the B.C. Mining Group of PwC, a senior member of PwC's Global Mining Industry Practice and an auditor of Canadian, United States, U.K. and other internationally listed mineral resource and energy clients. Since his retirement from PwC, Mr. Boggio has served as an independent director for several publicly listed corporations. Mr. Boggio is a Fellow of the Chartered Professional Accountants of Canada (FCPA, FCA) and has served as president of the British Columbia Institute of Chartered Accountants and chairman of the Canadian Institute of Chartered Accountants.

Purni Parikh – Ms. Parikh has 27 years of experience in business administration. She has a Certificate in Business from the University of Toronto and has 25 years' experience working with public companies in the areas of legal and regulatory administration, corporate finance, governance and investor relations. In addition, Ms. Parikh has completed governance and board related course work at Harvard Business School. Ms. Parikh is also an Accredited Director with Acc. Dir. certification.

Gregory Clark – Mr. Clark worked as a Licensed Aircraft Technician in the Heavy Maintenance Deptartment for Canadian Airlines and then Air Canada. He holds a Transport Canada Aircraft Maintenance Engineer License.

Pre-Approval Policies and Procedures

The audit committee has not adopted any specific policies and procedures for the engagement of non-audit services. However, under its charter, the audit committee must approve all non-audit services to be provided to the Company or its subsidiaries by the Company's external auditors.

External Auditor Service Fees

The following table sets forth the fees billed to the Company by Ernst & Young, LLP, Chartered Professional Accountants in the last two fiscal periods for services rendered:

Fiscal Period	**Audit Fees**(1) C$	**Audit Related Fees**(2) C$	**Tax Fees** C$	**All Other Fees**(3) C$
December 31, 2017	$66,000	$0	$0	$57,500
December 31, 2016	$0	$0	$0	$0

(1) Aggregate fees billed by the Company's auditors for audit and review services.
(2) Aggregate fees billed by the Company's auditors for assurance and related services that are reasonably related to the performance of the audit or review of the Company's financial statements and not contained under "Audit Fees".
(3) Aggregate fees billed by the Company's auditors for services not contained "Audit Fees", "Audit Related Fees" or "Tax Fees".

ADDITIONAL INFORMATION

Additional information about the Company may be found on SEDAR at www.sedar.com.

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities, and securities authorized for issuance under equity compensation plans, where applicable, will be contained in the Company's information circular for the annual meeting of shareholders involving the election of directors.

Additional financial information is provided in the Company's consolidated financial statements and management discussion & analysis for its most recently completed financial year.

Titan Mining Corporation
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Telephone: 604-687-1717 - Facsimile: 604-687-1715
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SCHEDULE "A"

TITAN MINING CORPORATION
(the "Company")

AUDIT COMMITTEE

CHARTER

The Audit Committee (the "Committee") is a committee of the Board of Directors (the "Board") of Titan Mining Corporation (the "Company") to which the Board delegates its responsibilities for the oversight of the accounting and financial reporting process and financial statement audits.

The Committee will:

(a) review and report to the Board on the following before they are published:

   (i) the financial statements and MD&A (management discussion and analysis) (as defined in National Instrument 51-102) of the Company;

   (ii) the auditors' report, if any, prepared in relation to those financial statements; and

   (iii) all other filings with regulatory authorities and any other publicly disclosed information containing the Company's financial statements, including any certification, report, opinion or review rendered by the independent accountants, and all financial information and earnings guidance intended to be provided to analysts and the public or to rating agencies, and consider whether the information contained in these documents is consistent with the information contained in the financial statements.

(b) review the Company's annual and interim earnings press releases, if any, before the Company publicly discloses this information;

(c) satisfy itself that adequate procedures are in place for the review of the Company's public disclosure of financial information extracted or derived from the Company's financial statements and periodically assess the adequacy of those procedures;

(d) recommend to the Board the external auditor to be nominated for the purposes of preparing and issuing an auditor's report or performing other audit, review or attest services for the Company and the compensation of such external auditor;

(e) be directly responsible for overseeing the work of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Company, including the resolution of disagreements between management and the external auditor regarding financial reporting;

(f) monitor and report to the Board on the integrity of the financial reporting process and the system of internal controls that management and the Board have established;

(i) establish procedures for:

(i) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls, or auditing matters; and

(ii) the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters.

(j) pre-approve all non-audit services to be provided to the Company or its subsidiary entities by the Company's external auditor, including as contemplated by National Instrument 52-110;

(k) review and approve the Company's hiring of partners, employees and former partners and employees of the external auditor of the Company;

(l) with respect to ensuring the integrity of disclosure controls and internal controls over financial reporting, understand the process utilized by the Chief Executive Officer and the Chief Financial Officer to comply with National Instrument 52-109;

(m) review any changes proposed by management to accounting policies and report to the Board on such changes;

(n) oversee the opportunities and risks inherent in the Company's financial management and the effectiveness of the controls thereon;

(o) review major transactions (acquisitions, divestitures and funding), in respect of which a special committee of the Board is not established;

(p) review the reports of the Chief Executive Officer and Chief Financial Officer regarding any significant deficiencies or material weaknesses in the design of operation of internal controls and any fraud that involves management or other employees of the Company who have a significant role in managing or implementing the Company's internal controls and evaluate whether the internal control structure, as created and as implemented, provides reasonable assurances that transactions are recorded as necessary to permit the Company's external auditor to reconcile the Company's financial statements in accordance with applicable securities laws;

(q) review with management the adequacy of the insurance and fidelity bond coverage, reported contingent liabilities, and management's assessment of contingency planning. Review management's plans regarding any changes in accounting practices or policies and the financial impact of such changes, any major areas in management's judgment that have a significant effect upon the financial statements of the Company, and any litigation or claim, including tax assessments, that could have a material effect upon the financial position or operating results of the Company;

(r) periodically review and discuss with the external auditor all significant relationships the external auditor has with the Company to determine the independence of the external auditor, including a review of service fees for audit and non-audit services; and

consider, in consultation with the external auditor, the audit scope and plan of the external auditor and approve the proposed audit fee and the final fees for the audit.

Composition of the Committee

The Committee shall be composed of at least three independent directors. Independence of the Board members will be as defined by applicable legislation and as a minimum each committee member will have no direct or indirect relationship with the Company which, in the view of the Board, could reasonably interfere with the exercise of a member's independent judgement.
All members of the Committee must be financially literate or must become financially literate within a reasonable period of time after his or her appointment to the Committee. "Financial literate" means that such member has the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company's financial statements. One or more members of the Committee shall, in the judgment of the Board, have accounting or financial management expertise.

Appointing Members

The members of the Committee shall be appointed or re-appointed by the Board on an annual basis. Each member of the Committee shall continue to be a member thereof until such member's successor is appointed, unless such member shall resign or be removed by the Board or such member shall cease to be a director of the Company. Where a vacancy occurs at any time in the membership of the Committee, it may be filled by the Board and shall be filled by the Board if the membership of the Committee is less than three directors as a result of the vacancy or the Committee no longer has a member who has, in the judgment of the Board, accounting or financial management expertise.
Authority

The Committee has the authority to engage independent counsel and other advisors as it deems necessary to carry out its duties and the Committee will set the compensation for such advisors.

The Committee has the authority to communicate directly with and to meet with the external auditors and the internal auditor, without management involvement. This extends to requiring the external auditor to report directly to the Committee.

The Committee has the authority to approve, if so delegated by the board of directors, the interim financial statements and management discussion and analysis and to cause the filing of the same together with all required documents and information with the securities commissions and other regulatory authorities in the required jurisdictions.

The Committee shall have full access to the books, records and facilities of the Company in carrying out its responsibilities.

The Board shall adopt resolutions which provide for appropriate funding, as determined by the Committee, for (i) services provided by the external auditor in rendering or issuing an audit report, (ii) services provided by any adviser employed by the Committee which it believes, in its sole discretion, are needed to carry out its duties and responsibilities, or (iii) ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out its duties and responsibilities.

Reporting

The reporting obligations of the Committee will include:

1. reporting to the Board on the proceedings of each Committee meeting and on the Committee's recommendations at the next regularly scheduled directors meeting; and

2. reviewing, and reporting to the Board on its concurrence with, the disclosure required by Form 52-110F2 in any management information circular prepared by the Company.

Meetings

The time and place of meetings of the Committee and the procedure at such meetings shall be determined from time to time by the members thereof provided that:

- *A quorum for meetings shall be at least a majority of the members of the Committee, present in person or by telephone or other telecommunication device that permit all persons participating in the meeting to speak and hear each other;*
- *The Committee shall meet at least quarterly (or more frequently as circumstances dictate); and*
- *Notice of the time and place of every meeting shall be given in writing or facsimile communication to each member of the Committee and the external auditors of the Company at least 48 hours prior to the time of such meeting.*

While the Committee is expected to communicate regularly with management, the Committee shall exercise a high degree of independence in establishing its meeting agenda and in carrying out its responsibilities. The Committee shall submit the minutes of all meetings of the Committee to, or discuss the matters discussed at each Committee meeting with, the Board.

The members of the Committee must elect a chair from among the members of the Committee. On request of the auditor of the Company, the chair of the Committee must convene a meeting of the Committee to consider any matter that the auditor believes should be brought to the attention of the directors or shareholders.

Approved by the Board of Directors of
Titan Mining Corporation on June 1, 2017