

MARCH 2025 NASDAQ:PPTA TSX:PPTA

# PERPETUA RESOURCES

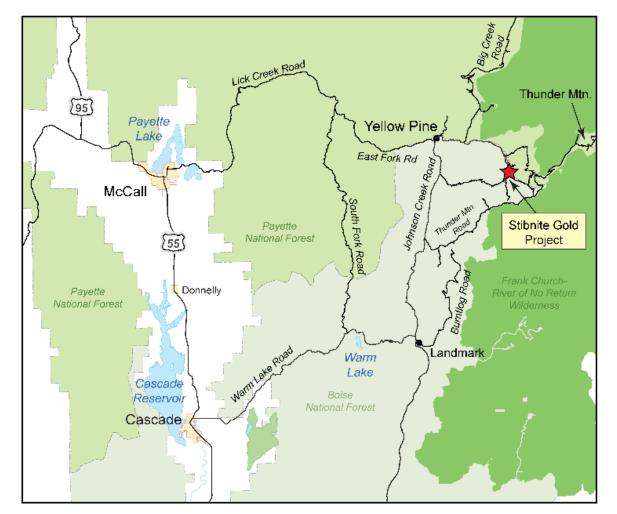
Responsible Mining. Critical Resources. Clean Future.

www.perpetuaresources.com

## **STIBNITE GOLD PROJECT**

Coeur d'Alene







## **RESTORATIVE. CRITICAL. RESPONSIBLE.**



Our goal is to transform an area abandoned after 100 years of mining activity into a national strategic asset for critical mineral and gold production.

Our approach is to utilize responsible mining and stakeholder engagement practices to restore the legacy site and bring benefits to all stakeholders.





## **THE PERPETUA WAY** RESPONSIBLE. RESTORATIVE. CRITICAL.

We are driven by the understanding that building a strong and successful business starts with doing business the right way.

> We know that economic success and environmental success are inseparable.

We designed our project to restore the environment, create opportunity and benefit communities.



## **RESPONSIBLE U.S. MINERAL PRODUCTION**

**Responsible production** prioritizes environmental outcomes and community benefits along with the safe and economic production of minerals.



Note: Numbers reflect Perpetua Resources Idaho, Inc. staff and board members as of January 2024

#### More than words.

Informed Goals. Action. Transparency.

- ✓ 325k tons of legacy waste cleaned up | since 2021
- ✓ \$17 million to improve water quality | since 2021
- ✓ 81k+ trees planted | since 2011
- ✓ 100% safe transportation fuel hauls | since 2009
- ✓ 12+ years no reportable spills
- ✓ Sustainability Reports | 2013 2023
- Community Agreement in | 2018
- Profit-sharing Foundation | 2019
- ✓ Dark Skies Commitment | 2019
- Adopted ESG policy | 2019
- Updated ESG policy | 2021
- ✓ Published GHG emissions audit | 2021- 2023
- ✓ Citizen's water monitoring program | 2021
- Published Sustainability Roadmap | 2022

## **WORKING TOGETHER**

## **Community Agreement**

Through a community agreement signed in 2018, the **Stibnite Advisory Council** brings together communities across central Idaho to discuss the challenges and opportunities presented by the Stibnite Gold Project.

- Direct access to company leadership
- Monthly meetings
- Identify opportunities and solutions
- Address questions or concerns
- Citizen's Water Monitoring Initiative (2021)





VILLAGE OF YELLOW PINE + CASCADE + DONNELLY + NEW MEADOWS + RIGGINS + COUNCIL + ADAMS COUNTY + IDAHO COUNTY

## **2023 SUSTAINABILITY REPORTING**



100%

Safe Fuel Hauls (since 2009)



Trees Planted (since 2011) 1,200+

**Community Presentations** (since 2015)

83%

Employees based in Idaho (as of Dec 2023)

\$89k in scholarships for local

students (since 2015) 100%

of Employees participated in compliance and business integrity training (in 2023)

50%

Female Executive Management (as of Jan 2024)

33%

**Diverse Board Members** (as of Jan 2024)

perpetuaresources.com/wp-content/uploads/2023-Perpetua-Resources-Sustainability-Report.pdf

# RESTORE AN ABANDONED SITE

#### 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

#### \* 1953-1960

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

#### 1970s-1990s

Periodic gold mining by multipleowners and operators

#### 2009-2011

Land ownership consolidated by Midas Gold (now Perpetua Resources). Geology & environment within the Stibnite Gold Project area is studied.

## 1941-1950

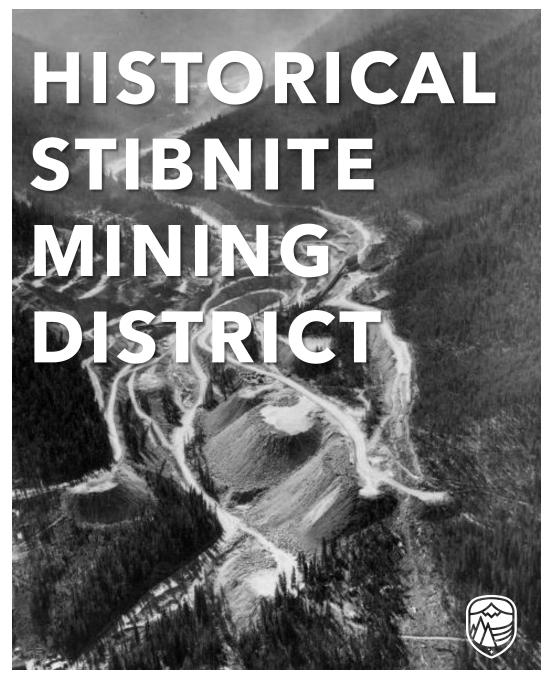
Antimony & tungsten declared critical & strategic minerals for the war effort, mining for both occurs at Stibnite.

## 1960s

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

### 1990s-2000s

All mining stopped, limited reclamation by owners, operators and state and federal government.



#### neutral by the Americas.

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

Tungsten production in China began in 1914, and it has been the largest tungsten producer. During the Sino-Japanese War its flow of tungsten was disrupted and stockpiles accumulated in Indochina. One of the great coups of the rearmament race was made by the United States when it purchased this entire stock and delivered it to this country just prior to Pearl Harbor. In the

race for tungsten hur tween victory and defe paying Portugal and S for the critical metal. buying policy of the keep Germany from o cal metal rendered it United States to pay a unit for WO<sub>2</sub>.

But to obtain enoug military program was mestic mines were reo plorations were made, the Yellow Pine dep Idaho.

"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."

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The Government in The US Senate Congressional Record, build access roads and open up 1956 The Yellow Pine deposit was a lifes. for this country, but it was geologically a strange phenomenon like a howl of gin

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## HISTORICAL LEGACY

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

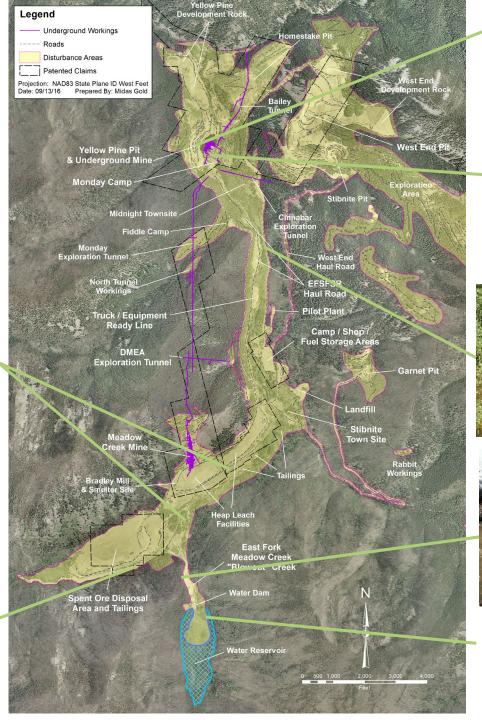
#### TAILINGS

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



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







#### **BLOWOUT CREEK VALLEY** 14-foot drop in water table, loss of

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

#### BLOWOUT CREEK

Largest source of sedimentation in the watershed



## **RESTORATION OF BROWNFIELDS SITE**

## SOLUTIONS FOR THE ENVIRONMENT

## SEDIMENTATION

Early repair of the largest source of sedimentation Pick up, reprocess, reuse and safely store 10.5M tons of tailings and spent ore

METAL LEACHING



Re-establish fish migration and provide permanent river restoration



## 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.



## CURRENT CONDITIONS

## **Existing Yellow Pine pit**

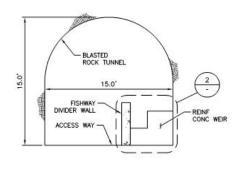
East Fork South Fork Salmon River (EFSFSR) dumps into the Yellow Pine pit. Fish passage blocked for over 80 years. Sediment from Blowout Creek settles in Yellow Pine pit



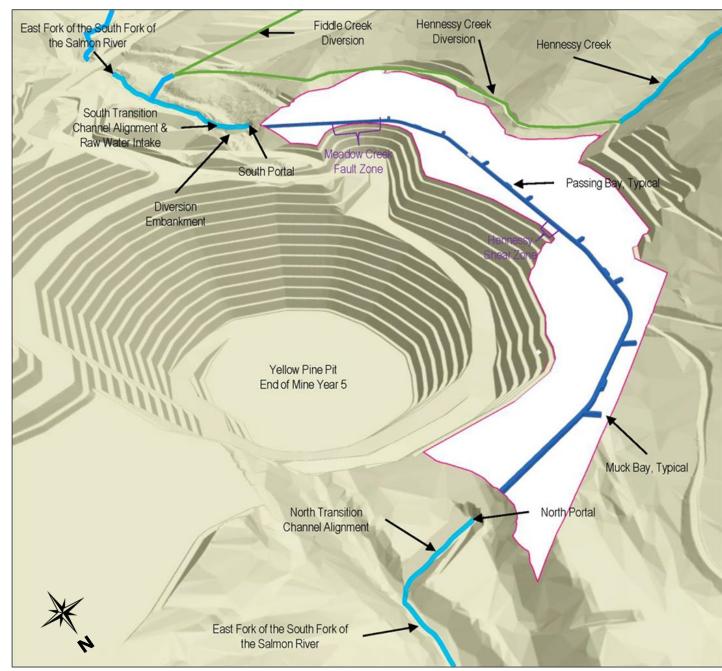
## **DURING MINING**

#### **EFSFSR Tunnel Passage**

- Immediate fish passage for approximately 15 years.
- Proven technologies for passage, monitoring and restoration.
- Passage for all 3 key species chinook salmon, bull trout and steelhead to miles of stream habitat currently blocked.







**EFSFSR**: East Fork South Fork Salmon River

## **River and Fish Passage Restored** PERMANENT FISH ACCESS restored for the first time in 80 years.

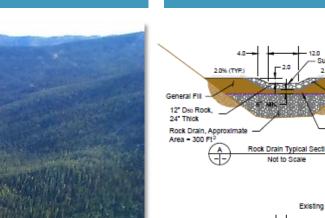
PERMANENT FISH ACCESS restored for the first time in 80 years. HABITAT RESTORATION built into project beginning in year 11.



OUF

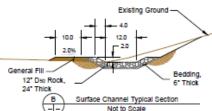
## **BLOWOUT CREEK RESTORATION**

#### CURRENT



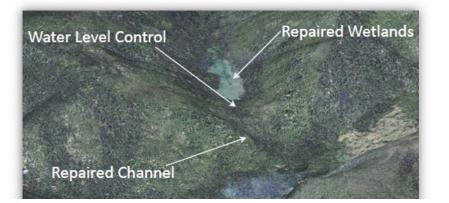
### **INTERMEDIATE**

#### urface Overflow Channel 2.0% (TYP) 6" Thick Existing Ground EOTEXTILE



#### **IMPROVEMENTS**

- Improve water quality in Meadow Creek and EFSF Salmon River.
- ✓ Improve habitat conditions.
- ✓ Raise water table in the hanging valley by 14 ft
- ✓ Stabilize the water table
- Reestablish wetlands habitat.



## **REMOVE & REPROCESS LEGACY TAILINGS**

Restoration follows construction

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

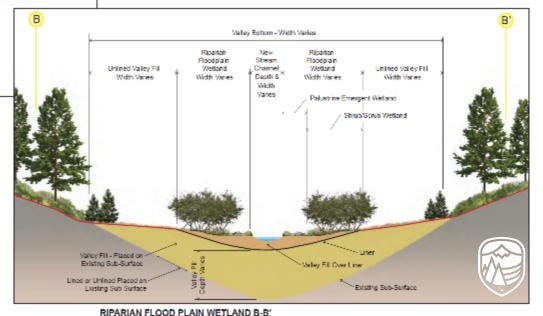
#### **CURRENT**



#### **RESTORATION**

Toodplah

**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.



NOT 10 SCALE

TSF: Tailings Storage Facility | DRSF: Development Rock Storage Facility | SODA: Spent Ore Disposal Area

## COMMITTMENT TO EARLY RESTORATION

The Administrative Settlement Agreement and Order on Consent (ASAOC) is necessary to allow a third-party to voluntarily address environmental conditions at an abandoned mine site.

The ASAOC does not approve mining activity, it <u>only</u> provides for cleanup activity of legacy waste and is separate from the NEPA process reviewing the Stibnite Gold Project

## **SOLUTIONS START NOW**

#### **Perpetua Takes Action to Restore the Site**

Perpetua signed an ASAOC with federal agencies in 2021, in order to perform agreed upon early actions to improve water quality conditions at Stibnite.

**Comprehensive Clean Up:** Immediate, timecritical needs are addressed over 4 years; once the Stibnite Gold Project is permitted, and all parties agree, the Agreement allows for a comprehensive site cleanup.

**Phase 1:** The first phase of work began in July 2022 and was continued during the summer of 2023.



## INDUSTRY AND THE ENVIRONMENT CAN WORK TOGETHER

Invest \$2 billion in Idaho **Provide** well-paid jobs to Idahoans **Grow** economic opportunity through direct and indirect expenditures and tax contributions\*

## **ECONOMY** + ENVIRONMENT

**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



suming a price of \$2,100/oz gold. Based on the FS and Financial Update, which are intended to be read as a \*Initial Capital includes capitalized preproduction and is a whole, and sections should not be read or relied upon out of c 2024 as set forth in the Financial Update. The information in this presentation is subject to the assumptions, exclusions



## **IDAHO JOBS**

**3-year construction period\***Approx. **950 direct jobs in Idaho**Average wage: **\$95,000**Average annual **payroll ~\$93 million**

#### ~ 15-year operating life\*

Approx. **600 direct jobs in Idaho**\* Average wage**: \$87,000**\* Average annual **payroll ~\$43 million** \* (Life of mine average)

**3-year reclamation prior to closure\***Approx. **100 direct jobs in Idaho**Average wage: **\$85,000**

NOTE: Based on the FS and Financial Update, which are intended to be read as a whole, and sections should not be read or relied upon out of context. Financial data as of Q4 2024 as set forth in the Financial Update. The information in this presentation is subject to the assumptions, exclusions and qualifications contained in the Technical Reports. See "Cautionary Note and Technical Disclosure" at the end of this presentation.





## ~\$2 BILLION INVESTMENT

~\$2 billion expected direct investment in Idaho
 37 miles of road: new and upgraded roads including 5 bridges
 71 miles of transmission line: new and upgraded 138 kV power line and 5 new substations
 36,620 cubic yards concrete
 4,098 tons of rebar
 12,600 sq ft of masonry
 7,227 tons of structural steel: PEMB: 2,695 tons; platework: 1,872 tons; structural steel: 2,460 tons; handrails, ladders, and grating: 200 tons

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## **ECONOMIC OPPORTUNITIES**

## **DIRECT BENEFITS\***

- \$341 million in average annual expenditures
- **\$43 million** in annual payroll (operations)
- **\$384 million** in federal corporate income taxes
- **\$162 million** in state and local taxes and mine license fees

## **DIRECT, INDIRECT & INDUCED BENEFITS\***

- \$591 million in federal taxes
- **\$286 million** in state and local taxes

## \$108M spent in Idaho 2014-2023













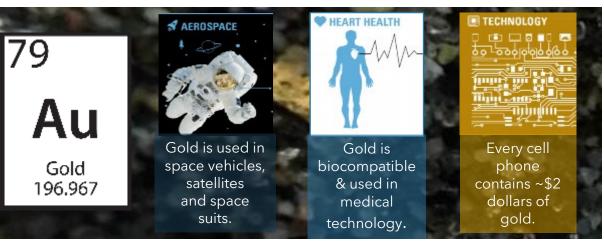
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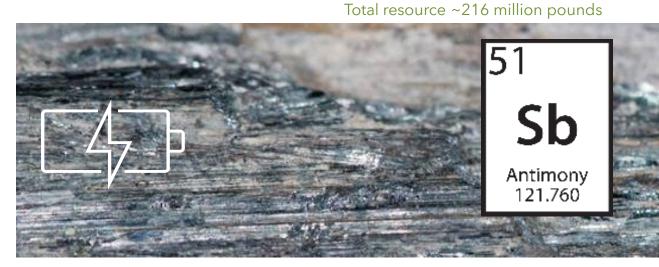
# CRITICAL RESOURCES

## **GOLD** 4.8 MILLION OUNCES OF GOLD (Reserve)

## **ANTIMONY** 148 MILLION POUNDS OF ANTIMONY (Reserve)

Total resource ~6 million ounces.





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

Half of all gold is used for jewelry. Other uses include currency and industrial purposes, in aerospace, technology and medical equipment. The **Stibnite Gold Project** would be the only domestic source of mined antimony, expected to produce ~115 million pounds.\*

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



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



# ATIMONY: Securing & Powering the Future

## **CRITICAL to NATIONAL SECURITY.**

**ANTIMONY TRISULFIDE**: Derived from a high purity form of the critical mineral antimony, antimony trisulfide (stibnite) is an essential component in hundreds of munition types, including primers for small and medium caliber munitions, mortars, artillery, mines, flares, grenades, shoulder launched munitions and missiles



Ukraine War Is Depleting U.S. Ammunition Stockpiles



90% Antimony controlled by China, Russia and Tajikistan.



Only domestic reserve and known domestic mil-spec antimony trisulfide is in Idaho. Perpetua Resources could re-establish domestic antimony production and protect America's future.

Perpetua Resources is estimated to produce enough antimony trisulfide to completely satisfy Defense needs and ~35% of U.S. annual commercial antimony demand in the first six years of production<sup>1.</sup>

Should antimony production in Idaho fail to move forward, there are no immediate alternatives for a domestic source of mil-spec antimony trisulfide and no alternatives for naturally occurring antimony trisulfide that could come online in the near-term at the cost and quantity that the U.S. Department of Defense needs.

**2022 - Department of Defense awarded Perpetua up to \$24.8M** in Defense Production Act funding.

**2024 - Department of Defense awarded Perpetua up to \$34.4M** in additional Defense Production Act funding.



## **ANTIMONY IN THE DEFENSE SECTOR**

Antimony is critical for national defense



## **U.S. DEPARTMENT OF DEFENSE** \$59.4M – Defense Production Act Title III \$15.5M – U.S. Army, Defense Ordnance

"Perpetua's Stibnite-Gold Project produced antimony trisulfide for the U.S. ammunition industrial base during World War II and the Korean War, and it is the sole domestic geologic reserve of antimony that can meet Department of Defense (DoD) requirements."

U.S. Department of Defense, Dec 19, 2022



**ANTIMONY TRISULFIDE**: Antimony trisulfide, aka "stibnite", is derived from a high purity form of the critical mineral antimony.

It is an essential component in hundreds of munition types, including primers for small and medium caliber munitions, mortars, artillery, mines, flares, grenades, shoulder launched munitions and missiles.

- Ammunitions
- Ammunition Primers
- Explosive Formulations
- Night Vision Goggles
- Military Clothing
- Communication Equipment
- Infrared Sensors
- Precision Optics
- And more

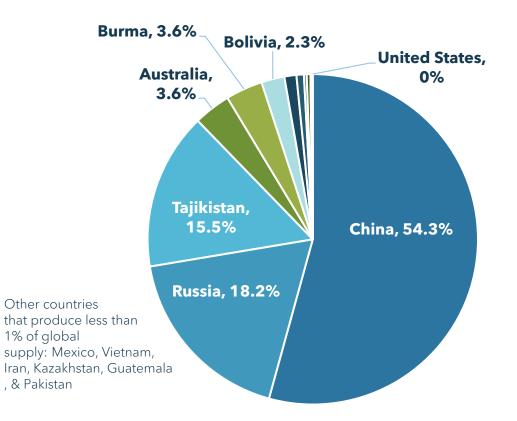


## US CRITICAL MINERAL SUPPLY CHAIN RISK.

**Critical Minerals** are metals and non-metals essential to economic and national security and are vulnerable to supply chain discustions

- disruptions Antimony is one of 50 federally listed critical minerals and a strategic defense material
- China & Russia dominate the world antimony supply (>70%)
- U.S. has no primary antimony production
- **Perpetua Resources could re-establish domestic antimony** production and protect America's future
- **2021 Executive Order on Critical Supply Chains** and subsequent report, signals need to evaluate supply chains for critical minerals, semiconductors and battery storage technology
- **2022** <u>National Defense Authorization Act</u> noted concern that nonallied nations control the U.S. supply of antimony and called for reporting on the national stockpile of antimony
- **2022 Through the Defense Logistics Agency**, Perpetua received 2 Small Business Innovation and Research (SBIR) grants to advance study of domestic mil-spec antimony trisulfide
- **2022 Department of Defense awarded Perpetua up to \$24.8M** in Defense Production Act funding
- 2024 Department of Defense awarded Perpetua up to \$34.4M in additional Defense Production Act funding

#### 2022 World Mine Production and Reserves



Source: 2023 USGS Mineral Commodity Summaries

Perpetua Resources is estimated to produce enough antimony trisulfide to completely satisfy Defense needs and ~35% of U.S. annual commercial antimony demand in the first six years of production<sup>1.</sup>

1. Based on the first 6 years of 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.

## **DEPARTMENT OF DEFENSE** up to \$59.2M

U.S. Department of Defense has conditionally awarded Perpetua Resources up to \$59.2M in Defense Production Act Title III funding to support advancing the construction readiness of a domestic antimony source.

- Reimbursement for certain costs incurred over 24 months
- Advances construction readiness and the environmental and technical studies required for permitting process.
- No changes to the project design.
- No changes to the authorities of the permitting agencies.

"Perpetua's Stibnite-Gold Project produced antimony trisulfide for the U.S. ammunition industrial base during World War II and the Korean War, and it is the sole domestic geologic reserve of antimony that can meet Department of Defense (DoD) requirements."

U.S. Department of Defense, Dec. 19, 2022



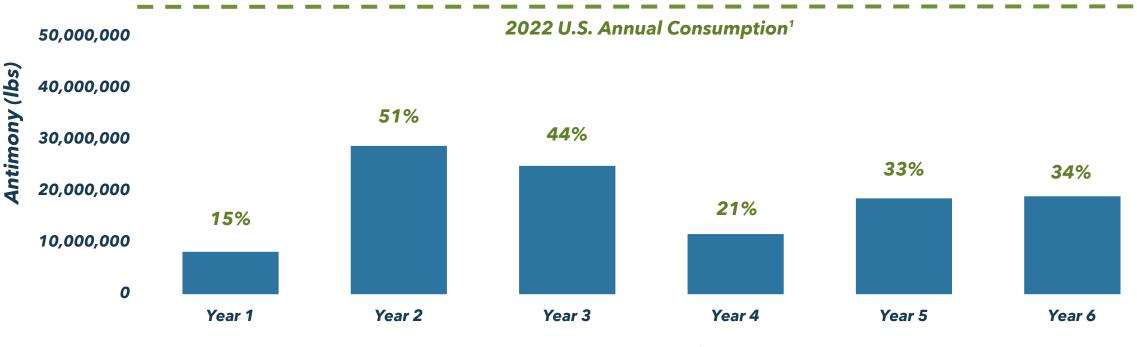


## EXPECTED TO AVERAGE ~35% OF U.S.

#### Stibnite Gold Project Recovered Antimony<sup>2</sup>

60,000,000

DEMAND<sup>1,2</sup>



#### Stibnite Gold Project - Year of Operation

#### Perpetua Resources plans to re-establish domestic antimony production, protecting America's future

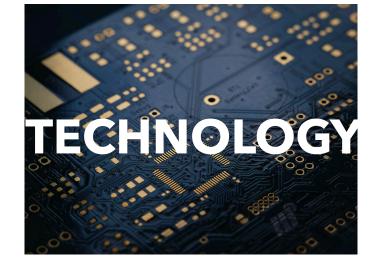
- 1. Source: 2023 USGS Antimony commodity summary
- 2. Based on the 2020 Feasibility Study (FS) which is intended to be read as a whole and sections should not be read or relied upon out of context. The information in this presentation is subject to the assumptions, exclusions and qualifications contained in the FS. See "Regulatory Information" at the end of this presentation. For a summary of differences between the FS and TRS, see "Cautionary Note and Technical Disclosure" at the beginning of this presentation.

## **CRITICAL FOR THE AMERICAN FUTURE**

**ANTIMONY (Sb):** A "critical mineral" that is vital to U.S. national security and will support the transition to a green economy



Night Vision Goggles Military Clothing Infrared Sensors Hardening Lead: Bullets & Shrapnel Armor Piercing Projectiles Ammunition Primers



Circuit boards Semi-conductors Electrical switches Fluorescent lighting High-quality clear glass



Copper wiring insulation Lead-acid batteries Liquid-metal batteries Solar panels Wind turbines



## **AMERICAN INNOVATION & AMERICAN MINERALS**

## **LIQUID METAL BATTERY**

The liquid metal battery fundamentally changes the way power grids operate and enables the transition to carbon-free power grids.

#### **MISSING PIECE FOR NET ZERO GRID**

Ambri's antimony-based, liquid metal battery is the large-capacity, low-cost, reliable, responsible, stationary energy storage for the future.

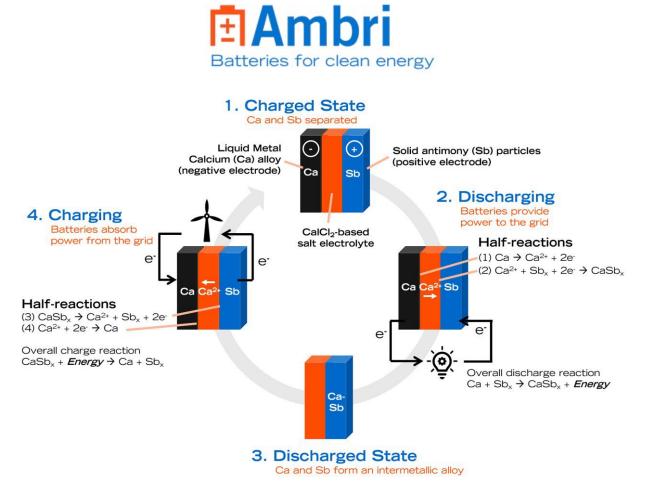
**ANTIMONY AND CALCIUM**: Developed by a team from MIT, the liquid metal battery technology relies on a calcium ally anode, molten salt electrolyte and a cathode of solid antimony.

**HIGH-CAPACITY**: Grid scale, daily cycle, modular to meet gigawatt deployment.

**LONG-LIFE**: 20+ year useful life.

**LOWER COST**: 30-50% below equivalent lithium-ion (2020-2030).

**IMMEDIATE**: <500 millisecond response time.



## **A GREEN ENERGY PARTNERSHIP**

Antimony from the Stibnite Gold Project will be used to produce high-capacity, long-term, reliable, and safe clean energy storage batteries.

At the current scope, the partnership will provide enough antimony to **Power ~1 Million U.S. homes with solar power for the 20-year battery lifespan.** 

## RESPONSIBLE, SECURE SOURCE of ANTIMONY

#### **MISSING PIECE FOR DECARBONIZED GRID**

- Perpetua has committed to supply a portion of the antimony from the Stibnite Gold Project to Ambri, the liquid metal battery company.
- The current commitment of antimony from the Project can power over 13 Gigawatt hours of energy storage.
- Perpetua and Ambri will also partner to identify opportunities to reduce carbon emissions through renewable energy generation combined with battery storage during operations



## **STIBNITE GOLD LOGISTICS FACILITIES**

Scott Valley, Administrative and Transportation Facility

#### **IN-TOWN JOBS**

Human Resources

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**

### **CURRENT ROUTE (Johnson Creek Alternative)**

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

### **CONSIDERATIONS**

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

### PREFERRED ALTERNATIVE, THE BURNTLOG ROUTE PROMOTES SAFETY

#### 38 miles total.

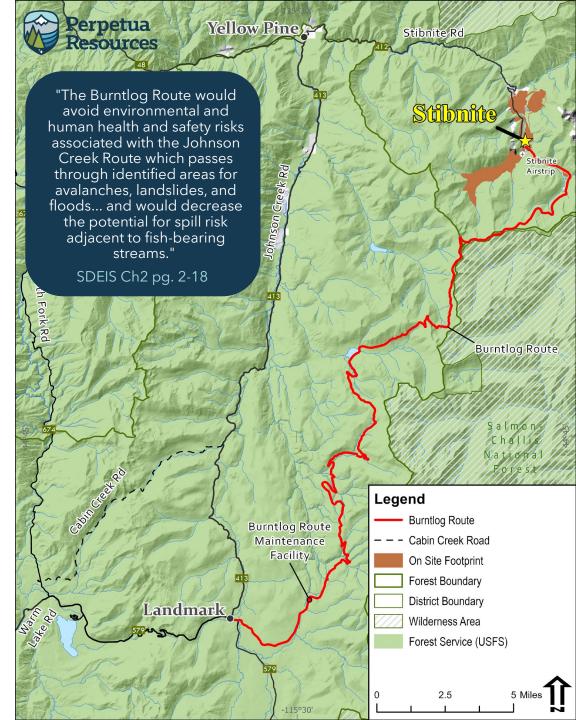
- 23 miles improving existing road (Burnt Log Road, Meadow Cr. Lookout Rd, & Thunder Mountain Road)
- 15 miles of new road

#### **Benefits**

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

#### **Safety Considerations**

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



# **TRANSPORTATION PLAN**

- Concentrate traffic 6am-8pm Mon-Fri
- Bus workforce from Logistics Facility to project site (Estimate 90% of workforce)
- Approximately 25 round trips per day
- Pilot vehicles will accompany fuel & sensitive loads
- Bypass downtown McCall
- Perpetua Resources will address upgrades at HWY 55 at Warm Lake, Boydston and Dienhard

**BENEFITS:** 

Less traffic Less dust Lower accident risk Lower spill risk Less noise

Current Burntlog Roa

The Stibnite Gold Project represents an estimated 1-3% increase in 2017 traffic levels on Highway 55.



## **PERPETUA TRAFFIC IMPACTS - OPERATIONS**

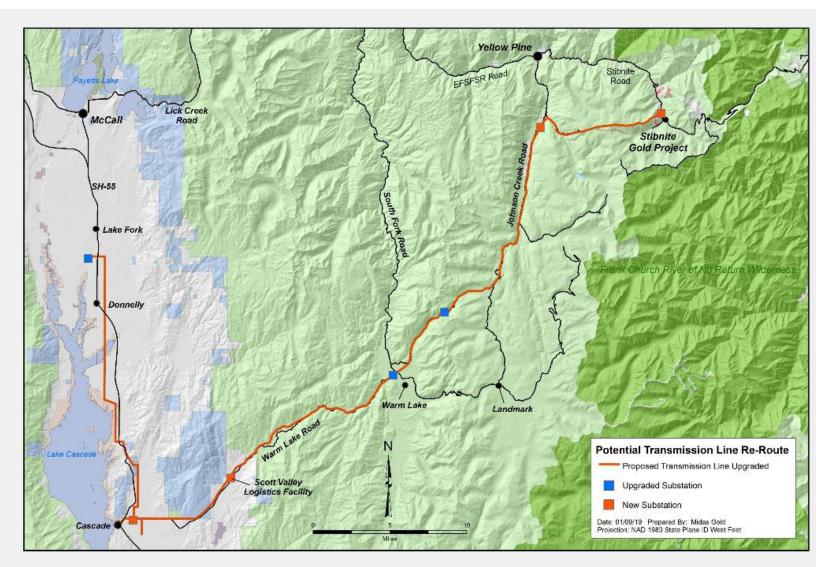
To/From SH-55 to the Stibnite Gold Logisitics Facility

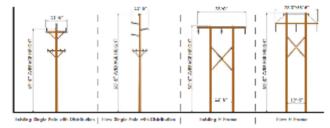
Main Road	Direction of Travel	Annual Average Daily Traffic <sup>1</sup>			Percent Vehicles	Number	Percent
		Existing AADT	Perpetua Added Trips	Total	from Perpetua	of Heavy Vehicles	Heavy Vehicles
SH-55	North of Warm Lake	4,900	52	4,952	1.1	8	0.1
	South of Warm Lake	4,900	104	5,004	2.1	17	0.3
Warm Lake Rd	N/A	1,670	156	1,826	8.5	25	1.4

<sup>1</sup> Supplemental Draft Environmental Impact Statement (SDEIS), 2022

# **TRANSMISSION LINE UPGRADE**

Project will upgrade ~72 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.



### TAILINGS SAFETY 101

Best Practice For Tailings Facility -Design

No known failures for facilities with these design characteristics

Added benefits

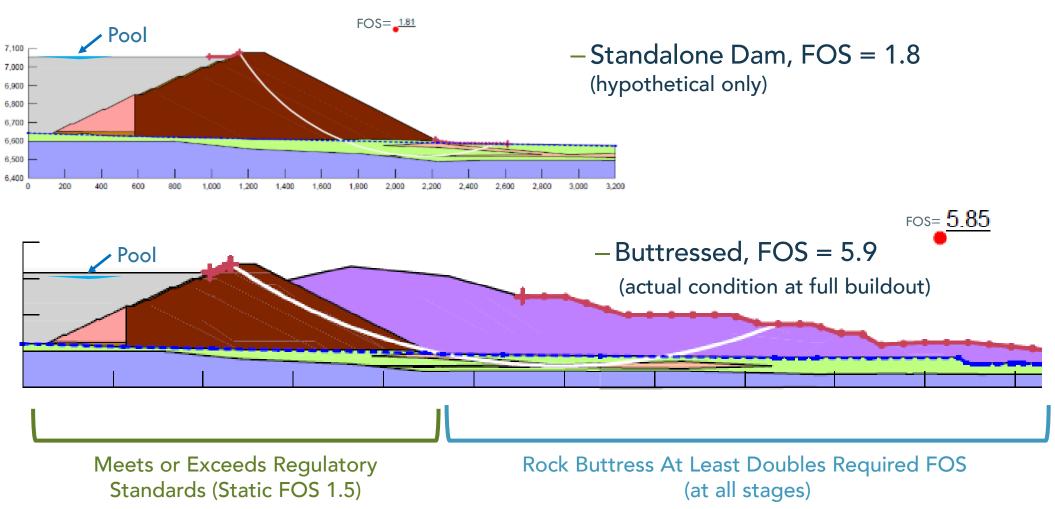
### THE STIBNITE GOLD PROJECT TAILINGS **STORAGE FACILITY WI**

- 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

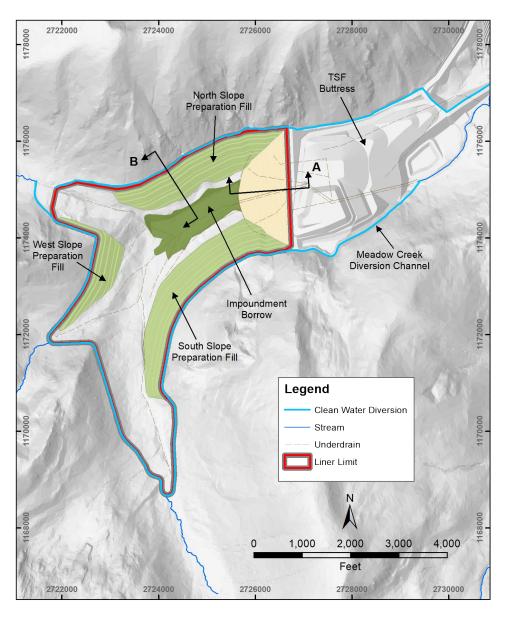


# **TAILINGS FACILITY STABILITY**

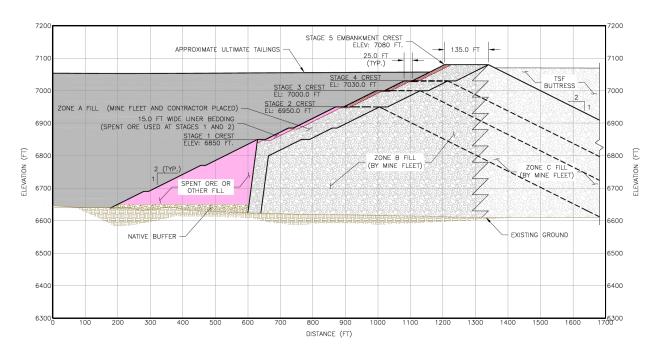
FOS: Factor of Safety



## **TSF/BUTTRESS DESIGN CONFIGURATION**



- Rockfill with downstream raises to maintain freeboard
- ✓ Composite-lined
- ✓ Surface water diverted
- Underdrains
- Over-liner drainage/pore pressure relief



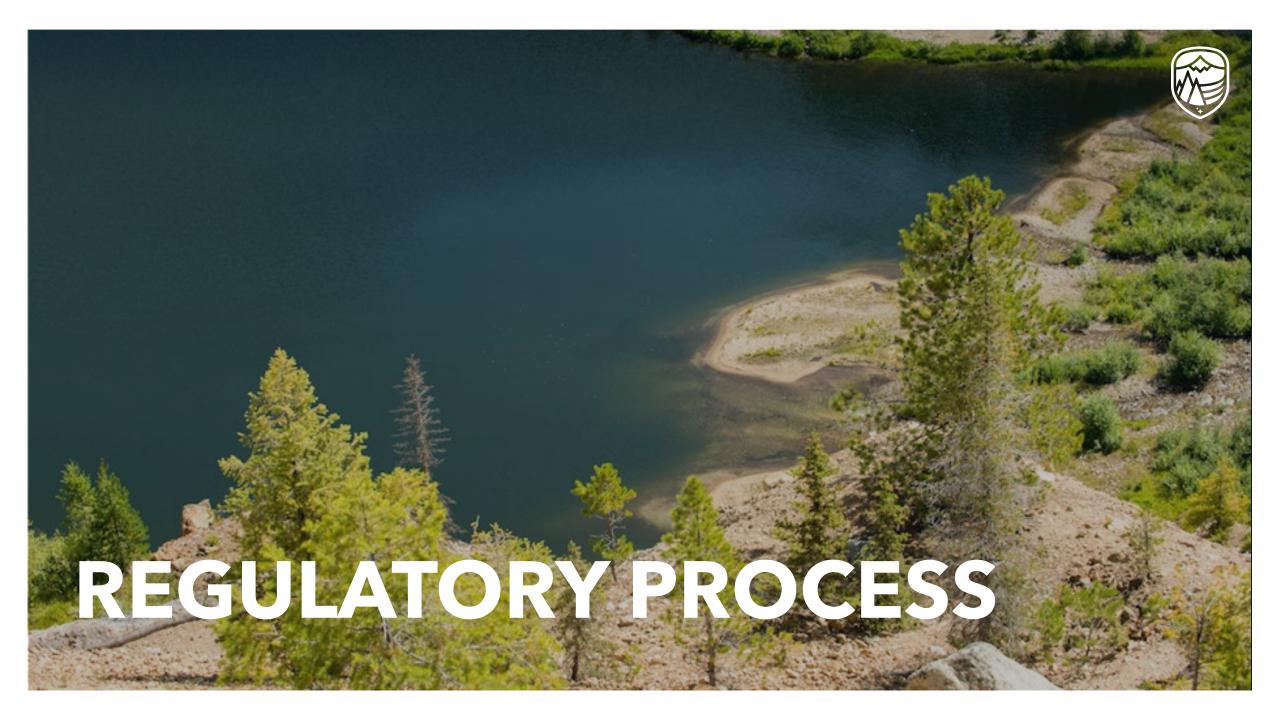
#### **TSF**: Tailings Storage Facility

# FINANCIAL ASSURANCE

MAKING SURE FUNDING FOR RESTORATION IS AVAILABLE INCASE OF DEFAULT

Before mining can begin, we must set aside protected funds to guarantee the reclamation of the project.

- Laws have recently changed; projects must now set aside funding for reclamation calculated based on the actual cost of reclamation and closure which includes on site-specific conditions and third-party contractor costs. The calculation also includes an extra percentage for contingency and long-term water treatment.
- 2. Perpetua has suggested that financial assurance for the Stibnite Gold Project incorporate **restoration standards** where possible.
- 3. 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.
- 4. Perpetua will **not** be using a **"Corporate Guarantee"** as a tool for financial assurance and instead will look to traditional forms like bonding and trust.



# The Stibnite Gold PROJECT

### PLAN DESIGNED TO PROVIDE:

- ✓ Natural resource restoration via private investment
- ✓ Restoration of salmon migration into upper EFSF Salmon River
- ✓ Over 500 direct well-paid jobs for Idahoans
- The only domestically mined source of antimony, a mineral of critical national significance

2010 Begin Study and Engineering
2016 Begin Regulatory Review under NEPA
2020 Public Comment Period for the Draft EIS
2022 Supplemental Draft EIS published
2024 Final EIS & Draft Record of Decision published
2025 Final Record of Decision published
2025 Construction Decision anticipated



**NEPA:** National Environmental Policy Act **EIS:** Environmental Impact Statement **EFSFSR:** East Fork South Fork Salmon River

# WHAT WE HEARD IN 2020

**Improve water quality** 

**Reduce water temperature** 

### **Reduce the project footprint**

Based on public and agency feedback on the Draft EIS, Perpetua submitted project refinements to the USFS in December of 2020. The improvements create better environmental outcomes and are responsive to public input. The agency has decided to advance the improved project design forward for additional public review.

# PROJECT IMPROVEMENTS

**Improved Water Quality** permanent water treatment is no longer needed through elimination of Fiddle DRSF, added liners, etc.

**Improved Water Temperature** to reach levels closer to or even below baseline.

**10% reduction** in total volume mined (44 million tons)

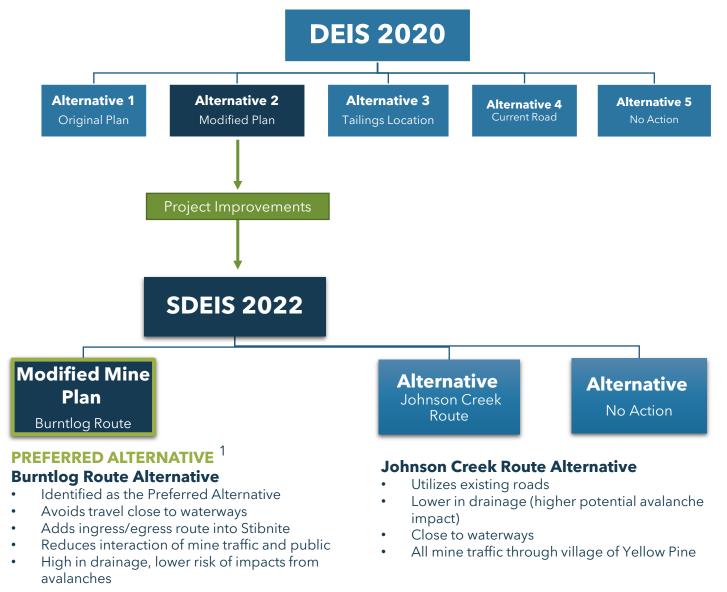
**70% reduction** in Hangar Flats pit size (the pit can be completely backfilled)

**7% reduction** in disturbance from open pits (37 acres)

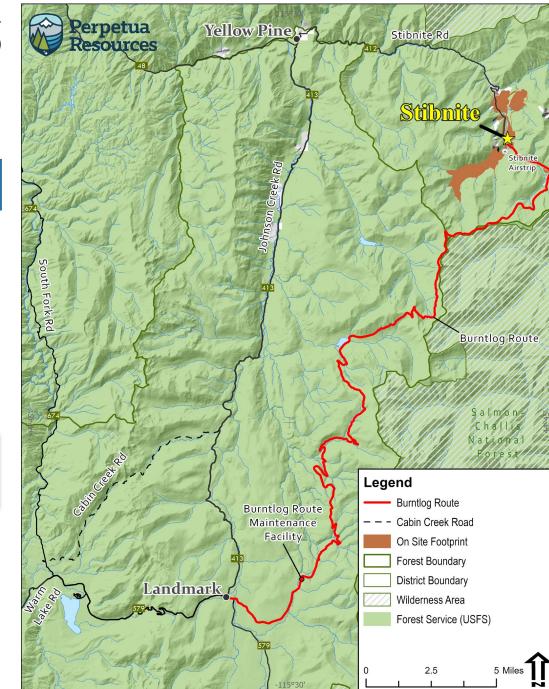
**168-acre reduction** in disturbance without Fiddle DRSF



# **2022 SUPPLEMENTAL DEIS**



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



IT ALL STARTS HERE.

Restore the site. Restore the river.

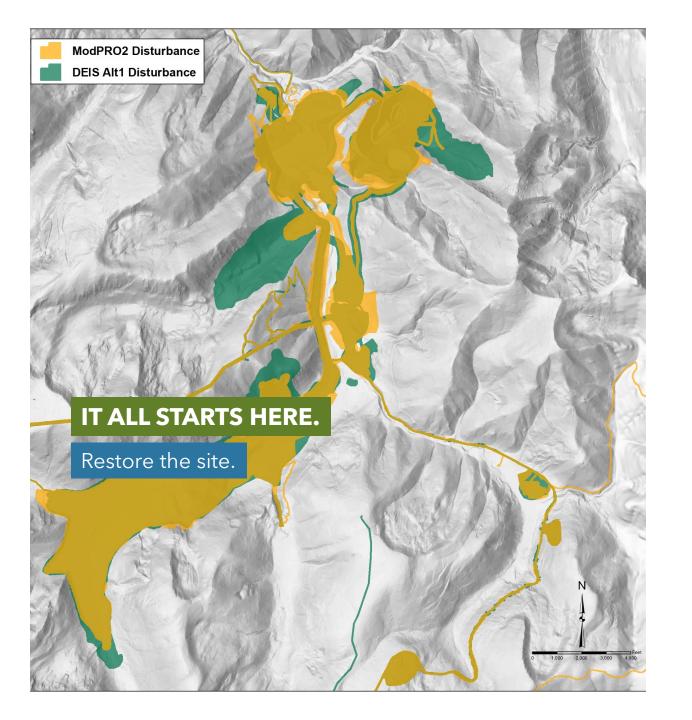
# **IT IS TIME.**

### **Improve River and Fish Conditions**

- ✓ 20+ miles of habitat opened
- ✓ 8 miles of bull trout habitat
- ✓ 13 miles of Chinook critical habitat

"The restoration activities, particularly providing volitional passage in the East Fork SFSR, would result in <u>a major</u>, <u>permanent</u>, regional, and beneficial effect <u>on Chinook salmon</u>, steelhead, bull trout, <u>and westslope cutthroat trout within the</u> <u>vicinity of the mine</u>."

(Supplemental Draft Environmental Impact Statement, 4.12.2.2 2021 MMP; p.4-334)

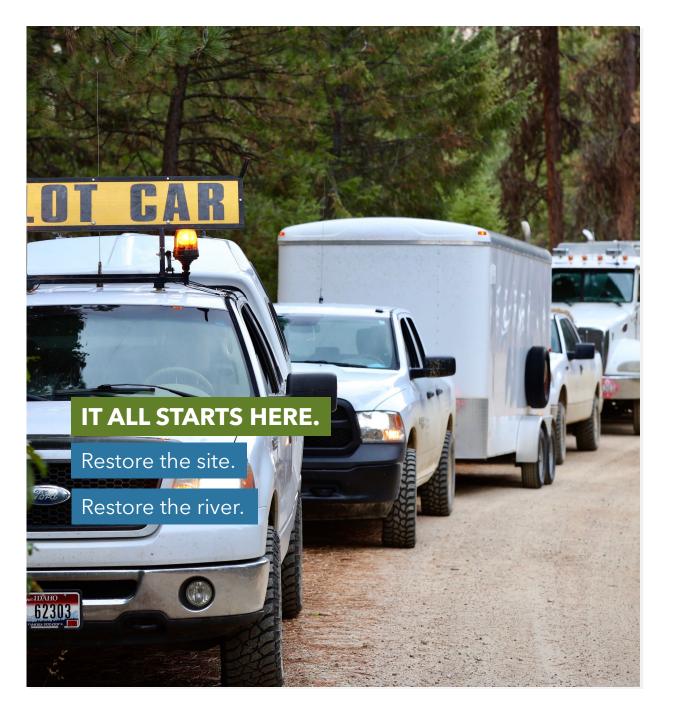


# **IT IS TIME.**

6 years of listening and working with regulators has reduced the project impacts.

- ✓ 13% reduction in on-site disturbance
- ✓ 51% on-site Project footprint on previously disturbed legacy areas.
- ✓ 10% reduction in volume mined
- ✓ 70% reduction in Hangar Flats pit volume + complete backfill
- ✓ ~60% reduction in mercury emissions
- ✓ 23% reduction in traffic by adding lime production to site.





# **IT IS TIME.**

### Safe transport via Burntlog route.

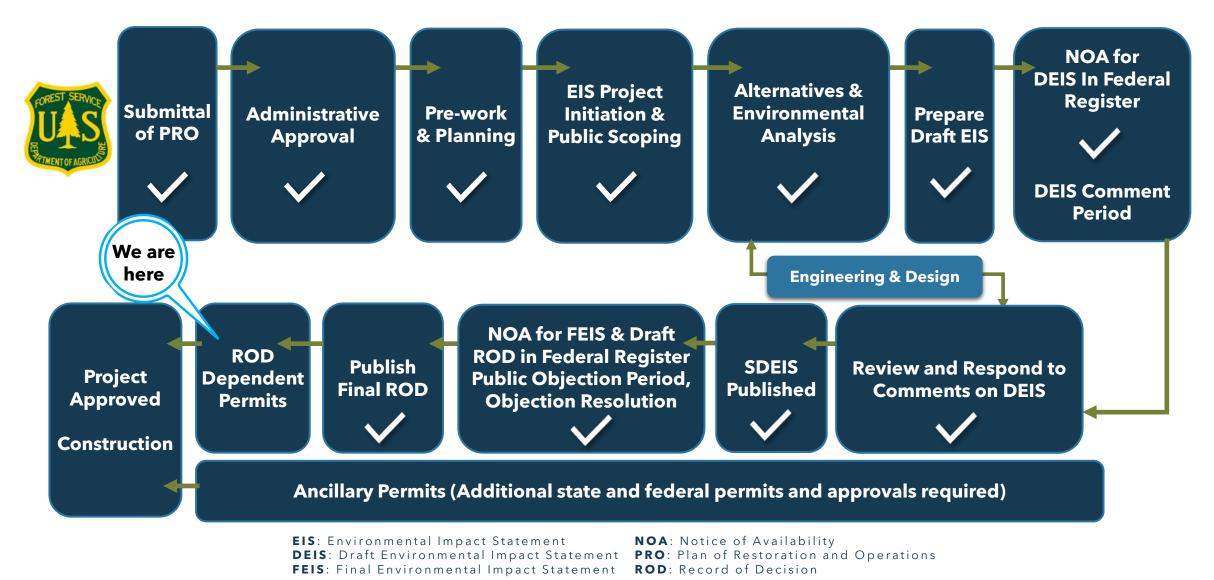
- $\checkmark$  38 miles of new and existing road
- ✓ Reduced risk of hazards
- ✓ Reduced safety risks
- ✓ 18 fewer miles within .5 mile of streams.

"The <u>Burntlog Route would avoid environmental</u> and human health and safety risks associated with the Johnson Creek Route which passes through identified areas for avalanches, landslides, and floods. This route would provide another route for SGP ingress/egress, would decrease SGP and public traffic interaction with Yellow Pine and Johnson Creek area residents; and <u>would</u> decrease the potential for spill risk adjacent to fish-bearing streams."





### PERMITTING – NEXT STEPS





### PERPETUA RESOURCES RESPONSIBLE. RESTORATIVE. CRITICAL.



# THANK YOU.



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### FORWARD-LOOKING STATEMENTS

Information and statements contained in this presentation that are not historical facts are "forward-looking information" or "forward-looking statements" (collectively, "Forward-Looking Information") within the meaning of applicable Canadian securities legislation and the United States Private Securities Litigation Reform Act of 1995. We use words such as "may," "would," "should," "will," "likely," "expect," "anticipate," "believe," "intend," "plan," "forecast," "outlook," "project," "estimate" and similar expressions suggesting future outcomes or events to identify forward-looking statements or forward-looking information. Forward-Looking Information includes, but is not limited to, information concerning the business of Perpetua Resources Corp. (the "Company"), the Stibnite Gold Project (the "Project"), including but not limited to statements with respect to results of the FS (as defined below) and the Financial Update (as defined below); the assumptions, qualifications and limitations of the results of the FS and the Financial Update, including the economic results and the sensitivity analysis of the variables included therein; other assumptions underlying the FS and the Financial Update, including regarding inflation, labor, regulatory and permitting outcomes and timing, construction timing, production capacity and expectations, LOM estimates, expected mining methods; the expected outcomes of the Stibnite Gold Project, including our reserves and resources; disclosure regarding possible events, conditions or financial performance that is based on assumptions about future economic conditions and courses of action; next steps and courses of action including the prospects and timing of successfully securing project financing on acceptable terms, or at all; environmental clean up actions by us and our contractors; ongoing funding and anticipated liquidity; our ability to comply with and obtain permits related to the Stibnite Gold Project; actions to be taken by the USFS, the Department of Defense, the State of Idaho and other government agencies and regulatory bodies; our ability to successfully implement and fund the Project and the occurrence of the expected benefits from the Project; timing of anticipated milestones related to the Project; predictions regarding improvements to water guality, water temperature, and fish habitats and other environmental conditions at the site, including with respect to process and timing of such improvements; reduction of the Project footprint and the anticipated benefits and other effects thereof; our ability to successfully implement the Project and the occurrence of the expected benefits from the Project, including contributions to the workforce, national security and clean energy transition; our and Ambri, Inc.'s ("Ambri") ability to perform under the supply agreement described in this presentation, which agreement is subject to certain conditions, including completion of the permitting process for the Project, commencement of commercial production of antimony, identification of one or more refiners to transform our antimony concentrate into antimony metal, and mutual agreement on certain material terms, including volume and pricing; the anticipated economic, environmental and other benefits of the Project; the viability of the Project; development and operating costs in the event that a production decision is made; success of exploration, development and environmental protection, closure and remediation activities; permitting time lines and requirements; requirements for additional capital; requirements for additional water rights and the potential effect of proposed notices of environmental conditions relating to mineral claims; risks and opportunities associated with the Project; planned exploration and development of properties and the results thereof; planned expenditures, production schedules and budgets and the execution thereof. Statements concerning mineral resource and mineral resource that they involve estimates of the mineralization that may be encountered if the Project is developed. In preparing the Forward-Looking Information herein, the Company has applied several material assumptions, including, but not limited to, assumptions that the conclusions and findings from the FS and basic engineering work, and the technical, geologic, engineering, production and reserve assumptions underlying such work, are reliable to form the basis for the Financial Update; the full amount of the Defense Production Act award will be funded on the expected timeline; that we will be able to obtain sufficient funding to finance permitting, pre-construction and construction of the Project and that all requisite information will be available in a timely manner; the exchange rates for the U.S. and Canadian currencies will be consistent with the Company's expectations; that the current exploration, development, environmental and other objectives concerning the Project can be achieved and that its other corporate activities will proceed as expected; that the current price and demand for gold and antimony will be sustained or will improve; that general business and economic conditions will not change in a materially adverse manner and that all necessary governmental approvals for planned activities on the Project will be obtained in a timely manner and on acceptable terms; that permitting and operations costs will not materially increase; the continuity of the price of gold and other metals, economic and political conditions and operations; and the assumptions set out in the FS and Financial Update and in the Company's public filings with the U.S. Securities and Exchange Commission (the "SEC") and its Canadian disclosure record. 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 Technical Reports (as defined below) and the Company's public filings; operations and contractual obligations; changes in exploration programs based upon results of exploration; failure of mining methods or processes to operate as anticipated; changes in estimated mineral resources or unexpected variations in guantity of mineralized material, grade, or recovery rates; changes in commodity prices, exchange rates, interest rates, tax rates, operating or production costs; availability of personnel and equipment; plant, equipment or process 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; risks to employee health and safety and a slowdown or temporary suspension of operations in geographic locations impacted by an outbreak of disease; estimates used in budgeting and financial statements proving to be incorrect; risks related to unforeseen delays in the permitting process (including, but not limited to, future US government shutdowns); risks related to opposition to the Project; risks related to increased or unexpected costs in operations or the permitting process; risks that necessary financing will be unavailable when needed on acceptable terms, or at all; risks related to the outcome of litigation and potential for delay of the Project, as well as those factors discussed in the Company's public disclosure record. Although the Company has attempted to identify important factors that could affect the Company and may cause actual actions, events or results to differ materially from those described in Forward-Looking Information, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that Forward-Looking Information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Because it is not possible to predict or identify all such factors, this list cannot be considered a complete set of all potential risks or uncertainties. Accordingly, readers should not place undue reliance on Forward-Looking Information. For further information on these and other risks and uncertainties that may affect the Company's business and liquidity, see the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of the Company's filings with the SEC, are available at www.sec.gov and with the Canadian securities regulators, which are available at www.sedar.com. Except as required by law, the Company expressly disclaims any obligation to update the Forward-Looking Information herein.

### **CAUTIONARY NOTE & TECHNICAL DISCLOS**



### the present a recommendation to buy or sell these securities. Investors should always consult their investment advisors prior to making any investment decisions. All references to "dollars" or "\$" shall mean United States dollars unless otherwise specified.

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

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

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

All other technical analyses, design information, capital and operating cost information, economic analyses, permitting and legal assumptions, conclusions and recommendations are consistent between the TRS and the FS.

Financial data in the FS and TRS are based on cost estimates as of December 31, 2020, as set forth in the FS . On February 13, 2025, the Company released an updated cash flow model for the Project (the "Financial Update"). The Financial Update was prepared by the Company and is based, in part, on the basic engineering work completed by Ausenco Engineering USA South Inc. ("Ausenco") in January 2025, and with contributions from other mining engineers and consultants, utilities and financial advisors. It is intended to be read as a supplemental financial update to the cash flow forecast included in the FS with respect to economic information regarding the Project. Using the scientific and technical information presented in the FS, the Financial Update reflects the progression of the Project plan to a Basic Engineering level, including applying fourth quarter 2024 cost estimates for construction and operations and current and consensus commodity pricing for sales. Neither the Financial Update nor the studies or data underlying such update modifies the Mineral Resources and Mineral Reserves reported in the FS and the TRS or the material assumptions and information pertaining to such disclosure. The information contained in the Financial Update is subject to the assumptions, exclusions and qualifications set forth in the Company's Current Report on Form 8-K filed with the SEC on February 13, 2025, as well as those contained in the FS and the TRS, except to the extent explicitly updated by the Financial Update.

Readers are encouraged to read the Financial Update and the Company's Current Report on Form 8-K filed with the SEC on February 13, 2025, which is available under the Company's profile on EDGAR. Readers are encouraged to read the TRS and the Company's Current Report on Form 8-K filed with the SEC on January 3, 2021, as amended by the Company's Current Report on Form 8-K/A filed with the SEC on June 8, 2022, which are available under the Company's profile on EDGAR. Readers are also encouraged to read the FS, which is available on the Company's website and under the Company's profile on SEDAR, for detailed information concerning the Project. The FS, the TRS and the Financial Update are intended to be read as a whole, and sections should not be read or relied upon out of context. References to the "Technical Reports" in this presentation refer to the FS, the TRS and the Financial Update, as applicable. See also "Regulatory Information" at the end of this presentation.

This presentation contains certain mineral reserve, production, costs, valuation, capitalization, trading data and similar information regarding certain other mineral projects and peer companies. Such data was derived from publicly available reports by such companies and other trade and industry sources. While the company believes such sources to be reliable, the company has not independently verified such information. Furthermore, information regarding mineral reserves, production and similar mineral project information for each company is based on estimates, assumptions and reporting standards applied to available data by each company and their reserve engineers in their respective reports, which may differ materially from the estimates, assumptions and reporting standards applied by us, and therefore may not be comparable among the companies presented. As a result, comparisons of such data made in this presentation, while considered reasonable at the time they are made, are subject to a variety of risks and uncertainties which could cause actual events or results of each company to differ materially from those reflected and there can be no assurance that we will be able to achieve similar results at similar results at similar stages of development.

Investors should be aware that the Letter of Interest from US EXIM is non-binding and conditional, and does not represent a financing commitment. A funding commitment is conditional upon completing the application, due diligence and underwriting process and receiving all required Project approvals. Additionally, funding under the DPA TIA is available only for the specified costs related to permitting, environmental baseline data monitoring, environmental and technical studies, and advancing construction readiness and is not available to fund certain corporate expenses.



### **REGULATORY INFORMATION**

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

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

The Financial Update was prepared by the Company under the direction of Christopher Dail, a qualified person (as defined in NI 43-101 and as defined in Subpart 1300), and is based, in part, on the basic engineering work completed by Ausenco, with contributions from other mining engineers and consultants, utilities and financial advisors.

The material scientific and technical information in respect of the Project in this presentation, unless otherwise indicated, is based upon information contained in the FS, with notable differences between the FS and the TRS identified. The financial information in respect of the Project in this presentation, unless otherwise indicated, is based upon information contained in the Financial Update, which should be read as a supplemental financial update to the FS with respect to economic information regarding the Project.

Readers are encouraged to read the Financial Update and the Company's Current Report on Form 8-K filed with the SEC on February 13, 2025, which is available under the Company's profile on EDGAR. Readers are encouraged to read the TRS and the Company's Current Report on Form 8-K filed with the SEC on January 3, 2021, as amended by the Company's Current Report on Form 8-K/A filed with the SEC on June 8, 2022, which are available under the Company's profile on EDGAR. Readers also are encouraged to read the FS, which is available under the Company's profile on SEDAR and on the Company's website, for detailed information concerning the Project. All disclosure contained in this presentation regarding the mineral reserves and mineral resource estimates and economic analysis on the property is fully qualified by the full disclosure contained in the FS, the TRS and the Financial Update. The FS, the TRS and the Financial Update are intended to be read as a whole and sections should not be read or relied upon out of context.

Financial data is based on cost estimates as of the fourth quarter of 2024, as set forth in the Financial Update. See the Current Report filed on Form 8-K on February 13, 2025.

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

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

#### OTHER

See also "Cautionary Note" at the beginning of this presentation.

# PERPETUA RESOURCES

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