



SANDFIRE RESOURCES  
AMERICA INC.

# AN EMERGING COPPER PRODUCER IN MONTANA, USA

Community Presentation  
2023



# IMPORTANT INFORMATION AND DISCLAIMER

**Written Disclosure:** The written disclosure contained in this presentation is further described in the independent technical report prepared under National Instrument 43-101 entitled “Sandfire Resources America Inc., Black Butte Copper Project, Feasibility Study (Johnny Lee Deposit) and Mineral Resource Estimate Update (Lowry Deposit) – Technical Report NI 43-101” dated December 8, 2020, which was filed on Sandfire Resources America Inc.’s SEDAR profile at [www.sedar.com](http://www.sedar.com) on December 10, 2020.

**Qualified Person:** The technical information contained in this presentation related to the Johnny Lee Deposit has been reviewed and approved by Erik Ronald, M. Eng., P.Geo, RM-SME, Principal Resource Geology Consultant, SRK, Brad Evans, MAusIMM, CP(Mining), and Deepak Malhotra Ph.D. RM-SME, Resource Development Inc. The technical information contained in this presentation related to the Lowry Deposit has been reviewed and approved by Messrs. Ronald and Malhotra. Messrs. Ronald, Evans and Malhotra are qualified persons, as such term is defined in NI 43-101 for Mineral Resources, Mineral Reserves and metallurgical processing respectively.

**Forwarded Looking Statements:** In making these forward-looking statements, the Company has applied certain factors and assumptions that the Company believes are reasonable, including those assumptions previously set out in this presentation and the following assumptions: that the Company will receive required regulatory approvals, the Company’s successful advancement of the Black Butte Copper Project, the expected positive results from the Project based on the estimates and findings contained in the Feasibility Study, that the Company will continue to be able to access sufficient funding to execute its plans, that the Company is able to procure equipment and supplies in sufficient quantities and on a timely basis, that the Company’s exploration and development activities on the Black Butte Copper Project will not be affected by actions of environmental activists or other special interest groups, that the results of exploration and development activities will be consistent with management’s expectations, the assumptions underlying internal rates of return and net present value are valid, that capital costs and sustaining costs will be as estimated, that the assumptions underlying Mineral Resource and Mineral Reserve estimates are valid, that no unforeseen accident, fire, ground instability, flooding, labor disruption, equipment failure, metallurgical, environmental or other events that could delay or increase the cost of development will occur, that the current price and demand for copper and other metals will be sustained or will improve; that general business and economic conditions will not change in a materially adverse manner; and the continuity of economic and political conditions and operations of the Company.

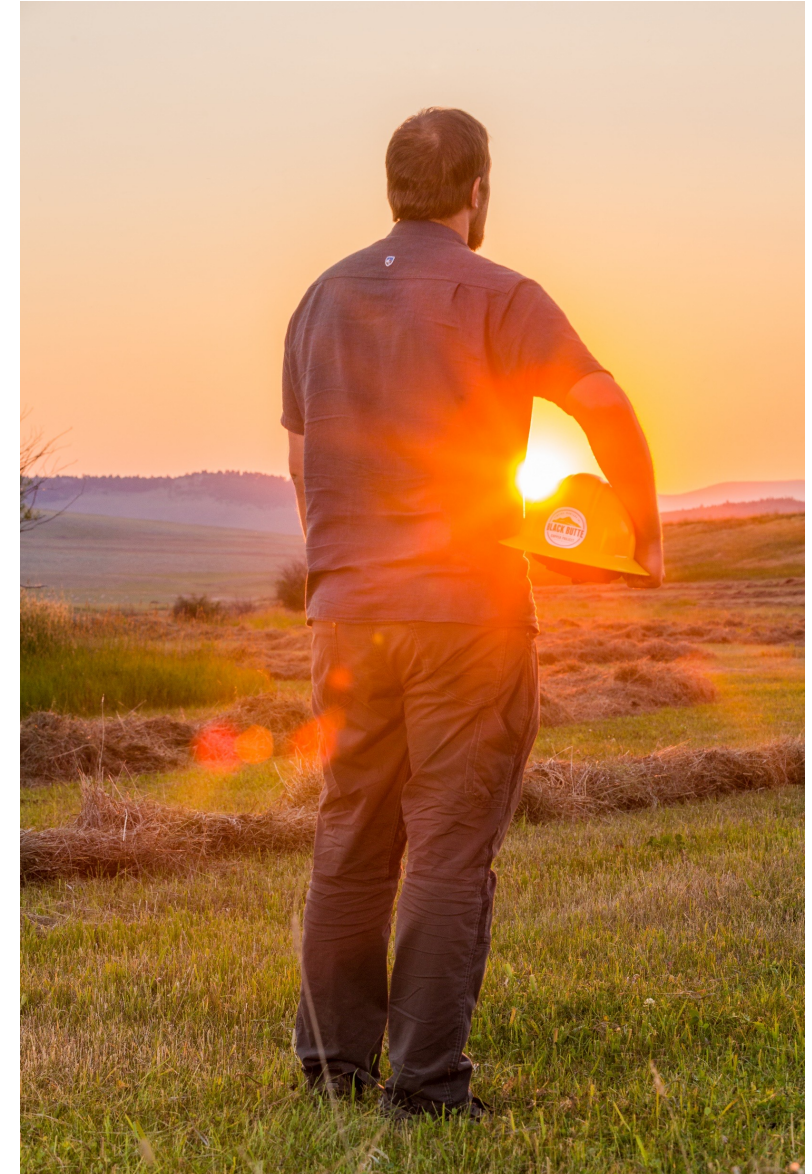
However, the forward-looking statements in this document are subject to numerous risks, uncertainties and other factors, including factors relating to the Company’s operation as a mineral exploration and development company and the Black Butte Copper Project, that may cause future results to differ materially from those expressed or implied in such forward-looking statements, including those risks previously set out in this presentation and the following risks: the risk that any of the assumptions on which the forward looking information is based prove to be incorrect or invalid, the risk of unexpected variations in Mineral Resources and Mineral Reserves, grade or recovery rates, the possibility of cost overruns or unanticipated costs and expenses, uncertainties relating to the availability and costs of financing needed in the future, that actual costs of restoration activities are greater than expected and that changes in Project parameters as plans continue to be refined result in increased costs, results of exploration and development activities will not be consistent with management’s expectations, uncertainties involved in the interpretation of drilling results and geological tests; delays in obtaining or inability to obtain required government or other regulatory approvals or financing, failure of plant, equipment or processes to operate as anticipated, the risk of accidents, labor disputes, inclement or hazardous weather conditions, unusual or unexpected geological conditions, ground control problems, earthquakes, flooding; interference with the Company’s exploration or development activities by environmental activists or other special interest groups; inability to procure equipment and supplies in sufficient quantities and on a timely basis; the risk that estimated costs will be higher than anticipated and the risk that the proposed mine plan and recoveries will not be achieved, the risks disclosed in the Company’s most recently filed Management Discussion and Analysis and the Company’s other continuous disclosure filings filed under the Company’s profile at [www.sedar.com](http://www.sedar.com) and all of the other risks generally associated with the development and operation of mining facilities.

There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements. Readers are cautioned not to place undue reliance on forward-looking statements. The Company does not intend, and expressly disclaims any intention or obligation to, update or revise any forward -looking statements whether as a result of new information, future events or otherwise, except as required by law.

**CAUTIONARY NOTE TO US READERS:** As a Canadian reporting issuer, the Company is subject to rules, policies and regulations issued by Canadian regulatory authorities and is required to provide detailed information regarding its properties including mineralization, drilling, sampling and analysis, security of samples and Mineral Resource and Mineral Reserve estimates. In addition, as a Canadian reporting issuer, the Company is required to describe Mineral Resources associated with its properties utilizing Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) definitions of “indicated” or “inferred”, which categories of resources are recognized by Canadian regulations but are not recognized by the United States Securities and Exchange Commission (“SEC”). The SEC allows mining companies, in their filings with the SEC to disclose only those mineral deposits they can economically and legally extract or produce. Accordingly, information contained in this presentation regarding our mineral deposits may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations of the Commission thereunder. Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.



- ▶ Throughout the 1970's, there was a push for more exploration effort to find "Sullivan-type" Zn-Pb-Ag deposits in Belt Basin.
  - One of the companies that joined in the exploration surge was Cominco American Inc. In 1985, they discovered the Johnny Lee copper deposit. Because they were originally searching for zinc, there was little interest, and the company dropped the exploration leases.
- ▶ In 2008, landowners where the Johnny Lee deposit was discovered were approached by many companies that wanted to lease their property.
  - These local landowners and ranchers sought out Jerry Zieg, a geologist and Meagher County local. He had been on the original Cominco team all those years ago and was now working in Alaska for a NovaGold. NovaGold investors helped to create Tintina Resources to continue exploration, with Jerry Zieg as part of the team. Knowing they could trust a local with Montana values, the landowners leased the land to Tintina in spring of 2010.
- ▶ Tintina began drilling again in fall of 2010.
  - The results were great with very high-grade copper was added to the resource.
- ▶ Tintina applied for a Mine Operating Permit to the Montana Department of Environmental Quality (DEQ) in December of 2015 and received the permit in April of 2020.





# MODERN MINING AT ITS BEST

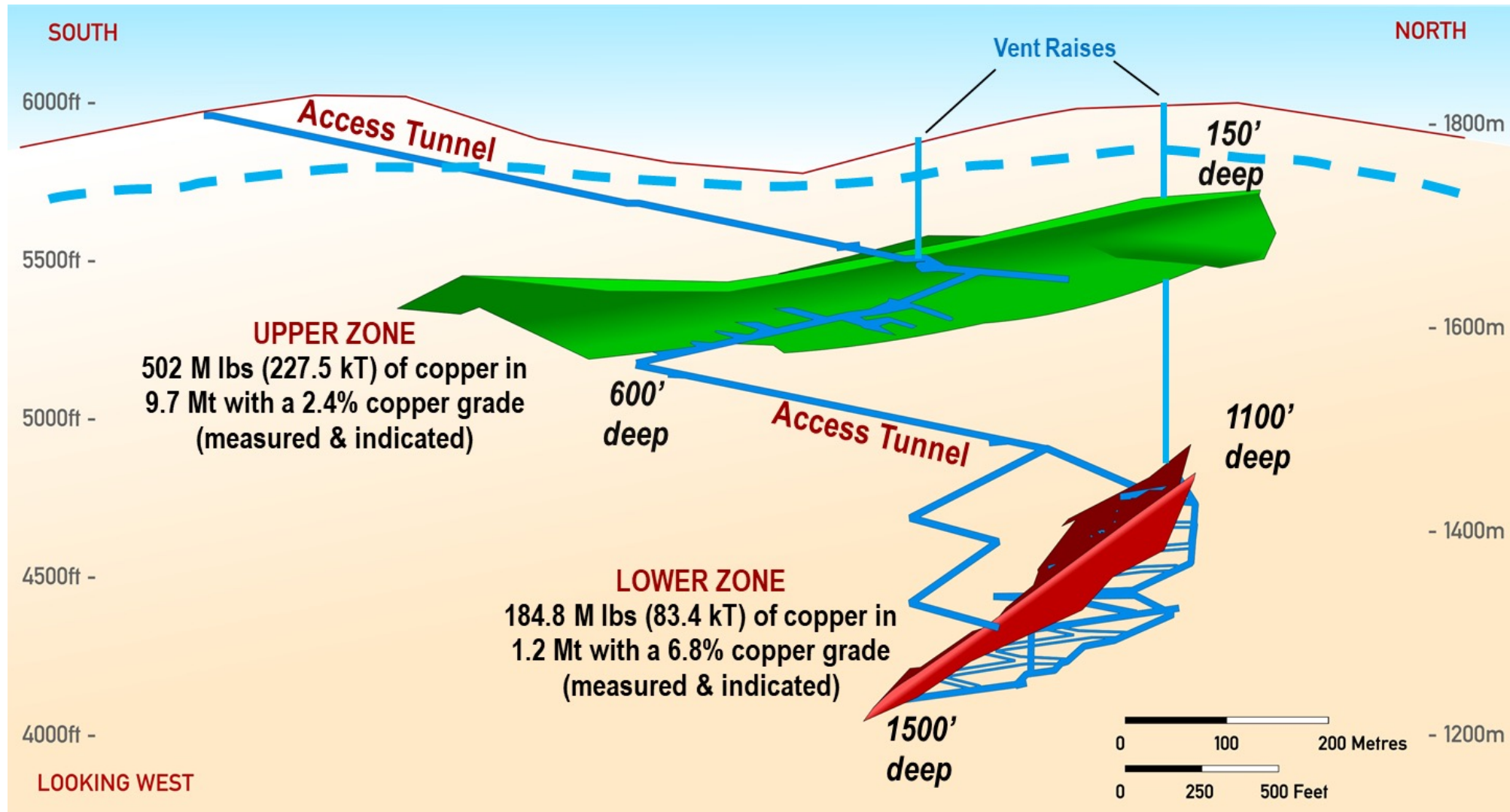


- ▶ Creating a highly engineered underground mine.
- ▶ Protecting all water quality and quantity with no perpetual water treatment needed.
- ▶ Bonding fully for all reclamation with land returning to agricultural after the end of mining.
- ▶ Providing 240 top paying jobs for 11 years at minimum with family supportive wages.
- ▶ Enhancing the community and its sustainable growth.



*Black Butte Copper signed a Memorandum of Understanding with the Meagher County Stewardship Council, committing to no open pit mining in the district.*

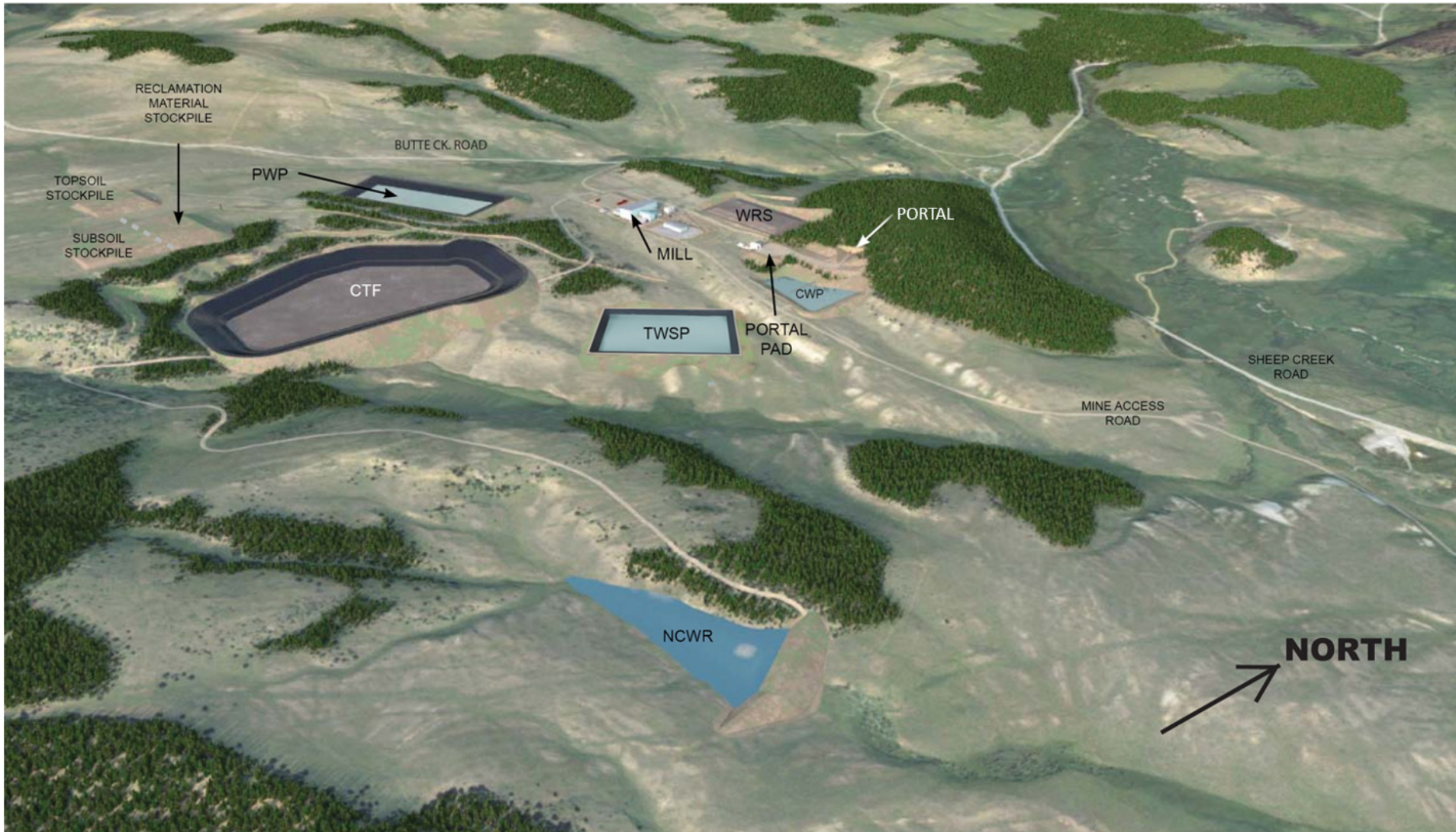
# JOHNNY LEE DEPOSIT



*Black Butte Copper is one of the highest-grade copper deposits being developed in the world.*



# COMPACT SURFACE FOOTPRINT



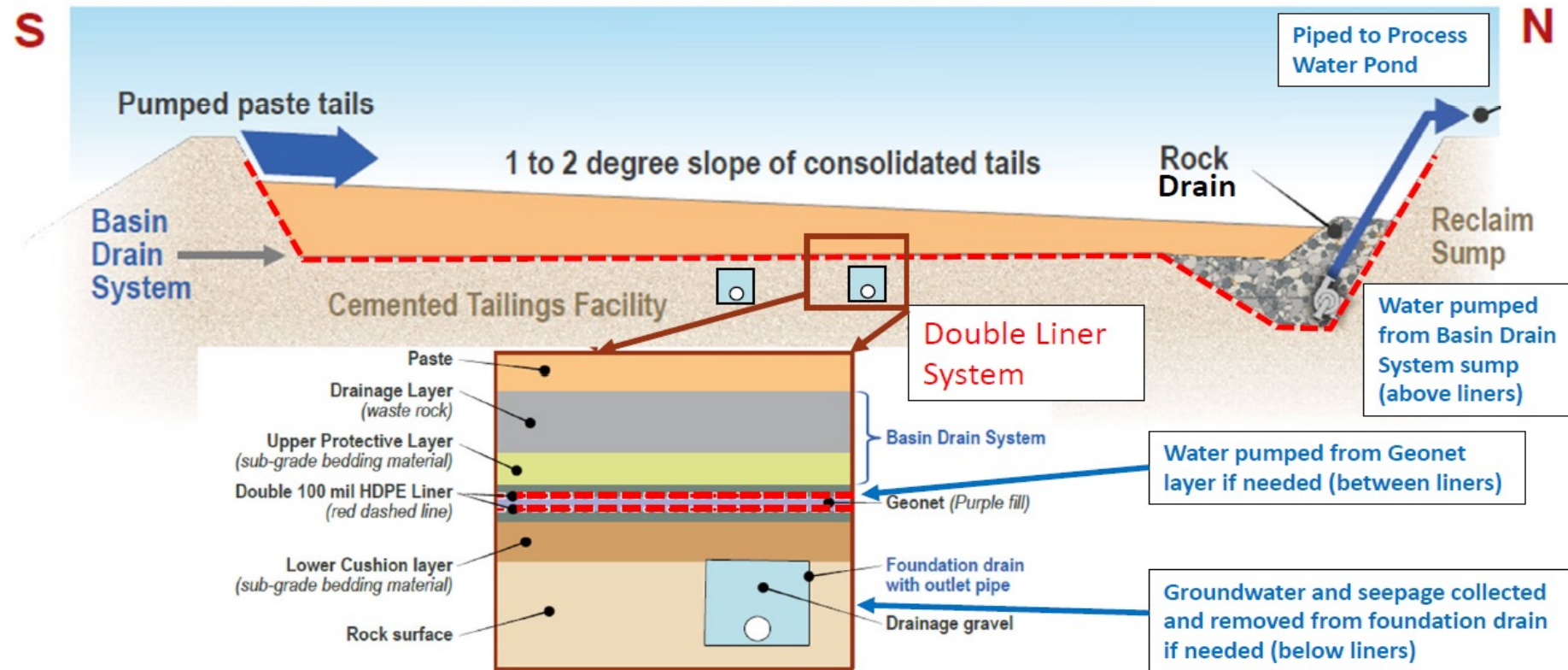
Our very small surface footprint is out of Sheep Creek Valley and will be 100% reclaimed.

# WORLD CLASS CEMENTED TAILINGS FACILITY



## Schematic Cemented Tailings Facility Sections with Lining System

### Cemented Tailings Facility Long Section



The surface facility is designed for:

- ✓ 10,000 year maximum earthquake event
- ✓ 1.5 times average annual precipitation in a single storm

(22 inches rain on 11 inches of wet snow in one storm)



# PROCESS PLANT RENDERING





# PHASE I CONSTRUCTION COMPLETED



**PERMITTED. PROTECTED. COMMITTED TO DOING IT RIGHT.**





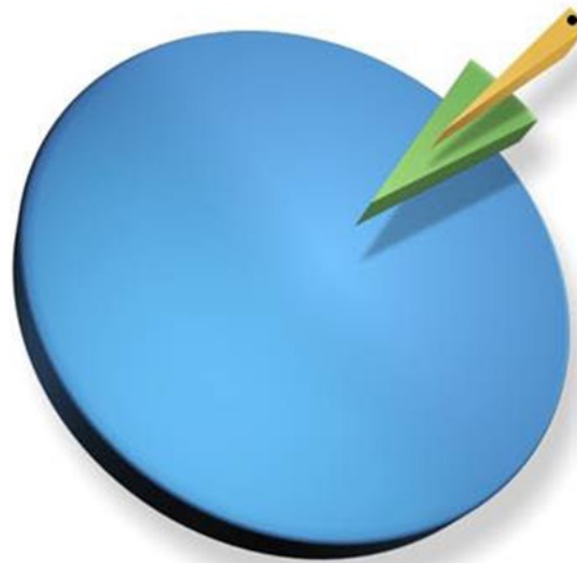
- ▶ BBC water monitoring requirements are detailed in the Project **Field Sampling and Analysis Plan (FSAP)**.
- ▶ **Requires monitoring of many different water resource categories:**
  - Groundwater
  - Surface Water
  - Springs
  - Seeps
  - Wetlands

## WATER MONITORING

- Over **90 sites** are monitored on a monthly, quarterly, or annual basis
- The baseline water monitoring record contains over a decade of data

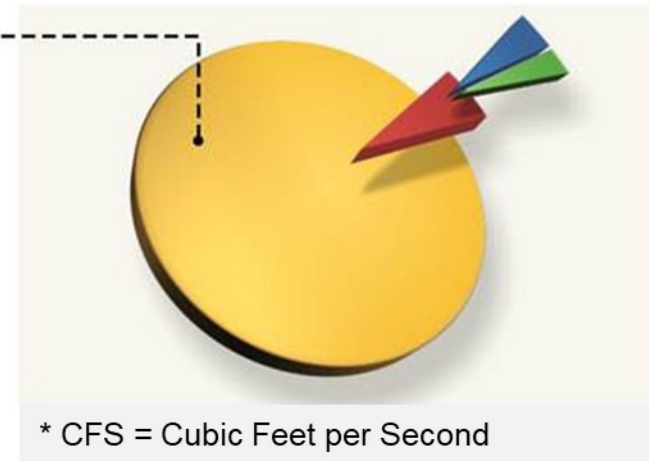


# MITIGATION OF SUPPLEMENTAL GROUND WATER



## Sheep Creek flow over a year:

- ▶ Maximum Flow – **825 CFS**
- ▶ Average Flow - **56 CFS**
- ▶ Dec-March Base Flow – **15 CFS**



## Sheep Creek base flow (low flow) compared to Black Butte Copper project use:

- ▶ Dec-March Base Flow – **15 CFS**
- ▶ Maximum from Mine - **1.12 CFS**
- ▶ Consumed during mining; mitigated with retired irrigation rights - **0.47 CFS = 210 GPM**
- ▶ Treated by Reverse Osmosis and returned directly to ground water system – up to **0.65 CFS**

0.47 CFS is equivalent to a small sprinkler irrigation system. This groundwater amount used in the mining process is less than 3% of Sheep Creek's low flow during winter months and is completely mitigated by retiring the same amount of irrigation rights further up Sheep Creek.



## BBC completes **fauna monitoring** annually:

- Aquatic Surveys (Little Sheep Crk, Sheep Crk, Coon Crk, Moose Crk) – fish, amphibians & macroinvertebrates.
- Bat Monitoring & Kestrel Monitoring
- Full baseline wildlife surveys completed during permitting phase
- Wildlife policy requires that **no wildlife shall be fed, harassed, or otherwise disturbed.**

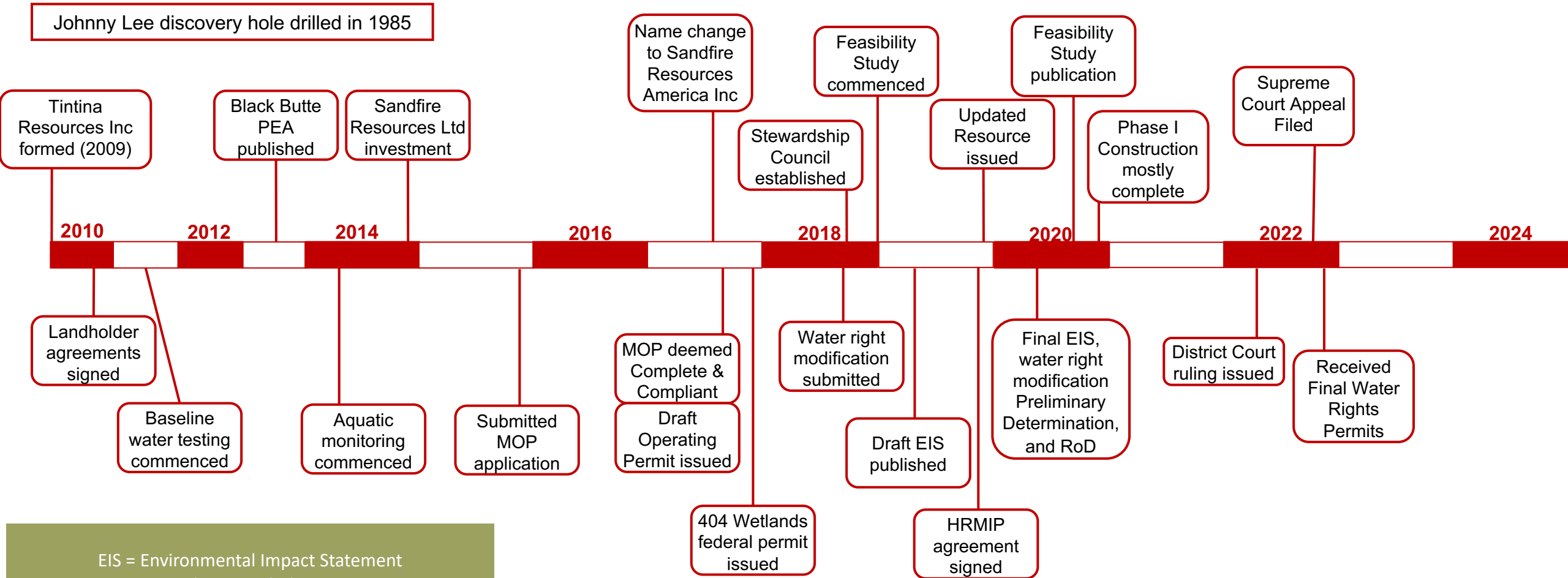
## BBC maintains a **Noxious Weed Management Plan**:

- Requires vehicles, equipment, and drill rigs be cleaned before entering project areas including:
  - Tires, treads, tracks
  - Undercarriages
- Personnel entering site should clean boots, pants, and other PPE free of mud and seed debris to prevent spread of noxious weeds

## BBC completes **cultural resource inventories**:

Cultural Resource Surveys are completed on all lands of interest to make sure we are protecting our heritage. This work is done in conjunction with the State Historic Preservation Office (SHPO) and local tribal representation.

# PAST PROJECT TIMELINE



EIS = Environmental Impact Statement

The EIS includes:

HRMIP = Hard Rock Mining Impact Plan

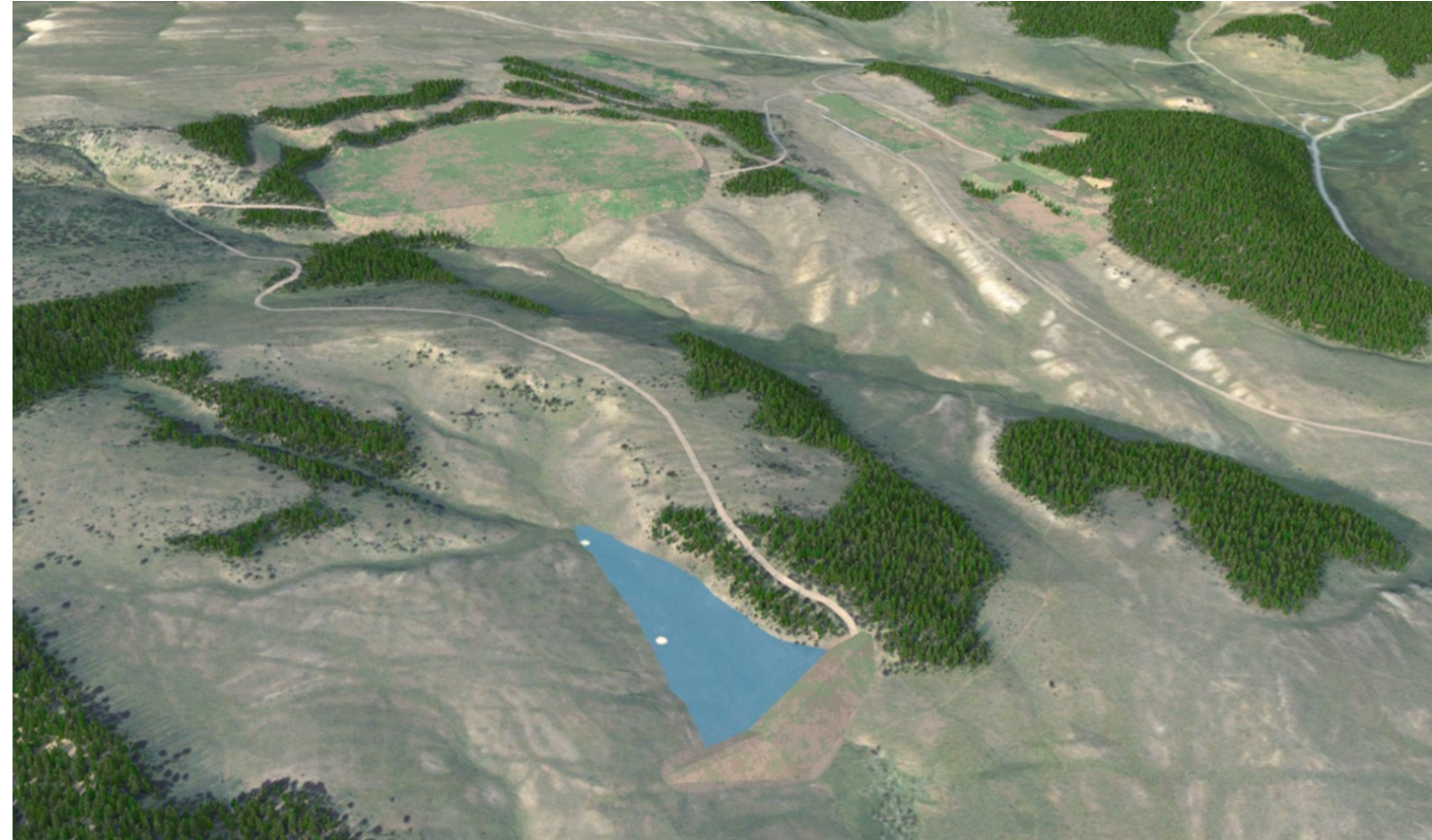
AQP = Air Quality Permit

MPDES = Montana Pollution Discharge Elimination System  
Received the Record of Decision (RoD) on April 9, 2020



# HARD ROCK MINING BONDS IN MONTANA

- ▶ Posting a reclamation bond is required before construction commences.
- ▶ Bonding calculations include:
  - Direct Reclamation Costs
  - Indirect Reclamation Costs
  - Mobilization
  - Contingencies
  - Engineering and Design Updates
  - Third Party Contracting Cost
  - Reclamation Management
- ▶ The Phase I Construction Bond is \$4.7M.
- ▶ The Phase II Construction Bond isn't yet set.
- ▶ Montana mining bonds are reviewed every year and recalculated every 5 years.
- ▶ Bonds remains in place until reclamation is deemed complete by DEQ.



Black Butte Copper modern mining restores 100% the site to original land uses and restored water flows thus fully protecting our water and landscapes long term.



# MONTANA'S HARD ROCK MINING IMPACT ACT

- ▶ Montana's unique Hard Rock Mining Impact Act requires a new large-scale hard-rock mine developer to prepare an impact plan identifying local government services and facilities impacted as a result of the mineral development and mitigate them before construction can commence including:
  - Pre-mine required County/City infrastructure, improvements, and support staff.
  - School district needs due to increases in public school enrollment as the mine progresses.
  - Post-mine transition preparation.
- ▶ In 2020, \$437K was placed into escrow with money sent to Meagher Co. in lieu of future taxes for 3 years.
- ▶ Between 2020-2023 all escrow money was received by Meagher Co. and the City of White Sulphur specifically for the salary of an additional Sheriff's Deputy, a Deputy vehicle, and County/City planning.





# COMMUNITY INVOLVEMENT



## ► Site Tours

- Black Butte Copper provides monthly summer tours and gives presentations statewide upon request.

## ► Transparency Library

- A full transparency library is available to the public and can be found on the project's website.

## ► Education

- BBC hosts a 4-day STEM Summer Camp for local youth in grades 3-6.
- Social Media presence is used heavily to further spread education about modern mining practices.

## ► Volunteering & Participation

- Black Butte Copper and the entirety of its staff try to stay engaged wherever they can in the community. We are lucky to have a town/state with so much opportunity!



## ► Meagher County Stewardship Council (MCSC)

- This nonprofit council gives stakeholders an independent voice with the goal of sustainable positive net impact environmentally, socially and economically past the life of the mine. To learn more about the council, please go to their website:

<https://meaghercountystewardshipcouncil.org/>

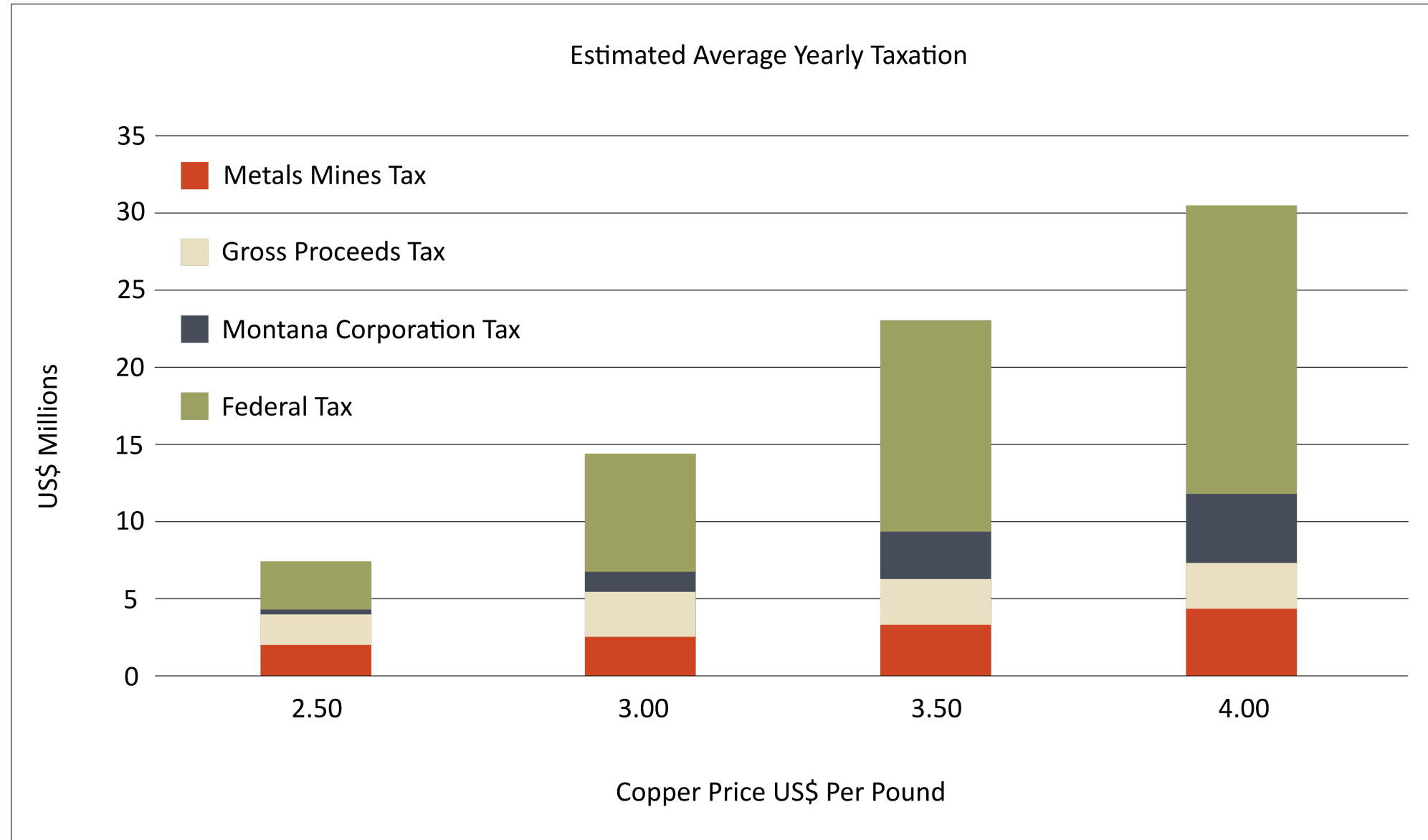
## ► MCSC MISSION

- “The Meagher County Stewardship Council shepherds efforts to safeguard and enhance the natural resources, culture, and economic interests of Meagher County for the benefit of current and future generations.”





# ESTIMATED FUTURE TAX REVENUES



# JOBS AND THE ECONOMY



Average Meagher County 2019 household income: \$46,607  
Average individual Black Butte Copper employee income: \$71,000+

- ▶ Construction:
  - 2 years
  - About 200-400 workers
- ▶ Mine Life:
  - 8-10 YEARS
  - About 240 employees
  - About 24 full time contractors
- ▶ Reclamation:
  - 1-3 years
  - About 25 employees
- ▶ Current:
  - There are 24 employees currently on payroll.





## ► Trends

- There are many trends currently driving growth in copper demand and they aren't expected to change in the coming decades. These trends include increased use of electronics, an uptake in electric vehicles, and increased interest in renewable and efficient energy sources – all requiring significant amounts of copper.

## ► Recycling

- Copper is a circular material, meaning it does not lose quality when it is reused. Recycling more copper will help to meet demand but recycling alone will not be enough to ensure a stable supply of copper into the future.

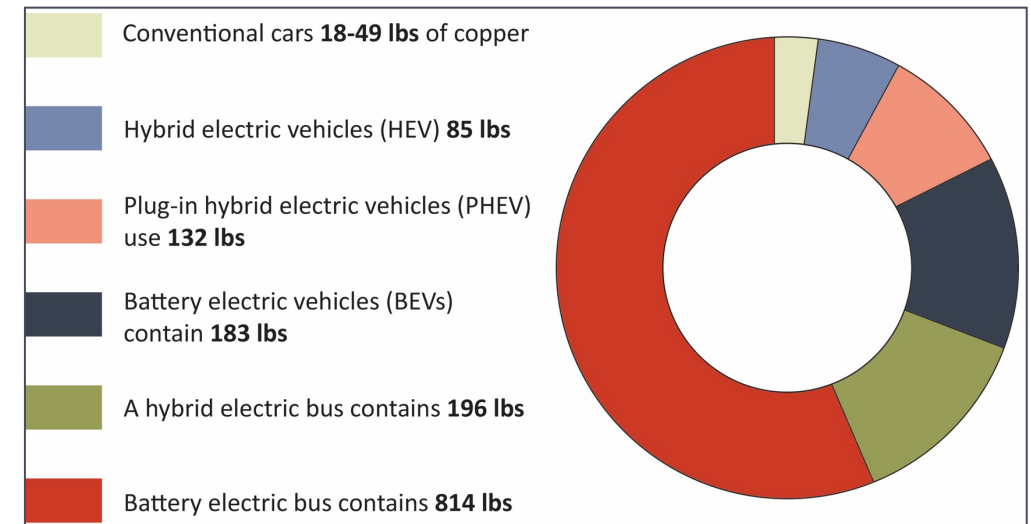
## ► Renewable Energy

- Numerous countries, including the U.S., are championing renewable energy and zero emission, spurring shifts to electric vehicles and sustainable energy development. In order to meet the copper demand that these rising trends will require, it is necessary to continue learning how and where copper deposits are located.



Sandfire Resources Degrussa Solar Project

The demand for copper due to electric vehicles is expected to increase by 1.7 million tons by 2027.



Graphic and above quote from *Copper Drives Electric Vehicles*, published by Copper Development Association Inc.

Goldman Sachs recently presented a bullish forecast for the copper market for 2023-24, with its analysts expecting the price will jump from current US\$8500/t to \$11,000/t this year, increasing to US\$12,000/t.



A photograph of three workers in safety gear (hard hats and high-visibility vests) standing outdoors, looking towards a mountain range under a cloudy sky. The worker in the center is wearing an orange high-visibility vest with a logo on the back. The worker on the right is wearing a yellow high-visibility vest. The worker on the left is partially visible, wearing an orange high-visibility vest.

**DONE RIGHT.  
DONE TOGETHER.  
THAT'S THE MONTANA WAY.**



**Sandfire Resources America Inc. / Black Butte Copper**

17 E Main St., White Sulphur Springs, MT 59645

Office Phone: 406.547.3466