



NEW  
MEXICO  
COPPER  
CORPORATION

**HEARING ON NMED DP 1840**

**Copper Flat Mine, Sierra County NM  
Presentation by Jeffrey Smith, P.E.**

COPPER FLAT

[themacresourcesgroup.com](http://themacresourcesgroup.com)



**PRESENTATION OUTLINE**

1. Jeffrey Smith, P.E. Qualifications
2. New Mexico Copper Corporation
3. Copper Flat Project Overview
4. Summary of Community Benefits
5. Application for Discharge Permit
6. Methods to Protect Groundwater
7. Introduction to Major Mine Units
8. Reclamation and Closure Plan
9. Posting of Financial Assurance
10. Introduction to the Other Experts



**1. JEFFREY SMITH, P.E. QUALIFICATIONS**

- Chief Operating Officer of New Mexico Copper Corporation
- University of Arizona Bachelor of Science Degree in Mining Engineering
- Stanford University Master of Science Degree in Management
- Thirty-Five Years of Experience in Mine Management and Mine Engineering
- Mining Experience in U.S. (NM, NV, ID, AZ, AK), Mexico, and South America
- Mine Engineer at Quintana Minerals Copper Flat Mine, 1980-1983
- Pershing County (NV) Economic Development Authority, Past Board Member
- Knowledge and Understanding of NM Copper Rule Requirements to Prevent Water Pollution





## **2. NEW MEXICO COPPER CORPORATION**

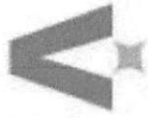
- Owner of Project Assets, Permittee, Developer, and Operator of Copper Flat Mine
- Organized as a New Mexico Domestic Profit Corporation in 2010
- Wholly-Owned Subsidiary of THEMAC Resources Group (Listed as TSXV:MAC)
- THEMAC Majority Shareholder (85%) is Tulla Group, an Australian Family (Maloney) Investment Group
- Tulla's Other Mining Investments Include Norseman Gold, Australia's longest continuously running gold mining operation producing over 5.5 million ounces of gold over 65 years in Western Australia.
- Tulla Is Fully Funding the Copper Flat Project, Investing more than \$55 Million to Date.
- NMCC plans are designed to meet or exceed health, safety and environmental regulatory requirements.
- NMCC is committed to developing a long-term relationship with our neighbors in Sierra County and dedicated to providing the local community with significant opportunities for employment and economic development



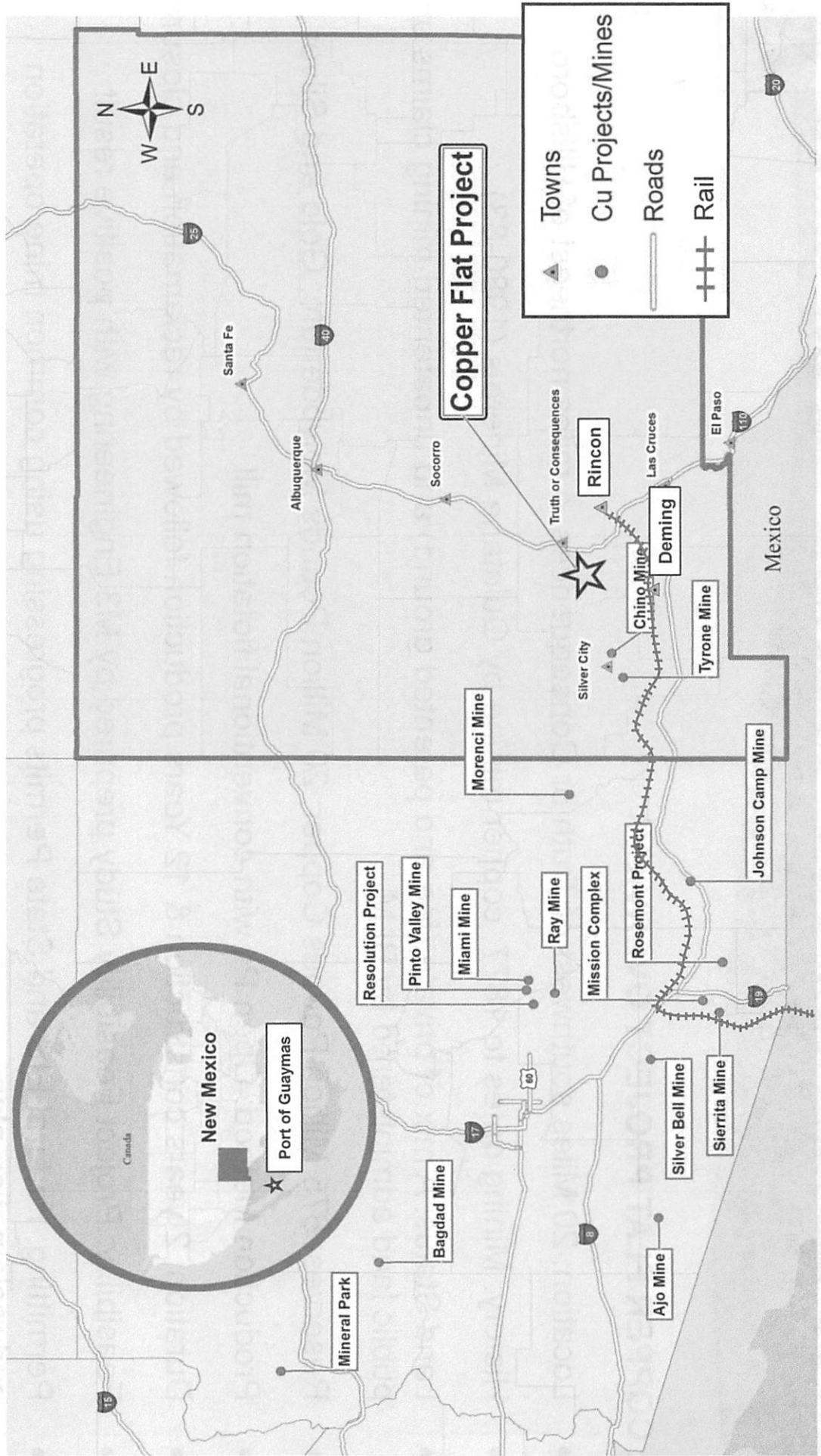
### **3. COPPER FLAT PROJECT OVERVIEW**

- Location: 20 Miles southwest of Truth or Consequences; 4 miles northeast of Hillsboro
- History: Mining dates to 1877; copper mining by Quintana Minerals (1980-83)
- Land Status: A mix of private (fee and patented ground) and unpatented mining claims on public land administered by BLM
- Reserves: 675 Million Pounds Copper; 20 Million Pounds Molybdenum; Gold and Silver
- Production Method: Open Pit with conventional flotation mill
- Duration: 2 years construction & 12 Years production followed by reclamation and closure
- Feasibility: Project Feasibility Study prepared by M3 Engineering with positive result
- Permitting: Federal EIS and State Permits progressing using common mine operation and reclamation plan

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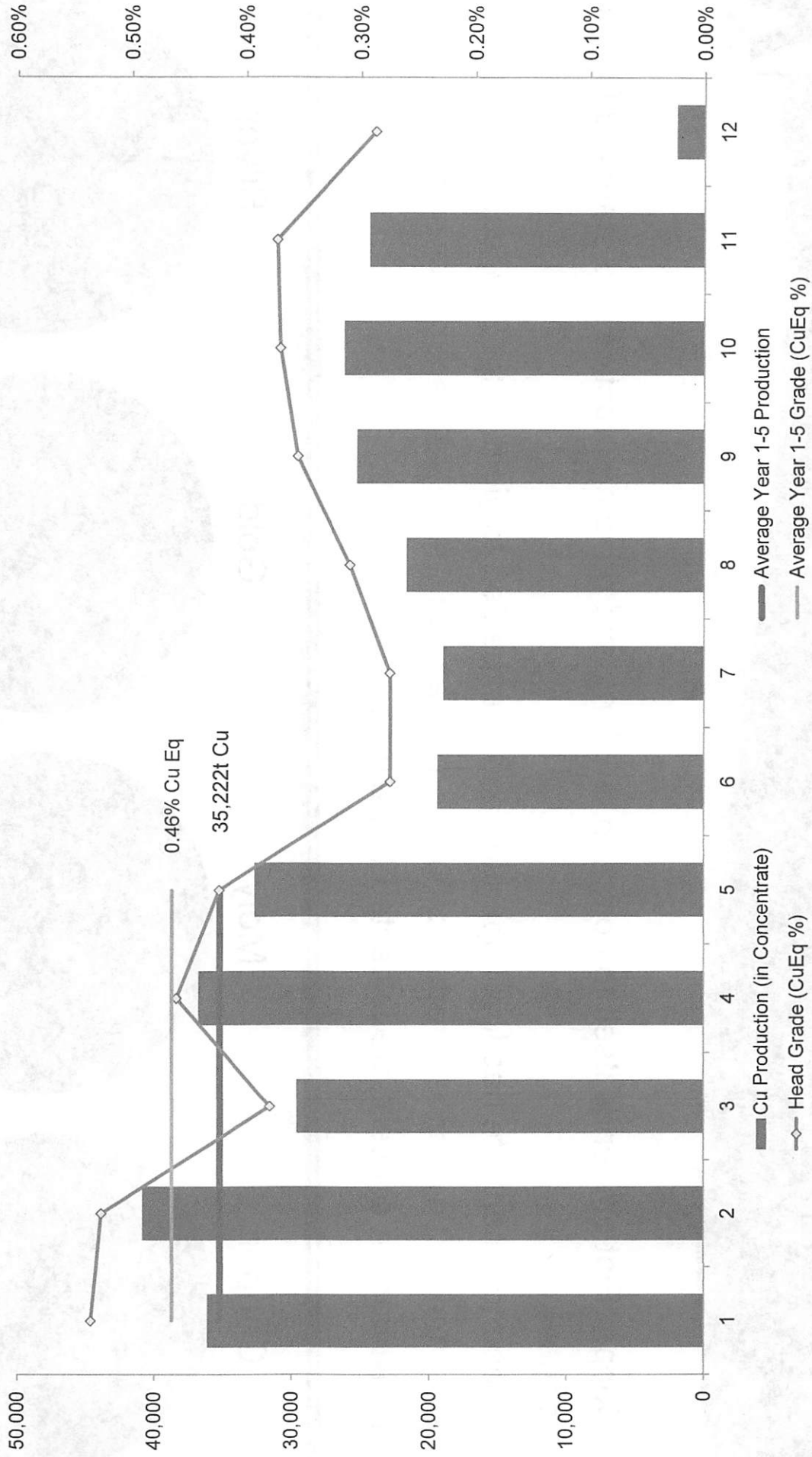
Located in one of the world's most prolific copper mining regions



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Annual Copper Production (t) and Copper Equivalent Grade (%)



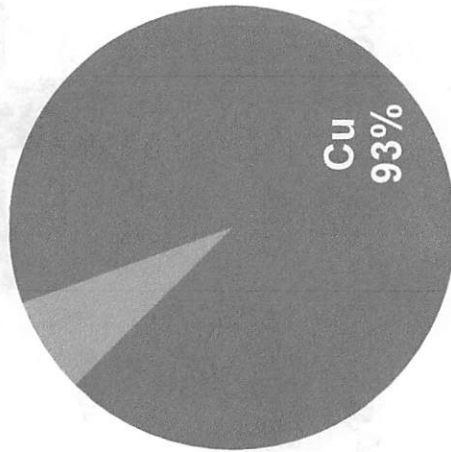


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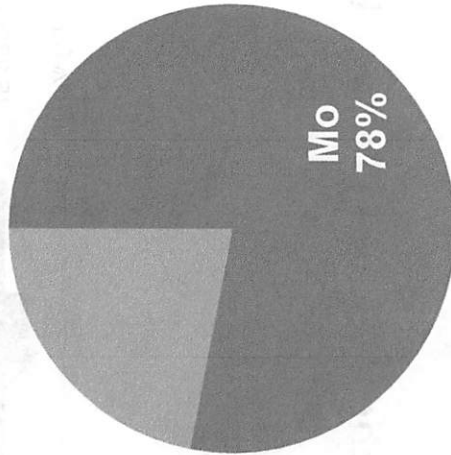


- Copper Flat ore lends itself to common crushing and grinding practice and standard flotation reagents
- Copper concentrate has low impurities and is expected to yield clean 28% copper, 6 g/st gold and 160 g/st silver grade based upon lab as well as actual plant performance
- Molybdenum concentrate expected to yield 55% Mo

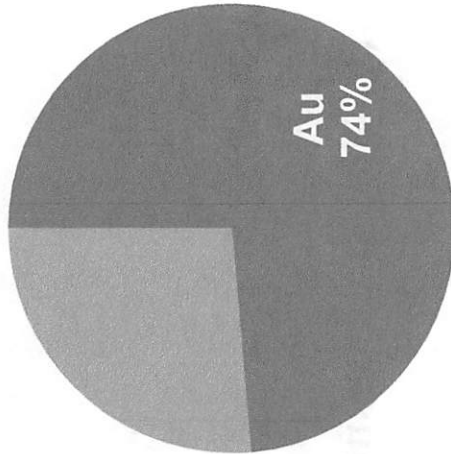
Copper



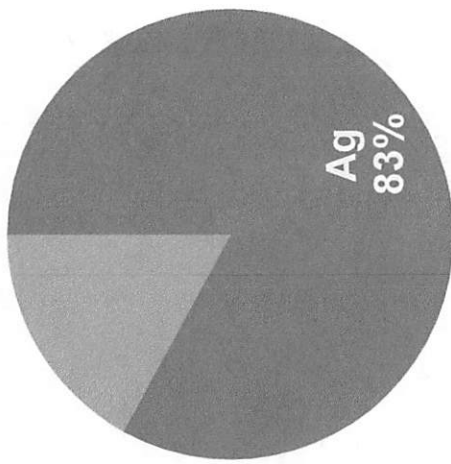
Moly



Gold



Silver



Expected Recoveries



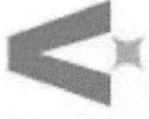


#### 4. SUMMARY OF COMMUNITY BENEFITS <sup>1</sup>

- Construction Jobs: 1,156 jobs total (direct, indirect, induced) in New Mexico
- Construction Economic Impact to State: Project adds \$55.6 Million to statewide labor income and adds \$79.6 Million to the value of materials and goods produced within the State
- Construction Expenditures: \$45 Million Sierra County; \$49 Million State
- Operation Phase Jobs: 270 full time direct jobs at mine with individual wages from \$35k to \$60k + Benefits; 368 – 407 jobs total (direct, indirect, induced)
- Federal and State Taxes: \$175 Million (Ad Valorem, Severance, Income, Gross Receipts)
- Ongoing jobs, wages and tax benefits during 10 – 20 year reclamation and closure phase

<sup>1</sup>Arrowhead Center, *The Socioeconomic Impacts of THEMAC Resources Group Ltd. Copper Flat Mine Project in Sierra County, New Mexico*, August 15, 2012

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## 5. APPLICATION FOR DISCHARGE PERMIT

- Sampling and Analysis Plan and Baseline Data Report by Intera, 2010-2012
- Initial application submitted in 2011 prior to New Mexico adopting the Copper Rule
- 2017 Revision to application organized to demonstrate Copper Rule Compliance
- Application Supported By Numerous Technical Reports, Mining and Reclamation Plans
- Application includes extensive water management methodologies and controls for protecting groundwater
- Application Deemed by NMED to be Administratively Complete in 2012
- Application Deemed Technically Approvable and Draft DP 1840 Issued February 2, 2018



## **6. EXAMPLE METHODS TO PREVENT WATER POLLUTION**

- Water management planning, engineering and design with sufficient capacity for anticipated storm events
- Site grading and constructing diversion structures to direct unaffected stormwater away from mine facilities and limit stormwater running onto mine facilities and capturing stormwater that falls directly on mine facilities for use at the mine
- Ore processing by flotation only; not employing ore leaching or solvent extraction processes
- Implementing and following a waste rock characterization and management program
- Constructing fully lined and contained process facilities including the flotation plant, tailings storage, process water piping systems, and process and affected water impoundments
- Tailings solution management, including facility drain down after processing ends, followed by placement of engineered cover and revegetation
- Reclamation of legacy disturbances during construction and operation; complete reclamation and closure of the site following operation, including reshaping and revegetation





### 7. INTRODUCTION TO THE MAJOR MINE UNITS

- Open Pit: Future pit is located at west side of mine property and located primarily on private ground owned by NMCC
- Process Facility: Contained and lined facilities utilizing existing foundations and locations east of the open pit
- Tailings Storage Facility (TSF): Synthetically lined (High Density Polyethylene or HDPE) storage located southeast of the process facility. The TSF includes solution underdrain/collection and process water recycling system; recovered water will be reused for mineral recovery as part of a water conservation plan. The TSF dam will comply with OSE Dam Safety regulations
- Mine Waste Rock Stockpiles (WRSP): Located east of the open pit on low-permeability andesite bedrock
- Ponds and Impoundments: HDPE lined facilities located adjacent to the WRSPs, the process area, and the TSF; ponds and impoundments are designed to include capacity for stormwater events
- Roads and Administrative Areas: Surfaces graded and maintained for stormwater management; includes contained waste water package treatment facility discharging to the TSF

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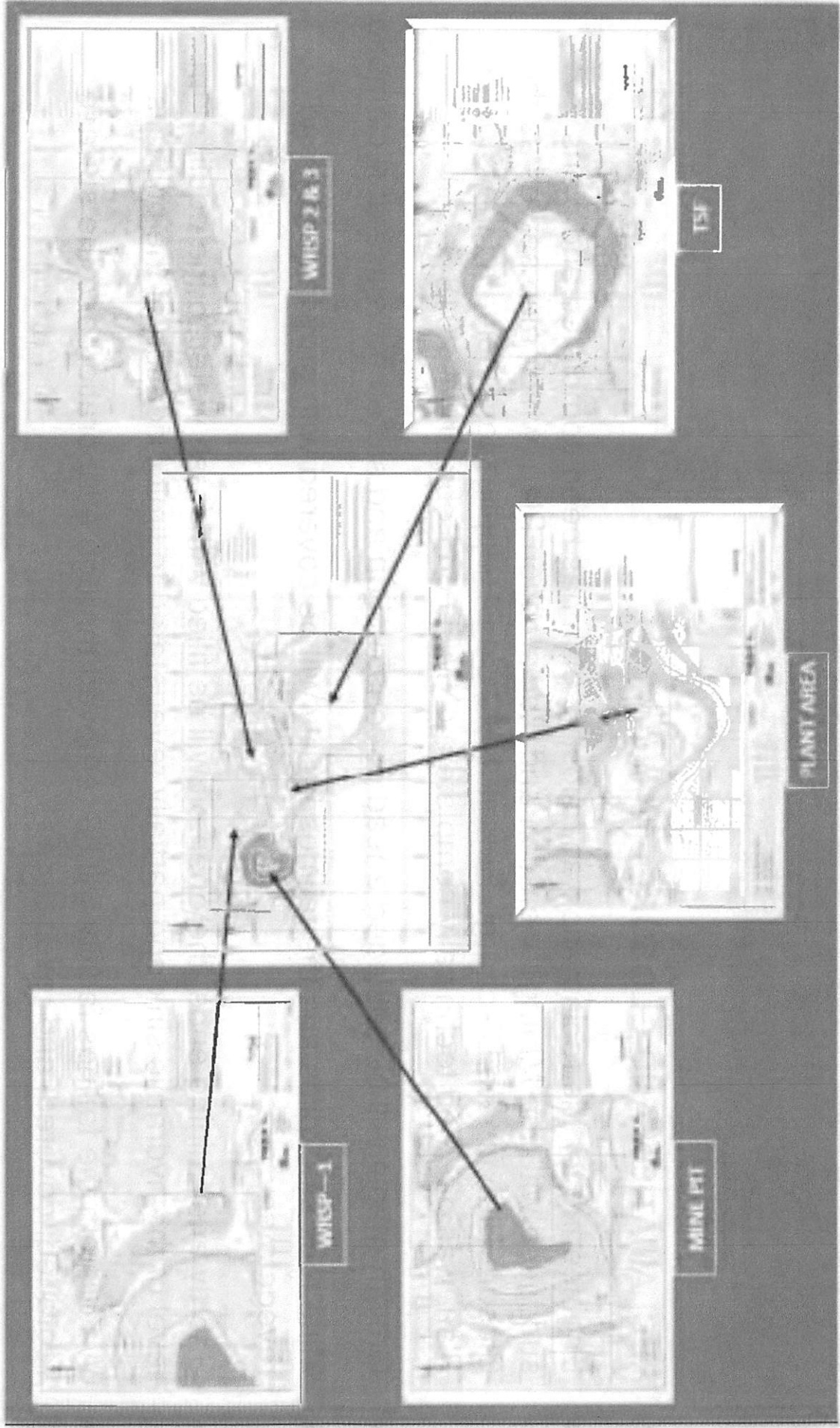
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any such its enormous purchasing and leasing

will be more than allowed of their to sit job off

### General Site Plan Showing Major Mine Units





## **8. RECLAMATION AND CLOSURE PLAN**

- Engineering for the reclamation and closure plan has been completed and plans submitted with the Mining Operation and Reclamation Plan, which also serves as the Closure Plan for the Discharge Permit. NMCC's DP application, including the Closure Plan, was deemed technically complete by NMED on February 1, 2018
- Growth media will be salvaged ahead of construction and stored for reuse at reclamation
- Mine rock stockpiles and the tailings facility will be covered with growth media and revegetated
- Shortly after mining ends, the open pit will be filled with fresh water to the equilibrium level of the hydraulic sink and partially revegetated to limit oxidation of the pit walls
- Water from the tailings facility will be removed through evaporation and the surface regraded, covered, and revegetated
- Buildings, pipelines, and other surface structures will be removed; concrete foundations will be broken and removed or buried as appropriate
- Pond and trench liners will be removed and the excavations backfilled and revegetated except as needed for ongoing water management





## **9. POSTING OF FINANCIAL ASSURANCE**

- NMCC will post financial assurance for the reclamation and closure of Copper Flat and the FA will be held jointly by NMED, MMD, and BLM
- NMCC's financial assurance proposal is based on the estimated cost of reclamation and closure as performed by third party contractors under agency management as required by 19.10.12 NMAC, which is administered by MMD
- NMCC's financial assurance proposal includes a closure water management plan as required by 20.6.7.33.H NMAC, which is administered by NMED
- The estimated cost of reclamation and closure has been prepared by SRK Consulting using the Copper Flat reclamation and closure plan prepared by Golder Associates and application of estimating standards and practices accepted by a wide range of regulatory agencies and jurisdictions
- The financial assurance estimate prepared by SRK totals \$55.8 million. This total includes costs for contractor performance of the work, mobilization/demobilization, Agency management and contract administration, closure water management, and monitoring.
- Cost calculations requires approval by the three agencies. The Copper Flat estimate was submitted for agency review on August 9, 2018.
- Documentation of SRK's Cost Estimate is provided as an exhibit to NMCC's Notice of Intent



## 10. INTRODUCTION TO THE OTHER EXPERTS

- NMCC has employed a large number of qualified experts in a wide range of fields for the development of the Copper Flat Mine plans, from which a smaller group of experts are present to provide testimony on their specific areas of expertise. Presenting today are:
  - Steven T. Finch, Jr., *CPG, PG*, John Shomaker & Associates, Inc., Albuquerque, NM
  - Dr. Ruth Griffiths, *EurGeol, CGeol, PhD*, SRK Consulting, Cardiff, UK
  - Dave Kidd, P.E., Golder Associates, Tucson, AZ
  - Todd Stein, P.G., Golder Associates, Albuquerque, NM
- Other Experts Employed On the Copper Flat Project Are Reflected in the Record