'From Critical Mineral Discovery to a Mining Operation – Meeting the Regulatory & Social Challenges in New Mexico'

Bob Newcomer, MS, CPG Principal & Mining Hydrogeochemist Toltec Mesa Resources LLC Albuquerque, New Mexico



A Critical Mineral Resource Mining/Processing Project – If It is Going to be Part of a Solution to Energy Transition Then....

Must Involve a Multi-Stakeholder Approach to Understand Shared Risks Must Benefit & Provide Opportunities for the Miners & Investors, Local Communities and Ecosystems

## Ranking Business Risks & Opportunities in 2025

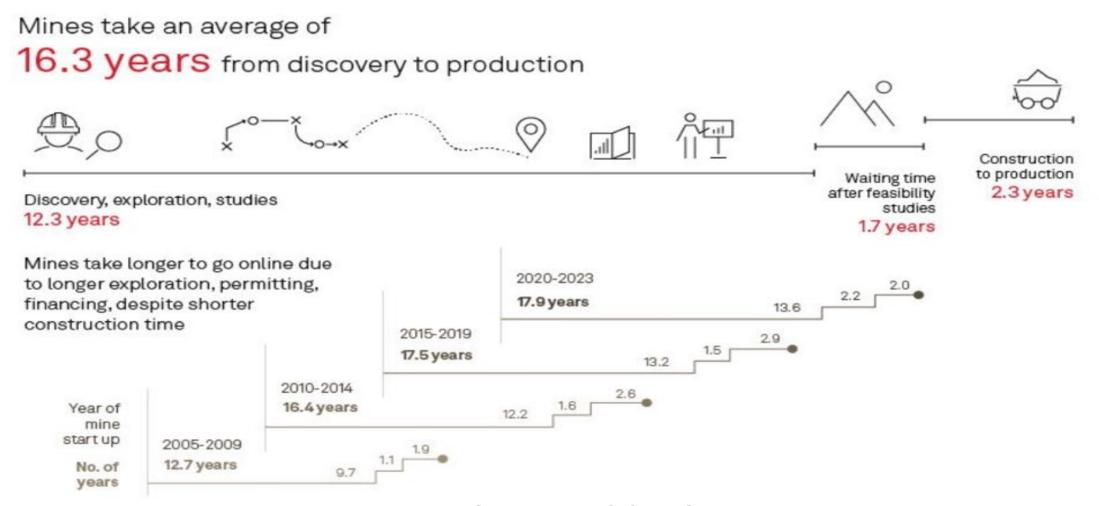
Source - Ernst & Young (2024)

## Top 10 List Compared to 2023

- 1. Capital (up from 2023, 8th)
- 2. Environmental Stewardship (down from 2023, 1st)
- 3. Geopolitics (down from 2023, 2nd)
- 4. Resource/Reserve Depletion (new to list in 2024)
- License to Operate (down from 2023, 4th)
- 6. Rising Costs and Productivity (same, 5th and 6th in 2023 with Supply Chain)
- 7. Climate Change (down from 2023, 3rd)
- 8. New Projects (new to list in 2024)
- 9. Changing Business Models (same as 2023)
- 10. Innovation (down from 2023, 9th)
- 11. Workforce (left the top ten from 2023, 7th)

An Arduous and Risky Journey -Miners and Investors

- Investment Capital Throughout
- Exploration, Discovery and Establishing a Land Position
- Determination of federal nexus
- Drilling, Sampling, Analyses
- Delineation of Resource– Viable Resource?
- Additional Evaluations Resource to Reserves 'Ore'
- Sequenced Feasibility Studies Estimates of 'All In' Costs
- If Feasible, "Detailed" Mine Permitting, Closure Planning & Financial Assurance
- Capitalize and Build the Mine



Source: S&P Global Market Intelligence

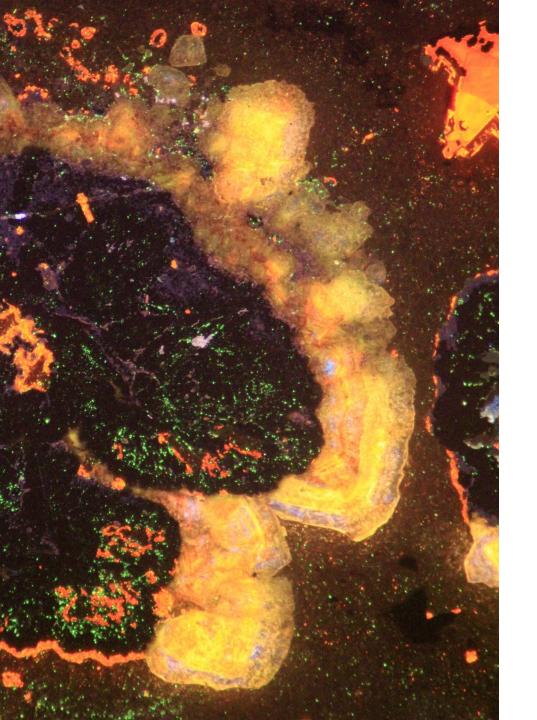
Data compiled March 2024. Image credit: Chris Allen Villanueva. Source: S&P Commodity Insights. © 2024 S&P Global.

## Key Challenges

- Raising Necessary Project Capital
- Addressing Environmental, Social and Governance (ESG) Concerns
- Finding New Deposits: Fewer Near-Surface 'Large' Mineral Deposits [Deeper and Under Geologic Cover]
- Finding and/or Developing a Trained and Qualified Workforce
- Capturing Value from Mine Wastes & Their Management

Sustainability Concepts, **Putting Them** Into Practice -Key Questions

- Can 'We' Address Impacts from Legacy Mine Wastes as a Condition of Social License?
- Can A Mine Operate Successfully within a 'Reduced Carbon Footprint' Expectation?
- Can A Mine Operate with Reduced Long-Term Impacts to Water Resources?
- Can A Mine Incorporate Longer-Term Perspectives and Value-Added Post-Mining Land Use Considerations in Mine Plans?



Improving on What We're Doing Now....

- Raise Public and Political Awareness
- Take Advantage of Advances with New Technologies
- Streamline Administrative & Permitting Process to Advance Projects