

# PERPETUA RESOURCES

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# NEPA at Work – Tracking the Evolution of the Stibnite Gold Project

## SME Utah

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December 19, 2022

- 1) Project Site Overview
- 2) Project and Company Update
- 3) Feasibility Study Overview
- 4) NEPA-Driven Changes
- 5) Outcomes





← STIBNITE 15

# Stibnite Gold Project

## RESTORE THE SITE





# HISTORICAL STIBNITE MINING DISTRICT

“In the opinion of the Munitions Board, the discovery of that tungsten mine at Stibnite, Idaho in 1942 shortened World War II by at least 1 year and saved the lives of a million American soldiers.”

The US Senate Congressional Record, 1956





# HISTORICAL LEGACY

After 100+ years of mining activity, many environmental legacies remain.

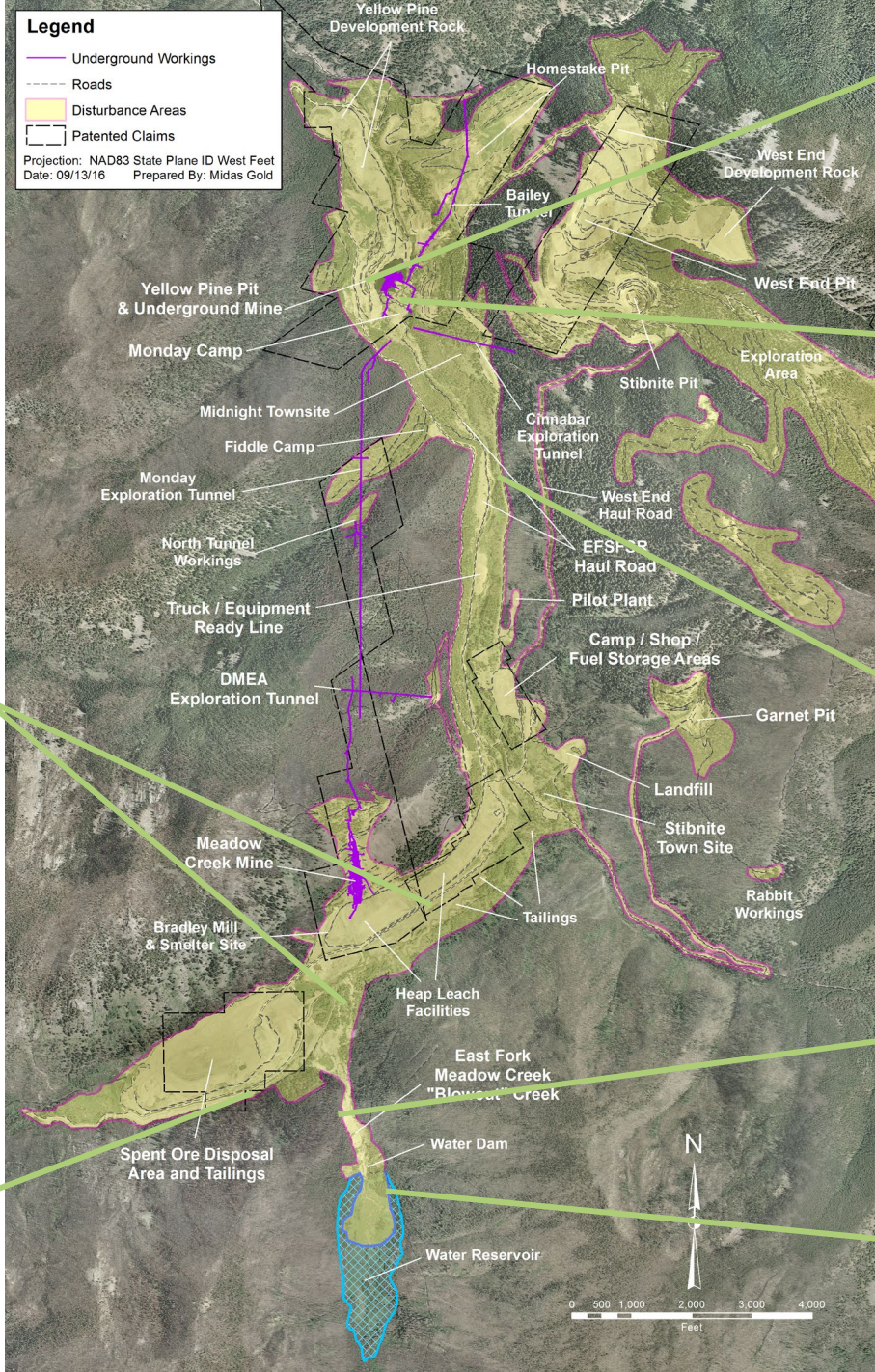
## TAILINGS

10.5 million tons of legacy spent ore and unlined tailings interact with ground and surface water



## MEADOW CREEK

4,900 ft rock lined ditch with limited habitat function



## YELLOW PINE PIT

The East Fork of the South Fork dumps into a legacy mine pit. Currently, ~80 feet of sediment has collected at the bottom



## FISH PASSAGE

Fish migration is blocked at the Yellow Pine pit



## HABITAT

13,000+ ft poor habitat quality



## BLOWOUT CREEK

Largest source of sedimentation in the watershed

## BLOWOUT CREEK VALLEY

14-foot drop in water table, loss of wetlands function





# THE STIBNITE GOLD PROJECT

We can take an area abandoned after 100 years of mining activity and use a responsible approach to mine redevelopment to restore the environment, bring benefit to our communities and provide the minerals critical to our nation for a more secure and sustainable future.





# STIBNITE GOLD PROJECT

## YELLOW PINE PIT

The Yellow Pine Pit will be re-mined and backfilling will begin in year 7 of operations. The river will be restored to natural flow and gradient, reconnecting fish to miles of native spawning and rearing grounds for the first time in 80 years.

## WEST END PIT

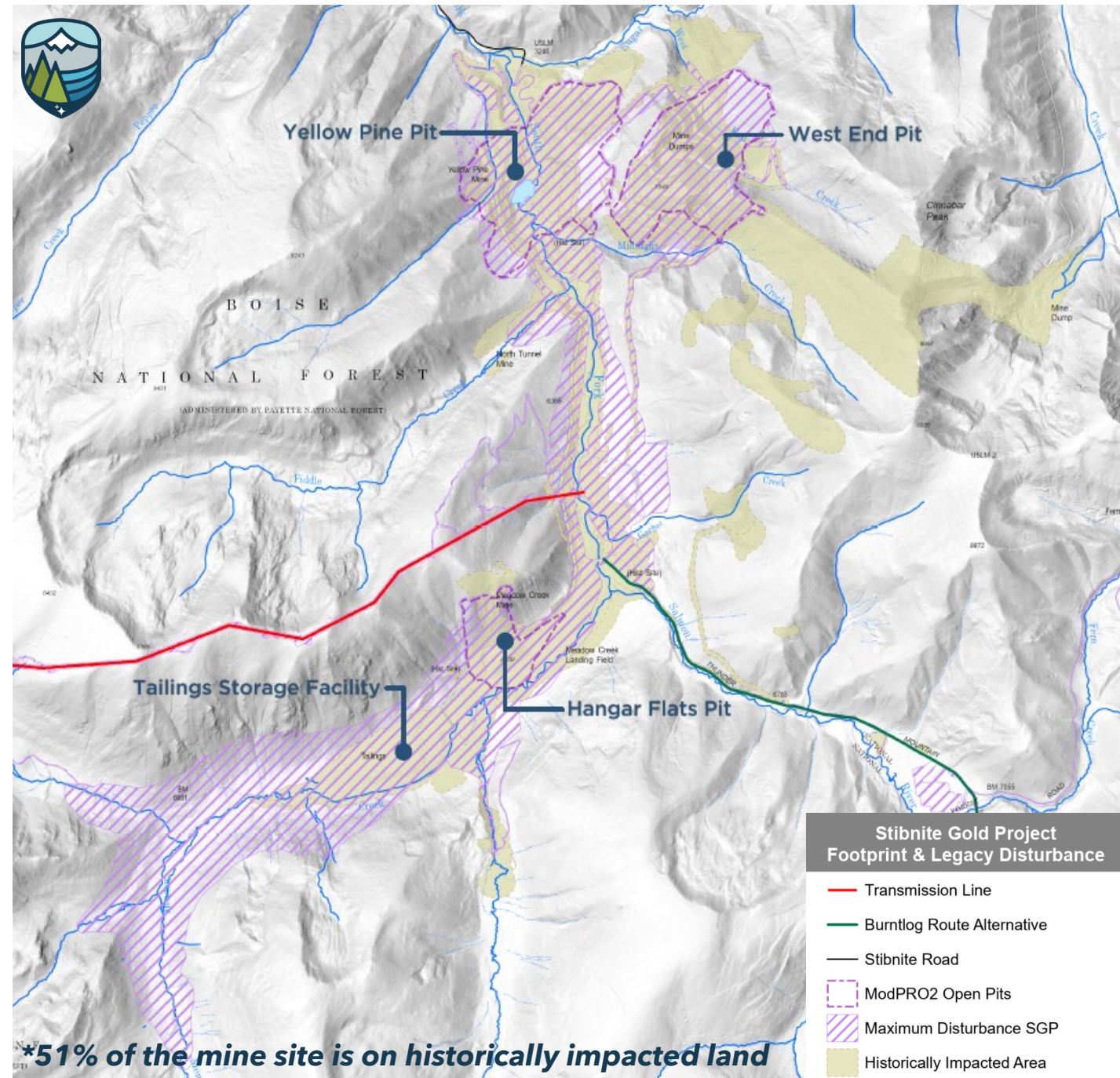
This current open pit will be re-mined, providing limestone for processing and providing the backfill for other pits allowing for more comprehensive habitat restoration.

## HANGAR FLATS PIT

This is the site of the former smelter, heap leach and underground workings. It will become a new open pit during operations. Mining this area will include backfilling the pit and stream and wetland reconstruction.

## TAILINGS STORAGE FACILITY (TSF)

TSF construction and operations include reprocessing & safely storing 3 million tons of historical tailings and repurposing 7 million tons of heap leach ore, removing an existing potential source of water degradation. The TSF will be composite lined and features an 80-million-ton rock buttress that brings the factor of safety to double the required value at all stages.







# PROJECT EVOLUTION





# The STIBNITE GOLD PROJECT

<b>2010</b>	Begin Study and Engineering
<b>2012</b>	Preliminary Economic Assessment (PEA)
<b>2014</b>	Preliminary Feasibility Study (PFS)
<b>2016</b>	Begin Regulatory Review under NEPA
<b>2020</b>	DEIS Public Comment Period, Feasibility Study (FS)
<b>2021</b>	ASAOC, Re-brand, NASDAQ Listing, Ambri Agreement
<b>2022</b>	Supplemental DEIS (SDEIS) published, 1 <sup>st</sup> Legacy Cleanup
<b>2023</b>	Or early 2024, <i>Record of Decision anticipated</i> <sup>1</sup>
<b>2024</b>	<i>Potential Construction</i> <sup>1</sup>
<b>2027</b>	<i>Potential Production</i> <sup>1</sup>

<sup>1</sup> See forward-looking statements at the end of this presentation. Reflects management's latest expectations based on USFS schedule published in October 2022.

## PLAN DESIGNED TO PROVIDE:

- ✓ Natural resource restoration via private investment
- ✓ Restoration of salmon migration into upper East Fork South Fork Salmon River
- ✓ Over 500 direct well-paid jobs
- ✓ The only domestically mined source of the critical mineral antimony

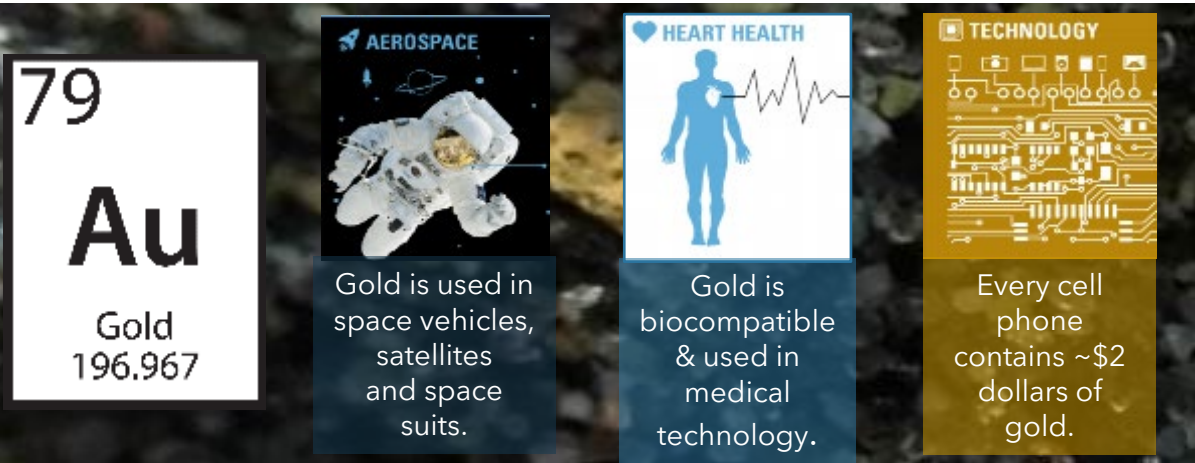




# 2020 FEASIBILITY STUDY

## 4.8 MILLION OUNCES OF GOLD (Reserve)

Total resource ~6 million ounces.



## 148 MILLION POUNDS OF ANTIMONY (Reserve)

Total resource ~206 million pounds



The **Stibnite Gold Project** would be the 4<sup>th</sup> largest US gold operation by grade and likely produce between ~4-5 million ounces of gold. \*

Half of all gold is used for jewelry. Other uses include currency and industrial purposes, in aerospace, technology and medical equipment.

The **Stibnite Gold Project** would be the only domestic source of mined antimony, expected to produce ~115 million pounds.\*

Critical for the defense and technology sectors, the United States uses **56.7 million pounds** of antimony each year, but we are **heavily dependent on China** to supply this strategic mineral.

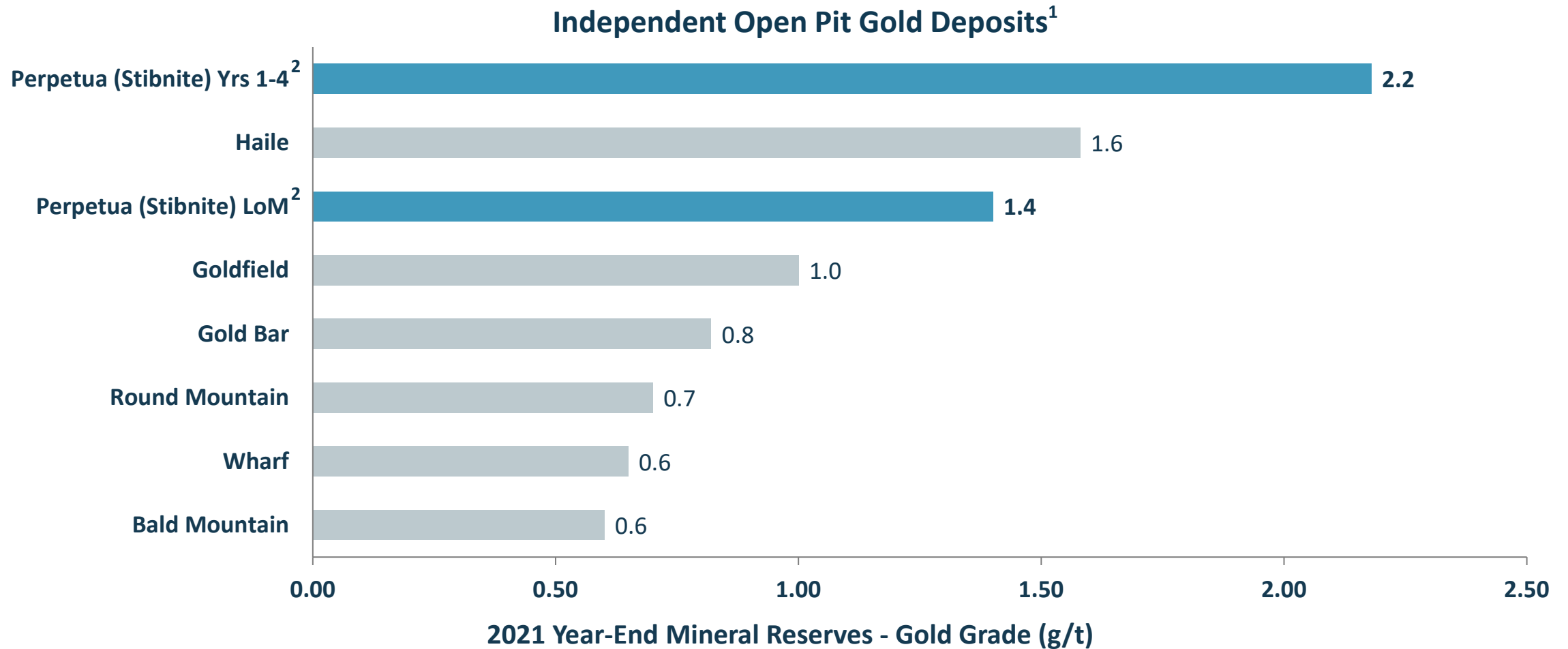


\* Based on the 2020 Feasibility Study (FS), which is intended to be read as a whole and sections should not be read or relied upon out of context. The information in this presentation is subject to the assumptions, exclusions and qualifications contained in the FS. See "Regulatory Information" at the end of this presentation.





# HIGH-GRADE, OPEN PIT GOLD DEPOSIT



Source: Latest available company materials as of May 13, 2022

1. Independent refers to gold projects as not owned by Barrick or Newmont; Independent projects shown are from the lower 48 states in the U.S.

2. Based on the 2020 Feasibility Study (FS) which is intended to be read as a whole and sections should not be read or relied upon out of context. The information in this presentation is subject to the assumptions, exclusions and qualifications contained in the FS. See "Regulatory Information" at the end of this presentation. For a summary of differences between the FS and TRS, see "Cautionary Note and Technical Disclosure" at the beginning of this presentation.





# ORE PROCESSING

## Dore metallurgical recoveries

- Gold at 68% - 91% (88.9% average)
- Silver at 23.2% Average

## Antimony concentrate metallurgical recoveries<sup>1, 2</sup>

- Antimony at 84% - 91% (89.5% average)
- Gold at 1% - 2%
- Silver at 59% - 65%

## High-grade antimony concentrate (Sb 55-65%)

- Low levels of impurities = no penalties

## Gold and silver likely by-product payables in Sb concentrates

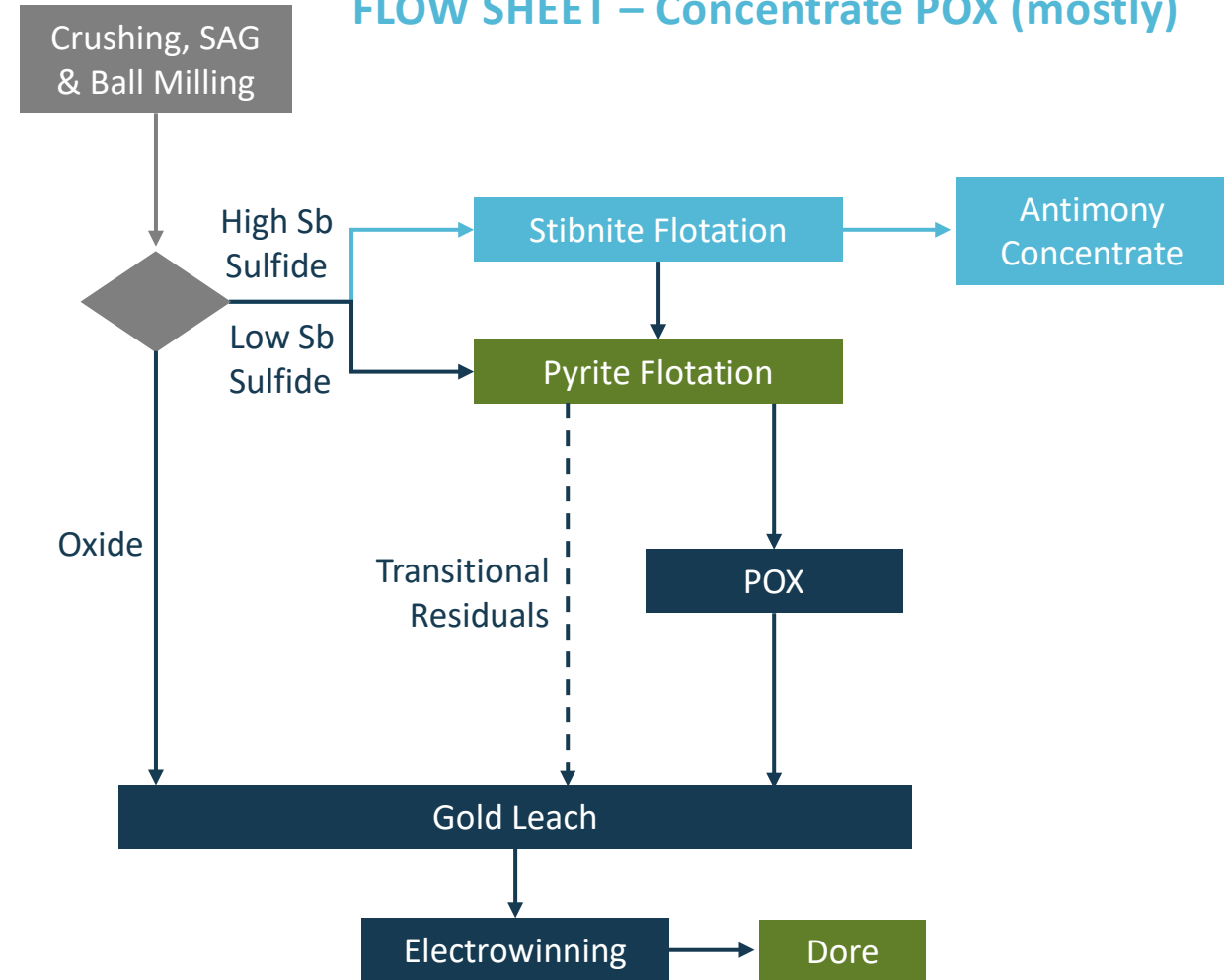
## Potential Antimony processing options include

- Conventional pyrometallurgical (smelting and roasting)
- Hydrometallurgical (solvent extraction)
- Bench and pilot scale testing indicates both options are viable processes for Sb concentrates.

<sup>1</sup> reporting LOM averages by ore type

<sup>2</sup> excluding historical tailings

## FLOW SHEET – Concentrate POX (mostly)



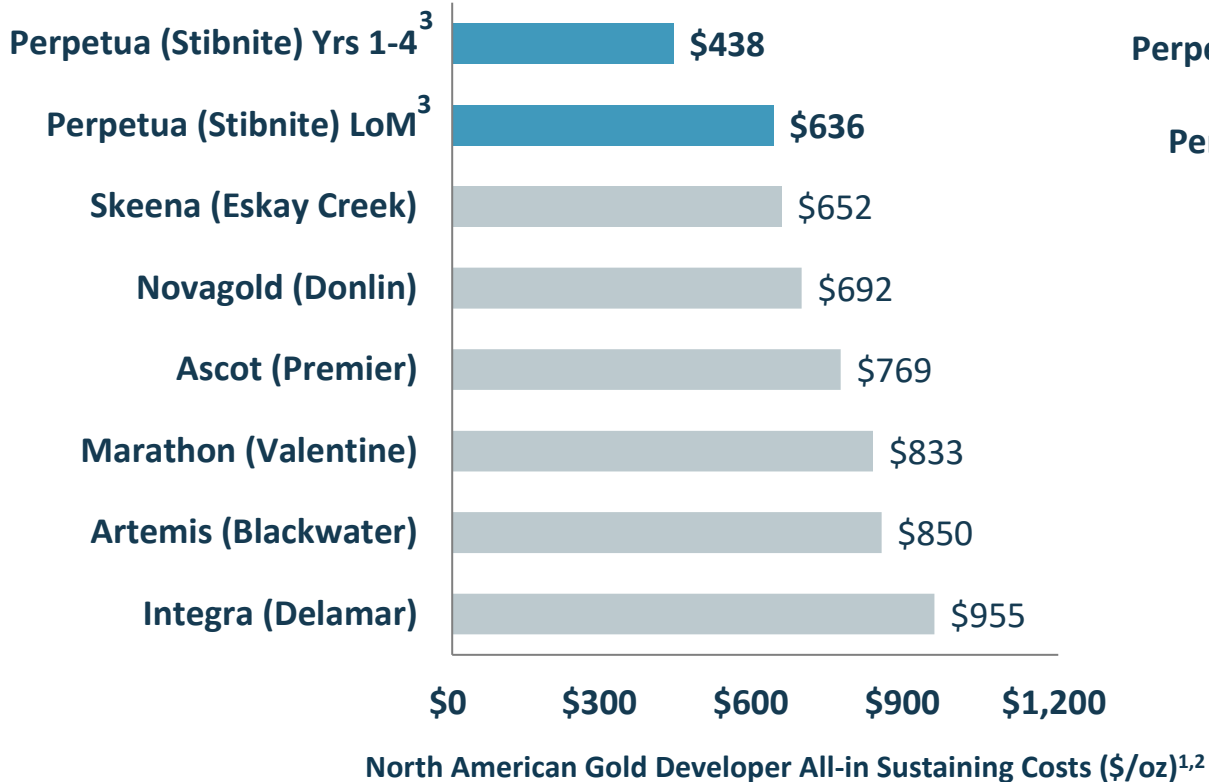
Based on the 2020 Feasibility Study (FS) which is intended to be read as a whole and sections should not be read or relied upon out of context. The information in this presentation is subject to the assumptions, exclusions and qualifications contained in the FS. See "Regulatory Information" at the end of this presentation. For a summary of differences between the FS and TRS, see "Cautionary Note and Technical Disclosure" at the beginning of this presentation





# LOWEST QUARTILE ALL-IN SUSTAINING COSTS<sup>1</sup>

Among lowest cost North American developers...



...and lowest cost relative to senior producers



**Valuable antimony by-product credit of \$70/oz over life of mine<sup>3</sup>**

1. All-in Sustaining Cost ("AISC") is a non-GAAP measure. See "Non-GAAP measures" at the end of this presentation.
2. North American gold developer project all-in sustaining costs are based on the most recent available technical reports. North American senior gold producer all-in sustaining costs represent FY 2021 actuals from company reports and filings.
3. Based on the 2020 Feasibility Study (FS) which is intended to be read as a whole and sections should not be read or relied upon out of context. The information in this presentation is subject to the assumptions, exclusions and qualifications contained in the FS. See "Regulatory Information" at the end of this presentation. For a summary of differences between the FS and TRS, see "Cautionary Note and Technical Disclosure" at the beginning of this presentation. Antimony by-product credit is calculated using antimony price of \$3.50/lb.



# ASAOC EARLY CLEANUP

## Agreement with USFS and EPA for cleanup of legacy impacts

### Stream Diversions (2022)

- Hennessy Creek
- Smelter Flats
- DMEA (dump removal / stream restoration)

### Waste Relocation (2023+)

- Lower Meadow Creek Tailings / Stream Restoration
- Northwest Bradley Dumps
- Bradley Man Camp Dumps
- Repository for removed waste

### Adit study (2022+)





# PERPETUA TO POWER AMBRI'S LOW-COST BATTERY

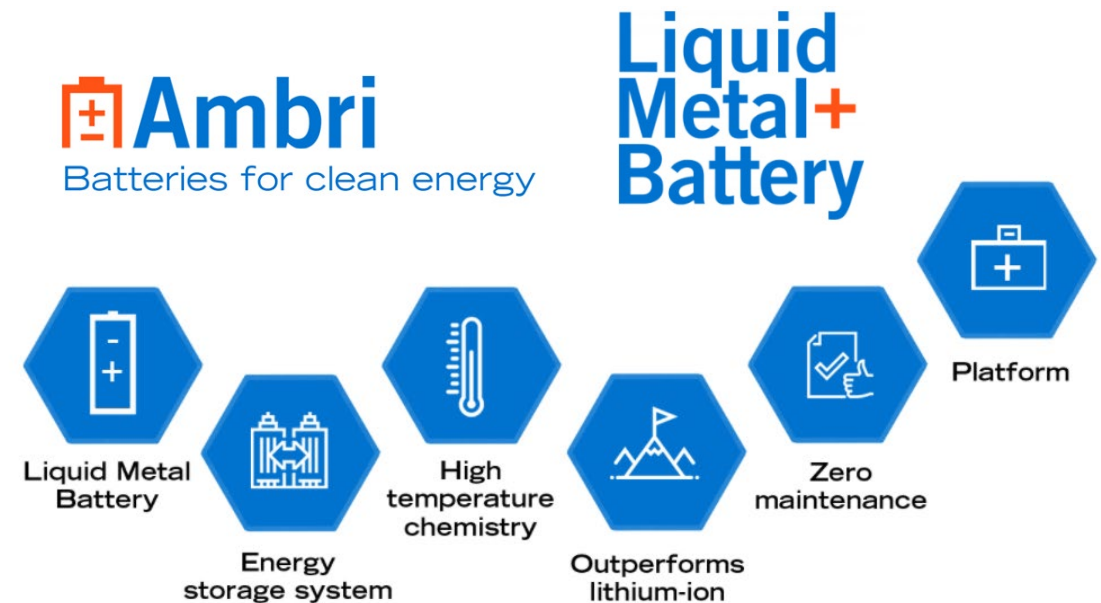


*Agreement to supply only responsible & domestically mined source of antimony for stationary, long duration, daily cycle energy storage enabling the transition to cleaner energy*

## **SUPPLY AGREEMENT<sup>1</sup>:**

- Current commitment of Perpetua's antimony can power over 13 GWh of energy storage or >8x the total additions to entire U.S. energy storage market in 2020
- Based on standard commercial terms with options for fixed pricing and higher volumes
- Partnering with Ambri to identify opportunities to reduce carbon emissions in operations through renewable energy combined with battery storage

Ambri secured \$144M from Reliance Industries, Paulson & Co., Bill Gates and others to accelerate growth and recently announced a tripling of its manufacturing capacity in the U.S.



Source: <https://ambri.com/>

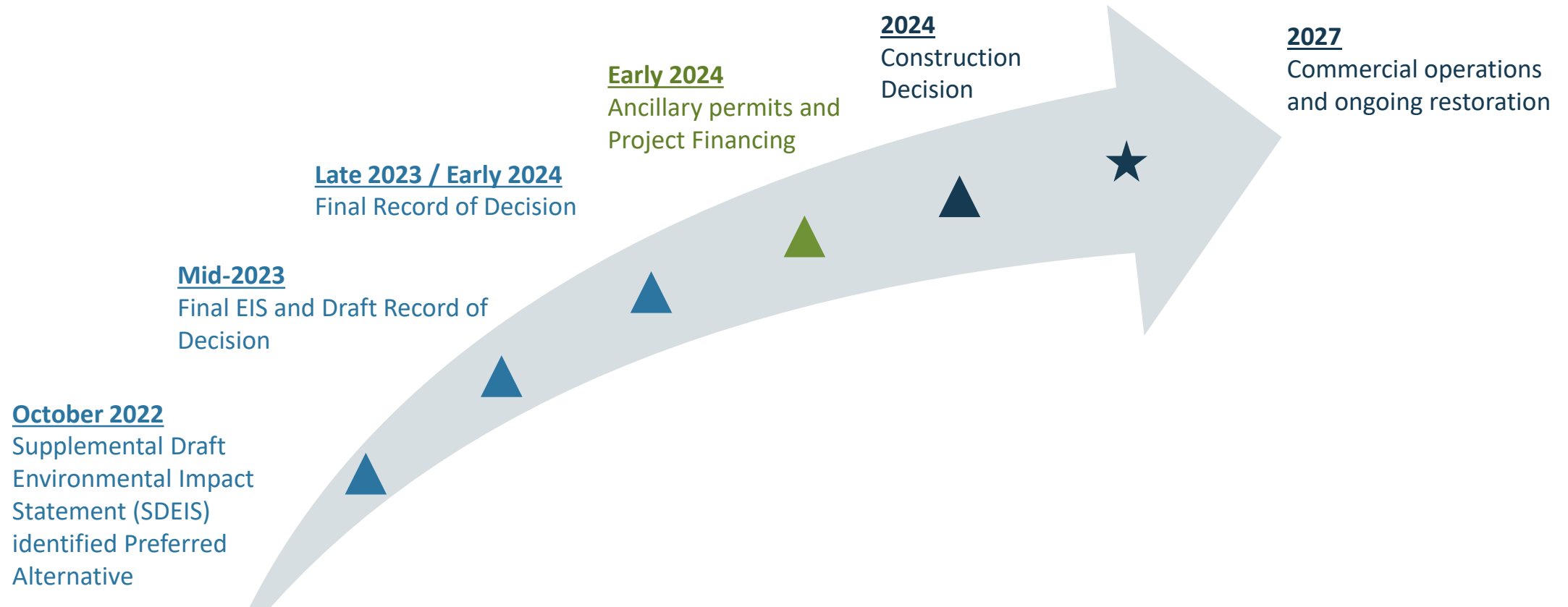
**Redefining how modern mining companies can be part of climate change solutions**

1. Subject to completion of the permitting process for the Project, commencement of commercial production of antimony, identification of one or more refiners to transform our antimony concentrate into antimony metal, and mutual agreement on certain material terms, including volume and pricing. For additional information regarding the risks and uncertainties surrounding our supply agreement with Ambri, see "Forward-Looking Statements" at the beginning of this presentation.



# PATH FORWARD FOR THE STIBNITE GOLD PROJECT<sup>1</sup>

*U.S. Forest Service identified Perpetua's Proposed Plan as Preferred Alternative<sup>2</sup> in Supplemental EIS*



**Preferred Alternative a major milestone providing clarity for remainder of the NEPA process**

<sup>1</sup> See forward-looking statements at the beginning of this presentation. Reflects management's latest expectations based on USFS schedule published in October 2022.

<sup>2</sup> Under NEPA, a "Preferred Alternative" is identified by a Federal Agency in a DEIS to let the public know which action the agency is leaning toward selecting as final.



75-Day Public Comment Period

## What we heard:

- ✦ **Improve water quality**
- ✦ **Reduce water temperature**
- ✦ **Reduce the project footprint**

# NEPA AT WORK

## PUBLIC FEEDBACK AND REFINEMENT CREATE THE BEST PLAN

Based on public and agency feedback on the Draft EIS, Perpetua submitted project refinements to the USFS in December of 2020 (rev. October 2021).

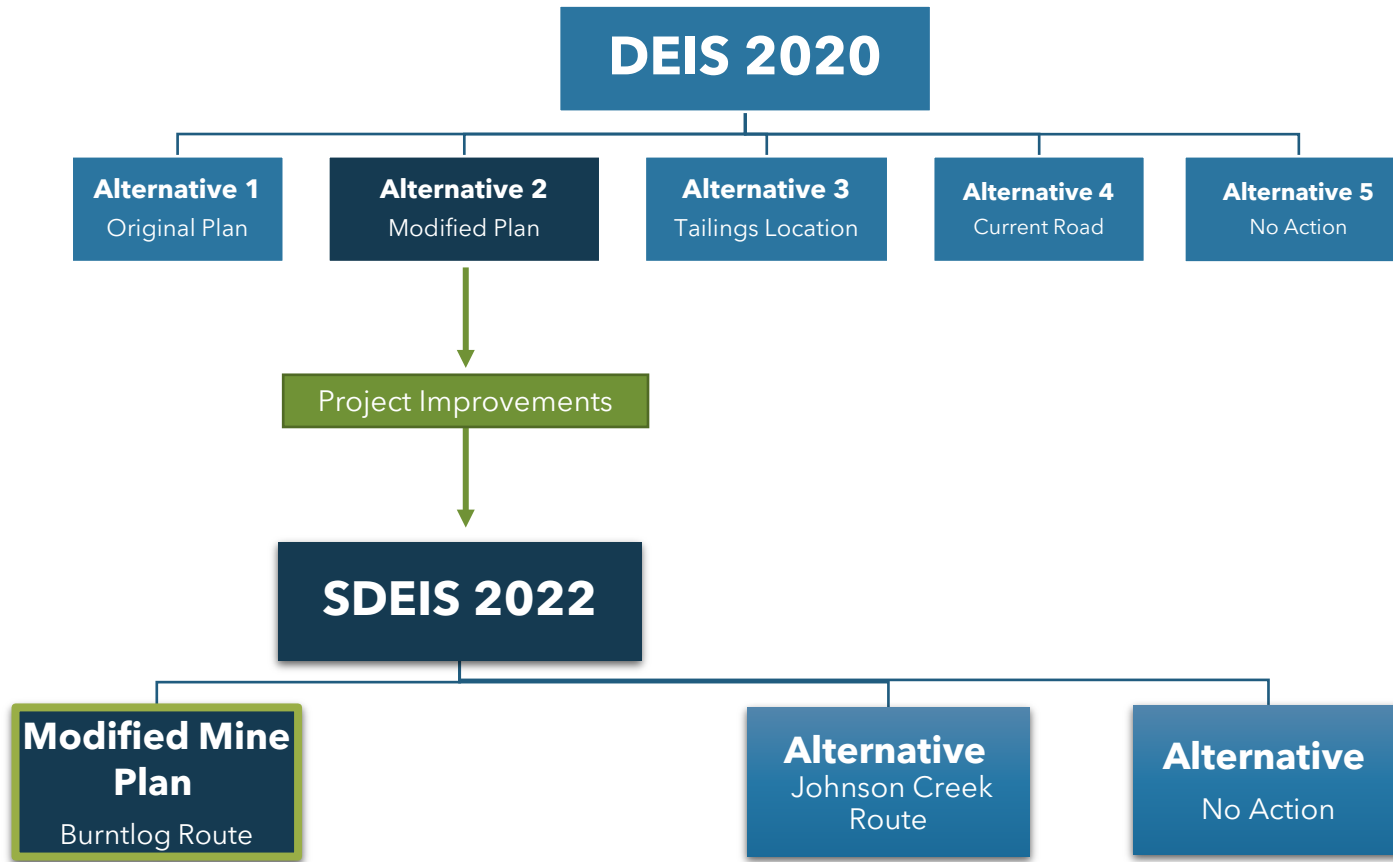
The improvements create better environmental outcomes and are responsive to public input.

The USFS has decided to advance the improved project design forward for additional public review.





# SDEIS - Narrowed NEPA Scope



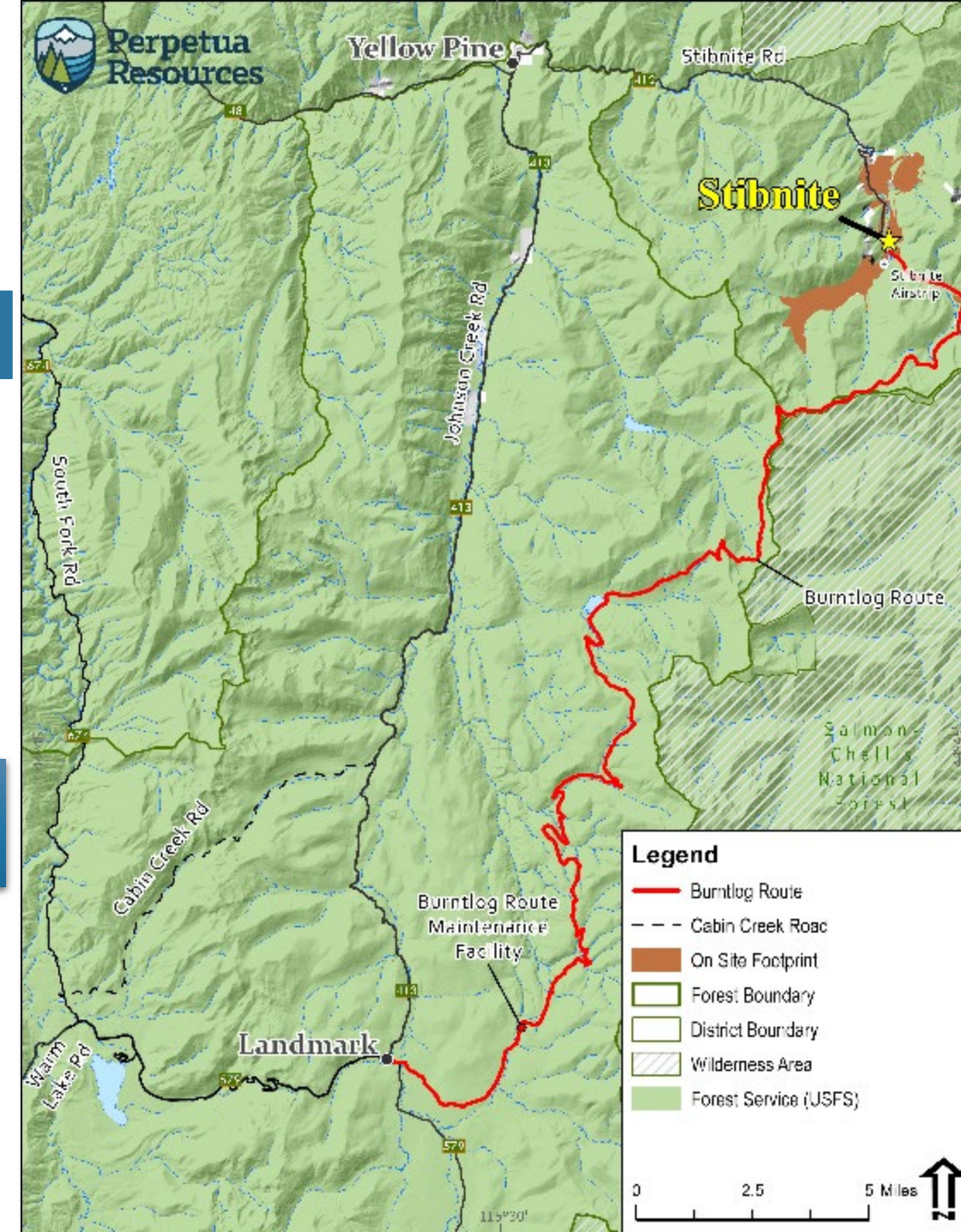
## PREFERRED ALTERNATIVE<sup>1</sup>

### Burntlog Route Alternative

- Identified as the Preferred Alternative
- Avoids travel close to waterways
- Adds ingress/egress route into Stibnite
- Reduces interaction of mine traffic and public
- High in drainage, lower risk of impacts from avalanches

### Johnson Creek Route Alternative

- Utilizes existing roads
- Lower in drainage (higher potential avalanche impact)
- Close to waterways
- All mine traffic through village of Yellow Pine



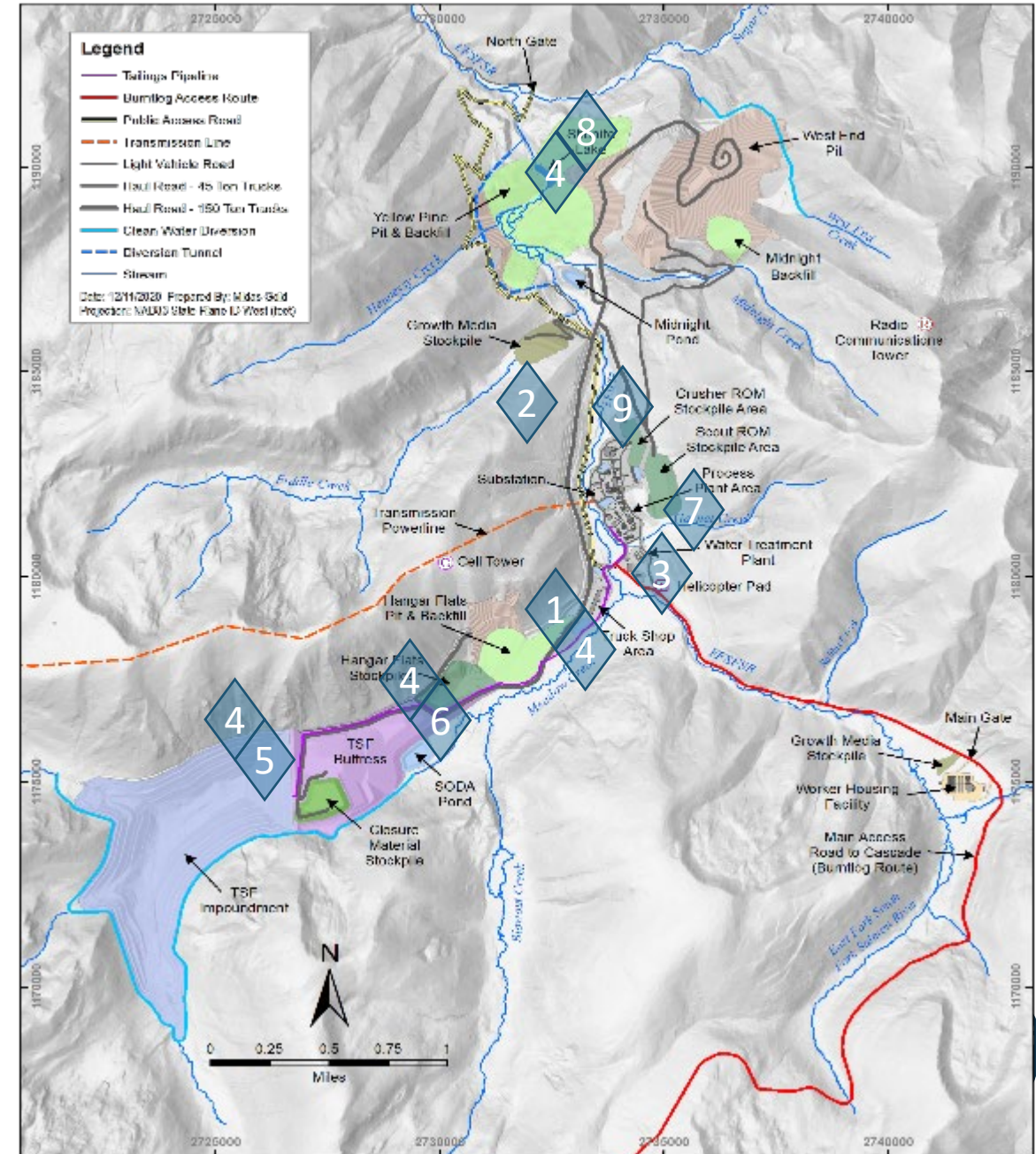
<sup>1</sup> Under NEPA, a "Preferred Alternative" is identified by a Federal Agency in a DEIS to let the public know which action the agency is leaning toward selecting as final.



# PROJECT REFINEMENTS

(changes to 2020 DEIS Alt 2)

- 1 **70% smaller Hangar Flats pit + complete backfill**  
(Reduces footprint, improves water quality and temperature, adds wetlands)
- 2 **Fiddle DRSF eliminated**  
(Reduces disturbance by 168 acres, much of it not previously disturbed)
- 3 **Reduce water handling and treatment**  
(and eliminate need for long-term water treatment).
- 4 **Geosynthetic covers on pit backfills, TSF buttress and TSF**  
(Reduces infiltration, improves water quality).
- 5 **TSF liner in compliance with new IDEQ CN Rule**  
(Performance-based, facility-type specific standards rather than one design fits all)
- 6 **Enhanced TSF buttress**  
(High factor of safety without further encroaching on floodplain).
- 7 **Enhancements and refinements to ore processing and tailings management process**  
(Improves water quality, reduces Hg emissions, improves tailings chemistry).
- 8 **Addition of Stibnite Lake**  
(Replaces habitat, reduces maximum water temperature).
- 9 **Enhanced riparian planting**  
(Reduces maximum water temperature).



# IMPROVED OUTCOMES

Original Plan - To Today

## Reduced Project Footprint by 13% (242 acres) On-Site

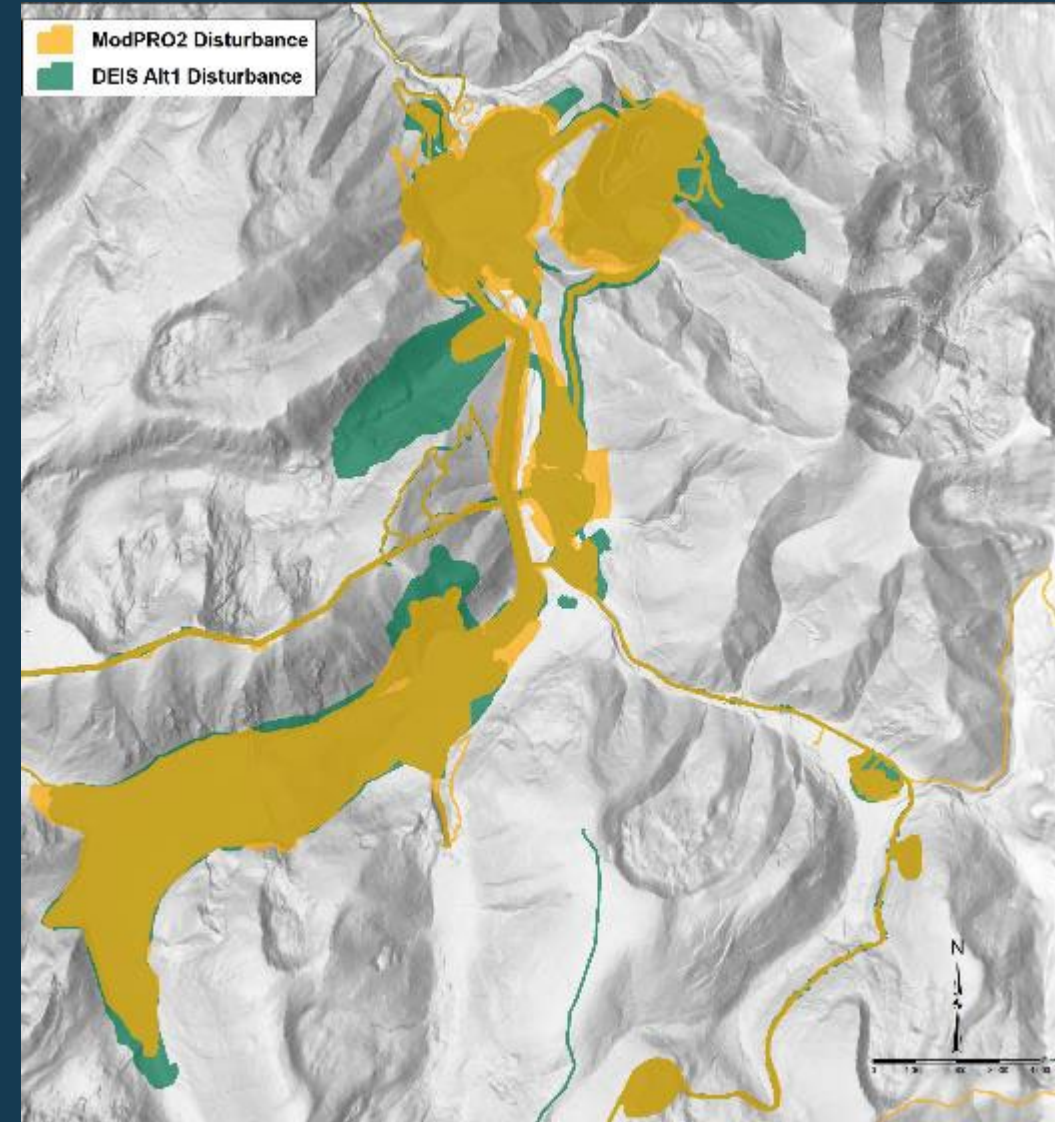
- ✓ Overall disturbance from pits reduced 7% (37 acres)
- ✓ Volume mined reduced by 10% (44 million tons)
- ✓ Hangar Flats Pit volume reduced by 70% + complete pit backfill
- ✓ Eliminated Fiddle development rock storage facility (168 acres)
- ✓ Eliminated West End development rock storage facility
- ✓ On-site lime production reduces traffic by 23%
- ✓ Hg emissions reduced by ~60%

## Improved Water Quality

- ✓ Added geosynthetic cover on pit backfills (YPP, HFP), TSF buttress and TSF (to reduce impacts on surface water quality)
- ✓ Volume of water handled reduced and long-term water treatment is no longer necessary
- ✓ Substantial reduction of arsenic and antimony in surface water

## Improved Water Temperature

- ✓ Water temperature back to baseline or below
- ✓ Reduced maximum summer temperature by approximately 5°C at Sugar Cr. confluence
- ✓ Reduced maximum water temperatures and added habitat through the addition of Stibnite Lake.



**Mine Site footprint reduced by 13% (242 acres)**





# BURNTLOG ROUTE





# SITE ACCESS

## CURRENT ROUTE (Johnson Creek Alternative)

The current travel routes to Stibnite, via Johnson Creek to Yellow Pine and Stibnite.

## CONSIDERATIONS

- Public input and feedback
- Proximity to fish-bearing waterways
- Impact on residents and recreationalists
- Safety risks to employees and the public

## PREFERRED ALTERNATIVE, THE BURNTLOG ROUTE PROMOTES SAFETY

### 38 miles total.

- 23 miles improving existing road (Burnt Log Road, Meadow Cr. Lookout Rd, & Thunder Mountain Road)
- 15 miles of new road

### Benefits

- Avoids travel along waterways
- 18 fewer miles within 0.5 mile of streams.
- Avoids large avalanche paths along Stibnite Rd.

### Safety Considerations

- All sensitive loads travel under strict best practice protocol and are accompanied by trained spill teams, which along with berms and ditches, minimize spill risk reaching waterways or the Frank Church boundary.
- ~4.3 miles alongside boundary area of the Frank Church
  - 3.3 miles are new road, drain away from the Wilderness, and are not visible from the Wilderness.
  - 1 mile of existing road will receive additional protective ditches and drain away from the wilderness.

"The Burntlog Route would avoid environmental and human health and safety risks associated with the Johnson Creek Route which passes through identified areas for avalanches, landslides, and floods... and would decrease the potential for spill risk adjacent to fish-bearing streams."

SDEIS Ch2 pg. 2-18







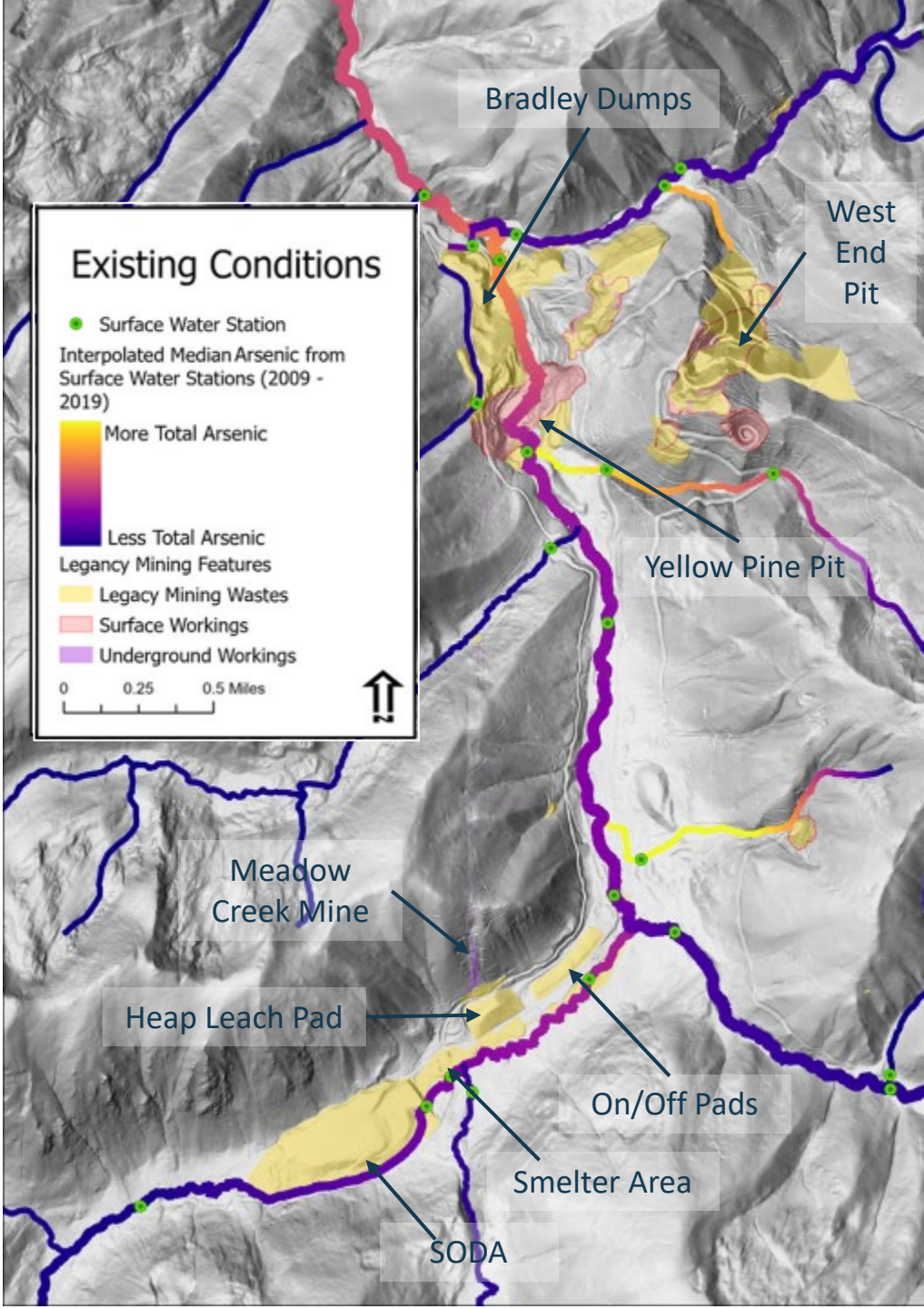
# WATER QUALITY





# WATER QUALITY TODAY

Meadow Creek Valley, circa 1940s

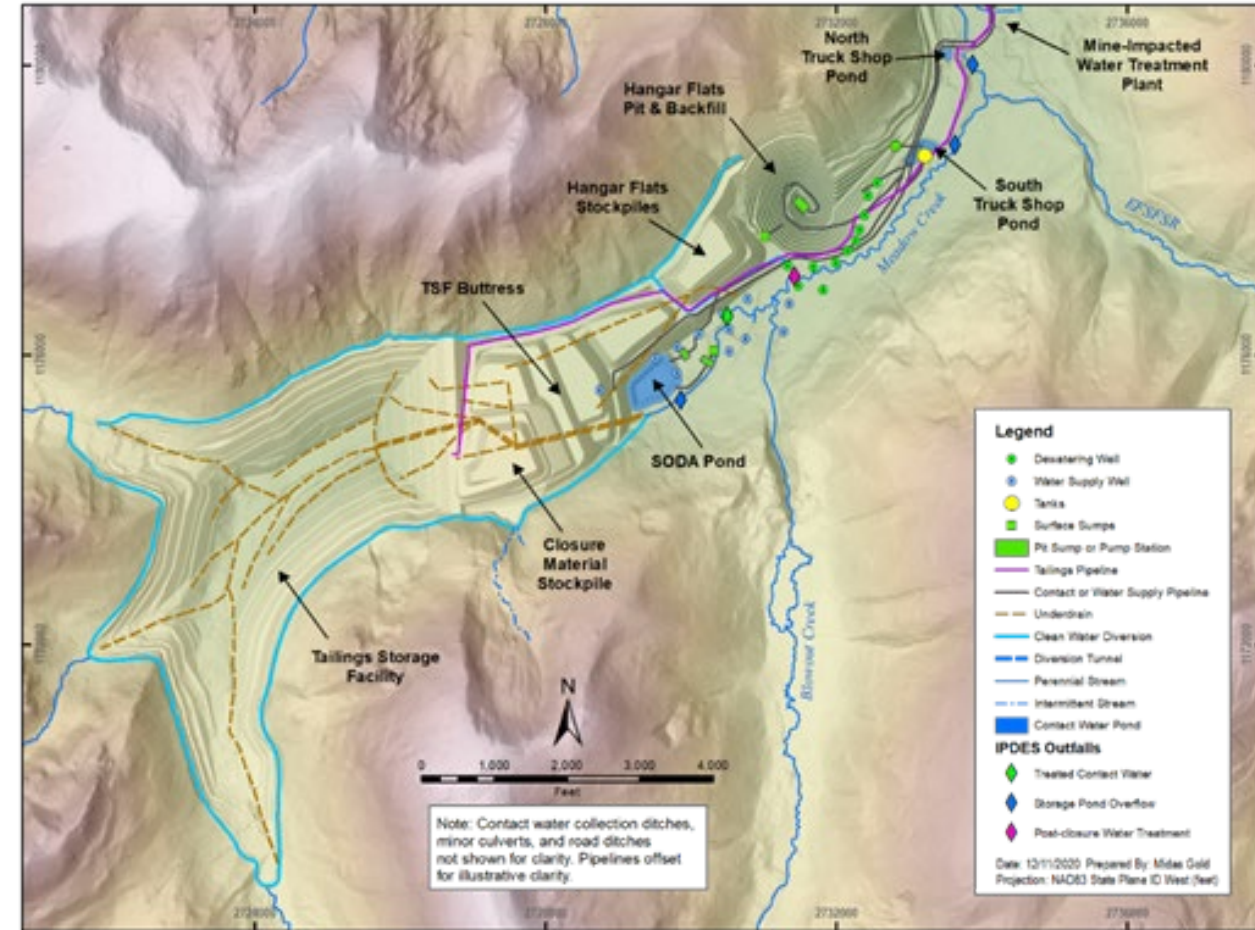




# WATER MANAGEMENT OVERVIEW

**Adaptable, scalable** and **proven technology** for effective MIW management/treatment, phased from Construction through Post-Closure

- Process water/TSF water will not be discharged during Operations; no treatment needed for that water until Closure
- Seasonal variability in runoff managed via interconnected contact water storage ponds
- Storage ponds and treatment plant designed with capacity to manage seasonal flow variability (evaluated over the 120-yr record using computer simulation)
- Improvements made in the ModPRO2 mine plan, like the elimination of Fiddle DRSF, complete backfill of Hangar Flats Pit, and cover of TSF and TSF Buttress, mean that **treatment will no longer be needed after approximately mine year 40, and decreases dramatically after mine year 23.**



MIW: Mine Impacted Water

TSF: Tailings Storage Facility

ModPRO2: Modified Plan of Restoration & Operations 2

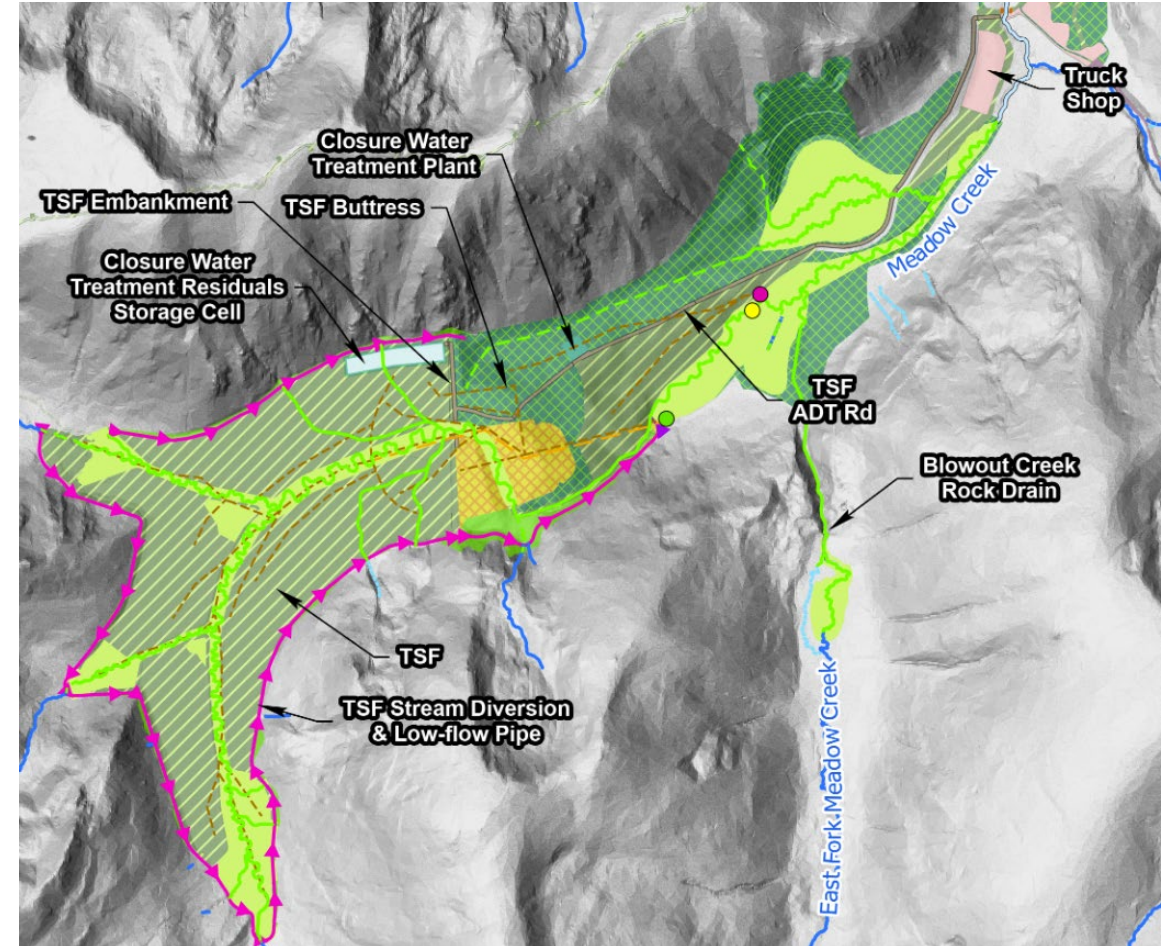
DRSF: Development Rock Storage Facility



# WATER QUALITY IMPROVEMENTS

## Project changes that improve water quality include:

- **Backfill:** Complete backfill of Hangar Flats pit (HFP) and elimination of Hangar Flat Pit Lake
- **Reduced Waste Rock Storage:** Elimination of Fiddle Development Rock Storage Facility (DRSF) and associated groundwater impacts and long-term treatment need
- **Reduced MIW Volume:** Reduction in the volume of dewatering water and contact water (smaller HFP/less overlap); treatment of water for surface discharge
- **Covers:** Addition of covers to Yellow Pine pit backfill, Hangar Flats pit backfill, Tailings Storage Facility (TSF) Buttress, and TSF impoundment surface
- **Reduction in volume and the amount of time active water treatment is needed in operations, closure, and post-closure**

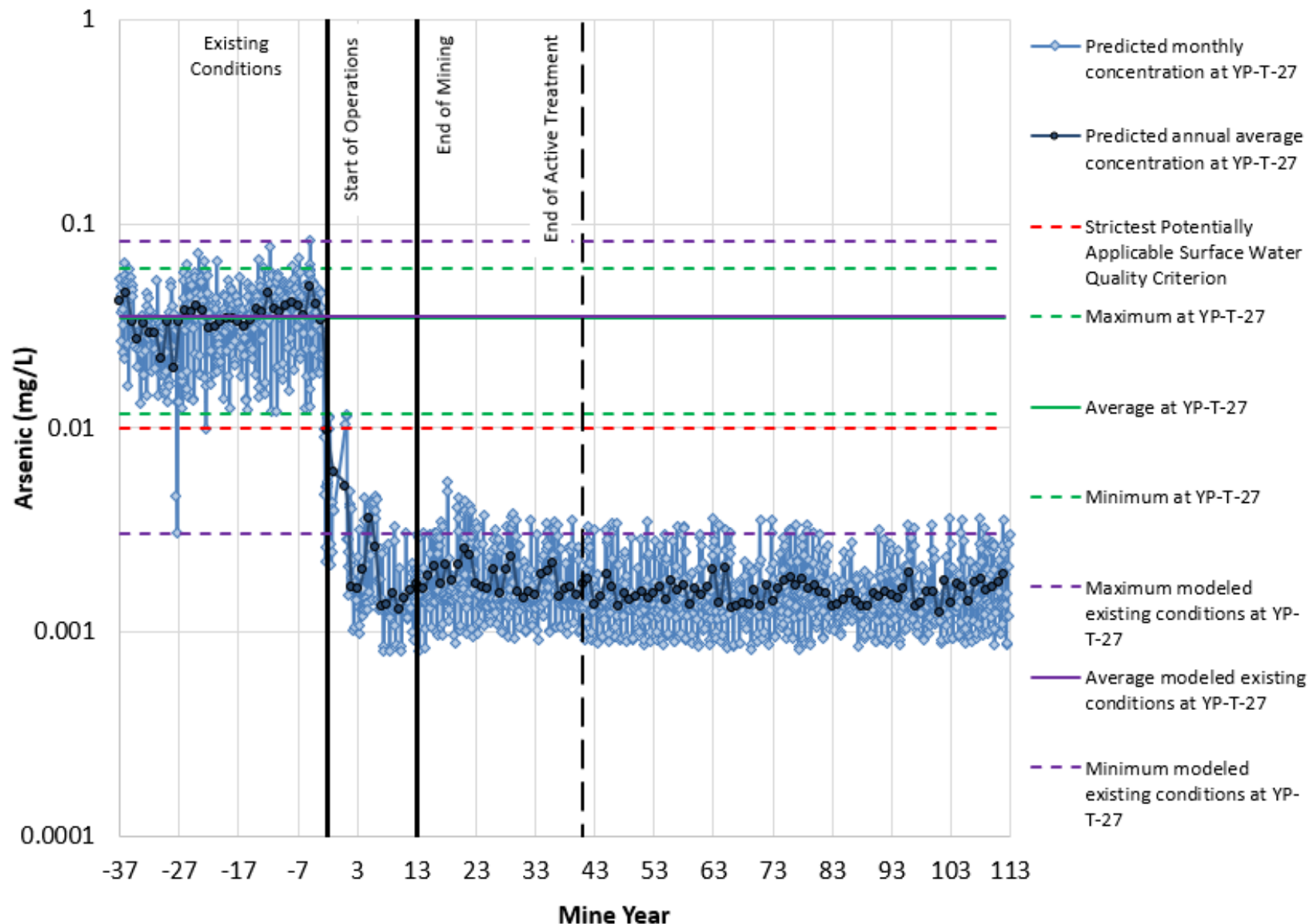


Mine Year 23



# OUTCOMES

In Meadow Creek, On-site water quality improved over current conditions, with a 96% reduction in average arsenic levels & a 95% reduction in antimony levels.

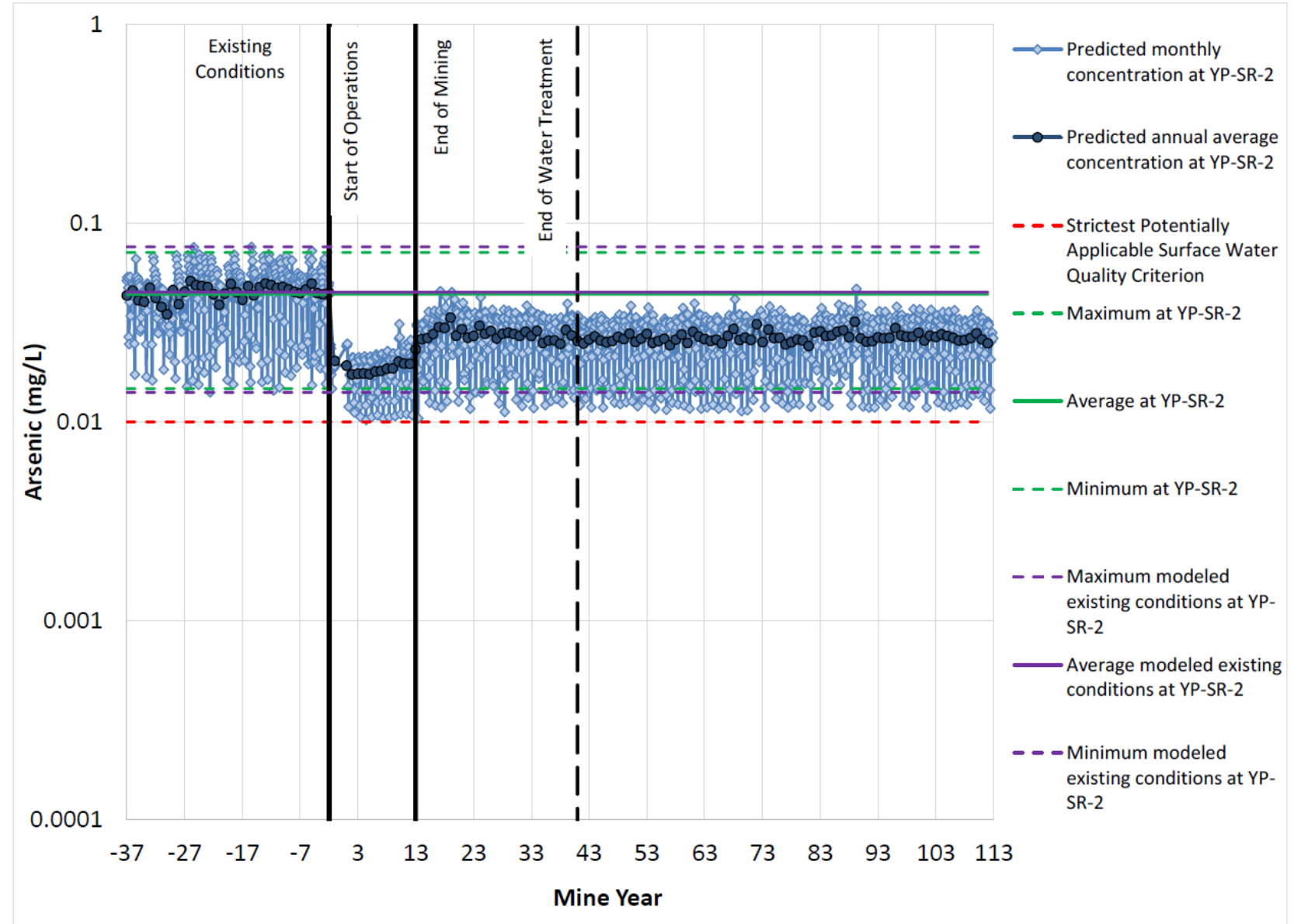


## Predicted WQ in Meadow Creek below TSF



# OUTCOMES

Below Sugar Creek  
(off-site) long-term  
water quality  
moderately  
improved (-40%  
Arsenic & -57%  
Antimony) over  
current conditions.



**Predicted WQ in EFSFSR below Sugar Cr.**





# STREAM TEMPERATURE



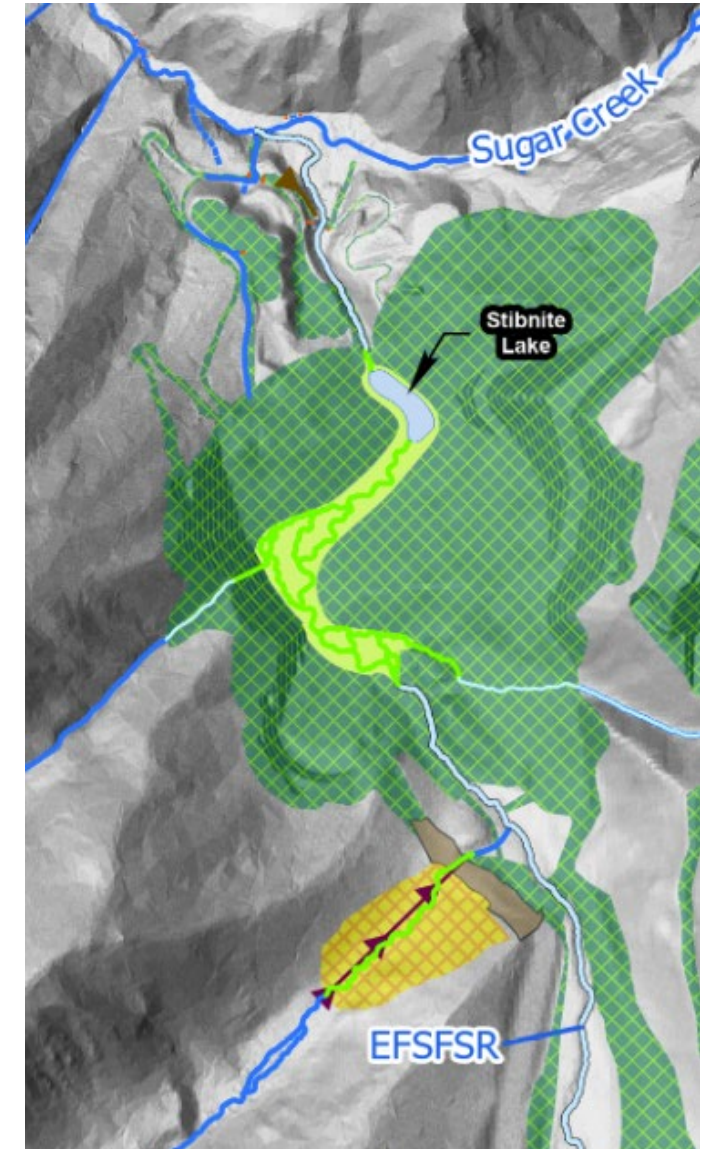


# TEMPERATURE IMPROVEMENTS

## Project changes to improve water temperature:

- **Planting:** Riparian planting taller, denser, wider, longer, and sooner.
- **Liners:** Extended stream/floodplain corridor liner prevents water loss in lower Meadow Creek and East Fork Meadow Creek
- **Stibnite Lake:** Creation of Stibnite Lake feature on lined, backfilled area of Yellow Pine pit (YPP) with similar volume and residence time as YPP Lake to provide similar temperature buffering
- **Low Flow:** Low flow pipes in diversion channels shade low flows at the TSF until EOY23

TSF: Tailings Storage Facility  
EOY: End of Year







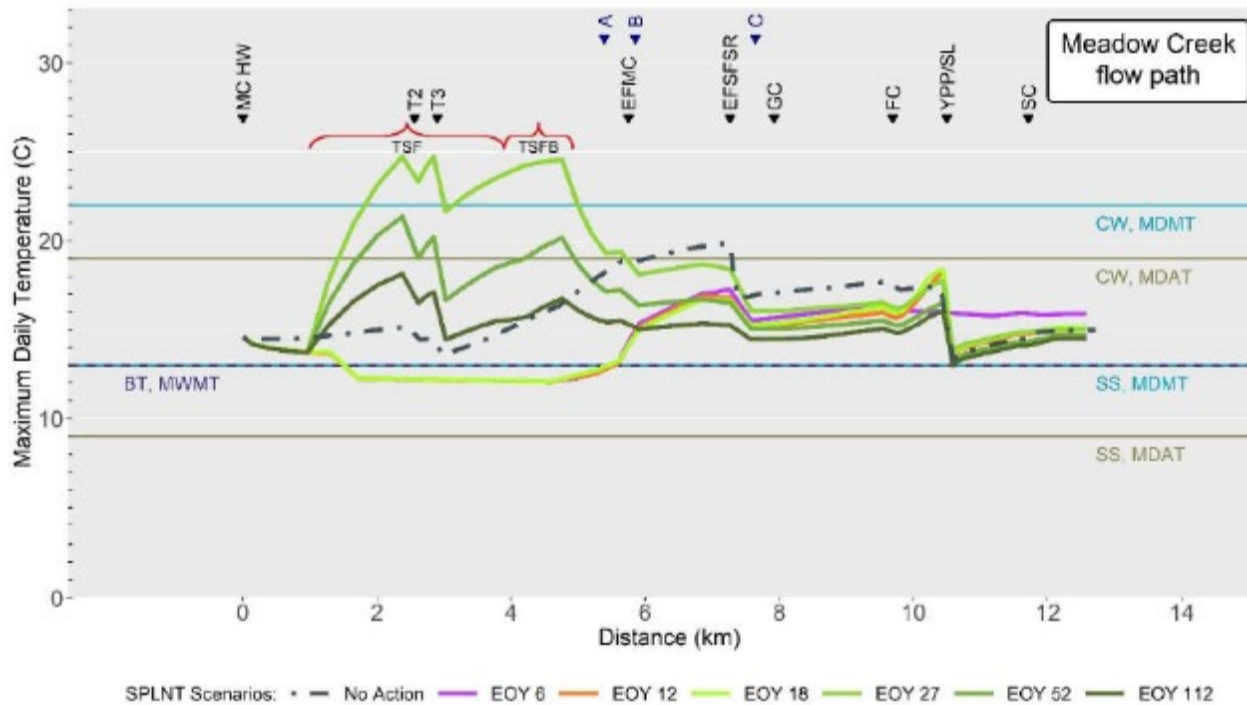
# REDUCED STREAM TEMPERATURE

## Stream Temperature Modeling

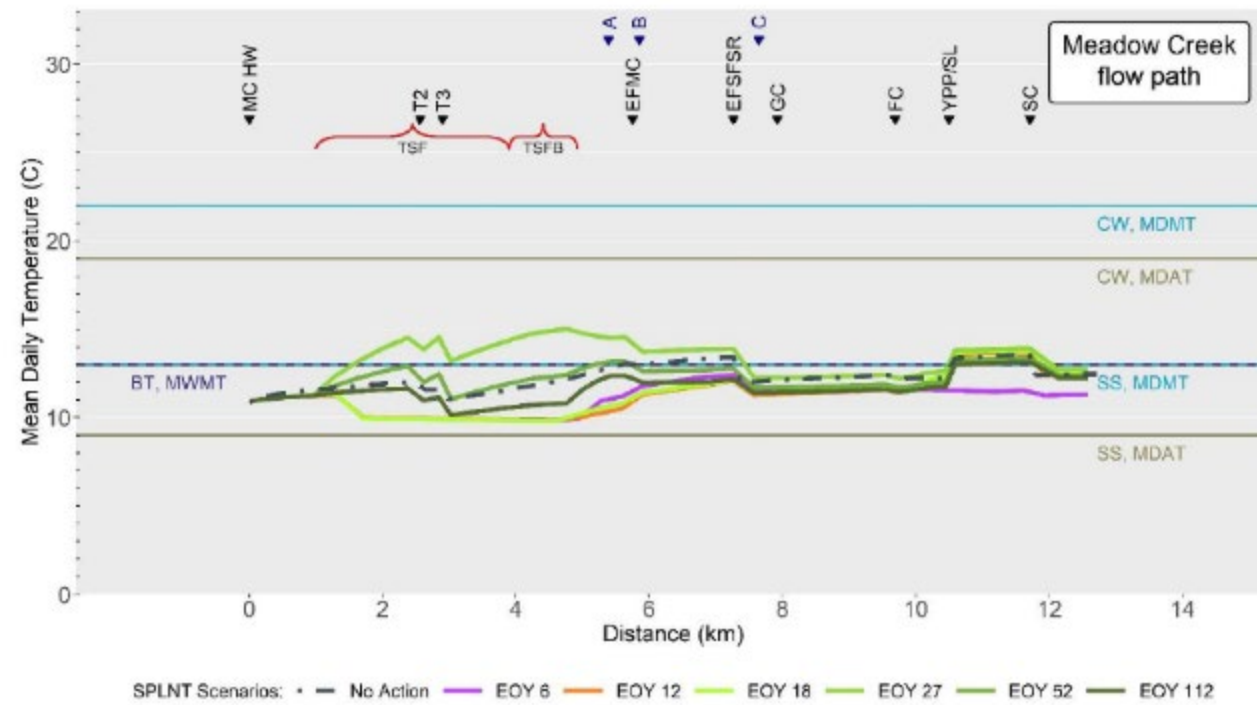
2020 Proposed Action maximum stream temperature at Sugar Creek was approximately 19°C

2022 Modified Mine Plan maximum stream temperature at Sugar Creek is approximately 14 °C

### Maximum Summer Temperature



### Average Summer Temperature





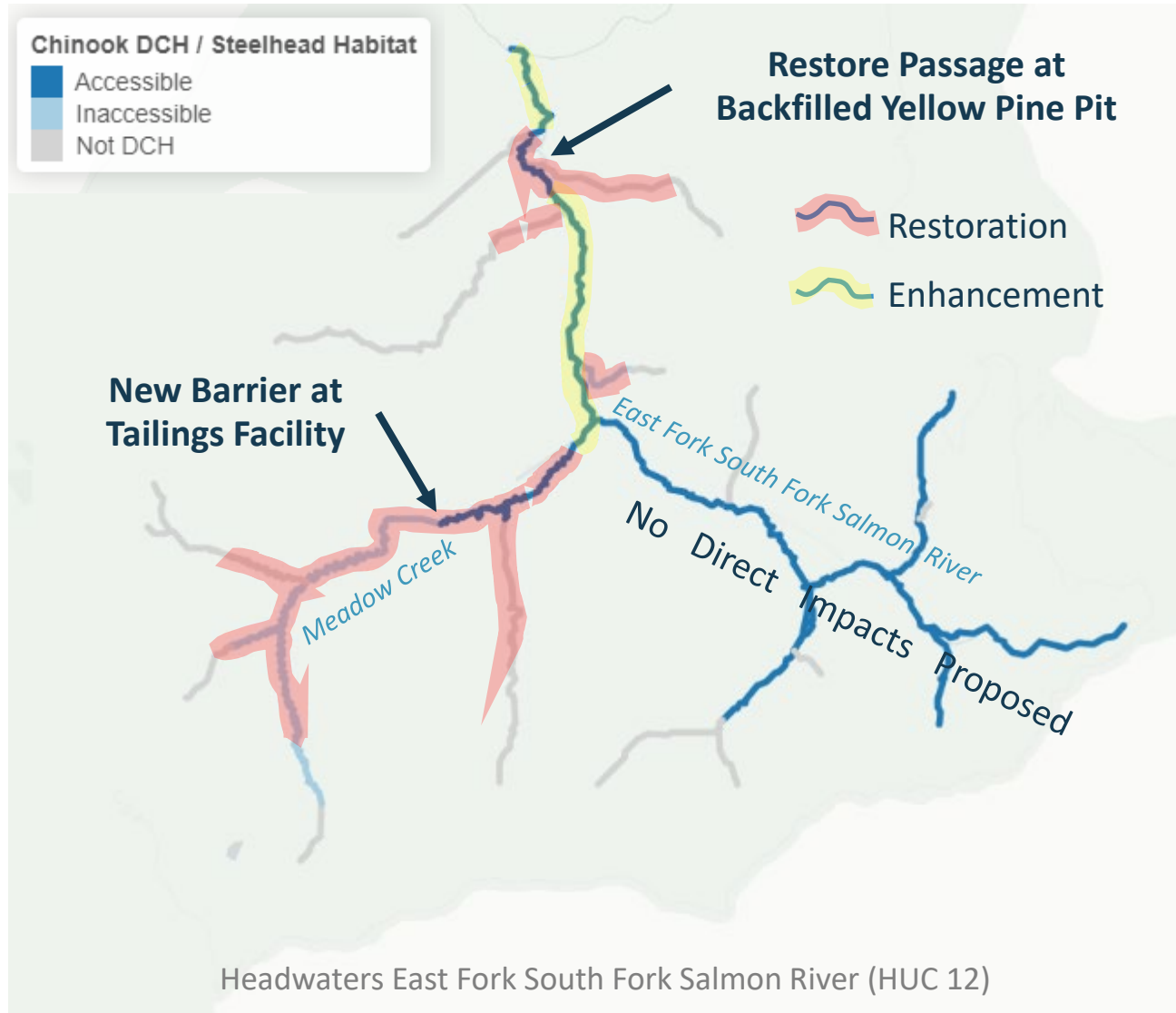
# STREAM RESTORATION





# STREAM RESTORATION AND ENHANCEMENT

## STREAM ACCESS



## Stream Restoration and Enhancement (ModPRO2- MMP)

- 12.8 miles of restored/enhanced perennial streams
- 5.2 miles of restored non-perennial streams

## Restored access upstream of backfilled yellow pine pit

- 20+ miles of perennial stream





STACKROCK GROUP

# River and Fish Passage Restored

PERMANENT FISH ACCESS restored for the first time in 80 years.

HABITAT RESTORATION built into project.





# Stream Temperature and Habitat Outcomes

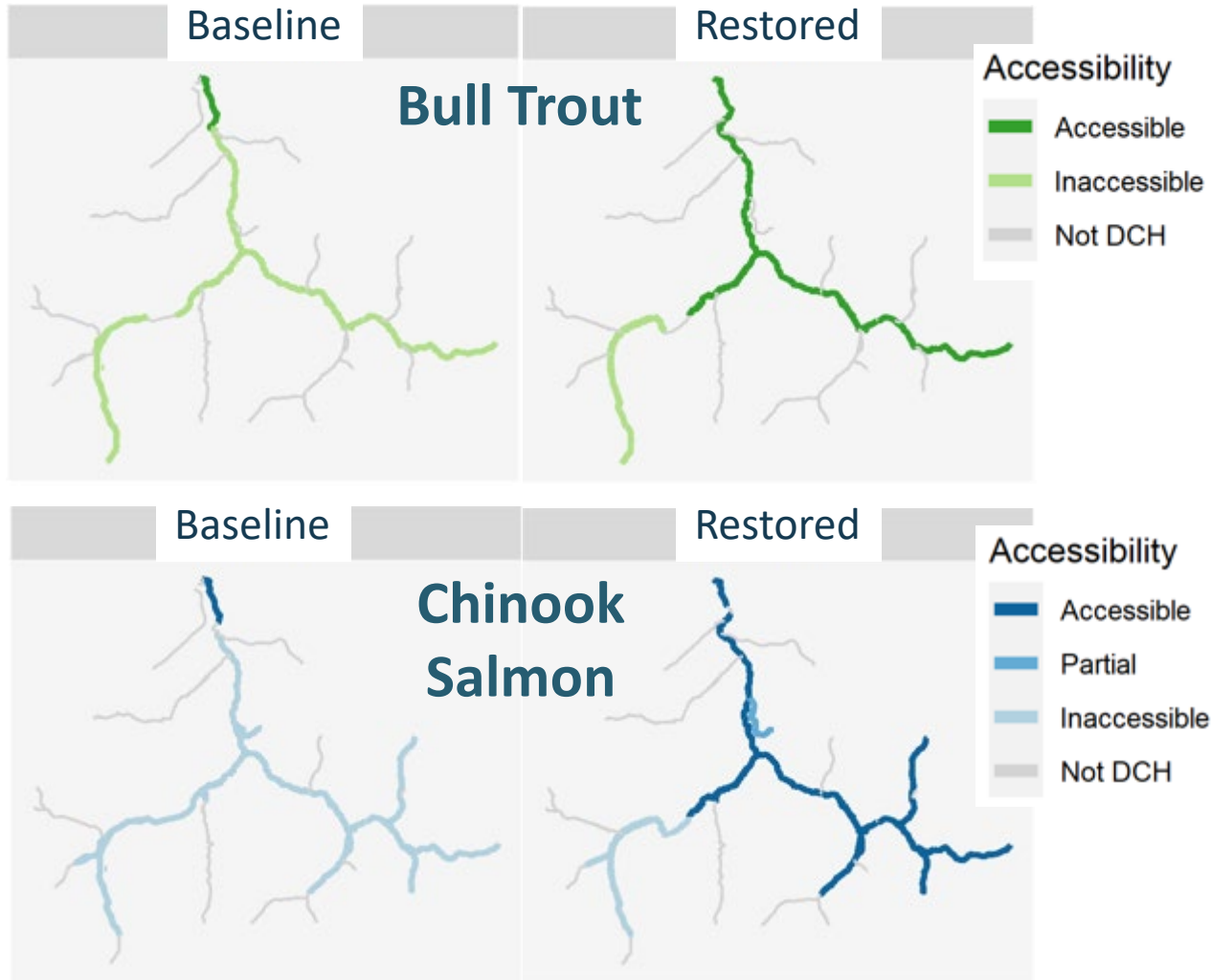
## Original Proposed Action vs. Updated Design

- Reduced maximum summer temperature by approximately 5°C at Sugar Creek confluence
- Increased end of project stream function from 6.8% to 9.5% net increase relative to baseline
- Increased stream shade and large woody debris (LWD) recruitment potential
- Provides lake habitat for adfluvial bull trout



# STREAM ACCESSIBILITY

## STREAM ACCESS



Source: RFAI 127

## Existing vs. Restored Accessible Designated Critical Habitat

- Bull Trout increases 8.7 miles
- Chinook Salmon increases 12.6 miles

RFAI: Request For Additional Information

DCH: Designated Critical Habitat





# TAILINGS STORAGE FACILITY





# TSF/BUTTRESS REFINEMENTS

## Updates to Tailings Storage Facility

- **Updated geosynthetic overliner** drain to avoid having heavy equipment placing gravel on liner while meeting CN Rule requirements. Similar composite liner system as PRO (60-mil LLDPE over GCL)
- **Enhanced buttress** with rock displaced from elimination of Fiddle DRSF, reaches full height in year 5 and further increases FOS, operational flexibility, and ability to maintain freeboard. Yet, maintains same valley length for restored Meadow Creek.
- **Slight increase in capacity** (needed for 14.25-year ore processing plan) without increasing TSF footprint or affecting additional forested wetlands.
- **Full geosynthetic cover on TSF and Buttress**, eliminating water interaction with tailings solids and development rock, dramatically reducing post-closure water treatment volume and duration.
- **Slight design refinements** to diversion and underdrain configuration due to capacity and buttress changes.



# TAILINGS SAFETY

ALL RETAINED OR UPGRADED IN MODPRO2

## THE STIBNITE GOLD PROJECT TAILINGS STORAGE FACILITY WILL BE:

**Best Practice** For Tailings Facility Design

**No known failures** for facilities with these design characteristics

**Added** benefits

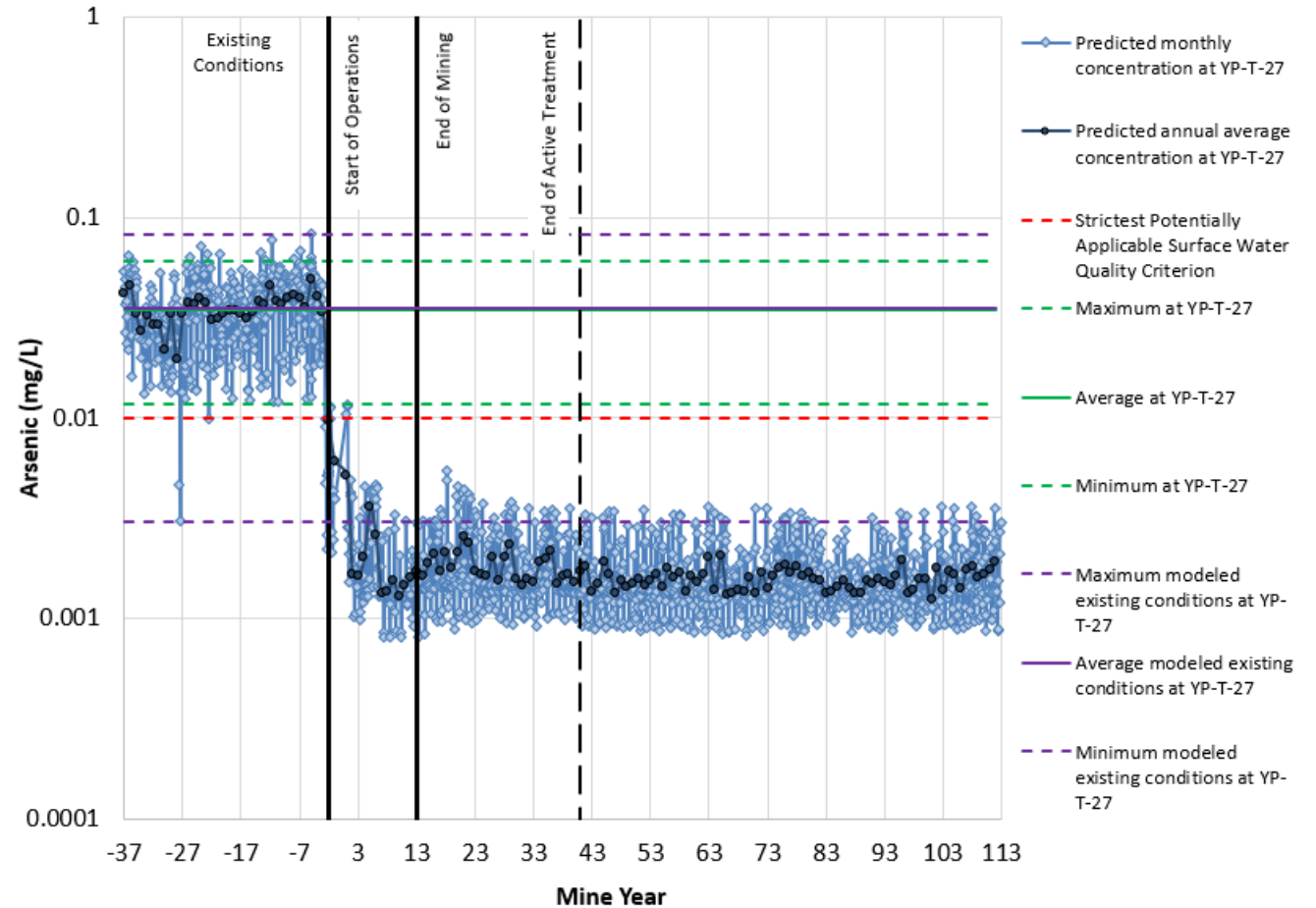
- ✓ Downstream constructed
- ✓ Made with compacted rockfill
- ✓ Fully lined
- ✓ Reviewed by an independent expert
- ✓ Buttressed to over double the factor of safety
- ✓ Designed and regulated in the U.S.
- ✓ 90% contained by mountains



# IMPROVED OUTCOMES



- **Reduced water treatment** need, and negligible impact of TSF on water quality throughout LOM and closure.
- **More flexible intermediate expansion ability with faster buttress construction**
- **Reduced already-negligible risk of failure.**



Predicted water quality in Meadow Creek below TSF/Buttress



# PROJECT MODIFICATIONS

- ✦ **REDUCE ON-SITE FOOTPRINT**
- ✦ **IMPROVE WATER QUALITY**
- ✦ **IMPROVE WATER TEMPERATURE**

- ✓ 70% reduction in Hangar Flats pit volume
- ✓ Complete backfill of Hangar Flats pit
- ✓ Strip ratio reduced to 2.5:1
- ✓ Eliminated Fiddle Development Rock Storage Facility
- ✓ Added geosynthetic covers on pit backfills, TSF buttress and TSF
- ✓ TSF updated to comply with new IDEQ CN rule
- ✓ Enhanced TSF buttress with increased factor of safety
- ✓ Refined ore processing and tailings management to improve tailings composition and reduce Hg emissions
- ✓ Stibnite Lake feature added for water cooling and habitat replacement
- ✓ Enhanced planting to cool water



**NOTE:** All graphs, data, and conclusions are those of Perpetua Resources or their consultants and are provisional. Final analysis from the US Forest Service is available in the Supplemental Draft EIS.



# NET ENVIRONMENTAL BENEFITS IDENTIFIED IN SDEIS

## **Increases Access to Fish Habitat:**

- ✓ Permanent, regional, and beneficial effect on Chinook salmon, steelhead, bull trout and westslope cutthroat trout
- ✓ Long-term and beneficial effect on fish resulting from reduced contaminant concentrations in surface water
- ✓ Net increase in available fish habitat during operations and following closure and reclamation
- ✓ Net increase in suitable rearing habitat for steelhead
- ✓ Improved thermal suitability of newly accessible habitat for Chinook salmon
- ✓ Increased habitat available and increased occupancy probability for bull trout and westslope cutthroat trout following completion of restoration activities including construction of the Stibnite Lake

## **Improves Water Quality and Mitigates Effects on Water Temperature:**

- ✓ Greatly reduced the volume and duration of long-term water treatment due to the adoption of a refined, comprehensive water management plan, and updated closure strategy incorporating engineered cover systems over the TSF and certain pits
- ✓ Improvements in stream temperatures across the majority of the site including significant reductions in portions of Meadow Creek and overall reduced temperatures in the East Fork South Fork Salmon River

**Stibnite Gold Project expected to deliver net environmental benefits relative to baseline conditions**





# PERMITTING - NEXT STEPS



**EIS:** Environmental Impact Statement  
**DEIS:** Draft Environmental Impact Statement  
**FEIS:** Final Environmental Impact Statement

**NOA:** Notice of Availability  
**PRO:** Plan of Restoration and Operations  
**ROD:** Record of Decision



# YOUR VOICE COUNTS

## 1. STAY INFORMED

### VIEW THE SDEIS

[www.PerpetuaResources.com/SDEIS](http://www.PerpetuaResources.com/SDEIS)

### ATTEND OFFICE HOURS & WEBINARS

Sign up: [www.PerpetuaResources.com/webinars](http://www.PerpetuaResources.com/webinars)

### U.S. FOREST SERVICE PROJECT PAGE

[www.fs.usda.gov/project/?project=50516](http://www.fs.usda.gov/project/?project=50516)

## 2. SEND YOUR LETTER BY JAN 10

[www.SupportStibnite.com](http://www.SupportStibnite.com)

[www.fs.usda.gov/project/?project=50516](http://www.fs.usda.gov/project/?project=50516)







# WHAT TO SAY

## 1. YOUR EXPERIENCE

What informs your perspective?

## 2. KEY MESSAGES

**It is time:** 6 Years of NEPA + Changes improved the project and reflect process and public input

**Net Improvement to Legacy Site:** Project provides benefits to water, river habitat

**Antimony:** We need critical mineral production in the U.S.

**American Mining:** U.S. safety and regulatory standards promote responsible production and American mines help local economies.

THANK  
YOU.



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Resources**

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# FORWARD-LOOKING STATEMENTS

Information and statements contained in this presentation that are not historical facts are “forward-looking information” or “forward-looking statements” (collectively, “Forward-Looking Information”) within the meaning of applicable Canadian securities legislation and the United States Private Securities Litigation Reform Act of 1995. We use words such as “may,” “would,” “could,” “should,” “will,” “likely,” “expect,” “anticipate,” “believe,” “intend,” “plan,” “forecast,” “outlook,” “project,” “estimate” and similar expressions suggesting future outcomes or events to identify forward-looking statements or forward-looking information. Forward-Looking Information includes, but is not limited to, information concerning the business of Perpetua Resources Corp. (the “Company”), the Stibnite Gold Project (the “Project”), including but not limited to statements with respect to results of the FS (as defined below); disclosure regarding possible events, conditions or financial performance that is based on assumptions about future economic conditions and courses of action; next steps and courses of action including environmental clean up actions by us and our contractors; our ability to comply with and obtain permits related to the Stibnite Gold Project; actions to be taken by the USFS, the State of Idaho and other government agencies and regulatory bodies; the timing of the public review period for the SDEIS; predictions regarding improvements to water quality, water temperature, and fish habitats and other environmental conditions at the site, including with respect to process and timing of such improvements; reduction of the Project footprint and the anticipated benefits and other effects thereof; our ability to successfully implement the Project and the occurrence of the expected benefits from the Project, including contributions to the workforce, national security and clean energy transition; our and Ambri, Inc.’s (“Ambri”) ability to perform under the supply agreement described in this presentation, which agreement is subject to certain conditions, including completion of the permitting process for the Project, commencement of commercial production of antimony, identification of one or more refiners to transform our antimony concentrate into antimony metal, and mutual agreement on certain material terms, including volume and pricing; the anticipated economic, environmental and other benefits of the Project; the viability of the Project; development and operating costs in the event that a production decision is made; success of exploration, development and environmental protection, closure and remediation activities; permitting time lines and requirements; requirements for additional capital; requirements for additional water rights and the potential effect of proposed notices of environmental conditions relating to mineral claims; risks and opportunities associated with the Project; planned exploration and development of properties and the results thereof; planned expenditures, production schedules and budgets and the execution thereof. Statements concerning mineral resource and mineral reserve estimates may also constitute Forward-Looking Information to the extent that they involve estimates of the mineralization that may be encountered if the Project is developed. In preparing the Forward-Looking Information herein, the Company has applied several material assumptions, including, but not limited to, that the review process under the NEPA (including any joint review process involving the USFS, the State of Idaho and other agencies and regulatory bodies) as well as the public review process and SDEIS will proceed in a timely manner and as expected; that we will be able to obtain sufficient funding to finance permitting, pre-construction and construction of the Project and that all requisite information will be available in a timely manner; the exchange rates for the U.S. and Canadian currencies will be consistent with the Company’s expectations; that the current exploration, development, environmental and other objectives concerning the Project can be achieved and that its other corporate activities will proceed as expected; that the current price and demand for gold and antimony will be sustained or will improve; that general business and economic conditions will not change in a materially adverse manner and that all necessary governmental approvals for planned activities on the Project will be obtained in a timely manner and on acceptable terms; the continuity of the price of gold and other metals, economic and political conditions and operations; and the assumptions set out in the FS. Forward-Looking Information involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the Forward-Looking Information. Such risks and other factors include, among others, the industry-wide risks and project-specific risks identified in the FS; operations and contractual obligations; changes in exploration programs based upon results of exploration; changes in estimated mineral reserves or mineral resources; future prices of metals and minerals; availability of personnel and equipment; equipment failure; accidents, effects of weather and other natural phenomena and other risks associated with the mineral exploration industry; environmental risks, including environmental matters under US federal and Idaho rules and regulations; impact of environmental remediation requirements and the terms of existing and potential consent decrees on the Company’s planned exploration and development activities on the Project; certainty of mineral title; community relations; delays in obtaining governmental approvals or financing; the Company’s dependence on one mineral project; the nature of mineral exploration and mining and the uncertain commercial viability; the Company’s lack of operating revenues; governmental regulations and the ability to obtain necessary licenses and permits; risks related to prior unregistered agreements, transfers or claims and other defects in title to mineral projects; currency fluctuations; changes in environmental laws and regulations and changes in the application of standards pursuant to existing laws and regulations; risks related to dependence on key personnel; COVID-19 risks to employee health and safety and a slowdown or temporary suspension of operations in geographic locations impacted by an outbreak; estimates used in budgeting and financial statements proving to be incorrect; risks related to unforeseen delays in the review process including availability of personnel from the USFS, State of Idaho and other stated, federal and local agencies and regulatory bodies (including, but not limited to, future US government shutdowns); risks related to opposition to the Project; risks related to increased or unexpected costs in operations or the permitting process; risks that necessary financing will be unavailable when needed on acceptable terms, or at all; risks related to the outcome of litigation and potential for delay of the Project, as well as those factors discussed in the Company’s public disclosure record. Although the Company has attempted to identify important factors that could affect the Company and may cause actual actions, events or results to differ materially from those described in Forward-Looking Information, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that Forward-Looking Information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Because it is not possible to predict or identify all such factors, this list cannot be considered a complete set of all potential risks or uncertainties. Accordingly, readers should not place undue reliance on Forward-Looking Information. For further information on these and other risks and uncertainties that may affect the Company’s business, see the “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” sections of the Company’s filings with the SEC, are available at [www.sec.gov](http://www.sec.gov) and with the Canadian securities regulators, which are available at [www.sedar.com](http://www.sedar.com). Except as required by law, the Company expressly disclaims any obligation to update the Forward-Looking Information herein.



# CAUTIONARY NOTE & TECHNICAL DISCLOSURE

*The presentation has been prepared by Perpetua Resources management and does not represent a recommendation to buy or sell these securities. Investors should always consult their investment advisors prior to making any investment decisions. All references to "dollars" or "\$" shall mean United States dollars unless otherwise specified.*

*The material scientific and technical information in respect of the Stibnite Gold Project in this presentation, unless otherwise indicated, is based upon information contained in the technical report titled "Stibnite Gold Project, Feasibility Study Technical Report, Valley County, Idaho" dated effective December 22, 2020 and issued January 27, 2021 (the "FS" or "2020 Feasibility Study"). The 2020 Feasibility Study was prepared in accordance with National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"). NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. These standards differ from the mining property disclosure rules specified in Subpart 1300 of Regulation S-K under the United States Securities Act of 1933 ("Subpart 1300") promulgated by the SEC. Accordingly, information concerning mineral deposits from the 2020 Feasibility Study set forth herein may not be comparable with information made public by companies that report in accordance with U.S. standards.*

*The Company has issued its inaugural Technical Report Summary (the "TRS"), dated as of December 31, 2021, and amended as of June 6, 2022, developed for the Stibnite Gold Project in accordance with the mining property disclosure rules specified in Subpart 1300 promulgated by the SEC. The TRS summarizes, in accordance with the mining property disclosure rules specified in Subpart 1300, the FS, which was completed under NI 43-101, with the following notable differences between the FS and the TRS:*

- The TRS Mineral Resource estimates were developed based on a gold price of \$1,500/oz versus the \$1,250/oz gold price assumed for the FS. The change in gold price results from higher trailing average gold prices at the date of preparation for the respective reports.*
- The Measured Mineral Resources in the FS were reclassified to Indicated Mineral Resources in the TRS due to differences in Subpart 1300 versus NI 43-101 Mineral Resources classification guidelines.*
- The Proven Mineral Reserves from the FS were reclassified as Probable Mineral Reserves for the TRS resulting from the reclassification of the Measured Mineral Resources to Indicated Mineral Resources due to differences in Subpart 1300 versus NI 43-101 Mineral Resources classification guidelines.*
- The TRS is classified as a Preliminary Feasibility level study whereas the FS was classified as a Feasibility level study. This change was driven by the Subpart 1300 requirement that a compliant Feasibility level TRS include a capital cost contingency allowance no greater than 10%, whereas the initial capital cost estimate for the FS included a more conservative allowance at approximately 15%.*

*All other technical analyses, design information, capital and operating cost information, economic analyses, permitting and legal assumptions, conclusions and recommendations are consistent between the TRS and the FS. Readers are encouraged to read the TRS and the Company's Current Report on Form 8-K filed with the SEC on January 3, 2021, as amended by the Company's Current Report on Form 8-K/A filed with the SEC on June 8, 2022, which are available under the Company's profile on EDGAR. Readers are also encouraged to read the FS, which is available on the Company's website and under the Company's profile on SEDAR, for detailed information concerning the Project. See also "Regulatory Information" at the end of this presentation.*

*Investors should be aware that the publication of the SDEIS and the identification by the USFS of the Modified Mine Plan as the Preferred Alternative does not indicate any commitments on the part of the USFS with regard to a final decision. In developing the Final Environmental Impact Statement ("FEIS"), the next phase of the NEPA planning process, the USFS may select various actions based on the Modified Mine Plan or each of the alternatives analyzed in the SDEIS. The SDEIS is subject to review and comment by the public through the public review period, which may be extended by the USFS in its sole discretion.*



# REGULATORY INFORMATION

The FS was compiled by M3 Engineering & Technology Corporation (“M3”) in accordance with NI 43-101 under the direction of independent qualified persons (as defined in NI 43-101) (“Independent QPs”). Independent QPs for the FS include: Richard Zimmerman, SME-RM (onsite and offsite infrastructure, cost estimating and financial modeling) and Art Ibrado, P.E. (mineral processing) with M3; Garth Kirkham, P.Geo. (mineral resources) with Kirkham Geosystems Ltd.; Christopher Martin, C.Eng. (metallurgy) with Blue Coast Metallurgy Ltd.; Grenvil Dunn, C.Eng. (hydrometallurgy) with Hydromet WA (Pty) Ltd.; Chris Roos, P.E. (mineral reserves) and Scott Rosenthal P.E. (mine planning) with Value Consulting, Inc.; and Peter Kowalewski, P.E. (tailings storage facility and closure) with Tierra Group International, Ltd.

The TRS was compiled by M3 in compliance with Subpart 1300 promulgated by the SEC under the direction of Independent Qualified Persons (as defined in Subpart 1300) (“QPs”). QPs for the TRS include: Richard Zimmerman, SME-RM (onsite and offsite infrastructure, cost estimating, mineral processing, financial modeling) with M3; Garth Kirkham, P.Geo. (mineral resources) with Kirkham Geosystems Ltd.; Christopher Martin, C.Eng. (metallurgy) with Blue Coast Metallurgy Ltd.; Grenvil Dunn, C.Eng. (hydrometallurgy) with Hydromet WA (Pty) Ltd.; Scott Rosenthal P.E. (mine planning and mineral reserves) with Value Consulting, Inc.; and Peter Kowalewski, P.E. (tailings storage facility and closure) with Tierra Group International, Ltd.

The material scientific and technical information in respect of the Project in this presentation, unless otherwise indicated, is based upon information contained in the FS, with notable differences between the FS and the TRS identified. Readers are encouraged to read the TRS and the Company’s Current Report on Form 8-K filed with the SEC on January 3, 2021, as amended by the Company’s Current Report on Form 8-K/A filed with the SEC on June 8, 2022, which are available under the Company’s profile on EDGAR. Readers also are encouraged to read the FS, which is available under the Company’s profile on SEDAR and on the Company’s website, for detailed information concerning the Project. All disclosure contained in this presentation regarding the mineral reserves and mineral resource estimates and economic analysis on the property is fully qualified by the full disclosure contained in the FS and the TRS.

Information of a scientific or technical nature in this presentation has been approved by Christopher Dail, AIPG CPG #10596, Exploration Manager for Perpetua Resources Idaho, Inc. and a qualified person (as defined in NI 43-101 and as defined in Subpart 1300).

All mineral resources have been estimated in accordance with CIM definitions, with notable differences to Subpart 1300 identified. Mineral resources are reported in relation to a conceptual pit shell to demonstrate potential for economic viability, as required under NI 43-101; mineralization lying outside of these pit shells is not reported as a mineral resource. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Mineral resource estimates include inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources.

The mineral resources and mineral reserves at the Stibnite Gold Project are contained within areas that have seen historic disturbance resulting from prior mining activities. In order for the Company to advance its interests at the Stibnite Gold Project, the Project will be subject to a number of federal, state and local laws and regulations and will require permits to conduct its activities.

See also “Cautionary Note” at the beginning of this presentation.

## OTHER

Certain monetary amounts, percentages and other figures included in this presentation have been subject to rounding adjustments. Certain other amounts that appear in this presentation may not sum due to rounding.

<https://midasgold.sharepoint.com/:b:/s/MGIICommentPeriod/ERprZ0Hk7W5DkL0c3Wi46GYBCOIdTs4X-RLCCCBjiXyExA?e=ycInAI>

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