



FOCUS ON EXPLORATION AND DEVELOPMENT IN PROLIFIC MINING DISTRICTS

TSX: TI

May 2021



Forward-Looking Information

This presentation contains "forward-looking information" within the meaning of Canadian securities laws. In some cases, forward-looking information can be identified by the use of forward-looking terminology such as "plans", "targets", "expects", "is expected", "unique investment opportunity", "is positioned" or "assumes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would" or "will" occur or be achieved. In addition, any statements that refer to expectations, predictions, indications, projections or other characterizations of future events or circumstances contain forward-looking information. Statements containing forward-looking information are not historical facts, but instead represent management's expectations, estimates and projections regarding future events.

Forward-looking information includes, among other things, statements relating to: estimated C1 cash costs and AISC; future financial or operating performance and condition of the Company, including its ability to continue as a going concern, and its business, operations and properties; the Company's ability to implement its growth strategy to maximize the value of its property holdings; the Company's planned exploration and development activities at both Empire State Mine and Mineral Ridge property; costs, timing and results of future exploration and drilling; forecasted trends in the global zinc market, including in respect of the price of zinc and gold; capital and operating cost estimates; economic analyses (including cash flow projections) from the Technical Reports; the adequacy of the Company's financial resources; the estimation of mineral resources; the realization of mineral resource estimates; the probability of inferred mineral resources being converted into measured or indicated mineral resources; the production schedule for the Empire State Mines ("ESM") #4 mine; the timing of completion and results of drift rehabilitation and refurbishment of ESM #4 mine; production estimates for ESM #4 mine; the Company's plans for marketing of zinc concentrate produced at the Empire State Mine and mill; any updates to the mine plan for ESM #4 mine and continuation of the drill program at the Empire State Mine; timing, receipt and maintenance of approvals, consents and permits under applicable legislation; the Company's ability to re-negotiate expired leases and the timing thereof; environmental, permitting, legal, taxation, title, socio-economic, community relations or political issues that may adversely affect the Company's current and anticipated operations; the Company's expectations with respect to the payment of dividends; the Company's ability to make scheduled payments of the principal, or to pay interest on or refinance its indebtedness; the Company's expectations with respect to principal shareholders; and the Company's expectation that it will be able to continue to locate and retain employees and consultants with required skills and knowledge.

Forward-looking information is based on opinions, assumptions and estimates made by the Company in light of its experience and perception of historical trends, current conditions and expected future developments, as well as other factors that the Company believes are appropriate and reasonable in the circumstances, as of the date of this presentation, including, without limitation, assumptions about: equity and debt capital markets; the ability to raise any necessary additional capital on reasonable terms; future prices of zinc, gold and other metals; the timing and results of exploration and drilling programs; the likelihood of discovering new mineral resources in the Balmat-Edwards district; the accuracy in the Technical Report of the mine production schedule; the estimated time of completion of drift rehabilitation and refurbishment of ESM #4 mine; the production estimates; the geology and geophysical data of ESM; the metallurgical forecast; the economic analysis, capital and operating cost estimates; the accuracy of any mineral resource estimates; the successful integration of ESM into the Company's business; availability of labour; the accuracy of drill sample results at ESM; future currency exchange rates and interest rates; operating conditions being favourable;

political and regulatory stability; the receipt of governmental and third party approvals, licenses and permits on favourable terms; obtaining required renewals for existing approvals, licenses and permits and obtaining all other required approvals, licenses and permits on favourable terms; sustained labour stability; stability in financial and capital goods markets; availability of equipment and the condition of existing equipment being as described in the Technical Report; the absence of any long-term liabilities created by the mining activity in the Balmat region beyond those described in the Technical Report; the accuracy of the Company's accounting estimates and judgments; the impact of adoption of new accounting policies; the Company's ability to satisfy the terms and conditions of its indebtedness; and the timing of a revised mine plan for ESM. There can be no assurance that such estimates and assumptions will prove to be correct. In addition, if any of the assumptions or estimates made by management prove to be incorrect, actual results and developments are likely to differ, and may differ materially, from those expressed or implied by the forward-looking information contained in this presentation. Accordingly, readers of this presentation are cautioned not to place undue reliance on such information.

Forward-looking information is necessarily based on a number of the opinions, assumptions and estimates that, while considered reasonable by the Company as of the date such statements are made, are subject to known and unknown risks, uncertainties, assumptions and other factors that may cause the actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information, including but not limited to the following factors described in greater detail under the heading "Risks Factors" in the Company's Annual Information Form for the year ended December 31, 2020, available at www.sedar.com: limited operating history; dependence on ESM; refurbishment of the mine and mill; inherent risks of mining; estimates of mineral resources; production decisions based on mineral resources; uncertainty in relation to inferred mineral resources; fluctuations in demand for, and prices of, zinc; production projections and cost estimates for ESM #4 mine may prove to be inaccurate; future requirements for additional capital; profitability of the Company; ability to attract and retain qualified management; title; competition; governmental regulations; market events and general economic conditions; environmental laws and regulations; threat of legal proceedings; rights, concessions and permits; social and environmental activism; land reclamation requirements; Tailings Management Facility and environmental reclamation; insurance; undisclosed liabilities; health and safety; dependence on information technology systems; zinc hedging activities; conflicts of interest; risks inherent in the Company's indebtedness; risks inherent in acquisitions; integration of the mine assets; labour and employment retention/relations; anti-corruption and bribery regulation, including ESTMA reporting; infrastructure; enforceability of judgments; absence of a market for the common shares; fluctuations in price of the common shares; loss of entire investment; significant ownership by Richard W. Warke; future sales of common shares by Richard W. Warke and other directors and officers of the Company; use of proceeds; payment of dividends; currency exchange rate risks; pro forma financial information; public company status; financial reporting and other public company requirements; dilution; and securities analysts' research or reports could impact the price of the common shares. These factors and assumptions are not intended to represent a complete list of the factors and assumptions that could affect the Company. These factors and assumptions, however, should be considered carefully. Currency is in US dollars and tonnage is in short tons unless otherwise indicated. Other than as required by securities laws, Titan assumes no responsibility for updating the forward-looking information in this presentation.

The scientific and technical information in this presentation has been approved by Mr. Scott Burkett. Mr. Burkett, Vice President of Exploration for Titan, is a qualified person as defined by National Instrument 43-101 (NI 43-101). Mr. Burkett has over 12 years of mineral exploration experience and is a Registered Member through the SME (registered member # 4229765).

Overview

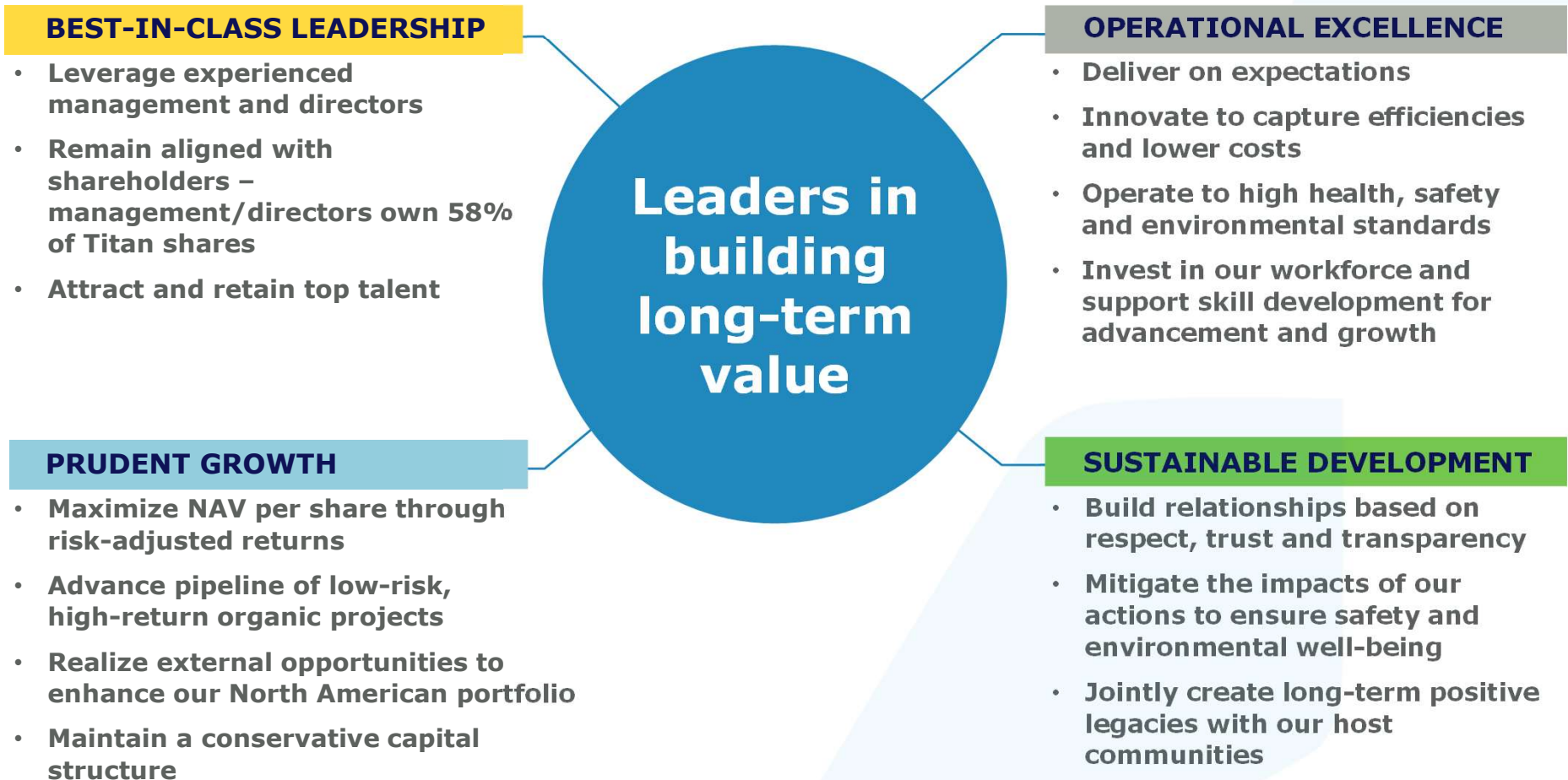
- **Focus on exploration and development; driven by best-in-class leadership**
 - **Empire State Mine (ESM), NY State**
 - 100%-owned zinc producer in historic mining district
 - In the process of developing 3 near-mine open-pit resources
 - **Mineral Ridge, Nevada**
 - Earn-In up to 100%
 - Fully permitted
 - M&I Mineral Resources of 355,500* oz of 1.10 g/t gold
 - Drill program:
 - Phase 1: Completed; results pending
 - Phase 2: Initiated
- **Part of the Augusta Group – strong track record in exploration and development**



Toronto Stock Exchange Symbol	TI
Shares Outstanding (05/14/2021)	139 M
Fully Diluted Shares Outstanding (05/14/2021)	170 M
Market Capitalization (as of 05/17/2021)	C\$65 M

Our Strategy

Mission: To deliver extraordinary shareholder value through exploration, development and operational excellence

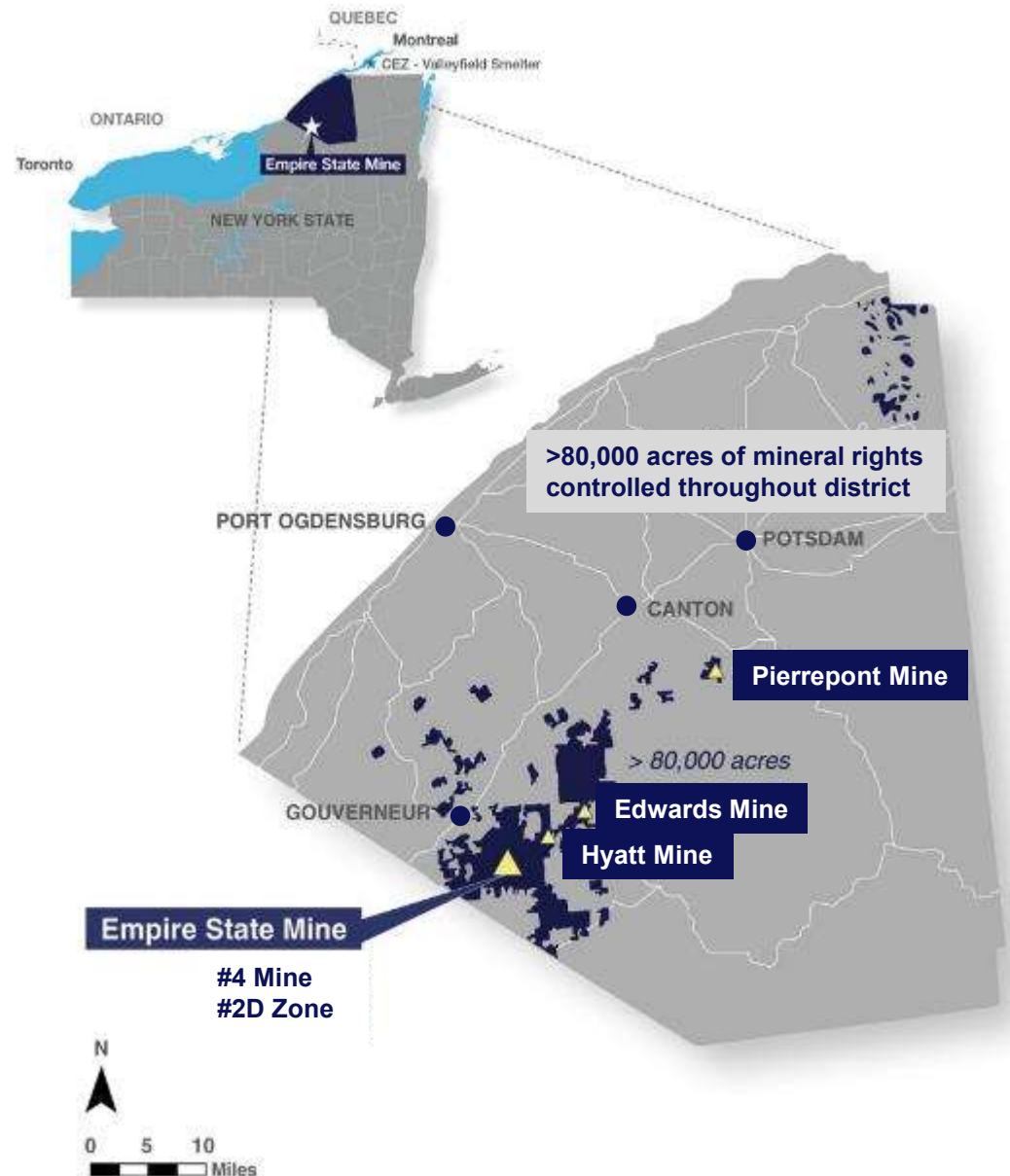


Empire State Mine: Focused on Exploration in a 100-Year-Old Zinc District

- Producing zinc concentrate
- Local employer, benefiting St. Lawrence County in northern New York
- Long-term zinc concentrate offtake agreement with Glencore – transportation within North America
- Historic production – 44M tons milled at average grade of 9.4% zinc from 7 mines within 30-mile radius of mill



Shipment of zinc concentrate leaving site



Empire State Mine: Near-Mine and District Exploration

- Production supported by current mineral resources with potential for near-mine resource additions
 - Current source is ESM #4 mine – multiple zones in production; Mahler, New Fold and Mud Pond
 - Near-mine open-pit mineralization discovery announced Nov 2019 and Jan 2020
 - Future discovery potential through additional near-mine exploration
- Targeting large, high-grade deposits (15 to 30+ Mt at 10% zinc) – new ideas and modern approach to exploration led by award-winning team



Office building and 3,800 tpd shaft



5,000 tpd processing plant



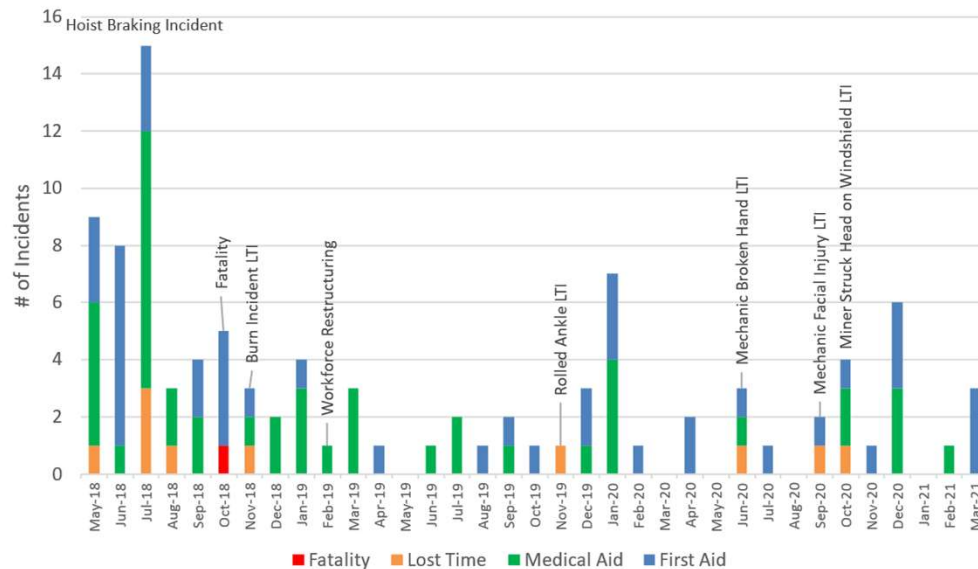
Underground crusher at 3,100 level



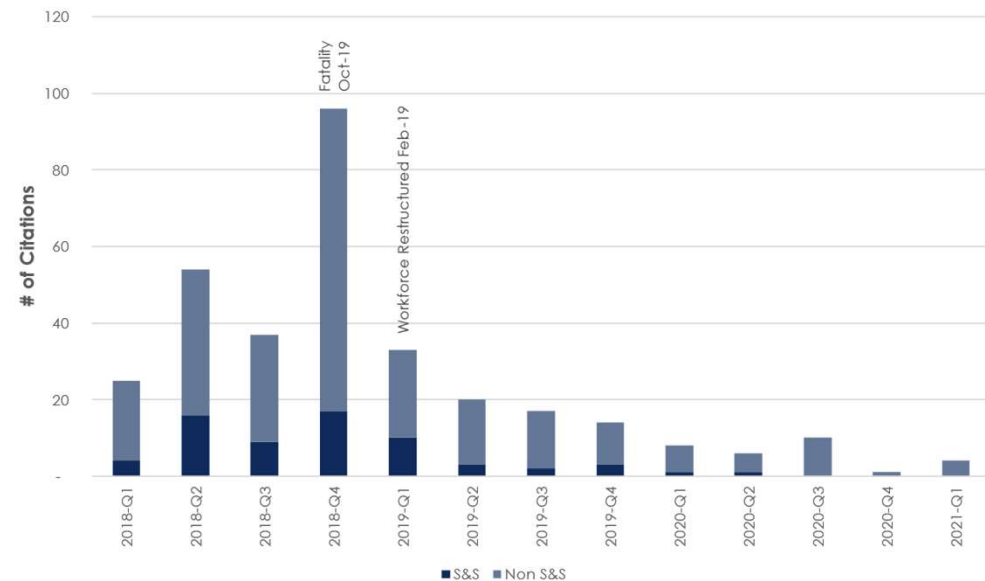
Fully equipped maintenance shop capable of servicing all equipment

Empire State Mine: Improved Safety Track Record

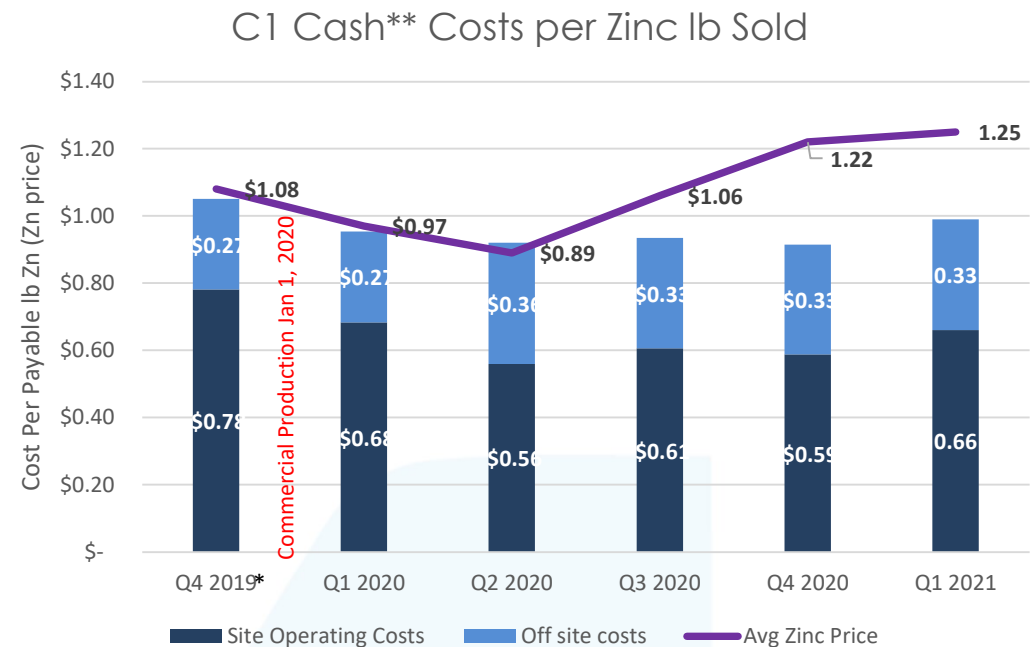
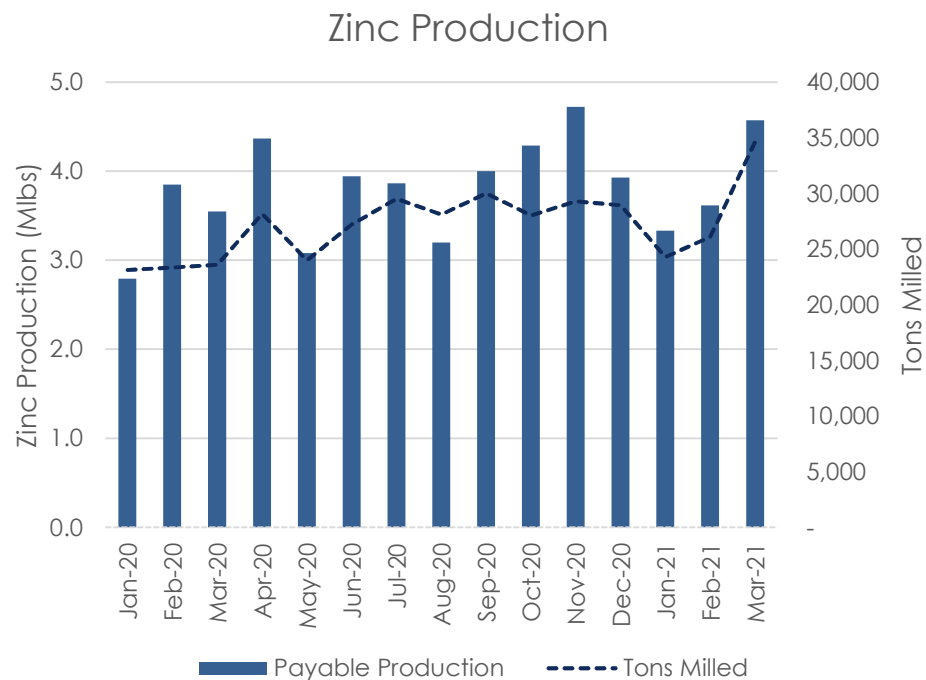
Safety Incidents



MSHA Citations



Empire State Mine: Improving Performance and Trajectory



*Cash costs not reported prior to commercial production achieved on Jan 1, 2020

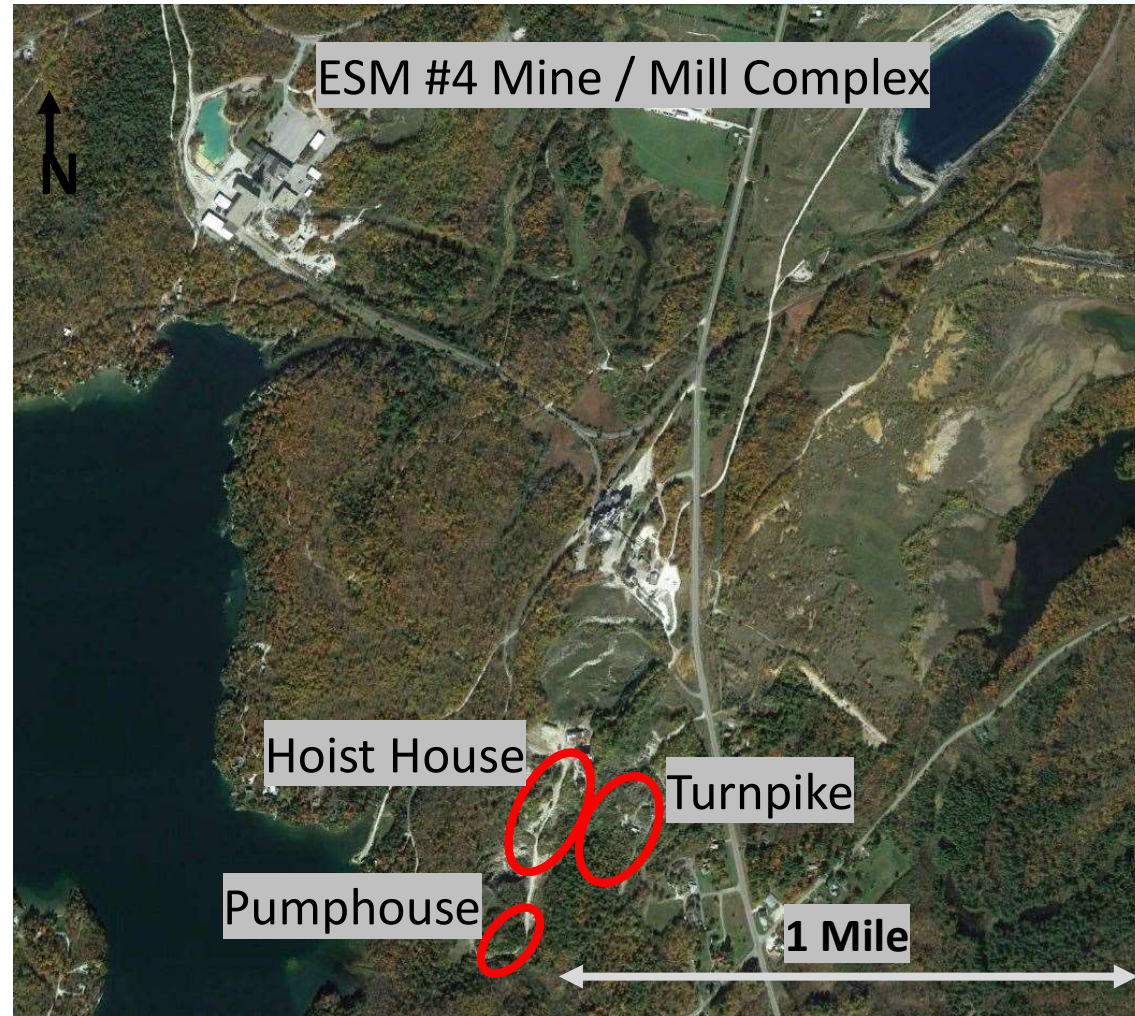
** Cash costs are a non-GAAP measure. See Titan's most recent MD&A for a discussion on non-GAAP measures.

Empire State Mine: Potential Near-Term Incremental Mill Feed

Hoist House , Pumphouse and Turnpike

- Shallow zones of near-mine open-pit mineralization discovered in Nov 2019
- Potential to add low-cost production
- Strategic zones to achieve Company's strategy of providing feed to ESM mill with over 3,000 tpd of excess capacity in an effort to dramatically increase production and lower costs
- Future discovery potential through additional near-mine exploration
- Production anticipated in 2021

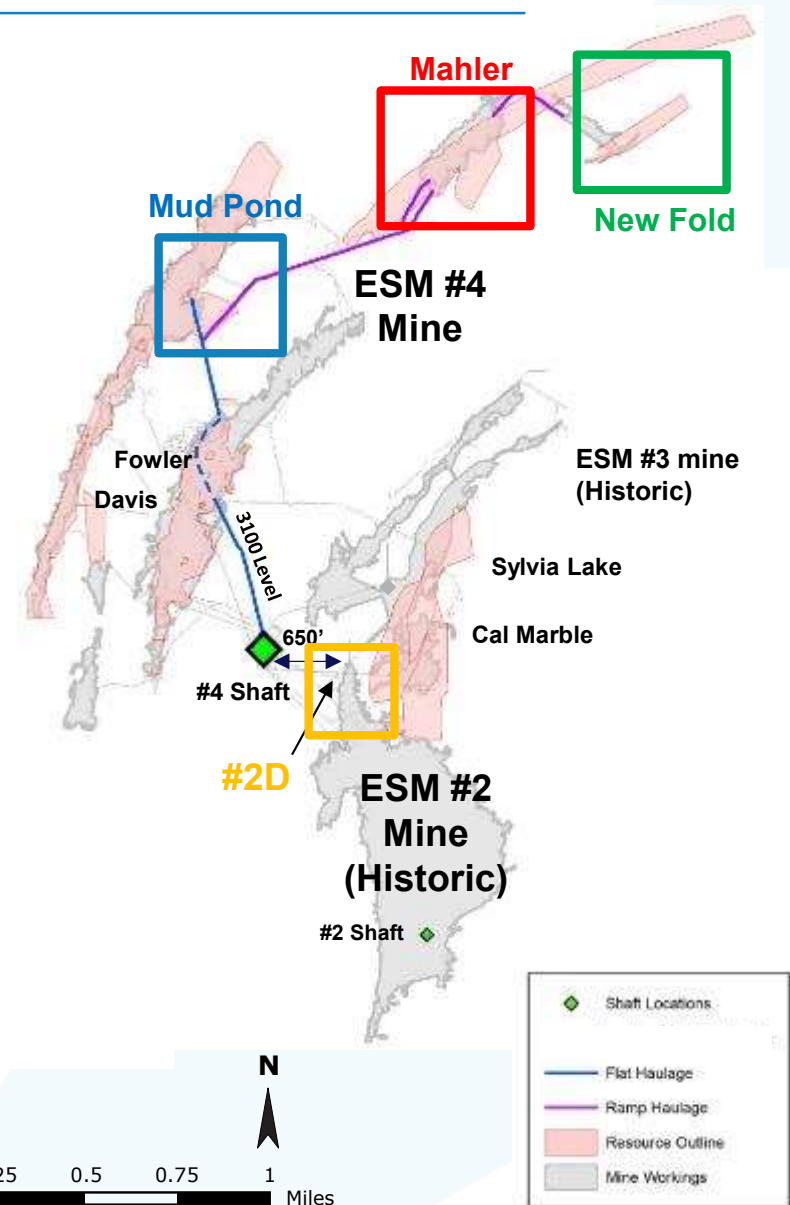
Hoist House Zone at ESM, Looking Northeast



Empire State Mine: Excellence in Exploration

Underground Drilling

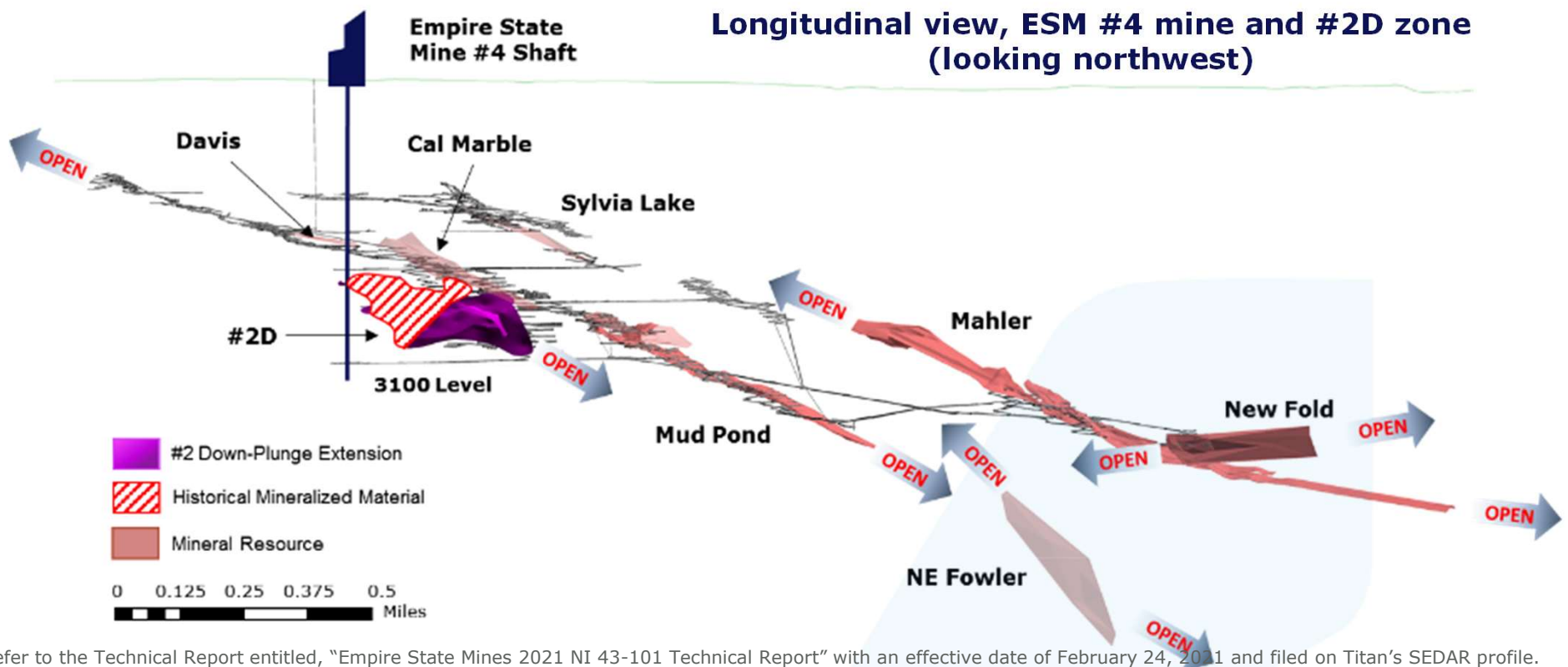
- Utilizing Company-owned and operated underground drills (<\$20/ft)
- Delineation of additional mineralization in Mahler, Mud Pond and New Fold
- Data used to refine current mine plan in preparation for development in 2021 and beyond
 - **Mahler**
 - **Mud Pond**
 - **New Fold**
 - **#2D**



Refer to the Technical Report entitled, "Empire State Mines 2021 NI 43-101 Technical Report" with an effective date of February 24, 2021 and filed on Titan's SEDAR profile.

Empire State Mine: Resource Expansion Potential at #4 and #2D

- #4 mine – mineralized zones generally plunge to northeast; potential to extend zones up and down-plunge
- #2D zone – More than 2,000ft of strike length and open down-plunge and laterally; connected by historic infrastructure on 2500 level to the #4 shaft



Refer to the Technical Report entitled, "Empire State Mines 2021 NI 43-101 Technical Report" with an effective date of February 24, 2021 and filed on Titan's SEDAR profile.

Empire State Mine: District Exploration – 2021 Plan

H1 2021

- Potential sources of open pit incremental mill feed:

★ Hyatt and Pierrepont

- Near Mine Target:

★ Little York – (5ft @ 15% Zn- historic)

H2 2021

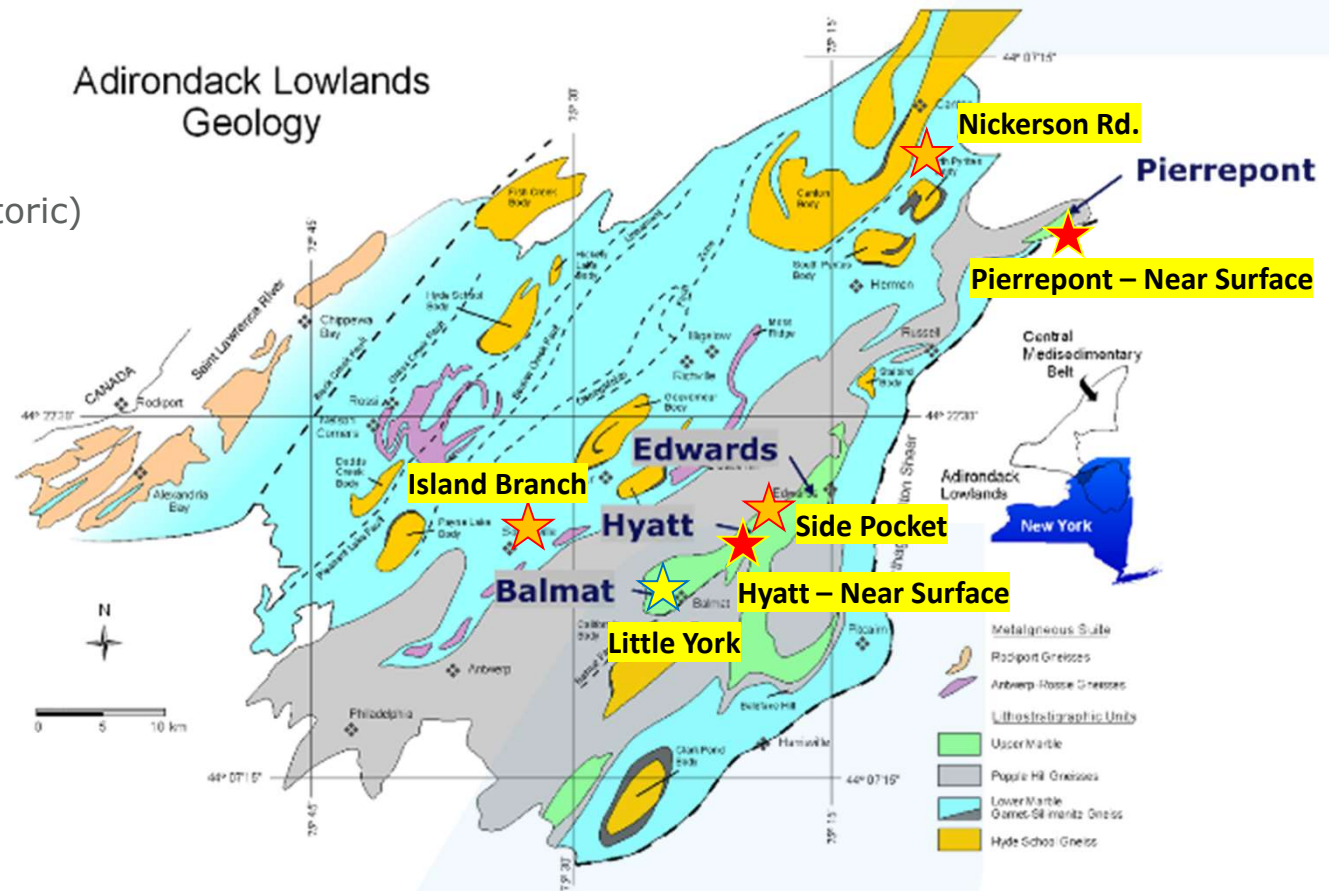
- District Targets:

★ Nickerson Rd – marbles with Zn occurrence

★ Side Pocket – Upper marble stratigraphy along Balmat-Edwards trend

★ Island Branch – Lower Marble with magnetic low suggesting large synform structure like Balmat

- Multiple untested geophysical targets

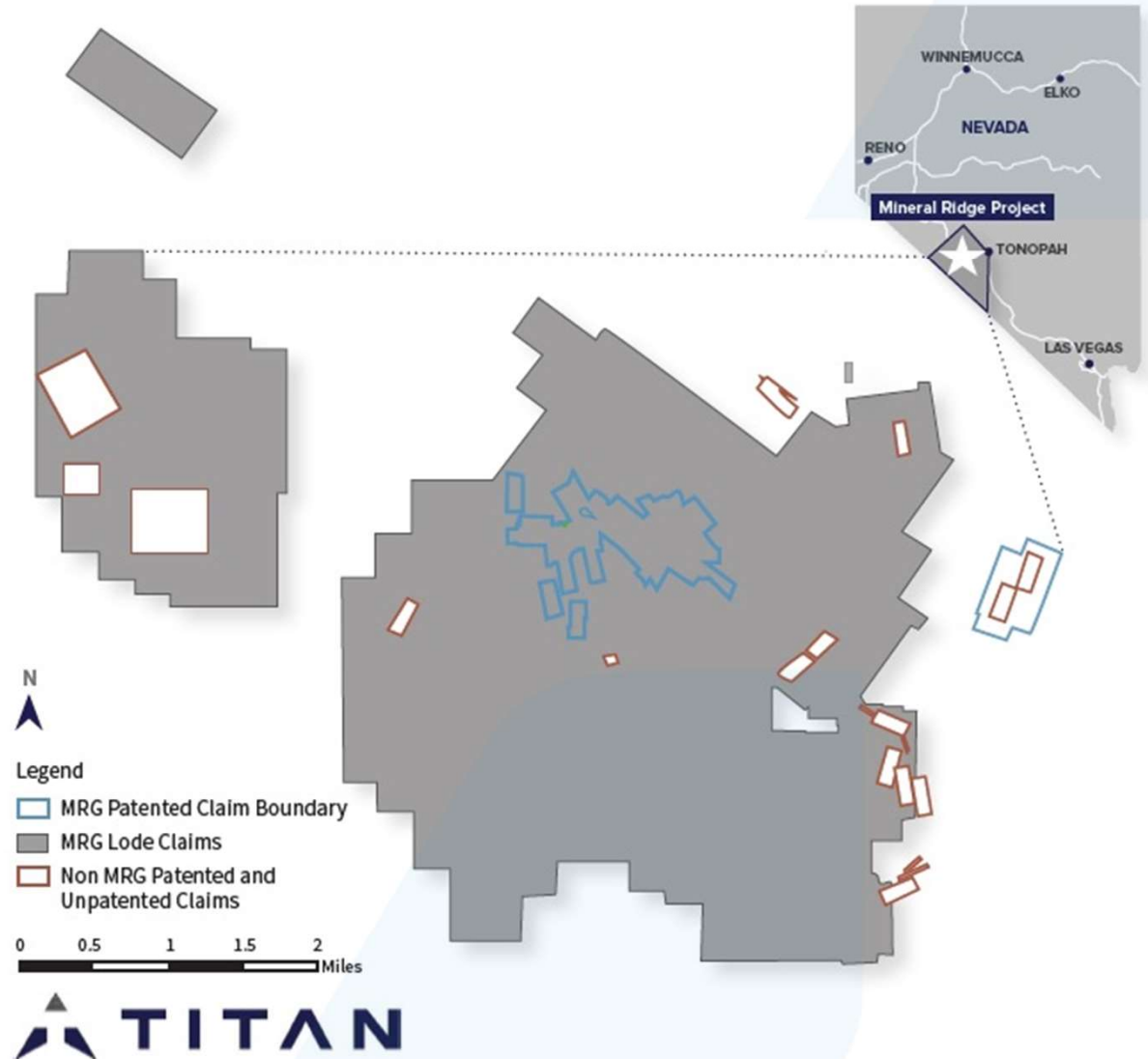


Refer to the Technical Report entitled, "Empire State Mines 2021 NI 43-101 Technical Report" with an effective date of February 24, 2021 and filed on Titan's SEDAR profile.

Mineral Ridge, Nevada: Actively Drilling and Fully Permitted

Key Facts:

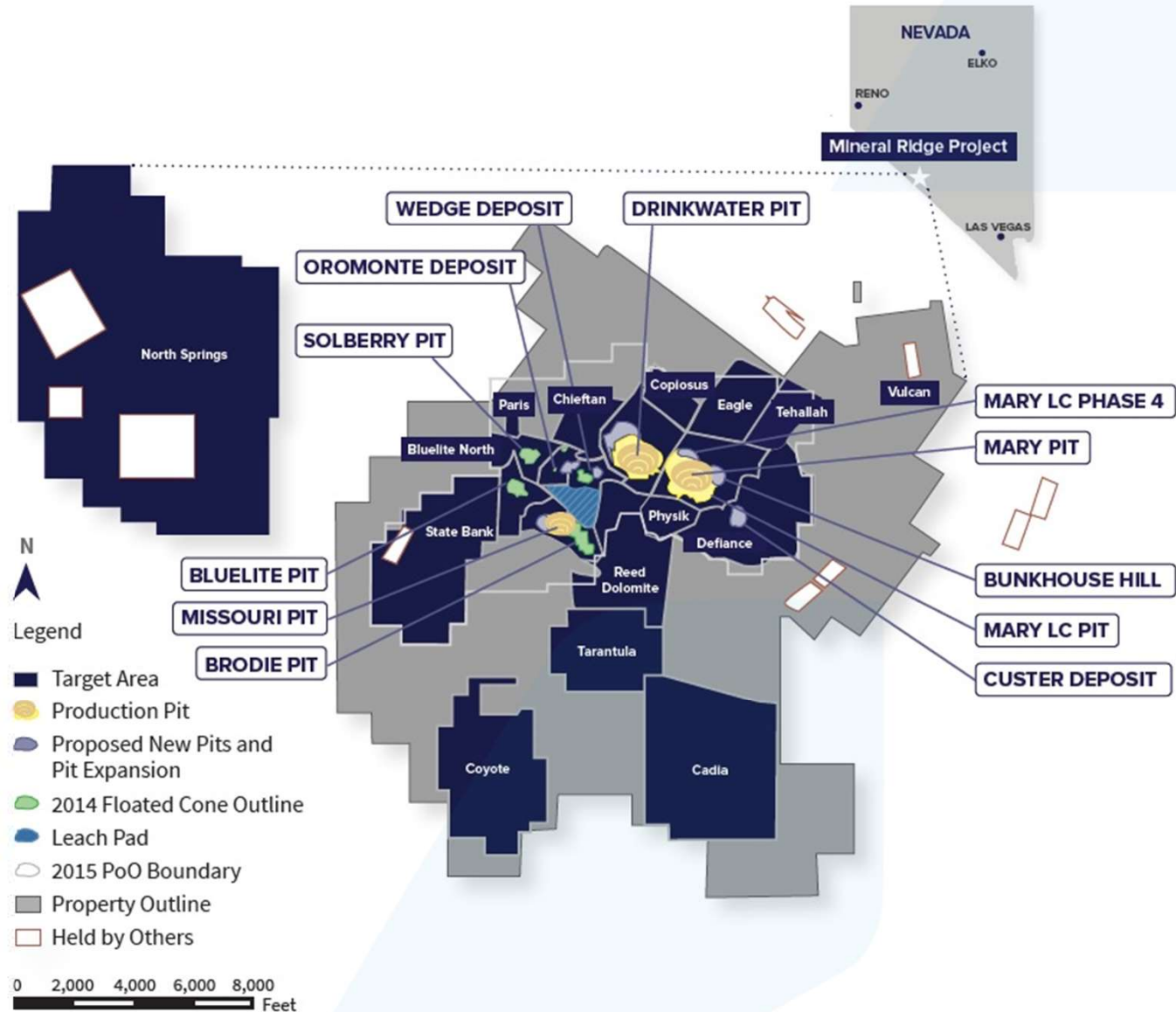
- **Location:** Esmeralda County, Nevada
- **Earn-In:** Up to 100%
- **Mineral Resource:**
 - Total Measured and Indicated Mineral Resources of 335,500* oz of 1.10 g/t gold
- **Fully permitted**
- **Drilling:**
 - Limited historical exploration
 - Phase 1:
 - Drill program completed; results pending
 - Phase 2:
 - Initiated



*Includes Measured Mineral Resources of 155,200 oz of 2.55 g/t gold and Indicated Mineral Resources of 180,300 oz of 0.74 g/t gold. Mineral Resources are quoted inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Refer to the Titan Technical Report entitled, "Mineral Ridge Project, Esmeralda County, Nevada, USA" having an effective date of December 22, 2020 and filed on sedar.com.

Mineral Ridge: Comprehensive Drill Plan

- Exploration will focus on the down-dip and strike extensions of the Drinkwater, Mary, Mary LC, Brodie NW, Custer, Bunkhouse and the Oromonte pit areas outside the existing Mineral Resources



Mineral Ridge: Exploration Potential; Resource Expansion

Current additional exploration targets aim to link mineralization together between Oromonte, Blueelite and Brodie forming a single large resource area

Bunkhouse

- High grade mineralization remains open down dip and along strike to the SE towards Custer. Over 1,000 feet of untested strike length between Bunkhouse and Custer

Custer

- Mineralization remains open along strike to the NW, southeast and up-dip to the SW

Drinkwater

- Mineralization remains open to the west, NW and SW towards the Blueelite Deposit

Oromonte

- Mineralization remains open along strike to the NW

Blueelite

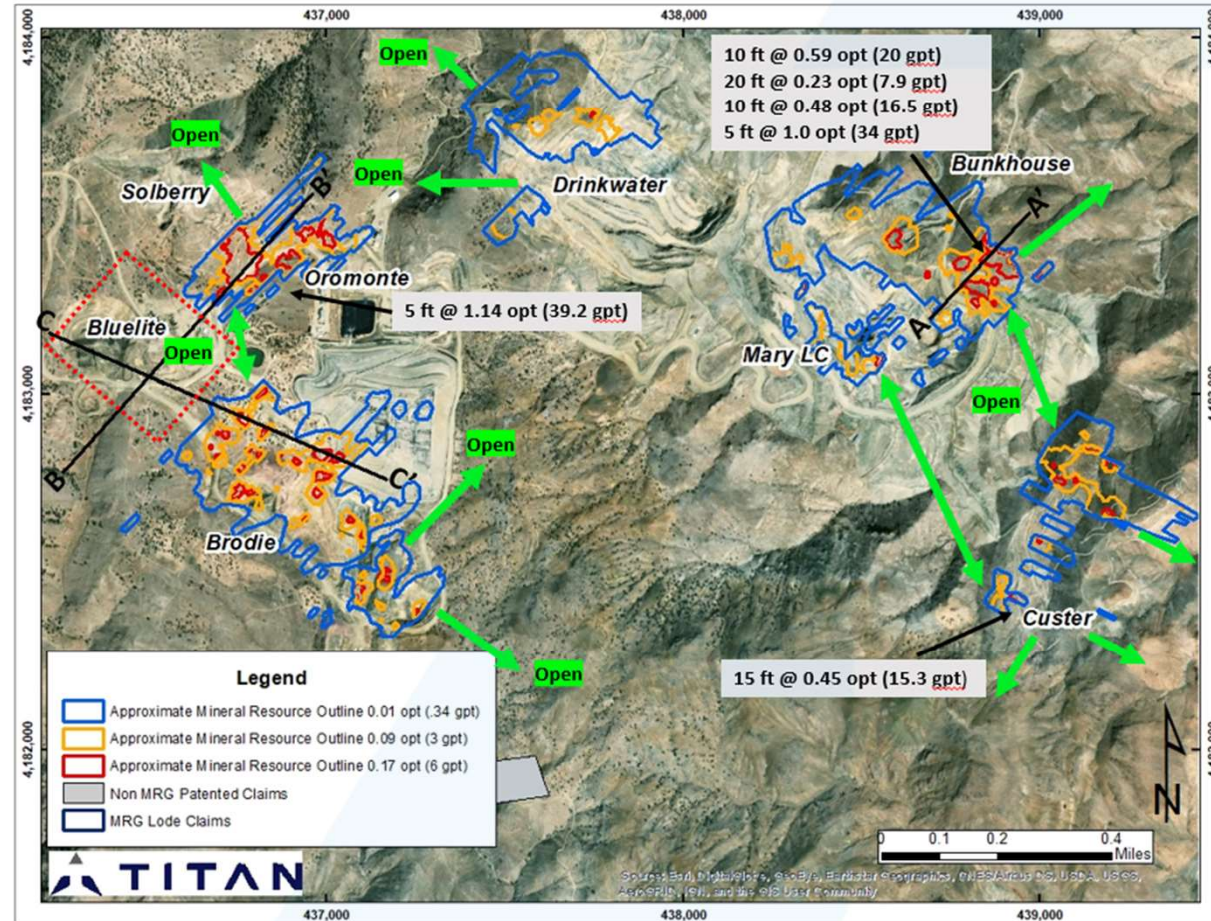
- Large undefined zone of mineralization that remains open to the NE towards Oromonte and connects with Brodie

Brodie

- Mineralization remains open to the NE towards Drinkwater and north towards Oromonte

Solberry

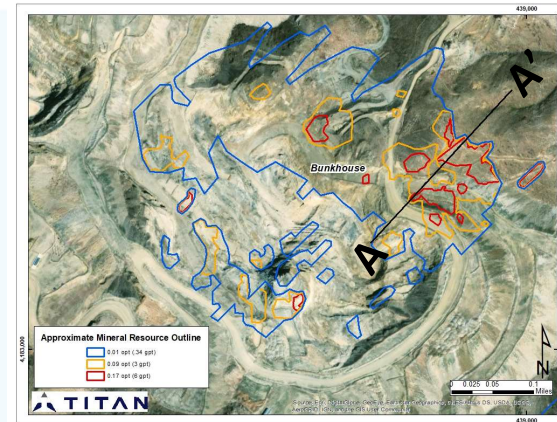
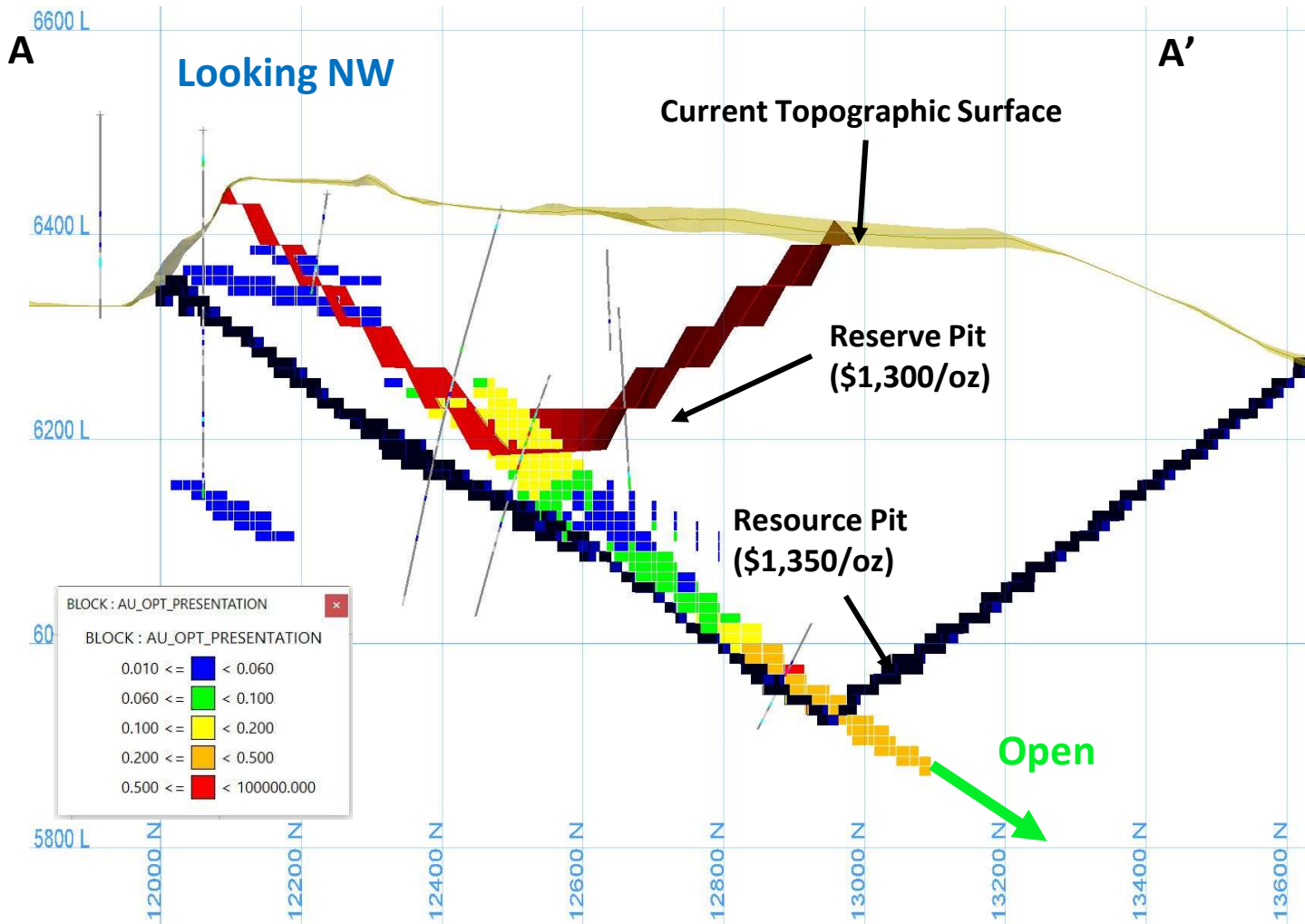
- Shallow mineralization previously mined however zone remains open down-dip to the NW



For additional information, refer to the Titan Technical Report entitled, "Mineral Ridge Project, Esmeralda County, Nevada, USA" having an effective date of December 22, 2020 and filed on sedar.com.

Mineral Ridge: Bunkhouse Deposit

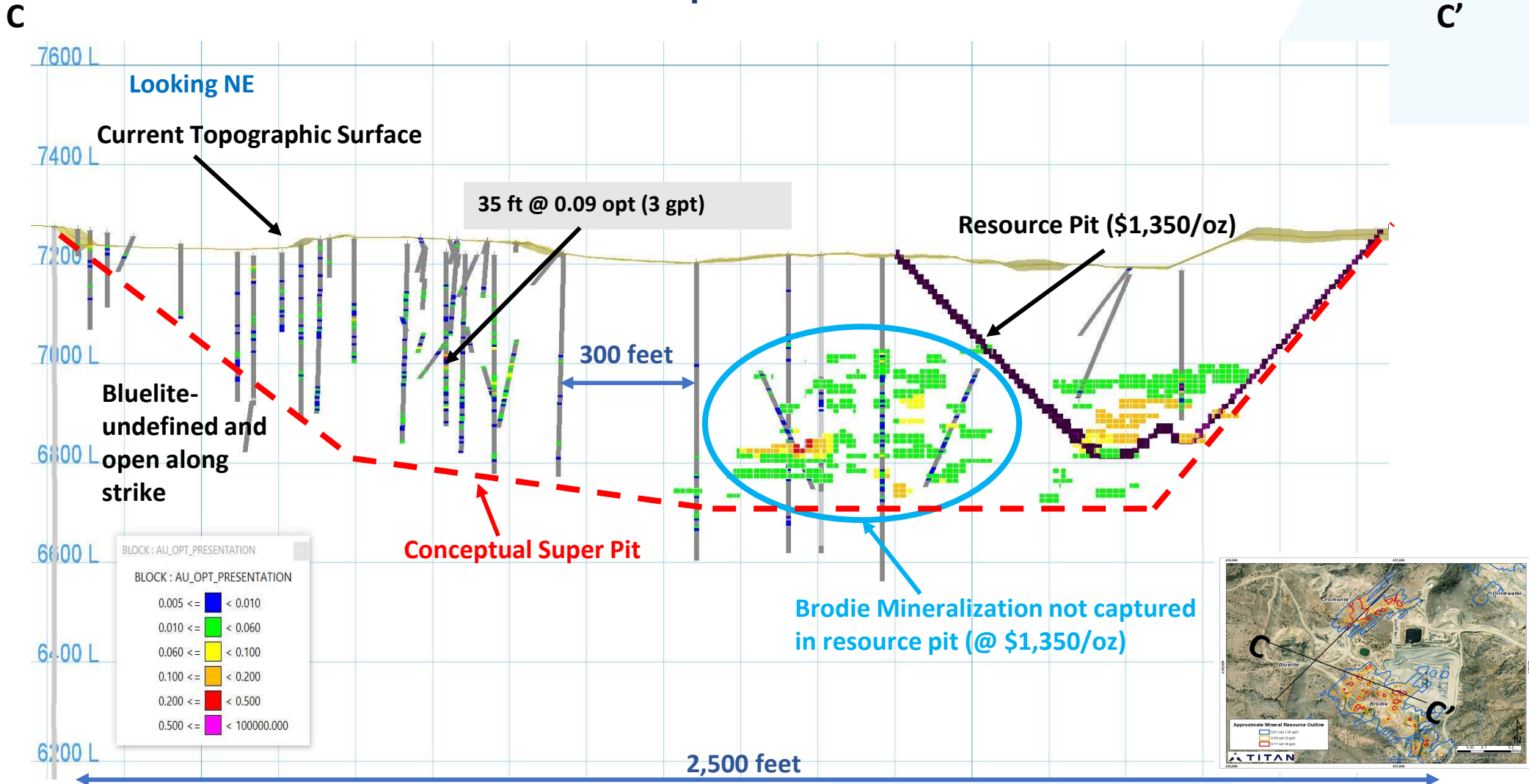
Bunkhouse Deposit - Resource Model



For additional information, refer to the Titan Technical Report entitled, "Mineral Ridge Project, Esmeralda County, Nevada, USA" having an effective date of December 22, 2020 and filed on sedar.com.

Mineral Ridge: Brodie Deposit

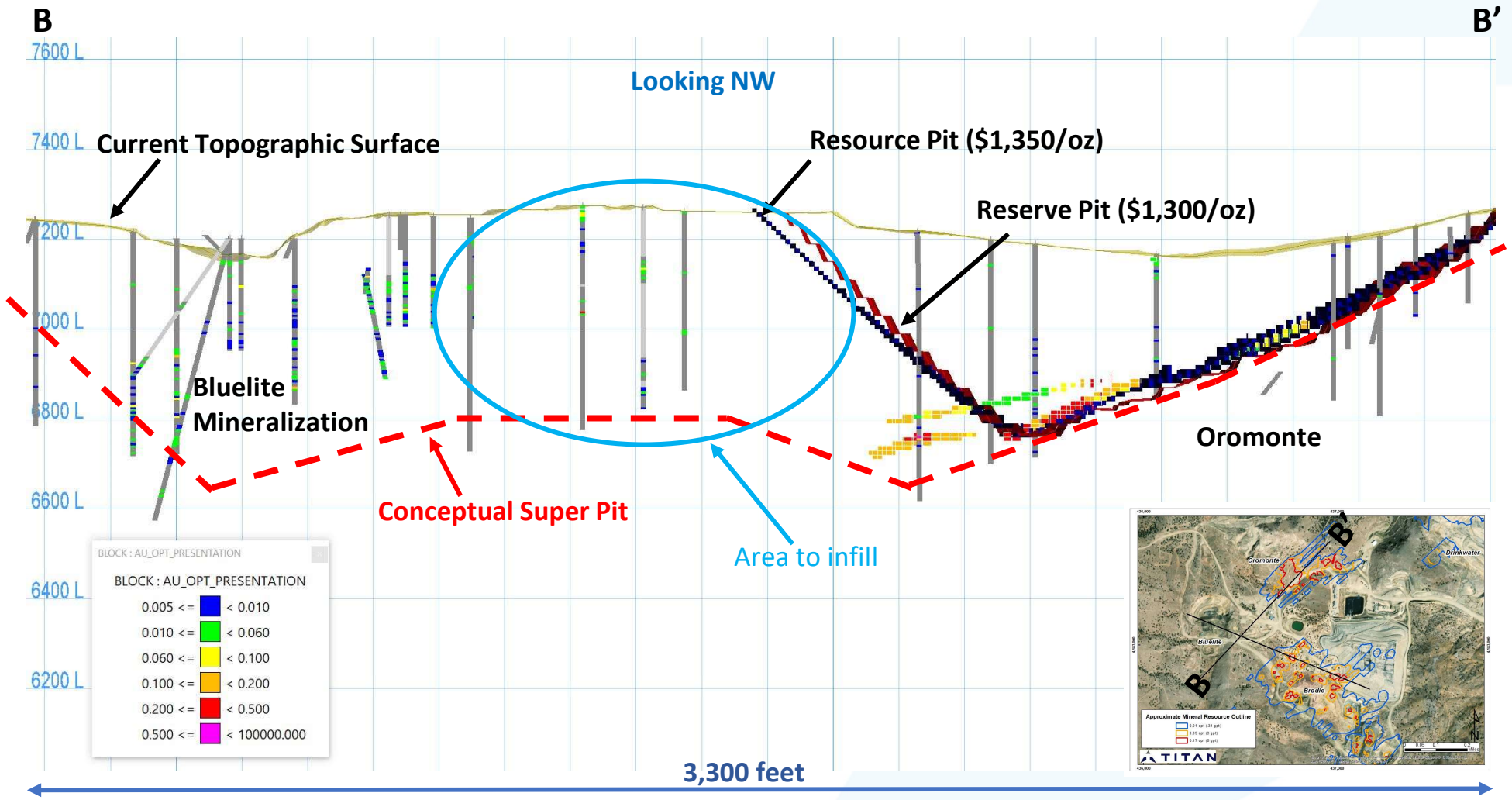
Brodie Deposit – Resource Model



For additional information, refer to the Titan Technical Report entitled, "Mineral Ridge Project, Esmeralda County, Nevada, USA" having an effective date of December 22, 2020 and filed on sedar.com.

Mineral Ridge: Oromonte Deposit

Oromonte Deposit - Resource Model



For additional information, refer to the Titan Technical Report entitled, "Mineral Ridge Project, Esmeralda County, Nevada, USA" having an effective date of December 22, 2020 and filed on sedar.com.

The Augusta Group – Track Record in Exploration and Development



Note: Market cap data as at May 3, 2021. The results for Ventana Gold Corp., Augusta Resource Corp., Equinox Gold, and Arizona Mining Inc. are independent of the results of Titan Mining Corp. and are no guarantee of the future performance. Undue reliance should not be placed thereon when considering an investment in Titan Mining Corp.

Investment Highlights

Best-in-Class Leadership

- **Demonstrated track record in exploration and development.** Executive Chair, Richard Warke, and the Augusta Group have generated extraordinary shareholder value
- **Award-winning.** CEO Donald Taylor is the recipient of PDAC's 2018 Thayer Lindsley Award for the 2014 discovery of the world-class Taylor lead-zinc-silver deposit in Arizona
- **Strong board.** Experienced, well-rounded and widely-recognized directors

Diversified Portfolio of Assets

- **Exposure to Zinc and Gold.** Assets located in prolific mining districts
- **Significant Discovery Potential.** Drilling ongoing at Mineral Ridge and targeting new discoveries in the 15-30Mt range at ESM, grading 10% zinc

Focus on Optimizing Cash Flow

- **ESM mine plan** includes higher-grade New Fold zone in ESM #4 mine and #2D zone as well as recent results from Turnpike and Hoist House zones.
- **Focus on development and exploration.** Infill drilling at #4 mine, drilling of near-mine open-pit mineralization as well as district exploration

APPENDIX



EMPIRE STATE
MINES

OFFICIALLY OPENED BY

TITAN

MINING CORP.

12 JUNE 2018

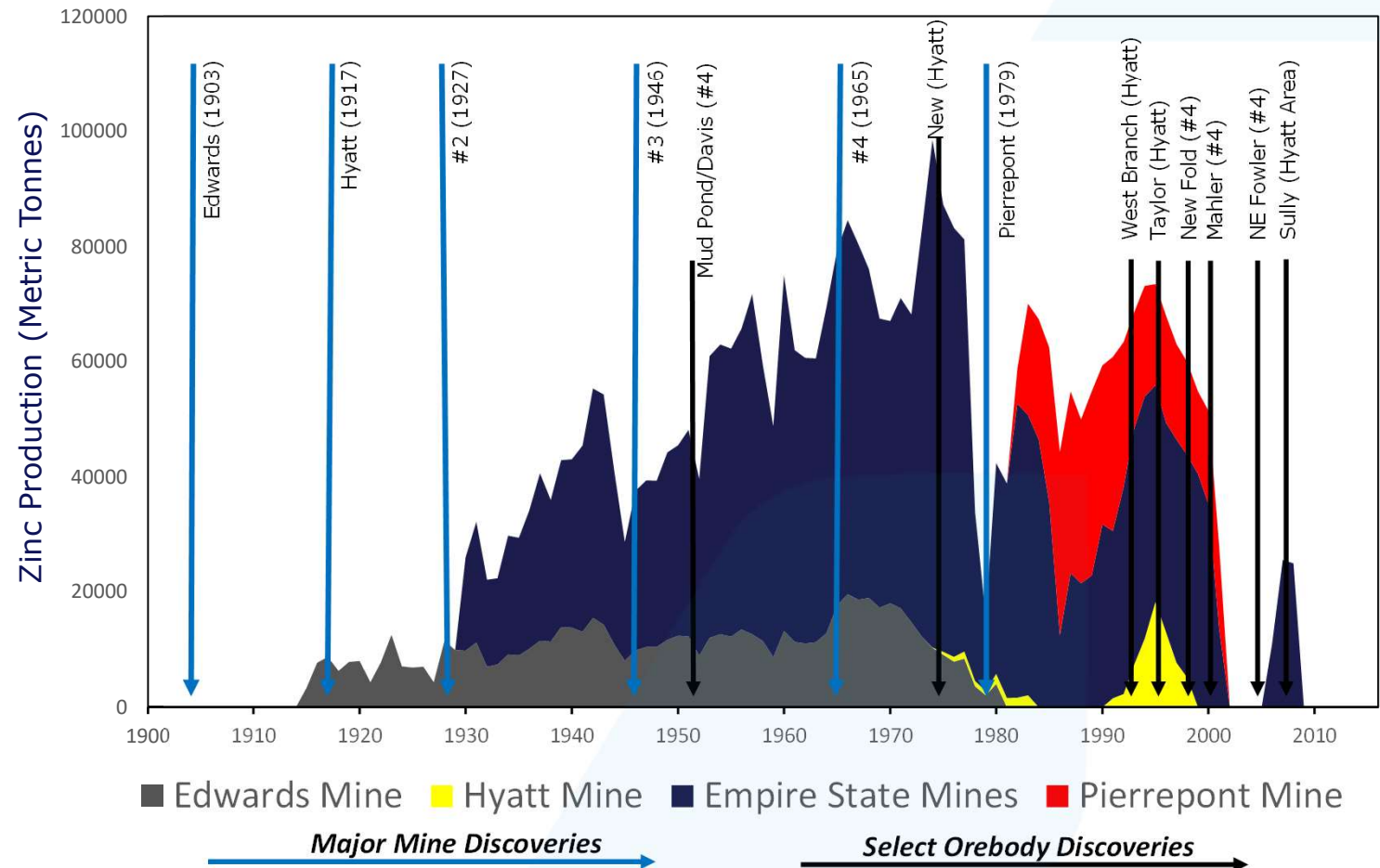
TITAN

History of Exploration Success: Potential for Additional Discoveries

Many discoveries made during a century of mining operations

- Minimal exploration during 2000-2010 period
- District remains highly prospective – refocus on exploration concurrent with production

Long Production History with Numerous Discoveries



The Right People



Richard Warke
Executive Chairman

- Consistent record of creating shareholder value at Augusta Group



Donald Taylor
CEO

- 25+ years of mineral exploration experience
- Discovered world-class Taylor sulphide deposit – winner of PDAC's 2018 Thayer Lindsley Award



Purni Parikh
President

- 25+ years of public company experience in the mining sector
- President of the Augusta Group



Michael McClelland
CFO

- 15 years' experience with global mining companies
- Former CFO of Bisha Mining Share Company, a Nevsun Resources subsidiary



Scott Burkett
VP, Exploration

- 10+ years' experience in exploration and ore control
- Instrumental in discovering world-class deposit at Arizona Mining's Hermosa project



Tom Ladner
VP, Legal

- Advised on multiple M&A transactions valued >\$1B
- Advised on 25+ public market financings raising >\$750M



Key directors

- John Boehner, Len Boggio, James Gowans, William Mulrow, George Pataki

Empire State Mine: Mineral Resources

Underground as at October 1, 2020

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

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

Open Pit as at October 1, 2020

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

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

Refer to the Technical Report entitled, "Empire State Mines 2021 NI 43-101 Technical Report" with an effective date of February 24, 2021 and filed on Titan's SEDAR profile.

Mineral Ridge: Mineral Resources

Category	Tons (000's)	Gold (opt)	Gold (g/t)*	Contained Gold (oz)
Leach Pad Resources				
Indicated	7,290	0.015	0.51	107,700
Total Measured and Indicated	7,290	0.015	0.51	107,700
Run-of-Mine Resources				
Measured	2,088	0.074	2.55	155,200
Indicated	1,095	0.066	2.27	72,600
Total Measured and Indicated	3,183	0.072	2.45	227,800
Total Resource Inventory				
Measured	2,088	0.074	2.55	155,200
Indicated	8,385	0.022	0.74	180,300
Total Measured and Indicated	10,473	0.032	1.10	335,500

Notes:

1. Rounding as required by reporting guidelines may result in summation differences. Tonnage and grade measurements are in Imperial units. Grades are reported in ounces per ton.
2. Leach Pad Mineral Resources have an effective date of December 1, 2020 with the following assumptions: a long-term gold price of \$1,216/oz; assumed process costs of \$11/t; and metallurgical recovery for gold of 91%. Silver was not used in the consideration of reasonable prospects for eventual economic extraction. Silver recoveries from heap leach pad material are projected to be 24%.
3. Run of Mine Mineral Resources have an effective date of December 1, 2020 and are reported within the pit designs at a 0.01 opt gold cut-off grade. These Mineral Resource are considered to be amenable to open-pit mining. Conceptual Whittle pit shells used the following assumptions: a long-term gold price of \$1,350/oz; assumed combined operating costs of \$12.36/t (mining, process, general and administrative); metallurgical recovery for gold of 95%, and variable pit slope angles that ranged from 38-42°. Mineral Resources are constrained to the area within the grade-shell wireframes. The areas outside of these grade shells are assumed to be at zero grade.
4. The Qualified Person for both estimates is Mr. Ian Crundwell, P.Geol., of Mine Technical Services.
5. Mineral Resources are quoted inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
6. *Titan shows g/t for reporting purposes only (1 oz./short ton = 34.2857 grams/tonne).

Refer to the Titan Technical Report entitled, "Mineral Ridge Project, Esmeralda County, Nevada, USA" having an effective date of December 22, 2020 and filed on [sedar.com](https://www.sedar.com).

Our Approach to Sustainability

Guiding Approach

- Our employees are governed by a commitment to integrity, trust, community involvement as well as environment and social stewardship
- Our projects are developed with the goal of delivering long-term mutual economic benefits for employees, communities, local governments and shareholders
- We strive to minimize the environmental, social and safety impacts of our activities through innovation and the use of technology
- A key measure of a successful project is defined by direct engagement and transparent discussions by our company with the surrounding communities which we impact

INTEGRITY AND TRUST

- We listen, communicate and respond to community stakeholders in an open, respectful and timely manner
- We build and reinforce our relationships through transparency
- We back up our commitments with action
- We comply with both the letter and spirit of laws, regulations and permits

COMMUNITY INVOLVEMENT

- We promote local economic development by hiring and buying locally
- We partner and invest in workforce training – so workers have the skills for future advancement and growth
- We use our projects as a catalyst to expand economic development and community investment for the benefit of local residents, community organizations and local governments

Committed to localization and building partnerships that deliver long-term mutual benefits

ENVIRONMENTAL AND SOCIAL STEWARDSHIP

- We mitigate the impacts of our actions to ensure the safety and environmental, well-being of the areas in which we operate
- We work jointly with communities to create positive, long-term legacies that benefit future generations
- We carefully manage the natural resources of our projects, and minimize our environmental footprint through sound business decisions



**FOR MORE INFORMATION
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TSX: TI