

# High Grade, High Quality, Solid Partners Copper-Zinc-Lead-Gold-Silver and now... Cobalt

**2018 Precious Metals Summit Colorado** 

### **Forward Looking Statements**



This presentation release includes certain "forward-looking information" and "forward-looking statements" (collectively "forward-looking statements") within the meaning of applicable Canadian and United States securities legislation including the United States Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical fact, included herein, including, without limitation, the future price of copper, the estimation of mineral reserves and mineral resources, the realization of mineral reserve and mineral resource estimates, the timing and amount of estimated future production, costs of production, capital expenditures, costs and timing of the development of projects, the likelihood and timing of the AMDIAP, the potential future development of Bornite, the future operating or financial performance of the Company, planned expenditures and the anticipated activity at the UKMP Projects, are forward-looking statements. Forward-looking statements are frequently, but not always, identified by words such as "expects", "anticipates", "believes", "intends", "estimates", "potential", "possible", and similar expressions, or statements that events, conditions, or results "will", "may", "could", or "should" occur or be achieved. These forward-looking statements may include statements regarding perceived merit of properties; exploration plans and budgets; mineral reserves and resource estimates; work programs; capital expenditures; timelines; strategic plans; market prices for precious and base metals; or other statements that are not statements of fact. Forward-looking statements involve various risks and uncertainties. There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements. Important factors that could cause actual results to differ materially from the Company's expectations include the uncertainties involving success of exploration, development and mining activities, permitting timelines, requirements for additional capital, government regulation of mining operations, environmental risks, unanticipated reclamation expenses; mineral reserve and resource estimates and the assumptions upon which they are based; assumptions and discount rates being appropriately applied to the PFS; our assumptions with respect to the likelihood and timing of the AMDIAP; capital estimates; prices for energy inputs, labour, materials, supplies and services the interpretation of drill results, the need for additional financing to explore and develop properties and availability of financing in the debt and capital markets; uncertainties involved in the interpretation of drilling results and geological tests and the estimation of reserves and resources; the need for cooperation of government agencies and native groups in the development and operation of properties as well as the construction of the access road; the need to obtain permits and governmental approvals; risks of construction and mining projects such as accidents, equipment breakdowns, bad weather, non-compliance with environmental and permit requirements, unanticipated variation in geological structures, metal grades or recovery rates; unexpected cost increases, which could include significant increases in estimated capital and operating costs; fluctuations in metal prices and currency exchange rates; and other risks and uncertainties disclosed in the Company's Annual Report on Form 10-K for the year ended November 30, 2017 filed with Canadian securities regulatory authorities and with the United States Securities and Exchange Commission and in other Company reports and documents filed with applicable securities regulatory authorities from time to time. The Company's forward-looking statements reflect the beliefs, opinions and projections on the date the statements are made. The Company assumes no obligation to update the forward-looking statements or beliefs, opinions, projections, or other factors, should they change, except as required by law.

# **Forward Looking Statements**



#### **Non-GAAP Performance Measures**

Some of the financial measures referenced in this press release are non-GAAP performance measures. We have not reconciled forward-looking full year non-GAAP performance measures contained in this news release to their most directly comparable GAAP measures, as permitted by Item 10(e)(1)(i)(B) of Regulation S-K. Such reconciliations would require unreasonable efforts at this time to estimate and quantify with a reasonable degree of certainty various necessary GAAP components, including for example those related to future production costs, realized sales prices and the timing of such sales, timing and amounts of capital expenditures, metal recoveries, and corporate general and administrative amounts and timing, or others that may arise during the year. These components and other factors could materially impact the amount of the future directly comparable GAAP measures, which may differ significantly from their non-GAAP counterparts.

#### **Cautionary Note to United States Investors**

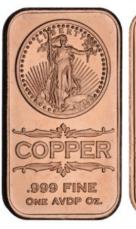
This press release has been prepared in accordance with the requirements of the securities laws in effect in Canada, which differ from the requirements of U.S. securities laws. Unless otherwise indicated, all resource and reserve estimates included in this press release have been prepared in accordance with Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and the Canadian Institute of Mining, Metallurgy and Petroleum (CIM)—CIM Definition Standards on Mineral Resources and Mineral Reserves, adopted by the CIM Council, as amended ("CIM Definition Standards"). NI 43-101 is a rule developed by the Canadian Securities Administrators which establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Canadian standards, including NI 43-101, differ significantly from the requirements of the United States Securities and Exchange Commission (SEC), and resource and reserve information contained herein may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, the term "resource" does not equate to the term "reserves". Under U.S. standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. The SEC's disclosure standards normally do not permit the inclusion of information concerning "measured mineral resources", "indicated mineral resources" or "inferred mineral resources" or other descriptions of the amount of mineralization in mineral deposits that do not constitute "reserves" by U.S. standards in documents filed with the SEC. Investors are cautioned not to assume that all or any part of "measured" or "indicated resources" will ever be converted into "reserves". Investors should also understand that "inferred mineral resources" have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. Under Canadian rules, estimated "inferred mineral resources" may not form the basis of feasibility or pre-feasibility studies except in rare cases. Disclosure of "contained ounces" in a resource is permitted disclosure under Canadian regulations; however, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC standards as in-place tonnage and grade without reference to unit measures. The requirements of NI 43-101 for identification of "reserves" are also not the same as those of the SEC, and reserves reported by Trilogy Metals in compliance with NI 43-101 may not qualify as "reserves" under SEC standards. Arctic does not have known reserves, as defined under SEC Industry Guide 7. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in a concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in a concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in a concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in a concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in a concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in a concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in a concerning mineral deposits in a concerning mineral deposits and the companies of the concerning made public by companies that report in a concerning made public by companies and the c accordance with U.S. standards.



8 Billion Pounds of Copper, 3 Billion Pounds of Zinc and over 1 Million Ounces of Gold Equivalent Precious Metals And now with 77 Million Pounds of Cobalt

- High-Grade Copper with Significant Cobalt, Zinc and Precious Metals - 100% owned
- Located in Alaska: a Safe, Rule of Law Jurisdiction
- Ambler Mining District Significant Exploration Upside
- Two Projects:
  - Arctic at PFS Completed; Permitting & BFS Underway
  - Bornite Exploration > 6 Billion lbs Copper and Growing
- Arctic Pre-Feasibility Highlights
  - ✓ Post Tax \$1.4 Billion NPV and 33% IRR
  - √43 Mmt Reserve Grading 5% Copper Equivalent
    - 2.3% Copper; 3.2% Zinc; 0.59% Lead; 0.49 g/t Gold and 36 g/t Silver
  - ✓ Average Annual Production: 160 Million Lbs Copper; 200 Million Lbs Zinc;
     30 Million Lbs Lead; 30,000 Ozs Gold and 3 Million Ozs Silverust | Respect | Integrity (4)

















## **Ambler Mining District - Alaska**



Safe Jurisdiction – Mining District Hosts Deposits Rich in Copper, Zinc, Lead, Gold, Silver & Cobalt



- Politically Stable
- Rule of Law
- Recognized Mineral Potential
- Resource Extractive
   Industries are the
   Largest Contributors
   to Alaska's Economy
- Well Established Permitting Process
- Supportive Borough Gov't – tax base for region
- NANA Agreement
- > NANA Alaskan Regional Native Corporation with 14,000 Iñupiat shareholders
- > Land owner and Joint partner with Teck on Red Dog
- Red Dog is the largest Zinc mine in the world operating for nearly 30 years
- > Good jobs and Local taxes from Red Dog supports NW Arctic Borough Government and School District











# Advancing the Ambler Mining District in Alaska by Forming Strong Partnerships

- Three Partnerships
  - ✓ Local Native Partnership with NANA Business Relationship with strong community relationships
  - ✓Infrastructure Partnership with State of Alaska AIDEA to build road infrastructure
  - ✓ Financial Partnership with South32









# Advancing the Ambler Mining District in Alaska by Forming Strong Partnerships

- Three Partnerships
  - ✓ **Local Native Partnership with NANA** Business Relationship with strong community relationships
  - ✓Infrastructure Partnership with State of Alaska AIDEA to build road infrastructure
  - √ Financial Partnership with South32



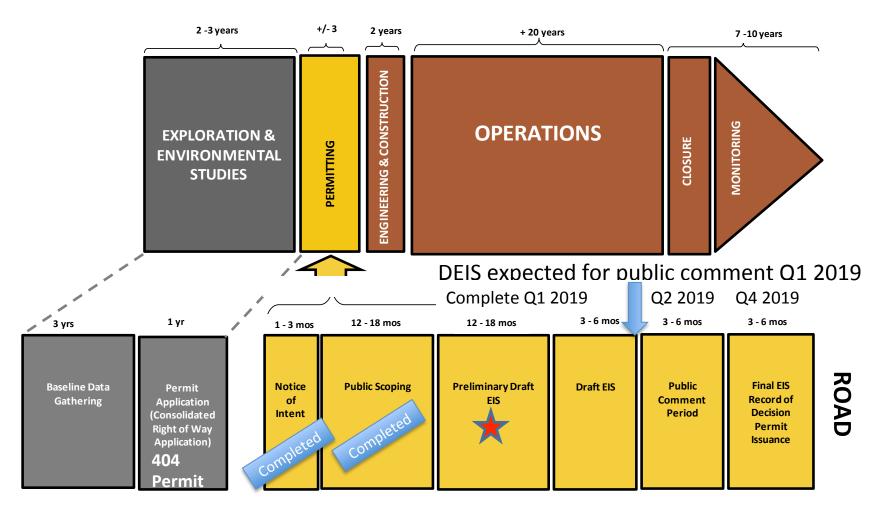
# **Truck Transportation Plan**





# **NEPA Road Permitting Process (EIS)**





Bureau of Land Management is the Lead Agency for Road Permitting while AIDEA is the proponent





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## **Share Capitalization**



#### Solid - Supportive Shareholder Base

NYSE American and Toronto Exchanges - Symbol "TMQ"

**Issued and Outstanding** 

131.3 M

**Options & Warrants**<sup>1</sup>

15.7 M

Retail, 16%

Fully Diluted<sup>2</sup>

148.5 M

**Balance Sheet** 

**Shareholder Base** 

Institutional, 80%

**Major Shareholders** 



- ~\$37.5 Million
- No debt
- Largely Institutionally Held
- Meaningful Management Ownership

- Electrum Group ~20%
- South32 Limited ~12%
- Baupost Group ~10%
- Paulson & Co. ~9%
- Selz Capital ~8%
- Millennium ~5%
- Management ~3%
- Above totals more than 65%

Management

& Directors.

4%

<sup>2)</sup> Fully diluted shares include 1.1M Deferred Share Units (Directors) and 0.4M Restricted Share Units (Officers) at May 31/18.



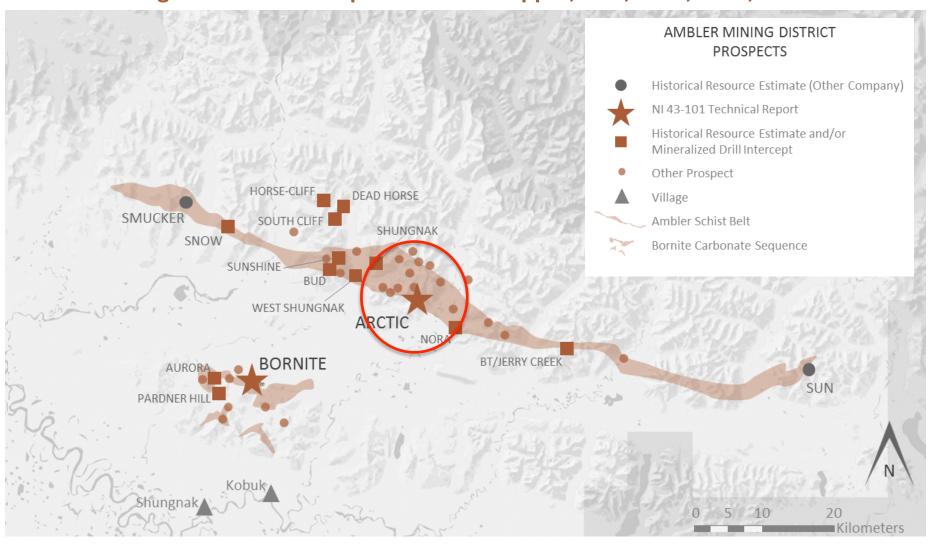


<sup>1) 9.1</sup>m stock options and 6,521,740 warrants, which are held 100% by Electrum, Paulson & Baupost as at May 31/18.

# **String of Pearls**



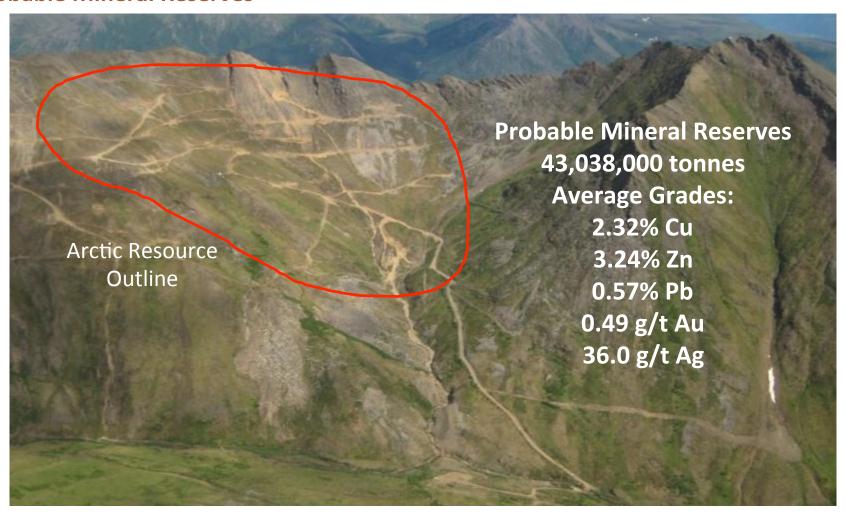
#### Ambler Mining District Hosts Deposits Rich in Copper, Zinc, Lead, Gold, Silver & Cobalt



# Reserves at the Arctic Project



#### **Probable Mineral Reserves**



Additional Inferred Resources of 3.5 Mt, with average grades of 1.71% Cu, 2.72% Zn, 0.60% Pb, 0.36 g/t Au and 28.69 g/t Ag. See Appendix for Reserve Estimate for the Arctic Project.



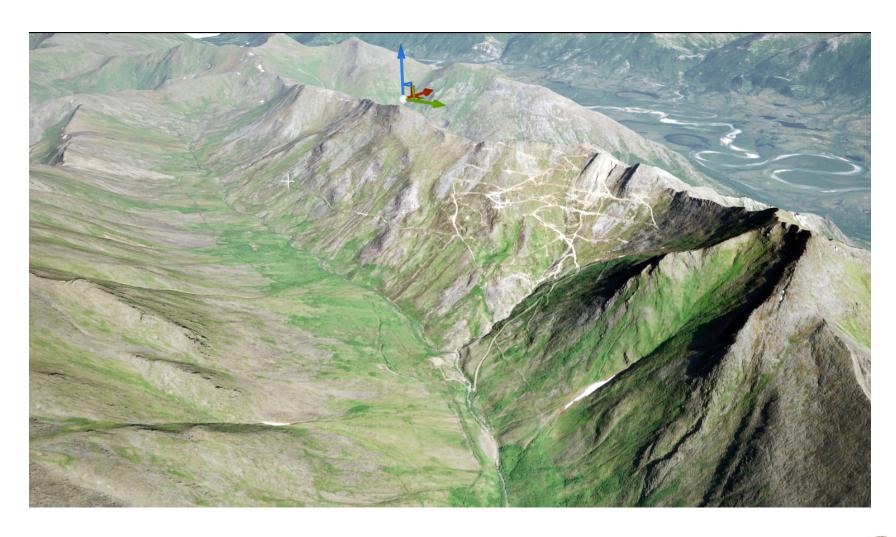
# Arctic PFS – Inputs & Economic Results

Pre-Feasibility Inputs and Economic Results	
Mine Life	12 Years
Mill Capacity	10,000 tpd
Strip Ratio (Waste/Ore)	6.9:1
	159M lbs Cu
	199M lbs Zn
Average Annual Production	33M lbs Pb
	3.3M oz Ag
	30,600 oz Au
	\$3.00/lb Cu
	\$1.10/lb Zn
Base Case Metal Prices	\$1.00/lb Pb
	\$18.00/oz Ag
	\$1,300/oz Au
Initial Capital Cost (\$ million)	\$779.6
Total Capital Cost (\$ million)	\$910.8
Operating Cost (\$/tonne milled)	\$46.81
Pre-Tax NPV (\$ million) at 8%	\$1,935.2
After-Tax NPV (\$ million) at 8%	\$1,412.7
Cash Costs, Net of By-Product Credits (\$/lb Cu Payable)	\$0.15
All-in Cost (\$/lb of Cu Payable)	\$0.63
Annual Free Cash Flow at Today's Metal Prices (\$ million)	~\$450
Capital Intensity Ratio (\$ Initial Capital/Tonne of Copper Equivalent)	\$6,203
After-Tax IRR (%) / Pre-Tax IRR	33.0/38.0
Payback Period - After-Tax (Years)	2.0



# TRILOGY metals inc

#### **Overview of Valley – looking Northeast**





# TRILO,GY metals inc

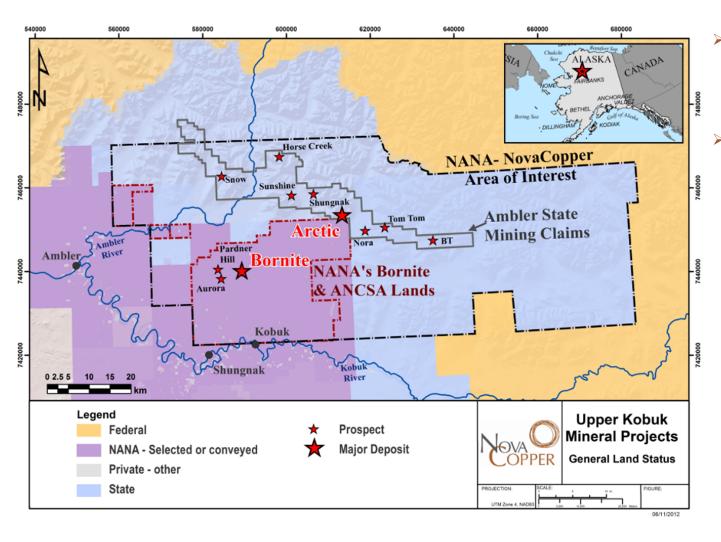
#### **Overview of Mine Site – looking Northeast**







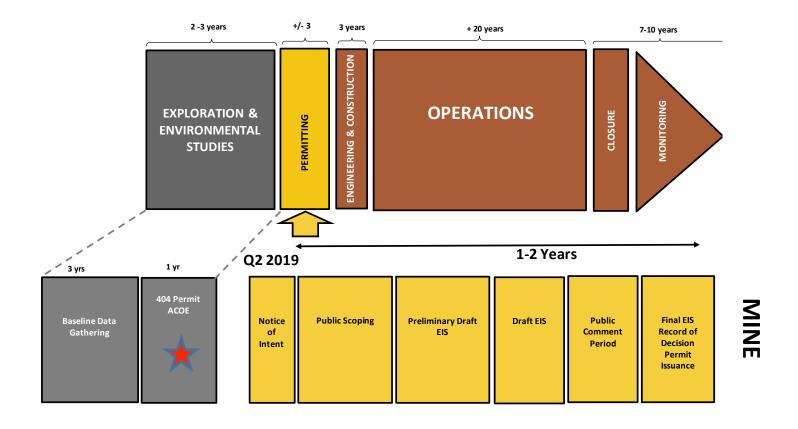
#### **Requires Federal, State and Borough Approvals**



- 404 Wetland Permit is the only Federal Permit Required
- All other significant permits issued by the State of Alaska
  - Mine Operating Permit
  - Air Quality Permit
  - Dam Operating Permit
  - Water Discharge Permit

# **NEPA Mine Permitting Process (EIS)**





Start Permitting Process - Submit Permit for Mine in 1H 2019
Army Corp of Engineers (ACOE) is expected to be the lead agency

# **Arctic – Towards Permitting in 2019**



#### **Next Steps for Arctic**

#### 2018 Arctic Budget of US\$6.7 Million



#### **AMDIAP Road**

Liaison, legal, consultants as needed

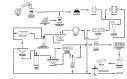
#### **Ore Sorting**

- Complete the ore sorting program that has been initiated in FY2017
- 2 tonne bulk sample of ore grade material sent to Steinert Labs for testing
- Consider impacts to the PFS
  - 20-30% dilution at mine face
  - XRT sorting to remove waste from mined material
  - potential to upgrade "ore" grade
  - potential to reduce mill throughput, power, manpower, tailings
  - → every tonne processed costs ~\$20/t milled



#### Permitting

- Initiate Arctic Permitting
- Begin speaking to the relevant agencies
- Submit permits in 1H 2019: Notice of Intent kicks off formal NEPA permitting Process



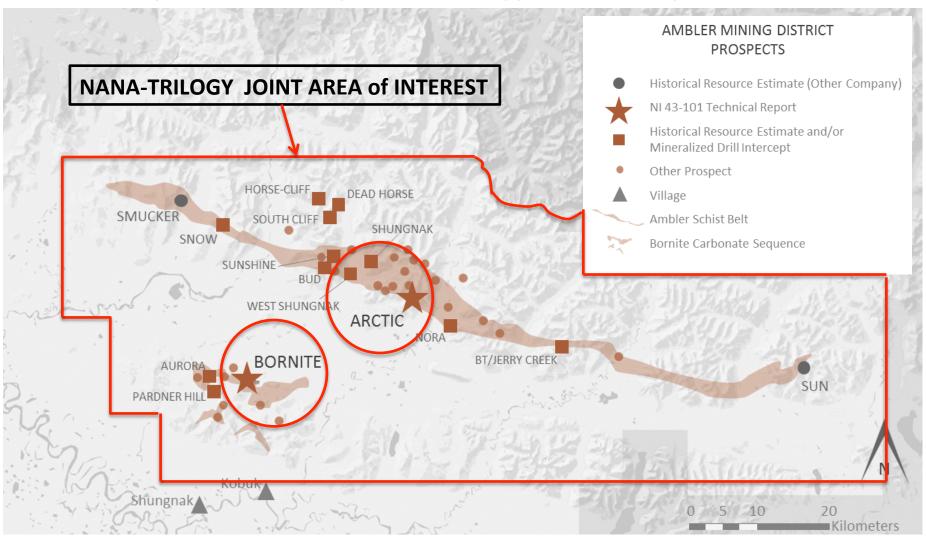
#### **Feasibility Study**

By 2020





#### Ambler Mining District Hosts Deposits Rich in copper, zinc, lead, gold and silver & cobalt



# **Bornite – Testing Northern Extension**



#### **2018 Diamond Drill Program – Expanding Resources**

10 exploration holes, up to 1,200 meters deep

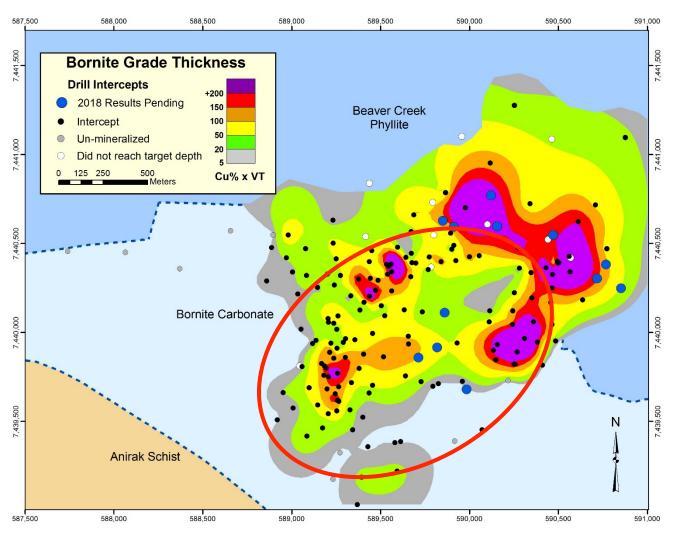
6 Billion Pounds of Copper77 Million Pounds of Cobalt

**Below-Pit Mineral Resources** 57.8 Mt of 2.89% Cu Inferred **In-Pit Mineral Resources Proposed Pit** 40.5 Mt of 1.02% Cu Indicated **Exploration Upside** Drill Holes 84.1 Mt of 0.95% Cu Inferred Indicated & Inferred Open Pit Resource Inferred Drilling Below Pit Resource Seismic Survey **US\$10** million each year for **2017** and **2018** Programs Metallurgy & **Drill Target** Hydrology **Funded by South32** 



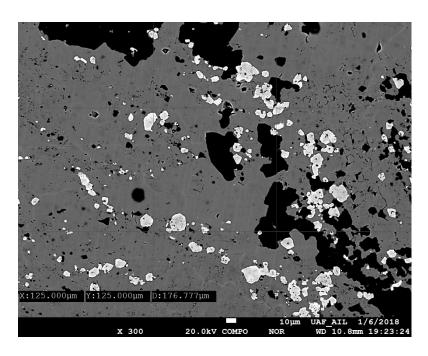


### Six Billion Pounds of Copper, 77 Million Pounds of Cobalt and Growing









- One of the Largest North American Cobalt Resources
- Geometallurgical Work Demonstrates

Cobalt occurs in 3 phases:

- Cobaltiferous pyrite
  - Cobaltite
- Carrollite
- Future Work on Cobalt Recovery to/from Pyrite Concentrate

Туре	Cut-off (Cu %)	Tonnes (million)	Co (%)	Contained Co (Mlbs)
In-Pit <sup>(1)</sup>	0.5	124.6	0.017	45
Below-Pit	1.5	57.8	0.025	32
Total Inferred		182.4	0.019	77

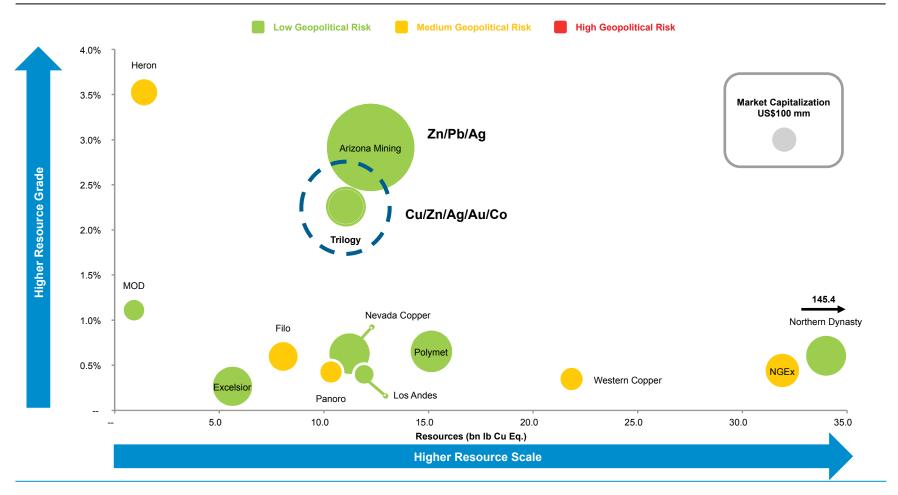
Resources stated as contained within a pit shell developed using a metal price of US\$3.00/lb Cu, mining costs of US\$2.00/tonne, milling costs of US\$11/tonne, G&A cost of US\$5.00/tonne, 87% metallurgical recoveries and an average pit slope of 43 degrees.

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 will be converted into Mineral Reserves. It is reasonably expected that the majority of Inferred mineral resources could be upgraded to Indicated mineral resources with additional exploration.



#### Resource Scale vs. Resource Grade

RESOURCES(1) (BN LB CU EQ.) VS. RESOURCE GRADE(1) (% CU EQ.)



#### Leading resource grade amongst copper peers; resource scale in line



### Summary



# 8 Billion Pounds of Copper, 3 Billion Pounds of Zinc and over 1 Million Ounces of Gold Equivalent Precious Metals and 77 Mlbs of Cobalt

- Located in mining friendly jurisdiction in northern Alaska
- PFS on Arctic Highest grade Open Pit VMS deposit in the world
- Low Capex + Low Opex High Quality Asset
- Bornite excellent exploration upside
- Mostly unexplored district of which only two deposits identified on a huge land package
- Well funded to Complete Permitting and Feasibility Study at Arctic while South 32 funds Bornite Exploration
- Upcoming News
  - Drill Results from Bornite 2018 Program
  - Copper-Cobalt Metallurgy at Bornite
  - Ore Sorting Update Arctic
  - Initiate Permit Application
  - Plans for 2019 \$10M Bornite Exploration Program
  - Bornite Copper and Cobalt Resource Update and PEA

# **Camp at Bornite**









# **Appendix**

Qualified Person: Andrew W. West, Certified Professional Geologist, Exploration Manager for Trilogy Metals Inc., is a Qualified Person as defined by National Instrument 43-101. Mr. West has reviewed and verified the technical information in this presentation and approves the disclosure contained herein.

### Management



#### Rick Van Nieuwenhuyse, President & CEO

- 40+ years of experience in the natural resource sector, including his role as Founder, President, and CEO of NOVAGOLD since 1997 and his role as Vice President of Exploration for Placer Dome Inc. from 1990 to 1997
- Years of working experience in and knowledge of Alaska
- Has managed projects from grassroots discovery through to advanced feasibility studies, production and closure

#### **Elaine M. Sanders, CFO & Corporate Secretary**

- 20+ years of experience in audit, finance, and accounting with public and private companies
- Has been involved with numerous financings and acquisitions, and has listed companies on both the TSX and AMEX
- Responsible for all aspects of financial services, financial reporting, and corporate governance

#### **Andrew West, Exploration Manager**

- 20+ years of experience in underground and surface mineral exploration.
- Managed exploration projects from advanced stages, through pre-feasibility, start-up, to operational mines.
- Responsible for all aspects of exploration and overseeing resource estimations

#### **Bob Jacko, VP Projects**

- 35+ years of experience in both underground and open pit operations within North America
- Mining engineer with extensive experience in mine start-ups, project development, mature operations and closure
- In the past eight years, Bob has focused on engineering oversight working on a variety of preliminary economic assessments, pre-feasibility studies and bankable feasibilities studies for mining projects

# Patrick Donnelly, VP Corporate Communications & Development

- Almost 25 years of experience in mineral exploration, capital markets, corporate development and investor relations
- Formerly a Project Geologist and has explored for precious and base metals and diamonds in western and northern Canada
- Was recently President and Co-Founder of First Mining Gold Corp.

#### **Cal Craig, Director of Environment & Permitting**

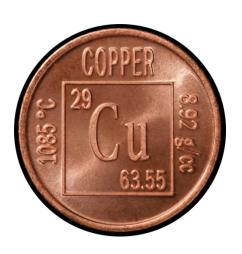
- Experience with baseline data collection and management.
- Knowledge of environmental permitting and compliance.
- Worked at several advanced stage exploration projects in Alaska.

#### **WHY COPPER?**



#### **Copper – a Fundamental Metal**

- Copper = Energy
- We cannot produce, transmit or use energy without copper at every step...and we always use more energy
- To meet the Paris Climate Change Accord and replace Fossil Fuel based energy with Alternative forms of Energy will require 5X as much Copper!
- As the world moves to replace 20<sup>th</sup> century internal combustion engine technology with 21<sup>st</sup> century autonomous driving electric vehicle technology – will take even more copper!
- > Everything "Green" and everything Hi-Tech requires More Copper
  - → Copper is The Green Metal of the Future



#### WHY COPPER?



#### **Copper – a Fundamental Supply-Demand Metal**

- Demand looks Good . . . What about Supply?
- Average Mine Reserve Grade is Declining . . . Maintaining production levels will require additional capital investment . . . Requires >\$3.50/lb copper incentive price
- Supply Disruptions more frequent . . . storms, power supply, water use conflicts . . . protests and riots
- Nationalization . . . Indonesia/Freeport Grasberg Greece/Eldorado . . . Tanzania/Barrick . . . South Africa/Everyone
- Exploration expenditures are down significantly for past 5 years . . . while Billions of dollars invested in previous 5 years had little to show for it . . . Why?
- Low Hanging Fruit has been Mined . . . New mines will be deeper and harder to find in more remote location and take longer to develop
  - → Perfect Storm for Copper

## **Copper Fundamentals**

# TRILOGY metals inc

#### **LME and Shanghai Inventories Declining**

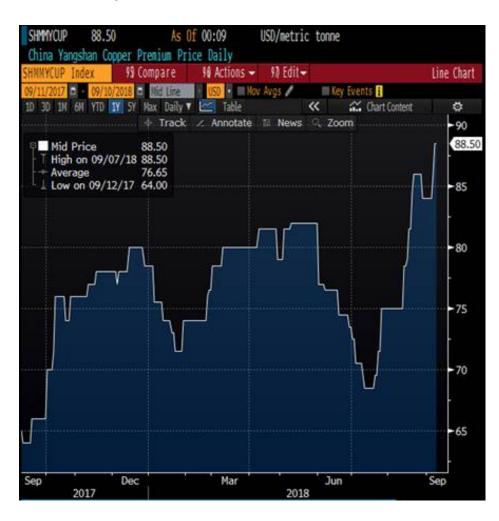


Source: Bloomberg

# **Copper Fundamentals**

### TRILOGY metals inc

#### **Shanghai Premiums are Up**

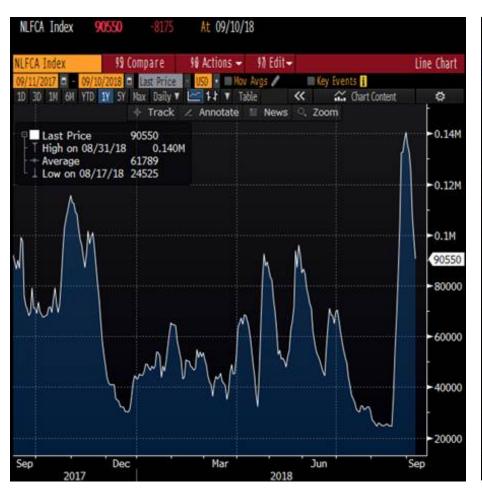


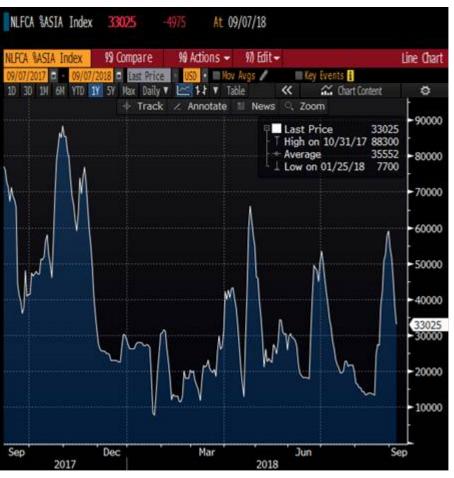
Source: Bloomberg

### **Copper Fundamentals**

# TRILOGY metals inc

#### **Cancelled Warrants have Spiked**



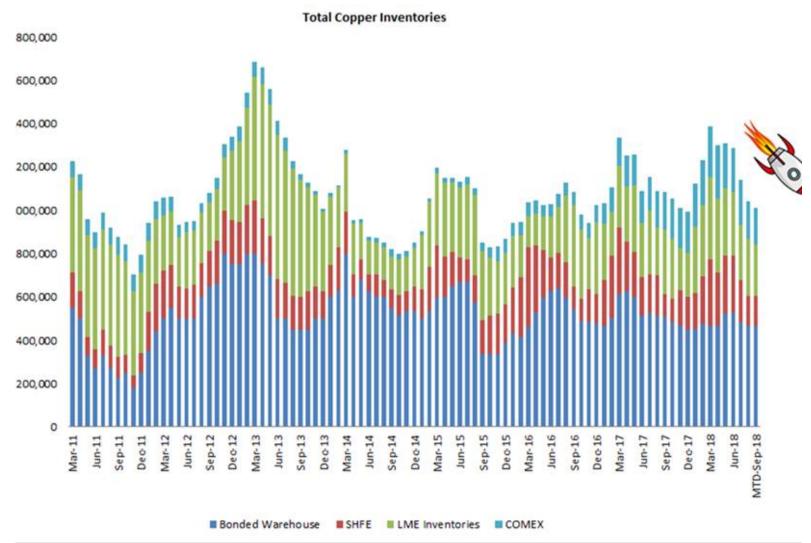


Source: Bloomberg



# TRILOGY

#### **Global Copper Inventories are Down**



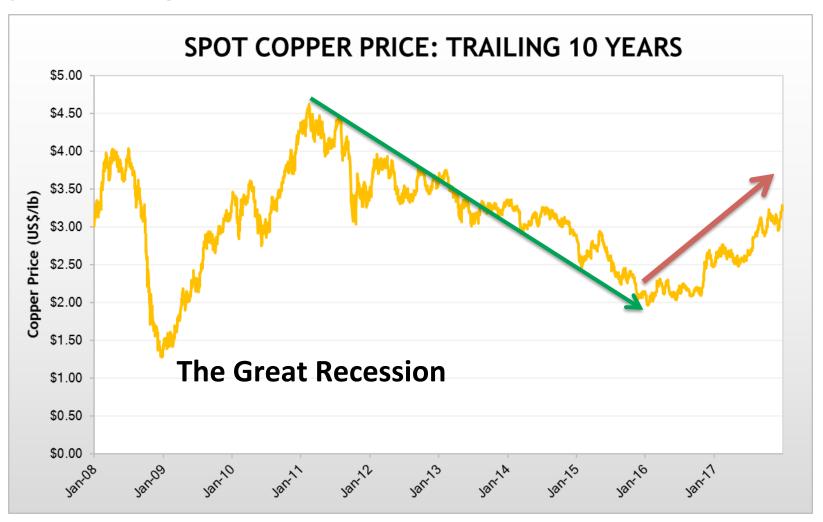
Source: Scotiabank Trust | Respect | Integrity





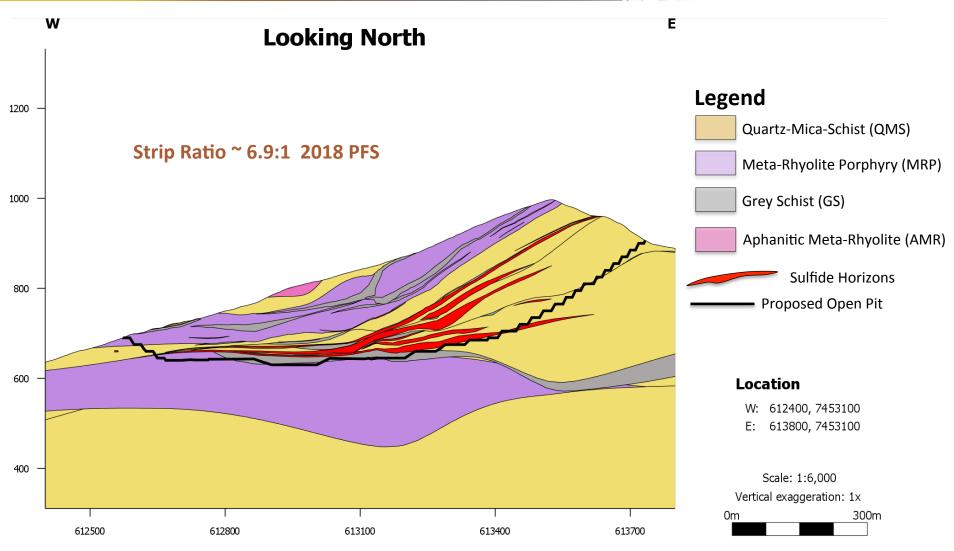
#### **Fundamental Rule of Investing**

Buy Low ... Sell High



# **Arctic Deposit: Cross Section**





## **Arctic PFS – Capital**



Capital Costs	Million (US\$)
Mining	\$281.1
Crushing	\$18.3
Process Plant	\$113.8
Tailings	\$30.3
On-Site Infrastructure	\$84.5
Off-Site Infrastructure	\$15.6
Total Direct Costs	\$543.8
Indirects	\$121.9
Contingency	\$92.0
Owners Costs	\$21.9
Total Indirect Costs	\$235.8
Total Initial Capital Costs	\$779.6
Sustaining Capital	\$65.9
Mine Closure and Reclamation	\$65.3
Total Capital Costs	\$910.8











Operating Costs (US\$)	
Off-Site Operating Costs	
Royalties, TC/RCs, Penalties, Insurance & Transport (\$, million)	\$2,526.8
On-Site Operating Costs	
Mining Cost (\$/t mined)	\$3.09
Mining (\$/t milled)	\$20.47
Processing (\$/t milled)	\$15.19
G&A (\$/t milled)	\$5.60
Surface Service (\$/t milled)	\$0.95
Road Toll & Maintenance (\$/t milled)	\$4.70
Total Operating Cost (\$/t milled)	\$46.81
Total Operating Cost (\$, million)	\$2,014.7

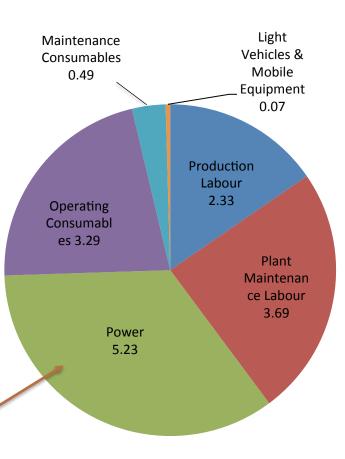
# 1% NSR to NANA Regional Corporation, Inc. in exchange for surface use agreement

- NSR to NANA totals \$90.4 million over the life of mine

# Significant reduction in power generation costs due to use of LNG in processing facilities

- Power generation in 2018 PFS is \$5.23/t

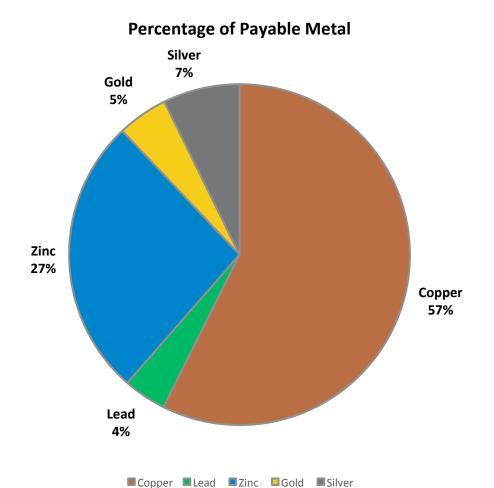
## PFS Operating Cost (\$/t)







### **3 Separate High-Quality Concentrates**



#### **Copper Concentrate**

- > 90% recovery
- > 30.3% concentrate grade
- Cu payable 96.5%
- > Ag 169 g/t (4.93opt); Ag payable 90%
- No significant penalty metals

#### **Zinc Concentrate**

- > 91.7% recovery
- > 59.2% concentrate grade
- > Zn payable 85%
- No significant penalty metals

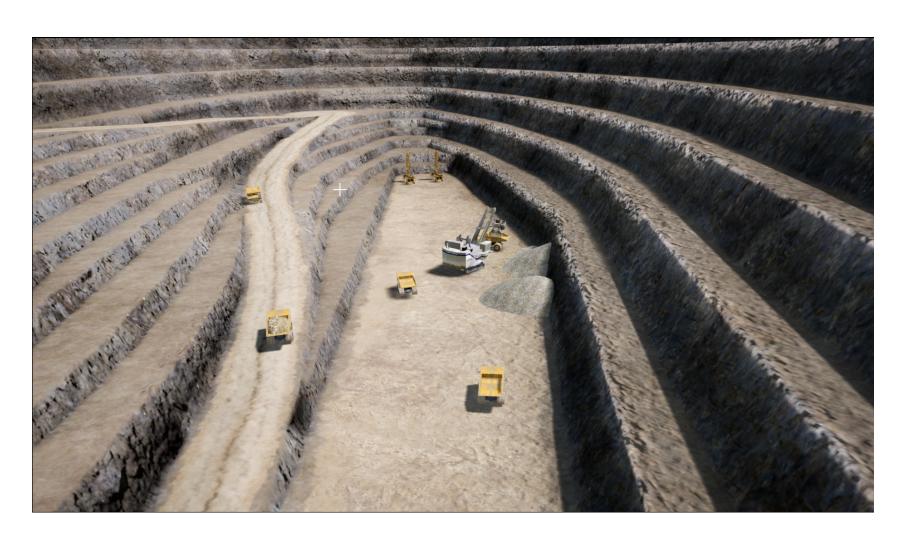
#### **Lead Concentrate**

- > 80% recovery
- > 55% concentrate grade
- Pb payable 95%, subject to 3% deduction for concentrates <60% grade</p>
- > Ag 2,383 g/t (69.5opt); Ag payable 95%
- > Au 34 g/t (1opt); Au payable 95%





## Typical Drill & Blast with Truck and Shovel Operation loading Ore and Waste





# TRILOGY metals inc

## **Crushing, Conveying and Ore Stockpile**







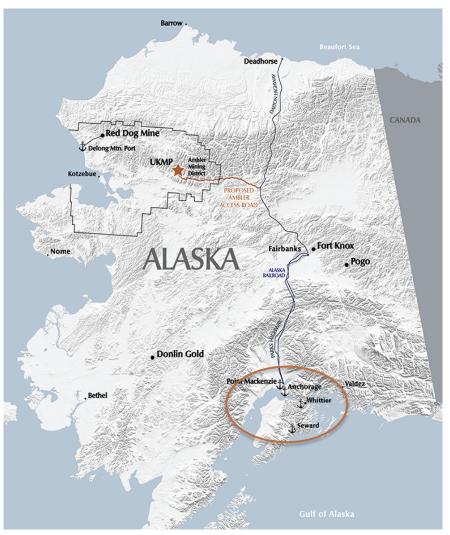
## **Typical Crush-Grind-Flotation Mill Circuit with On-Site Power Generation Using LNG**



## **Infrastructure Partnership - AIDEA**



### **Ambler Mining District Industrial Access Project (AMDIAP)**



- A ~200 mile road connecting the Ambler mining district to 4 ice-free ports; year-round shipping ports at multiple locations (Mackenzie, Anchorage, Seward & Whittier)
- Rail option from Fairbanks to ports cost savings
- Alaska Industrial Development & Export Authority (AIDEA) has begun the permitting process for the road
- Notice of Intent filed in the US federal register on February 28, 2017 – Begins EIS
- ✓ Scoping completed Jan 31, 2018.
- Draft EIS anticipated by Mar 2019 and Final EIS by Dec 2019
- National Park Service to complete EEA by end of 2019
- AIDEA to permit and build AMDIAP (similar to Red Dog road and port – DMTS)
- Finance construction costs with low interest bonds
- Payback over 30+ years with tolls
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# TRILOGY

## **Formal Agreement for Strong Community Relationships**

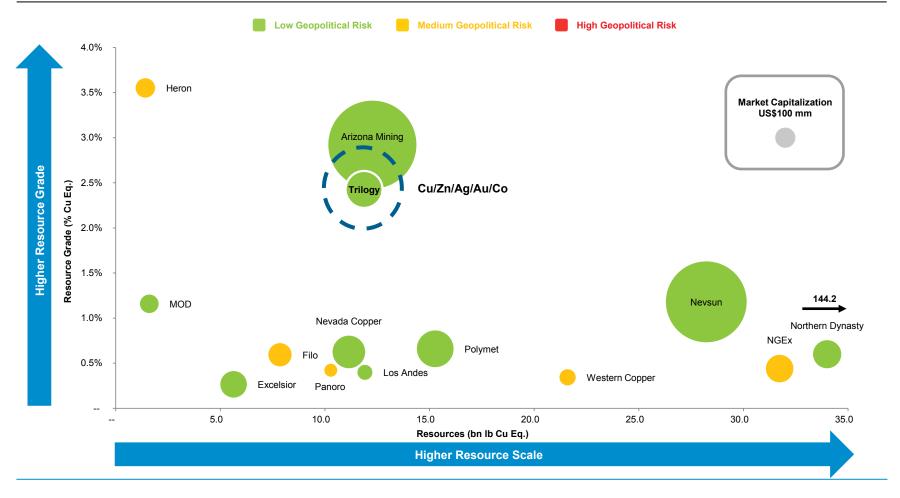
- NANA is a for-profit US corporation with a social responsibility
- One of 13 regional native corps created as a result of the Alaska Native Claims Settlement Act (ANCSA) passed by Congress and signed in law by President Nixon in 1971
- Control 353,000 Acres in 100 Km long District
- Net Smelter Royalty (1% to 2.5%)
- Option for NANA to be an equity partner (16% to 25%) or receive a net proceeds royalty (15% NPI)
- Promote employment for NANA shareholders & scholarships
- Oversight Committee created which includes three sub-committees
  - Subsistence
  - Workforce Development
  - Communications





### Resource Scale vs. Resource Grade

RESOURCES(1) (BN LB CU EQ.) VS. RESOURCE GRADE(1) (% CU EQ.)



### Leading resource grade amongst copper peers with emerging scale



# Financial Partnership - South32 Limited



### Announced on April 10, 2017

Now a 12.5% Shareholder

### Paid second \$10M option payment to fund 2018 Bornite Program

- Trilogy and South32 have signed an agreement whereby South32 has been granted an option to form a 50-50 joint venture, to hold our Alaskan assets
- South32 is a global diversified metals and mining company, demerged from BHP Billiton in 2015, with high quality operations producing bauxite, alumina, aluminum, energy and metallurgical coal, manganese, nickel, silver, lead and zinc
- On June 18, 2018 South32 announced all-cash agreement to acquire Arizona Mining Inc. for US\$1.3 billion or Cdn\$6.20 per share a 50% premium to the previous closing price
- South32 does not currently produce copper and has no operations in North America strategic move?
- Option Payments US\$10 M/year for up to 3 years
  - > Annual payments maybe increased upon mutual consent
  - To be spent on exploration at Bornite
- South32 can exercise option to form the JV at anytime and pay the Subscription Price into the JV
  - South32 pays a premium of 150% to what we have spent to date of approx. US\$100 million
  - US\$150 million + Parallel Matching of Arctic Project budget each year to a maximum of US\$5 million per year

## **Concentrate Containers – No Losses**





# **Qube Logistics Concentrate Containers**





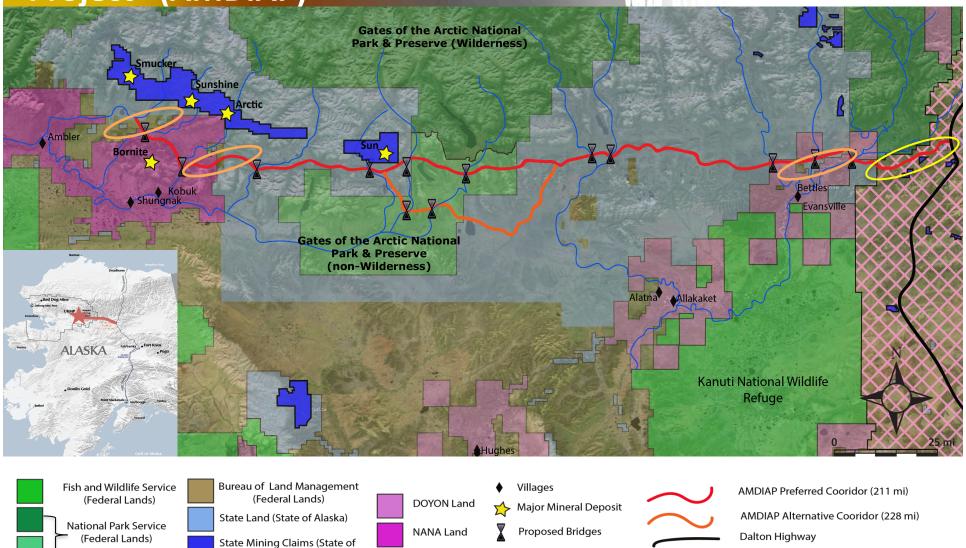
# **Qube Logistics Concentrate Containers**





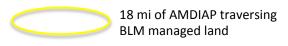
# Ambler Mining District Industrial Access Project (AMDIAP)





6 mi of AMDIAP traversing
State and Native selected lands
managed by BLM

Alaska)



**Major Rivers** 

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Industrial Corridor defined in 1991 BLM EIS ROD







	Tonnage	Average Grade:					
Category	t x 1000	Cu (%)	Zn (%)	Pb (%)	Au (g/ t)	Ag (g/ t)	
Proven Mineral Reserves	-	-	-	-	-	-	
Probable Mineral Reserves	43,038	2.32	3.24	0.57	0.49	36.0	
Proven & Probable Mineral Reserves	43,038	2.32	3.24	0.57	0.49	36.0	
Waste within Designed Pit	296,444						
Total Tonnage within Designed Pit	339,482						

#### **Notes**

- (1) Reserves estimated assuming open pit mining methods and include a combination of planned and contact dilution.
- (2) Reserves are based on prices of \$2.90/lb Cu, \$0.90/lb Pb, \$1.10/lb Zn, \$1,250/oz Au and \$18/oz Ag and fixed process recoveries of 90.0% Cu, 89.9% Pb, 91.7% Zn, 61.1% Au and 49.7% Ag.
- (3) Mining costs: \$3.00/t incremented at \$0.02/t15m and \$0.015/t/15m below and above 710m elevation respectively.
- (4) Processing costs: \$36.55/t. Includes process cost: \$19.86/t, G&A: \$8.92/t, sustaining capital: \$4.11/t, closure: \$1.00/t and road toll: \$2.66/t.
- (5) Treatment costs of \$70/t Cu concentrate, \$180/t Pb concentrate and \$300/t Zn concentrate. Refining costs of \$0.07/lb Cu, \$10/oz Au, \$0.60/oz Ag. Transport cost \$149.96/t concentrate.
- (6) Fixed royalty percentage of 1%.
- (7) There is a risk to the mineral reserves if the toll road is not built in the time frame required for the Arctic Project, or if the toll charges are significantly different from what was assumed.
- (8) The geotechnical assumptions used in the pit design may vary in future assessments and could materially affect the strip ratio, or mine access design.
- (9) The Qualified Person for the reserves estimate is Antonio Peralta, P.Eng who visited the Project site in July 2017 as part of the data verification process.
- (10) The effective date of the mineral reserves estimate is October 10, 2017.





# 8 Billion Pounds of Copper, 3 Billion Pounds of Zinc and over 1 Million Ounces of Gold Equivalent Precious Metals

	Resource Category	Tonnes Millions	Grade %	Contained Metal Mlbs
Copper				
Arctic	Indicated	36.0	3.07	2,441
	Inferred	3.5	1.71	131
Bornite In-Pit	Indicated	40.5	1.02	913
	Inferred	84.1	0.95	1,768
Bornite Below-Pit	Inferred	57.8	2.89	3,683
Zinc				
Arctic	Indicated	36.0	4.23	3,356
	Inferred	3.5	2.72	210
Lead				'
Arctic	Indicated	36.0	0.73	581
	Inferred	3.5	0.60	47.0
	Resource	Tonnes	Grade	Contained Metal
	Category	Millions	g/t	Moz
Gold				
Arctic	Indicated	36.0	0.63	0.73
	Inferred	3.5	0.36	0.04
Silver				
Arctic	Indicated	36.0	47.6	55.0
- Jee winere in	Inferred	3.5	28.7	3.0
				Truct   [

# Mineral Resources for the Arctic & Bornite Projects



Deposit	Cut-off	Tonnes (M)	Cu%	Zn%	Pb%	Ag g/t	Au g/t	Cu (Mlbs)	Cu Eq⁴ (Mlbs)	Tonnes Cu	Tonnes Cu Eq⁴
					Indic	ated					
Arctic <sup>1</sup>	0.5% Cu	36.0	3.07	4.23	0.73	47.6	0.63	2,441	4,376	1,107,200	1,984,900
Bornite (In-Pit) <sup>2</sup>	0.5% Cu	40.5	1.02					913	913	413,000	413,000
						Total Ir	ndicated	3,354	5,289	1,520,200	2,397,900
	Inferred										
Arctic <sup>1</sup>	0.5% Cu	3.5	1.71	2.72	0.60	28.7	0.36	131	251	59,400	113,900
Bornite (In-Pit) <sup>2</sup>	0.5% Cu	84.1	0.95					1,768	1,768	802,000	802,000
Bornite (Below Pit) <sup>3</sup>	1.5% Cu	57.8	2.89					3,683	3,683	1,671,000	1,671,000
						Total	Inferred	5,582	5,702	2,532,400	2,586,900

Туре	Cut-off (Cu%)	Tonnes Co (%) (million)		Contained Co (MIbs)
Bornite In-Pit	0.5	124.6	0.017	45
Bornite Below-Pit	1.5	57.8	0.025	32
Total Inferred		182.4	0.019	77

#### Notes

- a) 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 will be converted into Mineral Reserves.
- b) These resource estimates have been prepared in accordance with NI 43-101 and the CIM Definition Standard, unless otherwise noted.
- See numbered footnotes below on resource information.
- d) Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.
- e) Tonnage and grade measurements are in metric units. Contained gold and silver ounces are reported as troy ounces; contained copper, zinc, and lead pounds as imperial pounds.
- g/t = grams per tonne
- g) All amounts are stated in U.S. dollars unless otherwise noted.

#### Resource Footnotes

- 1) Resources stated as contained within a pit shell developed using metals prices of \$3.00/lb for copper, \$0.90/lb lead, \$1.00/lb zinc, \$1,300/oz gold, \$18/oz silver, mining costs of \$3.00/tonne, milling and G&A costs of \$35/tonne, metallurgical recoveries of 92% for copper, 77% for lead, 88% for zinc, 63% for gold, 56% for silver and an average pit slope of 43 degrees.
- 2) Resources stated as contained within a pit shell developed using a metal price of \$3.00/lb for copper, mining costs of \$2.00/tonne, milling costs of \$11/tonne, G&A cost of \$5.00/tonne, 87% metallurgical recoveries and an average pit slope of 43 degrees.
- 3) Mineral resources at a 1.5% cut-off are considered as potentially economically viable in an underground mining scenario based on an assumed projected copper price of \$3.00/lb, underground mining costs of \$65.00 per tonne, milling costs of \$11.00 per tonne, G&A of \$5.00 per tonne, and an average metallurgical recovery of 87%.
- 4) The Arctic copper-equivalent resource is calculated using the following metal price assumptions: \$3.00/lb Cu, \$1.00/lb Zn, \$0.90/lb Pb, \$18.00 oz Ag, and \$1,300/oz Au. Calculation excludes any adjustments for metal recoveries. Net of by-product credit.

Cobalt resources stated as contained within a pit shell developed using a metal price of US\$3.00/lb Cu, mining costs of US\$2.00/tonne, milling costs of US\$11/tonne, G&A cost of US\$5.00/tonne, 87% metallurgical recoveries and an average pit slope of 43 degrees.

Mineral Resources are not Mineral Resources will be converted into Mineral Resources will be converted into Mineral Resources will be converted into Mineral Resources of the Mineral Resources will be converted into Mineral Reserves. It is reasonably expected that the majority of Inferred mineral resources could be upgraded to Indicated mineral resources with additional exploration.



## NI 43-101 Compliant Resources



### **Cautionary Note Concerning Resource Estimates**

This summary table may use the term "resources", "measured resources", "indicated resources" and "inferred resources". United States investors are advised that, while such terms are recognized and required by Canadian securities laws, the United States Securities and Exchange Commission (the "SEC") does not recognize them. Under United States standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. Mineral resources that are not mineral reserves do not have demonstrated economic viability. United States investors are cautioned not to assume that all or any part of measured or indicated resources will ever be converted into reserves. Further, inferred resources have a great amount of uncertainty as to their existence and as to whether they can be mined legally or economically. It cannot be assumed that all or any part of the inferred resources will ever be upgraded to a higher category. Therefore, United States investors are also cautioned not to assume that all or any part of the inferred resources exist, or that they can be mined legally or economically. Disclosure of "contained ounces" is permitted disclosure under Canadian regulations, however, the SEC normally only permits issuers to report "resources" as in place tonnage and grade without reference to unit measures. Accordingly, information concerning descriptions of mineralization and resources contained in this release may not be comparable to information made public by United States companies subject to the reporting and disclosure requirements of the SEC.

NI 43-101 is a rule developed by the Canadian Securities Administrators, which established standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Unless otherwise indicated, all resource estimates contained in this circular have been prepared in accordance with NI 43-101 and the CIM Definition of Standards.

### **Technical Report and Qualified Persons**

The documents referenced below provide supporting technical information for each of the Company's projects.

Project	Qualified Person(s)

Arctic Dr. Bruce M. Davis, FAusIMM, BD Resource Consulting Inc.

Robert Sim, P.Geo., Sim Geological Inc.

Paul Staples, P.Eng., Ausenco Engineering Canada Inc. Justin Hannon, P.Eng., Ausenco Engineering Canada Inc.

Antonio Peralta Romero, PhD, P.Eng., Amec Foster Wheeler Americas Ltd.

Bruce Davis, FAusIMM, BD Resource Consulting, Inc.

John J. DiMarchi, CPG, Core Geoscience Inc.

Jeffrey B. Austin, P.Eng., International Metallurgical & Environmental Inc.

Robert Sim, P.Geo., SIM Geological Inc.

Calvin Boese, P.Eng., M.Sc., SRK Consulting (Canada) Inc. Bruce Murphy, P.Eng., SRK Consulting (Canada) Inc. Tom Sharp, PhD, P.Eng., SRK Consulting (Canada) Inc.

Bornite Dr. Bruce M. Davis, FAusIMM, BD Resource Consulting Inc.

Robert Sim, P.Geo., Sim Geological Inc.

Jeff Austin, P.Eng., International Metallurgical & Environmental Inc.

Most Recent Disclosure & Filing Date

Company's press release dated February 20, 2018

Arctic Project, Northwest Alaska, USA NI 43-101 Technical Report on Pre-Feasibility Study – Effective date February 20, 2018; Filed April 6, 2018

Company's press release dated June 5, 2018

NI 43-101 Technical Report on the Bornite Project, Northwest Alaska, USA – Effective date June 5, 2018; Filed July 20, 2018

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# Mineral Resources for the Arctic & Bornite Projects



#### **Definitions & Notes**

Mineral Resources: "measured", "indicated" and "inferred" mineral resources are estimated in accordance with the definitions of these terms adopted by the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") in November, 2010 updated in May 2014 and incorporated in National Instrument 43-101, Standards of Disclosure for Mineral Projects ("NI 43-101"), by Canadian securities regulatory authorities. 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 will be converted to Mineral Reserves.

Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content. Tonnage and grade measurements are in metric units. Contained gold and silver ounces are reported as troy ounces; contained copper, zinc, and lead pounds as imperial pounds. All amounts are stated in U.S. dollars unless otherwise noted.

g/t = grams per tonne

#### **Comments on Individual Projects**

#### Arctic

Resources stated as contained within a pit shell developed using metal prices of \$3.00/lb for copper, \$1.00/lb for zinc, \$0.90/lb for lead, \$18.00/oz for silver, \$1,300/oz for gold, mining costs of \$3.00/tonne, milling and G&A costs of \$35/tonne, metallurgical recoveries of 92% for copper, 77% for lead, 88% for zinc, 63% for gold, 56% for silver and an average pit slope of 43 degrees.

#### **Bornite**

In-Pit mineral resources stated as contained within a pit shell developed using metal prices of \$3.00/lb for copper, mining costs of \$2.00/tonne, milling costs of \$11/tonne, G&A cost of \$5.00/tonne, 87% metallurgical recoveries and an average pit slope of 43 degrees. Below-Pit mineral resources at a 1.5% cut-off are considered as potentially economically viable in an underground mining scenario based on an assumed projected copper price of \$3.00/lb, underground mining costs of \$65.00 per tonne, milling costs of \$11.00 per tonne, G&A of \$5.00 per tonne, and an average metallurgical recovery of 87%.

# Disclosure Regarding Scientific and Technical Information



Unless otherwise indicated, all reserve and resource estimates included in this presentation have been prepared in accordance with Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and the Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards for Mineral Resources and Mineral Reserves ("CIM Definition Standards"). Canadian standards, including NI 43-101, differ significantly from the requirements of the United States Securities and Exchange Commission ("SEC"), and reserve and resource information in this presentation may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, the term "resource" does not equate to the term "reserves". Under U.S. standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. The SEC's disclosure standards normally do not permit the inclusion of information concerning "measured mineral resources", "indicated mineral resources" or "inferred mineral resources" or other descriptions of the amount of mineralization in mineral deposits that do not constitute "reserves" by U.S. standards in documents filed with the SEC. U.S. investors should also understand that "inferred mineral resources" have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. 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, estimated "inferred mineral resources" may not form the basis of feasibility or pre-feasibility studies except in rare cases. Investors are cautioned not to assume that all or any part of an "inferred mineral resource" exists or is economically or legally mineable. Disclosure of "contained ounces" in a resource is permitted disclosure under Canadian regulations; however, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC standards as in-place tonnage and grade without reference to unit measures. The requirements of NI 43-101 for identification of "reserves" are also not the same as those of the SEC, and reserves reported in compliance with NI 43-101 may not qualify as "reserves" under SEC standards. Accordingly, information concerning mineral deposits set forth herein may not be comparable to information made public by companies that report in accordance with United States standards.

## **NOTES**







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