Perpetua Resources

February 2021

TSX:MAX *(TSX:PPTA as of Feb 18, 2021)*
NASDAQ:PPTA *(as of Feb 18, 2021)*

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.

Note: Numbers reflect Perpetua Resources Idaho, Inc. staff and board members as of February 2021

THE PERPETUA WAY

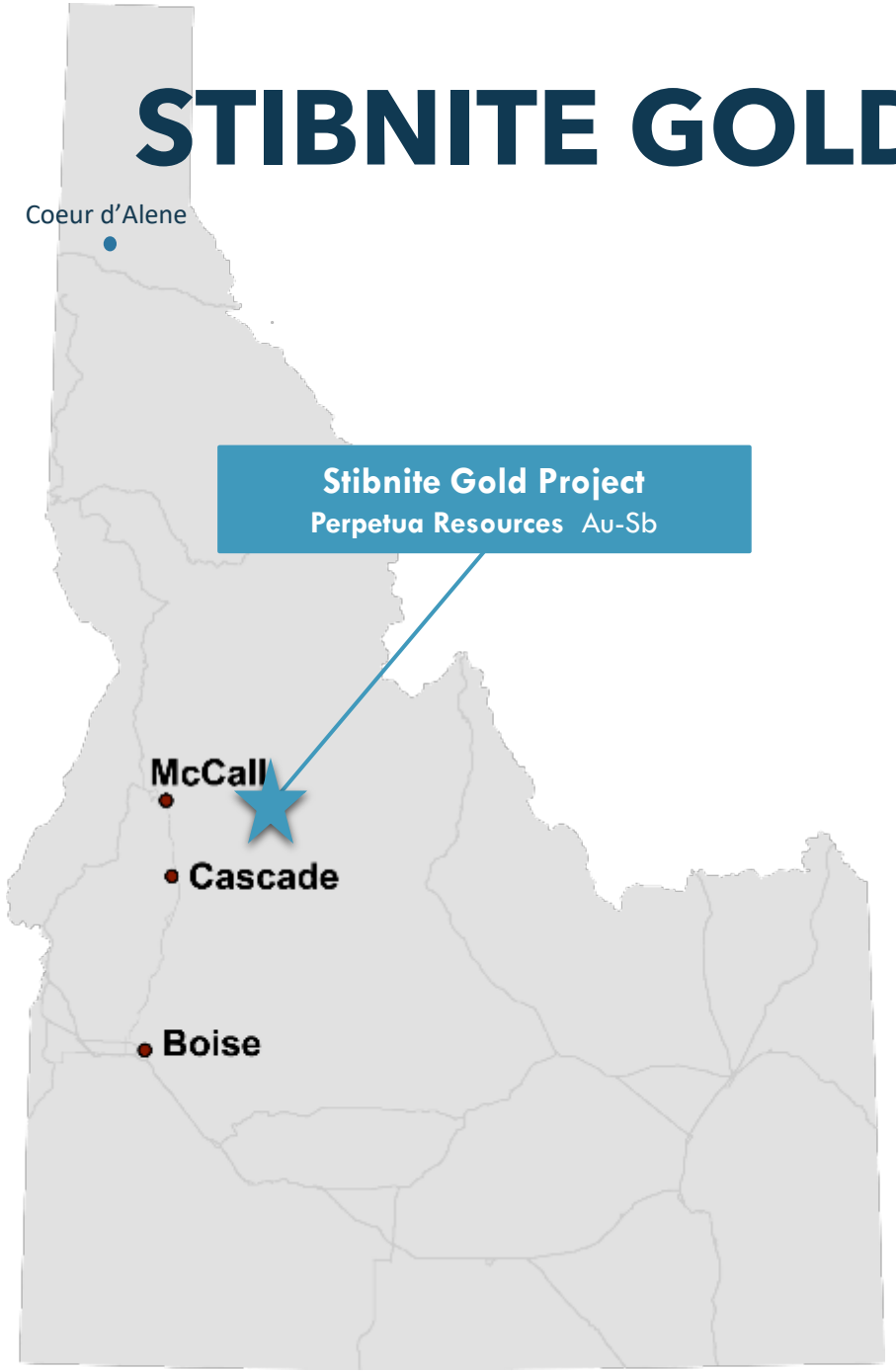
We are driven by the belief that building a **strong and successful business** for our employees, partners and shareholders **starts with doing business the right way.**

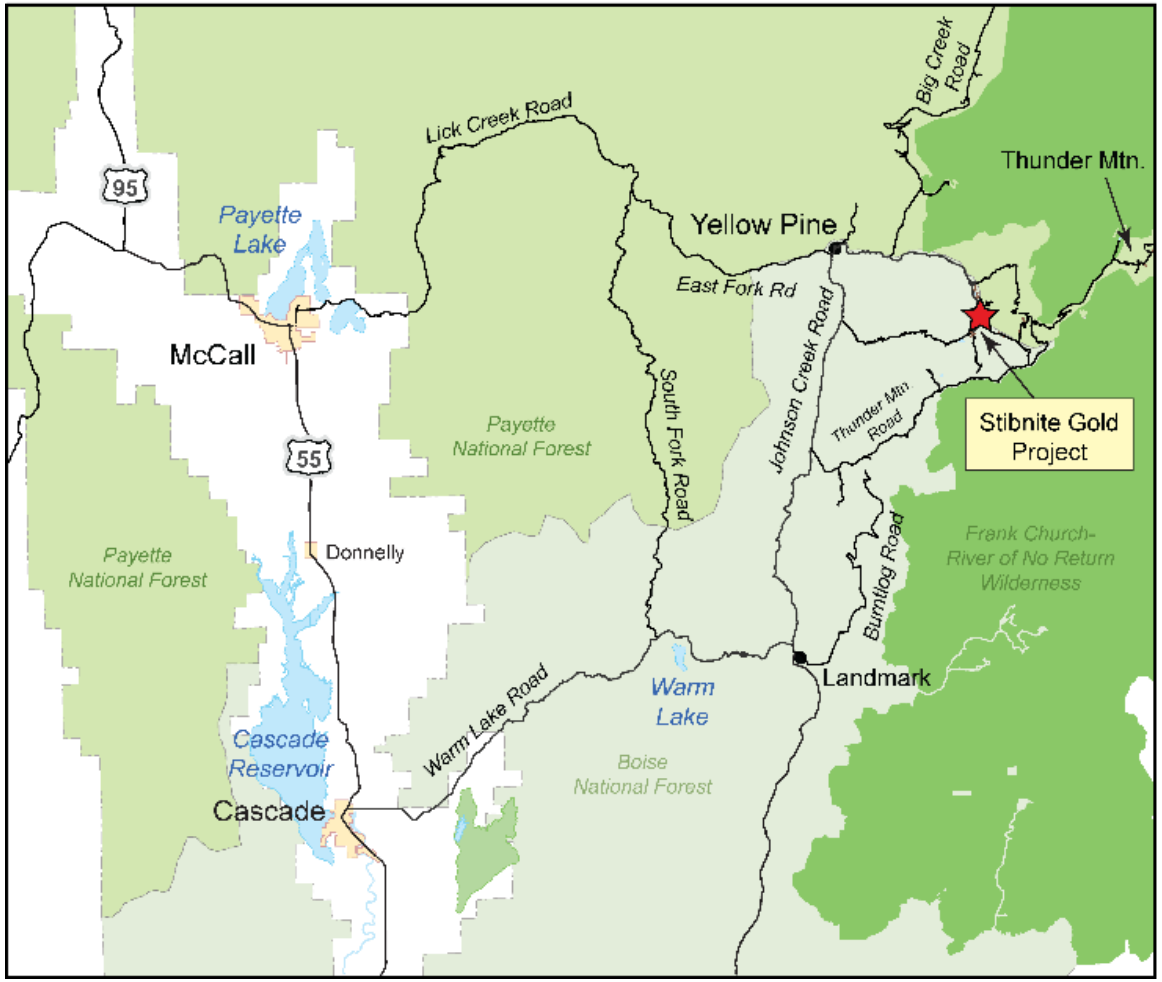
For **a modern mining company**, this means we designed a mining project that **restores the environment, creates opportunity and benefits communities**.

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

STIBNITE, IDAHO

STIBNITE GOLD PROJECT





HISTORICAL STIBNITE MINING DISTRICT

1890s
The Thunder Mountain gold rush brings mining to the area

1900-1930
The town of Stibnite is established

1938
Mining at Yellow Pine pit stops salmon migration upstream

1941-1950
The town of Stibnite booms when antimony & tungsten were declared critical & strategic minerals

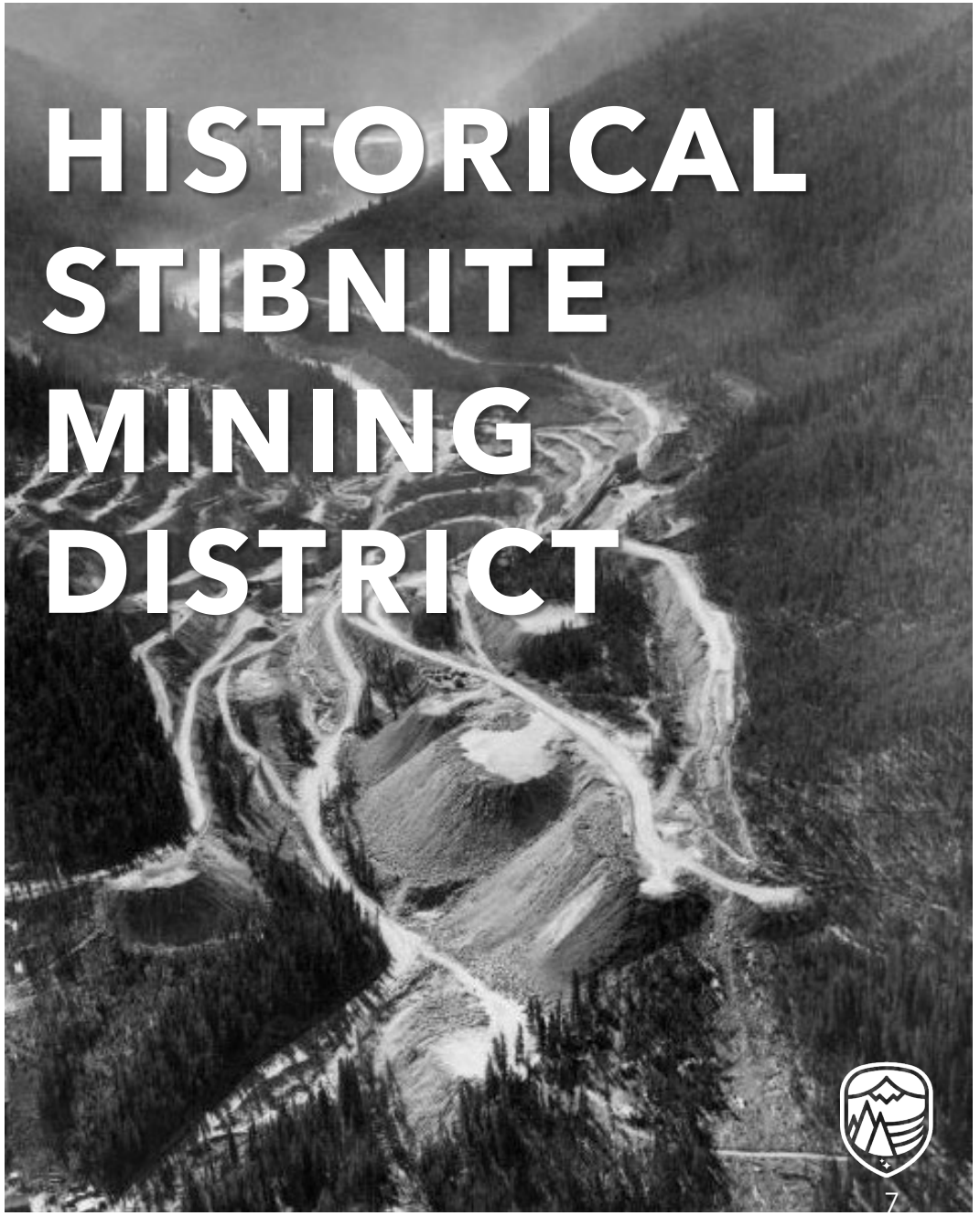
1953-1960
With WWII & the Korean War over, mining slowed and Stibnite slowly faded

1960s
Earthen dam failure resulting in hundreds of tons of sediment eroding into surrounding streams & rivers, even to this day

1970s-1990s
Periodic mining by multiple owners and operators

1990s – 2000s
All mining stopped, U.S. Gov't conducts some limited clean-up

2009-2011
Midas Gold (*now Perpetua Resources*) consolidated land ownership & began evaluating the geology & environment within the Stibnite Gold Project area



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

Idaho.

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

"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

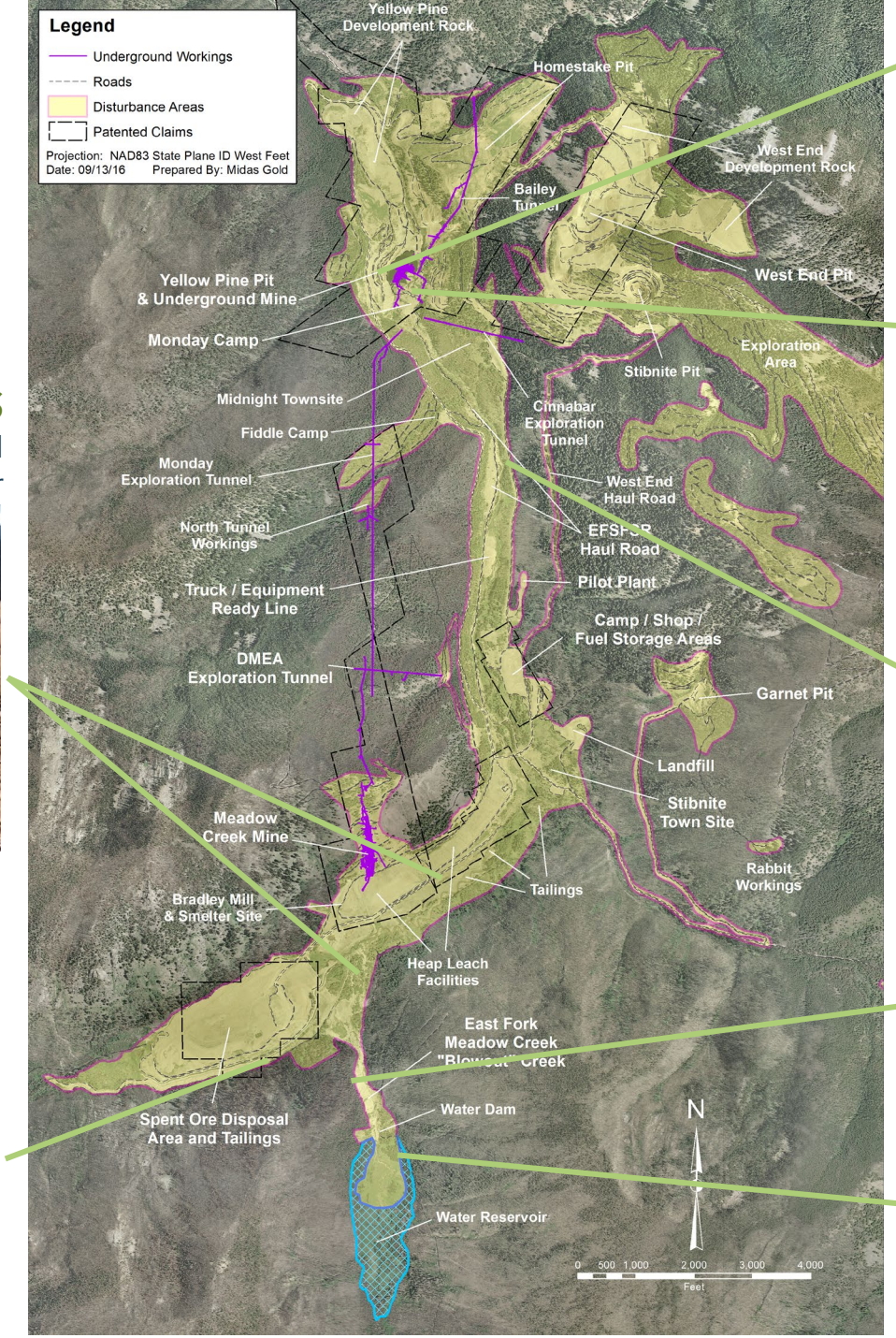
After 100+ years of mining activity, many environmental legacies remain.

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 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

ESFS: East Fork South Fork Salmon River

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

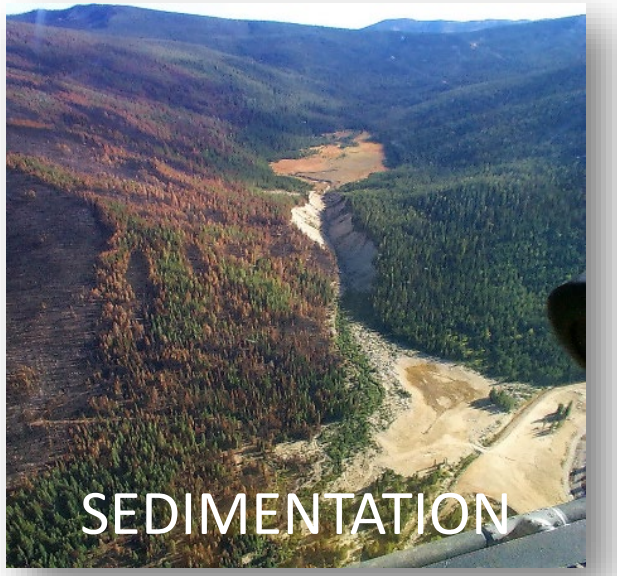
Repair and reclaim past damage. Mitigate and reclaim new disturbances. Improve water quality and aquatic habitat, including fish passage and long-term ground and surface water protection.

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.

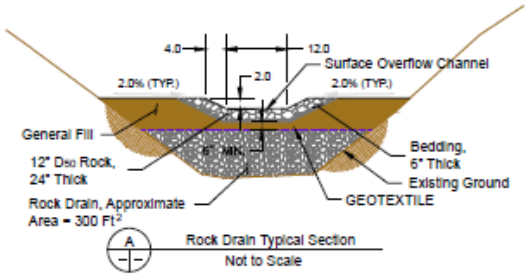
TODAY

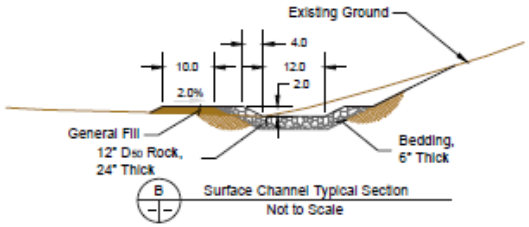
The failed dam caused the most significant source of sediment in the watershed. It degrades water quality and fish habitat and diminishes wetlands functionality.

BLOWOUT CREEK RESTORATION

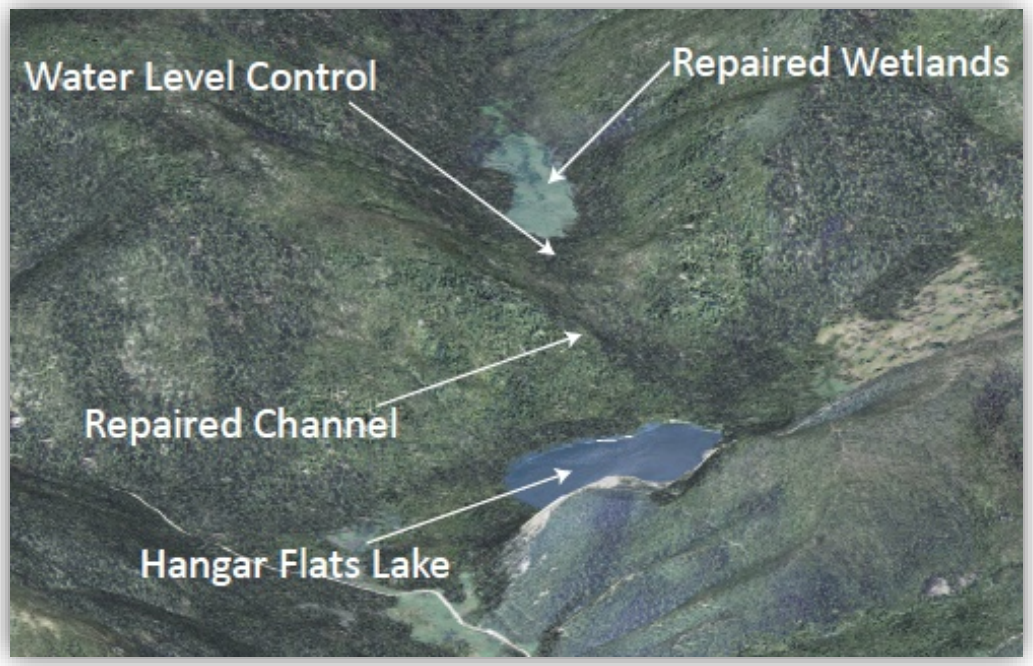
CURRENT

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.

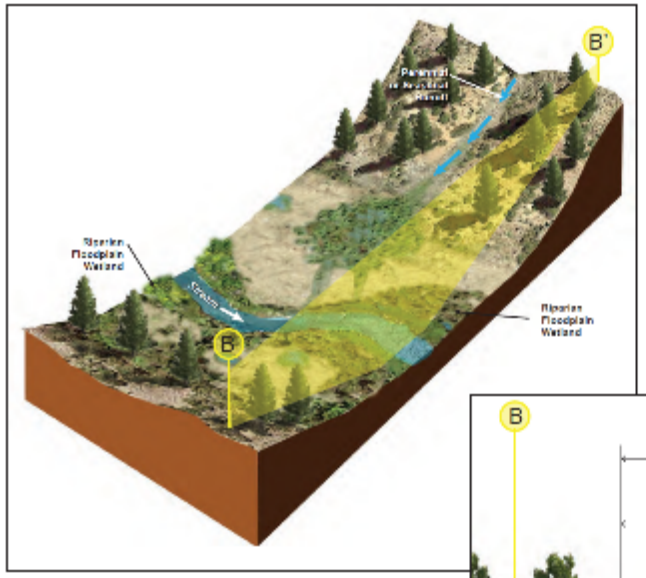
TODAY

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

REMOVE & REPROCESS LEGACY TAILINGS

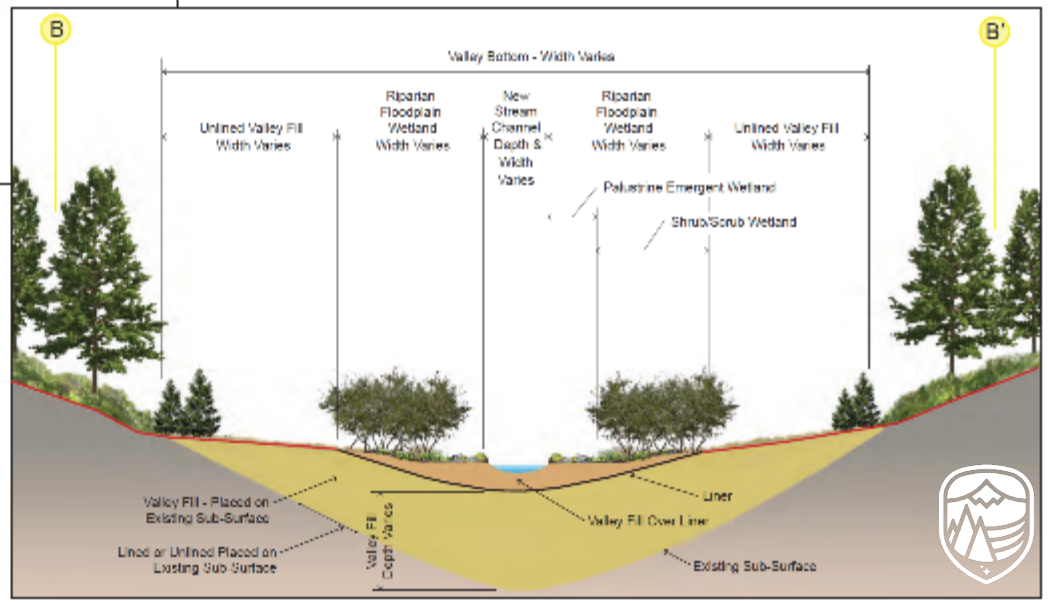
CURRENT

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'

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

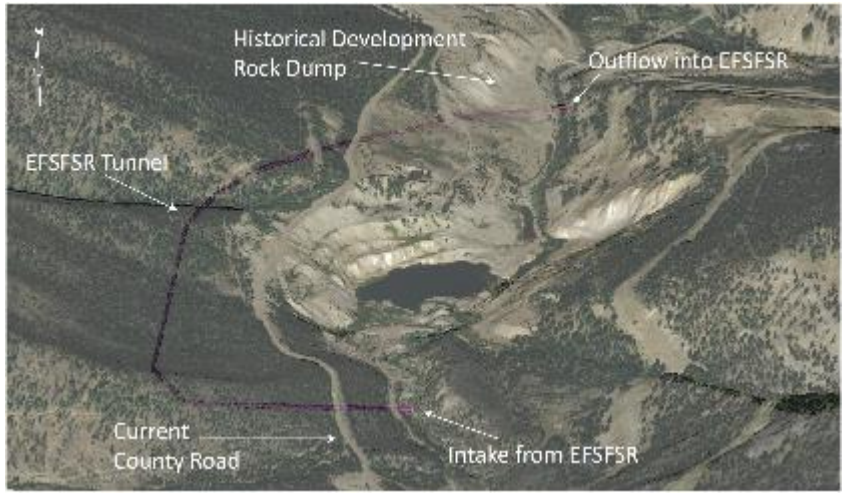
The East Fork of the South Fork of the Salmon River flows directly into the Yellow Pine pit, blocking fish passage.

YELLOW PINE PIT 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.

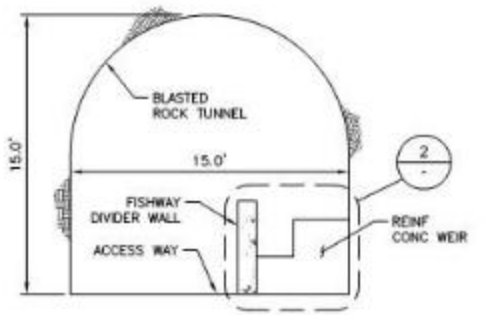
The lighted fishway will feature resting pools and keep water velocities below the swim speeds of target fish.

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.

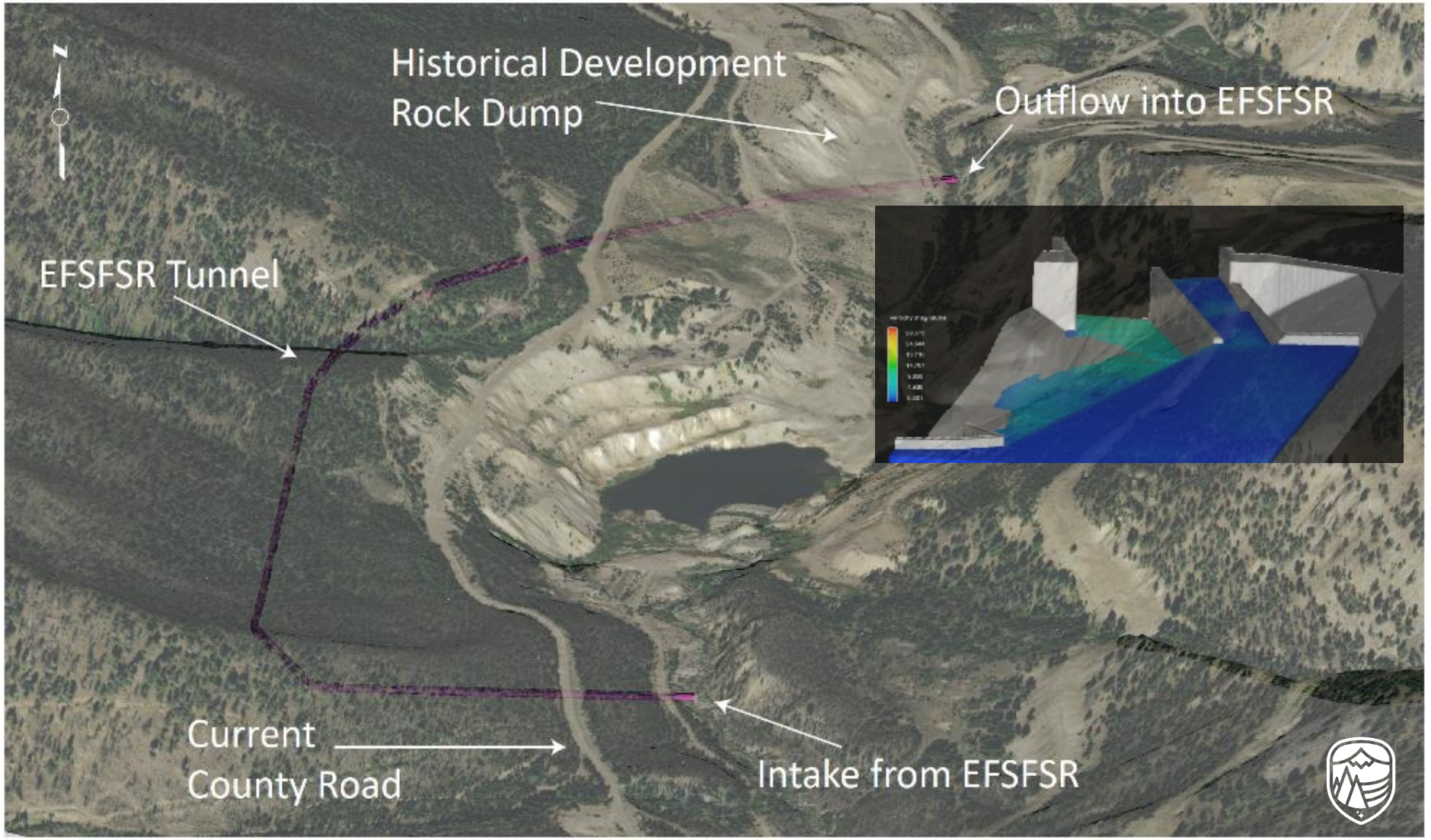
INTERIM FISH PASSAGE

EFSFSR



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%



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

*Based on 2014 Pre-Feasibility Study

AN ECONOMIC PROJECT

FUNDS RESTORATION, CRITICAL MATERIALS AND ECONOMIC DEVELOPMENT

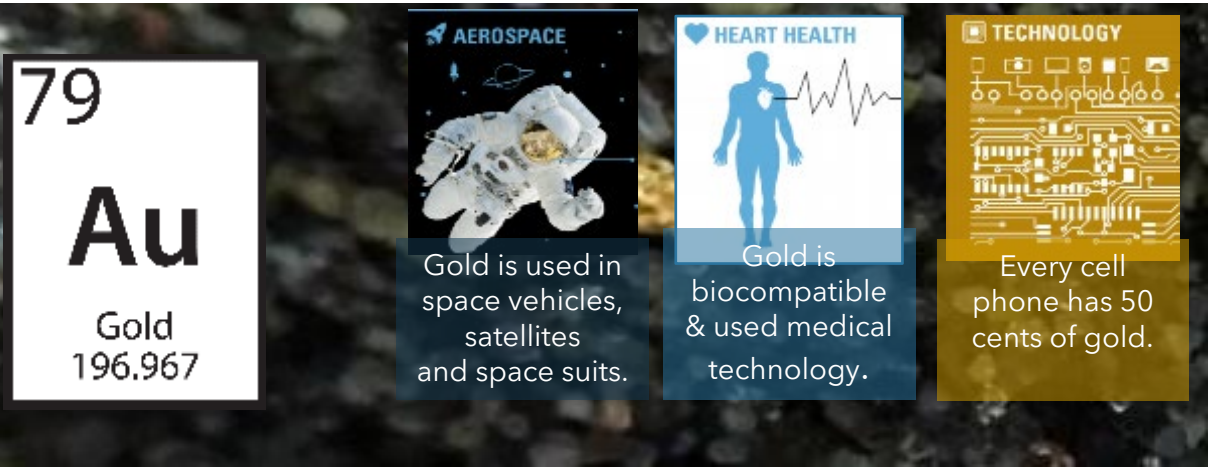
- One of **largest** undeveloped independent gold reserves in the United States
- Slated to become **largest** independently owned gold mine in the United States
- **Second highest grade** undeveloped open pit deposit in Lower 48 of United States
- **Lowest** quartile projected costs
- Current market cap only **21% of project NPV(5%)** at $1,850/oz gold price*
- Receipt of permits expected to **unlock** material value
- Environmental **restoration** funded through mine redevelopment
- **Critical minerals** production
- **Capital investment** and **jobs**

1. 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. The FS was prepared under the direction of Independent Qualified Persons (QPs) and in compliance with National Instrument 43-101 (NI 42-101) the Canadian Securities Administrators (CSA) standards for reporting mineral properties.
2. Perpetua Resources Market Cap based on Fully Diluted Market Cap at US$7.49 share price (C$9.50 – closing price on TSX) as of February 12, 2021

GOLD

4.8 MILLION OUNCES OF GOLD (Reserve)

Total resource ~6 million ounces.



The **Stibnite Gold Project** would be the 4th largest US 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.

ANTIMONY

100+ MILLION POUNDS OF ANTIMONY

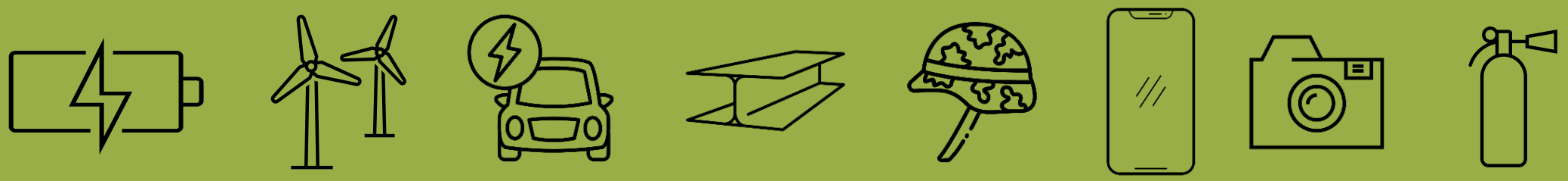
The **Stibnite Gold Project** would be the only domestic source of antimony mined in the U.S.

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.

* 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.

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.

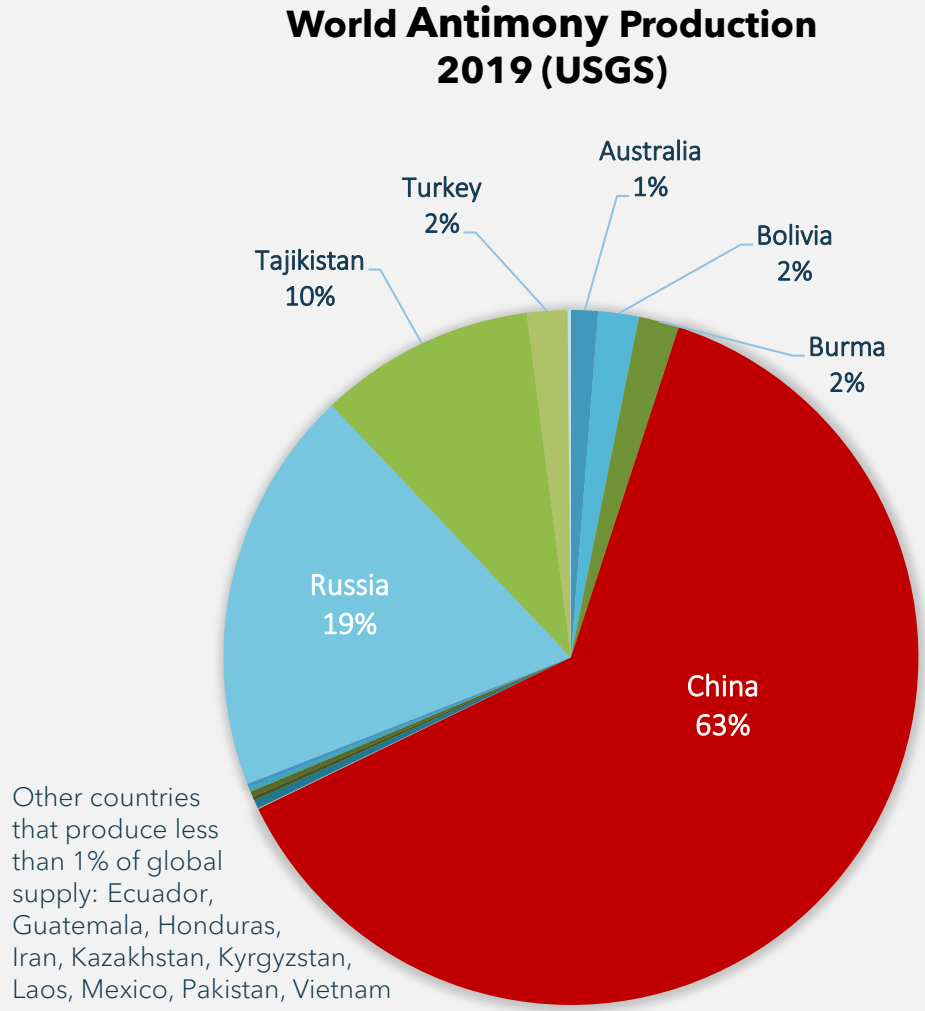
- Antimony Molten-Salt Batteries, the New Metal in Mass Storage, Harllgarten and Company, Jan. 2021

ANTIMONY: CRITICAL MINERAL

NECESSARY FOR AMERICA'S NATIONAL SECURITY AND ECONOMIC INDEPENDANCE

SUPPLY RISK

1. China and Russia dominate the world antimony supply (>80%)
2. No domestic antimony production in the United States
3. Perpetua Resources would become first domestic source of antimony
4. Estimated Production[1] Would Equal ~30% of US annual demand



Other countries that produce less than 1% of global supply: Ecuador, Guatemala, Honduras, Iran, Kazakhstan, Kyrgyzstan, Laos, Mexico, Pakistan, Vietnam

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.

$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

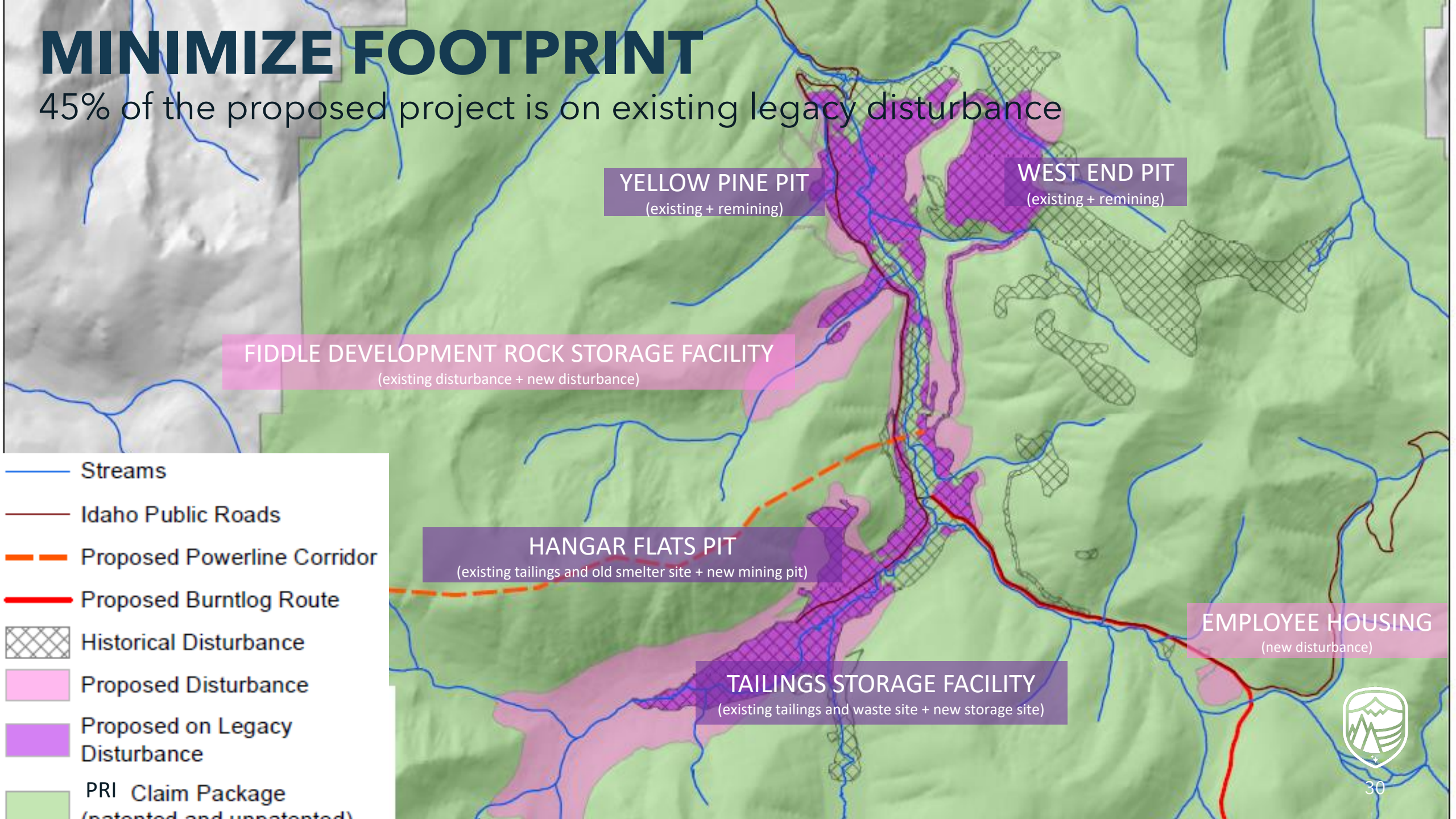
7,730 sq ft of masonry

9,555 tons of structural steel

PROJECT FOOTPRINT

MINIMIZE FOOTPRINT

45% of the proposed project is on existing legacy disturbance



LIMIT FOOTPRINT THROUGH RESTORATION

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.

EFSFSR: East Fork of the South Fork of the Salmon River
TSF: Tailings Storage Facility

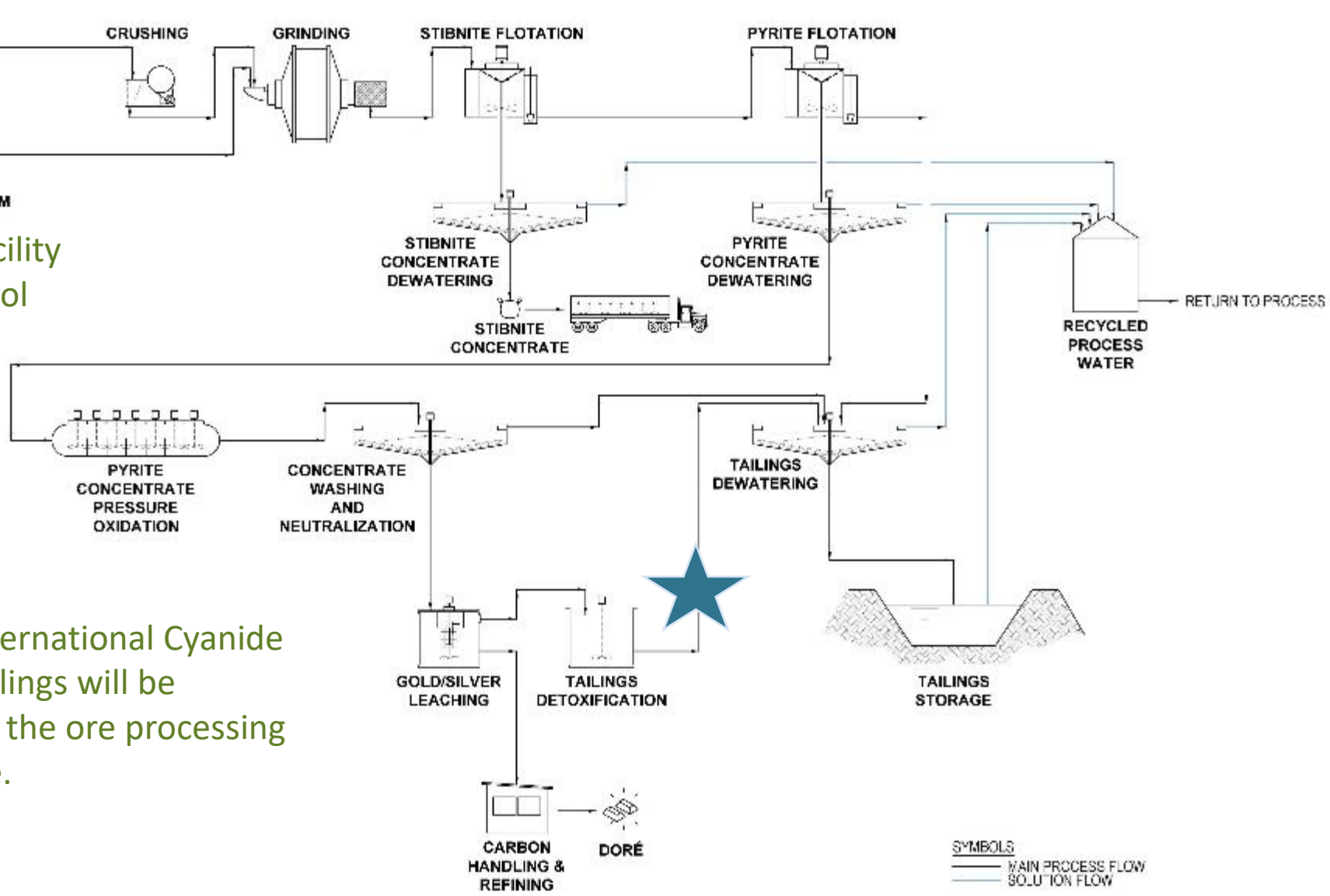
LOOKING TO THE SKIES

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

Dark Skies Report, 2019: www.perpetuaresources.com

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.



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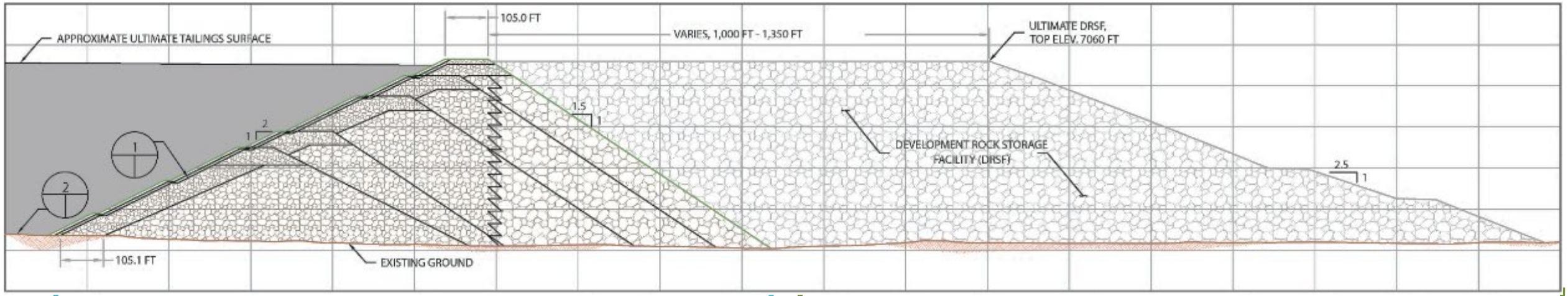
TAILINGS MANAGEMENT

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

- ✓ Downstream constructed
- ✓ Made with compacted rockfill
- ✓ Fully lined

No known failures for facilities with these design characteristics

- ✓ Reviewed by an independent expert
- ✓ Buttressed to double the factor of safety

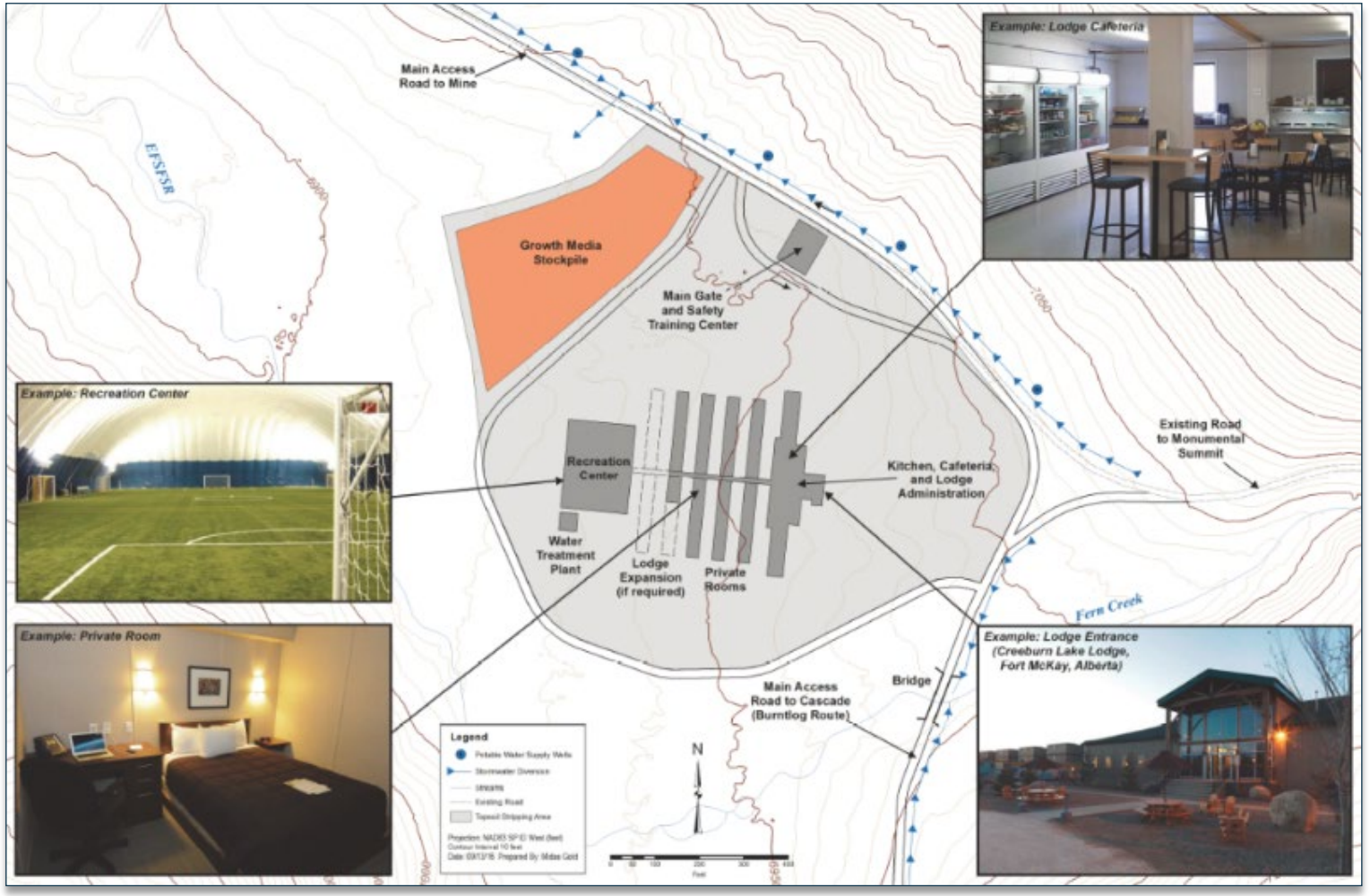
Added benefits

- ✓ Designed and regulated in the U.S.
- ✓ 90% contained by mountains

LIMIT FOOTPRINT BY USING LEGACY AREAS

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

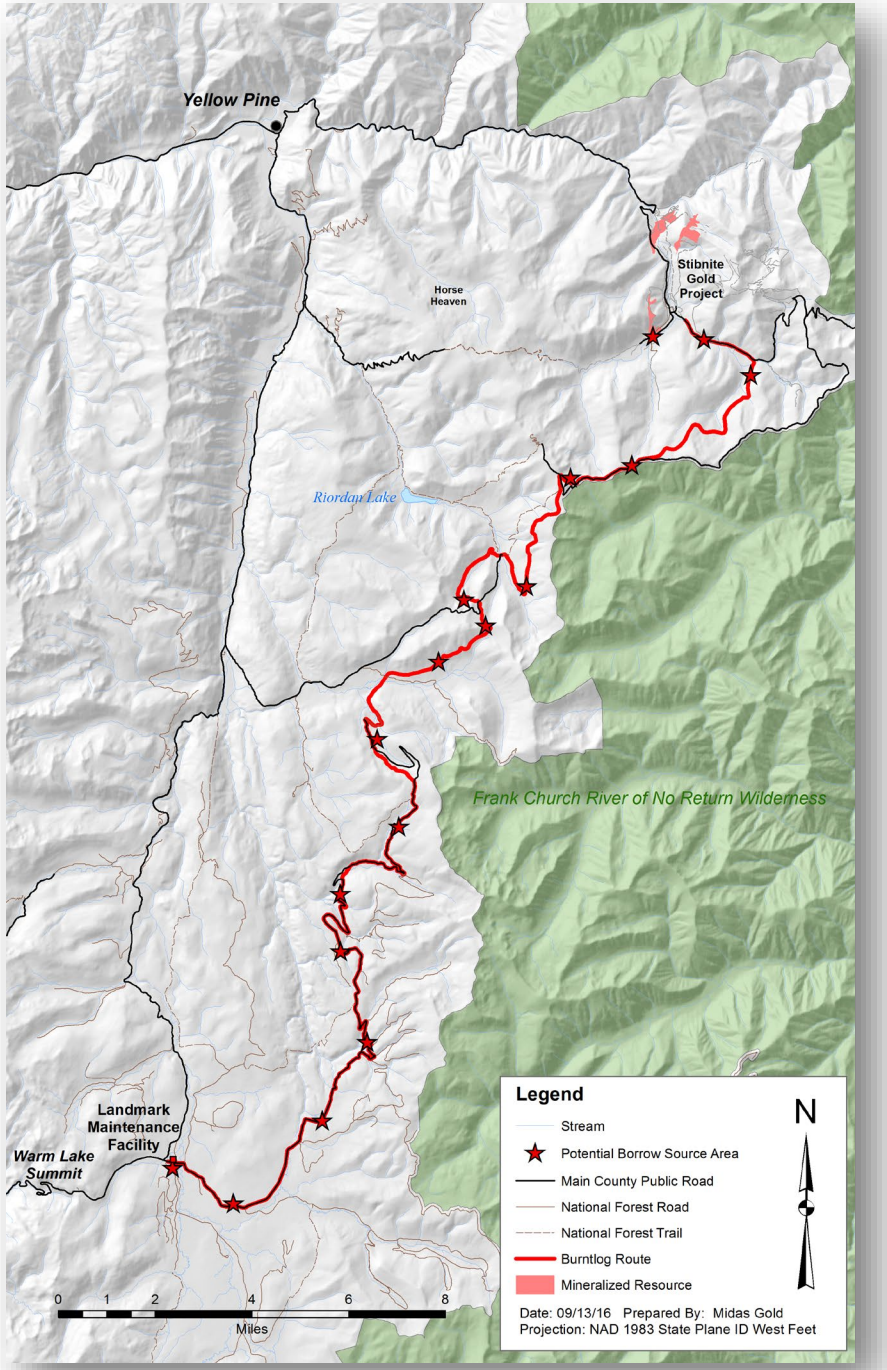
Travel adjacent to larger waterways via Johnson Creek or South Fork Road to Yellow Pine and Stibnite.

STUDIES EVALUATED

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

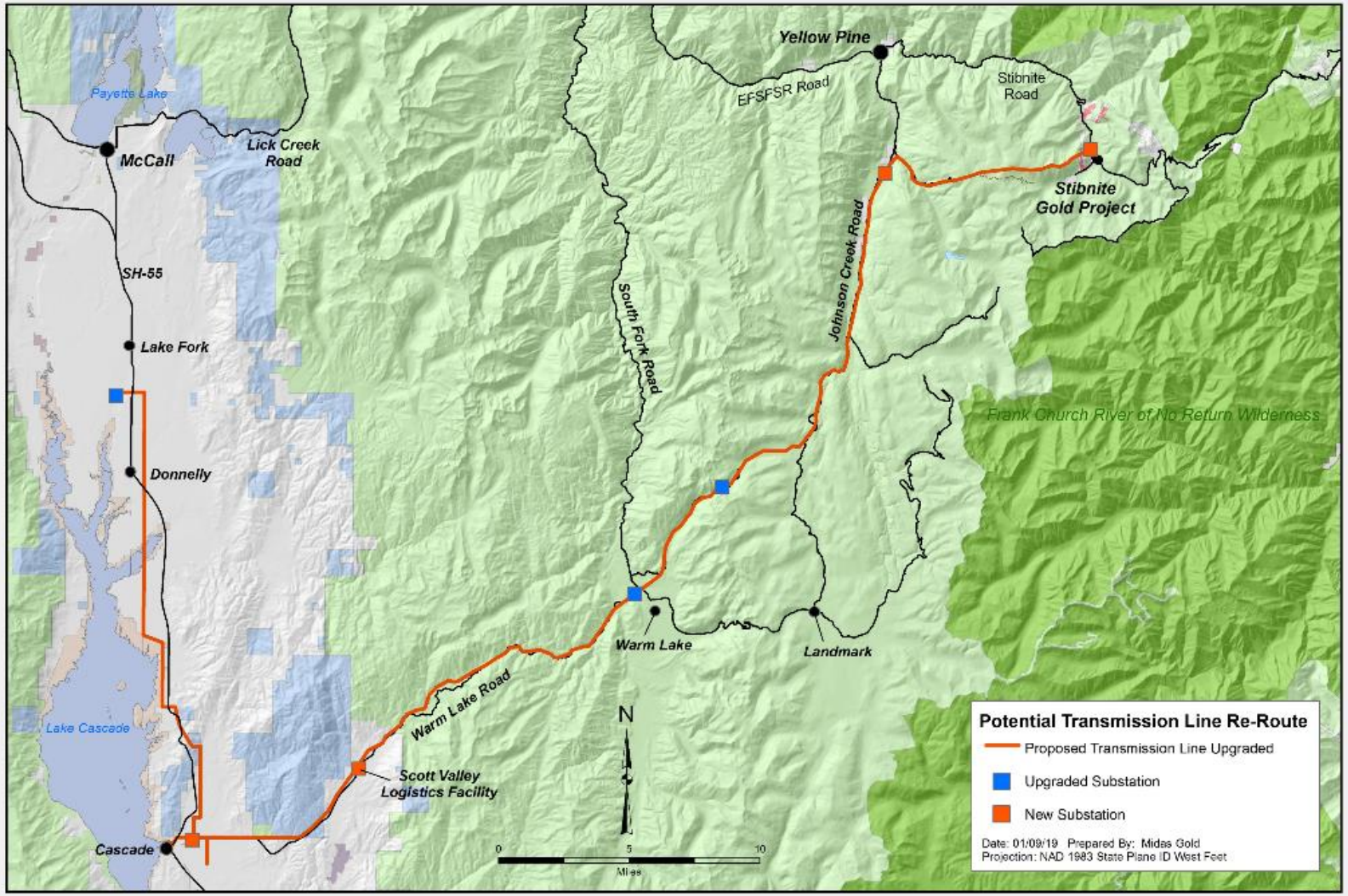
NEW BURNTLOG ROUTE PROMOTES SAFETY

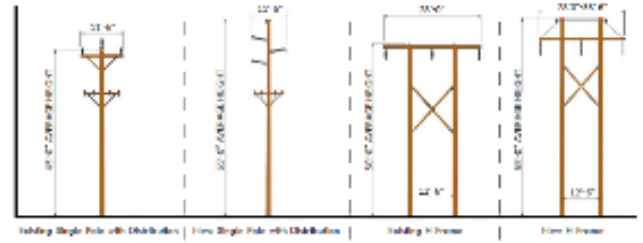
- 18 miles improving existing Burntlog Road (FS 447)
- 17 miles of new pioneered road
- 2 miles improving existing Thunder Mountain Road (FS 375)
- Avoids travel along waterways.
- Provides Year-round access.



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.

COMMITTED 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.

1. **January 15, 2021** The Environmental Protection Agency and the U.S. Forest Service with concurrence of the U.S. Department of Justice, direct and authorize the Company to conduct early actions to improve water quality conditions at Stibnite.
2. **Involvement** by the Idaho Department of Environmental Quality and 2 Idaho Tribes were involved in the process and multiple government-to-government consultations were held.
3. **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.
4. **Not NEPA, Not Mining:** The ASAOC only provides for clean up activity of legacy waste, it is separate from the NEPA process reviewing the Stibnite Gold Project, it does not change the process, timing or review for the Project.

ASAOC: ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT

NEPA: NATIONAL ENVIRONMENTAL POLICY ACT

IDAHO OPPORTUNITY

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

$78M spent in Idaho 2014-2020

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

* 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 FS. See "Regulatory Information" at the end of this presentation.

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.

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.

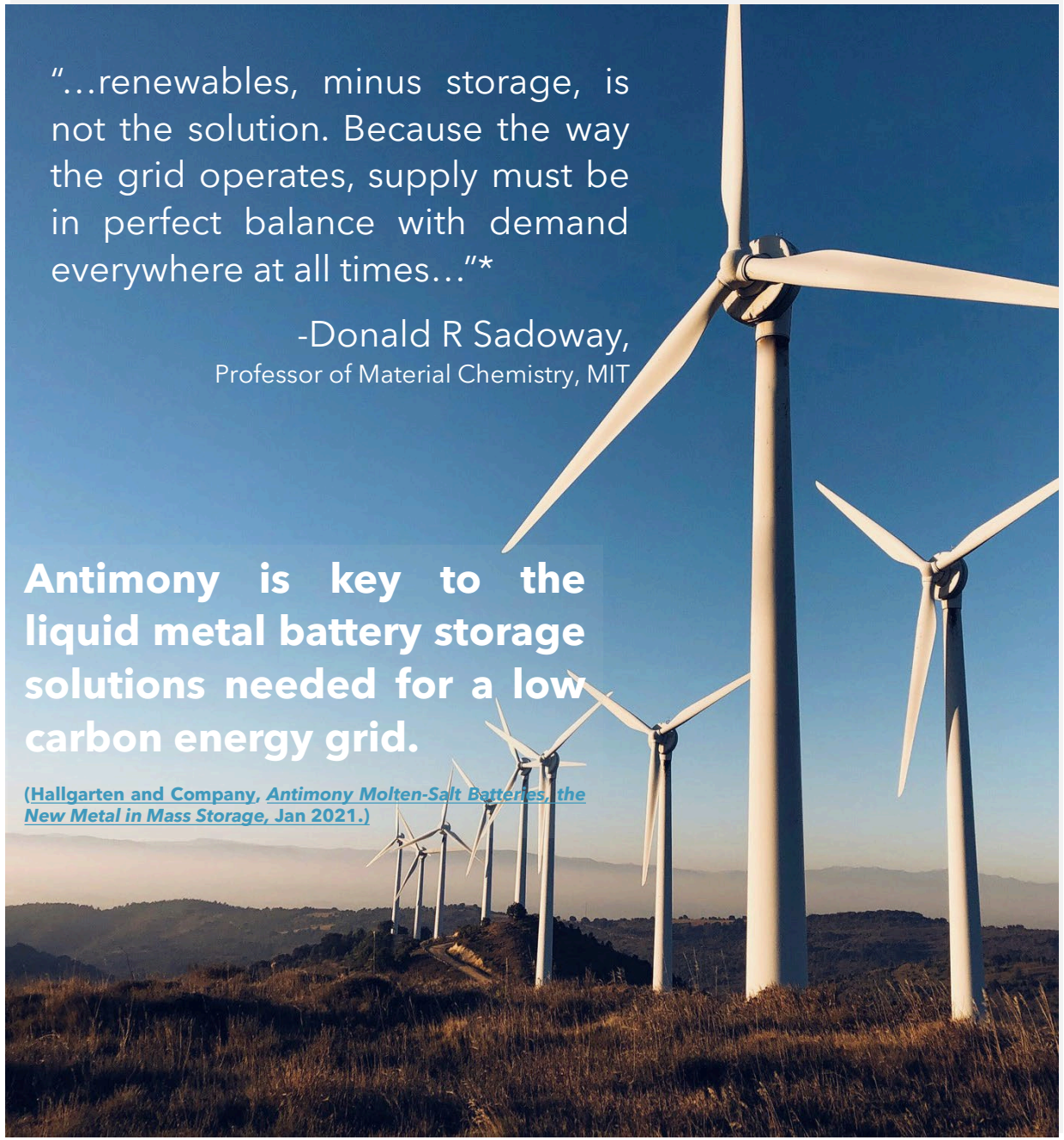
GRANTS

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

WHY TODAY?



*Cost-Informed Discovery of New Battery Chemistries - Donald R Sadoway – YouTube
https://www.youtube.com/watch?reload=9&v=ve3eu0ak2qs&t=327s

BRING MINING HOME.

A responsible future starts at the source.

"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*

Domestic production of minerals will:

Provide CONTROL over the environmental conditions of mining

&

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 INCASE OF DEFAULT

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

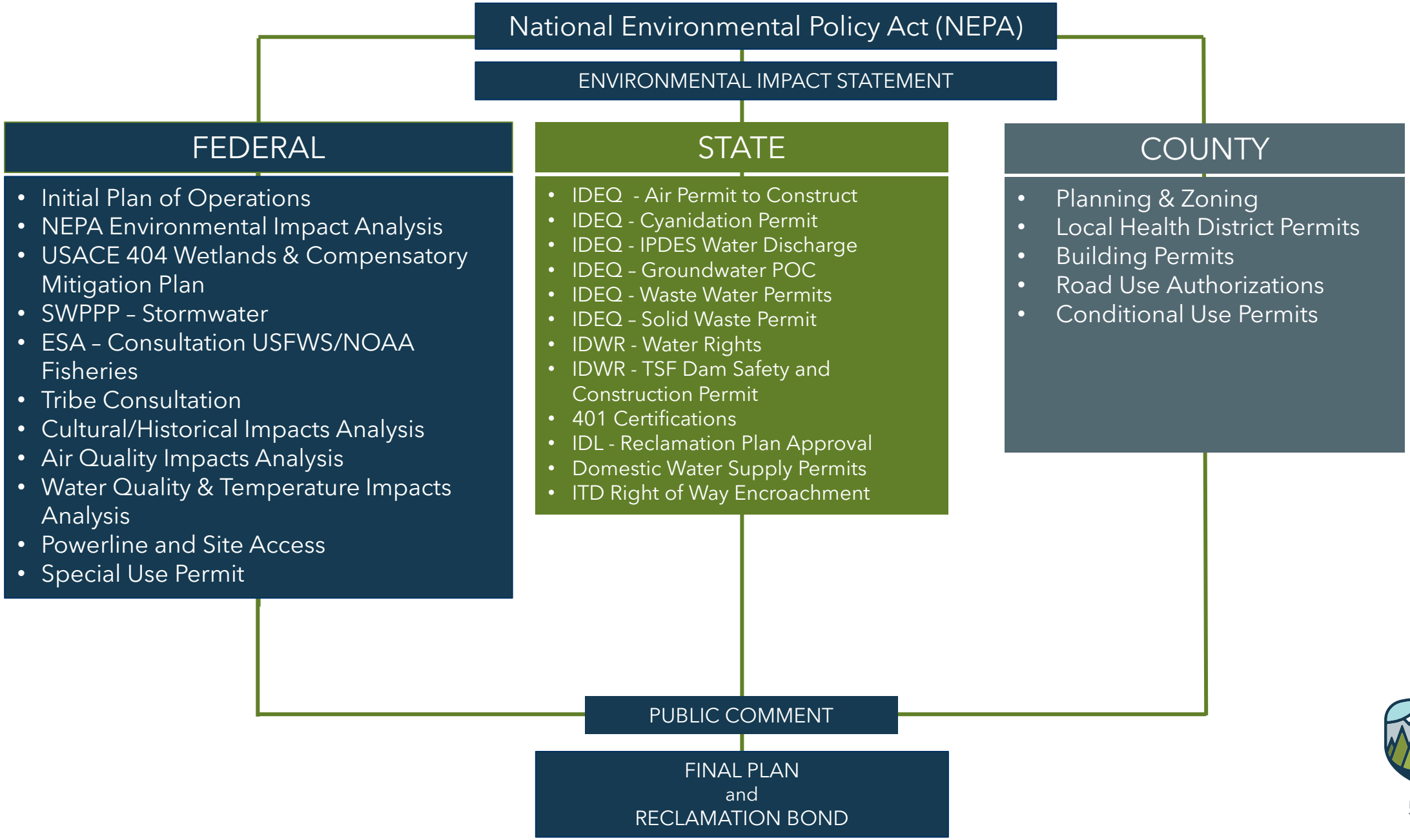
TRUE COST: Projects must now set aside funding for reclamation calculated based on the actual cost of reclamation and closure. The calculation includes on site-specific conditions and third-party contractor costs, extra percentages for contingency and long-term water treatment.

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

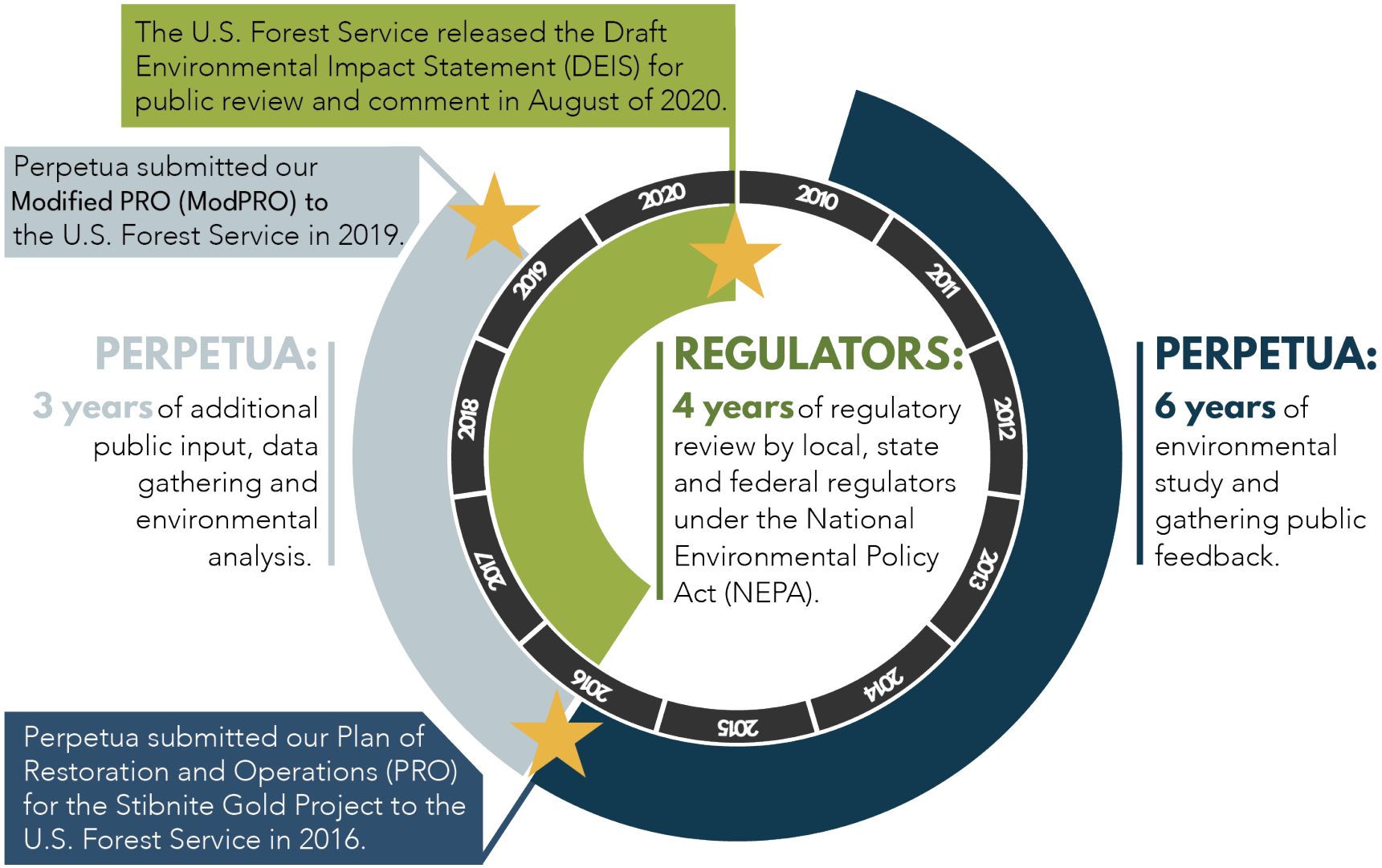


PERMITTING – NEXT STEPS

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

2020 (Q3)
Draft Environmental Impact Statement (DEIS)*

2020 (Q4)
Feasibility Study (FS) Released*

2021
Final EIS Record Of Decision (ROD)*

2022
Ancillary Permits + Financing

2022/23
Construction, Begin Mitigation + Legacy Restoration

2026
Begin Commercial Operations + Restoration

~2040
Begin Post-Op Restoration

~2050
Most Final Reclamation Completed

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*

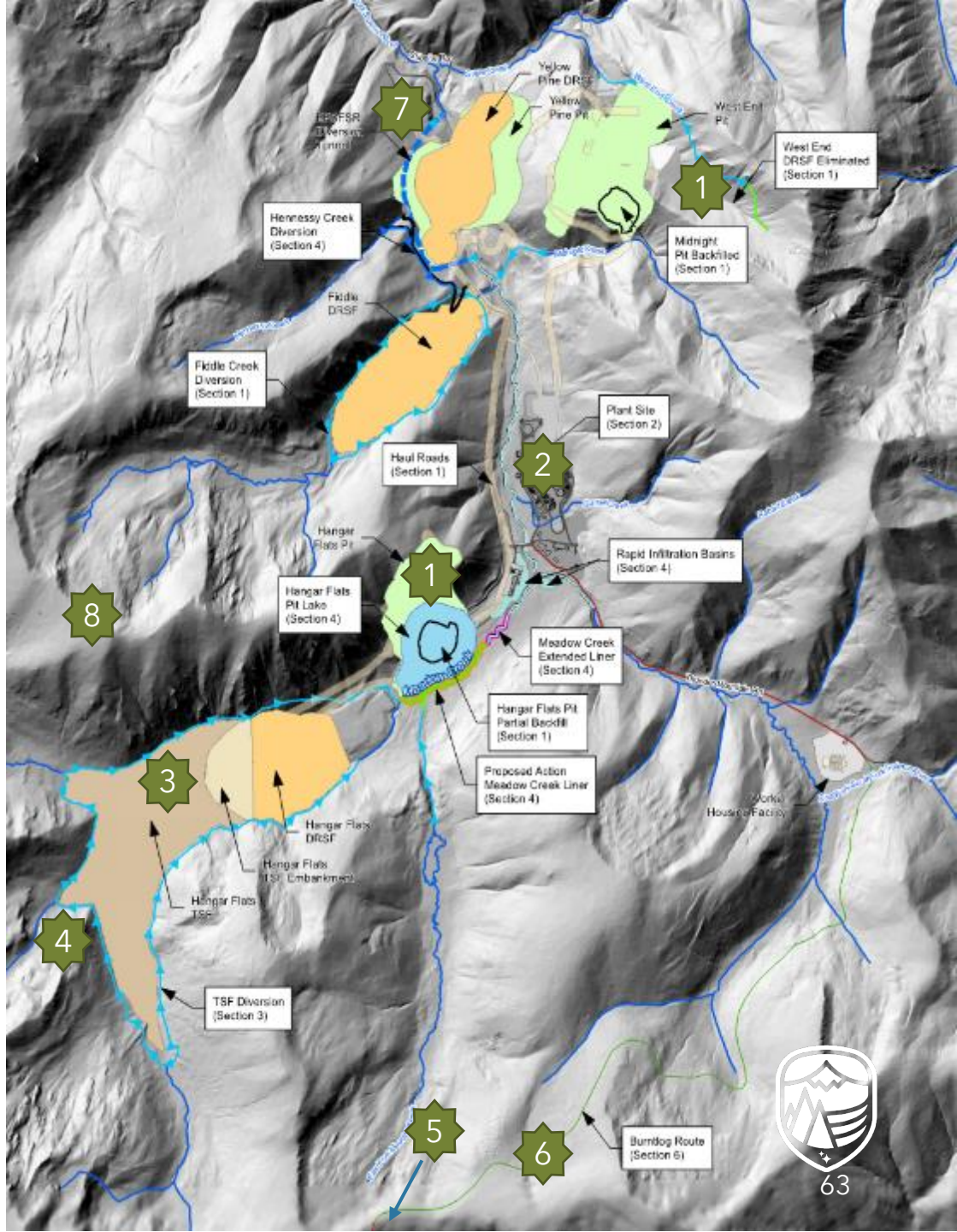
ALTERNATIVE 2

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.

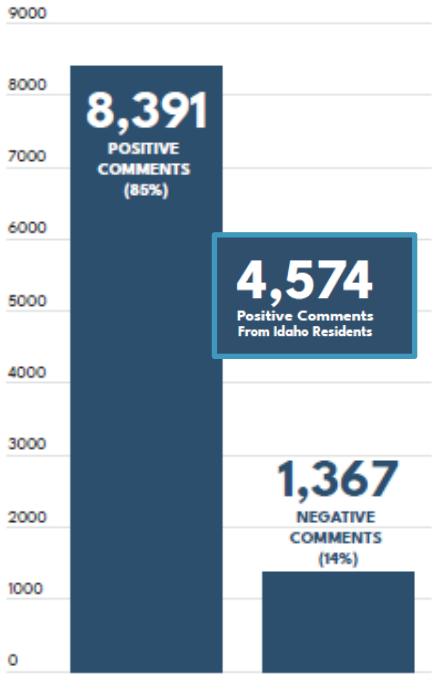
Concurrent mitigation and restoration reduce the uncertainty in the duration of wetland and riparian resource losses. *(Ch. 4 Section 4.11.3.1.1; p. 4.11-53)*

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.

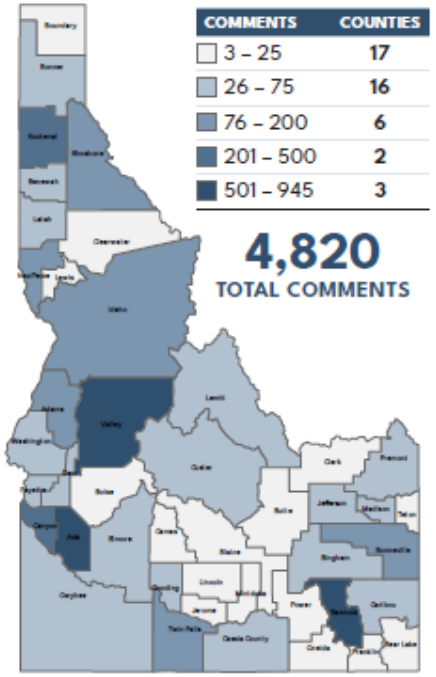
TRANSPARENCY: 75 Day Public Comment Period

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

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.

Perpetua Resources

www.perpetuaresources.com