



**TITAN MINING CORPORATION  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
FOR THE YEAR ENDED DECEMBER 31, 2017**

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

*This management's discussion and analysis ("MD&A") of Titan Mining Corporation. (the "Company", "Titan", "we", "us", or "our") covers the year ended December 31, 2017, with comparative information for the year ended December 31, 2016. This MD&A takes into account information available up to and including March 22, 2018. This MD&A should be read in conjunction with the accompanying consolidated financial statements and notes for the years ended December 31, 2017 and 2016 (the "Consolidated Financial Statements"), which are available on the Company's website at [www.titanminingcorp.com](http://www.titanminingcorp.com) and under the Company's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com).*

*The Company has prepared the consolidated financial statements in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").*

*All dollar amounts reported herein are in US dollars unless indicated otherwise.*

**Cautionary Note Regarding Forward-Looking Information**

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

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

*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.*

**Reserves and Resources**

*This MD&A uses the terms measured, indicated and inferred resources as a relative measure of the level of confidence in the resource estimate. Readers are cautioned that: (a) mineral resources are not economic*

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

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

## **ABOUT TITAN MINING CORPORATION**

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

The Company's corporate office is located in Vancouver, British Columbia, and its shares are listed on the Toronto Stock Exchange and trade under the symbol "TI".

## **HIGHLIGHTS AND OUTLOOK**

2017 was a year of significant progress in the Company's development following on from the December 30, 2016 acquisition of the Empire State Mines, with the following key achievements:

- Hired an operating management team with extensive experience in underground mining operations led by Keith Boyle as Chief Operating Officer;
- Completed a preliminary economic assessment ("PEA") of the Empire State Mines' #4 mine that showed pre-production capital of \$10.7 million, after tax net present value of \$150 million at a discount rate of 8%; after tax internal rate of return of 121% and an initial mine life of 8 years;
- Completed an initial public offering ("IPO") of the Company's common shares raising a total of \$41.4 million before fees and listing the shares on the Toronto Stock Exchange and paid off \$8.6 million of the liabilities that arose on the Acquisition from the proceeds;
- Following the PEA and IPO, initiated the work to complete the full refurbishment of the Empire State Mines' #4 mine; and
- Announced the signing of a term sheet for a \$15 million credit facility with the Bank of Nova Scotia.

Subsequent to the year-end the Company announced that underground mining had resumed with the first ores skipped to surface on schedule. The Company has also commissioned the mill and is in the process of running batches of ore through the mill and producing concentrate that will be delivered to Glencore Ltd. under its new long-term concentrate offtake agreement. Based on current progress, the Company anticipates being in commercial production during the second quarter of 2018.

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

The Company further strengthened its management team subsequent to the year end with the appointments of Michael McClelland as Chief Financial Officer, Scott Burkett as VP, Exploration, Jacqueline Allison as VP, Investor Relations and Strategic Analysis, Eric Strom as VP, Projects and Innovation and Naomi Johnson as VP, Community Relations.

In addition to completing the restart of operations based on the existing 8 year mine plan, the Company is also working to extend the mine life and increase mill throughput by analysing in-mine remnants and zone extensions that may be brought into the resource, undertaking a regional exploration program and making process improvements.

The Company is also engaged in a small base metal exploration program on its unpatented mining claims in New Mexico. The Company has received approval to conduct a drill program and anticipates a first phase of approximately 7 holes totalling 3,500 feet at a cost of approximately \$250,000.

### **EMPIRE STATE MINES**

#### **(a) Acquisition**

On December 30, 2016 the Company, through its wholly owned subsidiary Titan Mining (US) Corporation, completed the acquisition of Balmat Holdings Corp. ("Balmat") and its wholly owned subsidiary, St. Lawrence Zinc Co LLC, which own the Empire State Mines, from Star Mountain Resources Inc. ("Star Mountain"). Star Mountain had previously acquired the same two entities from Hudbay Minerals Inc. ("Hudbay") on November 2, 2015. Pursuant to the agreement between the Company and Star Mountain (the "Purchase Agreement"), the Company acquired 100% of the issued and outstanding shares of Balmat from Star Mountain.

As consideration for the shares acquired, the Company incurred the following obligations ("Acquisition Obligations"):

- issued 2,968,900 shares of the Company to Star Mountain valued at \$2,211,237 (CDN\$1.00 per share);
- made a cash payment of \$1,000,000 to Star Mountain which was completed on January 4, 2017.
- issued Star Mountain a promissory note in the principal amount of \$2,000,000, payable in four quarterly installments of \$500,000.
- assumed \$3,318,794 in debts owed to Augusta Investments Inc. ("Augusta") (a company controlled by the Company's President and CEO) by Star Mountain for advances made on the Company's behalf by Augusta to settle certain liabilities of Star Mountain;
- paid certain pre-closing liabilities on behalf of Star Mountain totaling \$51,854 (subject to minor adjustments); and
- assumed Star Mountain's remaining purchase obligations to Hudbay stemming from Star Mountain's acquisition of Balmat on November 2, 2015, which was fair valued at \$7,500,000.

#### ***Purchase accounting***

The transaction has been accounted for as an asset acquisition using the purchase method, rather than as a business combination, as the net assets acquired did not constitute a business under IFRS. The Company capitalized transaction costs of \$346,385 as part of the acquisition bringing the total purchase price to \$16,428,269 as follows:

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

<b>Consideration</b>	<b>Amount</b>
Shares issued on acquisition	\$ 2,211,237
Cash payment to Star Mountain	1,000,000
Note payable to Star Mountain	2,000,000
Note payable to Augusta Investments Inc.	3,318,794
Pre-closing liabilities paid on Star Mountain's behalf	51,854
Letter agreement to pay Hudbay	7,500,000
Capitalized transaction costs	346,384
<b>Total purchase price</b>	<b>\$ 16,428,269</b>

The total purchase price was allocated to the assets acquired and liabilities assumed on a relative fair value basis as follows:

<b>Assets acquired and liabilities assumed</b>	<b>Amount</b>
Cash	\$ 81,430
Prepaid expenses and deposits	164,588
Supplies inventory	311,310
Property, plant and equipment	25,019,791
Mineral interests	3,695,151
Restricted cash	1,662,870
Accounts payable and accrued liabilities	(395,539)
Reclamation and remediation provision	(14,111,332)
<b>Total purchase price</b>	<b>\$ 16,428,269</b>

**(b) Project Description**

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

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

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

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

**(c) Preliminary Economic Assessment**

The Company completed a Preliminary Economic Assessment ("PEA") on the Empire State Mines' #4 mine and filed a technical report dated September 19, 2017, which can be found on the Company's web site or under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).

A summary of the operating and financial results follows:

PEA Highlights	Unit	Value
<b>Operations</b>		
Mine Life	Years	8
Planned tons mined	Mt	4.3
Annualized throughput	tpd	1,465
Average zinc head grade	%	9.2
Recovered zinc (LOM)	Mlb	756
Average annual zinc production	Mlb	95
Payable zinc production (LOM)	Mlb	643
Average annual payable zinc production	Mlb	80
Average annual C1 costs (LOM)	\$/lb zinc	\$ 0.69
Average AISC (LOM)	\$/lb zinc	\$ 0.78
<b>Financial</b>		
Pre-production capital	\$M	\$ 10.7
LOM capital	\$M	\$ 69.2
Net smelter royalty (net of 0.3% average royalty)	\$M	\$ 622.0
Pre-tax cash flow	\$M	\$ 299.4
Income taxes	\$M	\$ 88.6
After-tax cash flow	\$M	\$ 210.7
After-tax net present value at 8%	\$M	\$ 150.0
After-tax internal rate of return	%	121.0

1. The PEA assumes the following zinc prices: Year 1: \$1.25/lb; Year 2:\$1.45/lb; Year 3:\$1.40/lb; Year 4: \$1.35/lb; year 5: \$1.20/lb; thereafter \$1.05/lb.
2. Zinc production refers to zinc in concentrate.
3. AISC (all-in sustaining costs) defined as site-level cash operating costs plus off-site costs plus sustaining capital divided by payable metal production.
4. 2018 AISC excludes \$8.6 million of expected development capital spending, before capitalization of pre-commercial production adjustments.
5. Life-of-mine ("LOM") figures exclude final year (wind down year).

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

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

*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. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all, or any part of the mineral resources estimated will be converted into mineral reserves.*

Mineral Resource Estimate

Mineral resources for each of the mineralized zones at the Empire State Mines' #4 mine are summarized in the table below.

Mineralized Zone	Measured		Indicated		Measured and Indicated		Inferred	
	Tons	% Zn	Tons	% Zn	Tons	% Zn	Tons	% Zn
Mahler	400,500	15.89	700,900	15.27	1,101,400	15.50	516,600	15.59
New Fold	68,000	12.75	249,600	11.72	317,600	11.94	539,400	13.97
Mud Pond	336,700	10.40	273,900	10.89	610,600	10.62	392,900	10.70
Other mineralization	44,900	10.73	83,500	10.16	128,400	10.36	827,100	12.85
<b>Total</b>	<b>850,100</b>	<b>13.19</b>	<b>1,307,900</b>	<b>13.35</b>	<b>2,158,000</b>	<b>13.29</b>	<b>2,276,000</b>	<b>13.37</b>

The Mineral resource statement for the Empire State Mines' #4 mine set out in the Technical Report was prepared in accordance with NI 43-101. The effective date of the mineral resource statement is April 6, 2017, and follows the guidelines of the generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" (as adopted on November 23, 2003). Also considered was the "Guidance on Commodity Pricing used in Mineral Resource Estimation and Reporting" adopted by the CIM Council on November 28, 2015. The guidance provides additional clarity on the CIM definition of "reasonable prospects of eventual economic extraction".

The mineral resource statement presented in the Technical Report is based on drill data, mining contacts, and the guidance of the on-site personnel that created the mineral resource wireframes. The information was reviewed and all work is believed to have been executed in a professional manner based on the standards of care at the time. In order to determine the quantities of material satisfying "reasonable prospects for economic extraction", the authors of the Technical Report assumed a minimum mining cut-off grade of 6.0% zinc, representing an approximate operating cost of \$70/ton, a zinc price of \$1.00/lb and 96% recovery. The authors of the Technical Report were unaware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing or political issues that may adversely affect the mineral resources presented in the Technical Report. The authors of the Technical Report were satisfied that the geological modelling honours the current geological information and knowledge. The location of the samples and the assay data are sufficiently reliable to support mineral resource estimation. The authors of the Technical Report considered that the blocks with grades above the cut-off grade satisfy the criteria for "reasonable prospects for economic extraction" and can be reported as a mineral resource.

**(d) 2017 Site Activities**

Prior to completion of the Company's IPO in the fourth quarter of 2017, the Company's activities to advance the refurbishment of the Empire State Mines' #4 mine were limited by the availability of funding. Early pre-IPO activities included shaft utility refurbishments, installation of new hoist cable, and the start of reconditioning of the mobile equipment fleet and underground ground support installations. A mobile mechanical contractor was hired to refurbish select underground mobile equipment necessary for initial underground rehabilitation work. Dumas Contracting, an underground mine contractor, was also retained to perform initial underground rehabilitation work. Other activities included the supply of certain long-lead electrical items related to the crusher refurbishment, which were received in June 2017. Through the third quarter of 2017, a number of employees were hired, with a full site management team in place along with technical support staff in the geology and engineering departments. The engineering department focused on

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

preparing the detailed engineering for the plan to re-commence operations at the Empire State Mines' #4 mine in conjunction with Dumas Contracting.

Following completion of the PEA and the IPO, the Company began its mine refurbishment and rehabilitation plan in earnest, hiring additional employees and contractors. On January 30, 2018, the Company announced that the crusher, hoist and mill at the Empire State Mines' #4 mine had been commissioned and hoisting of ore had begun on schedule and budget. The underground crusher refurbishment, which was on the critical path, was completed on time, allowing for the shaft, with a capacity of 3,800 tons per day, to commence hoisting activity. The rehabilitation of the underground mine is well advanced, with over 26,000 feet completed since the start of the project. Initial development to access new stopes has begun, and production will be sourced from drilled long-hole stopes and early development ore. Refurbishment of mobile equipment is proceeding well, with over 85% of the support fleet fully operational, and work on production equipment is expected to advance through the quarter as throughput ramps up.

**(e) Growth Strategy**

Based on the mineral resources outlined in the PEA for the Empire State Mines' #4 mine, mill throughput is expected to ramp up to a rate of 1,800 t/d by the first quarter of 2019. The Empire State Mines' # 4 mine was last mined in 2008 and the Company believes that the areas to be mined will be fully accessible after rehabilitation work is completed.

Titan has a three-pronged strategy to drive cash flow growth and maximize the value of its properties by leveraging excess capacity and lowering costs:

- Fill the shaft (3,000 t/d capacity) and extend mine life with in-mine mineral resource additions;
- Fill the mill (5,000 t/d capacity) strategy supported by regional exploration; and
- Modernize the operation to improve efficiencies and lower costs.

Titan is evaluating exploration targets consisting of the historic proven and probable ores and remnants at the Empire State Mines' #4 mine that may, if economic, extend the life of the mine and underpin an increase in production to 3,000 t/d, which is the capacity of the existing shaft. Remnants are structural pillars left behind during previous operations at the Empire State Mines' #4 mine. These historic proven and probable ores and remnants were not extracted due to the low commodity prices at that time, or because suitable mining methods and technologies were not yet available. This mineralized material was "written down" by the previous owners of the Empire State Mines' #4 mine and is no longer considered a part of the economic operation. Previous owners calculated the tonnage and grade of the mineralized material, designating it as "low grade reserves", and filing internally as such, to allow for re-evaluation when technical or economic conditions changed. None of the mineralization in areas that were written down by the previous owners is included in the current mineral resource envelope for the Empire State Mines' #4 mine. A qualified person for the purposes of NI 43-101 has not done sufficient work to classify these historical estimates as a current mineral reserve. The Company does not treat the historical estimates as a current mineral resource or mineral reserve.

The Company aims to identify and evaluate regional exploration targets. Satellite deposits were previously mined at the former Pierrepont, Edwards and Hyatt mines, and the company holds interests in approximately 81,000 acres of mineral interests surrounding the Empire State Mines' #4 mine. If economic deposits are identified in the region, there is potential to extend the life of the operation further and to utilize spare capacity in the mill, which has a nameplate capacity of 5,000 t/d.

Titan has a US\$5 million budget for regional exploration in 2018. The regional exploration program includes the compiling, digitizing and modeling of historical data in order to generate additional exploration targets in



**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

and around the Empire State Mines' #4 mine. Existing high priority exploration targets include the Sully prospect and the Gap Zone. The results of a versatile time domain electromagnetic (VTEM) survey completed in 2008 are being used to identify exploration targets outside the immediate area of the Empire State mine. Three targets identified to date include North Gouverneur, Moss Ridge SW, and Colton.

The Company has identified six opportunities that have the potential to increase the mine life, reduce operating costs, and/or improve overall mine efficiency relative to the PEA, as detailed below.

<b>Opportunity</b>	<b>Explanation</b>	<b>Potential Benefit</b>
Plant Feed Sorting	The use of sorting technology could reject waste rock dilution in the mineralized plant feed.	Rejecting waste rock dilution would increase the head grade entering the mill.
Resource Expansion	The mineral resource has not been fully delineated and there is opportunity to expand the mineral resource.	Increase mine life and increased project NPV.
Railveyor	The use of Railveyor technology could simplify material handling in the mine.	Reducing mine operating costs by eliminating or reducing the need for truck haulage for mill feed material.
Mine Material Transportation	Improve the haulage efficiency by grading haul roads, slashing tight areas or corners.	Improved truck speeds and mechanical availability should lead to lower operating costs.
Drill Core Sampling	Resampled core for holes that were excluded from the study due to lack of verification data.	Potential to increase mineral resources within the PEA, mine plan grade and classification without additional drilling.
Metallurgical Testing	Locked cycle test proved concentrate grades of 60% while budget is set to 56%. Investigate retention times in cleaner flotation stages and forced air type cells in rougher stage.	Potential to increase concentrate grade.

**OTHER PROJECTS**

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

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

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

## **CORPORATE ACTIVITIES**

### **Initial Public Offering**

On October 19, 2017, the Company completed an initial public offering ("IPO") of its shares on the Toronto Stock Exchange and commenced trading under the symbol "TI". 35,750,000 common shares were issued at CDN\$1.40 per share for gross proceeds of CDN\$50,050,000 (\$40,110,595) and on November 6, 2017, the Company issued another 1,200,000 common shares at CDN\$1.40 per share for gross proceeds of CDN\$1,680,000 (\$1,318,061) upon the exercise of the over-allotment option by the underwriters. The proceeds have been used to repay the outstanding obligations that arose on the acquisition of the Empire State Mines Project (see "Liquidity and Capital Resources" later in this MD&A) and to fund the refurbishment of the mine in preparation for the restart of operations.

### **Management Appointments**

Subsequent to the year-end the Company announced the strengthening of its management team with the appointments of Michael McClelland as Chief Financial Officer, Jacqueline Allison as Vice President, Investor Relations and Strategic Analysis, Eric Strom as Vice President, Projects and Innovations, Scott Burkett as Vice President, Exploration and Naomi Johnson as Vice President, Community Relations.

Mr. McClelland is a chartered professional accountant and is currently Chief Financial Officer of Bisha Mining Share Company, an operating subsidiary of Nevsun Resources Ltd. He previously worked for Goldcorp Inc. as the Mine General Manager at Wharf Resources (now owned by Coeur Mining), and Director of Finance, Canada and USA.

Ms. Allison is a Chartered Financial Analyst with a PhD in Mineral Economics, and has 20 years of capital markets and corporate experience. Prior to joining Titan, she was Vice President, Investor Relations for Dominion Diamond Corp., and Director, Investor Relations for Hudbay Minerals Inc. Previously, she served as Vice President and Research Director, Fundamental Equities for BMO Asset Management, and Vice President, Canadian Equities for Natcan Investment Management.

Mr. Strom has over 20 years of industry experience in precious and base metals mine development and operations in Canada and Australia. He was most recently Director, Underground Mining for New Gold Inc., and has previously worked for Placer Dome, Goldcorp, Rio Tinto and China Molybdenum. Mr. Strom led the implementation of the world's first fully automated underground hard rock mine at Northparkes Mines, Australia.

Mr. Burkett has over 10 years of experience in mineral exploration, ore control, geologic modeling, resource estimation and database management. Prior to joining the Company, Mr. Burkett worked for Arizona Mining Inc., where he served as Chief Geologist for the Hermosa Project, and was instrumental in designing programs which resulted in significant expansion of the mineral resources. Mr. Burkett also brings experience in exploration and ore control from previous roles at Metal Mining Consultants Inc., First Solar, Hycroft Resources & Development, Inc. (Allied Nevada Gold) and Yamana Gold, Inc.

Ms. Naomi Johnson is a corporate social responsibilities and international development specialist and lawyer who has developed a leading-edge approach to stakeholder risk and impact management in the private, public and not-for-profit sectors. She was previously Partner and Senior Director, Community Relations for Barrick Gold Corporation, Regional Practice Lead for the Americas - Social Impact Management for Hatch,

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

Director, Legal Programming and Director, Africa Program for War Child Canada, and Resettlement Expert for the United Nations High Commissioner for Refugees.

**RESULTS OF OPERATIONS**

	Years ended December 31,	
	2017	2016
<b>SITE EXPENSES</b>		
Care and maintenance costs	\$ 4,008,636	\$ -
Depreciation	978,732	-
Exploration and evaluation expenses	1,748,342	-
	<u>6,735,710</u>	<u>-</u>
<b>GENERAL AND ADMINISTRATION EXPENSES</b>		
Share based compensation	955,524	-
Salaries and benefits	882,997	-
Professional fees	755,771	32,064
Office and administration	456,260	28,326
Investor relations	111,918	2,640
	<u>3,162,470</u>	<u>63,030</u>
<b>OTHER EXPENSES/(INCOME)</b>		
Acquisition obligation amendment fee	525,000	-
Interest expense	356,758	-
Accretion expense	341,457	-
Interest income	(77,922)	(3,746)
Other	(12,125)	7,110
	<u>1,133,168</u>	<u>3,364</u>
<b>NET LOSS FOR THE YEAR</b>	<b><u>\$ 11,031,348</u></b>	<b><u>\$ 66,394</u></b>
<b>OTHER COMPREHENSIVE LOSS:</b>		
Items that may be reclassified to profit or loss:		
Unrealized loss on translation to reporting currency	133,158	77,382
<b>TOTAL COMPREHENSIVE LOSS FOR THE YEAR</b>	<b><u>\$ 11,164,506</u></b>	<b><u>\$ 143,776</u></b>
<b>LOSS PER SHARE</b>		
Basic and diluted	<u>\$ 0.16</u>	<u>\$ 0.01</u>

The net loss for year ended December 31, 2017, was \$11,031,348, compared to a loss of \$66,394 in the previous year. There were no significant activities in the Company during 2016, prior to the acquisition of the Empire State Mine Project on December 30, 2016, from which date the results have been consolidated.

The Empire State Mines' #4 mine was on care and maintenance until the completion of the IPO on October 19, 2017, following which the mine entered the development stage. From November 1, 2017, all mine site costs including general and administration but excluding exploration and evaluation costs were capitalized to mineral properties, plant and equipment as construction-in-progress. These costs will continue to be

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

capitalized until the mine achieves commercial production in accordance with the Company's accounting policy.

Care and maintenance costs comprise the costs necessary to maintain a skeleton staff on site for security purposes, to maintain the buildings and infrastructure and ensure the operation stayed in compliance with environmental and other regulations.

Depreciation expense is the charge for the period for depreciation recorded on the depreciable assets acquired on the Acquisition and subsequently. Depreciation for the period subsequent to November 1, 2017 has been capitalized and included in construction-in-progress.

Exploration and evaluation expenses were amounts incurred by the Company in the period for the preparation of the Technical Report and for exploratory drilling being undertaken by the Company.

General and administration expenses of \$3,162,470 were incurred for the year ended December 31, 2017 and compares to \$63,030 in 2016. General and administration expense includes a \$955,524 non-cash expense related to the granting of stock options to directors, employees and advisors of the Company in the second and fourth quarters of 2017. General and administration expense also includes \$604,336 with respect to the listing of the Company's shares on the Toronto Stock Exchange, as discussed below, of which approximately \$449,834 is included in professional fees and \$154,502 in office and administration.

Other expenses/(income) mainly consists of:

- Acquisition obligation amendment fees of \$525,000 related to the deferral of the \$5,000,000 cash payment to Hudbay from June 28, 2017 to October 31, 2017 (\$500,000 payable in common shares) and the deferral of a \$500,000 installment to Star Mountain from September 30, 2017 to the earlier of five days from the date of the IPO date or October 31, 2017 (\$25,000 payable in cash).
- Interest expense and fees on the loans from Augusta related to the Acquisition and subsequent funding.
- Accretion expense, a non-cash charge, recognizing the unwinding of the discount to reflect the passage of time on the reclamation and remediation provision for the Empire State Mines.

## **LIQUIDITY AND CAPITAL RESOURCES**

At December 31, 2017, the Company had cash and cash equivalents of \$25,167,611 compared to \$8,156,928 at December 31, 2016.

Cash outflow from operations for the year ended December 31, 2017, of \$8,062,726 reflects the cash components of the care and maintenance, exploration and evaluation, general administration and finance expenses for the year and compares to an outflow of \$1,322 in 2016 when the Company was largely inactive.

Cash provided by financing activities of \$27,737,216 for the year ended December 31, 2017, compares to \$8,157,680 in 2016. 2017 includes the IPO, which was completed in October and November 2017, whereby the Company issued an aggregate of 36,950,000 common shares at CDN\$1.40 per share for aggregate gross proceeds of \$41,428,656 (CDN\$51,730,000). The Company incurred \$3,568,370 in underwriting, professional and other costs in connection with the IPO of which \$2,964,034 has been deducted from share capital and \$604,336 expensed to the consolidated statements of loss and comprehensive loss and included in operating activities in the statements of cash flows.

From the proceeds of the IPO, the Company repaid the following Acquisition Obligations:

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

- On October 20, 2017, the Company paid Hudbay in full with \$5,000,000 in cash and issued 2,673,857 common shares of the Company valued at \$3,000,000 representing the Acquisition Obligation of \$2,500,000 and the amendment fee of \$500,000, previously discussed;
- On October 20, 2017, the Company paid Augusta in full with \$4,475,552 representing the debenture principal of \$4,118,794 plus interest and fees of \$356,758. The principal repaid comprised the \$3,318,794 that was assumed on the acquisition together with new debenture advances received in August 2017 and September 2017 totalling \$800,000. The amounts payable to Augusta were due on demand or December 31, 2017, if earlier and bore interest at 12% per annum payable monthly in arrears. The advances of \$800,000 received during the year also had an upfront fee due upon funding of 2%.

The Company also paid the first and second installments of \$500,000 due to Star Mountain under the Empire Mines purchase agreement on March 30, 2017 and June 30, 2017, respectively. At December 31, 2017 the \$525,000 payment due on October 24, 2017 and the \$500,000 payment due on December 30, 2017 remain outstanding pending 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 conveyance of the Empire State Mines by Star Mountain to the Company alleging that it was a fraudulent conveyance. In addition, the Aviano notice stated that it intends to file an analogous action in New York alleging fraudulent conveyance, naming Star Mountain and the Company as defendants. As at the date hereof, no litigation has been commenced by Aviano against the Company. Pursuant to the Purchase Agreement, Star Mountain has agreed to indemnify the Company against certain claims including the proposed action by Aviano against the Company. See "Risks and Uncertainties – Title" later in this MD&A for further information.

During the twelve months ended December 2016, the Company issued 59,377,000 common shares in private placements for proceeds of \$8,157,680 and 2,968,900 shares in relation to the acquisition of the Empire State Mines with a deemed value of \$2,211,237.

For the year ended December 31, 2017, cash used in investing activities totalled \$2,567,301 (2016 – inflow of \$80,433) and was substantially all used with respect to the refurbishment of the Empire State Mines' #4 mine and is net of accounts payable at December 31, 2017, related to the refurbishment.

The Company is in the development stage and its financial success will be dependent upon the extent to which it can refurbish the Empire State Mines' #4 mine and successfully generate positive cash flow from its operation. The sales value of any minerals mined by the Company will be largely dependent upon factors beyond the Company's control, such as the market value of minerals produced. The Company does not expect to receive significant income from the Empire State Mines' #4 mine until it has successfully returned to commercial production. The Company intends to meet all cash requirements for the refurbishment and pre-commercial production operation of the Empire State Mines' #4 mine from the funds raised from the IPO. The future funding needs of the Company are dependent upon the Company's ability to generate positive cash flow from the Empire State Mines' #4 mine and its continued ability to obtain equity and/or debt financing to meet its financial obligations as they come due. As previously mentioned, the Company has obtained a commitment from the Bank of Nova Scotia for a \$15 million credit facility of which \$5 million would be available on closing with the remainder available based on certain production milestones. The Company anticipates closing shortly although there can be no guarantee this will occur.

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

**Commitments**

The Company's commitments as at December 31, 2017, that need to be satisfied with cash and their approximate timing of payment are as follows:

	2018	2019- 2020	2021- 2022	2023+	Total
Accounts payable and accrued liabilities	\$ 3,631,426	\$ -	\$ -	\$ -	\$ 3,631,426
Acquisition obligations	1,025,000	-	-	-	1,025,000
Operating lease obligations	229,246	458,492	288,875	-	976,613
Advance royalties on mineral rights	36,708	36,708	36,708	36,708	146,832
	\$ 4,922,380	\$ 495,200	\$ 325,583	\$ 36,708	\$ 5,779,871

**SELECTED ANNUAL INFORMATION**

Information for the three years ended December 31, 2017, as extracted from the Company's audited financial statements, is presented as follows:

	2017	2016	2015
Net loss	\$ 11,031,348	\$ 66,394	\$ -
Net loss per share (basic and diluted)	0.16	0.01	-
Total assets	60,835,398	39,013,822	10
Total non-current financial liabilities	\$ 14,698,181	\$ 14,111,332	\$ -

**SUMMARY OF QUARTERLY RESULTS**

The following table provides highlights from the Company's financial statements of quarterly results for the past eight quarters:

	2017 Q4	2017 Q3	2017 Q2	2017 Q1	2016 Q4	2016 Q3	2016 Q2	2016 Q1
Net loss for the period	\$ 2,528,773	\$ 3,068,233	\$ 3,429,723	\$ 2,004,619	\$ 66,394	\$ -	\$ -	\$ -
Basic and diluted loss per share	0.03	0.05	0.06	0.03	0.01	-	-	-
Cash and cash equivalents	25,167,611	48,237	1,223,889	4,683,433	8,156,928	10	10	10
Total assets	60,835,398	31,737,916	32,839,939	36,058,595	39,013,822	10	10	10
Acquisitions obligations	1,025,000	13,018,794	12,318,794	12,318,794	13,870,648	-	-	-
Total liabilities	19,354,607	29,285,704	27,832,589	27,764,021	28,788,671	-	-	-

The Company was a dormant, privately-held shell corporation for the periods prior to the fourth quarter of 2016 and had limited activity during those periods. As at the Reporting Date, the Company is still at the development stage and therefore has not earned any revenues. Accordingly, seasonality or commodity market fluctuations have had a limited impact on the Company's operating results to date although this will change in 2018 with the re-start of mine operations.

In the fourth quarter of 2016, the Company completed non-brokered private placements of Common Shares for proceeds of \$8,157,680, as reflected by the increase in cash and cash equivalents. The Company also closed the Acquisition on December 30, 2016, as reflected by the increase in total assets, acquisition obligations, and total liabilities at the end of the quarter.

The increase in the net loss in the first quarter of 2017 compared to the fourth quarter of 2016 reflects the consolidation of the results of the Empire State Mines from its acquisition on December 30, 2016. The increase in the net loss during the second and third quarters of 2017 compared to the first quarter of 2017

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

reflects the general ramp up in operations at the Empire State Mines' #4 mine as additional employees and contractors were hired as well as the recording of share-based compensation expense with respect to stock options granted in June, 2017. In addition, the second quarter of 2017 includes Acquisition Obligation amendment fees of \$525,000, as discussed earlier in this MD&A.

The increase in cash and cash equivalents and total assets in the fourth quarter of 2017 results from the completion of the Company's IPO for aggregate gross proceeds of \$41,428,656. Following the financing, in November 2017, the Company started its refurbishment of the mine and plant infrastructure in preparation for the start of operations. Accordingly, all costs other than exploration and evaluation, corporate and financing have been capitalized, which has resulted in the decrease in the net loss in the fourth quarter of 2017 as discussed further below.

#### **FOURTH QUARTER**

The net loss for the fourth quarter of fiscal 2017 was \$2,528,773 (\$0.03 per common share compared to \$66,394 (\$0.01 per common share) in the previous year and \$3,068,233 in the third quarter of 2017. The increase in the loss from the 2016 comparative is because the Company was largely dormant in the fourth quarter of 2016 until the Acquisition that closed on December 30, 2016. The decrease in the net loss in the fourth quarter of 2017 compared to the third quarter of 2017 is primarily attributable to the commencement of the refurbishment of the Empire State Mines' #4 mine following the IPO. All site costs are being capitalised from November 1, 2017 other than exploration and evaluation costs. As a result, total mine site costs expensed in the fourth quarter of 2017 decreased to \$861,449, compared to \$1,973,863 in the third quarter of 2017. Conversely, general and administration expense increased to \$1,623,521 in the fourth quarter of 2017 compared to \$856,019 in the third quarter of 2017 primarily as a result of the IPO whereby \$604,336 of the costs associated with the listing on the TSX were expensed in the fourth quarter.

As noted above, on October 19, 2017, the Company completed the IPO raising aggregate gross proceeds of \$41,428,656. The Company paid off the Acquisitions Obligations owing to Hudbay of \$5,000,000 and to Augusta of \$3,318,794 and repaid the other advances from Augusta of \$800,000 plus interest and fees of \$356,758. On October 20, 2017, the Company also issued 2,673,857 common shares to Hudbay for the balance of the Acquisition Obligation of \$3,000,000.

#### **OFF-BALANCE SHEET ARRANGEMENTS**

The Company has no off-balance sheet arrangements.

#### **PROPOSED TRANSACTIONS**

The Company has no proposed transactions.

#### **RELATED PARTY TRANSACTIONS**

##### **(a) Transactions with key management personnel**

Key management personnel include those persons having authority and responsibility for planning, directing and controlling the activities of the Company. The Company's key management personnel for the year ended December 31, 2017 and 2016, were its Chief Executive Officer, Chief Financial Officer, Chief Operating Officer, and Directors. The remuneration for the Company's key management for the year ended December 31, 2017 and 2016 comprised:

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

	Year ended December 31, 2017	Year ended December 31, 2016
Salaries and benefits	\$ 659,328	\$ -
Other short-term benefits	8,747	18,860
Stock based compensation	799,627	-
	<u>\$ 1,467,702</u>	<u>\$ 18,860</u>

**(b) Other related party transactions**

In addition to the transactions described above and elsewhere in this MD&A, the Company also had the following related party transactions:

The Company shares office space, equipment, personnel and various administrative services with other companies (Arizona Mining Inc. ("Arizona Mining"), NewCastle Gold Ltd (until December 22, 2017) and Armor Minerals Inc.) related to it by virtue of certain directors and management in common. These services have been mainly provided through a management company, 688284 BC Ltd. (the "Management Company"), equally owned by the related companies. Costs incurred by the Management Company are allocated between the companies based on time incurred and use of services and are charged at cost. The Company was charged for the following with respect to these arrangements in the years ended December 31, 2017 and 2016:

	Year ended December 31, 2017	Year ended December 31, 2016
Expenses reimbursement:		
Exploration and evaluation	\$ 22,258	\$ -
Investor relations	57,146	-
Office and administration expenses	204,607	7,395
Professional fees	98,991	-
Salaries and benefits	867,980	-
	<u>\$ 1,250,982</u>	<u>\$ 7,395</u>

Other assets of \$100,474 (December 31, 2016 - \$nil) relate to the Company's share of jointly owned assets (primarily leasehold improvements and furniture and equipment) held by the management company.

At December 31, 2017 accounts receivable included \$40,846 outstanding (2016 - \$nil) with respect to these arrangements and an amount payable to Arizona Mining of \$3,292 (December 31, 2016 - \$2,635), related to the reimbursement of expenses incurred on the Company's behalf.

The Company began prospecting for base metals in an area of New Mexico in 2017 after being introduced to the area pursuant to an agreement with Arizona Mining. The agreement enables the Company to explore the area and take title to any claims subject to a back-in right whereby Arizona Mining can acquire a 60% interest in the claims on payment of two times the exploration expenditures at that time. The right is exercisable on the earlier of the Company expending \$2.5 million on exploration or three years.

**OUTSTANDING SHARE DATA**

The Company is authorized to issue an unlimited number of common shares without par value. At March 22, 2018, the Company had 101,970,757 common shares issued and outstanding and 7,015,000 stock options outstanding.



**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

**CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS**

The preparation of the Company's consolidated financial statements requires management to make judgements, estimates and assumptions in the process of applying the Company's accounting policies that affect the reported amounts of assets, liabilities and contingent liabilities at the date of the consolidated financial statements, and reported amounts of expenses during the reporting period. Estimates and assumptions are continually evaluated. However, actual outcomes could materially differ from these estimates. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in future periods affected. Information about critical judgements and estimates in applying accounting policies that have the most significant effect on amounts recognized in the consolidated financial statements are as follows:

- *Determination of Technical and Commercial Feasibility* – The Company determined that its Empire State Mines' #4 mine had achieved technical and commercial feasibility effective November 1, 2017. As a result, costs subsequently incurred on the project are accounted for as development costs and capitalized to mineral property, plant and equipment, as appropriate instead of as exploration and evaluation expenditures accounted for in accordance with IFRS 6. The determination that the project had achieved technical and commercial feasibility is a matter of significant judgement particularly in circumstances where a preliminary feasibility or feasibility study has not been completed. In making its determination the Company took into consideration, among other factors: the long operating history of the Empire State Mines prior to its closure in 2008; the existing mineral resources; the results of the preliminary economic assessment completed in 2017; the existing mine permits, leases and infrastructure; and the funding made available to the Company to complete the project.
- *Reclamation and remediation provision* – The Company's accounting policy requires the recognition of a provision for future reclamation and other closure activities when the obligation arises. The present value of future obligations are estimated by the Company using mine closure plans and other studies based on current environmental laws and regulations and Company policy. The estimates include assumptions as to the future estimated costs, timing of the cash flows to discharge the obligations, inflation rates, and the prevalent market discount rates. The reclamation and closure estimates are more uncertain the further into the future the activities are to be performed. Any changes to these assumptions will result in an adjustment to the provision which affects the Company's liabilities and its property, plant and equipment.
- *Functional currency determination* – In accordance with IAS 21, management determined that the functional currency of the parent company, Titan Mining Corporation, is the Canadian dollar and the functional currency of the Company's wholly-owned subsidiaries is the U.S. dollar, as these are the currencies of the primary economic environments in which the companies operate.
- *Impairment* – Management applies significant judgement in its assessment and evaluation of asset or cash generating units at each reporting date to determine whether there are any indications of impairment. The Company considers both internal and external sources of information when making the assessment of whether there are indications of impairment for the Company's mineral properties, plant and equipment. External sources of information considered are changes in the Company's economic, legal and regulatory environment, which it does not control, but affect the recoverability of its mining assets. Internal sources of information the Company considers include the manner in which mining properties and plant and equipment are being used or are expected to be used and indications of economic performance of the assets.
- *Acquisition of Empire State Mines* – The determination of whether a set of assets acquired and liabilities assumed constitute the acquisition of a business or an asset may require the Company to make certain judgements. In accordance with IFRS 3, a business consists of inputs, including non-current assets, and

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

processes, including operational processes, that when applied to those inputs have the ability to create outputs that provide a return to the Company and its shareholders. When acquiring a set of activities or assets in the exploration, evaluation and development stage, which may not have outputs, judgment is required to consider other factors to determine whether the set of activities or assets is a business. Based on an assessment of the relevant facts and circumstances, the Company concluded that the acquisition of the Empire State Mines did not meet the criteria of a business combination and the acquisition has been accounted for as an acquisition of assets.

- *Purchase price accounting* – Management made certain assumptions regarding the value of the total consideration exchanged and the fair values of the property, plant, and equipment and mineral interests acquired on the acquisition of the Empire State Mines. Changes to either the value of the consideration or the relative values of the assets acquired and/or liabilities assumed could have a pervasive impact on the financial statements of the Company given the majority of the Company's assets and liabilities were acquired on the acquisition of the Empire State Mines.
- *Estimated mineral resources* – Mineral resources are estimates of the amount of metal that can be extracted from the Company's properties, considering both economic and legal factors. Estimating the quantity and/or grade of mineral resources requires the analysis of drilling samples and other geological data. Calculating mineral resource estimates requires decisions on assumptions about geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, transportation costs, commodity prices and foreign exchange rates. Estimates of mineral resources may change from period to period as the economic assumptions used to estimate mineral resources change and as a result of additional geological data generated during the course of operations. Changes in reported mineral resources may affect the Company's financial position in a number of ways, including the following:
  - i. asset carrying values may be affected due to changes in estimated future cash flows;
  - ii. prospective depreciation charges in the Company's consolidated statement of comprehensive income may change when such charges are determined by the unit-of-production basis, or when the useful lives of assets change; and
  - iii. provision for reclamation liabilities balances may be affected as the estimated timing of reclamation activities is adjusted for changes in the estimated mine life as determined by the available mineral resources.
- *Determination of useful life of assets for depreciation purposes* – Significant judgment is involved in the determination of the useful life and residual value of long-lived assets that drive the calculation of depreciation charges. Changes in the estimate of useful lives and residual values may impact the depreciation calculations.
- *Share-based payments* – The fair value of share-based payments is calculated using the Black-Scholes option pricing model. The main assumptions used in the model include the estimated life of the option, the expected volatility of the Company's share price (using historical volatility of similar publicly-traded companies as a reference), the expected dividends, the expected forfeiture rate, and the risk-free rate of interest. The resulting value calculated is not necessarily the value that the holder of the option could receive in an arm's-length transaction given that there is no market for the options and they are not transferrable.
- *Taxation* – The provision for income taxes and the composition of income tax assets and liabilities requires management's judgment. In determining these amounts, management interprets the applicable income tax legislation and makes estimates of the expected timing of the reversal of deferred tax assets and liabilities. Management also makes estimates of future taxable profits, which affect the extent to which potential future tax benefits may be accrued. Assumptions about the generation of

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

future taxable profits depend on management's estimates of future cash flows resulting from estimates of future production and sales volumes, commodity prices, mineral resources, operating costs and other capital management transactions. These judgments, estimates and assumptions are subject to risks and uncertainties, which may impact the actual amount of deferred income tax assets recognized in the Company's statement of financial position and the benefit of other tax losses and temporary differences not yet recognized.

**CHANGES IN ACCOUNTING POLICIES**

In January 2016, the IASB issued IFRS 16, Leases, which eliminates the classification of leases as either operating or finance leases for a lessee. Under IFRS 16, all leases are considered finance leases and will be recorded on the balance sheet. The only exemptions to this classification will be for leases that are 12 months or less in duration or for leases of low-value assets. The requirement to record all leases as finance leases under IFRS 16 will increase lease assets and lease liabilities on an entity's financial statements. IFRS 16 will also change the nature of expenses relating to leases as the straight-line lease expense previously recognized for operating leases will be replaced with depreciation expense for lease assets and finance expense for lease liabilities. IFRS 16 includes an overall disclosure objective and requires a company to disclose (a) information about lease assets and expenses and cash flows related to leases; (b) a maturity analysis of lease liabilities; and (c) any additional company-specific information that is relevant to satisfying the disclosure objective. IFRS 16 is effective from January 1, 2019 and can be applied before that date but only if IFRS 15 is also applied. The Company is currently assessing the effect of this standard on its financial statements. As at December 31, 2017, the Company has developed an understanding of the requirements of IFRS 16 but has not commenced analysis of existing arrangements or possible changes that may result from adoption of IFRS 16.

The final version of IFRS 9, Financial Instruments, was issued by the IASB in July 2014 and will replace IAS 39, Financial Instruments: Recognition and Measurement. IFRS 9 requires financial assets to be classified into three measurement categories on initial recognition: those measured at fair value through profit and loss, those measured at fair value through other comprehensive income and those measured at amortized cost. Investments in equity instruments are required to be measured by default at fair value through profit or loss. However, there is an irrevocable option for each equity instrument to present fair value changes in other comprehensive income. Measurement and classification of financial assets is dependent on the entity's business model for managing the financial assets and the contractual cash flow characteristics of the financial asset. IFRS 9 also introduces a forward-looking "expected loss" impairment model and a substantially reformed approach to hedge accounting. IFRS 9 is effective for annual periods beginning on or after January 1, 2018, but is available for early adoption. The Company plans to adopt the standard beginning January 1, 2018. The Company is currently assessing the effect of this standard and its related amendments on its financial statements. At this stage, the Company does not expect this standard to have a material effect on its financial statements.

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

**FINANCIAL INSTRUMENTS**

**(a) Designation and valuation of financial instruments**

The Company's financial instruments and their designation as at December 31, 2017 and 2016 were as follows:

	December 31, 2017	December 31, 2016
<b>Financial assets</b>		
Loans and receivables		
Cash and cash equivalents	\$ 25,167,611	\$ 8,156,928
Accounts receivable	186,559	1,229
<b>Total financial assets</b>	<b>\$ 25,354,170</b>	<b>\$ 8,158,157</b>
<b>Financial liabilities</b>		
Other financial liabilities		
Accounts payable and accrued liabilities	\$ 3,631,426	\$ 806,691
Acquisition obligations	1,025,000	13,870,648
<b>Total financial liabilities</b>	<b>\$ 4,656,426</b>	<b>\$ 14,677,339</b>

The book value of the Company's financial instruments approximates their fair values because of the short-term maturity of these financial instruments.

**(b) Financial risk**

The Company may be exposed to risks of varying degrees of significance which could affect its ability to achieve its strategic objectives. The Company manages risks to minimize potential losses. The main objective of the Company's risk management process is to ensure that the risks are properly identified and that the capital base is adequate in relation to those risks. The Company's risk exposure and the impact on the Company's financial instruments are summarized below:

***Credit risk***

Credit risk is the risk of potential loss to the Company if the counterparty to a financial instrument fails to meet its contractual obligations.

The Company is exposed to credit risk with respect to its cash and cash equivalents and accounts receivable. The Company's maximum exposure to credit risk is the amount disclosed in the consolidated statements of financial position. Credit risk associated with cash and cash equivalents is minimized by placing the majority of these instruments with major Canadian financial institutions with strong investment-grade ratings as determined by a primary ratings agency. Credit risk associated with accounts receivable is minimal due to the immaterial nature of these receivables.

***Liquidity risk***

Liquidity risk represents the risk that the Company will be unable to meet its obligations associated with its financial liabilities. The Company endeavours to manage its liquidity risk by maintaining sufficient readily available cash in order to meet its liquidity requirements at any point in time.

***Market risk***

Market risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate due to changes in market factors. Market risk comprises three types of risk: price risk, interest rate risk and currency risk.

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

Price risk

Price risk is the risk that the fair value of future cash flows of the Company's financial instruments will fluctuate because of changes in market prices. The Company is not exposed to price risks.

Interest rate risk

Interest rate risk is the risk that the fair values and future cash flows of the Company will fluctuate because of changes in market interest rates. The Company is exposed to interest rate risk to the extent that the cash maintained at financial institutions is subject to a floating rate of interest. The interest rate risk on cash is considered insignificant due to the low interest rates in the current economic environment and short-term nature of its holdings and as such the Company does not take any actions to manage interest rate risk.

Currency risk

Currency risk is the risk that the fair values or future cash flows of the Company's financial instruments will fluctuate because of changes in foreign currency exchange rates. The Company is exposed to currency risk through financial assets and liabilities denominated in currencies other than the Company's functional currency. The Company incurs expenditures in Canadian and U.S. dollars with the majority of the expenditures being incurred in U.S. dollars to support the operations of the Empire State Mine. The Company does not consider the currency risk to be material to the future operations of the Company and as such does not have a hedging program or any other programs to manage currency risk.

As the functional currency of the parent company is Canadian dollars, currency risk arises from financial instruments denominated in U.S. dollars that are held at the parent company level. Conversely for the Company's subsidiaries whose functional currency is U.S. dollars, currency risk arises from financial instruments denominated in Canadian dollars that are held at the subsidiary company level.

The Company's financial instruments denominated in currencies that are not the U.S. dollar as at December 31, 2017 and 2016 are:

	December 31, 2017		December 31, 2016	
	Canadian dollar	U.S. dollar equivalent	Canadian dollar	U.S. dollar equivalent
Cash and cash equivalents	\$21,724,896	\$17,316,915	\$ 10,842,514	\$ 8,075,504
Accounts receivable	218,724	174,345	1,650	1,229
Accounts payable and accrued liabilities	(963,259)	(767,813)	(242,083)	(180,299)
Net exposure	\$20,980,361	\$16,723,447	\$ 10,602,081	\$ 7,896,434

The Company's sensitivity analysis suggests that a 10% depreciation or appreciation of the U.S. dollar against the Canadian dollar would have resulted in an approximate \$1,672,344 (December 31, 2016 - \$789,643) decrease or increase in the Company's comprehensive loss, respectively.

**RISKS AND UNCERTAINTIES**

The Company's activities and related results are subject to a number of different risks at any given time. Exploration and development of mineral resources involves a high degree of risk.

A summary of the Company's financial instruments risk exposure is provided in the Financial Instruments section of this MD&A. The following are additional risk factors which the Company's management believes are most important in the context of the Company's business. It should be noted that this list is not exhaustive and that other risk factors may apply.

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

***The Company has a limited operating history***

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

***Dependence on the Empire State Mines' #4 mine***

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

***Refurbishing and re-commencing mining operations***

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

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

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

- unusual or unexpected geological formations;
- metallurgical and other processing problems;
- metal losses;
- environmental hazards;
- power outages;
- labour disruptions;
- industrial accidents;

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

- periodic interruptions due to inclement or hazardous weather conditions;
- flooding, explosions, fire, rockfalls, rockbursts, cave-ins and landslides;
- ground or soil conditions including seismic activity;
- mechanical equipment and facility performance problems;
- poor ventilation in all or part of the Empire State Mine; and
- the availability of materials and equipment.

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

***Mineral resource calculations are only estimates based on interpretation and assumptions***

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

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

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

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

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

***Production based on mineral resources***

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

***Uncertainty exists related to inferred mineral resources***

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

***Title***

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

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

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

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

Mining operations from time to time may rely on an expired lease or option that the Company is unable to renew. Currently, several leases and options on which the Company does not currently foresee operating have expired. If the Company were to be in default with respect to leases or options for properties on which it has mining operations, the Company may have to close down or significantly alter the sequence of such



**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

mining operations, which may adversely affect its future production and future revenues. If the Company mines on property that it does not own or have a valid lease in respect of, the Company could incur liability for such mining. Also, in any such case, the investigation and resolution of title issues would divert management's time from the Company's business and its results of operations could be adversely affected.

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

***Fluctuations in demand for, and prices of, zinc***

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

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

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

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

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

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

being required to raise additional equity capital or incur additional indebtedness to finance capital expenditures in the future.

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

***There may be requirements for additional capital in the future***

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

***Profitability of the Company***

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

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

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

***Competition***

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

***Significant governmental regulations***

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

- environmental protection, including regulations with respect to processing concentrates;

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

- 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

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

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. In addition to matters disclosed in "Risks and Uncertainties-Title", on or about March 12, 2018, the Company received a letter from legal counsel to SGS Acquisition Company Limited ("SGS") dated March 9, 2018. The letter states that in 2016 SGS filed an action in the U.S. District Court for the District of Colorado against certain parties and Star Mountain. The Company is not a named party in this case. SGS alleges the Company (a) has obligations to SGS under mutual indemnification provisions to Star Mountain for the breach of any representations, warranties or breaches of covenants under the Purchase Agreement and (b) failed to conduct its due diligence in connection with the Purchase agreement, which interfered with SGS's ability to recover from Star Mountain. SGS is not a party to 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.

***Rights, concessions and permits***

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

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

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

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

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

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

- control dispersion of potentially deleterious effluents; and

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

- reasonably re-establish pre-disturbance land forms and vegetation.

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

***Tailings management facility and environmental reclamation***

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

***Insurance***

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

***Health & safety***

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

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

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

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

***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.

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

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

***Labour and employment retention relations***

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

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

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

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

***Infrastructure***

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

***Enforceability of judgments***

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

**TITAN MINING CORPORATION**  
**Management's Discussion and Analysis**  
**For the Year ended December 31, 2017**  
*(In United States. Dollars unless otherwise stated)*

---

holders of Common Shares to enforce, in original actions brought in courts in jurisdictions outside of Canada, liabilities predicated upon Canadian securities laws

**QUALIFIED PERSONS**

Authors of the PEA are: Garrett Macdonald, Michael Makarenko, Matt Moss and Indi Gopinathan, each of JDS Energy and Mining Inc. ("JDS") , Michel Creek, formerly of JDS, Allan Reeves of Tuun Consulting Inc. and Robert Raponi of TR Raponi Consulting Ltd. Each is a "qualified person" for the purposes of NI 43-101.

Keith Boyle, P. Eng., Chief Operating Officer of the Company, a qualified person for the purposes of NI 43-101, has approved the scientific and technical information in this MD&A.