

# THEMAC

RESOURCES

NEW  
MEXICO  
COPPER  
CORPORATION

MMD HEARING, PERMIT TRACKING SI027RN  
Copper Flat Mine, Sierra County NM  
Presentation by Jeffrey Smith, P.E.



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**PRESENTATION OUTLINE**

1. The New Mexico Mining Act of 1993
2. New Mexico Copper Corporation
3. The Copper Flat Mine
4. Mine Permit Application
5. The Major Mine Units
6. Reclamation and Closure Plan
7. Compliance With Reclamation Standards
8. NMCC Experts
9. Juan Velasquez Presentation
10. Financial Assurance
11. Summary of Community Benefits
12. Conclusions



**1. THE NEW MEXICO MINING ACT OF 1993**

- Enacted to promote responsible utilization and reclamation of lands affected by exploration, mining or the extraction of minerals vital to the welfare of the State
- The Act requires all mining operations to obtain permits and meet certain requirements
- The Act differentiates between existing and new mines, and permitting requirements for a new mine are more complex than for an existing mine. The Copper Flat Mine is defined to be a new mine under the Act
- Requirements for a new mine permit include:
  - Collecting 12 months of environmental baseline data
  - Apply best management practices to design and operations avoid or minimize acid drainage and other impacts to ground and surface water
  - Erosion control
  - Contemporaneous reclamation
  - Minimize change to hydrologic balance

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### POSITIVE COMMENTS ON THE NEW MEXICO MINING ACT <sup>2</sup>

“Our state passed a landmark law to change the way that mining is done here. It was a massive effort” Douglas Meiklejohn, Executive Director of the nonprofit New Mexico Environmental Law Center (NMELC), who helped draft what became the New Mexico Mining Act.

“The Mining Act put into place safeguards that say, ‘You can mine, but we need to make sure that the mine doesn’t destroy our natural resources. The process that now is in place takes a more holistic view of permitting: regulators now look at environmental and public health impacts along with mine design and safety. Twenty-one years after its implementation, the law is resulting in a more sustainable future for the state.” Brian Shields, Executive Director of Amigos Bravos

“This is an extraordinarily insightful law. It seems rare that our legislators think 100 years in the future, but that’s what the people who passed this law did. We should all be extremely grateful that we have the Mining Act because we care about future generations in New Mexico. They’re the main beneficiaries of the Act.” Harry Browne, Former Director of the Gila Resources Information Project (GRIP)

<sup>2</sup> Green Fire Times, April 2, 2014, [greenfiretimes.com/2014/04/the-new-mexico-mining-act/](http://greenfiretimes.com/2014/04/the-new-mexico-mining-act/)



## **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



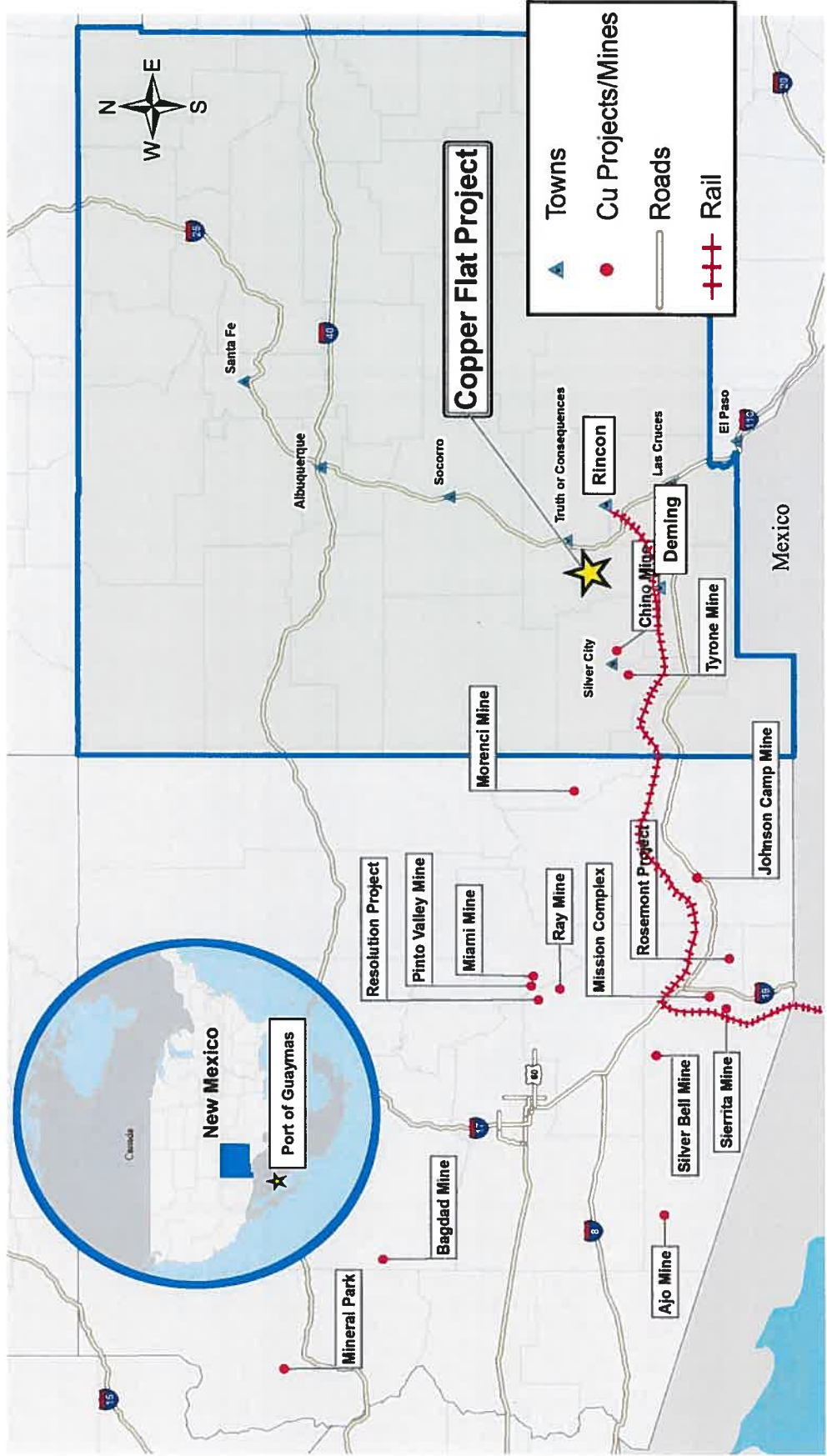
### **3. THE COPPER FLAT MINE**

- **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)
- **Property:** 4,741 acres total containing 2,190 acre permit area. A mix of private property and unpatented mining claims on public land administered by BLM;
- **Production Method:** Open pit mine with conventional flotation mill to produce and sell mineral concentrate
- **Reserves:** 675 Million Pounds Copper; 20 Million Pounds Molybdenum; Gold; and Silver
- **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 the Arizona-New Mexico Porphyry Copper Belt, one of the world's most prolific copper mining regions





#### **4. MINE PERMIT APPLICATION**

- Sep 2010: NMCC Sampling and Analysis Plan Submitted to MMD
- 2010 – 2012: Baseline data at the site collected for analysis and use in the permitting process
- Jul 2012: NMCC Permit Application Package Submitted to MMD
- Aug 2012: NMCC Permit Application Package Deemed Administratively Complete by MMD and Agency Technical Review Begins
- 2012 – 2018: NMCC responding to Agency comments, questions, and requests for additional information. NMCC updating plans to reflect engineering progress and coordinate/synchronize with plans provided to other Agencies (BLM, NMED)
- Jul 2018: Draft Environmental Evaluation prepared by MMD pursuant to §19.10.6.605.D NMAC
- Jul 2018: Permit Application Package Deemed Technically Approvable by MMD
- Oct 2018: Public hearing on the NMCC Permit Application Package scheduled to occur





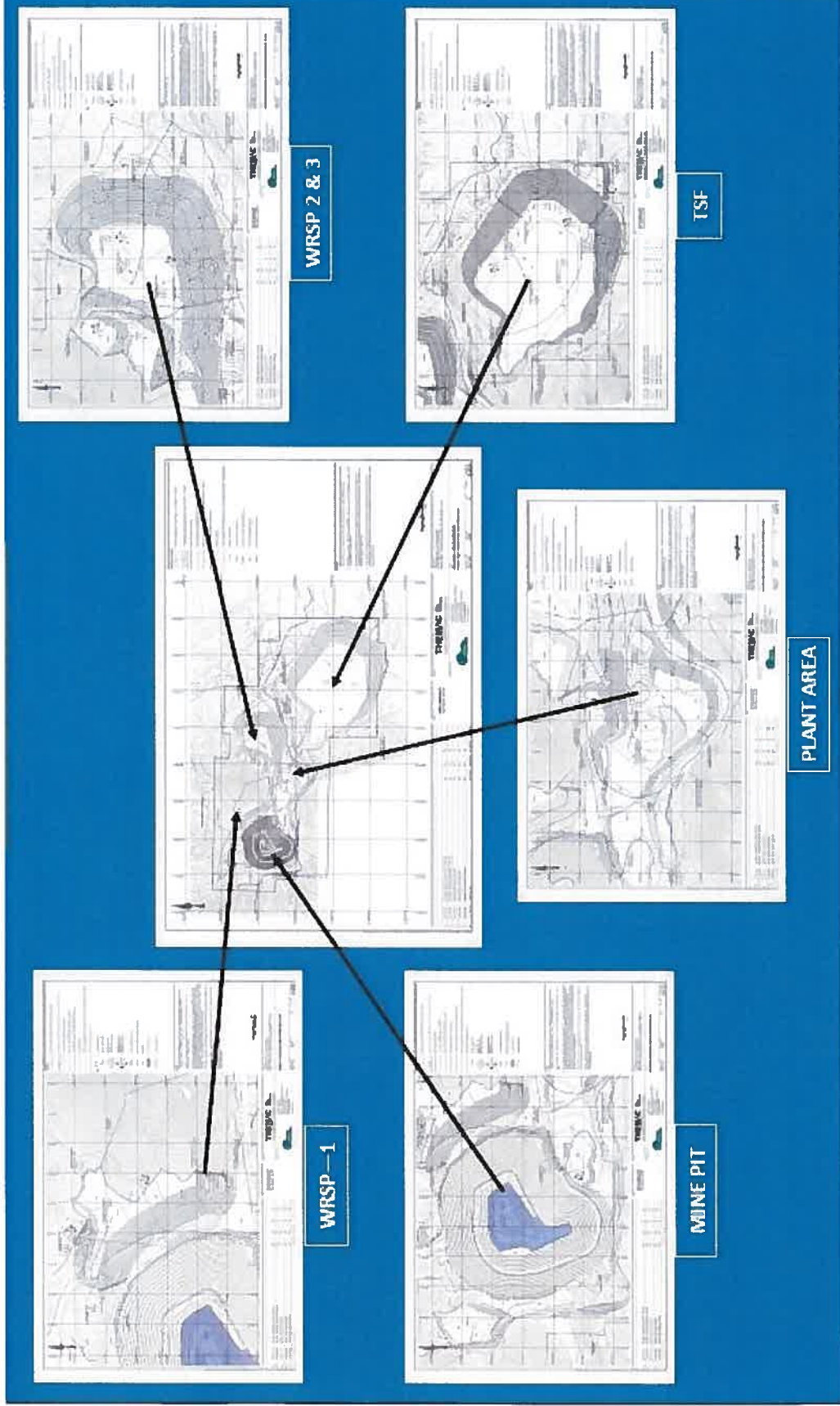
## **5. THE MAJOR MINE UNITS**

- **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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## General Site Plan Showing Major Mine Units





## **6. RECLAMATION AND CLOSURE PLAN**

- Engineering for the reclamation and closure plan has been completed and plans submitted with the Mining Operation and Reclamation Plan. NMCC's Mine Permit Application Package, including the reclamation and closure plan, was deemed to be technically approvable by MMD on July 13, 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; the TSF liner will be left in place to ensure long term protection of groundwater
- 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



## **7. COMPLIANCE WITH RECLAMATION STANDARDS IN 19.10.6.603 NMAC**

- The mine operation and closure plans have been designed using the most appropriate technology and the best management practices
- Plans are designed to return the area to a post mining land use compatible with land uses that currently exist at the site and the surrounding area: wildlife habitat, livestock grazing, and recreation
- The operation is designed to meet without perpetual care all applicable environmental requirements of the Act, 19.10 NMAC and other laws following closure
- Contemporaneous reclamation is included in the operating plan
- Operations have been designed to minimize change to the hydrologic balance in both the permit and potentially affected areas. In a similar fashion, reclamation is designed to result in a hydrologic balance similar to pre-mining conditions
- Plans incorporate measures to limit the formation of acid or other toxic drainage during operation and following reclamation to prevent releases that cause federal or state standards to be exceeded
- The reclamation plans are designed to provide a self-sustaining ecosystem; success will be determined through comparison of ground cover, productivity and diversity to approved reference areas



**9. NMCC EXPERTS**

- A team of highly qualified experts contributed to NMCC plans and designs; team capabilities fully cover the range of disciplines required to comply with NM Mining regulations
- Mr. Juan Velasquez will assist with today's presentation; Mr. Velasquez is principal of Velasquez Environmental Management Services and was instrumental in preparing the NMCC applications for the MMD Mine Permit and the NMED GW Discharge Permit
- Also attending on behalf of NMCC are the following technical experts, who are available to meet with the public, provide additional information, and respond to questions
  - Reclamation Designs: Todd Stein, P.G., Golder Associates, Albuquerque, NM
  - Hydrology and Geochemistry: Steven T. Finch, Jr., CPG, PG, John Shomaker & Associates, Inc., Albuquerque, NM
  - Hydrology and Groundwater Modeling: Mike Jones, Principal Hydrologist, John Shomaker & Associates, Inc., Albuquerque, NM
  - Geochemistry: Amy Prestia, P.G., Senior Geochemist, SRK North America, Reno, NV,
  - NMCC Plans and Permits: Katie Emmer, Environmental and Permitting Manager, New Mexico Copper Corp, Albuquerque, NM

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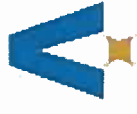


**9. JUAN VELASQUEZ PRESENTATION**



## **10. 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. Documentation of SRK's Cost Estimate is provided on the MMD website
- Cost calculations requires approval by the three agencies. The Copper Flat estimate was submitted for agency review on August 9, 2018. Discussions with the Agencies regarding the basis and calculations are ongoing.



## **11. 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

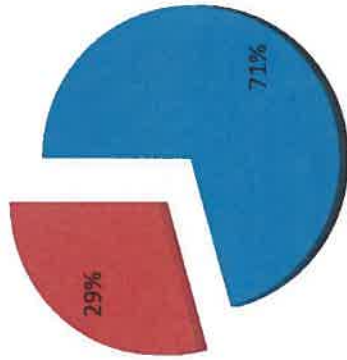


# THE COPPER FLAT MINE



**Project Investment More Than \$55 million To Date  
\$39 million (71%) Directed to New Mexico**

\$55 Million Invested in Project



■ In State ■ Out of State

Sierra County	\$3.4 million
Albuquerque	12.6 million
Rest of State	22.8 million
Total NM	\$38.8 million

Sierra County	Salaries; Rent; Vehicle Maintenance & Fuel; Hotel and Restaurants; Banking Services; Contractors; Power Coop; Land Payments; Property Tax
Albuquerque	Salaries; Rent; Professional, Technical, and Business Services
Rest of State	Acquisition; Taxes; Agency Fees; Professional & Technical Services



## **12. CONCLUSIONS**

- The operating and reclamation designs and plans NMCC has developed for the Copper Flat Mine meet or exceed the very rigorous requirements for a new mine permit established by the New Mexico Mining Act of 1993
- The reclaimed operation will achieve a self-sustaining ecosystem that is appropriate for the life zone of the surrounding area
- All environmental requirements can be met without perpetual care
- Designs and plans for the Copper Flat Mine will provide a post mining land use that is similar to the existing land use of wildlife habitat, livestock grazing, and recreation
- The proposed reclamation is economically and technically feasible