

PERPETUA RESOURCES

Critical Resources. Responsible Mining. Environmental Restoration.

www.perpetuaresources.com

OUR TEAM



NEW PERSPECTIVES



ENVIRONMENT SOCIAL RESPONSIBILITY GOOD GOVERNANCE (ESG)

Perpetua Resources is changing the face of mining.

- ✓ Adopted ESG policy in 2019
- ✓ Community Agreement in 2018
- ✓ Annual Sustainability Reporting
- ✓ 60k+ Trees Planted
- ✓ 104+ Months No Reportable Spills
- ✓ Dark Skies commitments

2021 ESG Commitments

- ✓ Company aims to publish sustainability roadmap.





THE PERPETUA WAY

We are driven by the belief that building a **strong and successful business** for our employees, partners and shareholders **starts with doing business the right way.**

For a **modern mining company**, this means we designed a mining project that **restores the environment, creates opportunity and benefits communities.**

We believe that **economic success and environmental success are inseparable**, and this drives everything we do.



STIBNITE, IDAHO



STIBNITE GOLD PROJECT

Coeur d'Alene

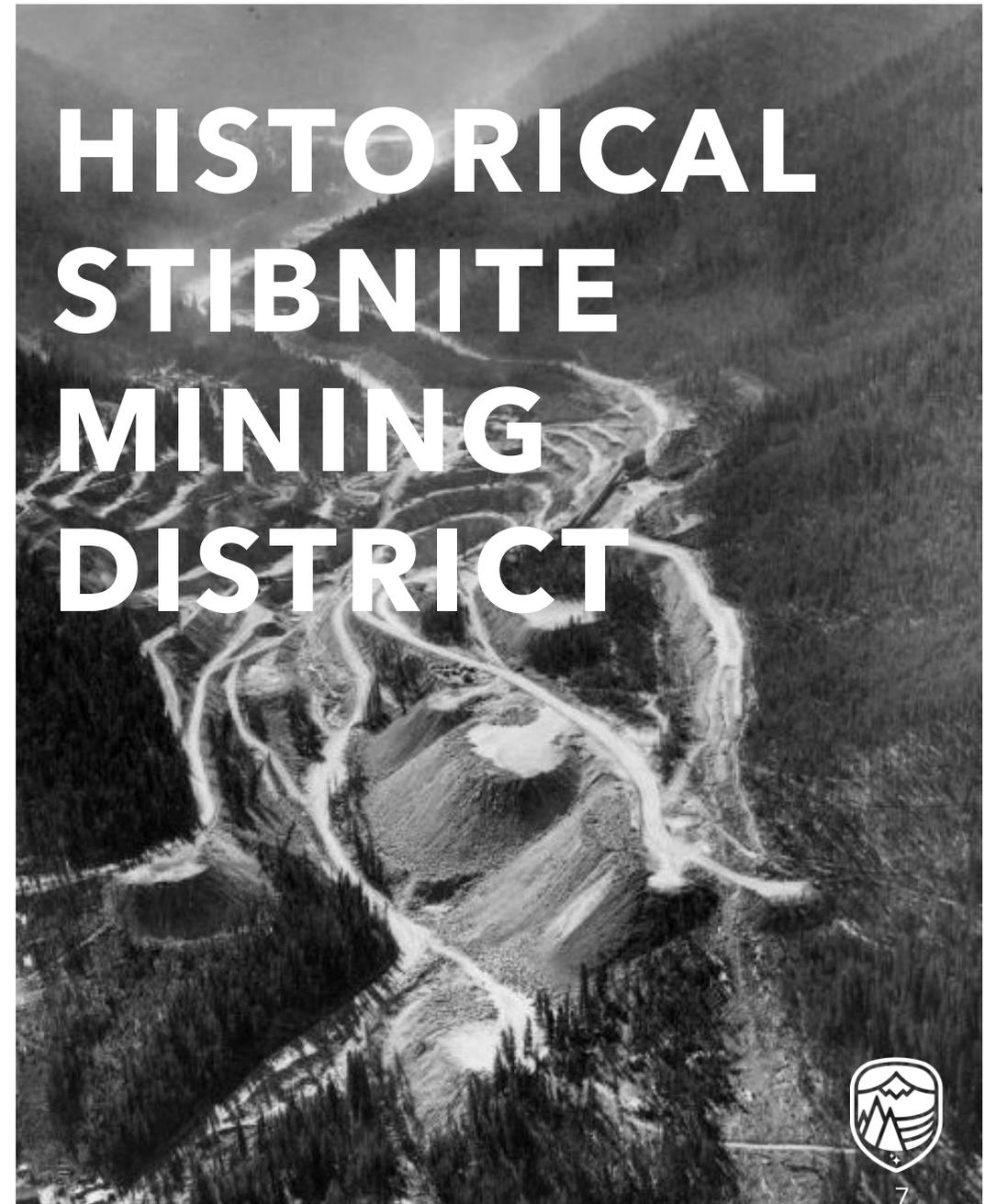
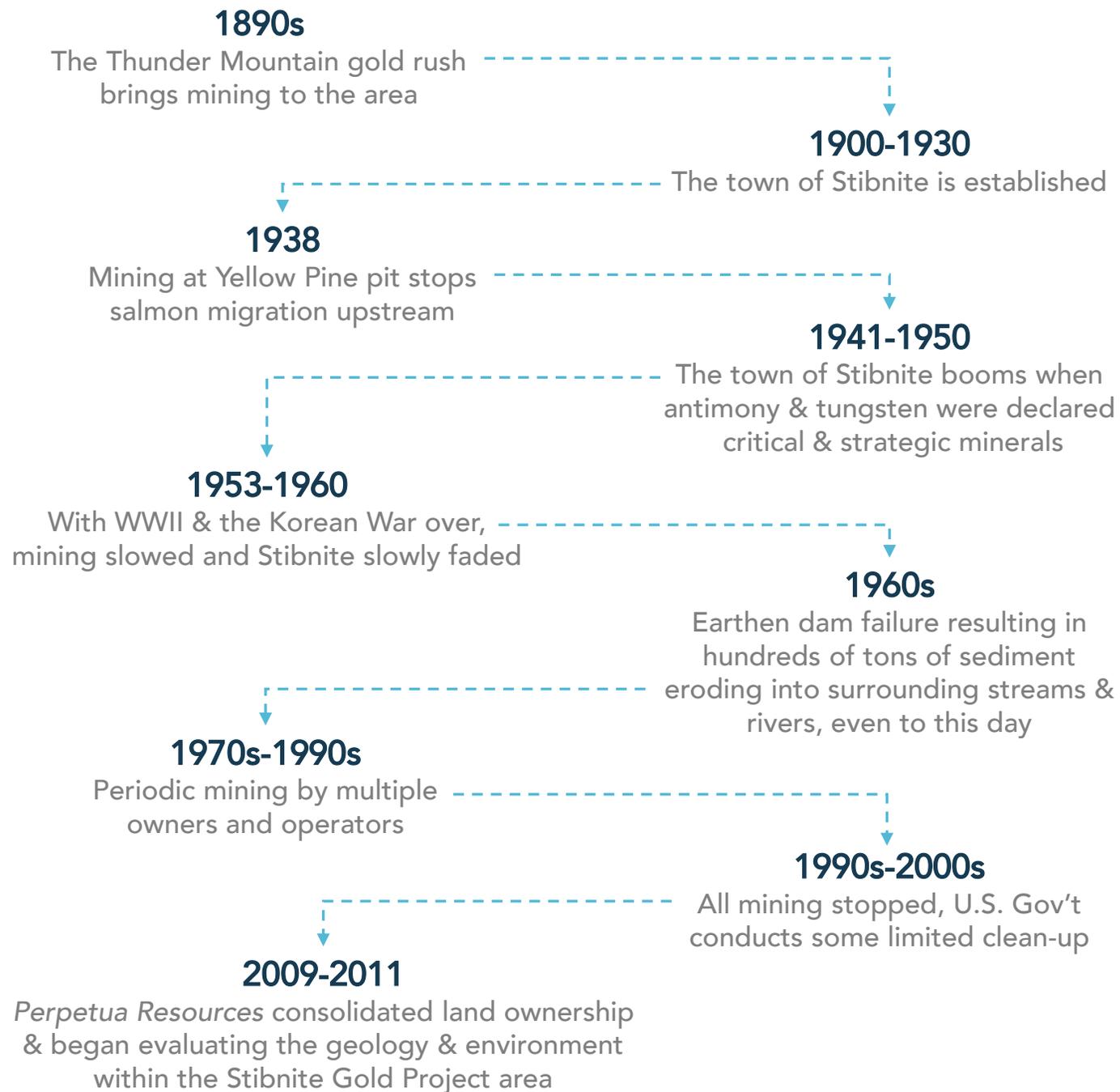
Stibnite Gold Project
Perpetua Resources Au-Sb

McCall

Cascade

Boise





Neutral by the Americas.
It was Germany's use of high-velocity, armor-piercing projectiles with the tungsten carbide core that almost made the north African campaign a successful one.

Tungsten production in China began in 1914, and it has been the largest tungsten producer in the world.

Japan's tungsten production was disrupted by the Indochina war, and the United States' tungsten production was entirely dependent on foreign sources. Tungsten is a rare metal, and its production is concentrated in a few countries. The United States' tungsten production is a small fraction of the world's production. Tungsten is used in a variety of applications, including armor-piercing projectiles, and its production is a critical part of the military-industrial complex.

But the discovery of tungsten in Idaho was a major breakthrough. The Yellow Pine deposit in Idaho was one of the largest tungsten deposits in the world. The discovery of tungsten in Idaho was a major breakthrough. The Yellow Pine deposit in Idaho was one of the largest tungsten deposits in the world. The discovery of tungsten in Idaho was a major breakthrough. The Yellow Pine deposit in Idaho was one of the largest tungsten deposits in the world.

The Government invested millions to build access roads and open up this mine. The Yellow Pine deposit was a lifesaver for this country, but it was geologically complex and difficult to mine.

“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



BM-124

HISTORICAL LEGACY

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

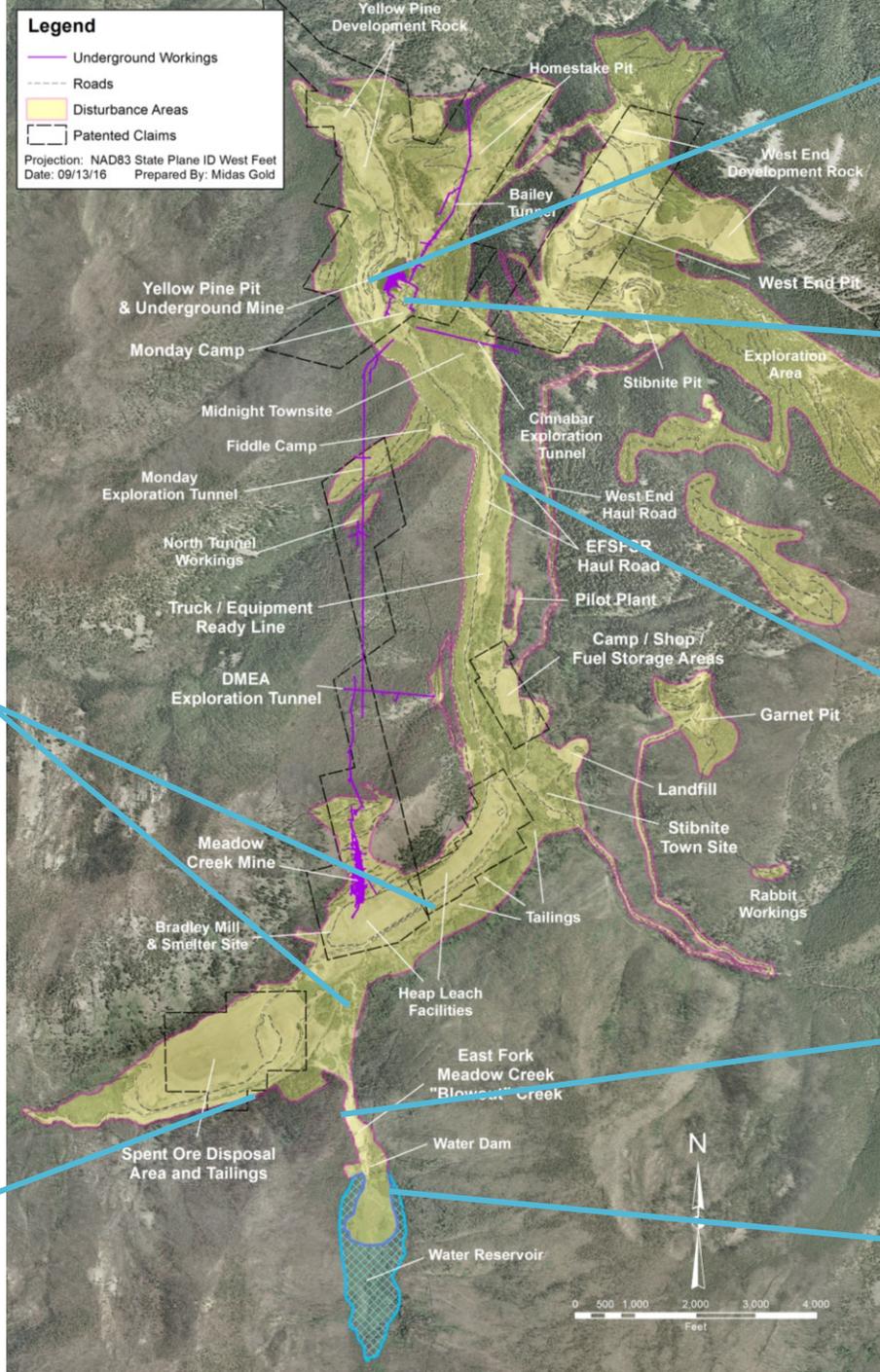
TAILINGS

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 by 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 sustainable approach to restore the environment and develop a modern mining project with critical mineral production.





The Plan of Restoration & Operations (PRO)

6 YEARS of Study and Engineering

4 YEARS of Regulatory Review
under NEPA (National Environmental Policy Act)

75-DAY Public Comment Period for the
Draft Environmental Impact Statement (DEIS)

PLAN DESIGNED TO:

- Provide natural resource restoration via private investment
- Restore salmon migration into upper EFSF Salmon River
- Over 500 direct well-paid jobs for Idahoans
- Provide antimony, a mineral of critical national significance



OUR APPROACH

1. Being Stewards of the Environment is Good Business

Prioritize stewardship and restoration of the land, wildlife and water.

2. Minimize our Impact

Design and construct the project to minimize impact on wildlife, habitat, and community. Including keeping the project footprint limited to previously disturbed areas, when possible.

3. Leave the Area Better

Repair and reclaim past damage. Mitigate and reclaim new disturbances. Improve water quality and aquatic habitat, including fish passage and long-term ground and surface water protection.

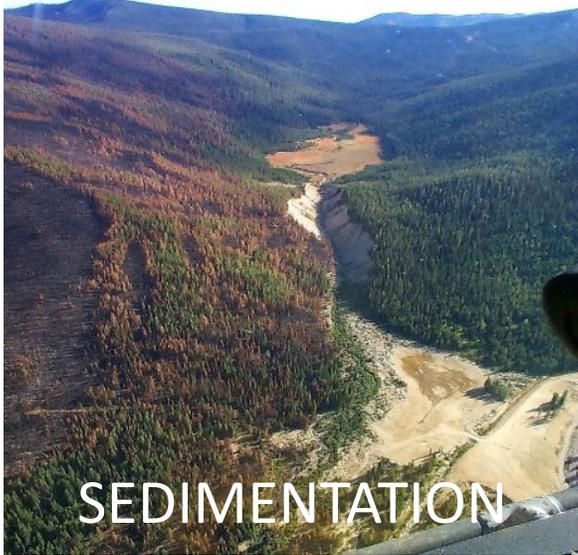
4. Safety First

Identify best practices and prioritize the safety of our people, our communities and the environment through identifying and then eliminating, minimizing or mitigating possible risks.



RESTORATION OF BROWNFIELDS SITE

SOLUTIONS FOR THE ENVIRONMENT



Early repair of the largest source of sedimentation



Pick up, reprocess, reuse and safely store 10.5M tons of tailings and spent ore



Re-establish fish migration and provide permanent river restoration



LEGACY

Water reservoir failed in 1965.

TODAY

The failed dam caused the most significant source of sediment in the watershed. It degrades water quality and fish habitat and diminishes wetlands functionality.

BLOWOUT CREEK

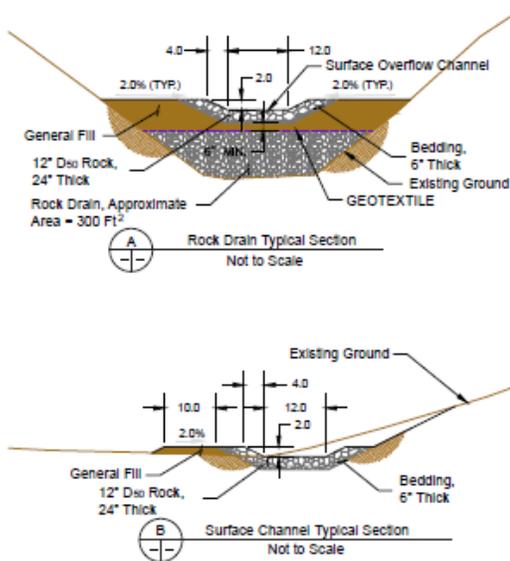


BLOWOUT CREEK RESTORATION

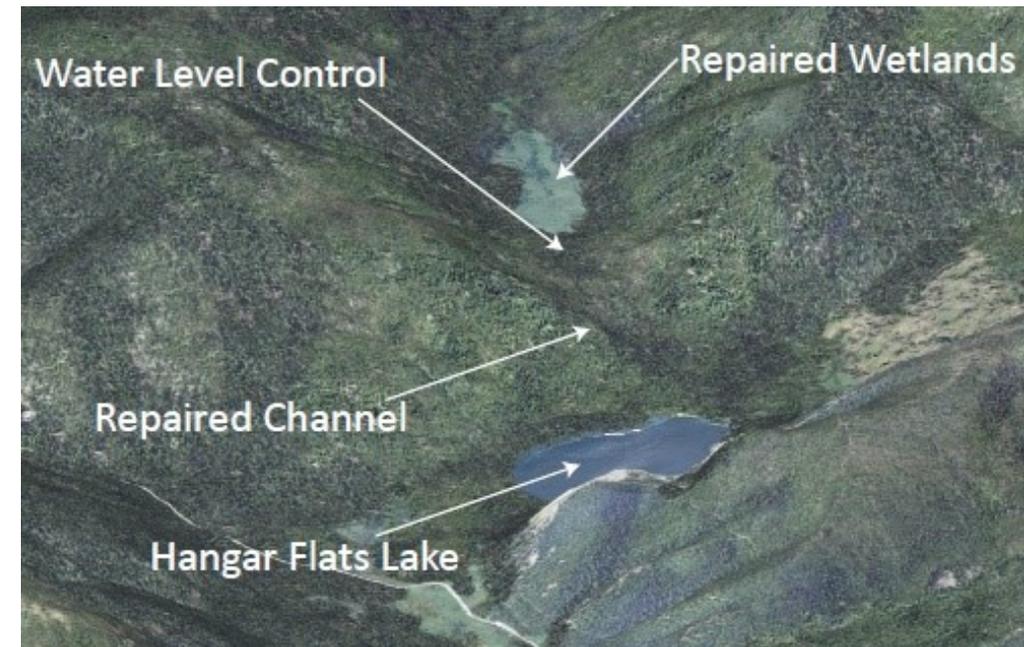
CURRENT



INTERMEDIATE



RESTORATION



LONG TERM SOLUTION to improve water quality, stabilize the water table and re-establish wetlands habitat.



LEGACY

Tailings (beige) were covered with spent heap leach ore (brown) after being deposited, unlined, in the Meadow Creek Valley.

TODAY

Revegetation attempts have been made; however, legacy materials continue to degrade water quality and leach metals into the surface water and groundwater.

SPENT ORE DISPOSAL AREA

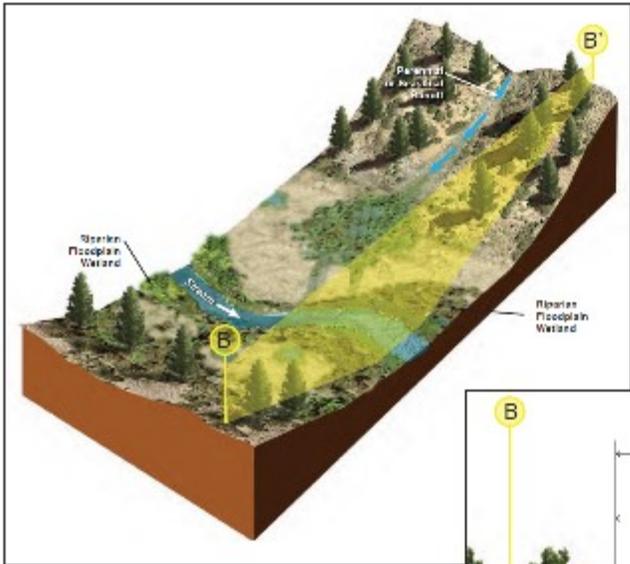


REMOVE & REPROCESS LEGACY TAILINGS

CURRENT

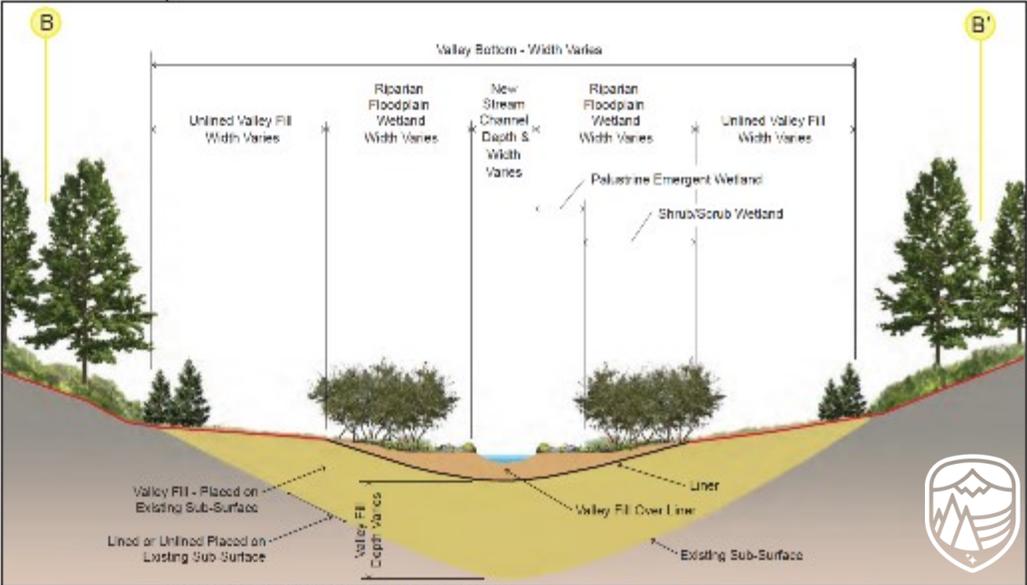


RESTORATION



Reprocess 3 million tons of historical tailings & **repurpose** the 7.5 million tons of spent heap leach ore, removing an existing potential source of water degradation.

Restoration follows construction and operation of TSF and Hangar Flats DRSF within portions of the SODA footprint.



RIPARIAN FLOOD PLAIN WETLAND B-B'
NOT TO SCALE



LEGACY

During the World War II era, the East Fork of the South Fork of the Salmon River (EFSFSR) was diverted to facilitate mining of the Yellow Pine pit, cutting off fish passage.

TODAY

The East Fork of the South Fork of the Salmon River flows directly into the Yellow Pine pit, blocking fish passage.

YELLOW PINE PIT



YELLOW PINE PIT RESTORATION

CURRENT



The East Fork of the South Fork of the Salmon River flows into the abandoned Yellow Pine pit, blocking fish migration to natural spawning areas.

INTERMEDIATE



A 0.9-mile tunnel fishway will allow fish to swim back to historical spawning areas early and throughout mine operations, for the first time in over 80 years.

The lighted fishway will feature resting pools and keep water velocities below the swim speeds of target fish.

RESTORATION

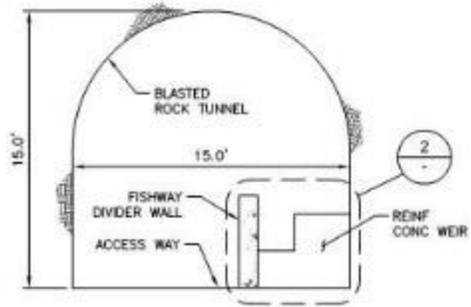


Backfilling the Yellow Pine pit will allow reestablishment of a natural path and gradient for the East Fork of the South Fork of the Salmon River. This work will begin in year 7 of operations.



INTERIM FISH PASSAGE

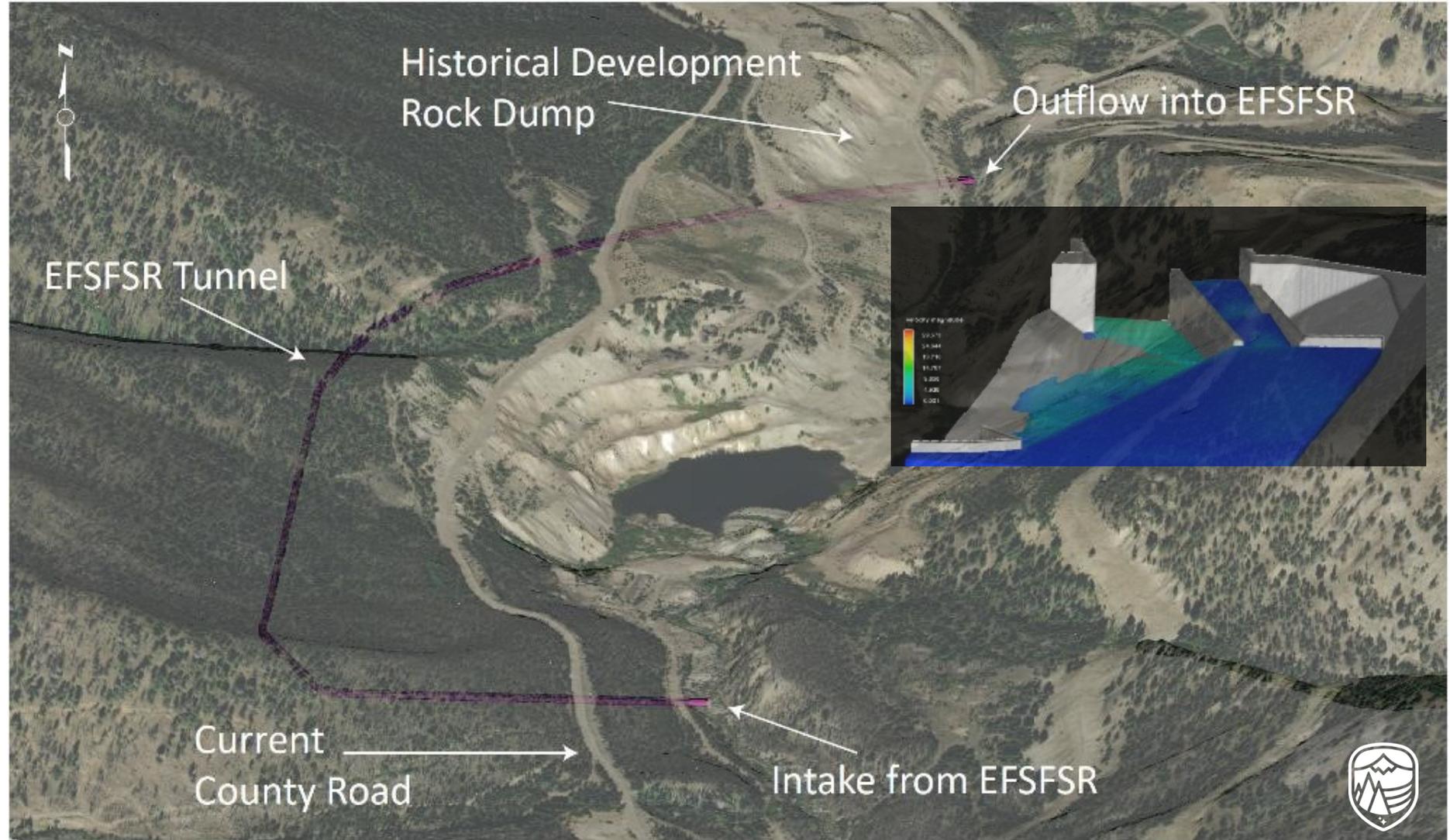
EFSFSR



SECTION
SCALE: 1" = 5'

Fishway Details

- 2' high fish weir within 4' weir
- 5' divider wall
- Weir anchored to bedrock/tunnel lining
- Divider wall similarly anchored
- Weir spacing 22' @ 4.5% and 66' @ 1.5%





STACKROCK GROUP

BACKFILL AND RESTORATION BEGINS IN YR 7





RESOURCES FOR RESTORATION & ECONOMIC RENEWAL



INDUSTRY AND THE ENVIRONMENT CAN WORK TOGETHER

ECONOMY + ENVIRONMENT

Invest \$1 billion in Idaho

Provide well-paid jobs to Idahoans

Grow economic opportunity with an estimated \$43 million in direct annual payroll during operations & \$86 million in local and state taxes*

Reprocess historical tailings

Restore fish passage

Repair historically impacted waterways

Remediate areas contributing to water degradation

Rehabilitate habitat and natural vegetation

Reuse materials on site



A UNIQUE AMERICAN OPPORTUNITY



- ✓ Redeveloping one of **largest, highest grade** and **lowest cost** gold projects in the U.S.*
- ✓ **Superior project economics** with ~15 year reserve life and <3 year payback period*
- ✓ **Re-establishing U.S. critical mineral production**
- ✓ Located in **stable mining jurisdiction** with **Idaho community** and **political support**
- ✓ **Sustainable approach** to restoring the environment, improving a legacy, and creating value for all stakeholders
- ✓ **Attractive valuation**, trading at 21% of NPV^{(5%)*}, with **significant near-term catalysts**

**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.*



GOLD

4.8 MILLION OUNCES OF GOLD (Reserve)

Total resource ~6 million ounces.

79
Au
Gold
196.967

AEROSPACE
Gold is used in space vehicles, satellites and space suits.

HEART HEALTH
Gold is biocompatible & used medical technology.

TECHNOLOGY
Every cell phone has 50 cents of gold.

The **Stibnite Gold Project** would be the 4th largest U.S. gold operation by grade and likely produce between ~5-6 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.

* Based on the 2020 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.

ANTIMONY

100+ MILLION POUNDS OF ANTIMONY

51
Sb
Antimony
121.760

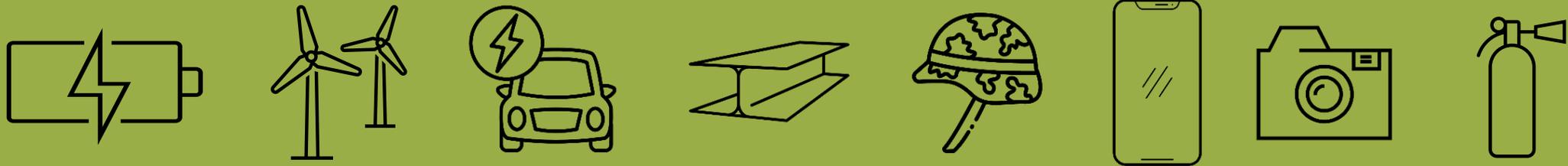
The **Stibnite Gold Project** would be the only domestic source of antimony mined in the U.S.

Critical for the defense and technology sectors, the United States uses **44 million pounds** of antimony each year, but we are **heavily dependent on China** to supply this strategic mineral.



A GREEN ECONOMY STARTS AT THE SOURCE

ANTIMONY (Sb): A “critical mineral” supporting the transition to a green economy and is vital to national security.



“A low-carbon future will be very mineral intensive because clean energy technologies need more materials than fossil-fuel -based electricity generation technologies.”

- *Minerals for Climate Action the Mineral Intensity of the Clean Energy Transition*, Work Bank, May 2020

Antimony is key to liquid metal battery storage solutions needed for a low carbon energy grid.

- *Antimony Molten-Salt Batteries, the New Metal in Mass Storage*, Harllgarten and Company, Jan. 2021



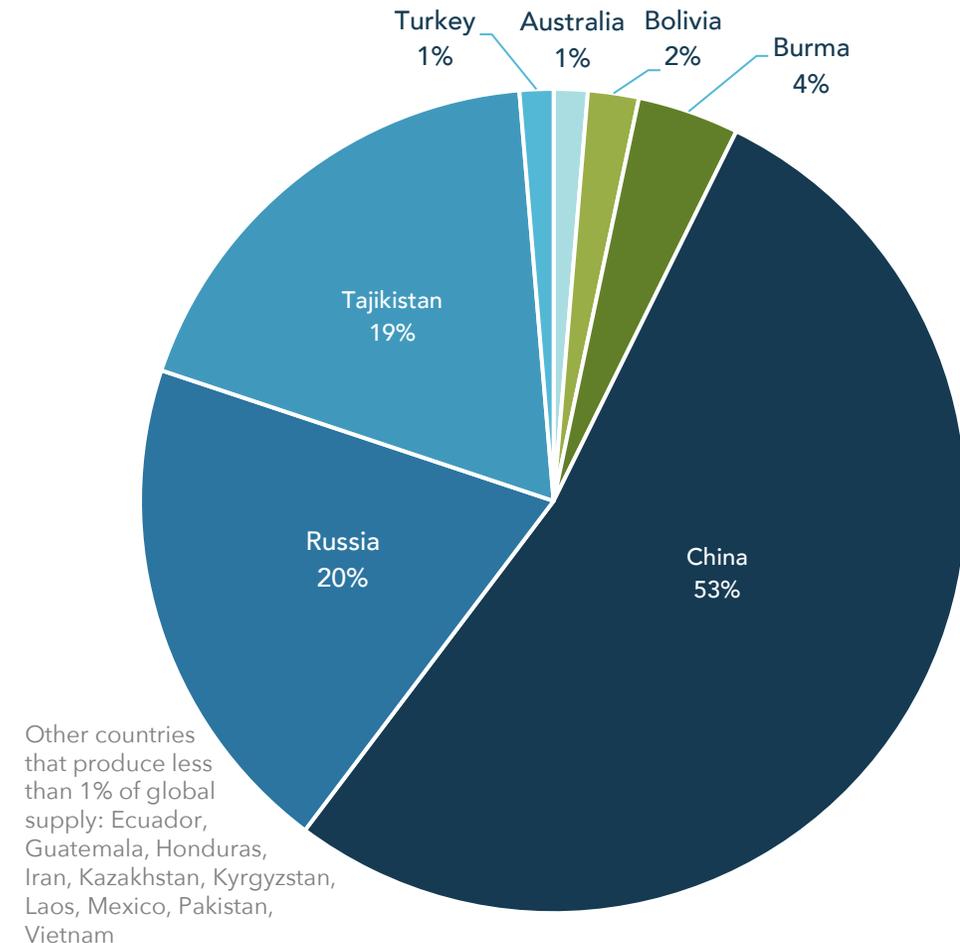
ANTIMONY: CRITICAL MINERAL

NECESSARY FOR AMERICA'S NATIONAL SECURITY
AND ECONOMIC INDEPENDANCE

SUPPLY RISK

1. China and Russia dominate the world antimony supply (>70%)
2. No domestic antimony production in the United States
3. Perpetua Resources would become first domestic source of antimony
4. Estimated Production¹ Would Equal >35% of US annual demand

World Antimony 2020 Production (USGS)



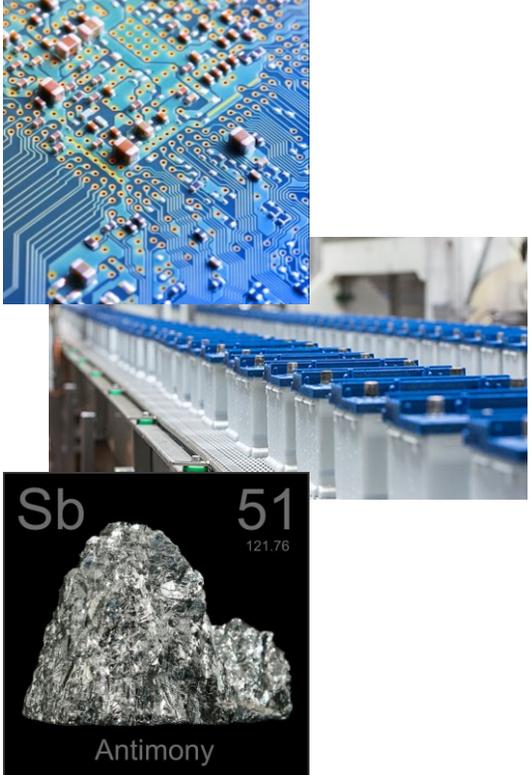
1. Antimony is a chemical element included on the U.S. Interior Department's list of Critical Minerals
2. Based on the first 6 years of the 2020 FS, which is intended to be read as a whole and sections should not be read or relied upon out of context. The information in this presentation is subject to the assumptions, exclusions and qualifications contained in the FS. See "Regulatory Information" at the end of this presentation.

SECURING AMERICA'S CRITICAL SUPPLY CHAINS

President Biden's recent Executive Order requires supply chain risks and policy recommendations be brought forward in four key areas:

**ANTIMONY IS A KEY MINERAL
IN THREE OUT OF THE FOUR AREAS**

- ✓ Semiconductor manufacturing
- ✓ High-capacity batteries
- ✓ Critical minerals
- Pharmaceuticals



Perpetua Resources can help secure U.S. production of antimony

Source: White House Executive Order February 24, 2021



\$1+ BILLION INVESTMENT IN IDAHO

\$1+ billion total construction and capital investment

37 miles of road: new and upgraded roads including 5 bridges

72 miles of transmission line: new and upgraded 138 kV power line and 5 new substations

57,000 cubic yards concrete

5,580 tons of rebar

7,730 sq ft of masonry

9,555 tons of structural steel

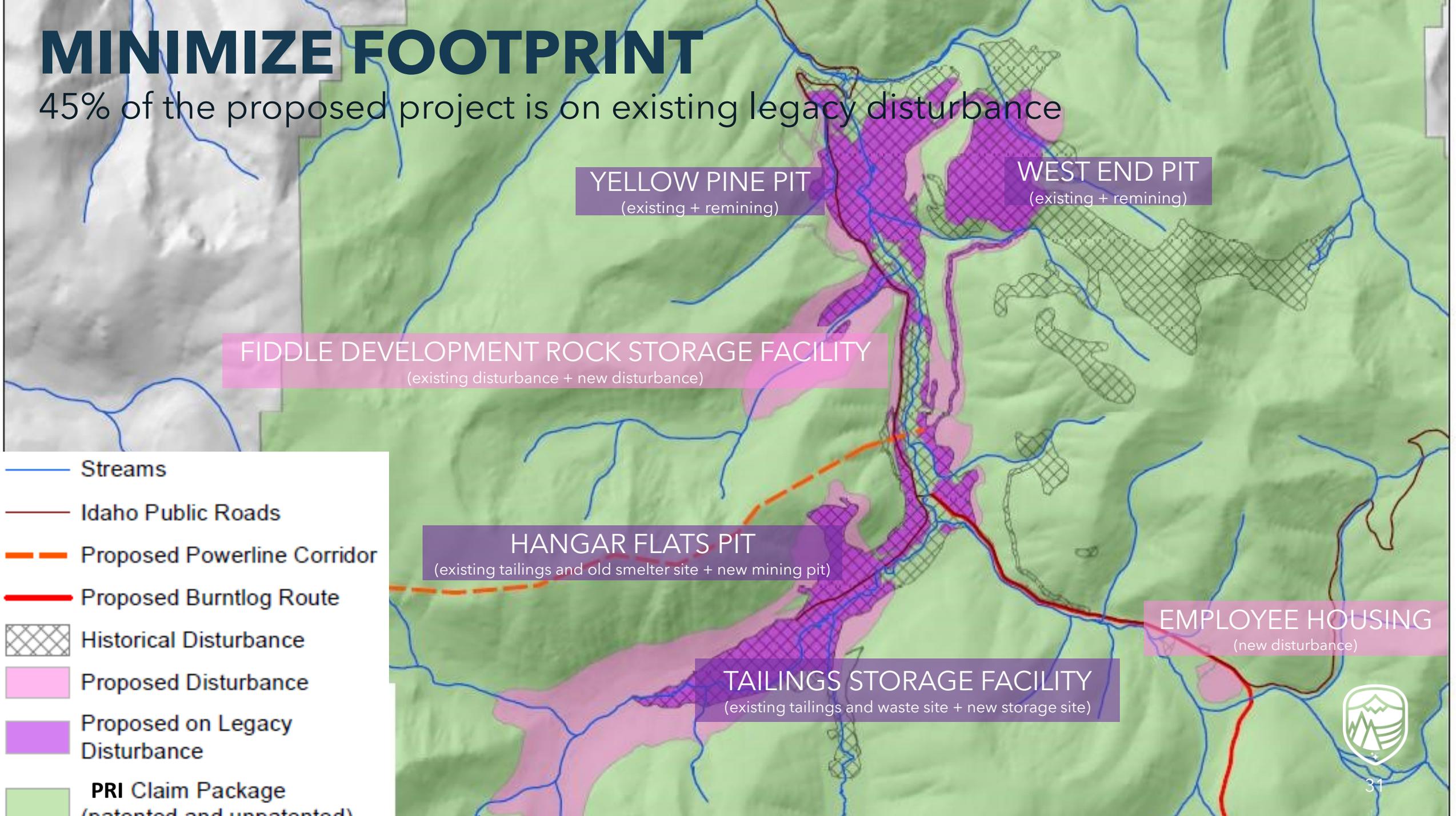


PROJECT FOOTPRINT



MINIMIZE FOOTPRINT

45% of the proposed project is on existing legacy disturbance



YELLOW PINE PIT
(existing + remining)

WEST END PIT
(existing + remining)

FIDDLE DEVELOPMENT ROCK STORAGE FACILITY
(existing disturbance + new disturbance)

HANGAR FLATS PIT
(existing tailings and old smelter site + new mining pit)

TAILINGS STORAGE FACILITY
(existing tailings and waste site + new storage site)

EMPLOYEE HOUSING
(new disturbance)

- Streams
- Idaho Public Roads
- Proposed Powerline Corridor
- Proposed Burntlog Route
- Historical Disturbance
- Proposed Disturbance
- Proposed on Legacy Disturbance
- PRI Claim Package (patented and unpatented)



LIMIT FOOTPRINT THROUGH RESTORATION

Reclamation:

stable, static, little to no change; may not mimic natural conditions



Restoration:

naturally dynamic, deformable, resilient; mimics natural conditions



Perpetua Resources has committed to a **RESTORATION** standard wherever possible.



RESTORATION UPFRONT AND CONCURRENT

		Period	Construction			Operations															Closure				
		ACTIVITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
On-Site Mine Features/Activities	EFSFSR Diversion (tunnel)		2																						
	Remove spent ore in Meadow Creek valley		2																						
	Legacy material reprocessing					4																			
	Remove legacy development rock at Yellow Pine and West End pits				3																				
Stream and Wetland Enhancement, Restoration and Mitigation	Install rock drain and weir at Blowout Creek, elevate GW table			3																					
	EFSFSR stream habitat and riparian enhancements			3																					
	Lower Meadow Creek diversion around Hangar Flats pit			3																					
	Fiddle Creek restored												11												
	EFSFSR, Hennessy Creek, Midnight Creek restored														14										
	Upper Meadow Creek (TSF) restored																					20			
	Blowout/Lower Meadow Creek routed to HF Lake																		17						
	Decommission fish tunnel																				18				
	Garnet Creek restored																				18				
	Route West End Creek into West End pit																		16						
	Final restoration of Blowout Creek																		16						
	Wetland mitigation				3																				
	Revegetation	Reforest burned areas		1																					
Revegetation			1																						
Monitoring	Ongoing environmental monitoring		1																						

Perpetua Resource restoration and mitigation plans provide early action on legacy features and concurrent restoration and reclamation of new disturbance.



LOOKING TO THE SKIES

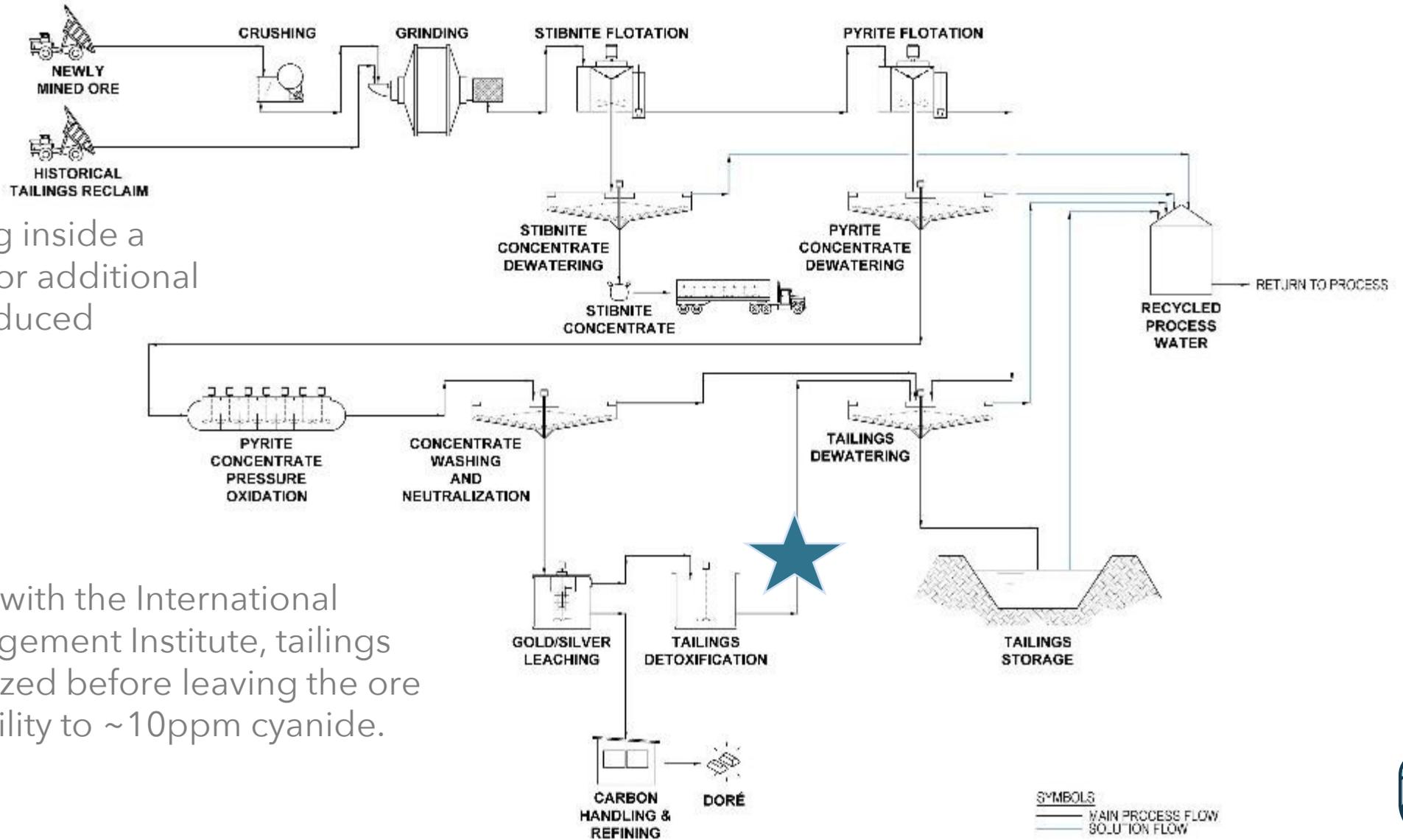
CREATING RESPONSIBLE NIGHT LIGHTING AT THE STIBNITE GOLD PROJECT TO MITIGATE LIGHT POLLUTION.



ORE PROCESSING

✓ Ore processing inside a facility allows for additional control and reduced exposure.

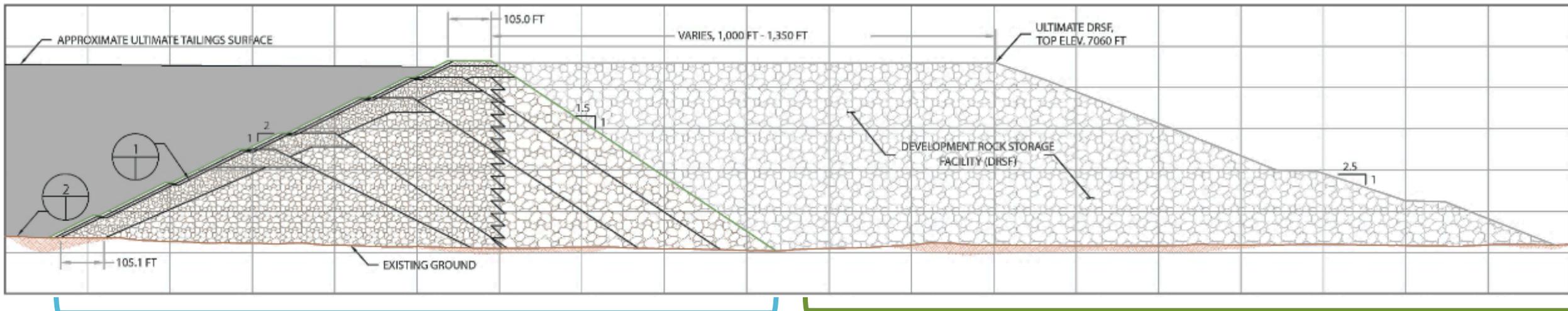
✓ In accordance with the International Cyanide Management Institute, tailings will be neutralized before leaving the ore processing facility to ~10ppm cyanide.



TAILINGS MANAGEMENT

Designed for long term safety

- Factor of safety greatly exceeds Idaho's 1.5 requirement
- 90% contained by mountains
- Downslope (downstream) method of construction for enhanced stability
- Fully lined to protect water quality
- Area designed to become a wetlands & riparian habitat
- Buttressed by 65 million tons of development rock, which substantially increases the overall factor of safety
- Rockfill embankment material enhances stability vs. soil construction



Designed to Regulatory Standards

Rock Buttress Doubles Factor of Safety



TAILINGS SAFETY 101

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 double the factor of safety
- ✓ Designed and regulated in the U.S.
- ✓ 90% contained by mountains



LIMIT FOOTPRINT BY USING LEGACY AREAS



Buttress

Tailings

Tailings dam

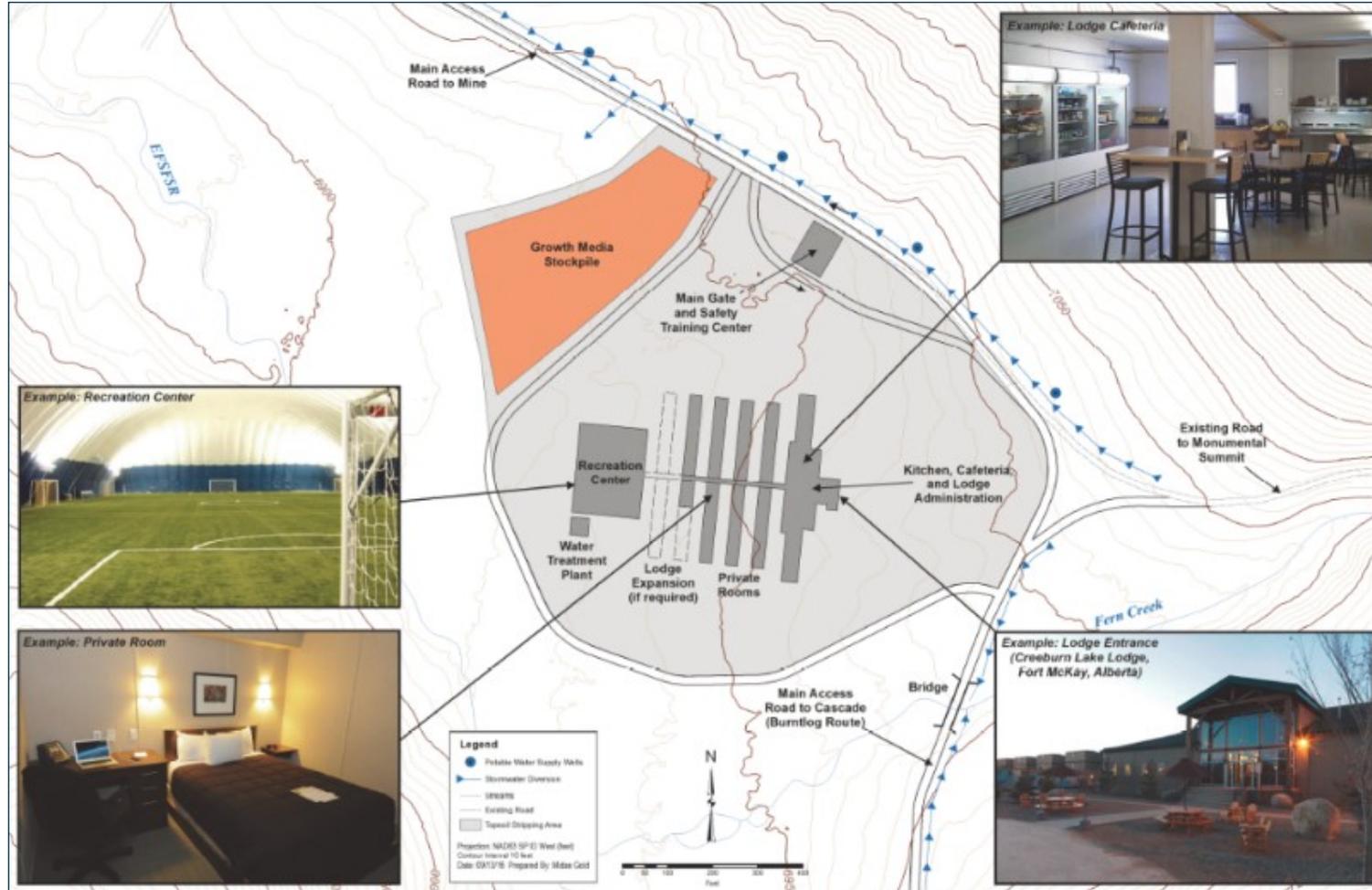
Historic spent ore
and tailings



INFRASTRUCTURE



EMPLOYEE HOUSING



ONSITE HOUSEING

1. Two-week on/of work cycle
2. Bus/van service minimizes daily commute time to mine
3. Decreases road traffic and dust, lower accident risk & lower greenhouse gas emissions
4. Accommodation for ~250+ people

Hotel-style accommodation.

Meal service, laundry, housekeeping, first-aid, Wi-Fi, health services, recreation facilities, 24-hour food



STIBNITE GOLD LOGISTICS FACILITIES

Administrative and Transportation Facility

IN-TOWN JOBS

Accounting & Human Resource

Purchasing & Accounting

Administration & Management

Warehousing & Storage

Laboratory

REDUCE TRAFFIC

Use as point of transportation for staff and site load consolidation

Reduces dust and sediment generated by vehicles

Reduces risk of accidents along route

Reduce greenhouse gas emissions



SITE ACCESS

Prioritize safety, avoid water ways

CURRENT ROUTE

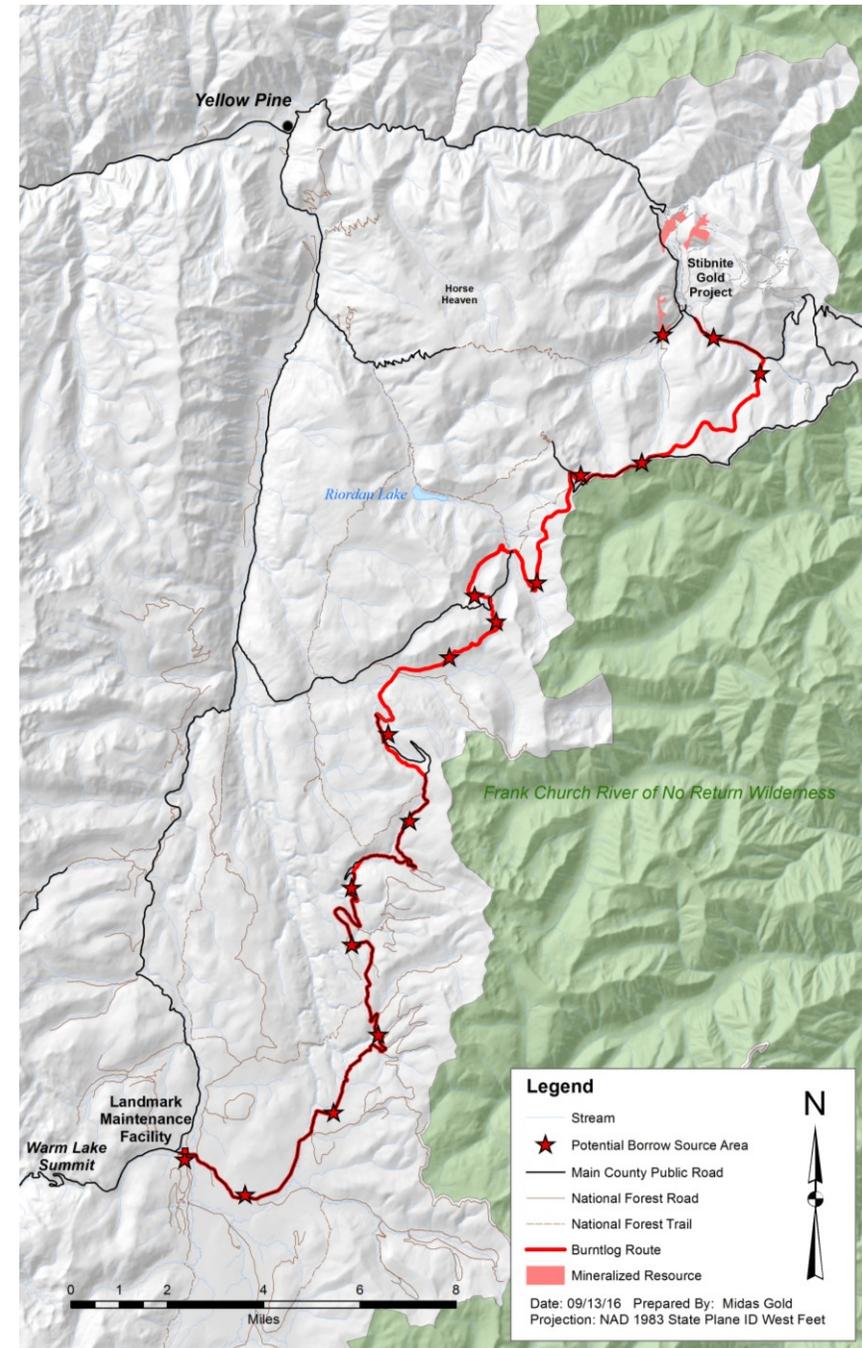
Travel adjacent to larger waterways via Johnson Creek or South Fork Road to Yellow Pine and Stibnite.

STUDIES EVALUATED

- Proximity to fish-bearing waterways
- Impact on residents and recreationalists
- Safety risks to employees
- Cost to upgrade
- Design of vehicles

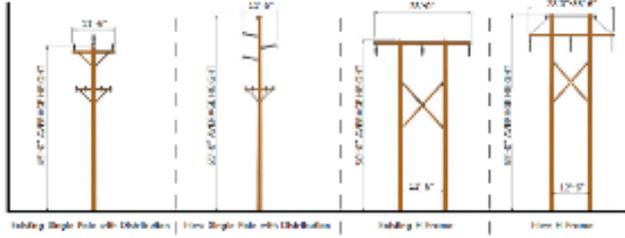
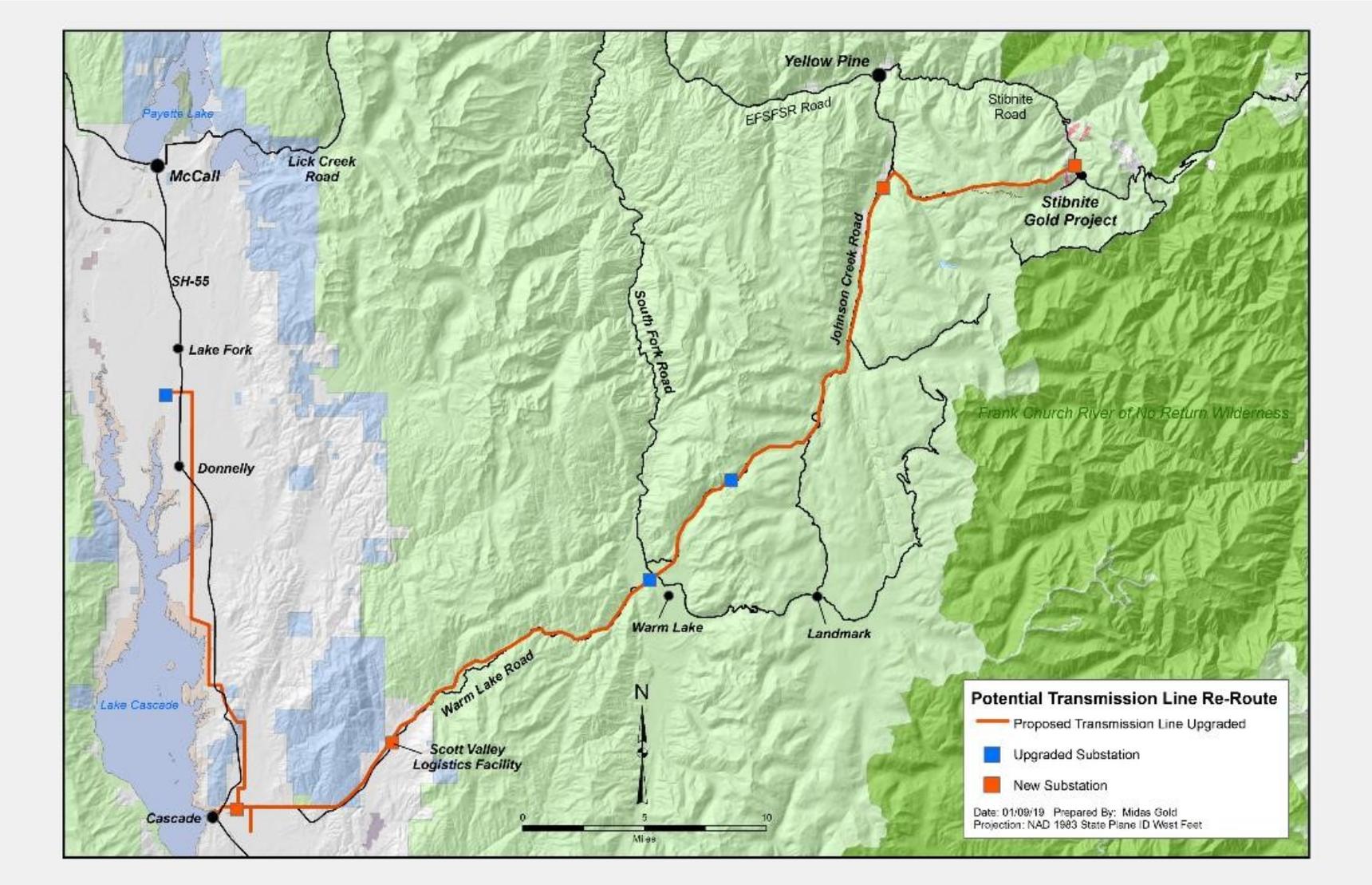
NEW BURNTLOG ROUTE PROMOTES SAFETY

- 18 miles improving existing Burntlog Road (FS 447)
- 17 miles of new pioneered road
- 2 miles improving existing Thunder Mountain Road (FS 375)
- Avoids travel along waterways.
- Provides Year-round access.



TRANSMISSION LINE UPGRADE

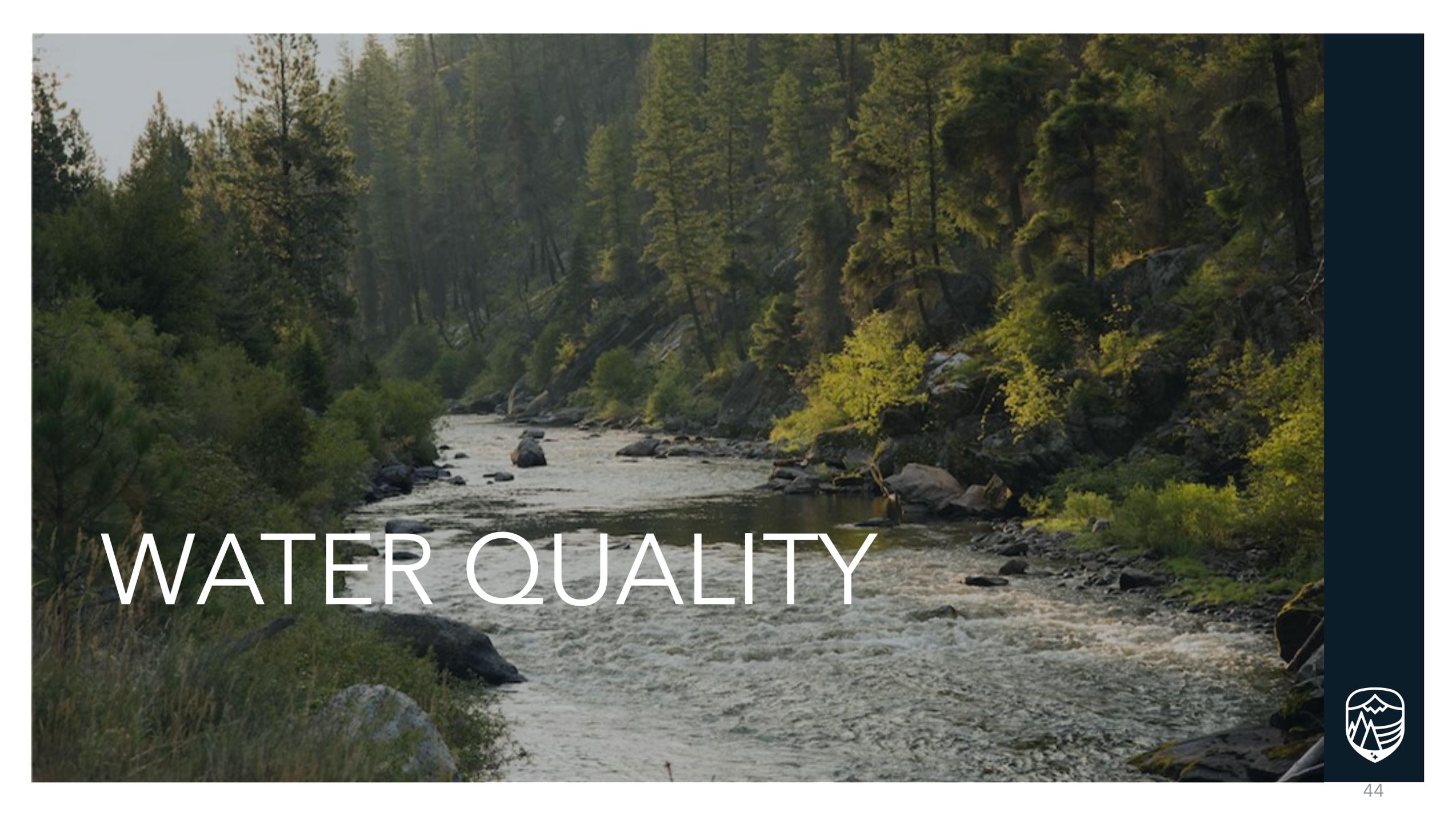
Project will upgrade 73 miles of transmission line at company's expense



INCREASED POWER AND RELIABILITY

- Upgrade current 69-kV to 138-kV
- New and upgraded substations
- Costs will be incurred by Company, not Idaho Power rate payers.
- We proposed changes to the route to reduce environmental impact and improve location for local residents.





WATER QUALITY



ACID ROCK DRAINAGE?

WHAT IS ACID ROCK DRAINAGE?

Acid rock drainage is a naturally occurring process of sulfide minerals oxidizing, combining with water and creating acid.

WHAT ABOUT AT STIBNITE?

The substantial majority of rocks we will mine have no potential for generating acid. While some rocks at site have low levels of sulfides, which can generate acid, they also have significant quantities of **carbonate and other minerals that neutralize acid generation potential**. We've conducted years of testing in 3rd party labs and ARD has not been found.

IN FACT:

After 100 years of mining at Stibnite, acid rock drainage has not occurred. The Stibnite Gold Project would be mining in the same locations as past operators.



WATER QUALITY TODAY

WATER QUALITY MONITORING PROGRAM

- Baseline groundwater and surface water monitoring program initiated in 2011 and is ongoing
- Quarterly sampling of streams, natural seeps, adit/dump seeps, and groundwater monitoring wells – over 40 surface sites and 30 wells

SUMMARY OF FINDINGS

- No evidence of net-acid generation from natural seeps or past mining activities
- Arsenic and Antimony are the principal metals of concern impacting surface and ground water in the Stibnite Mining District
- While the area has naturally high mineralization, unconstrained legacy tailings, historic adit seeps and legacy waste rock dumps are principal sources of metals entering surface waters



GEOCHEMICAL MODELING

Proposed action site-wide water chemistry modeling (SWWC)

MINING IMPACTS +

Water quality impacts from various mine facilities

- Contact water and infiltration from DRSFs
- Runoff water from TSF
- Pit de-watering and pit-lake water quality

+

RESTORATION ACTIVITIES

Water quality improvement from reclamation activities and water management practices

- Removal of SODA, Bradley Tailings, Hecla Heap Leach
- Diversion of West End Creek around West End
- Diversion/restoration of the East Fork around/over Yellow Pine
- Pit de-watering and pit-lake water quality

= NET IMPROVEMENT IN SURFACE WATER QUALITY

Operational practices and reclamation activities are predicted to result in an **improvement in downstream surface water quality with a net decrease in As and Sb** relative to current baseline conditions during operations.



COMMITTMENT TO EARLY RESTORATION

ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT (ASAOC)

An ASAOC is necessary to allow a third-party to voluntarily address environmental conditions at an abandoned mine site without inheriting the liability of the conditions left behind by past operators.

SOLUTIONS START NOW PATH FOR ABANDONED MINE RESTORATION

January 15, 2021: Perpetua signed ASAOC with the Environmental Protection Agency & the U.S. Forest Service with concurrence of the U.S. Department of Justice, to perform agreed early actions to improve water quality conditions at Stibnite

Engagement: The Idaho Department of Environmental Quality and two Idaho Tribes were involved in process, multiple government-to-government consultations

Multiple Phases: Immediate, time-critical needs are addressed first over 4 years; then should Stibnite Gold Project be permitted, and all parties agree, the Agreement allows for a comprehensive site cleanup

ASAOC does not approve mining activity, it only provides for clean up activity of legacy waste and is separate from the NEPA process reviewing the Stibnite Gold Project



IDAHO OPPORTUNITY

COMMUNITY
HALL →



IDAHO OPPORTUNITY

COMMITMENT TO HIRE LOCAL



PROVIDE 500+ DIRECT JOBS



ECONOMIC INVESTMENT





IDAHO JOBS

IN IDAHO, ~2 INDIRECT JOBS CREATED FOR EVERY DIRECT JOB IN MINING.

~ 2-3-year construction period*

Approx. **600-700 direct jobs in Idaho**

Average wage: **\$70,000**

Average annual **payroll ~ \$34 million**

~ 12-15 year operating life*

Approx. **500-600 direct jobs in Idaho***

Average wage: **\$80,000***

Average annual **payroll ~\$42 million**

**(Life of mine average)*

~ 3-5-year final reclamation and closure*

Approx. **50-200 direct jobs in Idaho**

Average wage: **\$60,000**

NOTE: Based on the 2014 PFS, 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 PFS and FS. See "Regulatory Information" at the end of this presentation.



ECONOMIC OPPORTUNITY

DIRECT BENEFITS*

- **\$232 million** in average annual expenditures
- **\$42 million** in annual payroll (operations)
- **\$329 million** in federal corporate income taxes
- **\$86 million** in state and local taxes and mine license fees
- **\$3.8 million** in local taxes for schools, government, law enforcement, etc

DIRECT, INDIRECT AND INDUCED BENEFITS*

- **\$506 million** in Federal Taxes
- **\$218 million** in State and Local Taxes
- **\$152 million** in sales transactions in the regional economy
- **\$298 million** annually in sales transactions in Idaho

\$78M spent in Idaho 2014-2020

COASTLINE
Equipment

Rocky Mountain
SIGNS
McCall, Idaho 634-2045
STICKERS, BANNERS, WINDOW GRAPHICS,
MAGNETS, VEHICLE GRAPHICS, ETC


COUGAR DAVE'S
FOOD & SPIRITS

 **LEGACY** *Seeds*


MOUNTAIN TECH
PERFORMANCE





WORKING TOGETHER

For the future of Idaho



The Stibnite Advisory Council brings together communities across central Idaho to discuss the challenges and opportunities presented by the Stibnite Gold Project.



www.stibniteadvisorycouncil.com





STIBNITE FOUNDATION

SUPPORTING IDAHO

We empower Idahoans across the Stibnite Foundation region by providing funds to benefit people, the environment and communities within our region.



GRANTS

INVESTING IN OUR COMMUNITIES

The Stibnite Foundation is excited to help organizations who share our values of helping people, the environment and communities. Grant applications are now available to organizations throughout the Stibnite Foundation Region. Make sure to submit your grant by May 31, 2020.

www.stibnitefoundation.com



WE BELIEVE IN IDAHO

This part of Idaho is special. At the heart of this region are many amazing people working every day to advance causes important to them. If we help them succeed, we all benefit.



WHY TODAY?

COMMUNITY
HALL →



"...renewables, minus storage, is not the solution. Because the way the grid operates, supply must be in perfect balance with demand everywhere at all times..."*

-Donald R Sadoway,
Professor of Material Chemistry, MIT

"A low-carbon future will be very mineral intensive because clean energy technologies need more materials than fossil-fuel-based electricity generation technologies."

World Bank, Minerals for Climate Action the Mineral Intensity of the Clean Energy Transition, May 2020

BRING MINING HOME.

A responsible future starts at the source.

Antimony is key to the liquid metal battery storage solutions needed for a low carbon energy grid.

(Hallgarten and Company, Antimony Molten-Salt Batteries, the New Metal in Mass Storage, Jan 2021.)

A SECURE SUPPLY of the minerals we need for a lower carbon future.



PERMITTING



5+ years

of Regulatory Review
Anticipated



11 agencies

Local, State and Federal
Agencies



50+ permits

for Environmental, Safety
and Regulatory Standards



>\$10s Millions

set aside for Reclamation



FINANCIAL ASSURANCE

MAKING SURE FUNDING FOR RESTORATION IS AVAILABLE IN CASE OF DEFAULT

*Before mining can begin,
we must provide
protected funds to
guarantee the
reclamation of a project
site.*

TRUE COST: Projects must now set aside funding for reclamation calculated based on the actual cost of reclamation and closure. The calculation includes on site-specific conditions and third-party contractor costs, extra percentages for contingency and long-term water treatment.

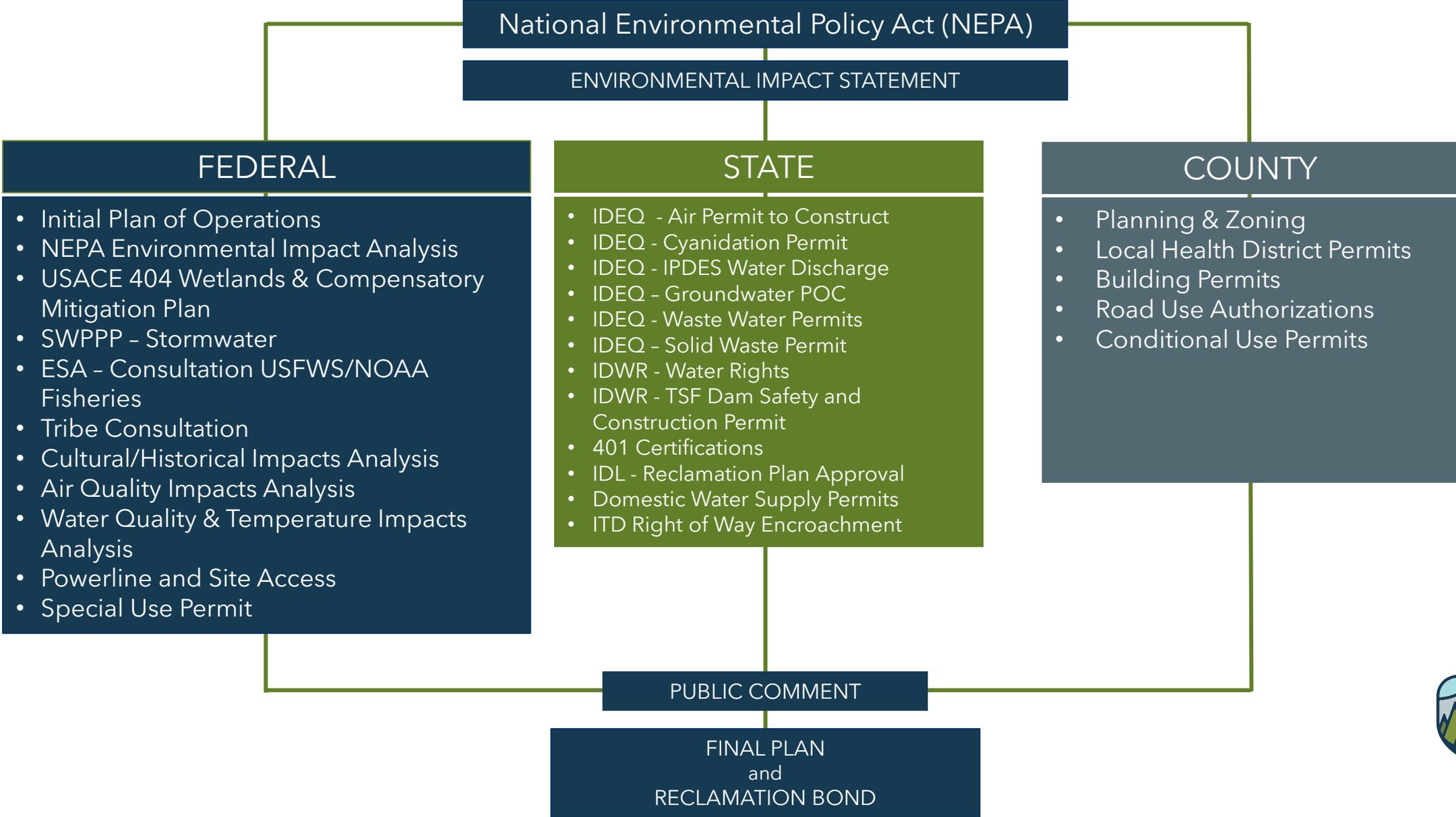
RESTORATION STANDARD: We will calculate financial assurance based on restoration standards where possible—which goes beyond the required reclamation standard.

REVIEWED IN PHASES: Financial Assurance for the Stibnite Gold Project will be evaluated in phases and reviewed at a minimum of every five years to ensure the amounts are correct and adaptive.

BONDS AND TRUST: We will not be using a “Corporate Guarantee” as a tool for financial assurance and instead will look to traditional forms like bonding and trust.



ROBUST PERMITTING



PERMITTING - NEXT STEPS

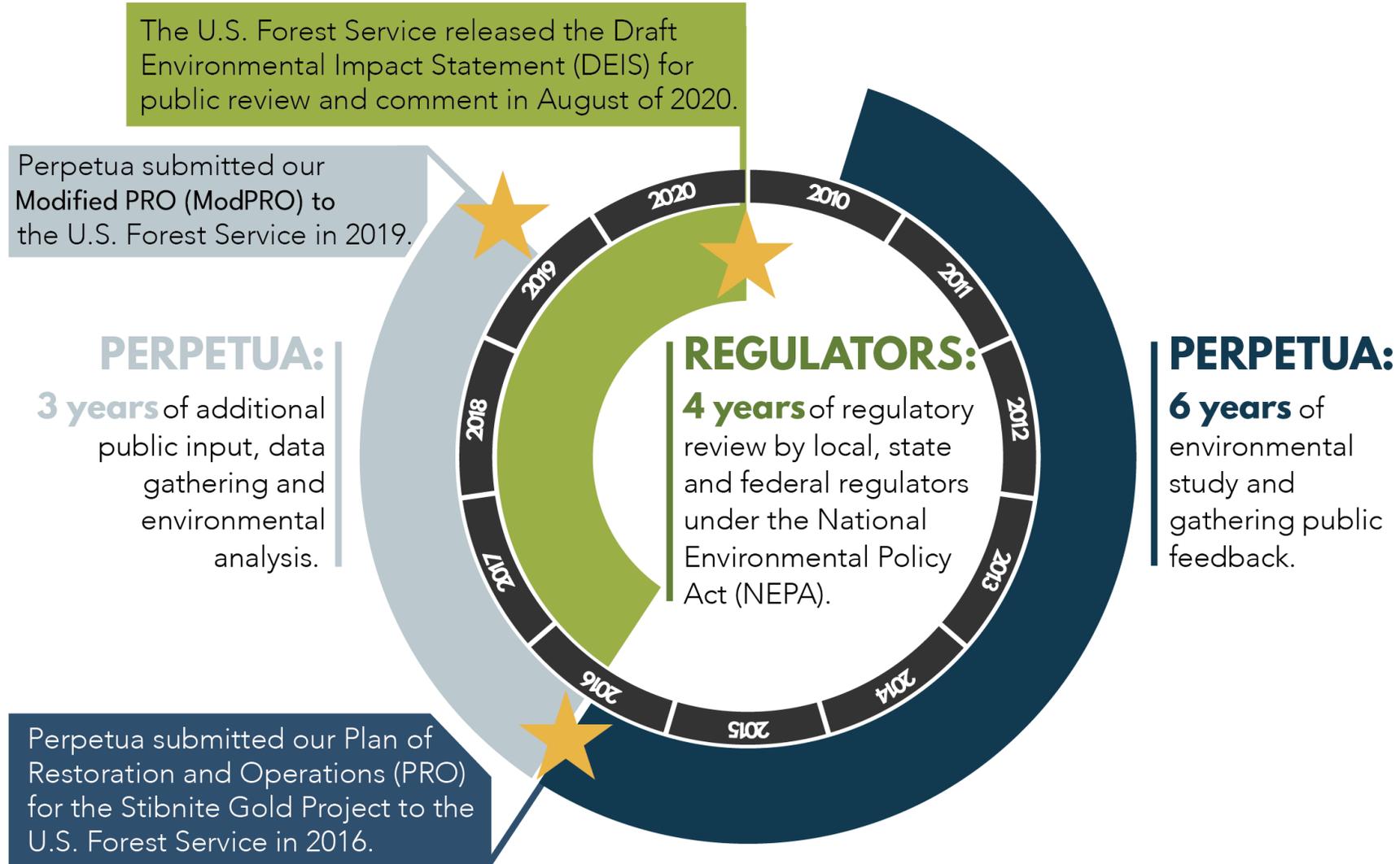
EIS: Environmental Impact Statement
DEIS: Draft Environmental Impact Statement
FEIS: Final Environmental Impact Statement
NOA: Notice of Availability
PRO: Plan of Restoration and Operations
ROD: Record of Decision



Note: The timelines presented on figure is based on the current "Schedule of Proposed Activities" (SOPA) published by the USFS on Oct. 1, 2020 but are subject to adjustment and change as the NEPA process continues to advance.



PROJECT MILESTONES



NEXT STEPS



MOVING FORWARD

Recent Accomplishments:

- ✓ Draft Environmental Impact Statement (Aug 2020)
- ✓ Successful comment period (Aug-Oct 2020)
- ✓ Feasibility Study Released (Dec 2020)
- ✓ Signed historic agreement with Federal Agencies to begin water cleanup (Jan 2021)*
- ✓ Announced name change to Perpetua Resources (Feb 2021)
- ✓ US Listing on NASDAQ Approved (Feb 2021)

Upcoming Milestones:

- ❑ Final Environmental Impact Statement & Draft Record of Decision (ROD) (2021)**
- ❑ Final ROD (2021)**
- ❑ Ancillary Permits & Financing (2022)
- ❑ Construction, Begin Legacy Restoration (2022/2023)
- ❑ Commercial Operations, Ongoing Restoration (2026)

*Administrative Settlement Agreement and Order on Consent (ASAOC)

**Indicative permitting schedule based on latest published government schedule



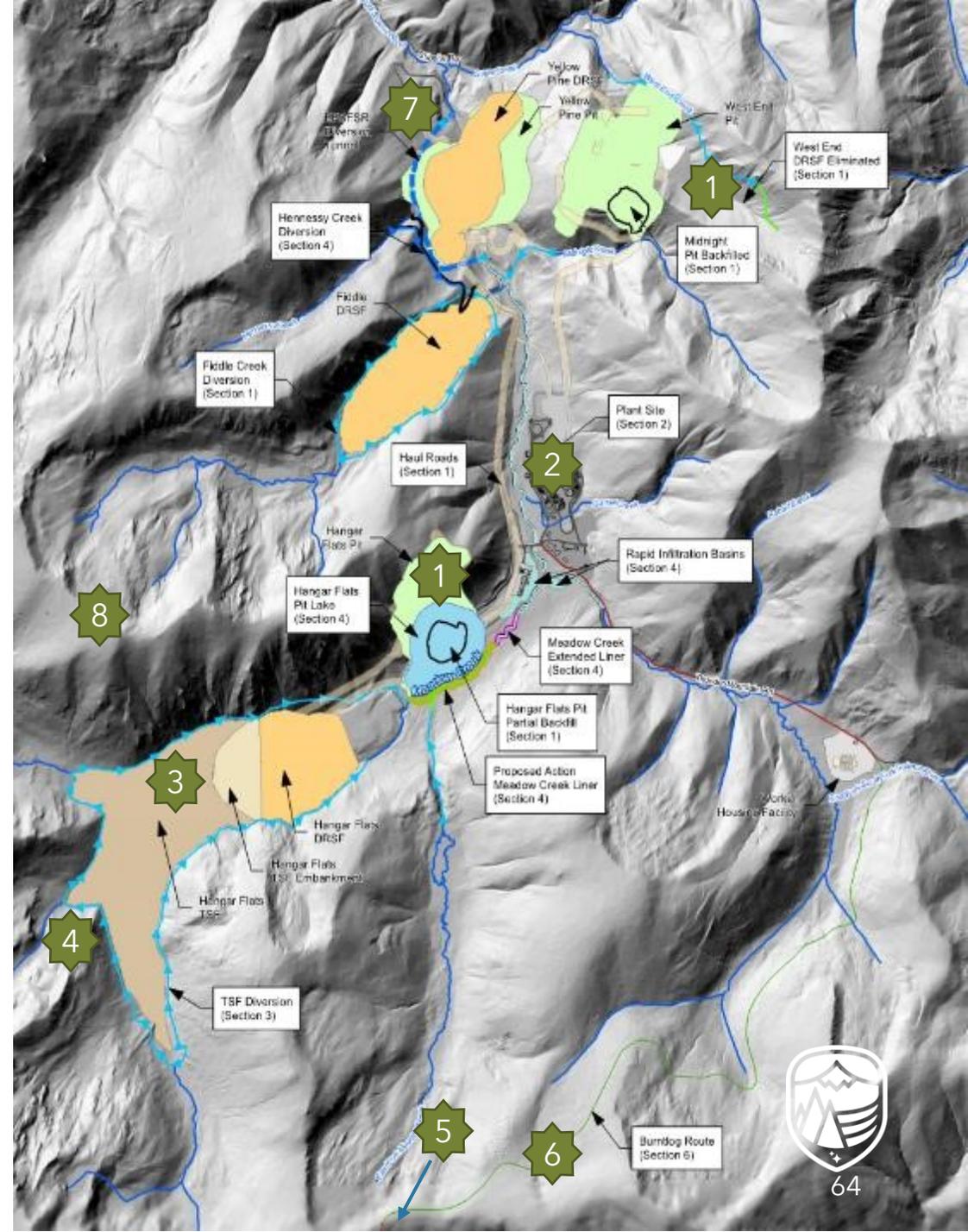
ALTERNATIVE 2

Our Proposed Action

Through the study and analysis within the NEPA process, the Company proposed refinements to our original plan to improve the environmental outcomes. **These changes were reflected in Alternative 2 in the Draft Environmental Impact Statement (DEIS).**

ModPRO SUBMITTED MAY 3, 2019

1. Development Rock Storage Facility- reduce or remove where possible
2. Generate lime on-site, reducing traffic >20%
3. Diverting water and improving liner design for the Tailings Storage Facility
4. Improve surface water management
5. Relocate offsite maintenance facility
6. Modify mine access route to reduce impacts
7. Provide public access - through site when possible
8. Modify the powerline route



Draft ENVIRONMENTAL IMPACT STATEMENT (DEIS)

Removing historical barriers to fish migration will assist the population.

Long-term access to historically blocked critical habitat would result in increased productivity. (Ch 4.12 Fish Resources - 4.12-33)

Free movement and access to habitat can improve genetic diversity of isolated populations. (Ch 4.12 Fish Resources - 4.12-33)

Increased access to feeding and refuge areas in critical habitat can improve overall productivity. (Ch 4.12 Fish Resources - 4.12-33)

Mitigation and Restoration will address impacts.

Proposed mitigation will provide 1:1 replacement of wetlands acres. (Ch4 Sections 4.11.2.3.1.1 and 4.11.2.3.1.2; Tables 4.11-7 and 4.11-8; p. 4.11-24 and 4.11-26.)

Mitigation plan offers a net gain of 346.5 wetland functional units represents a 40% increase. (Appendix D, CMP Table 8-2).

Restoration plans will provide a net gain of 21,941 stream functional units, a 23% increase. (Appendix D, Table 8-1)

Removing legacy materials will improve water quality.

Removing legacy and managing water provides long-term reduction in metal loading in ground and surface water. (Ch. 4 Section 4.9)

Removing legacy tailings and waste lowers concentrations of antimony and arsenic in the East Fork South Fork of the Salmon River. (Ch 4, p. 4.9-70)

Removing legacy tailings and waste improves water quality in Meadow Creek Valley. (Ch. 4, 4.12 103-104)

Concurrent Restoration reduces risks.

Concurrent mitigation and restoration reduce the uncertainty in the duration of wetland and riparian resource losses. (Ch. 4 Section 4.11.3.1.1; p. 4.11-53)

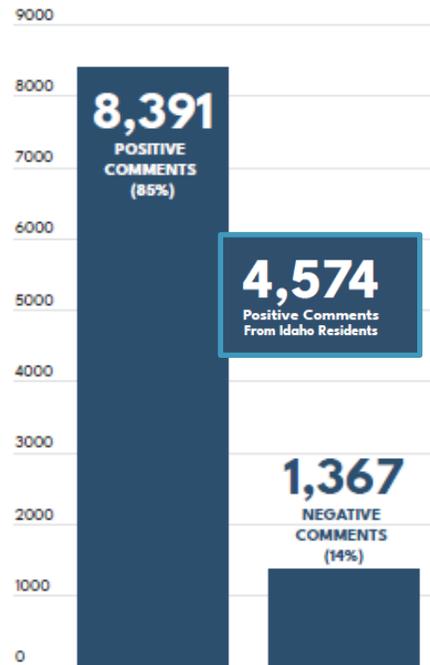
NOTE: Those reading the DEIS should take note of Appendix D— which reviews the voluntary and required mitigation to offset impacts of mining.



NEPA AT WORK: PUBLIC FEEDBACK AND REFINEMENT CREATE THE BEST PLAN.

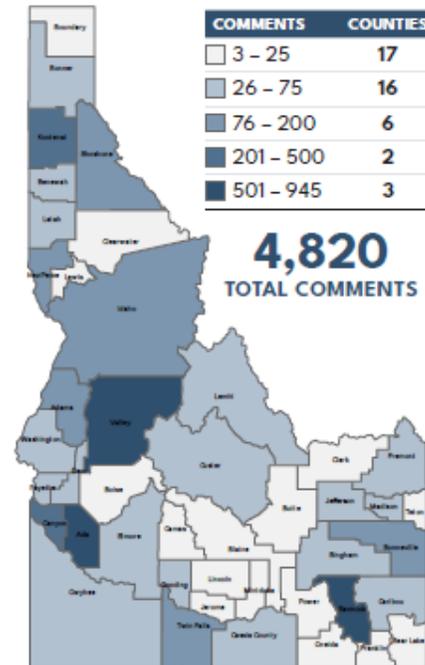
TRANSPARENCY: 75 Day Public Comment Period

Positive vs. Negative Comments



*Numbers are based on individually submitted comments to the U.S. Forest Service.

Comments Submitted from Idaho



*Numbers are based on address provided by commenters. Not all commenters provided address information.

REFINEMENT: Agencies Responding to the Public

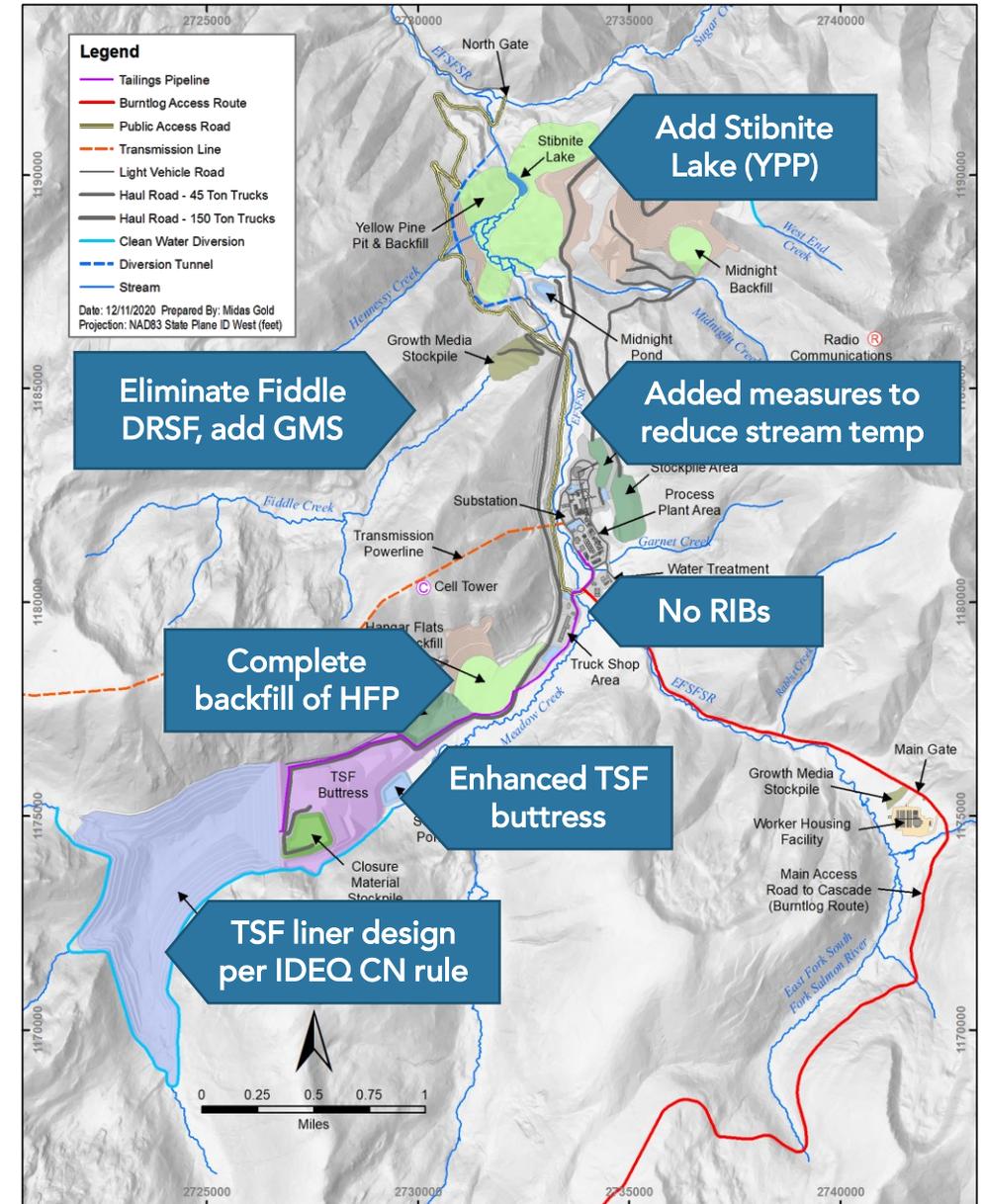
Now, the U.S. Forest Service and cooperating agencies will:

- Review all comments
- Respond to the public
- Incorporate feedback into their final analysis
- Identify the Selected Plan based on scientific analysis, public feedback and state and federal requirements.
- Publish a Final Environmental Impact Statement
- Issue a Draft Record of Decision
- Conduct Objection Resolution
- Issue a Final Record of Decision



IMPROVEMENTS

- ✓ Fiddle DRSF eliminated
- ✓ Add Stibnite Lake on YPP backfill
- ✓ Enhanced riparian planting prescription
- ✓ Smaller Hangar Flats pit (HFP), complete backfill of HFP
- ✓ No rapid infiltration basins (RIBs)
- ✓ Enhanced TSF Buttress
- ✓ TSF liner in compliance with IDEQ CN Rule
- ✓ Incorporates Water Quality Management Plan



REGULATORY INFORMATION

The FS was compiled by M3 Engineering & Technology Corporation (“M3”) in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* (“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 material scientific and technical information in respect of the Project in this presentation, unless otherwise indicated, is based upon information contained in the FS. Readers are encouraged to read the FS, which is available under the Company's profile on SEDAR, 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.

Information of a scientific or technical nature in this presentation has been approved by Austin Zinsser, SME-RM, Sr. Resource Geologist for Perpetua Resources Idaho, Inc. and a qualified person (as defined in Ni 43-101).

All mineral resources have been estimated in accordance with CIM definitions. 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.

NON-IFRS REPORTING MEASURES

“Cash Costs”, “All-in Sustaining Costs” and “Total costs” are not performance measures reported in accordance with International Financial Reporting Standards (“IFRS”). These performance measures are included because the statistics are key performance measures that management uses to monitor performance. Management uses these statistics to assess how the Project ranks against its peer projects and to assess the overall effectiveness and efficiency of the contemplated mining operations. These performance measures do not have a meaning within IFRS and, therefore, amounts presented may not be comparable to similar data presented by other mining companies. These performance measures should not be considered in isolation as a substitute for measures of performance reported in accordance with IFRS.

FORWARD LOOKING STATEMENTS

Information and statement 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. Forward Looking Information includes, but is not limited to, information concerning the Company’s business 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; the timing and impact of future activities on the Project, including but not limited to the ability to address legacy features left by previous operators; 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 Stibnite Gold Project is developed. In preparing the Forward-Looking Information herein, the Company has applied several material assumptions, including, but not limited to, that any additional financing needed will be available on reasonable terms; 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 Stibnite Gold 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 Stibnite Gold 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; that the circumstances surrounding the COVID-19 pandemic, although evolving, will stabilize or at least not worsen; 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; risks related to the availability of financing; 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; 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; and estimates used in budgeting and financial statements proving to be incorrect; 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. Accordingly, readers should not place undue reliance on Forward-Looking Information. Except as required by law, the Company expressly disclaims any obligation to update the Forward-Looking Information herein.

Cautionary Note and 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”). Readers are encouraged to read the FS, which is available under the Company’s profile on SEDAR, for detailed information concerning the Project. See also “Regulatory Information” at the end of this presentation.

Cautionary Note to U.S. Investors

This presentation includes Mineral Reserves and Mineral Resources classification terms that comply with reporting standards in Canada and the Mineral Reserves and the Mineral Resources estimates are made 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 significantly from the requirements of the SEC set the SEC’s rules that are applicable to domestic United States reporting companies. Consequently, Mineral Reserves and Mineral Resources information included in this news release is not comparable to similar information that would generally be disclosed by domestic U.S. reporting companies subject to the reporting and disclosure requirements of the SEC. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in accordance with U.S. standards.

THANK
YOU.



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