



**FOCUS ON EXPLORATION AND DEVELOPMENT  
IN A PROLIFIC ZINC DISTRICT**

**TSX: TI**

July 2020

# 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; costs, timing and results of future exploration and drilling; forecasted trends in the global zinc market, including in respect of the price of zinc; capital and operating cost estimates; economic analyses (including cash flow projections) from the Technical Report; 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 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 and Uncertainties" in the Company's Management's Discussion and Analysis for the year ended December 31, 2018, available at [www.sedar.com](http://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.

Donald Taylor, MSc., PG, Titan's Chief Executive Officer, is a Qualified Person under NI 43-101, and has reviewed and approved the technical contents of this presentation on behalf of Titan.



# Overview

- **100%-owned Empire State Mine (“ESM”) in New York State**
- **Part of the Augusta Group – strong track record in exploration and development**
- **Zinc production in historic mining district**
- **Focus on exploration and development; driven by best-in-class leadership**
- **Discovery of Near-Mine Open-Pitabile Mineralization - Potential near-term incremental mill feed**



Empire State Mine,  
New York

Toronto Stock Exchange Symbol	TI
Shares Outstanding	123.0 million
Fully Diluted Shares Outstanding	145.2 million
Market Capitalization (as of 07/10/2020)	C\$22 million

Currency is in US dollars and tonnage is in short tons unless otherwise indicated

# Our Strategy

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

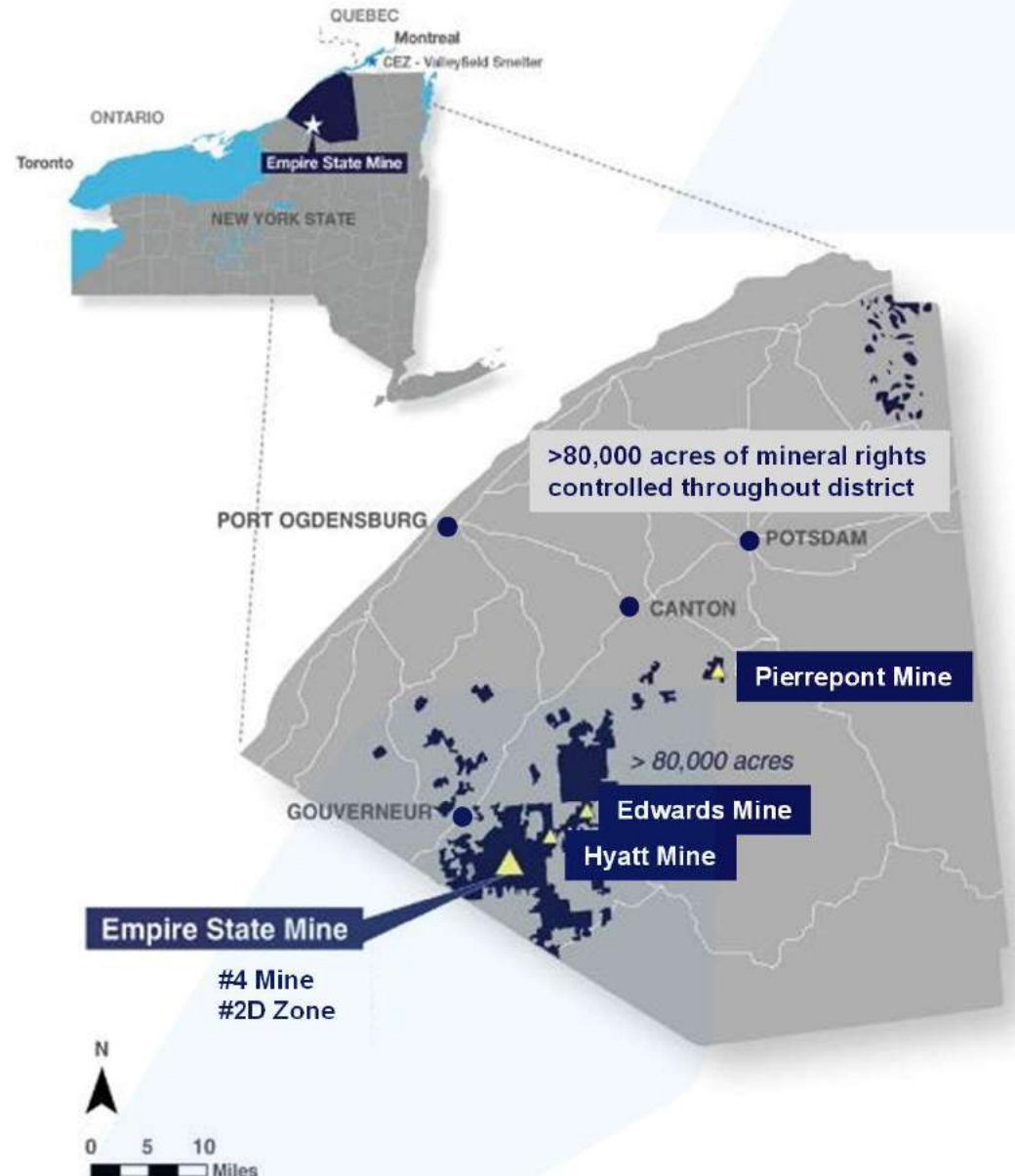


# Empire State Mine: Focused on Exploration in a 100-Year-Old Zinc District

- 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: Historic Production – 4.1 M tons Zn (8.2 B lbs Zn)

## EMPIRE STATE MINE #1 MINE

- Zinc showings identified 1920s
- Mined #1 zone at 3-4% Zn

## #2 MINE

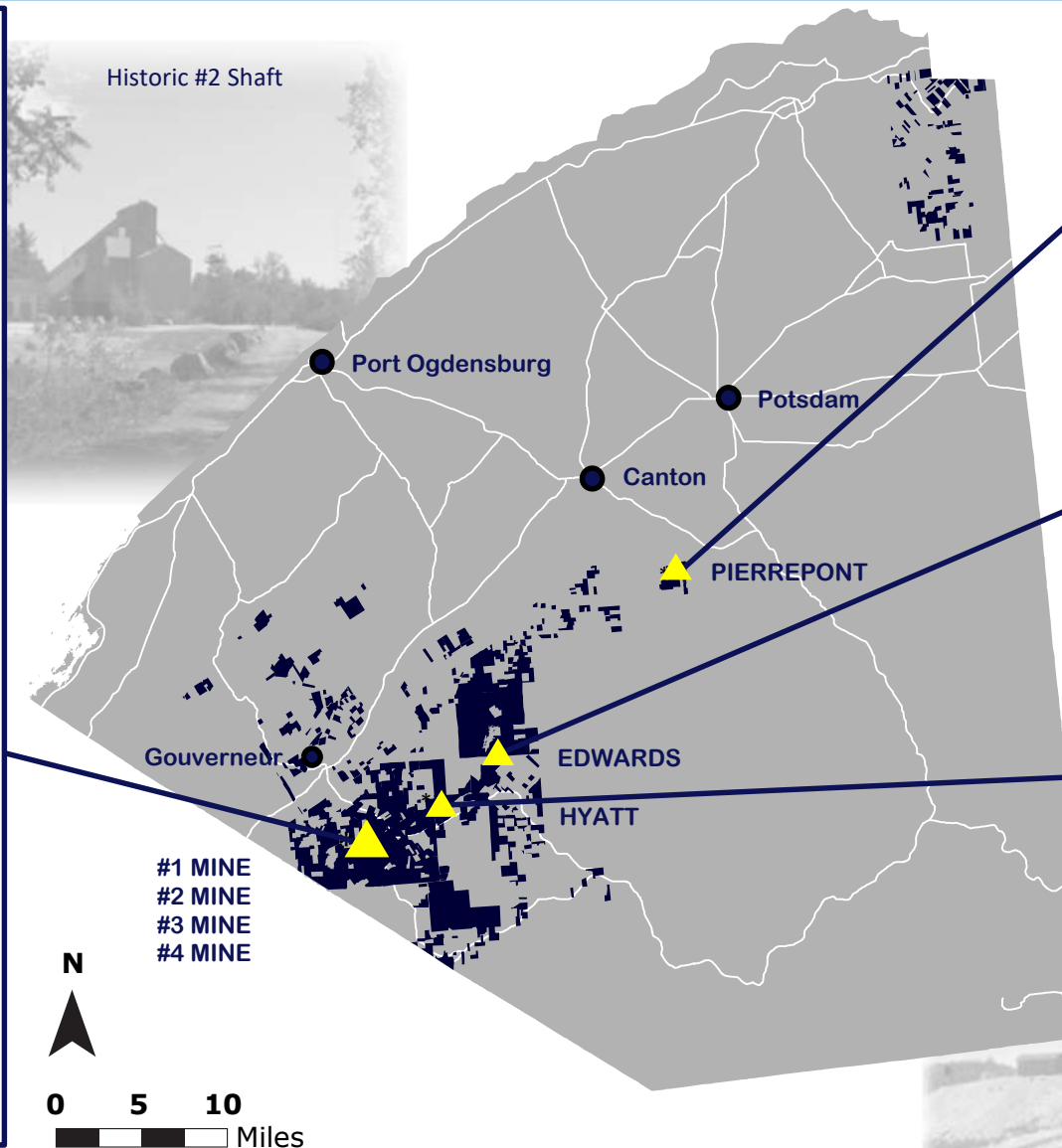
- Discovered 1927
- Opened 1930, closed 1998
- Produced 17.6 Mt at 8.8% zinc or 1.5 Mt zinc
- 5 orebodies

## #3 MINE

- Discovered 1945
- Opened 1953, closed 1985 (flooded)
- Produced 5.7 Mt at 9.4% zinc or 537 kt zinc
- 3 orebodies

## #4 MINE (Restarted January 2018)

- Discovered 1965
- Opened 1971, placed on care and maintenance 2008
- Produced 10.5 Mt at 7.9% zinc or 831 kt zinc
- 8 orebodies



## PIERREPONT MINE

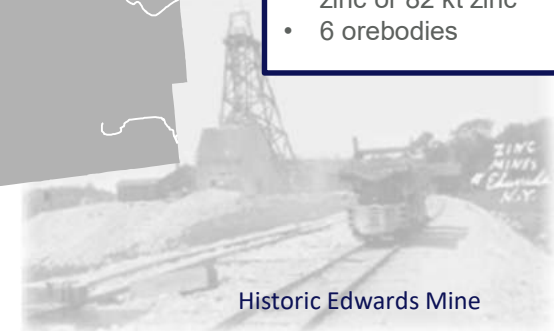
- Discovered 1979
- Opened 1982, closed 2001 High-grade mine
- Produced 2.7 Mt at 16.3% zinc or 433 kt zinc
- 2 orebodies

## EDWARDS MINE

- Discovered 1903
- Opened 1915, closed 1980
- Produced 6.5 Mt at 10.8% zinc or 706 kt zinc
- 6 orebodies

## HYATT MINE

- Discovered 1917
- Opened 1918, closed 1998 (flooded)
- Produced 946 kt at 8.6% zinc or 82 kt zinc
- 6 orebodies





# 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; Mahler and Mud Pond zones in production, New Fold zone in development
  - New development frontier in #2 mine – #2D zone to be incorporated in new mine plan
  - Discovery of near-mine open-pitatable mineralization announced Nov 2019 and Jan 2020
  - Future discoveries expected 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<sup>1</sup> team



Underground crusher at 3,100 level

<sup>1</sup>: Donald Taylor is the recipient of PDAC's 2018 Thayer Lindsley Award



Office building and 3,800 tpd shaft



5,000 tpd processing plant

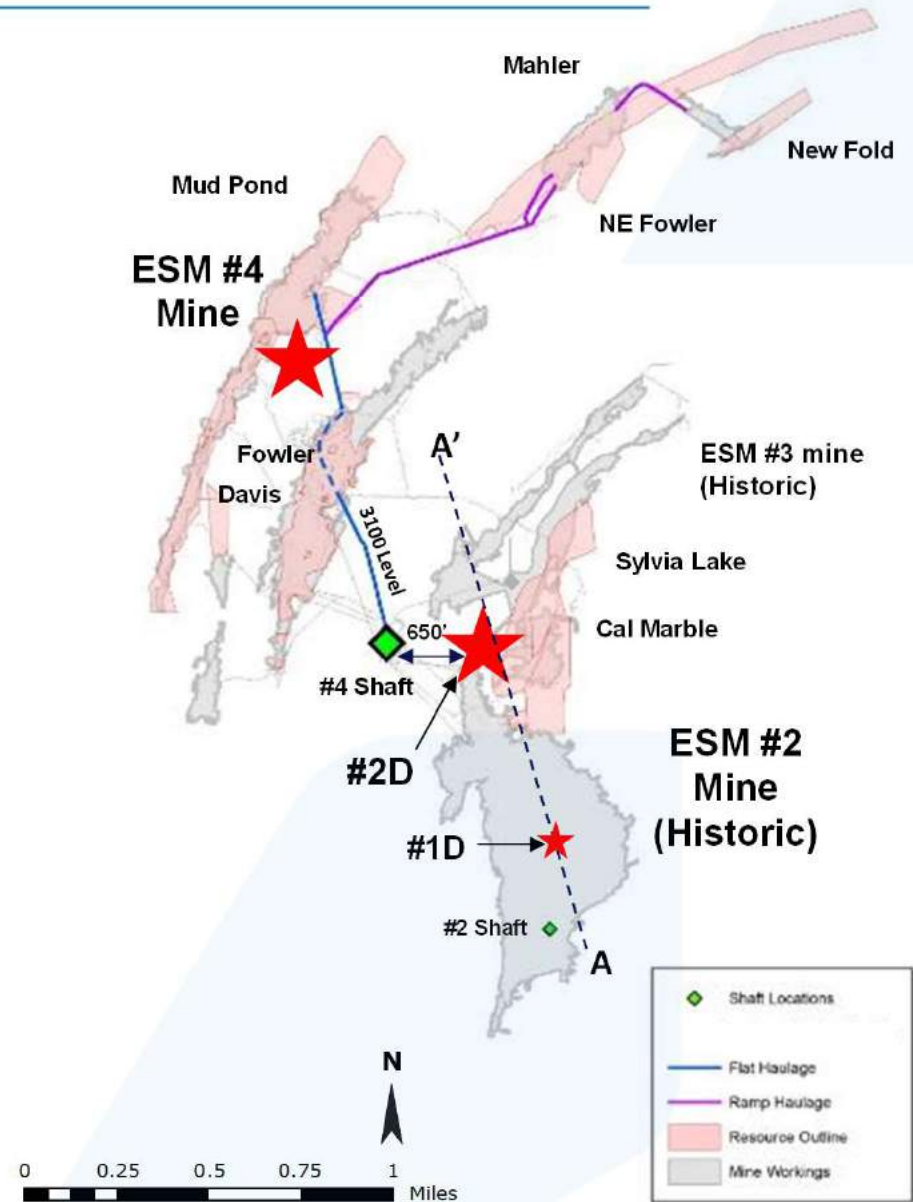


Fully equipped maintenance shop capable of servicing all equipment

# Excellence in Exploration

## Plan view of ESM #4 mine and #2D zone

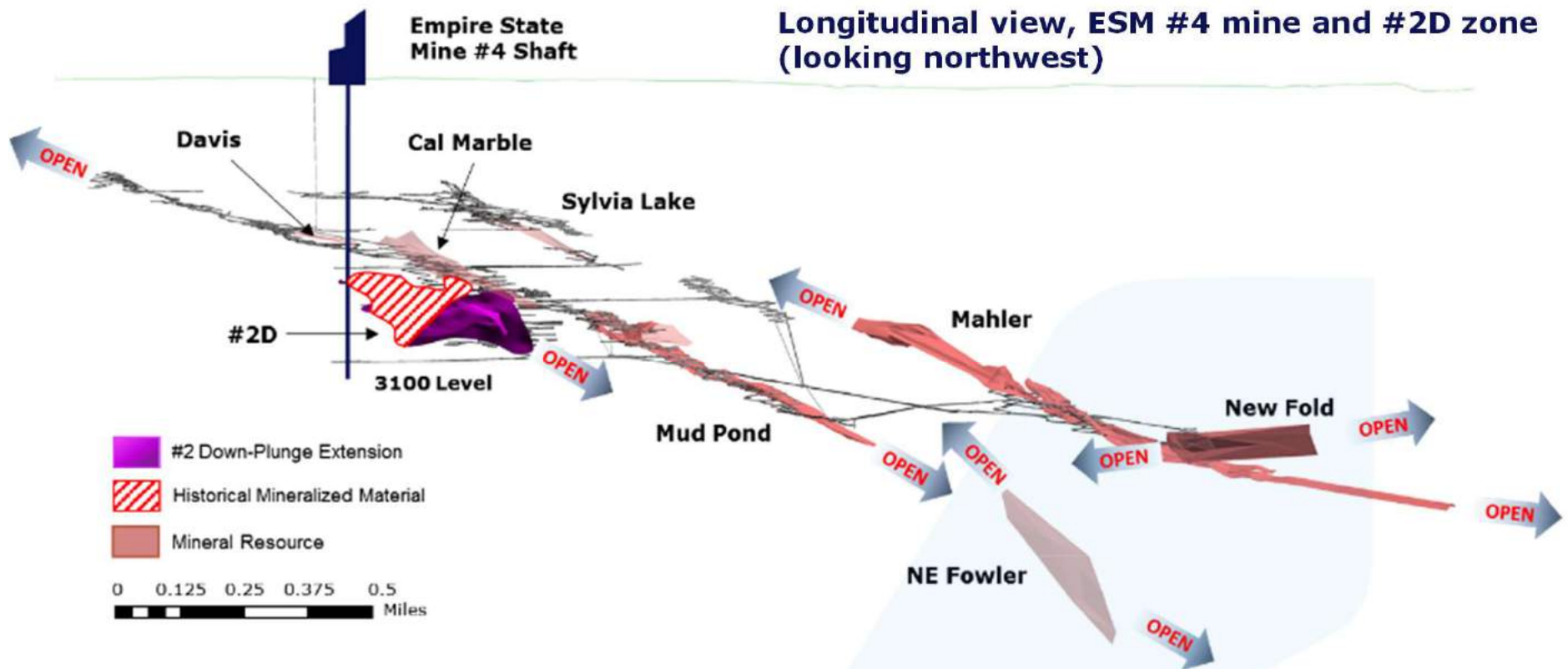
- #4 mine – drilling potential zone extensions and increasing confidence for mine design
- #2D zone – major extension of zone mined in historic #2 mine; 650 feet east of #4 shaft; historic infrastructure in place; open down-plunge and laterally
- #1D – potential extension of historically-mined zone



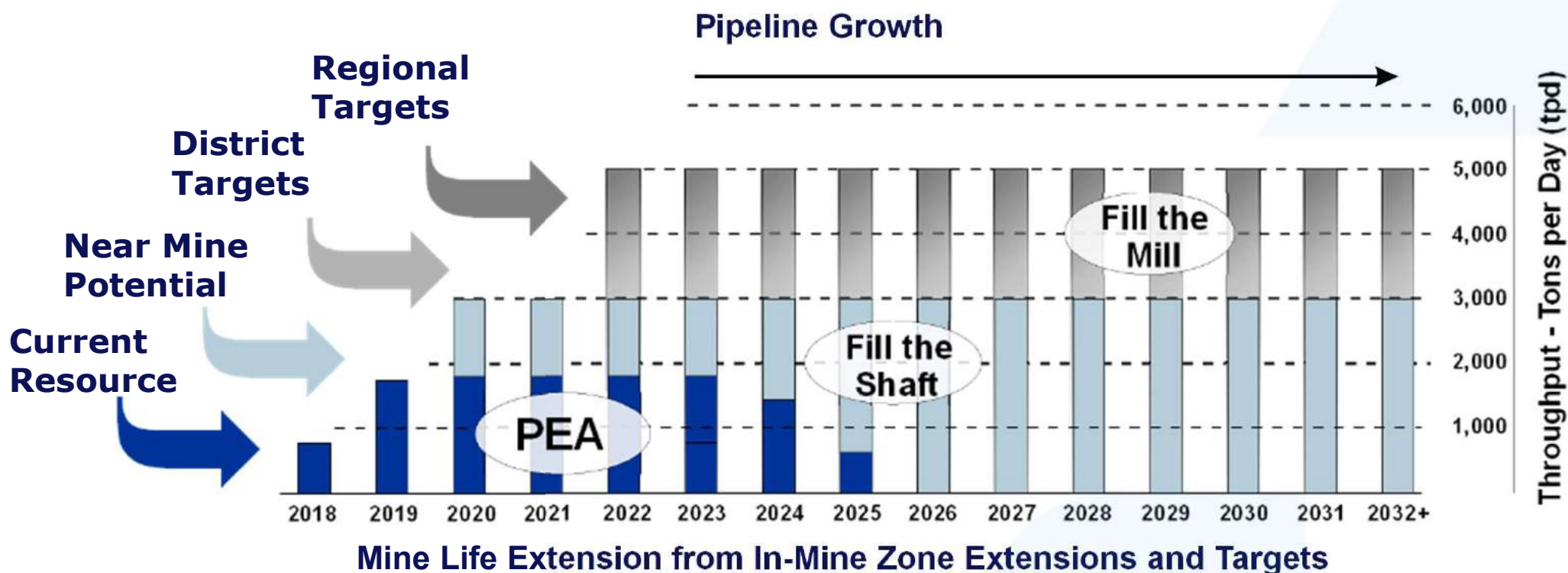


# Mineral Resource Expansion Potential at ESM #4 Mine and #2D Zone

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



# Growth Strategy – Exploration



## Preliminary Economic Assessment

- Existing Resource
- Historic Reserves and Remnants

## Near Mine Potential

- #2D, #1D
- NE Streeter
- West Gleason

## District Targets

- Hyatt, West Branch Sully
- Edwards - Pierrpont
- VTEM Targets

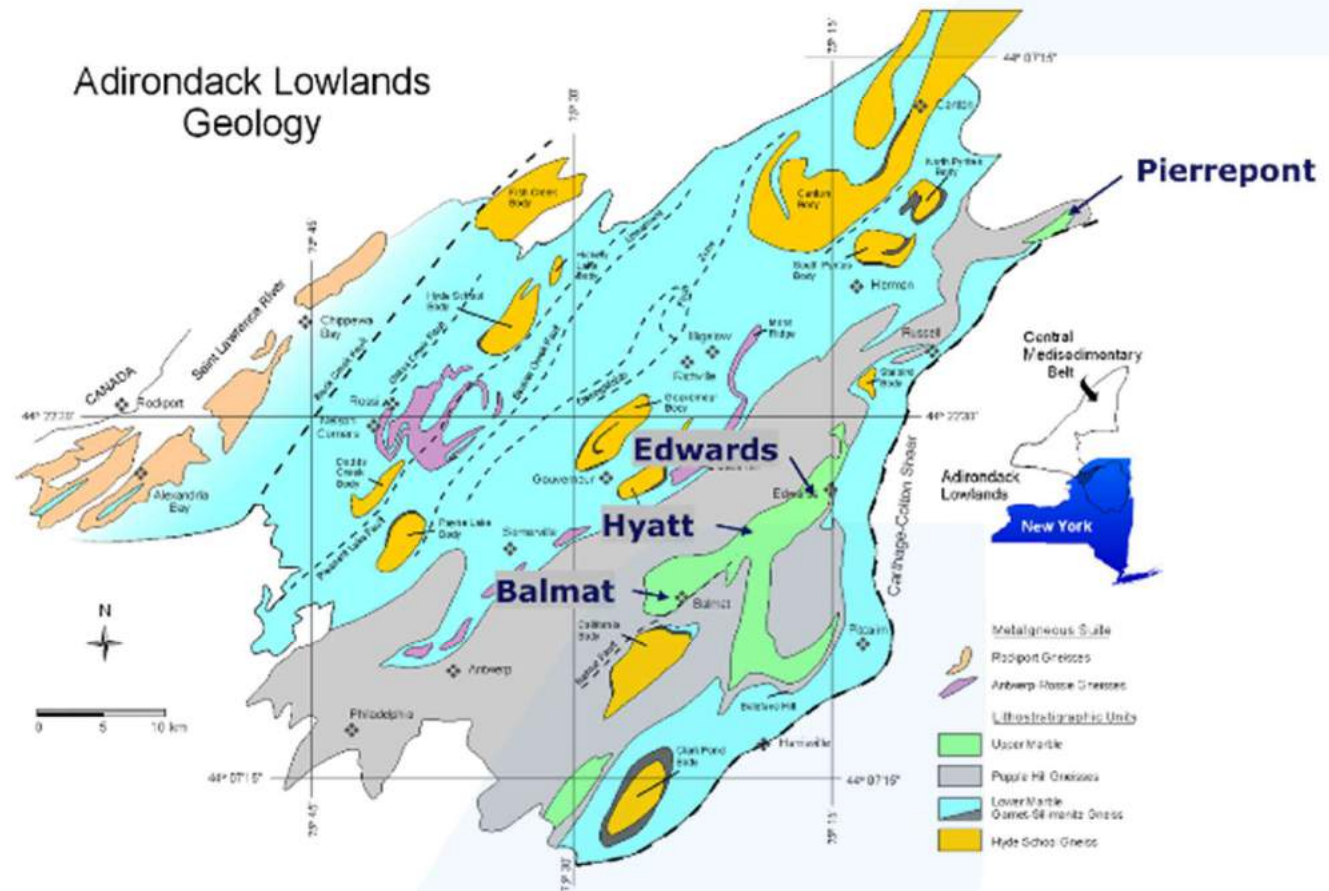
## Regional

- Geochem Targets
- VTEM Targets

# New Ideas for a Prolific Zinc District

## Exploration targets throughout district

- Targeting large, high-grade deposits in the 15 to 30+ Mt range
- Multiple targets identified along trend northeast of ESM and south of Hyatt
- Target areas exhibit favourable host rocks, prospective structures and surface expressions of zinc mineralization
- Untested geophysical targets generated from 2008 VTEM survey
- Drill site selection from compilation and review of existing data within target areas

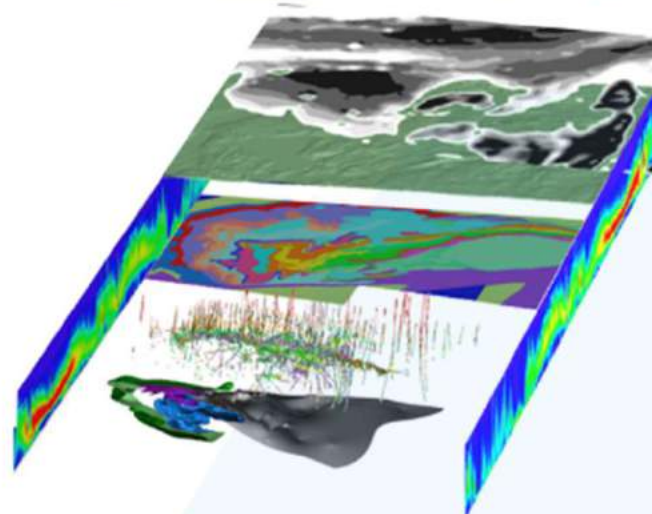
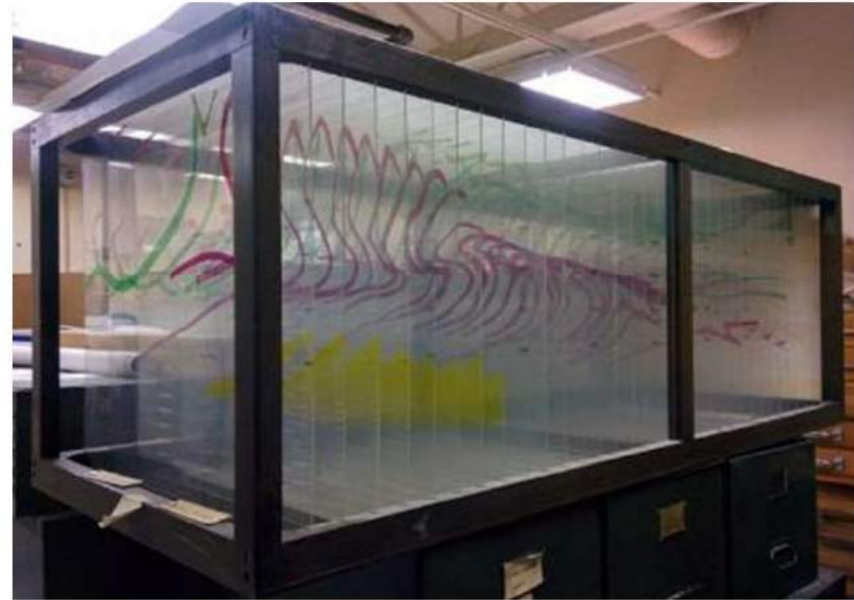




# Exploration Potential– Mining Historic Data

## Compiling, digitizing and modelling existing data

- 100 years of historical exploration – ~800 kilometers of available drill data
- Consolidating and assessing exploration data from multiple programs and operators
- Previous (re)discoveries based on examination of historical data
  - Red Lake-Dickenson (Goldcorp)
  - Sigma-Lamaque (Integra Gold)
  - Horne 5 Project (Falco)



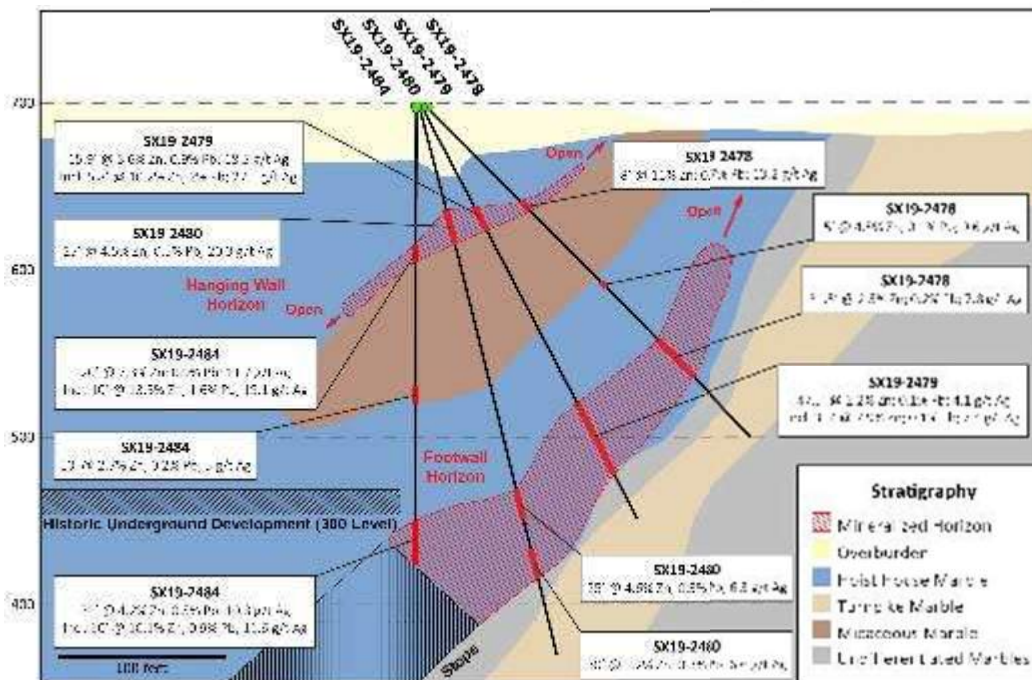
- 
- Re-interpreted magnetic data
  - Inversion of airborne VTEM
  - High precision LIDAR topo
  - Digitization and synthesis of geological mapping
  - Transition to modern core logging scheme
  - 3D modelling of geology, ore shells and mine workings

## Discovery of Near-Mine Open-Pit Mine Mineralization – Potential Near-Term Incremental Mill Feed

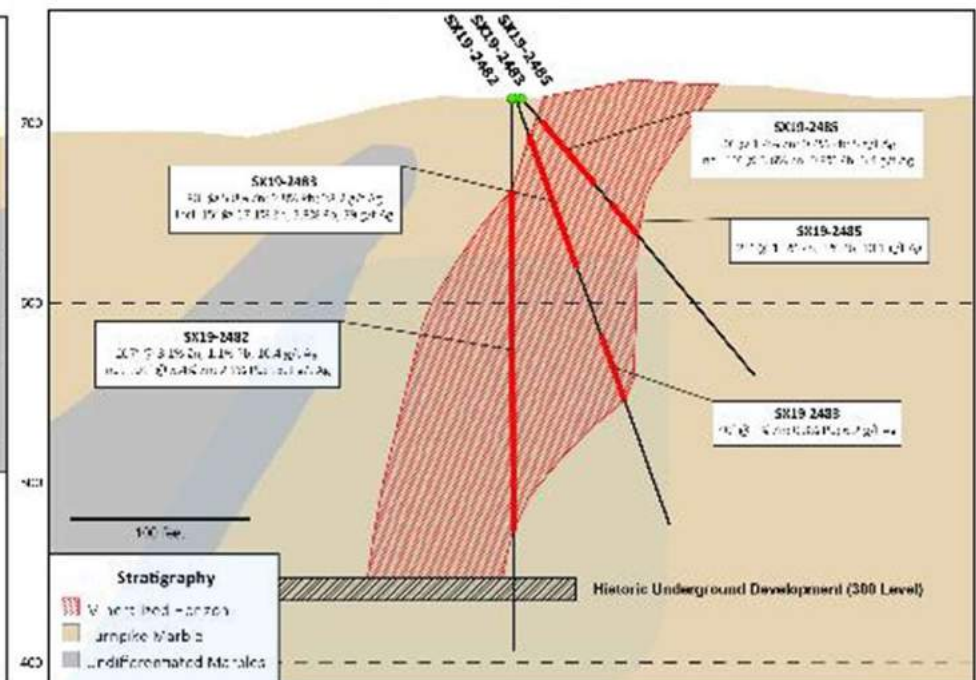
## Hoist House and Turnpike zones – potential to add low-cost production

- New shallow zones discovered of near-mine open-pitatable mineralization in Nov 2019 and Jan 2020
- Definition drilling of these potential new open-pit mill feed zones is a key goal of the Company's strategy of filling over 3,000 tpd of excess capacity at the ESM mill in an effort to dramatically increase production and lower costs
- Future discoveries expected through additional near-mine exploration

### Hoist House Zone at ESM, Looking Northeast

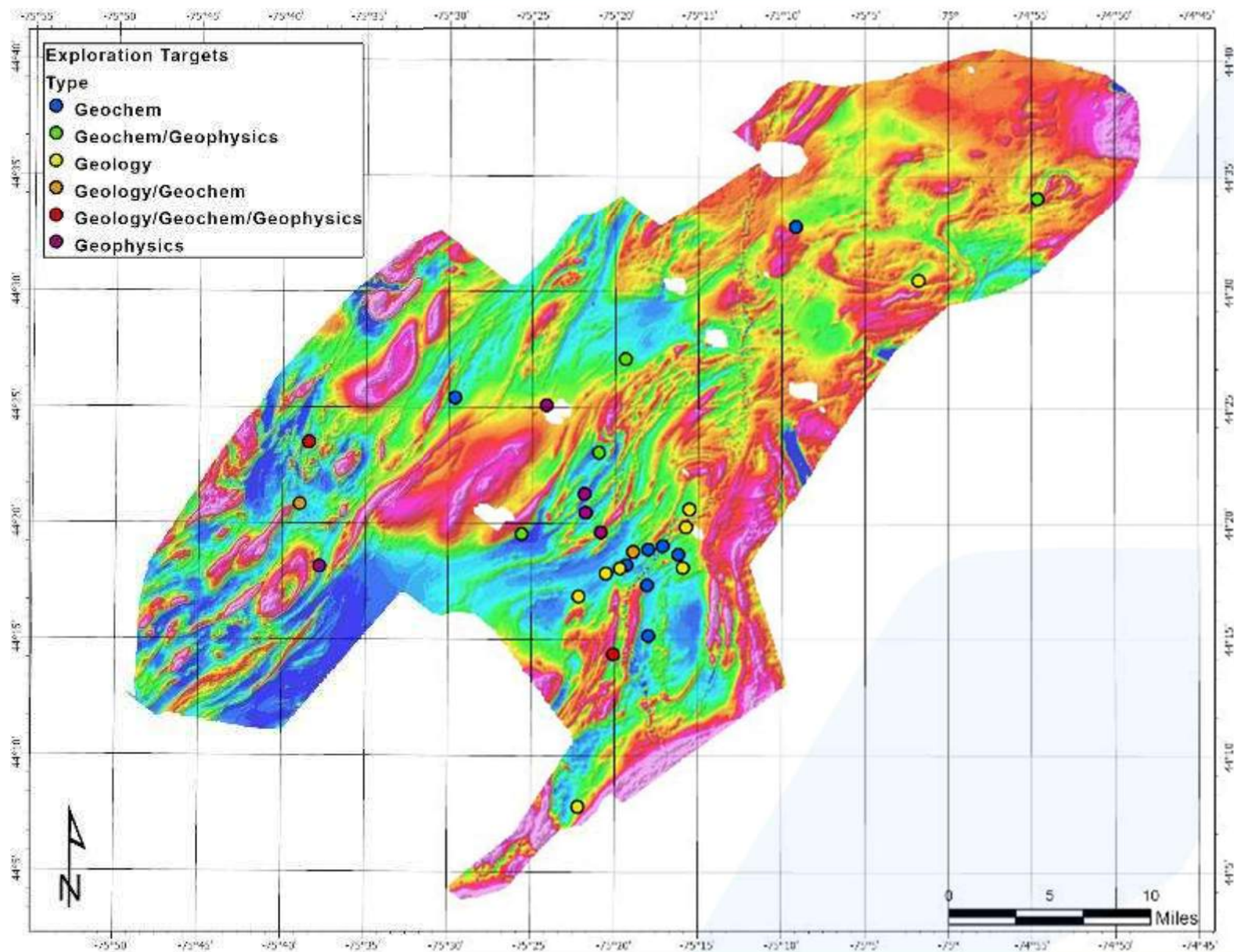


### Turnpike Zone at ESM, Looking Northeast





# Excellence in Exploration





# The Augusta Group – Track Record in Exploration and Development



La Bodega gold project (Colombia)

**SOLD for ~C\$1.6B in 2011**

12,960% return



Rosemont Copper Project (Arizona)

**SOLD for ~C\$666M in 2014**

3,300% return



Hermosa-Taylor Zn-Pb-Ag Project (Arizona)

**SOLD for ~C\$2.1B in 2018**

6,100% return



Castle Mountain gold project (California)

**Co-Founded in 2017; C\$4B Market Cap**

1,700% return

**Current companies:**



Note: 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.



# APPENDIX



EMPIRE STATE  
MINES

OFFICIALLY OPENED BY



MINING CORP.

12 JUNE 2018



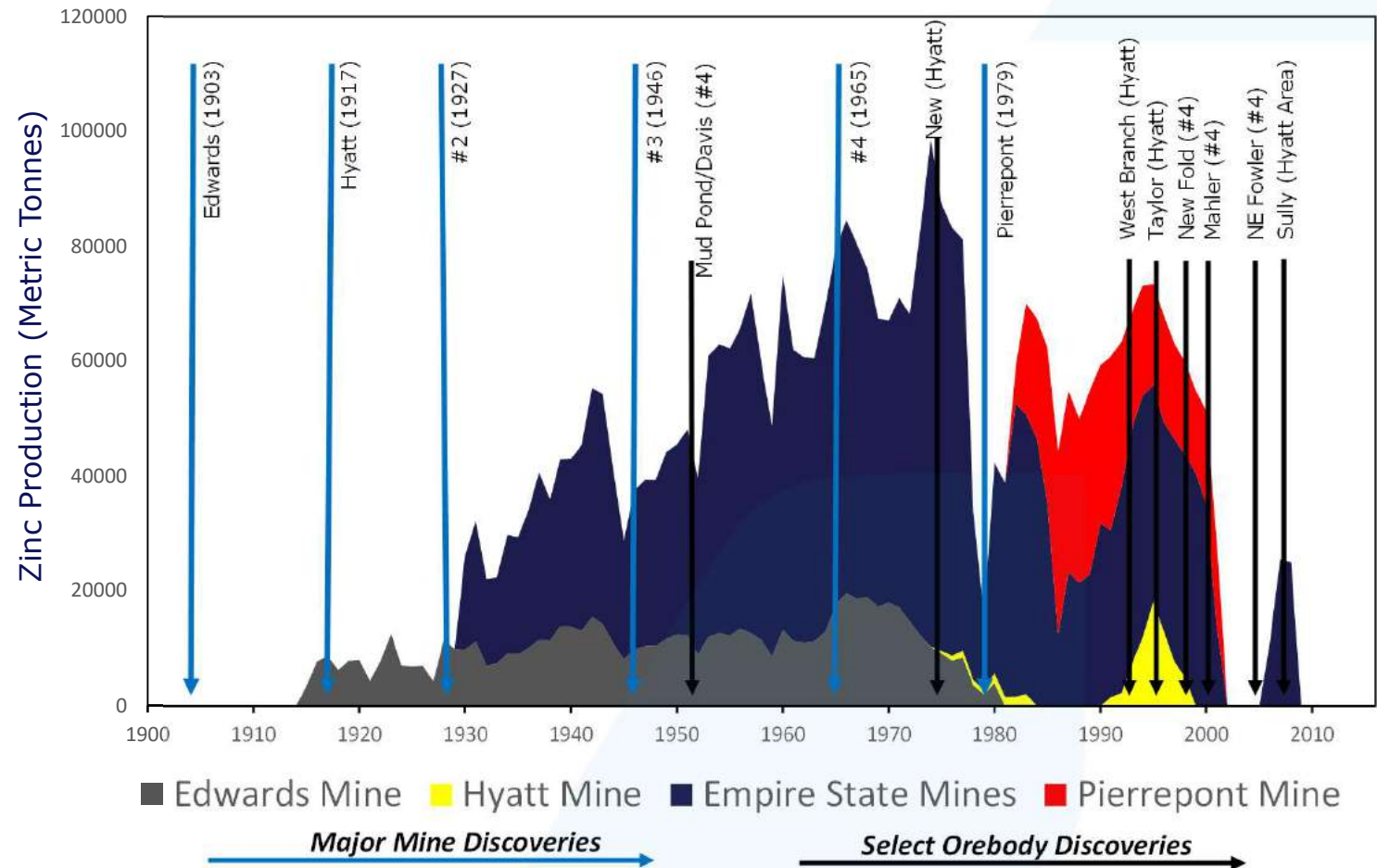


# History of Exploration Success Plus Potential for Additional Discoveries

## 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

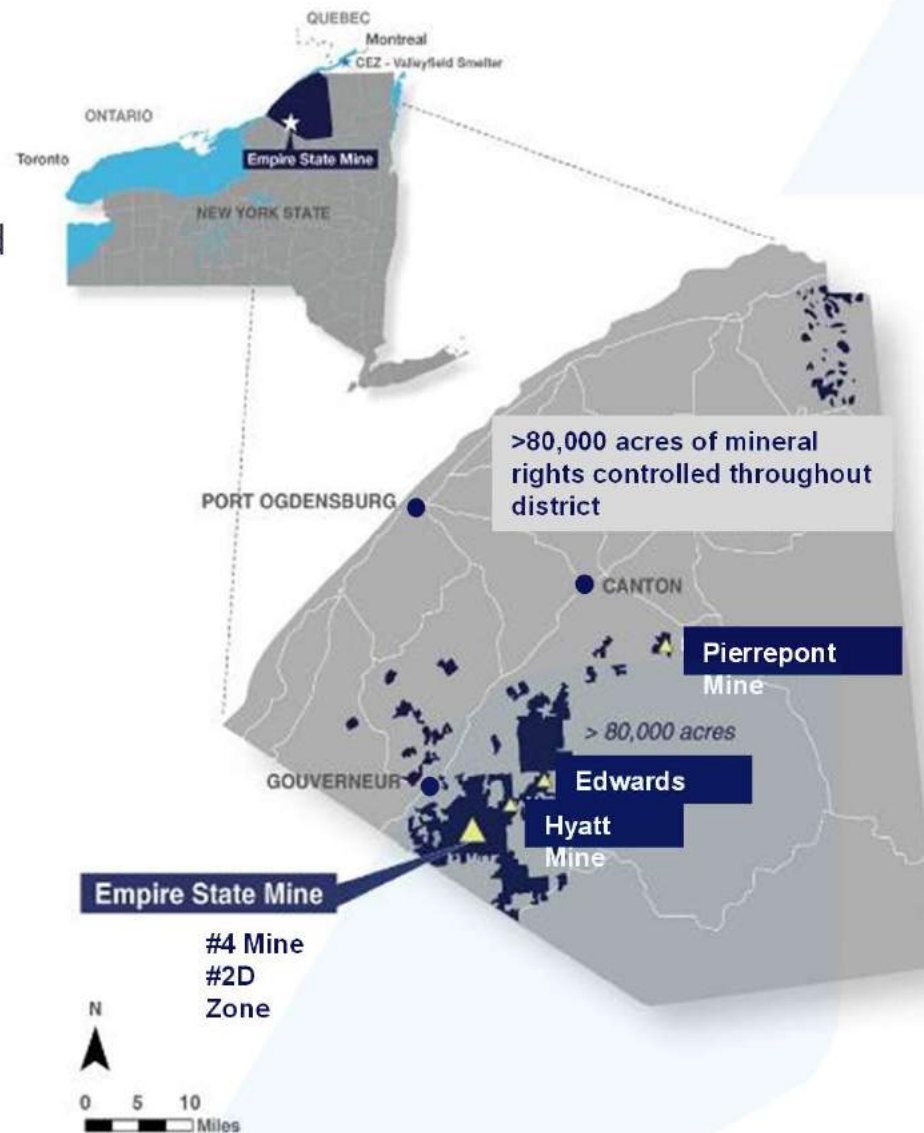




# Empire State Mine: Focused on Exploration in a 100-Year-Old Zinc District

## Land Position

- >80,000 acres of mineral rights controlled by Titan
  - ~25% owned
  - ~70% leased/optioned
- Reciprocal Agreement w/ Vanderbilt Minerals
  - ~ 5%



# 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



**Kevin Torpy**  
VP, Operations

- 20+ years' experience in mine building and operations
- Strong focus on safety, efficiency, cost control



## Key directors

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

# 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

## Focus on Optimizing Cash Flow

- **New mine plan expected by mid-2020,** to include 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 in #2D zone and #4 mine as well as district drilling

## World-Class Exploration Potential

- **Highly-prospective district.** 100 years of historical data, many new untested ideas and a modern approach to exploration
- **Potential for significant discoveries.** Target new discoveries in the 15-30Mt range, grading 10% zinc



# Empire State Mine: Historic Production

## EMPIRE STATE MINE

### #1 MINE

- Zinc showings identified 1920s
- Inclined shaft to 300 foot level
- Mined #1 zone at 3-4% Zn

### #2 MINE

- Discovered 1927
- Inclined shaft to 2,500 foot level and 500 tpd mill
- Opened 1930, closed 1998
- Produced 17.6 Mt at 8.8% zinc or 1.5 Mt zinc
- 5 orebodies
- ~50% of historic production from #1-#4 mines

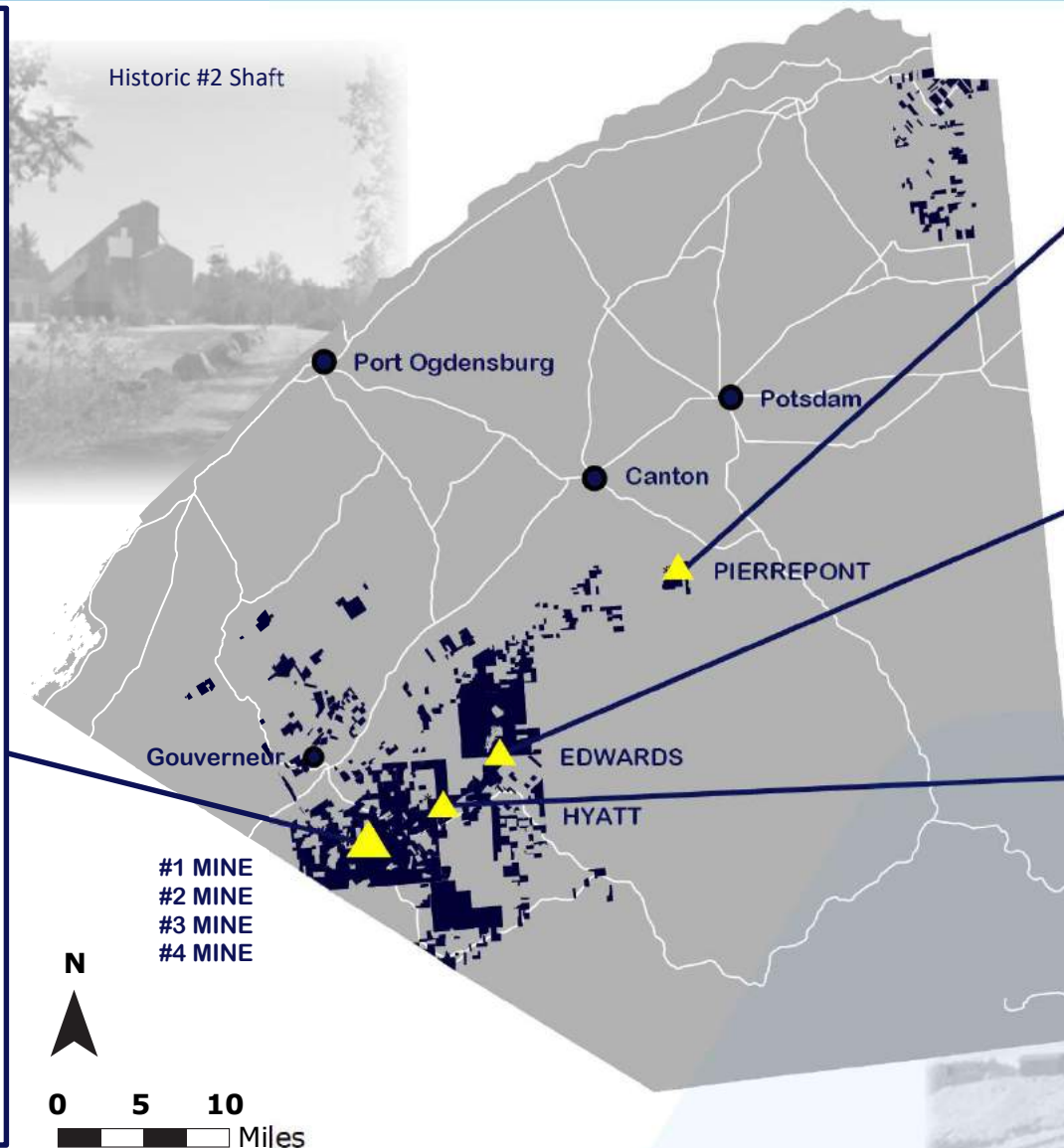
### #3 MINE

- Discovered 1945
- Vertical shaft to 900 foot level
- Opened 1953, closed 1985 (flooded)
- Produced 5.7 Mt at 9.4% zinc or 537 kt zinc
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### #4 MINE

#### (Restarted January 2018)

- Discovered 1965
- Vertical shaft to 3,100 foot level and 5,000 tpd mill
- Opened 1971, placed on care and maintenance 2008
- Produced 10.5 Mt at 7.9% zinc or 831 kt zinc
- 8 orebodies



## PIERREPONT MINE

- Discovered 1979
- Ramp to ~700 foot depth
- Opened 1982, closed 2001 (flooded)
- Continuous operation
- High-grade mine
- Produced 2.7 Mt at 16.3% zinc or 433 kt zinc
- 2 orebodies

## EDWARDS MINE

- Discovered 1903
- Vertical shafts; deepest workings at 3,500 feet
- Opened 1915, closed 1980
- Continuous operation
- Produced 6.5 Mt at 10.8% zinc or 706 kt zinc
- 6 orebodies

## HYATT MINE

- Discovered 1917
- 2 ramps to 1,200 foot depth
- Opened 1918, closed 1998 (flooded)
- Produced 946 kt at 8.6% zinc or 82 kt zinc
- 6 orebodies



# Empire State Mine – Types of Mineralization

## Primary (parent) mineralization

- Conformable lenses (175m x 750m)
- Sphalerite with pyrite and minor galena
- ~1.0-3.0 Mt @ 11.5-14.5% Zn



## Remobilized (daughter) mineralization

- Cross-cutting, elongate trends (125m x ~2000m)
- Sphalerite with minor pyrite
- ~1.5-4.5 Mt @ 8% Zn



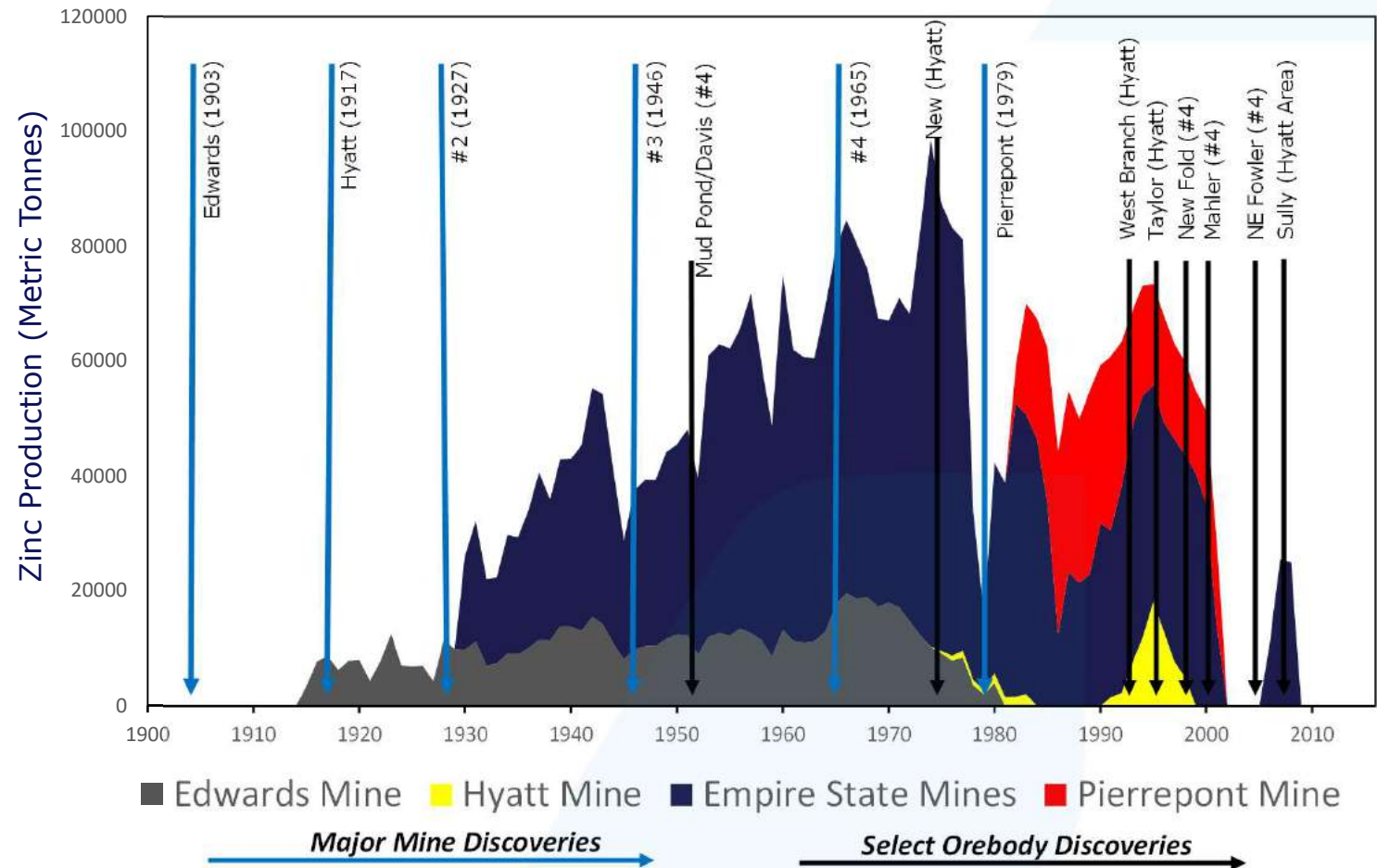


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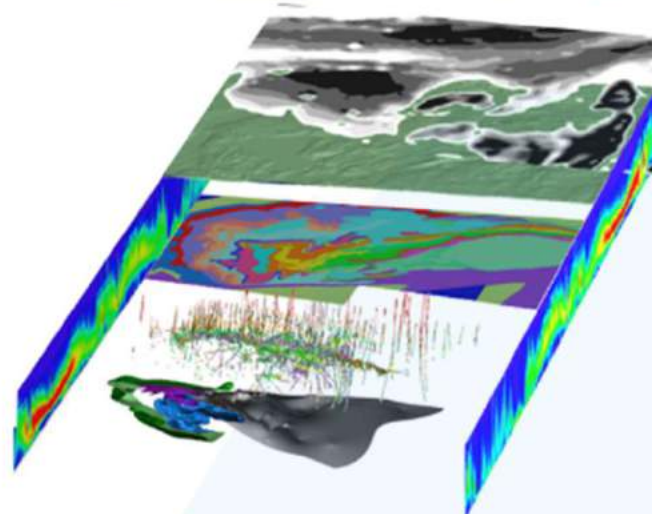
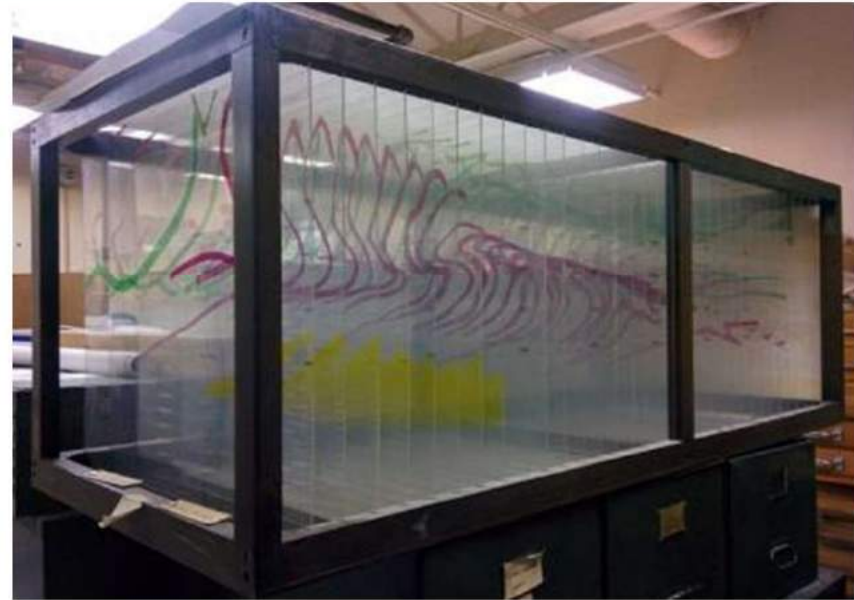
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# Mining Historical Data

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# Mineral Resources

## Mineral Resources at Empire State Mine #4 Mine as at January 31, 2018

Mineralized Zones	Measured		Indicated		Measured & Indicated		Inferred	
	'000 Tons	Grade (% Zn)	'000 Tons	Grade (% Zn)	'000 Tons	Grade (% Zn)	'000 Tons	Grade (% Zn)
<b>Mud Pond</b>	337.0	10.40%	285.2	10.87%	622.2	10.61%	1,390.5	10.68%
<b>New Fold</b>	68.0	12.75%	249.6	11.72%	317.6	11.94%	539.4	13.97%
<b>Mahler</b>	400.5	15.89%	700.9	15.27%	1,101.4	15.50%	516.6	15.59%
<b>Other Mineralization</b>	44.9	10.73%	83.5	10.16%	128.4	10.36%	2,969.6	12.55%
<b>Total</b>	850.4	13.19%	1,319.2	13.33%	2,169.6	13.27%	5,416.1	12.50%

Notes:

- (1) Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all, or any part, of the mineral resources estimated will be converted into mineral reserves.
- (2) The underground mining economics used operating costs of \$70/t, and a zinc price of \$1.00/pound at 96% recovery.
- (3) Tonnage is reported to the nearest 100 tons, and grades are rounded to the nearest two decimal places.
- (4) Rounding as required by reporting guidelines may result in apparent summation differences between tons, and grade.
- (5) Mineral resources were completed by Allan Reeves, P.Geo., President of Tuun Consulting Inc.

# 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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