ANNUAL INFORMATION FORM

For the Year Ended December 31, 2020

Dated: March 23, 2021

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PRELIMINARY NOTES

This Annual Information Form ("**AIF**") takes into account information available up to and including December 31, 2020 unless otherwise indicated. Throughout this document the terms "**we**", "**us**", "**our**", the "**Company**" and "**Titan Mining**" refer to Titan Mining Corporation.

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, 2020.

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 nature and extent of future exploration and testing at ESM and Mineral Ridge; that additional metallurgical test work will be completed on material collected from the Company's 2020 exploration program after all analytical results are received; that Titan believes that the district surrounding ESM remains underexplored despite the long operating history of ESM; that there is potential for significant resource expansion which is expected to support production growth; that other historic mines and new targets within the district will be a focus for Titan's exploration team; that increased productivities and improved operating costs are expected to continue into 2021 and have better positioned the mine for future success; that the completion of the revised mine plan, incorporating the higher-grade New Fold zone in the #4 mine and near-mine Hoist House, Turnpike and Pumphouse potential open pits in early 2021 will guide Titan's capital investment decisions for the underground and open pit projects at ESM; that Titan's plan for Mineral Ridge is to continue its exploration to an investment decision on the exercise of the Earn-in Option or Purchase Option; that the Company continues to examine various financing options to bolster the Company's treasury; Mineral Resource and Mineral Reserve estimates; and results from economic analyses on ESM and Mineral Ridge.

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. The Company has made assumptions based on or related to many of these risks, uncertainties and factors. 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; assumptions as to mining dilution; assumptions as to closure costs and closure requirements; environmental risks; unanticipated reclamation expenses; unexpected variations in quantity of mineralized material, grade or recovery rates; geotechnical or hydrogeological considerations during mining being different from what was assumed; changes to assumptions as to salvage values; ability to maintain the social license to operate; changes to interest rates; changes to tax rates, including federal, state and county income and property tax rates; and the factors discussed in the section entitled "Risks Factors" 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.

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 under the Company's profile on SEDAR at www.sedar.com.

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

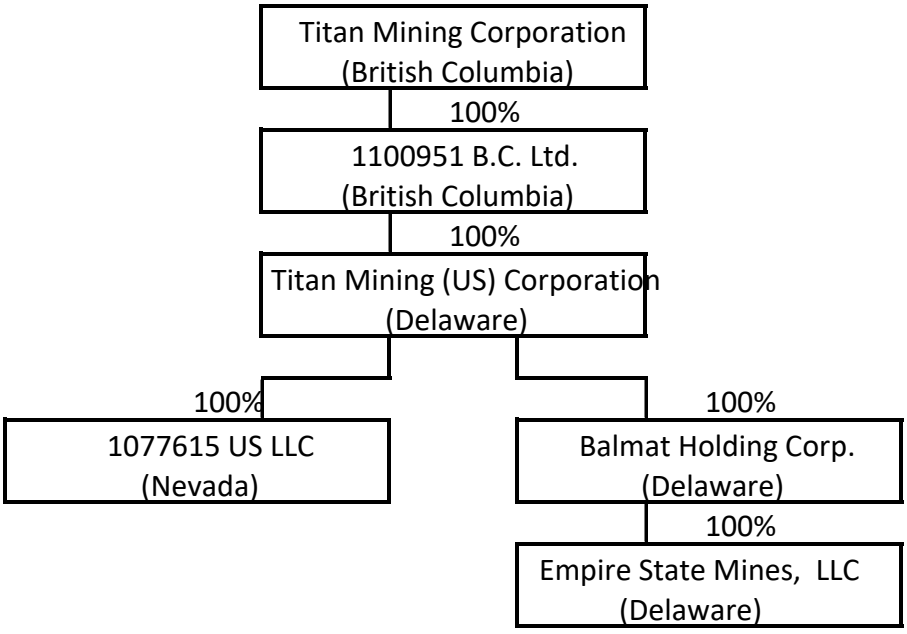
At the date of this AIF the Company's head office is located at Suite 555 – 999 Canada Place, Vancouver, British Columbia, V6C 3E1 and its the registered office is located at Suite 2900, 550 Burrard Street, Vancouver, BC V6C 0A3.

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.

Intercorporate Relationships

The following chart identifies Titan Mining's subsidiaries (including jurisdiction of formation or incorporation of the various entities). Except for 1077615 US LLC, all subsidiaries are material subsidiaries.



GENERAL DEVELOPMENT OF THE BUSINESS

Titan Mining is a natural resource company engaged in the acquisition, exploration, development and production of mineral properties. The Company's principal asset is its indirect ownership interest (as illustrated in the chart above) of Empire State Mines, LLC, which owns a group of high-grade zinc minesin St Lawrence County, New York. These past-producing operations include Empire State Mine's #2, #3, #4, Hyatt, Pierrepont and Edwards mines (collectively referred to as "**ESM**" or the "**Empire State Mine**"), which had been on care and maintenance since 2008. The Company indirectly acquired ESM on December 30, 2016 as part of its acquisition of 100% of the issued and outstanding shares of Balmat Holdings Corp.

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 its acquisition of ESM.

Operations at the Empire State Mine

On January 30, 2018, the crusher, hoist and mill at ESM were commissioned and hoisting of ore begun on schedule and budget.

On February 26, 2018, the Company concluded an off-take agreement with Glencore for 100% of the zinc concentrate from ESM.

On April 10, 2018, the Company updated the mineral resource at ESM's #4 mine and on May 24, 2018 filed an updated preliminary economic analysis.

On June 12, 2018, the Company officially opened ESM. Average mill throughput at ESM ramped up steadily from 443 tons per day ("**tpd**") when milling commenced in March 2018, at a grade of 10.4% zinc, 776 tpd in May 2018 at a grade of 8.1% zinc and a recovery rate of 93.7%, showing a strong uptick

in monthly performance. The Company also announced positive results from its 2018 exploration program at ESM. The ongoing review of historic data at the mine led to the identification of two new zones – the #2D zone, immediately below the historic #2 mine, and the NE Streeter zone located less than a mile to the east of the #4 shaft. The #2D and NE Streeter zones, and the previously-known #1D zone, which is immediately below the historic #1 mine will be tested for down-plunge extensions.

On November 14, 2018, the Company announced that the #2D zone, an extension of the large #2 mine which accounted for about half of the tons mined historically at ESM, was growing. This zone has the potential to add significant high-grade tonnage to the mine plan, with low capital costs given its proximity to the existing #4 shaft and historic infrastructure.

Production at ESM was impacted in the third and into the fourth quarter of 2018 mainly due to the mining contractor. As a result a transition from contractor to owner mining was completed.

On January 16, 2019, the Company provided an update on its exploration program at ESM. Exploration drilling expanded the #2D mineralized zone 1,380 feet down-plunge to the northeast and laterally.

On February 21, 2019, the Company announced that, as part of the optimization of the Empire State Mine, the operation was being restructured with a near-term focus on underground development as well as continued near-mine and district exploration.

District exploration targeted Cronus, Talcville and Edwards during the first quarter of 2019. A total of 28,398 feet of drilling was completed before drilling was placed on hold for the remainder of the year. Results from the district targets was being utilized to further refine district targets for future exploration drilling.

On April 1, 2019, the Company provided an update on its exploration program at ESM. The near-mine surface targets Hoist House, Turnpike and Pumphouse were drilled indicating the potential of open pit material to be mined to feed to the under-utilized mill at ESM.

On November 21, 2019, the Company announced the results from surface drilling at ESM. The drill program focused on two recently-identified near-surface zinc targets. The Hoist House zone was interpreted as an extension of the large #2 mine, which accounted for approximately half of the tons mined historically at ESM, and the Turnpike zone as an extension of the historic #1 mine. A total of 36 holes totaling 8,149 feet were drilled at Hoist House and 26 holes totaling 9,033 feet were drilled at Turnpike during the fourth quarter of 2019. Results indicated that the near surface mineralization extends from surface to a depth of approximately 300 feet and had the potential to be sourced by open-pit mining and provide low-cost incremental feed to the under-utilized mill at ESM.

During 2019 underground drilling focused on advancing definition drilling in both New Fold and #2D using ESM underground drills and labour. A total of 60 holes totaling 22,096 feet were drilled during the year, including 19 holes and 4,624 feet in the fourth quarter of 2019. Mineralization in both these zones continued to define longhole stope mineralization scheduled for production in 2020. Production drilling on the first block of #2D mineralization commenced in the fourth quarter as anticipated.

On January 14, 2020 and March 3, 2020, the Company announced drill results of three new zones of near-surface mineralization at ESM. The three near-surface mineralized zones (Hoist House, Turnpike and Pumphouse) have the potential to be extracted by open-pit mining methods to provide low-cost incremental feed to the under-utilized mill at ESM. Permitting related to the potential open pits will require a modification to the Mine Land Use Plan ("**MLUP**") and mine permit. Open pit mining is contemplated within the existing MLUP whereby pit development could commence following New York

State Department of Environmental Conservation approval of modifications to the MLUP and mine permit. Additionally, areas subject to disturbance of reclaimed lands that have been released from bonding may require the modification to be reviewed under the State Environmental Quality Review Act, which could affect timing of permit issuance. Further amendments of the Water Withdrawal and Stormwater Pollution Discharge Elimination System permits may be required subject to further review of the Company's existing allowances under such permits.

On October 6, 2020, the Company provided an update on its drilling programs at ESM. The Company reported that underground drilling intersected high-grade zinc mineralization in the Mahler zone that will add to the resource and ultimately enhance ESM's production profile.

Drilling resumed at the end of the third quarter at the Farm to Market target where two holes were completed and a third hole was collared for a total of 9,200 feet drilled. Drilling on this target continued during the first quarter of 2021. Additional high priority regional and near mine targets will be the focus of the 2021 exploration drilling program. Approximately 30,000 feet of drilling has been budgeted for this program.

Mineral Ridge Option Agreement

On August 31, 2020, the Company announced the signing of an Option Agreement (the "**Mineral Ridge Agreement**") on the Mineral Ridge property located in Esmeralda County, Nevada (the "**Mineral Ridge Property**") from Scorpio Gold Corporation ("**Scorpio Gold**") through its US affiliates. Terms of the Mineral Ridge Agreement require Titan to spend US$35 million in staged expenditures over a period of 5 years (the "**Option Term**") to earn 80% ownership interest (the "**Earn-in Option**") in Mineral Ridge Gold LLC ("**MRG**"), an indirect subsidiary of Scorpio Gold which currently holds all of the mineral rights and water rights comprising the Mineral Ridge Property. In addition to the Earn-in Option, Titan will have the right to acquire 100% interest (the "**Purchase Option**") in MRG upon spending US$7 million by January 1, 2022 and making a cash payment of US$35 million on or before December 31, 2022. During the Option Term, Scorpio Gold may continue its gold recoveries from the heap leach operations on the Mineral Ridge Property for its own account with 25% of the proceeds of such operation, net of operating costs, to be held in a trust account for the benefit of Titan, subject to Titan exercising either the Earn-in Option or the Purchase Option. If Titan does not exercise the Earn-in Option or the Purchase Option, the funds in the trust account will be released to MRG.

Mineral Ridge is a fully permitted mine and mill operation comprised of approximately 14,000 acres of patented, fee-owned, and unpatented mining claims which include certain water rights. Mineral Ridge has a current Mineral Resource of 335,500[1] oz gold at an average grade of 1.10 g/t. Historically, Mineral Ridge has produced approximately 1 million ounces of gold from underground and open pit mining operations and contains a robust mineralized system that has, to date, been under-explored. In the third quarter, the Company implemented a plan to target and expand resource areas around the existing Brodie, Oromonte, Custer and Bunkhouse pit areas. Additionally, the Company will test the Chieftain and Solberry targets which have been prioritized based on their geologic setting and anomalous gold-in-outcrop samples.

[1] Includes Measured Mineral Resources of 155,200 oz of 2.55 g/t gold and Indicated Mineral Resources of 180,300 oz of 0.74 g/t gold. Mineral Resources are quoted inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Refer to the "Mineral Ridge" section of this Annual Information Form for additional information.

The Company commenced drilling in the fourth quarter of 2020 with two drills. A total of 33 holes totaling 23,521 feet were drilled testing six target areas (Oromonte, Brodie SE, Bluelite, Solberry, Chieftain and Custer). Drilling continued during the first quarter of 2021 completing an additional ten holes. In addition, the Company is conducting several metallurgical tests on heap leach material, collected in 2017 by Scorpio Gold, to confirm historic metallurgical results. Additional metallurgical test work will be completed on material collected from the Company's 2020 exploration program after all analytical results are received.

Financings

On November 30, 2017, the Company signed a commitment letter for a senior secured credit facility with the Bank of Nova Scotia for up to $15 million (the "**BNS Credit Facility**"). The transaction closed on April 19, 2018. The BNS Credit Facility will be available to the Company on a revolving basis, up to maximum amounts as follows: $5,000,000 on closing until first shipment (completed); $10,000,000 from first shipment until commercial production (as defined in the credit agreement); and $15,000 on and after commercial production. The Company can choose to pay interest equal to either LIBOR plus 4.0% - 4.5% or the Lender's base rate plus 3.0% to 3.5%. The Company is also required to pay a standby fee ranging from 0.6% to 1.2% on the unadvanced portion of the Credit Facility. The maturity date is April 3, 2020.

The BNS Credit Facility is subject to covenants that require the Company to maintain interest coverage ratio of not less than 4.0 to 1.0; total leverage ratio of not more than 2.5 to 1; and tangible net worth of an amount greater then or equal $30 million plus 50% of consolidated net income. Effective August 7, 2018, the BNS Credit Facility agreement was amended to reflect that the financial covenants related to interest coverage and leverage ratios under the original agreement are not applicable for periods prior to September 30, 2018.

On September 30, 2018, the Company was in default of its interest coverage and total leverage ratios. In December 2018, the Bank of Nova Scotia waived the aforesaid events of default and consented to the Related Party Loan (defined below) from a company controlled by the Executive Chairman of the Company provided it is subordinate to the Bank of Nova Scotia's Credit Facility.

On November 30, 2018, the Company and its subsidiaries as guarantors and a company (the "**Lender**") controlled by the Executive Chairman of the Company, entered into a second ranking secured credit facility (the "**Related Party Loan**") of up to $18.7 million, maturing in December 2020. $3.7 million of such facility bears interest at 8% per annum with the remaining $15.0 million accruing interest at a floating rate equal to 7% plus the greater of (i) LIBOR and (ii) 1%, per annum, and matures on December 21, 2020. The Related Party Loan is a non-revolving, and any repayment under the facility shall not be re-borrowed.

Pursuant to the Related Party Loan, the Company agreed to issue to a company controlled by the Executive Chairman of the Company an aggregate of 2,500,000 warrants (the "**Warrants**") with each Warrant being exercisable for one common share of the Company for a period of five years, at an exercise price of Cdn$1.40.

On December 31, 2018, the Company was in default of the tangible net worth covenant under the BNS Credit Facility.

On January 21, 2019, the Company and the Bank of Nova Scotia amended the BNS Credit Facility whereby a maximum of $10,000 (the "**Available Credit**") was available to the Company on a revolving basis. Prior to March 31, 2019, the Bank of Nova Scotia was permitted to reduce the maximum amount available to $6,000, subject to the business and financial plan provided by the Company. The interest rate on the Available Credit is either LIBOR plus 4.25% or the Bank of Nova Scotia's base rate plus 3.25%,

and the standby fee is 0.8% of the unadvanced portion of the Credit Facility. If the amount available is reduced to $6,000, the interest rate changes to LIBOR plus 2.25% or the Lender's base rate plus 1.25%, and the standby fee is 0.5625% of the unadvanced portion of the BNS Credit Facility.

On May 31, 2019, the Company and the Bank of Nova Scotia further amended the BNS Credit Facility whereby the Available Credit limit continues as $10,000 and the maturity date was extended to April 3, 2021. The interest rate on the Available Credit was changed to LIBOR plus 2.25% or the Bank of Nova Scotia's base rate plus 1.25%. In addition, the financial covenant requirement on the BNS Credit Facility was removed.

On June 14, 2019, the Company issued to Ozama River Corp. ("**Ozama**"), a company controlled by the Company's Executive Chairman Richard Warke, 3,000,000 common shares of the Company and 3,000,000 common share purchase Warrants with each whole Warrant being exercisable for one common share of the Company at price of Cdn$0.50 per Share for a period of five years from the date of issuance of the Warrants in consideration for Ozama granting security over $10,000,000 owed by Company under the BNS Credit Facility.

On August 21, 2019, the Company entered into an addendum to its Related Party Loan further to which the Company borrowed an additional $1 million on the same terms as the original Related Party Loan. As such, the Related Party Loan was increased to a total of $19.7 million. Subsequent to December 31, 2019, the Company borrowed an additional $1 million on the same terms as the original Related Party Loan, increasing the total to $20.7 million.

On October 10, 2019, the Company closed a non-brokered private placement offering of 18,000,000 units at Cdn$0.35 per unit for aggregate proceeds of Cdn$6,300,000. Each unit is comprised of one common share and one-half of a common share purchase warrant. Each full warrant is exercisable into one common share of the Company at an exercise price of Cdn$0.50 per common share for a period of five year from the closing date of the private placement.

On September 24, 2020, the Company closed of a non-brokered private placement financing raising gross proceeds of Cdn$8,003,800 pursuant to which Titan issued 16,007,600 units of the Company at a price of Cdn$0.50 per unit, with each unit consisting of one common share and one-half of a common share purchase warrant. Each warrant entitles the holder to acquire one common share at a price of Cdn$0.75 for a period of three years from the closing date of the private placement.

On November 4, 2020, following shareholder approval, the TSX approved the repricing of the 2,500,000 Warrants issued to a company controlled by the Company Executive Chairman from Cdn$1.40 to Cdn$0.75 in connection with Related Party Loan. In consideration for the repricing, the Lender has agreed to extend the due date for repayment of the Related Party Loan by one additional year to November 30, 2021.

Board and Management

On August 1, 2017, the Company appointed Keith Boyle as Chief Operating Officer of the Company. Mr. Boyle ceased to be the Company's Chief Operating Officer on September 5, 2018.

On March 26, 2018, the Company appointed Michael McClelland as Chief Financial Officer replacing former interim CFO Paul Ireland (who replaced Saurabh Handa). Mr. McClelland is a chartered professional accountant and was formerly Chief Financial Officer of Bisha Mining Share Company, an operating subsidiary of Nevsun Resources Ltd. Previously, he was with Goldcorp Inc. as the Mine General Manager at Wharf Resources (now owned by Coeur Mining), and before that was Director of Finance, Canada and USA. Mr. McClelland started his career at KPMG LLP as a Senior Accountant with the mining group.

On June 26, 2018, the Company announced the election of Donald R. Taylor and Robert Wares to its Board of Directors. Mr. Taylor was the Chief Operating Officer of Arizona Mining Inc., and recipient of the Prospectors and Developers Association of Canada's ("**PDAC**") 2018 Thayer Lindsley Award for the 2014 discovery of the Taylor lead-zinc-silver deposit in Arizona. He has 30 years of mineral exploration experience with precious and base metals on five continents, taking projects from exploration to mine development. He has worked extensively for large and small cap companies, including BHP Minerals, Bear Creek Mining, American Copper and Nickel, Doe Run Resources and Westmont Mining Company. Mr. Taylor is a Licensed Professional Geologist in several eastern and western states and a qualified person as defined by National Instrument 43-101. He has a Bachelor of Science degree in Geology from Southeast Missouri State University and a Master of Science degree from the University of Missouri at Rolla. Mr. Wares ceased to be director of the Company on May 16, 2020.

On September 17, 2018, the Company announced the appointment of Donald R. Taylor as its new Chief Executive Officer, succeeding Richard Warke who continued as Executive Chairman. Mr. Taylor remained on the Board of Directors.

On October 9, 2018, the Company announced the appointment of three new directors to the Company's Board of Directors, former Speaker of the US House of Representatives, John Boehner, former Chief Executive Officer of Arizona Mining, James Gowans and investment banker, William Mulrow. Mr. Boehner served as the 53rd Speaker of the United States House of Representatives from 2011 to 2015. A member of the Republican Party, Mr. Boehner was the U.S. Representative from Ohio's 8th congressional district, serving from 1991 to 2015. He previously served as the House Minority Leader from 2007 until 2011, and House Majority Leader from 2006 until 2007. Following his career in government service, Mr. Boehner joined Squire Patton Boggs, a global law and public policy firm. Mr. Gowans has more than 30 years' experience in mineral exploration, feasibility studies, construction and operations, including at the Red Dog and Polaris mines. He was formerly President and CEO of Arizona Mining Inc., and Co-President and EVP & COO of Barrick Gold. Prior roles include Managing Director of Debswana Diamond Company (Pty) Ltd.; President & CEO of De Beers Canada Inc., COO & SVP of International Nickel Indonesia tbk PT, and EVP of Placer Dome Inc. Mr. Mulrow is a Senior Advisor at the Blackstone Group, an alternative asset manager. Previously, he was Director of Global Capital Markets at Citigroup, Inc., Managing Director of Paladin Capital Group, Senior Vice President and Head of New Product Development at Gabelli Asset Management (now GAMCO Investors), Managing Director in Corporate Finance for Rothschild Inc., and Managing Director and Head of Public Finance Banking for Donaldson, Lufkin and Jenrette Securities Corporation.

2021 Outlook

Titan's mission is to deliver extraordinary shareholder value through exploration, development and operational excellence.

Titan believes that the district surrounding ESM remains underexplored despite the long operating history of ESM. The Company is focused on discovering and developing additional high-grade, low-cost mineral resources to feed the mill at ESM. ESM's #4 mine is connected to its #2 mine, and there is potential for significant resource expansion which is expected to support production growth. Other historic mines and new targets within the district will be a focus for Titan's exploration team.

Mining and milling activities at ESM continued to ramp-up during the past year with commercial production having been declared on January 1, 2020. Increased productivities and improved operating costs are expected to continue into 2021 and have better positioned the mine for future success. The completion of the revised mine plan, incorporating the higher-grade New Fold zone in the #4 mine and

near-mine Hoist House, Turnpike and Pumphouse potential open pits in early 2021 will guide Titan's capital investment decisions for the underground and open pit projects at ESM.

Titan's plan for Mineral Ridge is to continue its exploration to an investment decision on the exercise of the Earn-in Option or Purchase Option. In addition, the Company continues to examine various financing options to bolster the Company's treasury.

DESCRIPTION OF THE BUSINESS

General

Summary - The Company is engaged in the acquisition, exploration, development and extraction of natural mineral resources. The Company's only source of revenue is from sales of zinc concentrates produced at ESM in New York State. The Company did not recognize revenue on the sales of its zinc concentrates until it reached commercial production on January 1, 2020. Other than mark-to-market adjustments relating to provisional pricing adjustments on concentrate shipments, revenue realized during the pre-commercial operating period at ESM was recorded as a credit to mineral properties, plant and equipment. The zinc concentrates produced by the Company at ESM is 100% sold to Glencore Ltd. pursuant to an off-take agreement between the Company and Glencore Ltd. dated February 26, 2018.

Titan also has an option to acquire the Mineral Ridge project in Nevada. Titan's plan for Mineral Ridge is to continue its exploration to an investment decision on the exercise of the Earn-in Option or Purchase Option in accordance with the timeframes and expenditures set out under "General Development of the Business – Three Year History – Mineral Ridge Option Agreement".

Production and Services - ESM announced commercial production on January 1, 2020. The method of production at ESM's #4 mine consists of underground mining principally through long hole stoping, sub-level drift and pillar slashing, modified or stepped room and pillar, mechanized cut and fill and sub-level drives, access, and stope cross-cut development operations. Extracted ore is trucked to a conventional crushing, milling and processing plant.

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, mining, milling, metallurgy, logistical planning and implementation of exploration and production programs as well as financing and accounting. While competitive conditions exist in the industry, and challenges in hiring at the mine site exists consistent with 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. The price of zinc is also a factor effecting the Company as it is determined by world markets over which the Company has no influence or control as further described below under 'Business Cycles'. Our competitive position is primarily determined by our costs compared to other producers throughout the world and our ability to maintain our financial integrity through metal price cycles. In addition, the mining industry is competitive, particularly in the acquisition of additional mineral reserves and resources in all phases of operation, and we compete with many companies possessing similar or greater financial and technical resources.

Business Cycles - The mining business is subject to mineral price cycles and in the case of the Company, the price of zinc. The marketability of minerals and mineral concentrates (zinc) is also affected by worldwide economic cycles. The ultimate economic viability of ESM 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 - On February 26, 2018, the Company concluded an offtake agreement with Glencore Ltd. for 100% of the zinc concentrate from ESM's #4 mine. The long-term contract commenced on January 1, 2018 with first concentrate being delivered in March 2018.

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 ESM's #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 ESM's #4 mine) and are the ongoing responsibility of Empire State Mines LLC. ESM and mine tailings reclamation is assured with a $1,662,870 certificate of deposit.

Employees – At December 31, 2020, the Company had 7 employees in its British Columbia office, 1 employee in its Toronto office, and 109 employees at ESM's #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 Option Agreement on the Mineral Ridge Property located in Esmeralda County, Nevada and an exploration project in New Mexico, USA.

Reorganization – As discussed above, on February 21, 2019 the Company announced a restructuring of its operations with a near-term focus on underground development as well as continued near-mine and district exploration.

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 Factors

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 2020 Annual Financial Statements. 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 fully comprehensive 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 production mineral property, ESM's #4 mine, was on care and maintenance since 2008 until recommencing operations in 2017. If the Company is unable to generate significant revenues from ESM's #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 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 ESM's #4 mine

The only mineral producing property the Company has is the ESM #4 mine. Because ESM's #4 mine has a limited life based on mineral resource estimates, now that the Company has re-commenced production at ESM's #4 mine, the Company will be required to replace and expand its mineral resources. In the absence of additional producing mineral projects, the Company will be solely dependent upon ESM's #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 ESM's #4 mine and increase throughput at ESM's #4 mine mill above its initially targeted rate.

Mineral Ridge options may never be exercised

In order to exercise the Earn-in Option, the Company must spend US$35 million in staged expenditures over a period of 5 years. In order to exercise the Purchase Option, the Company must spend US$7 million by January 1, 2022 and make a cash payment of US$35 million on or before December 31, 2022. There is no guarantee that exploration results will support an investment decision to exercise either option or that, even if the Company desires to exercise either option, the Company is able to raise the financing necessary to make the expenditures or payments required to exercise either option. Moreover, it is entirely possible that the Company incurs significant expenditures at Mineral Ridge and allows its interest in Mineral Ridge to lapse without achieving any return for shareholders from Mineral Ridge.

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 ESM's #4 mine. As disclosed above, substantial additional financing may also be necessary for Titan to exercise its options at Mineral Ridge. Failure to obtain sufficient financing may result in delaying or indefinite postponement of the Company's business plans. 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. This uncertainty casts doubt about the Company's ability to continue as a going concern.

Financial leverage and restrictive covenants may restrict our current and future operations

The Company and its subsidiaries have agreed to various restrictive covenants with its lenders under its existing loan agreements, including to maintain certain interest coverage and total leverage ratios, make payments of interest and principal when due, to conduct its operations subject to certain restrictions and to comply with restrictions governing current and future indebtedness.

These restrictions prohibit or limit the Company's and its subsidiaries' ability to, among other things, incur additional debt, provide guarantees for indebtedness, create liens, dispose of assets, liquidate, dissolve, wind up, or assign or surrender a material contract. These restrictions may restrict the Company's ability to refinance its existing indebtedness. If the Company defaults in respect of its obligations under any of its loan agreements, including without limitation servicing existing indebtedness, or if it is unable to refinance any such indebtedness, its lenders may be entitled to demand repayment and enforce their security against certain assets.

If there is any event of default under any of these agreements, the principal amount owing, plus accrued and unpaid interest, may be declared immediately due and payable. If such an event occurs, or if any extended default under such agreements is ongoing, it could have a material negative impact on the Company financially.

In addition, the degree to which the Company and its subsidiaries are leveraged could have important consequences to shareholders, including: (i) the Company's ability to obtain additional financing for working capital, capital expenditures, acquisitions or other project developments in the future may be limited; (ii) a significant portion of the Company's cash flows from operations may be dedicated to the payment of the principal and interest on their indebtedness, thereby reducing funds available for future operations and flexibility to take advantage of business opportunities; (iii) the Company may be unable to refinance its existing indebtedness on terms favourable to the Company, if at all, and the consequences arising therefrom; and (iv) the Company may be more vulnerable to economic downturns and be limited in its ability to withstand competitive pressures. The inability to meet these debt covenants or obtain lenders' consent to carry out restricted activities could materially and adversely affect the business and results of operations of the Company.

Ramping up mining operations

Titan declared commercial production on January 1, 2020. However, several risks remain while the Company ramps up 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 ramp up production 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 ramp up commercial production and could place Titan in a position where it has insufficient cash resources to continue mining operations, or which could result in mining operations being uneconomic.

The Company's current production projections and cost estimates for ESM's #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 ESM's #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 ESM's #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.

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.

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 ESM; 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 ESM.

Production based on mineral resources

The Company based its production decision on the results of a preliminary economic assessment 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 deeper 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 ESM Technical Report cannot be converted into measured or indicated mineral resources as there may be limited ability to assess geological continuity. Due to the uncertainty related 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 its properties 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.

Fluctuations in demand for, and prices of, zinc

As the Company's 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. ESM's #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 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 "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 ESM's #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 ESM 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 ESM's #4 mine will need to be raised to fully contain the estimated tonnage for ESM's#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 ESM's #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

ESM's #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 ESM's #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 ESM's #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 commenced 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.

Global Outbreaks and Coronavirus

The Company's business could be significantly adversely affected by the effects of any widespread global outbreak of contagious disease. A significant outbreak of contagious diseases in the human population could result in a widespread health crisis that could adversely affect the economies and financial markets of many countries, resulting in an economic downtown that could affect demand for the Company's products and likely impact operating results. In particular, the recent outbreak of the novel coronavirus ("**COVID-19**") has had a negative impact on the Company's business and global financial conditions. The Company cannot accurately predict the impact COVID-19 will have on the Company to obtain financing or third parties' ability to meet their obligations with the Company, including due to uncertainties relating to the ultimate geographic spread of the virus, the severity of the disease, the duration of the outbreak, and the length of travel and quarantine restrictions imposed by governments of affected countries. In the event that the prevalence of the coronavirus continues to increase (or fears in

respect of the coronavirus continue to increase), governments may increase regulations and restrictions regarding the flow of labour or products, and travel bans, and the Company's operations, suppliers, customers and distribution channels, and ability to advance its projects, could be adversely affected. In particular, should any employees or consultants of the Company become infected with COVID-19 or similar pathogens, it could have a material negative impact on the Company's operations and prospects.

EMPIRE STATE MINE

The following information on ESM is the Summary exactly as included in and extracted from the Technical Report titled "Empire State Mines 2021 NI 43-101 Technical Report" with an effective date of February 24, 2021 (the "**ESM Technical Report**"). The ESM Technical Report is incorporated by reference herein and available on the Company's profile on SEDAR.

1.1 Introduction

AMC Mining Consultants (Canada) Ltd. (AMC) has been engaged by Titan Mining Corporation (Titan) to update the current National Instrument 43-101 (NI 43-101) Technical Report for the Empire State Mine (ESM) operation. This technical report was prepared following the guidelines of NI 43-101.

In September 2017 JDS Energy and Mining Inc. (JDS) prepared a Preliminary Economic Assessment (PEA) for St. Lawrence Zinc Company, LLC (SLZ) a wholly owned subsidiary of Titan. The purpose of that study was to provide a Mineral Resource estimate with mine plan and economics for SLZ's ESM. Subsequently JDS prepared an update to the Technical Report in May 2018 to report increased Mineral Resources and updated mine plan.

SLZ owns the Balmat No. 4 Underground Zinc Mine (the Mine) which is now known as ESM No. 4 Mine or #4 Mine. 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.

The key difference between this Technical Report (2021 PEA) and the PEA completed in 2018 (2018 PEA) is the consideration of near surface Mineral Resources to be extracted by open pit mining. The 2021 PEA considers the economic impact of both underground and open pit mining to be processed through the existing process plant. Some adjustments are planned to include a lead concentrate circuit to treat lead mineralization from the proposed open pits.

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

Throughout this report, words such as orebody, ore shaft and fine ore bins have been used; these refer to standard terms and do not imply the confirmed presence of Mineral Reserves.

1.2 Project description

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 were maintained to good standards during the 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 utilizes a combination of selective longhole stoping, modified or stepped room and pillar and mechanized Cut and Fill as mining methods. 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). The proposed mine plan is expected to reach an initial target production rate of 1,400 t/d for 2021 and ramp up to 1,800 t/d in 2022 for the combined open pit and underground mines. The overall mine life is projected to be seven years with open pit mining completed in year three.

Tailings are being 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 and Dam Safety.

The ultimate capacity of the 260-acre footprint has been estimated at 20 million tons (Mt), with immediate capacity of 2.7 Mt, before further embankment construction will be needed. Tailing and waste rock materials at the TMF are non-acid generating due to the high carbonate content of the host rocks. Volunteer vegetation is evident and continues to naturally revegetate inactive areas of the TMF.

1.3 Location, access, and ownership

ESM is located approximately 1.3 mi south-west 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 totalling 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 totalling 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 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.

Cabo was contracted to drill underground in 2018 to 2019 and Boart Longyear was contracted for all surface programs in 2018 to 2020. Prior to ESM's 2018 to 2020 surface and underground drill programs, the drillhole database contained 4,342 drillholes completed at various times in the project's history within the Balmat area. ESM has subsequently added 4,050 historic drillholes to the database through the digitization of original log scans. Drilling during 2018 to 2020 consisted of both surface and underground holes. A total of 128 surface holes and 110 underground holes were drilled in the #2 and #4 Mines as well as near the historic No. 1 and No. 2 shafts, with an aggregate total of 194,755 feet (ft).

The Balmat mine (now ESM) has produced a total of 33.8M tons 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
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 2018.

1.5 Geology and mineralization

ESM is comprised of multiple deposits in and around Fowler, NY. There are ten deposits currently considered as viable economic targets; American, Cal Marble, Davis, Fowler, Mahler, Mud Pond, N2D, Northeast Fowler, New Fold, and Sylvia Lake. Historic mining at these locations has provided a good geological understanding of each, with supporting mapping, sampling, and drilling data.

This Mineral Resource report has been created through a collaboration between ESM and SRK and has been prepared under the Canadian NI 43-101 guidelines. A comprehensive re-modelling effort was undertaken by ESM in 2018 using Leapfrog Geo for all geological models. Mining and grade control experience by ESM geologists have supported that the implicit modelling of the mineralized zones as veins in Leapfrog Geo, results in more accurate geological wireframes.

The 2017 Mineral Resources were in seven mineralized zones between 1,400 ft and 5,500 ft below surface in the #4 Mine; these zones are known as: Mud Pond, Mahler, New Fold, NE Fowler, Davis, Sylvia Lake, and Cal Marble. 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 20° and 35°, with local variations from 10° to 90°. 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. For 2018, follow-up work focused upon the remnant and / or unmined portions in the #2 Mine and #3 Mine areas.

The Balmat-Edwards district deposits are similar to Mississippi Valley-type resources that were deposited in flat lying limestones and subsequently metamorphosed and folded. The mineralized zones are elongated parallel to ancient shorelines and were deposited in porous host rocks. 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.

The 2005 metallurgical test results, and operational results from 2006 to 2008, support a zinc recovery of 96% and a zinc concentrate grade of 58% for the underground operations.

ESM recently discovered two new zones of near-surface mineralization near the existing operation. Metallurgical test work was undertaken on the samples from the new zones to determine the process flowsheet for treating them to produce both lead / silver and zinc concentrates.

The primary objective of the test work undertaken at Resource Development Inc. (RDi) in 2020 was to determine if the ores from the Turnpike and Hoist House prospects can be processed in the existing circuit with minor modifications to produce both lead and zinc concentrates.

Approximately 121 pounds (lbs) or 55 kgs of each sample, some half core samples and existing mill feed samples were sent to RDi for metallurgical test work which consisted of Bond's Mill Work Index and abrasion index determination and flotation test work. Reagents, currently employed in the milling circuit at the mine, were also sent for the study.

The conclusions drawn based on the scoping level study undertaken by RDi were that the recently discovered prospects could be processed using sequential flotation process to produce separate lead and zinc concentrate. Mineralization form Turnpike and Hoist House prospects are slightly harder than the current ore being processed in the plant. The lead recovery and concentrate grade are dependent on the feed grade of the ore. The higher the feed grade, the higher the final concentrate recovery and grade.

Due to the low feed lead grade, one would require a large amount of mineralization to run a locked-cycle test. Since limited ore was available, the optimization can be done once new flotation cells for the lead circuit are incorporated into the flowsheet.

1.7 Mineral Resource estimates

Drillhole database

The drillhole database was provided to SRK through the current Vulcan projects for each zone. Assays and associated composites were extracted from drillholes that were used in estimation, of which there were 1,622 in total.

The complete database for ESM consists of 8,678 surface or UG core holes. There are 68 sets of channel samples, 1,728 surface core holes, 6,872 UG core holes, and 10 core holes identified as other (including monitoring wells). Smaller subsets of this database were used for geologic modelling and / or estimation on a lithological unit basis. Each lithological group was modelled separately in isolated geological and estimation projects.

Geologic model

The ten deposit zones were defined and modelled by ESM geologists. Each one is comprised of multiple veins designating variably oriented and spatially-distinct mineralized zones which were modelled using combinations of explicit and implicit methods. Input data for these models are based on drilling intercepts and years of surface and underground mapping. Some wireframes for these zones were modelled using GEMS software from 2008 - 2017 and have subsequently been modified as new information has become available and modelling software has changed.

All new geological modelling in 2019 - 2020 was conducted in Leapfrog Geo. Each zone has been analyzed and divided where appropriate to facilitate a more accurate estimation of grade. SRK notes that, in some cases, this has resulted in splitting of domains based on morphology or orientation for the purposes of estimation. Mud Pond has been separated into a main zone and an upper Apron lens of mineralization as well, but for the purposes of this report will be discussed collective as Mud Pond. Updates periods for modelling are summarized in Table 1.2.

Table 1.2 Update periods for geological modelling

Zone	Years modelled and updated
American	2019
Cal Marble	2009, 2017, 2019
Davis	2017, 2019
Fowler	2019
Mahler	2009, 2017, 2019
Mud Pond	2008, 2009, 2017, 2019
N2D	2019
New Fold	2009, 2017, 2020
Northeast Fowler	2017, 2019
Sylvia Lake	2017, 2019

Source: ESM 2020.

Block model

Separate block models were created for each zone. The parameters for each consist of origins, rotations (in Maptek rotation convention), parent block parameters and associated sub-block parameters.

Historical mine workings, or as-built solids, were used for sub-blocking during model creation and mined blocks contained in these wireframes were removed from the estimated material. A comprehensive as-built wireframe was updated as of 1 October 2020 and utilized to deplete tonnage within the block models.

Due to the high variability of the ESM deposits and the lack of robust variography, inverse distance squared estimates were used to estimate grade into parent blocks within the block model. The control of each estimate was based on sample selection criteria such as, minimum and maximum number of composites, minimum number of drillholes, and search distances. For each pass, the search distances were either isotropic (spherical) or anisotropic (ellipsoidal) depending on the geometric control and limits in each vein. For isotropic searches, the geometry of the vein was considered adequate to control sample selection. For anisotropic searches, the direction was defined using a variable orientation algorithm in Vulcan called Locally Varying Anisotropy (LVA). This oriented the search ellipse for each block down a plane which paralleled the modelled geologic continuity (i.e., the hangingwall or footwall of the ESM veins). LVA parameters were defined as the mid-point between the vein bounding surfaces, or manually set based on a triangulated surface.

Underground Mineral Resources have been modelled (Leapfrog Geo) and estimated (Maptek Vulcan) by ESM geologists and reviewed for consistency with industry standards by SRK. In some cases, SRK participated in classification or refinement of the estimates based on this review. Matthew Hastings of SRK Consulting (U.S.) Inc. is the Qualified Person (QP) who has reviewed the geological models and estimates and has conducted multiple site inspections. Mineral Resources for the underground Number 4 mine areas have been compiled from ten separate block models including the American, Cal Marble, Davis, Fowler, Mahler, Mud Pond, Number 2 Deeps, North East Fowler, New Fold, and Silvia Lake areas (Table 1.3).

Table 1.3 Underground Mineral Resource estimate as of 1 October 2020

Category	Tons (000's US short tons)	Zn (%)	Contained pounds (000's lbs)
Measured	190	13.56	51.6
Indicated	1,524	11.49	350.3
Measured + Indicated	1,714	11.72	401.9
Inferred	6,551	11.11	1,455.1

Note: Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that any part of the Mineral Resources estimated will be converted into a Mineral Reserves estimate. Resources stated as in-situ grade at a Zinc price of $1.07/oz, with an assumed zinc recovery of 96.3% Resources are reported using a 5.3% Zinc cut-off grade, based on actual break-even mining, processing, and G&A costs from the ESM operation. Numbers in the table have been rounded to reflect the accuracy or the estimate and may not sum due to rounding.
Source: SRK 2020.

Open-pit Number 2 Mine Mineral Resources have also been modelled (Leapfrog Geo) and estimated (Leapfrog EDGE) by ESM geologists and reviewed for consistency with industry standards by SRK. In some cases, SRK participated in classification or refinement of the estimates based on this review. Matthew Hastings of SRK Consulting (U.S.) Inc. is the QP who has reviewed the geological models and estimates, and has conducted one site inspection to the Number 2 Mine surface areas. Mineral Resources for the Number 2 Mine Open Pit area have been taken from a single block model which features the Hoist House, Pump House, and Turnpike areas (Table 1.4).

Table 1.4 Open pit Mineral Resource estimate as of 1 October 2020

Category	Tons (000's US short tons)	Zn (%)	Contained pounds (000's lbs)
Measured	105	3.34	3,190
Indicated	595	3.09	16,675
Measured + Indicated	701	3.13	19,864
Inferred	217	3.37	6,639

Note: Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that any part of the Mineral Resources estimated will be converted into a Mineral Reserves estimate. Resources stated as internal to an optimized pit shell, above a cut-off grade of 1.57% Zn. Cut-off is based on break-even economics at a Zinc price of $1.07/oz, with an assumed zinc recovery of 94%, and actual processing, and G&A costs from the ESM operation. No mining costs were considered in the calculation of this COG, as the pit optimization incorporates the mining costs to develop the shape for reporting. Numbers in the table have been rounded to reflect the accuracy or the estimate and may not sum due to rounding.
Source: SRK 2020.

1.8 Mining

The mine plan tons at the ESM deposit will be extracted using a combination of longitudinal retreat stoping (LGS), Cut and Fill (C&F), Panel Mining – Primary and Secondary (PAP & PAS), and development drifting underground mining methods with rock backfill. Longhole backstopes (BCK) are also used in the design where applicable. The proposed combined underground and open pit mine plan is expected to reach an initial target production rate of 1,200 t/d for 2021 and ramp up to 1,800 t/d in 2022. Open pit mining will be completed in Year three (2024). The overall mine life will be seven years.

The ESM deposit will be accessed from surface via the No. 4 shaft, and all mineralized material and some waste rock will be hoisted out of the mine via that shaft. In addition to the existing development and raises, new lateral development and ramping will be required to access mineralized zones.

To supplement the ventilation provided by the raises, as the ramps are being driven, shorter internal ventilation drop raises will ensure air delivery to the active development face.

Measured, Indicated, and Inferred Mineral Resources were included in the mine design and schedule optimization process. The Mineral Inventory is based on the Mineral Resource stated as of February 2020 and is estimated at a 6% Zinc cut-off grade for the underground mine and 1.2% Zn for open pit mining.

For the underground mine, dilution was estimated based on typical stope dimensions to calculate unplanned over break experienced during mining operations. The rock quality at ESM is considered to be very good geotechnically, so overbreak is considered to be minimal. For LGS and BCK stopes, two sources of dilution were considered. Sloughing was estimated to be 2.0 ft on both the hangingwall and footwall of LGS stopes. For C&F, planned over break dilution of 0.5 ft was applied to both walls. A dilution grade of 0% Zn was assumed for all dilution. An additional 5% of unplanned dilution at a grade 0% Zn is also included in all mining methods.

Mine recovery was calculated under the following mine assumptions:

- C&F and waste development passing incremental cut-off, assume 95% mine recovery after losses.
- Longitudinal retreat and backstopes assume 95% mine recovery.
- Panel mining assumes 71% mine recovery after losses from pillars left behind.

Provided care is taking during blasting and rigorous ore control and monitoring systems are followed, AMC estimates that dilution and ore losses can be minimized for open pit mining. A mining recovery factor of 95% and dilution of 5% has been applied. The production schedule for both the underground and open pit mines and the combined productions schedule are provided in Table 1.5.

Table 1.5 Mine production schedule

Item	Unit	LOM	2021	2022	2023	2024	2025	2026	2027
Underground ore mined	000s tons	2,650	375	390	390	390	390	390	325
Zinc grade	%	8.5	8.6	8.7	9.2	8.8	8.3	8.1	7.8
Contained zinc	000s lbs	450,371	64,345	67,704	71,575	68,396	64,400	62,965	50,987
Open pit ore mined	000s tons	658	69	275	275	40	-	-	-
Total open pit waste	000s tons	3,262	325	1,450	1,331	156	-	-	-
Stripping ratio		5.0	4.7	5.3	4.8	3.9	-	-	-
Total material moved	000s tons	3,921	394	1,725	1,606	196	-	-	-
Zinc grade	%	3.1	2.5	2.9	3.3	3.3	0.0	0.0	0.0
Lead grade	%	0.9	0.8	1.3	0.6	0.4	0.0	0.0	0.0
Contained zinc	000s lbs	40,364	3,454	15,968	18,321	2,621	-	-	-
Contained lead	000s lbs	11,875	1,146	7,308	3,129	293	-	-	-
Ore processed	000s tons	3,309	444	665	665	430	390	390	325
Zinc grade	%	6.6	7.6	6.3	6.8	8.3	8.3	8.1	7.8
Lead grade	%	0.4	0.1	0.5	0.2	0.0	0.0	0.0	0.0
Contained zinc	000s lbs	490,735	67,799	83,672	89,896	71,016	64,400	62,965	50,987
Contained lead	000s lbs	11,875	1,146	7,308	3,129	293	-	-	-

Source: AMC 2021.

1.9 Recovery methods

Mineralized material mined in the ESM deposits is processed at the existing ESM concentrator that was commissioned in 1970 and last shut down in 2008. The concentrator was refurbished in late 2017 and began processing ore in 2018. The concentrator flowsheet includes crushing, grinding, sequential lead and zinc flotation circuits, concentrate dewatering circuits, and loadout facilities.

The design capacity of the concentrator is 5,000 t/d. Through-out the history of the Balmat operation (now ESM), the capacity of the concentrator has exceeded that of the mines' capacity. The operating strategy is to operate the concentrator at its rated hourly throughput of 200 tons per hour (t/h) to 220 t/h, but for only as many hours as necessary to suit mine production. It currently is processing between 6,500 to 7,000 tons per week operating on a schedule of one shift per day, four days per week. The concentrator suffers no notable losses from intermittent operation.

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. Currently, the concentrator is producing zinc concentrate at an average of 59.0% zinc with 3% iron and 0.50% magnesium.

Lead values in the underground ore will be generally very low, and lead concentrate is not planned to be produced. Lead values in the open pit ore are expected to be higher and it will be possible to produce a lead concentrate from this ore source.

While aged, the concentrator is in good working order and runs efficiently. No modifications are required to continue processing underground ore sources and minimal modifications would be required for processing the mineralized material to be mined from the open pits.

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 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. 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 provides access to the parking lot and the approach to the office complex, and the tailings line entry is the waste truck haulage route to the tailings impoundment. These accesses are adequate, and no improvements are planned.

The existing mine office complex is a two-story steel frame and concrete block / galbestos-sided building with steel joist / concrete plank built up roof system. As part of the first floor, the maintenance vehicle storage garage, the boiler room, and the dry / lamp room is a 60 ft x 273 ft area. The dry, located on the ground floor, accommodates 125 men with individual lockers for clean clothes and hanging baskets for working clothes for all personnel, as well as the appropriate number of showers and toilet facilities.

The ground floor also contains mine offices, a boiler room and lamp room. Hot water for sanitary purposes is provided by quick recovery propane water heater, eliminating the need to operate a steam boiler through the summer months. The second floor contains a warehouse, machine shop, mine rescue room, first aid equipment room and training room.

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 are pumped from the Sylvia Lake pump house to two 100,000 gallon (gal) concrete deluge tanks near the concentrate storage building / rail loadout shed. Water is pumped from the reservoir tanks to the concentrator. Mine water is 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 the New York State Department of Environmental Conservation (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

All permits required to operate the ESM #4 Mine are active and in place. Additionally, there are not any other significant factors or risks that may affect access, title, or the right or ability to perform work on the ESM properties.

Permits have remained active for mining at No. 4 since the previous operating periods. No environmental studies are underway at this time, nor are any required for this existing fully permitted mine. The site is well managed and is in compliance with all environmental regulatory requirements.

Renewals for State Pollutant Discharge Elimination System (SPDES) Permit and Water Withdrawal Permit were submitted to the NYSDEC in a timely manner. Both permits are on the Department's schedule for technical review due to length of time elapsed since previous review.

Tailings are non-acid generating so conventional reclamation methods can be used to rehabilitate the tailings area. Currently, surface water discharge is in compliance with a SPDES permit and is expected to remain so for operating, closure, and post-closure periods.

The ESM No. 2 Mine site has been partially reclaimed. ESM No. 2 shaft serves as secondary access to the underground operations at the No. 4 Mine and will be included in the final reclamation of the No. 4 Mine and concentrator complex. No. 4 Mine and mine tailings reclamation is assured with a $1,627,341 certificate of deposit.

1.12 Operating and capital cost estimates

Estimated project capital costs (including closure costs) total $19.1M, consisting of the following distinct areas:

- #2 Mine pre-production
- #4 Mine capital equipment
- #4 infrastructure and process capital

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

Table 1.6 presents the capital estimate summary for each area in 2020 US$ with no escalation.

Table 1.6 Capital cost summary

Area	Cost estimate ($M)
#2 Mine pre-production capital	3.1
#4 Mine capital equipment	5.2
#4 infrastructure and process capital	2.9
Total capital cost	**11.1**
Closure costs	11.9

Salvage value	4.0
Total capital cost (incl. closure costs)	**19.1**

Source: Titan / AMC 2021.

Underground capital costs are estimated to be $5.2M, which include the lease purchase of one bolter and two 6-yard loaders, mobile equipment rebuilds, replacement of one single-boom Jumbo drill, one bolter, one lift truck and service cage, and purchases of a StopeMaster longhole drill, a 40T haul truck, 750 KW transformer and a leaky feeder head.

AMC has assumed that, due to the short life of the pits (three years), a contractor will be used to mine the open pits. Mark-ups on the operating costs have been assumed to cover the contractor's mining equipment and infrastructure capital costs.

Capital item allowance for the open pit includes upgrade of the railway right of way into a haul road, land acquisition, process plant upgrade for lead circuit, and site facility preparation.

Closure costs were estimated based on the SRK cost estimate of a total of $11.9M, this will be offset by the estimated $4M in salvage value. This cost is however not included in the economic model due to ongoing mining discoveries and expansions.

Indirect, owner's, and contingency costs are all incorporated into the capital cost estimates.

Preparation of the site operating cost estimate is based on current underground operation performance. The site operating cost is based on Owner-owned and operated mining / services fleets, and minimal use of permanent contractors except where value is provided through expertise and / or packages efficiencies / skills. Open pit operating costs were estimated by AMC.

Site operating costs in this section of the report is broken into three major sections, which include mining, processing, and general and administrative (G&A) costs. AMC estimated open pit mining costs assuming a contractor mining operation. The operating cost estimate allows for all labour, equipment, supplies, fuel, consumables, and supervision.

Site operating costs (Table 1.7) are presented in 2020 US$ on a calendar year basis. No escalation or inflation is included.

Table 1.7 Breakdown of estimated site operating costs

Site operating costs	Unit cost ($/t milled)	LOM cost ($M)
Underground		
Mining	43.00	114.0
Processing	14.00	37.1
G&A	22.00	58.3
Underground total	**79.00**	**209.4**
Open pit		
Mining	20.07	13.2
Processing	7.00	4.6
G&A	5.92	3.9
Open pit total	**32.99**	**21.7**

Underground and open pit		
Mining	38.44	127.2
Processing	12.61	41.7
G&A	18.80	62.2
Underground and open pit total	**69.95**	**231.1**

Source: Titan / AMC 2021.

1.13 Economic analysis

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 and are likely to approximate the true investment value. It must be noted, however, that tax estimates involve many complex variables that can only be accurately calculated during operations and, as such, the after-tax results are only approximations.

Sensitivity analyses were performed for variations in grade, metal price, operating costs, capital costs, and discount rates to determine their relative importance as project value drivers.

It must be noted that 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.

Other economic factors include the following:

- Discount rate of 8%.
- Nominal 2021 dollars.
- Revenues, costs, and taxes are calculated for each period in which they occur.
- All costs and time prior to 1 January 2021 are considered sunk costs.
- Results are presented on 100% ownership basis.

The project has been evaluated on an after-tax basis to provide an indicative value of the potential project economics. Corporate income tax was calculated by Titan of $8.4M for the life-of-mine (LOM).

The economic analysis incorporates royalties. A royalty of 0.3% is applied to the NSR for the zinc concentrate. However, it is assumed that there are no royalties for the sale of the lead concentrate.

The results of the economic evaluation indicate that the project is economic under the current assumptions. The pre-tax cash flow is estimated to be $107M, with a pre-tax and post-tax Net Present Value (NPV) at a discount rate of 8% of $88M and $81M, respectively. The results of the assessment are provided in Table 1.8.

A sensitivity analysis was performed to determine which factors most affected the project economics. The analysis revealed that the project is most sensitive to zinc price, then zinc grade, followed by operating costs and capital costs. The results of the sensitivity analysis are provided in Table 1.9.

Table 1.8 Summary of results

Summary of results	Unit	Value
Mine life	Years	7.0
Resource mined	kt	3,309
LOM throughput rate	t/d	1,294
Average head zinc grade	% Zn	6.6
Average head lead grade	% Pb	0.4
LOM recovered zinc	Mlbs	470
LOM recovered lead	Mlbs	10
LOM payable zinc	Mlbs	400
LOM payable lead	Mlbs	9.5
Revenue by commodity (zinc)	%	98
Revenue by commodity (lead)	%	2
Zinc revenue	$M	460
Lead revenue	$M	8
Total revenue	$M	468
Total offsite charges	$M	113
Royalties	$M	1
NSR (net of royalties)	$M	349
Capital costs (including sustaining)	$M	11
Operating costs	$M	231
Operating costs	$/t processed	69.85
Pre-tax cash flow	$M	107
Taxes	$M	8
After-tax cash flow	$M	98
Pre-tax NPV (8% discount)	$M	88
After-tax NPV (8% discount)	**$M**	**81**

Source: AMC 2021.

Table 1.9 Sensitivity results

Variable	Pre-tax NPV @ 8% ($M)			Post-tax NPV @ 8% ($M)		
	-20% variance	0% variance	20% variance	-20% variance	0% variance	20% variance
Zinc price	13	88	162	13	81	144
Zinc grade	31	88	144	31	81	128
CAPEX	90	88	85	83	81	78
OPEX	**125**	**88**	**50**	**112**	**81**	**48**

Source: AMC 2021.

1.14 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.

Risks

The most significant risks associated with the project are commodity prices, uncontrolled dilution, mineral recovery, operating and sustaining capital cost escalation, ventilation limitations, and Inferred Mineral Resource confidence.

These risks are common to most mining projects, many of which may be mitigated, at least to some degree, with adequate engineering, planning, and proactive management.

Opportunities

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. The replacement of ore reserves depended heavily on the ability to follow the mineralized zones through mine development. Additional exploration drilling may yield high returns in the discovery and upgrade of additional Mineral Resources.

Dilution is important to manage in any mining operation, particularly where mineralization occurs in narrow zones. The implementation of grade control by equipping geologists on shift with electronic survey and mapping software is an opportunity to improve control of the excavations and follow the mineralization more closely.

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. In addition, a sorted mill feed may permit a lower mine cut-off grade which could increase the Mineral Resources within the PEA mine plan, without requiring additional exploration.

Recommendations

The items shown in Table 1.10 are recommended for ESM to improve confidence and performance of the PEA mine plan and economics.

Table 1.10 Project recommendations and cost

Item	Cost ($)
Infill drilling and conversion of Inferred Mineral Resources	1,500,000
Geotechnical review	50,000
Sorting test work and integration study	100,000
Contractor quotes for open pit cost assumptions	15,000
Total estimate	**1,665,000**

Source: AMC 2020.

MINERAL RIDGE

The following information on Mineral Ridge is the Summary exactly as included in and extracted from the Technical Report titled "Mineral Ridge Project Esmeralda County, Nevada, USA NI 43-101 Technical Report" with an effective date of December 22, 2020 (the "**Mineral Ridge Technical Report**"). The Mineral Ridge Technical Report is incorporated by reference herein and available on the Company's profile on SEDAR.

1.1 Introduction

Titan Mining Corporation requested that Mine Technical Services Ltd (MTS) compile a technical report on the Mineral Ridge Project (the Project) that is located in Esmeralda County, Nevada, USA.

Titan signed an option agreement on the Project with Scorpio Gold Corp. (Scorpio Gold) on August 31, 2020. The agreement terms require Titan to spend US$35 million in staged expenditures over a period of five years to earn an 80% ownership interest in Mineral Ridge Gold LLC (MRG). MRG is an indirectly-owned subsidiary of Scorpio Gold, and is the Nevada entity that currently holds the Project mineral and water rights. In addition, Titan will have the right to acquire 100% interest in MRG upon spending US$7 million on exploration by January 1, 2022 and making a cash payment of US$35 million on or before December 31, 2022.

1.2 Terms of Reference

The Report is prepared to support the disclosure by Titan in the news release dated 26 February 2021, entitled "Titan Mining Updates Reporting at Mineral Ridge".

Units used in the report are metric units unless otherwise noted. Monetary units are in United States dollars (US$) unless otherwise stated. The Report uses Canadian English.

Mineral Resources and Mineral Reserves are reported in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (May 2014; the 2014 CIM Definition Standards).

1.3 Project Setting

The Project is located in southwestern Nevada, approximately 35 air miles (56 km) southwest of the town of Tonopah, at approximately 37º47'54"N, and 117º42'28"W.

The Project is accessed by US Highway 95 from either Las Vegas or Reno, Nevada. The town of Silver Peak can be accessed via paved road from US Highway 95 from Coaldale Junction via State Highway 265. There is also a gravel access road from US Highway 95 between Tonopah and Goldfield, east of Silver Peak. Within the Project area, exploration sites can be accessed using four-wheel drives along steep dirt tracks.

The climate is typical of the Great Basin area, with hot, dry summers and cool, dry winters. Mining activities have been conducted year-round, and future remnant area mining and processing is expected to also be undertaken on a year-round basis. Exploration is possible year-round, though snow levels in winter and wet conditions in late autumn and in spring can make travel on unpaved roads difficult.

1.4 Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

The Mineral Ridge Project consists of 60 patented claims totaling 859.18 acres (347.7 ha); two fee simple and two town lots collectively known as the Fee Lands, totaling 122.65 acres (49.65 ha); two water rights;

and 677 unpatented lode claims and one unpatented millsite claim totaling 12,896.88 acres (5,221.40 ha) for a total of 13,878.71 acres (5,618.9 ha). All property is held in the name of MRG.

The Federal Government has given full title of both surface and minerals for all patented claims. Unpatented lode claims or placer claims on public lands are for mineral prospecting, mining or processing operations, and other reasonably related uses.

The authorized Plan of Operations (PoO) area encompasses approximately 2,700 acres. Of this, the Bureau of Land Management (BLM) administers approximately 2,044 acres of public land while approximately 656 acres are private land controlled by Scorpio Gold. No US Forest Service land or state lands are located within the PoO area.

Four royalties are payable, with the rate to be paid depending on the claim.

1.5 Geology and Mineralization

Based on current published explanations for the Mineral Ridge mineralization, it appears that a structurally-controlled orogenic model may be the most applicable to the deposits.

The Mineral Ridge gold deposits are located on the northeast flank of the Silver Peak Mountain Range. The major lithological units include the Wyman Formation, Reed Dolomite, and the Deep Springs Formation. The Wyman Formation is underlain and intruded by an Eocene granodiorite and related alaskite, aplite, and pegmatite intrusive rocks. The contact is highly irregular in detail, due in part to structural contortions within the Wyman Formation.

Four main structural corridors have been defined, trending north–northwest, northwest, north–northeast, and northeast. The structural setting is marked by high shearing and flattening strain zones. The strain regime also resulted in extreme grainsize reduction of pegmatites, local development of mylonites, and abundant, locally chaotic, transposition in calcareous rocks. In addition, intense foliation developed in all rock types.

The currently-known mineralized zones occur over an area of approximately 14,000 ft (4,300 m) north–south and 15,000 ft (4,600 m) east–west. Gold deposits in the Project area are hosted within a structural envelope in the lower unit of the Wyman Formation near its contact with the crystalline core rocks. Quartz and felsic intrusive rock boundaries are common in this structural zone. Elongate, braided, ductile shear zones surround the boundaries, with these shear zones being preferentially in-filled by milky quartz veining associated with mineralization and the better gold grades. Internal to the mineralized envelope, other, smaller-scale fault and fold sets occur, which correspond to higher-grade mineralized shoots.

Gold is present as native gold and electrum that occurs as irregular shaped intergrowths in quartz associated with interstitial space and small fractures. Gold also occurs as irregularly-shaped intergrowths and as fracture fillings associated with goethite. Locally, minor amounts of galena, graphitic to carbonaceous material, sphalerite and anglesite/cerrusite have been observed, with galena and graphite appearing to be associated with higher-grade gold values. Gold particle size varies from 1–2 µm to about 700 µm, but most of the particles are in the 5–50 µm size range. Gold to silver ratios are typically in the 2:1 range.

1.6 History

Gold was initially discovered in 1864–1865. Mechanized open-pit mining feeding a heap leach pad commenced in 1989, and to 2008, operations were variously conducted by Zephyr Resources Inc. (Zephyr), Homestead Minerals Corp. (Homestead), Mineral Ridge Resources, Inc. (MRRI), Vista Gold Corp. (Vista Gold), and Golden Phoenix Minerals (Golden Phoenix). Production in this period is

estimated at 1,942,527 t at 0.058 opt for about 60,802 oz Au. Scorpio Gold acquired the Project in 2009, and conducted open-pit mining operations feeding a heap leach pad to November, 2017. Scorpio Gold produced, to end November 2017, 7,368,722 t grading 0.055 opt for 277,653 oz Au. The heap leach pad continued operating after mining activities were completed. From 2018 to November 2020, production from the pad was 14,516 oz Au and 7,358 oz Ag.

Exploration activities completed by companies prior to Titan included: geological mapping; rock chip and geochemical sampling; limited geophysical surveys; sonic, reverse circulation (RC) and core drilling; analytical and metallurgical testwork; and mining and technical studies.

In August 2020, Titan began mapping existing open-pit exposures at Mineral Ridge. The purpose of this program is to guide exploration and to develop near-mine drill targets. Titan placed special focus on mapping significant structures at the pit perimeters. Titan initiated a confirmation and exploration drill program in October 2020. From August to December 15, 2020, Titan collected 43 rockchip and grab samples during the mapping program.

Four targets for further exploration were estimated. Additional exploration potential remains within the Project, with a number of prospects that require data compilation, review and assessment to identify the most appropriate methods to explore those areas.

1.7 Drilling and Sampling

Exploration drilling prior to Scorpio Gold's involvement in the Project occurred from 1939–2008, and totalled 310,739 ft (94,713 m) in 1,794 drill holes. Of this total, 554 holes were drilled using diamond core tools for a total of 63,238 ft (19,275 m), and 1,240 holes were drilled by RC methods for a total of 247,501 ft (83,668 m). Scorpio Gold completed a confirmation drilling campaign at Mineral Ridge in 2009, and development and exploration drilling campaigns from 2010 to 2017. Drilling by Scorpio Gold from 2009 to July 31, 2017, the last date of drilling for Scorpio Gold, totalled 679,059 ft (206,978 m) in 2,118 RC, core and sonic drill holes.

Titan initiated a confirmation and exploration drill program in October 2020, comprising core and RC drilling. As of December 15, 2020, Titan had completed 19,937.5 ft (6,077 m) of drilling in 28 drill holes. Another 18,750 ft (5,715 m) of drilling in 25 drill holes are planned to complete the program. The drill campaign is expected to be completed in early 2021. The Titan drill campaign includes two confirmation twin drill holes and near-mine exploration drill holes at the Brodie, Oromonte, Custer, Bluelite, Solberry, Bunkhouse, and Chieftain mine and prospect areas. The Titan drilling does not support the Mineral Resource estimates for Mineral Ridge. The drill holes are also not used in estimating targets for further exploration.

Data collected at Mineral Ridge for RC and core drill holes during all drill programs includes, but is not limited to, collar surveys, downhole surveys, logging (lithology, structure, alteration, and mineralization), and geotechnical information. Sonic drill holes testing the leach pad were not logged. All core was photographed, and RC chip trays are retained as a record for the RC drill holes.

Sample recovery for Scorpio Gold and Titan RC drill holes was not estimated. Core recovery for the 2014–2020 diamond core campaigns was good. Scorpio Gold notes that core recovery was generally >94%. Average core recovery for Titan drilling, to date, is 93%. Sonic core recovery was not estimated, but generally observed by Scorpio Gold geologists as very good.

Collar surveys were conducted either by Scorpio Gold staff or by Kevin Haskew, a professional land surveyor with Advanced Surveying & Professional Services in Tonopah, Nevada, who completed collar survey locations for Scorpio Gold and for the Titan drill holes completed to date. Collars were picked up using global positioning system (GPS) instruments.

Down-hole surveys were not performed on all drill holes, and survey intervals varied by program, from a single survey per drill hole in the 2010 drill programs to 50 ft (15 m) intervals in the Scorpio Gold drilling. Scorpio Gold RC holes were only down-hole surveyed if they were >400 ft in depth. Titan RC holes were surveyed using the EZ-Gyro from Reflex. The sonic drill holes in the leach pad area did not have down-hole surveys performed.

RC samples were collected on approximately 5 ft (1.5 m) intervals, from a rotating wet splitter assembly attached to the drill rig. Core sample intervals were collected on 5 ft (1.5 m) intervals within homogeneous zones or on 2 1 to 7 ft (0.6 3 to 2.1 m) intervals where dictated by lithology. Sonic drill core from the leach pad drilling was placed in plastic bags in nominal 2.5 ft (0.76 m) intervals.

Bulk density determinations were conducted as part of early mining technical studies in 1995–1996. Checks were made using a metallurgical laboratory in 2010. Scorpio Gold checked values using truck count data. MTS recommended that a 13 ft^3/t ton value for in-situ rock be used for estimation purposes in this Report. If any blocks were encountered that were determined to be fill, then a bulk density value of 17.2 ft^3/t should be applied. These values are consistent with the collected density data and the observations during the Scorpio Gold mining operational.

American Assay Laboratories (AAL), located in Reno, Nevada, was the primary laboratory for a majority of the exploration drill campaigns, and is independent of Scorpio Gold. The laboratory performs both sample preparation and analysis. AAL was also used as a primary laboratory in the 2014 and 2017 Scorpio Gold analytical campaigns. AAL holds International Organization for Standardization (ISO)/International Electrotechnical Committee (IEC) 17025:2005 certification for testing laboratories. During 2014 and 2016, ALS Global (ALS) was used as a primary laboratory by Scorpio Gold. Sample preparation was conducted at ALS Reno, and analysis was completed by ALS Vancouver, Canada. ALS holds ISO/IEC 17025:2005 certification. In 2015 and 2016, Bureau Veritas (BV), in Sparks, Nevada was used by Scorpio Gold as a primary laboratory, and undertook both sample preparation and analysis. The BV laboratory holds ISO/IEC 17025:2005 certification.

At AAL, gold was determined by 30 g fire assay atomic absorption spectroscopy (AAS). AAL typically reassayed samples reporting greater than 2.5 g/t gold by fire assay gravimetric finish on a separate 30 g pulp split. The analytical method requested from ALS was Au-AA123, whereby gold was determined by 30 g fire assay AAS. A gravimetric method was used for samples returning greater than 0.08 opt gold for non-pulp samples. The BV analytical method was a 30 g fire assay for gold.

During 2020, ALS was used as the primary laboratory for Titan's drilling and geochemical sampling programs. All samples were assayed for gold by 30 g fire assay AAS (ALS method code Au-AA23) and multi-element analysis by aqua regia digestion ICP (ALS method code ME-ICP41).

Florin Analytical Services (Florin) was the laboratory used for the analysis of the leach pad sonic drilling completed in 2017, prior to Titan's interest in the Project. Florin is the Kappes, Cassiday & Associates (KCA) analytical arm in Reno, Nevada and participates in round-robin analyses with several professional organizations. Florin is not certified by an independent standards organization. Gold was analyzed at Florin via a one assay ton fire assay using AAS finish, silver was assayed using four-acid digestion and an AAS finish.

The Scorpio Gold onsite assay laboratory was owned, operated, and staffed by Scorpio Gold, and was not certified by an independent standards organization. Scorpio Gold assayed some exploration RC drill samples at the onsite Scorpio Gold assay facility, if there was sufficient capacity given the primary role of the laboratory was for run-of-mine assaying. If the analytical results showed anomalous gold values, the anomalous intervals were submitted to an external laboratory. Gold was assayed at the mine laboratory by fire assay gravimetric finish on a one assay ton sub- sample. Samples reporting greater than 0.01 opt, plus samples representing the preceding and following 10 ft (3 m) of drilling, were subsequently sent to

an external laboratory (typically AAL) for gold assay. The external laboratory gold assay results from these samples replace the Scorpio Gold assays in the Project database used for Mineral Resource and Mineral Reserve estimation. Silver assays were not routinely performed, and silver is not estimated for the remnant areas.

Scorpio Gold employed a quality assurance (QA)/quality control (QC) program of certified reference materials (CRMs), blanks, and field duplicates inserted in the Project sample stream at the rate of approximately one control for every 20 Project samples. The same QA/QC program was generally employed for all samples submitted to each laboratory and the Scorpio Gold on-site assay laboratory.

Titan's QA/QC program consists of submission of CRM and blank samples, inserted in the Project sample stream at the rate of approximately one control for every 15 Project samples.

1.8 Data Verification

All data that are stored in the Project database were verified by Scorpio Gold staff via software verification before final entry into the database. These routines were aimed at preventing entry of extraneous data such as incorrect lithology codes or overlapping assay intervals into the database. In addition, geological staff check for typical data entry errors, identify discrepancies, and correct the data where necessary. Titan employs a similar pre-check on data prior to database upload.

Third-party audits were performed in support of mining technical studies by Mineral Resource Development Inc. (1994–1995), Behre Dolbear (1996), Pincock, Allen, and Holt (1996), Micon International Limited (Micon) (1997), and Behre Dolbear (2003). This work supported that the data collected and reviewed by the third-party auditors were acceptable to support Mineral Resource and Mineral Reserve estimation at the time of the review.

Third-party reviews were performed in support of compilation of NI 43-101 technical reports by Micon (2009, 2010), AMEC (2012), and Telesto (2013, 2014). No significant issues that would affect Mineral Resource and Mineral Reserve estimation or mine planning were identified.

MTS reviewed the sonic drill program for the leach pad, and drilling that would be used to support estimation in the remnant areas, and MTS personnel performed site visits to the Project. No material issues that would affect Mineral Resource and Mineral Reserve estimation or mine planning were identified.

1.9 Metallurgical Testwork

Leach Pad Testwork

Material from the leach pad that was subject to metallurgical testwork was derived from a 2017 sonic drill program, and a 2014 heap leach composite sample. Tests conducted included head analysis for gold, silver, mercury, copper, carbon and sulphur; semi-quantitative analyses for a series of individual elements and whole rock constituents; Bond grindability test work; gravity testwork, leach testwork, and flotation testwork.

The highest overall gold extraction observed for the Mineral Ridge heap leach material at the 2017 testwork was 92%. These extractions were achieved through both the direct leaching of milled material at 250 mesh Tyler and leaching of gravity tailings at 400 mesh Tyler. Flotation recovery of gold from the gravity tails resulted in the lowest gold extractions with gold recoveries ranging from 77% to 81% at 400 and 250 mesh Tyler, respectively.

Direct leaching of milled material between 250 mesh and 400 mesh Tyler recovered 88–92% of the gold. Increasing the grind size to 200 mesh or 150 mesh Tyler reduced the gold extractions to 84% and 81%, respectively. For comparison, direct leaching testwork in 2014 at targeted grinding of 200 mesh, recovered 91.2% and 92.4% gold at 24 and 48 hours of leaching time respectively.

Based on a review of all test data generated, the best opportunity to maximize overall gold recovery may lie in a further optimization of direct leaching grinding size. Therefore, it is expected that an overall gold recovery of 91% will be achieved by direct leaching at Mineral Ridge while reprocessing the heap leach material at targeted grinding grind size of 80% passing 200 mesh.

Remnant Areas Testwork

Material from areas planned to be mined by open pit methods was tested at Kappes Cassidy and Associates (KCA) in 2010. Testwork included physical test work, head analyses, bottle roll leach test work, column leach testwork, and solid-liquid separation tests. Direct leaching of the open pit material has shown to be suitable for gold and silver extraction. A conventional CIL circuit is recommended for treating both the heap leach and remnant ore materials. Considering the Mary pit core composite as the most representative sample of the remnant pit material, at a targeted 200 mesh grinding (74 μm) the gold and silver recoveries for the open pit material are expected at 93% and 38% respectively. These recoveries are anticipated at 36 hours of residence time and at a grind target size of 200 mesh Tyler P80.

Variability

Samples selected for metallurgical testing were generally representative of the various types and styles of mineralization within the Mineral Ridge deposits. Enough samples were taken so that tests were performed on sufficient sample mass.

MTS notes that variability testwork should be completed in support of detailed designs:

- The head grades for the ROM (remnant areas) materials tested are higher than the modeled grade in the mine and process plans. This should be addressed when variability testing is conducted;
- The variability tests should, at a minimum, include abrasion index tests and reagent optimization tests for both ROM and heap leach samples.

Deleterious Elements

No significant deleterious elements are known from the processing perspective.

1.10 Mineral Resource Estimation

Leach Pad

The Mineral Resources comprise material contained entirely within the heap leach pad as of June 29, 2017. The initial resource estimates were performed in June 2017 and have been adjusted to account for mining production added to the heap leach pad up to the end of November 2017, and for heap leach metal depletions between June 2017 and end November 2020. The entire leach pad forms the basis for the mineralized volume. Sample data for the June 2017 estimates consisted of 34 drill holes identified as HP17001 through to HP17034, and 375 samples at 10 ft length intervals, plus a residual length for the final sample of each hole. There were no values that were considered to be outliers, and neither was any outlier restriction considered necessary. Samples were initially composited into both 10 ft length composites and 10 ft bench composites.

At the time of the initial estimate, the leach pad was split into seven areas which correspond to the historical/individual leach pad cells. The pad was further split vertically to approximate the elevation of the pad at the time of the change of ownership from Golden Phoenix to Scorpio Gold. An elevation of 7,209 ft was used as a vertical boundary.

A global tonnage factor of 17.61 ft^3/t was used to estimate tonnage.

Ordinary kriging (OK) was performed as the main gold estimation methodology with inverse distance (ID), inverse distance weighting to the second power (ID2), and nearest-neighbor (NN) estimates serving as validation models. Silver estimates were run using a single ID model and an NN estimate as a validation model. The resource block model was validated by means of visual inspection, checks of composite versus model statistics and swath plots. No areas of significant bias were noted.

Blocks were considered to have reasonable prospects of economic extraction considering the gold grade only. A gold price of $1,216/oz was used, this represents the three-year trailing average price through June 2017. Based on the current three year trailing average gold price of $1,350, the economics remain positive. The process recovery of 95% for gold is that obtained by KCA testwork using reasonable mill-scenario. The processing cost was provided by Scorpio Gold using actual Mineral Ridge Mine labour costs and conceptual mill processing costs for a 4,000 t/d mill operation.

Remnant Areas

The Mineral Resources for the Remnant areas are derived from November 2017 estimates for the Brodie, Oromonte, Drinkwater high wall (Drinkwater HW), Mary and Last Chance (Mary LC), Bunkhouse, and Custer areas. The drill hole database consisted of drill data from drilling campaigns completed between 2008–2017, comprising 2,011 drill holes and 122,611 sample intervals. As of December 2020, there were six drill holes from the 2020 Titan drilling that had available location and assay data. These drill holes were reviewed and are not considered to have a material impact on the 2017 resource estimate.

For the 2017 estimates, MTS used the grade shells, extracted from a Scorpio Gold MineSight project, as the basis for the high-grade zones which correspond to the mineralized lenses. In the case of the Drinkwater HW area, a new set of grade shells was provided by Scorpio Gold which took into account the latest 2017 drilling data. These grade shells were used to extract a set of high-grade composites which honored the grade shell intersections. Similarly, a set of low-grade composites were derived for the areas outside of the grade shells.

A single bulk density factor of 13 ft^3/t was assigned to all blocks that represent in-situ rock and was used in the Mineral Resource estimates. Blocks coded as fill were assigned a bulk density of 17.2 ft^3/t. Blocks coded with a percentage volume inside an underground working used a tonnage factor of zero applied to that portion of the block.

A gold capping value of 1.0 opt was selected as the appropriate capping value. This represents 33 assays that were capped to a maximum value of 1.0 opt for the grade estimation process. Of these 33 assays, only 16 are contained within the grade shells. An outlier restriction was used to restrict the range of influence of the high-grade gold values within the ordinary kriging grade block model to a threshold value of 1.0 opt gold and a distance of 30 ft.

Samples were composited to 10 ft intervals using the grade shells as the controlling boundary. Based on the common direction of dip and strike of the mineralized areas, the grade shells were grouped into three zones comprising Custer; Brodie and Oromonte; and Drinkwater HW, Mary LC, and Bunkhouse.

Block selections were created for blocks either contained within the grade shell wireframes or for blocks that were on the edge of the wireframes. Block selection was based on a proportional selection of 1%, i.e., if as little as 1% of the block intersected a wireframe, then the block would be estimated. An

estimate for the high-grade portion of the block (using the high-grade composites within the grade shell), as well as a low-grade estimate for the same block using the low-grade composites (those composites outside of the grade shell), was then run. A final "Au diluted" grade was calculated for these fringe blocks based on the formula:

Au Diluted = Au high-grade estimate x Proportion of block within the wireframe + Au low-grade estimate x Proportion of block outside the wireframe.

A three-pass strategy was used for the main OK estimate and a single pass strategy for the ID2 and NN validation model estimates. The resource block model was validated by means of visual inspection, checks of composite versus model statistics and swath plots. No areas of significant bias were noted.

Blocks were classified according to the estimation pass, with the first pass corresponding to Measured Mineral Resources, and the second and third passes corresponding to Indicated and Inferred Mineral Resource respectively.

The remnant areas are considered to be amenable to open-pit mining. Reasonable prospects for eventual economic extraction for these areas were derived from material within a conceptual Whittle pit shell based on the following parameter assumptions:

- Gold price: $1,350/oz;
- Mineralization haulage cost: $1.86/t;
- Processing costs: $7.49/t;
- General and administrative (G&A): $2.90/t;
- Metallurgical recoveries: 95%;
- Refining and smelting costs: $28.39/oz.

Based on the above criteria, a block-cut-off grade of 0.01 opt gold was used for blocks which would be considered for Mineral Resource estimation purposes. No contribution from silver is used in the assessment of reasonable prospects for eventual economic extraction for the remnant areas due to the limited number of silver assays available.

A sensitivity analysis was performed for various gold prices and cut-off grades. Metal price sensitivities were tested from $1,080–$1,690, which included the gold price assumption used in the leach pad considerations of reasonable prospects for eventual economic extraction. Cut-off grade sensitivities tested ranged from 0.008–0.012 opt gold. As the resource estimate is already contained within a high-grade grade shell, these parameters had a very limited influence on the resulting Mineral Resource estimates.

1.11 Mineral Resource Statement

Mineral Resources are reported using the 2014 CIM Definition Standards.

The Mineral Resource estimate for the material on the heap leach pad that is directly amenable to processing is provided in

Table **1-1**. These figures are based on the 2017 estimates with adjustments for production added between July 2017 and November 2017, and depletion derived from process production records between July 2017 and end November 2020. No cut-off criteria were applied since there will be no selectivity of areas to be processed and the leach pad will be processed in its entirety. The Mineral Resources are reported

inclusive of Mineral Reserves and have an effective date of December 1, 2020. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The Qualified Person (QP) for the estimate is Mr. Ian Crundwell, P.Geo.

The Mineral Resource estimate for the remnant material is provided in Table 1-2 (Measured and Indicated) and Table 1-3 (Inferred). The Mineral Resources are reported inclusive of Mineral Reserves and have an effective date of December 1, 2020. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The Qualified Person for the estimate is Mr. Ian Crundwell, P.Geo.

Table 1-1: Mineral Resource Estimate for Mineralization Contained within the Heap Leach Pad

Classification	Tons ('000)	Gold (opt)	Silver (opt)	Contained Gold ('000 oz)	Contained Silver ('000 oz)
Indicated	7,290	0.015	0.015	107.7	109.3
Inferred	78	0.014	0.023	1.1	1.8

Notes:

1. The effective date of the Mineral Resource estimate is December 1, 2020. The QP for the estimate is Mr. Ian Crundwell, P.Geo.
2. Mineral Resources are quoted inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. Mineral Resources are contained within the Mineral Ridge leach pad facility with the following assumptions: a long-term gold price of $1,216/oz; assumed process costs of $11/t; and metallurgical recovery for gold of 91%.
4. Silver was not used in the consideration of reasonable prospects for eventual economic extraction. Silver recoveries from heap leach pad material are projected to be 24%.
5. Rounding may result in apparent differences when summing tons, grade and contained metal content. Tonnage and grade measurements are in Imperial units. Grades are reported in ounces per ton.

Table 1-2: Measured and Indicated Mineral Resource Tabulation for Remnant Areas

Area	Classification	Tons ('000)	Gold Grade (opt)	Contained Gold ('000 oz)
Brodie	Measured	455.7	0.063	28.6
	Indicated	237.9	0.056	13.4
	Subtotal Measured and Indicated	**693.6**	**0.060**	**41.9**
Custer	Measured	147.8	0.083	12.3
	Indicated	75.4	0.088	6.6
	Subtotal Measured and Indicated	**223.2**	**0.085**	**18.9**
Drinkwater HW	Measured	527.3	0.046	24.3
	Indicated	209.2	0.049	10.3
	Subtotal Measured and Indicated	**736.6**	**0.047**	**34.6**
Mary LC & Bunkhouse	Measured	721.4	0.072	51.7
	Indicated	403.3	0.074	29.8

	Subtotal Measured and Indicated	**1,124.7**	**0.072**	**81.5**
Oromonte	Measured	235.8	0.162	38.3
	Indicated	169.0	0.074	12.6
	Subtotal Measured and Indicated	**404.8**	**0.126**	**50.9**
Combined	Measured	2,088.0	0.074	155.2
	Indicated	1,094.8	0.066	72.6
	Total Measured and Indicated	**3,182.8**	**0.072**	**227.8**

Table 1-3: Inferred Mineral Resource Tabulation for Remnant Areas

Area	**Classification**	**Tons ('000)**	**Gold Grade (opt)**	**Contained Gold ('000 oz)**
Brodie	Inferred	2.4	0.034	0.08
Custer	Inferred	—	—	—
Drinkwater HW	Inferred	180.1	0.059	10.61
Mary LC & Bunkhouse	Inferred	0.1	0.061	0.01
Oromonte	Inferred	0.4	0.092	0.03
Combined	**Total Inferred**	**182.9**	**0.059**	**10.73**

Notes:

1. The effective date of the Mineral Resource estimate is December 1, 2020. The QP for the estimate is Mr. Ian Crundwell, P.Geo.
2. Mineral Resources are reported inclusive of Mineral Reserves at a gold cut-off grade of 0.01 opt. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
3. Mineral Resources are constrained to the area within the grade-shell wireframes. The areas outside of these grade shells are assumed to be at zero grade.
4. These Mineral Resource are considered to be amenable to open-pit mining. Conceptual Whittle pit shells used the following assumptions: a long-term gold price of $1,350/oz; assumed combined operating costs of $12.36/t (mining, process, general and administrative); metallurgical recovery for gold of 95%, and variable pit slope angles that ranged from 38–42º.
5. Rounding may result in apparent differences between when summing tons, grade and contained metal content. Tonnage and grade measurements are in Imperial units. Grades are reported in ounces per ton.

Factors that may affect the Mineral Resources estimated for the leach pad include:

- Since for practical reasons the sonic drills were not permitted to penetrate the leach pad membrane, it was not possible to sample right up to the base of the leach pad. The majority of this material at the extreme edges of the resource model was classified as Inferred Mineral Resources. The true grade of the leached material at the extreme edges of the volume has some uncertainty;
- Local estimates of the leach pad grade have some uncertainty due to the repeatability of certain samples, and therefore selective mining (processing) of the pad should not be attempted using the current grade block model.

Factors that may affect the Mineral Resources estimated for the remnant areas include:

- Changes to geological or grade interpretations, including grade shell considerations;

- Changes to the modelling method or approach;
- Changes to the input parameters to the conceptual Whittle shells used to constrain the Mineral Resources;
- Changes to geotechnical assumptions, in particular, pit slope angles;
- Changes to metallurgical recovery assumptions;
- Changes to any of the social, political, economic, permitting, and environmental assumptions considered when evaluating reasonable prospects for eventual economic extraction.

Only gold was considered when evaluating reasonable prospects for eventual economic extraction in the remnant areas, as there were insufficient silver assays to support estimation. Silver has historically been produced in doré from the Mineral Ridge deposits, and represents a minor upside for the Project.

1.12 Mineral Reserve Estimation

Conversion from Mineral Resources to Mineral Reserves is relatively straightforward. Given the nature of the reclaimed material on the heap leach pad and the mining method, the assumption is that all material will be mined and processed, less any material left in place due to permit restrictions and facility location. Allowance has been made for facility location to exclude 260,000 t of material, which must remain in place, according to the heap material mining and tailings placement design completed by NewFields. An overall metallurgical recover of 91% for gold and 24% silver was assumed.

Open-pit mine designs have been completed on the Brodie, Custer, Drinkwater HW, Mary LC, Bunkhouse and Oromonte deposits. All Inferred material as classified as waste and scheduled to the appropriate waste rock storage facility (WRSF). The Mineral Reserves are reported using a 0.010 opt gold cut-off inside designed pits.

Using the results of past studies and current highwall conditions, the pit designs for reporting the Mineral Reserves were completed at a 47º inter ramp slope angle, with 20 ft catch benches every 40 ft. This results in a bench face angle of 66.6º. The use of preshear drill holes along the highwall has been added to the mine plan so this will also help with preserving the highwall integrity.

Based on reconciliation reports provided by Scorpio Gold, no ore loss has been included in the Mineral Reserve estimate as the reports show a consistent result of the mine producing more gold ounces than is predicted by the resource models.

The Mineral Resources for the remnant areas were evaluated using a Lerchs–Grossmann pit optimizer to generate optimized pit shells. Pit shells were generated based on varying metal prices with a base gold price of $1,300/oz. A total of 51 pit shells were generated to determine optimal break points in the pit phases and the final pit phase for each deposit. An overall average metallurgical gold recovery of 93% was assumed.

1.13 Mineral Reserve Statement

The Mineral Reserve estimates are reported using the 2014 CIM Definition Standards. The Qualified Person for the estimate is Mr. Jeffery Choquette P.E.

The Mineral Reserve estimate for the material on the heap leach pad is provided in Table 1-4. The estimate has an effective date of December 1, 2020. Proven and Probable Mineral Reserves for the remnant area material are reported within the final pit design used for the mine production schedule and are shown in Table 1-5. The estimate has an effective date of December 1, 2020.

Table 1-4: Mineral Reserve Estimate for the Heap Leach Pad

Mineral Reserve Classification	Tons ('000)	Gold (opt)	Silver (opt)	Contained Gold ('000 oz)	Contained Silver ('000 oz)
Probable	7,290	0.015	0.015	107.7	109.3
Less material remaining in place due to facility designs	(260)	0.015	0.015	(3.8)	(3.9)
Total Probable	**7,030**	**0.015**	**0.015**	**103.9**	**105.4**

Notes:

1. The Mineral Reserves have an effective date of December 1, 2020. The QP for the estimate is Mr. Jeffery Choquette P.E.
2. Mineral Reserves are contained within the Project leach pad facility with the following assumptions: long-term gold price of $1,300/oz; assumed total ore process costs of $10.59/t; metallurgical recovery for gold of 91%, and 24% for silver, refining and smelting cost of $28.39/oz of gold. Allowance has been made for the facility location which excludes 260,000 t; this material must remain in-place, based on the to the heap material mining and tailings placement design.
3. Rounding as required by reporting guidelines may result in summation differences.

Table 1-5: Mineral Reserve Estimate for the Remnant Areas

Pit Area	Mineral Reserve Classification	Tons ('000)	Gold (opt)	Contained Gold ('000 oz)
Brodie	Proven	51	0.042	2.1
	Probable	12	0.027	0.3
	Subtotal Proven and Probable	**63**	**0.039**	**2.5**
Custer	Proven	314	0.047	14.8
	Probable	144	0.032	4.6
	Subtotal Proven and Probable	**459**	**0.042**	**19.4**
Drinkwater	Proven	836	0.038	32.1
	Probable	352	0.033	11.7
	Subtotal Proven and Probable	**1,189**	**0.037**	**43.7**
Mary LC	Proven	470	0.035	16.3
	Probable	276	0.035	9.7
	Subtotal Proven and Probable	**746**	**0.035**	**26.0**
Bunkhouse	Proven	239	0.047	11.1
	Probable	4	0.021	0.1
	Subtotal Proven and Probable	**243**	**0.046**	**11.2**

Pit Area	Mineral Reserve Classification	Tons ('000)	Gold (opt)	Contained Gold ('000 oz)
Oromonte	Proven	563	0.071	39.8
	Probable	449	0.030	13.7
	Subtotal Proven and Probable	**1,012**	**0.053**	**53.5**
Total Combined	Proven	2,474	0.047	116.2
	Probable	1,239	0.032	40.1
	Total Proven and Probable	**3,713**	**0.042**	**156.3**

Notes:

1. The Mineral Reserves have an effective date of December 1, 2020. The Qualified Person for the estimate is Mr.
2. Jeffery Choquette P.E.
3. Mineral Reserves are reported within the pit designs at a 0.01 opt gold cut-off grade. Pit designs incorporate the following considerations: base case gold price of $1,300/oz; pit slope angles that range from 38–47º; average life- of-mine metallurgical recovery assumption of 93%; crushing costs of $1.81/t, process cost of $5.79/t, general and administrative and tax costs of $2.90/t; and average mining costs of $1.42/t mined.
4. Rounding as required by reporting guidelines may result in summation differences.

1.14 Mining Methods

Production of mineralized material from the heap and pit area is planned at a nominal rate of 4,000 t/d. Due to the timing of building a new pad storage area for the heap leach material, the heap leach material has to be processed before the mining of the pit areas to allow room for the additional material from the open pits. Mining and processing of the heap ore will take a little over five years and mining and processing of the open-pit ores will take three years for a total projected operating mine life of seven-and-one-half years.

Mining activities for the heap leach pad portion do not require traditional open-pit or underground mining methods. No drilling or blasting is anticipated as the reclaim leach material is unconsolidated. A hopper and solution mixing system will be constructed on the leach pad in order to pump material directly from the leach pad to the mill. After materials are processed through the milling operation, the tailings leaving the mill will be placed back on the pad using conveyor stackers. Given this method of mining, there will be no opportunity to selectively mine the reclaim material. Some of the tailings will be mined with the leached material, and about 260,000 t of reclaim material will remain on the pad because it is impractical to remove it. This material is situated in the bottom and center of the existing heap.

The Oromonte pit was designed in two phases, due to the large strip that would be required for this area. All other areas were designed in one pit phase, but the Custer, Mary LC and Drinkwater HW areas were designed with two different pits. The Custer pit has a small satellite pit referred to as the South Custer pit, the Mary LC pit has a small satellite pit referred to as the West Mary pit, and the Drinkwater HW pit has a small satellite pit referred to as the South Drinkwater pit.

The method of material transport for the remnant areas will be open-pit mining using two to three 16-yd^3 front-end loaders as the main loading units; a 6.6-yd^3 excavator will be used for sorting out narrow ore zones. The open-pit mineralized material will be loaded into 100-t haul trucks and transported to the crushing site next to the mill. Waste material will be transported to a designated WRSF for each pit. Open-pit mining in the past has been conducted using contract mining; this study is based on Owner mining and assumes a new production fleet will be purchased for all future mining activity. Mining is currently planned on 20 ft levels, but areas that contain ore zones are designed to be mined in approximately 10 ft levels.

The current open pits on site are all dry and do not require any dewatering of the working areas. Considerations to minimize hazards when mining through historic underground workings (voids) were included in the mine design.

The WRSFs were designed in order to minimize surface disturbance and backfill mined-out pits where future mining is not anticipated. There is sufficient capacity between the WRSFs and pits to store the projected waste tonnage.

The pre-production requirements at the Project are minimal given the presence of mineable mineralization near the bedrock surface. The majority of the haul roads are in place from past mining operations, and only the Drinkwater, Custer and Oromonte phase 2 pits will require construction of access roads to the top of each area to commence mining.

Mining is planned on a seven day per week schedule, with two 12 hour shifts per day. During the mining of pit ore, the peak mineralized material and waste production is estimated at 79,000 t/d and an average production rate of 52,400 t/d. An ore stockpile that reaches a peak capacity of 450,000 t is planned near the crusher and also on the past contractors lay down area. The stockpile will be used to supplement mill feed during high stripping periods of the pit phases. The average life of mine stripping ratio is estimated to be 13.6:1 for the open pit remnant material, and 4.79:1 if the heap ore is included in the calculation.

The amount of equipment required to meet the scheduled tonnages is calculated based on the mine schedule, equipment availabilities, usages and haul and loading times for the equipment. The mining of the heap leach pad will require a dozer, loader and scraper. The remnant area open pit operation will require, at peak, one excavator, three loaders, three production drills, a preshear drill, and 10 haul trucks. Support equipment will include dozers, a road grader, water truck, lube vehicle, maintenance service vehicle equipped with a mobile crane, and lighting plants.

For years one through six the mine manpower for the heap leach mining is estimated to be eight people, four crews of two people per crew. At peak, the open pit mining operation will require 100 persons.

1.15 Recovery Methods

The proposed processing plant will be a conventional design, and will re-process gold heap leach residual material at a rate of 4,000 t/d with an equipment availability of 92% (365 d/a). The process flowsheet developed for the heap leach material is a combination of conventional comminution using ball mills, and carbon-in-leach (CIL) cyanidation to recover gold and silver. The process plant will produce a gold and silver loaded-activated carbon product from the CIL circuit. The estimated gold and silver recoveries in the CIL circuit from the heap material are 91% and 24%, respectively. The loaded carbon will be shipped off-site to a refinery to recover the gold and silver. Refinery recovery is estimated at 99.4%.

The process plant will consist of:

- Reclaiming area including mixing and holding tanks;
- Grinding circuit consisting of two parallel ball mills;
- A pre-leach thickener;
- CIL cyanidation;
- Tailings thickening and filtration.

The process flowsheet was developed based on parameters established from test work conducted by KCA primarily from 2014–2017. The size selection of the grinding mills was based on the amenability of the

reclaimed ore to grinding determined through test programs performed by laboratories. The CIL tank sizing was based on leaching times determined by test work and using scale-up factors and experience.

Test programs evaluated several options for treating the reclaimed Mineral Ridge heap leach material. Samples showed regular to poor responses to conventional flotation. The CIL process was chosen as the best available alternative due to higher gold recoveries. As part of the study, several areas for optimization and simplification were identified in the process plant design, which reduced operational and capital requirements.

The major criteria used in the plant design to process 4,000 t/d equivalent to 1,460,000 t/a is outlined in Table 1-6.

At the beginning of the operation, the grinding plant will receive material from the heap leaching pads. This material will be reclaimed, scalped to remove trash, and mixed with water to form slurry of approximately 55% solids. The slurry will then be transferred to a holding tank and pumped to the ball mill pump box.

The ROM (remnant) material will be delivered to the crushing plant by front-end loader, to a grizzly which will control the maximum rock size reporting to the jaw crusher to 24 inches. The existing rock breaker will break apart any oversize material reporting from the mining operation.

The grinding circuit design will include two ball mills operating in parallel, with a shared pump box for both mills and dedicated cyclone clusters for each ball mill. The cyclone overflow will have a design for 80% passing size of 200 mesh (74 µm), and will feed a pre-leach linear trash screen. The cyclone underflow will return to the two ball mills. The mills will be designed to process 2,000 tons/d each. The linear trash screen undersize material will report by gravity to the pre-leach high-rate thickener, where the slurry will be flocculated and thickened to a density of 60% solids. The thickener overflow will be recycled to the process water pond for reuse and the thickener underflow reports to the leaching circuit.

The leaching circuit will consist of four tanks operating in series with a total residence time of 36 hours. The slurry density will be adjusted by recycling the overflow from the tailings thickener for the CIL circuit to operate at 45% solids. It is expected that the slurry will arrive at the CIL circuit at a pH of 10.5; adjustments will be made to maintain the required pH level, as necessary. Slurry will flow by gravity to each tank. Dissolved gold and silver in the slurry will be adsorbed onto activated carbon and discharged from the circuit at a designed rate of two tons per day.

Every 14 days bagged loaded carbon will be transported to an external facility for final gold and silver recovery, and carbon regeneration and recycling. Mineral Ridge uses reactivated carbon to adsorb gold from the pregnant leach solution. The existing activated carbon handling infrastructure, which includes carbon receiving, attritioning, sizing, sampling, and loading is suitable for the new process.

The CIL tailings will pass through a carbon safety screen to capture fugitive loaded carbon, and will report to a tailings thickener for cyanide solution recovery. The tailings thickener overflow will be recycled to the leach feed while the underflow will be sent to the tailings filters, where additional cyanide solution will be recovered. The filter cake at a designed moisture of 15% will be transported by existing grasshopper conveyors to the tailings pad. The tailings filter cake will be placed on the lined heap leach pad.

Table 1-6: Major Process Design Criteria

Criteria	Unit	Heap Leach	ROM
Daily processing rate	t/d	4,000	
Operating days per year	d/a	365	
Operating schedule	shifts/d	2	
	h/shift	12	
Mill feed grade – average	opt	0.0171	0.04
Metal recovery - CIL	% gold	91	93
Metal recovery - CIL	% silver	24	38
Refining recovery - Au & Ag	%	99.4	
Feed particle size, 80% passing	in	0.14	0.39
Grinding/CIL availability	%	92	
Milling and CIL process rate	t/h	181.2	
Ball mill grinding particle size, 80% Passing	mesh	200	
Ball mill circulating load	%	300	
Bond ball mill work index	kWh/t	15.3	
CIL slurry feed density	%	45	
CIL residence time	h	36	
Final tailings cake moisture	%	15	

1.16 Project Infrastructure

Mining

No new roads are envisioned to support the Project, except for a temporary access road that will be required during the mining of the Bunkhouse pit.

An ore storage stockpile that reaches a capacity of 450,000 t is planned on the open pit mining schedule. Approximately 150,000 t of this material will be stored near the crusher and the remaining tons will be stored in the flat area previously used as a laydown by the mining contractor.

Process

A significant portion of the infrastructure required to accommodate the proposed Project is already in-place and in good working condition. The infrastructure requirements, including existing items consists of:

- Substation and power distribution: additional distribution costs were considered in the capital cost estimate. The main substation was found suitable to support the Project;
- Maintenance facilities: no expansion necessary;

- Fuel storage: suitable as is;
- Roads: suitable as is;
- Water supply and management: suitable as is;
- Assay laboratory: suitable as is;
- Offices: suitable as is;
- Lined pad for tailings storage: expansion required and included in the capital cost estimate;
- Carbon-handling facility: suitable as is;
- Crusher surge pile: a separate surge pile with a 15,000-ton capacity is required between the crushing plant and the mill.

Leach Pad Liner

The process tailings will be filtered and placed on the lined heap-leach pad, which will be expanded to allow for heap-leach material mining and tailings placement.

1.17 Environmental, Permitting and Social Considerations

Environmental Considerations

In an effort to understand potential environmental issues associated with the Mineral Ridge Mine, a review of the most recent set of environmental studies completed at the Mineral Ridge Mine was undertaken. These studies were completed in support of a Plan of Operations amendment and an EA that was finalized in 2015. Aspects reviewed included air quality, cultural resources, migratory birds, solid/hazardous waste, surface and groundwater, grazing management, soil, visual resources, wildlife, and wild horses and burros. The review of environmental baseline study documentations and affected environment sections of documents prepared for the Mineral Ridge mine generally has not revealed any environmental or sociological issues that could, in and of themselves, create concerns that could result in materially affecting the proponents' ability to extract mineral reserves. Where there is potential concern, the resource has been amenable to reasonably easy-to-execute mitigations.

MRG has committed to execution of a group of environmental management plans and associated protection measures as a means of avoiding or otherwise minimizing environmental impacts to a variety of resources in the Project area. It is assumed that Titan would continue with these steps.

When active mining was underway, waste rock produced by mining operations at the Mineral Ridge mine was placed in waste rock disposal areas, used as backfill in underground workings, and used for the construction of haul roads, parking areas, storage area pads, building foundations, and other structures requiring rock foundations. Waste rock disposal areas are constructed using best practices for control of surface water run- on and runoff to manage flow, control erosion, and control sedimentation. As part of the approved waste rock monitoring program, samples are collected monthly for the two main lithologies (Alaskite and Wyman Formation).

Water monitoring has been ongoing at the Mineral Ridge site and is projected to continue through the proposed operations and into closure. MRG prepared a Water Monitoring Plan. Ongoing monitoring at the Mineral Ridge mine site is conducted.

Closure and Reclamation Planning

MRG committed to completing reclamation of disturbed areas resulting from mining activities at the Mineral Ridge site in accordance with BLM and NDEP (BMRR) regulations. BLM's reclamation requirements are outlined in 43 CFR 3809 and are generally summarized by stating that development of minerals on BLM-administered public land must be completed in a manner that prevents unnecessary or undue degradation of that land.

Weather at the Mineral Ridge mine site meets BMRR criteria that require production of a Seasonal Closure Plan. Current mine plans do not include provisions for closure during the winter months. If required, however, a seasonal closure is not anticipated to last more than two to three days. MRG also prepared a Temporary Closure Plan to deal with seasonal or interim closures that may occur due to mechanical or technical difficulties, unfavorable economic conditions, litigation or other unforeseen events.

A Tentative Plan for Permanent Closure is presented with a water pollution control permit (WPCP) application. This was prepared, and covers closure and stabilization requirements for areas such as heap leach pads, tailings impoundments, pits, WRSFs, ore stockpiles, and any other associated mine components that, if not properly managed during operation and closure, could potentially lead to the degradation of waters of the State. The Tentative Plan for Permanent Closure included goals and strategies for developing a Final Plan for Permanent Closure.

The Final Plan for Permanent Closure must be submitted at least two years prior to the anticipated permanent closure of that process component. This plan has not formally been submitted.

Permitting Considerations

The Mineral Ridge mine is located in part on public land administered by the BLM (Tonopah Field Office) and on private land controlled by MRG. BLM is the federal land management agency responsible for administration of surface mining regulations (43 CFR 3809) and determining compliance. BLM must ensure their decision regarding the project is in compliance with the NEPA. BLM works in conjunction with State of Nevada agencies including the NDEP- Bureau of Mining Regulation and Reclamation (BMRR), Nevada Division of Water Resources (NDWR), and the NDOW under a memorandum of understanding to assess and authorize proposed mining actions related to projects on both public and private lands. These State agencies issue substantive permits to the Mine under various state regulations.

The MRG Mineral Ridge mine has been under the ownership of several companies during its long mining history, with more recent permitting being undertaken by these operators since the late 1980s. As such, many of the permits have been either transferred to or acquired by each subsequent operator, most recently by MRG. It is expected that a similar transfer would be made to Titan at execution of the option agreement.

Reclamation permitting for mining and exploration activities are granted under permit No. 0103, this permit is valid for the LOM. The current water pollution control permit (WPCP) will expire on August 23, 2023. The WPCP authorizes processing up to 1,400,000 tons of ore per year. MRG obtained a Class II Air Quality Permit to Operate facilities that emit less than 100 t/a for any one regulated pollutant. The facility also meets hazardous air pollution system (HAPS) restrictions in that it emits less than 25 t/a HAPs, and less than 10 t/d of any one HAP. MRG obtained a Hazardous Waste Permit, EPA LQG #NVR000079988. MRG's class III waivered landfill permit, #SW1770, expired on 4/24/2020 and MRG is currently renewing it. MRG has held three water permits, No. 60034, No. 82547, and No. 60036, all of which require annual applications for extensions. The current permit for an Industrial Artificial Pond Permit is valid to 2024. MRG has posted reclamation bonding for the Mineral Ridge mine, which is currently $13.4 million.

Social Considerations

Due to the type of permitting actions conducted to date by MRG, BLM, and the various state agencies, there have been limited requirements for social or community outreach by the company. MRG has conducted meetings with BLM and NDEP-BMRR and other Nevada regulatory agencies since acquiring the Mineral Ridge mine, but none of these meetings have either been required to be open to the public or attended by members of the public.

MRG has attended meetings with the Esmeralda County Commissioners (Commissioners) to discuss planning, ongoing operations, and other topics of interest to the Commissioners. These meetings were open to the public.

Titan has conducted no social outreach activities to date.

1.18 Markets and Contracts

Gold and silver doré can be readily sold on numerous markets throughout the world and its market price can be ascertained on demand.

The gold and silver prices used in the financial model are US$1,350/oz and US$17/oz respectively, based on a review of the three-year trailing average price and the median price used NI 43-101 Technical Reports posted on SEDAR within the last 12 months.

1.19 Capital Cost Estimates

Project capital is summarized in Table 1-7. Supporting detail for these expenditures and others such as mine capital lease financing and working capital costs are provided in Sections 21 and 22.

Table 1-7: Capital Cost Summary

Item	Units	Total	2022	2023	2024–2027	2028
Mining equipment & pad expansion	$ ‘000	35,781	1,678	—	—	34,103
Mineral processing	$ ‘000	21,800	15,975	5,325	—	500
Tailings management	$ ‘000	—	—	—	—	—
On-site infrastructure	$ ‘000	2,910	2,183	728	—	—
Subtotal, Direct Costs	**$ ‘000**	**60,491**	**19,836**	**6,053**	**—**	**34,603**
Project indirects	$ ‘000	2,931	2,240	691	—	—
Engineering & project management	$ ‘000	2,387	1,845	542	—	—
Owners costs	$ ‘000	100	75	25	—	—
Subtotal Initial Capital Costs	**$ ‘000**	**65,910**	**23,996**	**7,311**	**—**	**34,603**
Contingency	$ ‘000	4,400	3,405	995	—	—
Total Capital Expenditure	**$ ‘000**	**70,310**	**27,401**	**8,306**	**—**	**34,603**

Note: Totals may not sum due to rounding

1.20 Operating Cost Estimates

Cash operating costs for the project are summarized in Table 1-8. Supporting detail for each line is discussed in Section 21. Additional non operating expenses such as bonding, capital lease interest, bonding, reclamation, salvage, depreciation and income taxes are detailed in Section 22.

Table 1-8: Operating Cost Summary

Item	Units	Total	2022	2023	2024	2025	2026	2027	2028	2029	2030
Tons milled	kton	10,742	—	736	1,464	1,460	1,460	1,460	1,464	1,460	1,238
Heap mining	$/ton milled	1.00	—	1.02	1.17	1.61	1.76	1.90	0.20	—	0.20
Remnant mining	$/ton milled	7.63	—	—	—	—	—	—	16.74	20.58	22.16
Crushing	$/ton milled	0.63	—	—	—	—	—	—	1.51	1.81	1.51
Process	$/ton milled	7.49	—	7.23	7.38	7.53	7.53	7.53	9.39	6.45	6.62
Stripping and refining	$/ton milled	0.44	—	0.43	0.43	0.43	0.43	0.43	0.45	0.46	0.47
G&A	$/ton milled	2.71	—	2.76	2.71	2.67	2.64	2.61	2.83	2.78	2.73
Net proceeds of minerals tax	$/ton milled	0.38	—	—	0.11	0.31	0.26	0.26	0.25	0.65	1.13
Total cash cost	**$/ton milled**	**20.28**	**—**	**11.45**	**11.81**	**12.56**	**12.63**	**12.74**	**31.37**	**32.72**	**34.81**
Total cash cost	**$/oz sold**	**920**	**—**	**871**	**898**	**955**	**961**	**969**	**1,021**	**916**	**810**
Total cash cost	**$ 000's**	**217,884**	**—**	**8,425**	**17,288**	**18,332**	**18,441**	**18,599**	**45,924**	**47,774**	**43,101**

Note: Totals may not sum due to rounding

1.21 Economic Analysis

The results of the economic analyses discussed in this section represent forward-looking information as defined under Canadian securities law. The results depend on inputs that are subject to a number of known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those presented here. Information that is forward- looking includes:

- Mineral Resource and Mineral Reserve estimates;
- Assumed commodity prices and exchange rates;
- Proposed mine production plan;
- Projected mining and process recovery rates;
- Assumptions as to mining dilution;
- Sustaining costs and proposed operating costs;
- Assumptions as to closure costs and closure requirements;
- Assumptions as to environmental, permitting and social risks.

Additional risks to the forward-looking information include:

- Changes to costs of production from what is assumed;
- Unrecognized environmental risks;
- Unanticipated reclamation expenses;
- Unexpected variations in quantity of mineralized material, grade or recovery rates;
- Geotechnical or hydrogeological considerations during mining being different from what was assumed;
- Failure of plant, equipment or processes to operate as anticipated;
- Changes to assumptions as to salvage values;
- Ability to maintain the social license to operate;
- Accidents, labor disputes and other risks of the mining industry;
- Changes to interest rates;
- Changes to tax rates, including federal, state and county income and property tax rates.

The economic viability of the project has been evaluated using constant dollar, unleveraged (no financing), after-tax discounted cash flow (DCF) methodology. This valuation method requires projecting material balances estimated from operations and calculating resulting economics.

Economic value is calculated from sales of metal, plus net equipment salvage value and bond collateral less cash outflows such as operating costs, capital costs, working capital changes, any applicable taxes and reclamation costs. Resulting annual cash flows are used to calculate the net present value (NPV) and internal rate of return (IRR) of the Project.

The economic evaluation is based on the estimated Mineral Reserves on the heap leach pad as of December 1, 2020, plus the Mineral Reserves estimated in remnant areas that can be mined using open pit methods. Since the Project entails use of infrastructure active up to, and including, the time of capital investment, continuity of administrative and certain operational activities is expected, which allows general and administrative and site infrastructure-related costs to be based on actual cost history. Otherwise, operating and capital costs for proposed new activities were derived by third-party engineers.

The remnant area open pit mining equipment is assumed to be leased rather than purchased. The type of lease is assumed to be a capital equipment lease. The term the lease is modeled at is four years at 6% interest. Interest payments are reported as cash operating costs and principal payments reduce cash as a financing activity reported on the cash flow statement. This financing mechanism lowers Project IRR by approximately 1%.

The Project returns a NPV 5% of $30 million and an IRR of 20.6%, supporting the Mineral Reserves estimate. The projected payback period is 3.7 years from commencement of operations.

A summary of the key elements of the cash flow analysis is provided in Table 1-9. The economic analysis results are displayed graphically in Figure 1-1.

1.22 Sensitivity Analysis

Project sensitivity to variations in operating costs, capital costs, gold grade and metals price was evaluated with respect to the NPV and IRR (Figure 1-2 and Figure 1-3 respectively).

The NPV5% (after-tax) of the Project is more sensitive to changes in metal price and metal grade, as compared to changes in capital and operating expenditure estimates. For example, at a gold price of $1,272/oz, a 15% decrease, the NPV5% (after-tax) decreases to $0 million and the IRR declines to 5%. At a gold price of $1,750/oz, a 17% increase, the NPV5% (after-tax) increases to $63 million and the IRR increases to 33%.

The IRR of the Project changes rapidly with changes in grade and metals price, and less rapidly with changes in capital and operating costs.

1.23 Risks and Opportunities

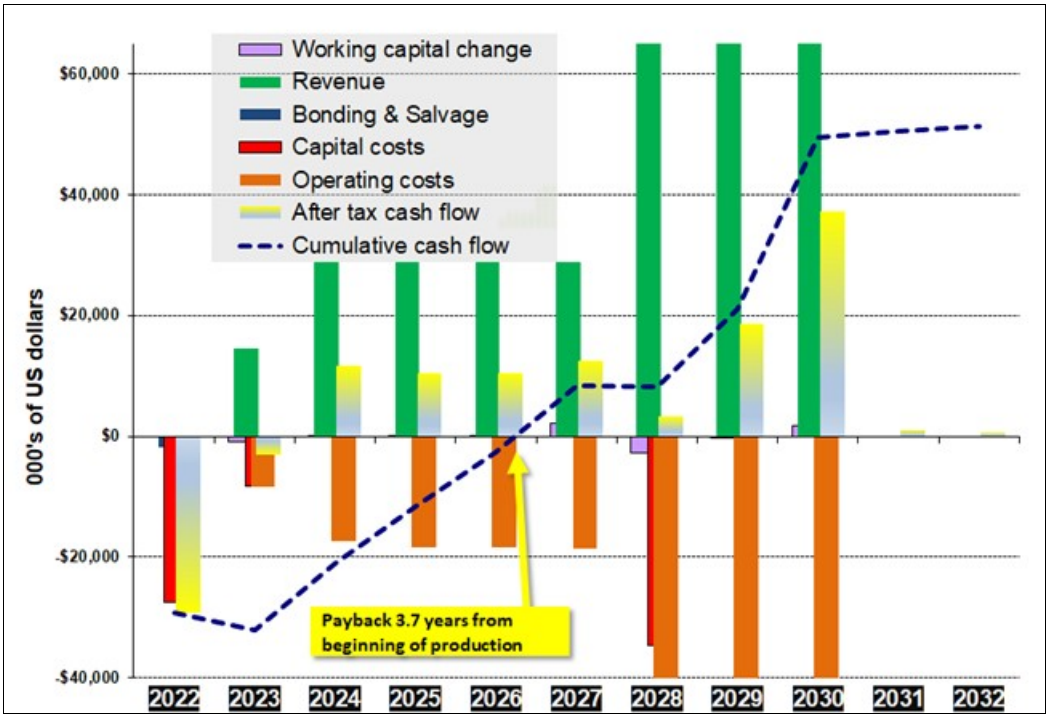
Financing

The economic analysis shows that the Project will initially require approximately $36 million in financing to construct. Whether the Project will be financed with reasonable terms and interest rates, will be based on the prevailing market conditions and sentiments of financing firms to invest in mining projects.

Table 1-9: Economic Parameters

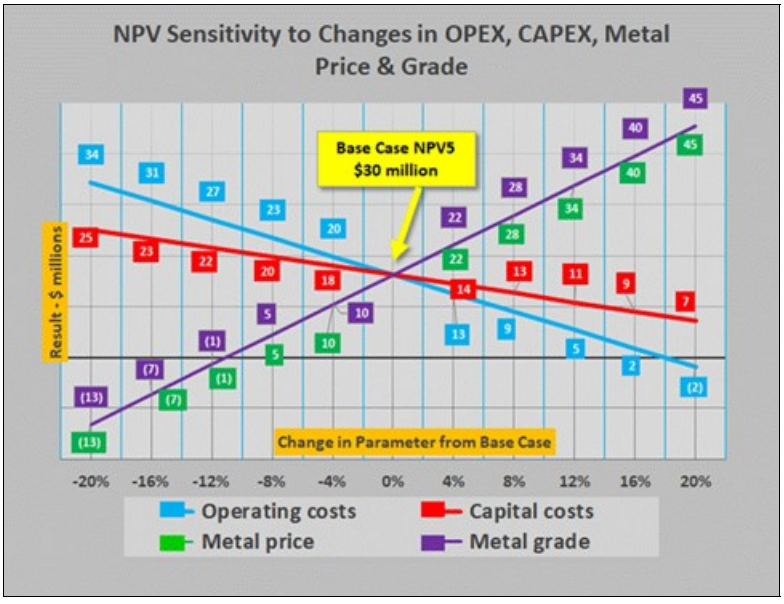
Area	Unit	Total/Average
Construction period	years	1.5
Operating period	years	7.3
Heap leach pad material milled	‘000 t	7,030
Average leach pad gold grade	opt	0.0145
Remnant material milled	‘000 t	3,712
Remnant material gold grade	opt	0.042
Recovery after process and refining	%	91.7%
Life of project gold sold	‘000 oz	236.9
Average annual gold sold	‘000 oz/a	32.5
Gold price	$/oz	$1,500
Average silver grade	opt	0.015
Average annual silver sold	‘000 oz/a	3.4
Total cash cost	$/oz	$920
Initial capital expenditures	$ million	$35.7
Remnant ore capital expenditures (Ops Year 6)	$ million	$34.6
Total after-tax net cash flow	$ million	$73.9
Net salvage value	$ million	$13.1
NPV of net cash flow discounted at 5%	$ million	$30.1
IRR	%	20.6%
Payback from end of construction	years	3.7

Figure 1-1: Graphical Display of Summary Cash Flow Forecast



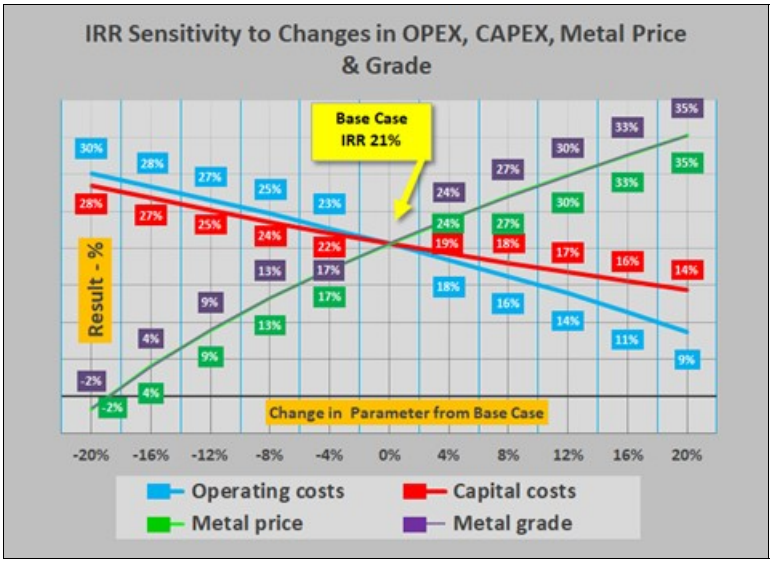
Note: Figure prepared by MTS, 2020.

Figure 1-2: NPV Sensitivity



Note: Figure prepared by MTS, 2020.

Figure 1-3: IRR Sensitivity



Note: Figure prepared by MTS, 2020.

Used Process Equipment

While not considered in the capital cost estimate, purchasing some used equipment for the Project could provide an opportunity to lower the capital cost estimate, which in turn might improve the Project economics. Used equipment can be considered for the Project, as the Project life is short.

Risk can be introduced with the introduction of used equipment of premature equipment failure, lower than expected performance, or incompleteness or unavailability altogether of technical information. This risk can be mitigated through inspections and conducting due-diligence before the purchase of such equipment.

Another benefit of purchasing used equipment to the Project can be shortening of the construction schedule. In addition to the permitting, certain purchased long-lead equipment determines the finish-date of the project, and hence, the start of production.

1.24 Conclusions

Under the assumptions in this Report, the proposed Mineral Ridge mining plan shows positive Project economics over the life-of-mine and supports Mineral Reserves. The mine plan is achievable under the set of assumptions and parameters presented.

1.25 Recommendations

A two-phase work program is recommended. The first phase will consist of exploration drilling. The second phase recommendations include additional exploration drilling, mining studies, and metallurgical testwork to support detailed process design, including variability and abrasion testing.

The program budget is estimated to total $4.0 to $6.6 million.

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 March 22, 2021, there were 138,978,357 common shares issued and outstanding and 22,503,798 warrants 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 2020.

Period	High	Low	Close	Volume
December 2020	0.92	9.64	0.84	1,782,500
November 2020	0.91	0.63	0.63	773,800
October 2020	1.03	0.67	0.79	1,110,300
September 2020	0.73	0.42	0.64	2,670,600
August 2020	0.35	0.21	0.375	3,008,000
July 2020	0.24	0.18	0.205	5,038,200
June 2020	0.275	0.19	0.20	1,695,300
May 2020	0.20	0.155	0.20	347,300
April 2020	0.205	0.15	0.17	602,500
March 2020	0.245	0.135	0.19	675,000
February 2020	0.28	0.20	0.215	709,700
January 2020	0.315	0.255	0.26	578,800

Prior Sales

At the date of this AIF the Company had 8,375,000 stock options outstanding with an exercise price ranging between Cdn$0.63 and Cdn$1.40 per share and expiring between June 1, 2022 and January 18, 2026 and 22,503,798 warrants with exercise price ranging between Cdn$0.50 to Cdn$0.75 per share expiring between September 22, 2023 and October 10, 2024. 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	**Executive Chairman of the Company**; Director and Executive Chairman of Solaris Resources Inc. since January 2020, Director and Executive Chairman of Augusta Gold Corp. since January 2021 and Director of Armor Minerals Inc. since February 2015 and President and CEO since October 2018; Director and Executive Chairman of Tethyan Resource Corp. from January 2019 to March 2020; President and CEO of the Company from October 2012 to September 2018; Executive Chairman and Director of Arizona Mining from July 2008 to August 2018; 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.
Donald R. Taylor Oro Valley, AZ USA	June 21, 2018	**Director and CEO of the Company;** Director of Solaris Resources Inc. since January 2020, Director of Augusta Gold Corp. since October 2020, Director of Tethyan Resource Corp. from January 2019 to September 2020; Director and COO of Arizona Mining Inc. from February 2015 and January 2016 respectively to August 2018, President from May 2012 to January 2016.
Purni Parikh[4] Burnaby, BC Canada	January 1, 2017	**President and Director of the Company**; Senior Vice President, Corporate Affairs and Corporate Secretary of Solaris Resources Inc. since November 2019; Senior Vice President, Corporate Affairs and Corporate Secretary of Augusta Gold Corp. since November 2020; Director of Armor Minerals Inc. since February 2015; Senior Vice President, Corporate Affairs and Corporate Secretary of Arizona Mining from February 2010 and November 2007 respectively to August 2018; 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.
Lenard Boggio[2][3] West Vancouver, BC 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 until his retirement from the firm in May 2012.
George Pataki[2][3] 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.
John Boehner[4] Marco Island, FL USA	October 9, 2018	**Director of the Company;** Strategic Advisor for Squire Patton Boggs since November 2017; Speaker of the US House of Representatives from 2011 to 2015.

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]
James Gowans[2][4] Surrey, BC Canada	October 9, 2018	**Director of the Company;** Director of Cameco Ltd. and New Gold Inc.; President, CEO and Director of Arizona Mining Inc. from January 2016 to August 2018; Co-President of Barrick Gold Corporation from July 2014 to August 2015, Executive Vice President and Chief Operating Officer of Barrick Gold Corporation from January 2014 to July 2014; Managing Director of Debswana Diamond Company (Pty) Ltd. from 2011 to 2014.
William Mulrow[2][3] New York, NY USA	October 9, 2018	**Director of the Company;** Senior Advisory Director at Blackstone Group since May 2017. Secretary to New York State Governor Cuomo from January 2015 to April 2017; Senior Managing Director at Blackstone Group from April 2011 to January 2015.
Michael McClelland Vancouver, BC Canada	March 26, 2018	**Chief Financial Officer of the Company; CFO of Augusta Gold Corp. since October 2020;** CFO of Bisha Mining Share Company (Eritrea) from February 2016 to March 2018; Financial Consultant from January 2015 to January 2016 focused on the mining industry; Progressively senior leadership roles in financial and operating areas at Goldcorp from June 2006 to January 2015 namely Director of Finance Canada / USA June 2010 to December 2013 and Mine General Manager, Wharf Mine from January 2013 to January 2015.
Scott Burkett Gouverneur, NY USA	March 8, 2018	**Vice President, Exploration of the Company**; Vice President, Exploration of Augusta Gold Corp. since October 2020; Chief Geologist at Arizona Mining Corp. from 2016 to 2018; Project Geologist at Metal Mining Consultants from 2012 to 2016.
Tom Ladner Vancouver, BC	November 23, 2020	**Vice President, Legal of the Company**; Vice President, Legal for the Augusta Group of companies, including Solaris Resources Inc. and Augusta Gold Corp. since November 2020; practiced law at Borden Ladner Gervais LLP from August 2014 to November 2020.
Susy Horna Surrey, BC Canada	November 6, 2017	**Corporate Secretary of the Company**; Corporate Secretary of Tethyan Resource Corp. from January 2019 to September 2020, Corporate Secretary of Armor Minerals Inc. since October 2018; Paralegal at Pacific Northwest LNG Ltd. from March 2015 to August 2017.

(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 March 22, 2021, is 78,492,883 (approximately 56.48% 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.

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 as described below and also 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".

On November 30, 2018 the Company and its subsidiaries as guarantors and a company controlled by Titan's Executive Chairman, entered into a second ranking secured credit facility of up to $18.7 million, maturing in December 2020. $3.7 million of such facility bears interest at 8% per annum with the remaining $15.0 million accruing interest at a floating rate equal to 7% plus LIBOR per annum. On August 21, 2019, the Company entered an addendum to its Loan which made an additional $1,000 available to the Company under the same terms as the original agreement. As such, the Loan was increased to a total of $19,710. Subsequent to December 31, 2019, the Company borrowed an additional $1 million on the same terms as the original Related Party Loan, increasing the total to $20.7 million.

In connection with the amendment to the Company's senior secured credit facility with the Bank of Nova Scotia, a $10,000 guarantee has been provided by a company controlled by Titan's Executive Chairman (the "Guarantor"), In consideration for the guarantee, the Company issued 3,000,000 common shares with a fair value of $979,000 and 3,000,000 share purchase warrants with each warrant exercisable for one common share at price of $0.50 per share for a period of five years from the date of issuance with a fair value of $543 at the guarantee effective date for a total fair value of $1,522 recorded as borrowing costs. Such common shares and share purchase warrants were issued on June 14, 2019.

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.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

Legal Proceedings

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.

The acquisition obligation owing to Star Mountain remains outstanding pending, among other things, the outcome of a claim brought against Star Mountain by Aviano Financial Group LLC ("Aviano"). The Company received notice on October 10, 2017 that 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 amended action of Aviano against Star Mountain was filed in the state of Colorado on October 12, 2017, adding claims for damages and a claim to set aside the alleged conveyance of ESM 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. While subsequent claims were filed by Aviano against Star Mountain, as at the date hereof, no litigation has been commenced by Aviano against the Company. Under the Purchase Agreement, Star Mountain agreed to indemnify the Company against certain claims including the proposed action by Aviano against the Company. The Company believes that the claim of fraudulent conveyance alleged by Aviano is wholly without merit and will defend against any action by Aviano if and when commenced.

On or about February 21, 2018, Star Mountain filed a voluntary petition commencing a Chapter 11 bankruptcy in the United States Bankruptcy Court for the District of Arizona. The filing of the bankruptcy case stayed the SGS and Aviano litigation against Star Mountain. The bankruptcy court confirmed a Chapter 11 plan of liquidation in the bankruptcy proceedings, which went effective on July 8, 2019. The Chapter 11 plan provides for the appointment of a Plan Trustee to liquidate all of the remaining assets owned by Star Mountain, including causes of action owned by Star Mountain. The Chapter 11 plan indicates that the Plan Trustee will investigate, and may pursue, potential fraudulent conveyance claims against the Company. In August of 2019, the Plan Trustee sent a written demand to the Company to perform what the Plan Trustee asserts are the Company's remaining monetary obligations under the Purchase Agreement.

On November 19, 2019, the Plan Trustee filed a Complaint against the Company, Titan (US) Corporation, and certain former officers and directors of Star Mountain with the Arizona bankruptcy court, and on February 21, 2020 (in response to a motion to dismiss filed by the Company and Titan (US) Corporation) the Plan Trustee filed an Amended Complaint. In his Amended Complaint, and as to the Company and Titan (US) Corporation, the Plan Trustee asserts: (a) a claim that the transaction under the Purchase Agreement should be avoided as a fraudulent conveyance under federal bankruptcy and state law; and (b) as purported alternative claims, that the Company and Titan (US) Corporation have breached their remaining payment obligations to Star Mountain related to the Purchase Agreement. The Company and Titan (US) Corporation believe that the Plan Trustee's claims are wholly without merit, and they will continue to aggressively defend against the claims.

The Company believes that the potential claim of fraudulent conveyance alleged by Aviano, and all of the claims asserted by the Plan Trustee against the Company and Titan (US) are wholly without merit. Irrespective of the merits of any such claims, however, if a fraudulent conveyance claim is resolved adversely against the Company, this could materially adversely affect the Company by terminating its interest in Empire State Mine or by potentially resulting in a significant damage claim. Such a result would have a significant negative impact on the Company.

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 as subsequently amended, issued to Star Mountain with respect to the Acquisition.
(ii) Off-take Agreement with Glencore Ltd. dated effective January 1, 2018 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 David Warren, Gary Methven, Deepak Malhotra, David Vatterodt, Ben Peacock and Matthew Hastings, being an author of the ESM 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 ESM 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 ESM Technical Report.

Each of Todd Wakefield, Ian Crundwell, Jeff Choquette, Brian Arthur, Kevin Lutes and Bruce Genereaux, being an author of the Mineral Ridge 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 Mineral Ridge 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 Mineral Ridge Technical Report.

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.

Qualified Person

Donald R. Taylor, MSc., PG, SME, Chief Executive Officer of the Company, a qualified person for the purposes of NI 43-101, has reviewed and approved certain scientific and technical information made in filings made by the Company under NI 51-102 in the most recently completed financial year. Mr. Taylor is a Director and officer of the Company. As of the date of this AIF, Mr. Taylor owns, beneficially, directly or indirectly, 4,778,571 common shares of the Company, 964,285 Warrants and 900,000 stock options, each to acquire one common share of the Company.

AUDIT COMMITTEE INFORMATION

National Instrument 52-110 – *Audit Committees* ("**NI 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, 2020, the Company's audit committee consisted of Messrs. Boggio, Mulrow and Gowans. All are independent and financially literate as defined in NI 52-110. The Audit Committee held three meetings during the year ended December 31, 2020.

The following is a description of the education and experience of each member of the audit committee during the year ended December 31, 2020 that is relevant to the performance of their responsibilities as an audit committee member.

Lenard Boggio (Chair of Audit Committee) - Mr. Boggio is a former partner of PwC LLP, where he was the leader of the mining industry practice in British Columbia. Mr. Boggio has significant expertise in financial reporting, auditing matters and transactional support, previously assisting, amongst others, clients in the mineral resource and energy sectors, including exploration, development and production stage operations in the Americas, Africa, Europe and Asia. Mr. Boggio previously served as a director of Blue Gold Mining Inc., Augusta Resource Corp., Armor Minerals Inc., Polaris Materials Corporation, and Lithium Americas Corp. and currently serves as a director of Equinox Gold Corp., Pure Gold Mining Inc., Sprott Resource Holdings Inc., Augusta Gold Corp. and provincially owned BC Hydro and Power Authority. Mr. Boggio has a Bachelor of Arts Degree and an Honors Bachelor of Commerce Degree from the University of Windsor. In 1985 Mr. Boggio became a member of the Institute of Chartered Accountants of BC ("ICABC", now "CPA BC"). Mr. Boggio was conferred with a Fellow's designation in 2007 by the ICABC for distinguished service to the profession and community and in 2018 he was awarded a Lifetime Achievement Award by CPA BC for his outstanding lifetime of service to the profession and community. He is a past president of ICABC and he is also a past Chair of the Canadian Institute of Chartered Accountants. He is also a member of the Canadian Institute of Corporate Directors ("ICD.D").

William Mulrow – Mr. Mulrow is a Senior Advisor at the Blackstone Group, an alternative asset manager. Previously, he was a Director of Global Capital Markets at Citigroup, Inc., a Managing Director of Paladin Capital Group, a Senior Vice President and Head of New Product Development at Gabelli Asset Management (now GAMCO Investors), a Managing Director in Corporate Finance for Rothschild Inc., and a Managing Director and Head of Public Finance Banking for Donaldson, Lufkin and Jenrette Securities Corporation. He is a graduate of the Kennedy School of Government at Harvard University and of Yale College where he graduated Cum Laude and was a Rhodes Scholar finalist.

James Gowans - Mr. Gowans has more than 30 years' experience in mineral exploration, feasibility studies, construction and operations, including at the Red Dog and Polaris mines. He was formerly President and CEO of Arizona Mining Inc., and Co-President and EVP & COO of Barrick Gold. Prior roles include Managing Director of Debswana Diamond Company (Pty) Ltd.; President & CEO of De Beers Canada Inc., COO & SVP of International Nickel Indonesia tbk PT, and EVP of Placer Dome Inc..

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, 2020	$210,000	$0	$0	$0
December 31, 2019	$222,000	$60,000	$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 under the Company's profile 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
Website: www.titanminingcorp.com
Email: info@titanminingcorp.com

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