

Graphite Creek Project

*Project Update to the
DOE Alaska Workshop on Critical Minerals*

May 9, 2024

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Graphite One (Alaska) Inc.**

Forward looking statements

All statements in this presentation, other than statements of historical facts, including those related to the timing and completion of the anticipated Feasibility Study, future production, establishment of a processing plant and a graphite manufacturing plant, establishment of a battery materials recycling facility, and events or developments that the Company intends, expects, plans, or proposes are forward-looking statements. Generally, forward-looking information can be identified by the use of forward-looking terminology such as “proposes”, “expects”, “is expected”, “scheduled”, “estimates”, “projects”, “plans”, “is planning”, “intends”, “assumes”, “believes”, “indicates”, “to be” or variations of such words and phrases that state that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “occur” or “be achieved”. The Company cautions that there is no certainty that tests of the Company’s material will be successful or that such tests will result in the development of successful products. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include market prices, exploitation and exploration successes, continuity of mineralization, uncertainties related to the ability to obtain necessary permits, licenses and title and delays due to third party opposition, changes in government policies regarding mining and natural resource exploration and exploitation, and continued availability of capital and financing, and general economic, market or business conditions. Readers are cautioned not to place undue reliance on this forward-looking information, which is given as of the date it is expressed in this press release, and the Company undertakes no obligation to update publicly or revise any forward-looking information, except as required by applicable securities laws. For more information on the Company, investors should review the Company's continuous disclosure filings that are available at www.sedar.com.

America's Graphite Crisis

100%

U.S. import reliance on China as primary graphite import source

U.S. GEOLOGICAL SURVEY

70%

of the world's graphite supply comes from China

REUTERS

95%

of anode materials in lithium-ion batteries is based on graphite

EUROPEAN CARBON & GRAPHITE ASSOCIATION

494%

Expected growth of the graphite market by 2050

WORLD BANK GROUP

2,500%

Expected growth of graphite demand by 2040

JOE BIDEN'S 100-DAY REPORT

15:1

Ratio of graphite to lithium in electric car batteries

LOMIKO METALS⁽¹⁾

⁽¹⁾ [The Need for Graphite - Lomiko Metals Inc.](#)

Domestic Supply Chain Solution

Meet graphite demand to decrease dependency on China



Graphite One (Alaska) Inc.
**Advance America's largest
graphite deposit**

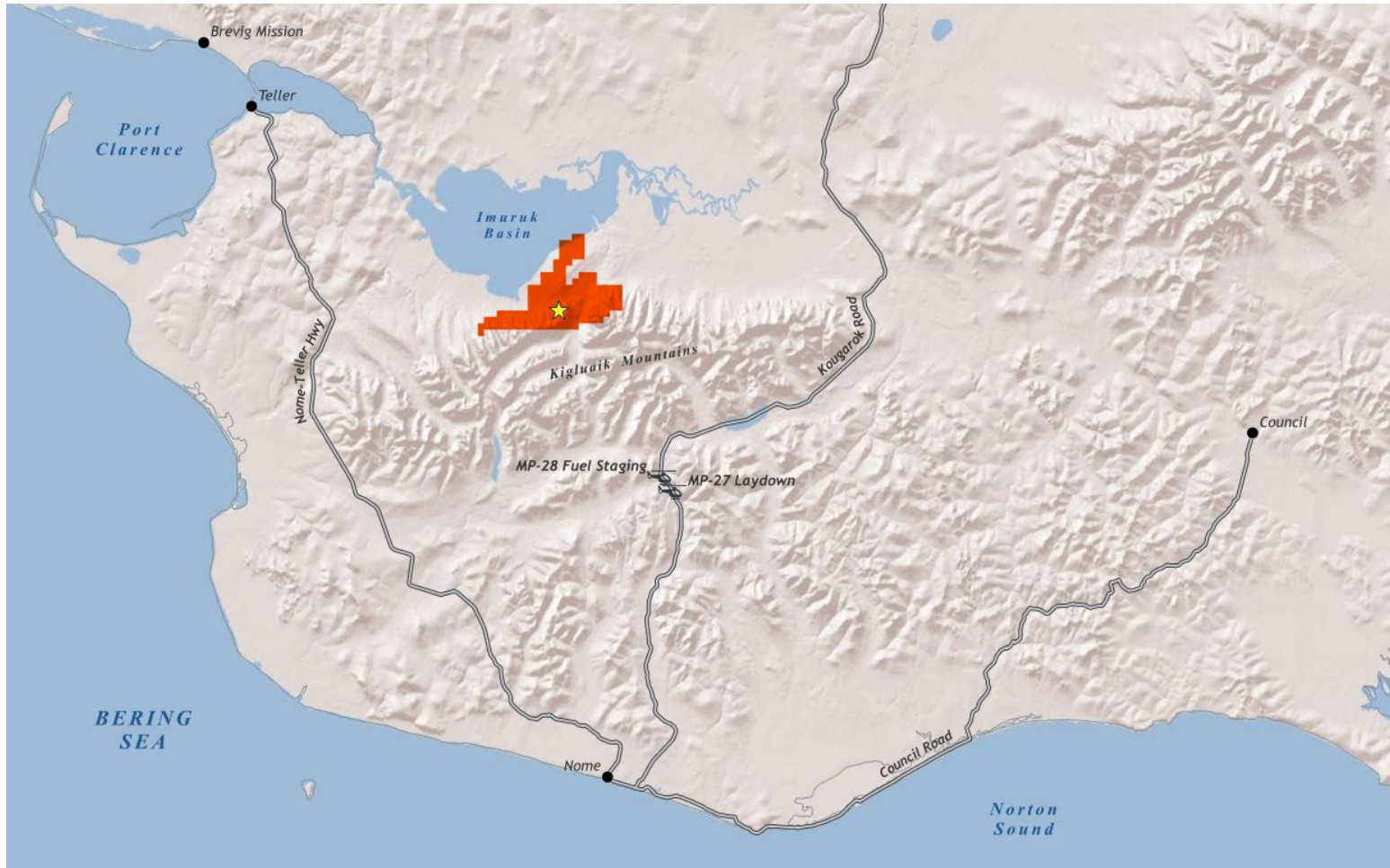
- Graphite Creek is the largest natural flake graphite deposit in the US
- Conventional open pit mine producing a 95% graphite concentrate, ~175 ktonnes per year
- Est. >300 jobs created in rural Alaska



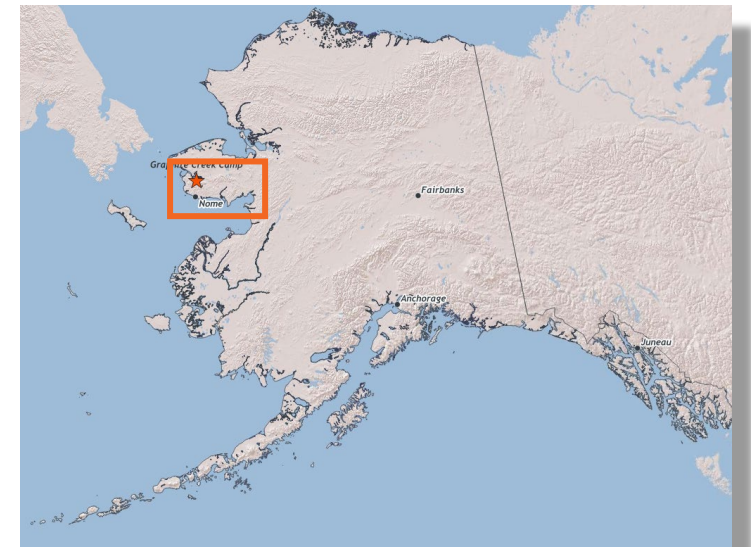
Graphite One (USA) Inc.
**Create America's first advanced
anode manufacturing AND
battery recycling facilities**

- Start plant using artificial graphite anode materials
- Add natural graphite processes once Graphite Creek Mine is in production
- Build facility in stages
- Technology License Agreement (TLA)
- G1 to own 100% of the Infrastructure and Plant
- Facility engineering to accept used EV batteries for feedstock

Project Location



- 38 miles north of Nome
- Between the Imuruk Basin and the Kigluaik Mountains
- 176 State Mining Claims

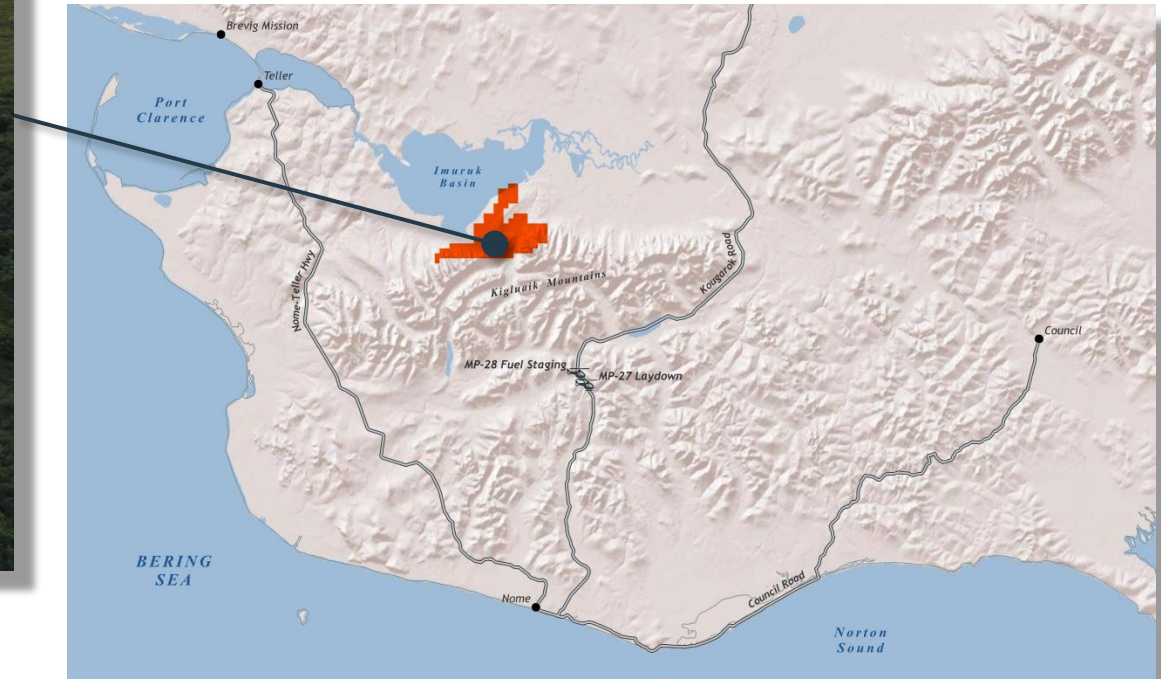


Graphite Creek Camp



Graphite Creek Camp Facing NW

- 60-person capacity, supporting
 - Drilling
 - Helicopter support
 - Environmental baseline monitoring

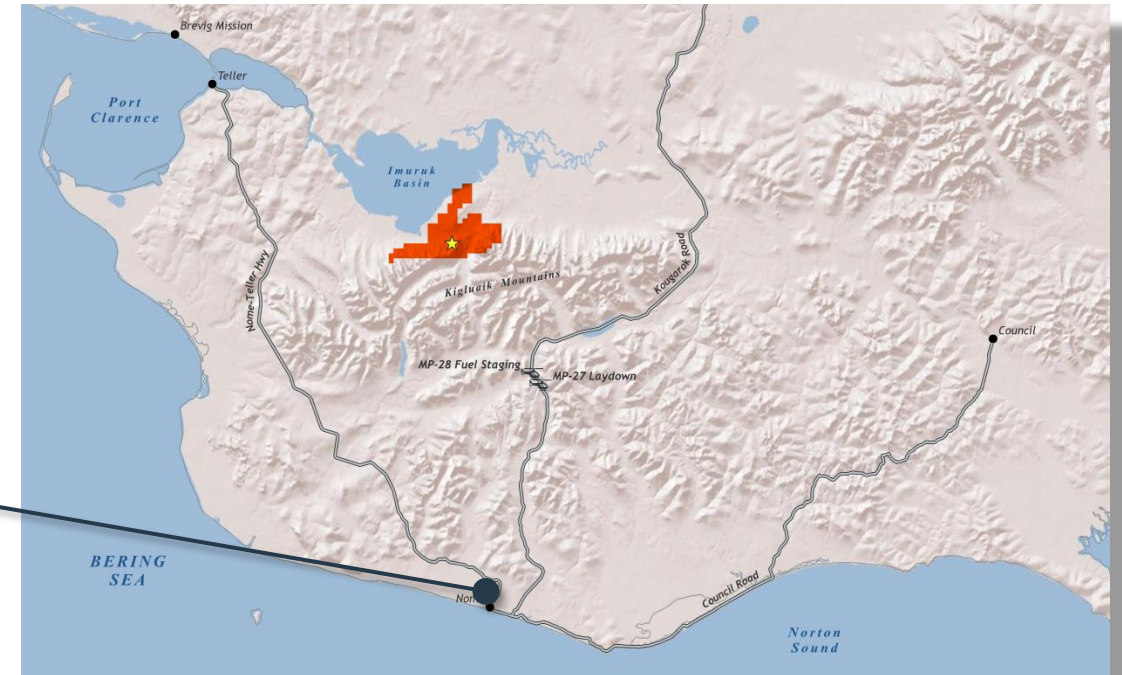


Nome Camp



Nome Camp Facing WNW

- 24-person capacity, supporting
 - Core logging
 - Core cutting
 - Sample preparation
 - Expediting
 - Transitional housing



Exploration History

- Early 1900's - Minor mining production in two campaigns
- 1943 - Sampling & mapping by the USGS
- 1981 - Sampling by Anaconda Company

Graphite One Exploration

Year	# holes drilled	Meters drilled	Other Activities
2011	0	0	Mapping, sampling
2012	18	4,248	Airborne Geophysics
2013	10	1,024	
2014	22	2,221	
2018	6	801	
2019	3	356	
2021	10	5,084	Established camp at Graphite Creek, PFS Started
2022	16	1,940	2 km step out, camp expansion, PFS Released
2023	57	8,720	FS Started



2022 Prefeasibility Study Results

- Open pit mining operation with conventional crushing, grinding, and flotation circuit
 - 2,800 tonnes per day mill throughput
 - 2.2:1 stripping ratio
- Co-disposal of waste rock with dry stack tailings
- ~18-mile access road
- 22-year mine life
- Concentrate barged from Nome to Lower 48 seasonally
- Secondary Treatment Plant (STP) and anode Manufacturing Facility



“The largest known graphite deposit in the United States is the Graphite Creek deposit in Alaska where recent industry exploration has identified a measured and indicated resources of more than 10 million metric tonnes of ore with 7.8 to 8.0 percent graphite”



Where to next?

2022 Prefeasibility Study

- 2,800 tpd mill
- 9,436 tpd mine (ore + waste)
- 53,000 tpy graphite concentrate
- STP 26-year annual production 75,026 tpy including 49,624 tpy anode materials



Feasibility Study Target

- 10,000 tpd mill
- ~33,700 tpd mine
- 175,000 tpy graphite concentrate
- 22-year mine life

Feasibility Study targets improving economics by

- Significantly lowering the operating cost per tonne of graphite concentrate produced
- Minimally increasing headcount but with up to 3.6 x increased throughput

Environmental Baseline Monitoring

Various levels of environmental baseline monitoring since 2014 to support eventual NEPA permitting process

- Cultural
- Surface & ground water
- Raptor surveys
- Aquatic species
- Imuruk Basin bathymetry
- Geochemical
- Hydrogeologic
- Meteorological
- Wetlands mapping



Community Outreach

- Community meetings since 2014 with emphasis on Brevig Mission, Teller, and Nome.
- Subsistence Advisory Council established in 2018
- Increasing local hiring
- Working with local resources on long term workforce development needs
- 2023 Investment Agreement with BSNC sets up scholarships and community project funding

Economic Impacts

- 8 Alaska residents on staff including 3 based on the Seward Peninsula
- 22 seasonal regional residents in 2023
- 2023 Payroll Impacts
 - \$1.9M to Alaska Residents
 - \$582K to regional residents
- Similar numbers expected for 2024
- \$31.2M in goods & services to Alaska businesses since 2021, including \$5.5M to Seward Peninsula based businesses



*John Weyanna
Treatment Plant Operator
Brevig Mission*



*Jolene Okleasik
Geotech
Teller*



*Delia Oozevaseuk,
Housekeeper
Nome*

Department of Defense Investments

- July 2023, Graphite One (Alaska) Inc. was awarded a \$37.5M Department of Defense (DoD) Technology Investment Agreement (TIA) under Title III of the Defense Production Act (DPA) funded by the , funded through the Inflation Reduction Act.
 - The goal of the TIA is to perform an accelerated Feasibility Study to modernize and expand domestic production capacity and supply for graphite battery anodes necessary for electronic vehicles and alternative energy batteries, as an essential national defense technology item.
- \$4.75M investment in partnership with Vorbeck to develop a graphite-based fire fighting foam to replace PFAS products

Project Timeline

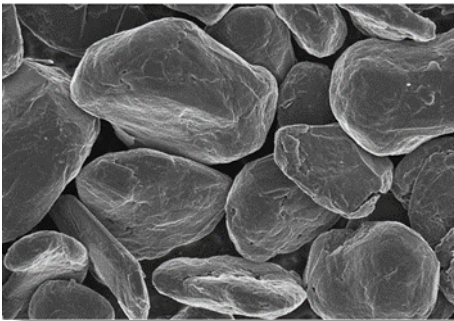
- 2024 Complete Feasibility Study
- 2025 – 2027 Permitting, Detailed Engineering
- 2027 – 2029 Construction
- 2029+ Operations

Secondary Treatment Plant

- Graphite Creek concentrate to be shipped to Lower 48 – recently announced Ohio location
- Mill, shape, and purify / graphitize input natural and artificial graphite materials into the following materials

Anode Materials

- Li-ion Batteries
- 4 anode products

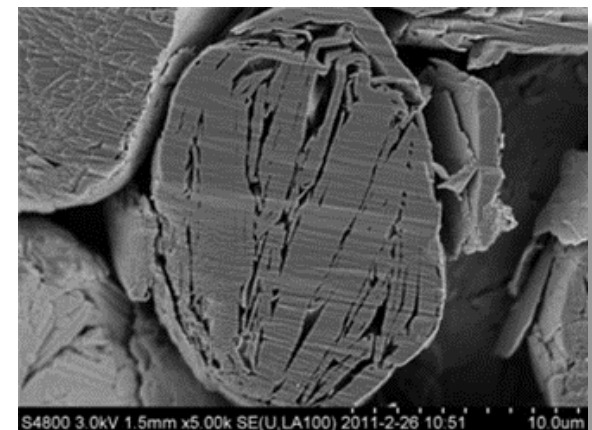


Purified Graphite Products

- 99% Cg
- Conventional, non-lithium-ion battery anode industry

Unpurified Graphite Products

- 95% Cg
- Traditional graphite markets such as refractory materials, lubricants, etc.



Why Not Secondary Treatment in Alaska?

- Lower cost and more abundant power in Lower 48
 - PFS Phase I - 85.9 MW Connected / 54.3 MW Peak
 - PFS Phase II – 110 MW Connected / 66.5 MW Peak
- Lower carbon footprint more attractive to investors interested in the graphite / BEV sector
- Access to ports for incoming concentrate and other precursor materials
- Access to transportation systems for delivery of battery anodes in the USA and to Europe
- Proximity to auto manufacturing

Questions?

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Graphite One 

