Over 70 years!

Infrastructure

- Dec. 1981: Western and Arctic Alaska Transportation Study (WAATS)
- ANILCA access established across Gate of the Arctic
- Ambler District

Mine Discovery & Advancement

- 1948: Rhiney Berg prospects for uranium near present day Bornite
- 1957: First drill holes at Bornite
- 1965/66: Kennecott sinks Bornite shaft
- 1967: Arctic deposit discovered
- 1970s: NANA founded
- 1986: Bornite claims deeded to NANA

- 1999: Agreement document between Kennecott/NANA, deal never completed
- 2000: Western Alaska Access Planning Study
- 2008 to 2009: Western Alaska Access Planning Study
- 2009 to 2014: 134 meetings and village engagement
- 2017: AIDEA takes over, AMDIAP EIS begins
- 2019: More NANA listening sessions
- Oct. 2019: Western Alaska Access Planning Study (WAAPS)
- July 2020: AMDIAP record of decision
- 2019: Trilogy/South32 announce JV ($144.4M spent 2011-2019)
- 2004: NovaGold begins work

NANA
### Typical Project Stages

<table>
<thead>
<tr>
<th>Stage</th>
<th>Exploration</th>
<th>Prefeasibility</th>
<th>Feasibility</th>
<th>Permitting/Design</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource</td>
<td>Inferred</td>
<td>Indicated</td>
<td>Measured</td>
<td>Measured</td>
<td>Debt &amp; Equity</td>
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<tr>
<td>Reserves</td>
<td>Assumed</td>
<td>Probable</td>
<td>Proven/Prob.</td>
<td>Proven</td>
<td>~$1B</td>
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<tr>
<td>Mine</td>
<td>Sketch</td>
<td>Preliminary</td>
<td>Firm</td>
<td>Final</td>
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<tr>
<td>Processing</td>
<td>Assumed</td>
<td>Options</td>
<td>Selected</td>
<td>Optimized</td>
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<tr>
<td>Market</td>
<td>Assumed</td>
<td>Options</td>
<td>Letter of Intent</td>
<td>Agreement</td>
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<tr>
<td>Environment Impact</td>
<td>Concept</td>
<td>Approximate</td>
<td>Near Complete</td>
<td>Completed</td>
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<tr>
<td>EIS</td>
<td>Conceptual</td>
<td>Scoped</td>
<td>Approved</td>
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<tr>
<td>Closure Plan</td>
<td>Concept</td>
<td>Preliminary</td>
<td>Advanced</td>
<td>Final</td>
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<tr>
<td>Permits</td>
<td>Assumed</td>
<td>Identified</td>
<td>Applied for</td>
<td>Granted</td>
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<tr>
<td>Community</td>
<td>Fatal Flaws</td>
<td>Issues</td>
<td>Negotiations</td>
<td>Agreement</td>
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<tr>
<td>Project Schedule</td>
<td>Assumed</td>
<td>Approximate</td>
<td>Final</td>
<td>Final</td>
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<tr>
<td>Cost Estimate</td>
<td>±30%</td>
<td>15-25%</td>
<td>Firm</td>
<td>Final</td>
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<tr>
<td>Economics</td>
<td>Est. ±30%</td>
<td>Probable ±15%</td>
<td>±15%</td>
<td>Finalized</td>
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<tr>
<td>Finance</td>
<td>Market</td>
<td>Equity</td>
<td>Firm ±15%</td>
<td>Equity</td>
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<tr>
<td>Time</td>
<td>Many Years</td>
<td>2-4 years</td>
<td>A Few Years</td>
<td>??</td>
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<tr>
<td>Cost of Stage</td>
<td>$5-500M+</td>
<td>$10-30M</td>
<td>$30-100M</td>
<td>$5-30M</td>
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</tbody>
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#### Project
- Bornite NANA Exploration
- Anarraq & Aktigiruq

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**Notes:**
- Positive Order of Magnitude Study
- Positive Prefeasibility Study
- Positive Feasibility Study
- Decision to Mine
$10 Million Gamble at Bornite
Could Pay Big Dividends

SPECIAL REPORT
By Robert G. Knox, Associate Editor

FROM FAIRBANKS the F27 plane flies north for more than an hour. It crosses the Arctic Circle and 40 miles farther on turns down at Gold Creek just

a TV show in the woods . . .

the colorful story of bornite, a far-north outpost where men are waging a difficult battle to extract rich copper lodes—see page 16.

Governor Hickel at Bornite with Charles Penney—Staff Photo
First advanced exploration in the NANA region; Bornite
A few faces of geologists....