

A Primer for the Lay Investor

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Juniors, Metals, and Projects:

The Good, The Bad, and the Butt-Ugly

The Good, The Bad, and the Butt-Ugly

- Timeline
- Cost of Production
- Access to Capital
- Exit Strategy

The Good:

- Short Lead Time to Development
- Low Capital Expenditures
- Low Cost Producers
- Multiple Exit Strategies

The Good:

- Open pit heap leach oxide Au deposits
- Open pit heap leach Cu Oxide deposits
- ISR or heap leach U₃O₈ deposits

The Good: Heap Leach Gold Deposit Dumps, Leach Pad, and Recovery Plant NW Sonora, Mexico



The Good: Heap Leach Copper Deposit Mine, Leach Pad, Recovery Plant Region II, Northern Chile



The Good: ISR Uranium Deposit

In-Situ Leach Well-Field, South Texas



The Bad:

- Lead Time for Exploration, Development , Permitting
- Mills and Smelters
- High Capital Expenditures
- Integrated Mining Company
- One Exit Strategy

The Bad:

- Polymetallic deposits
- Porphyry Cu \pm Mo-Au-Ag deposits
- Iron Oxide deposits

The Bad: Polymetallic VMS Deposit Mine/Mill Complex, SE Alaska



The Bad: Porphyry Cu-Au-Mo Deposit Open Pit Mine, North Central Utah



The Bad: Iron Oxide Deposit

Mesabi Range, NE Minnesota



The Butt-Ugly:

- Commodity Supply and Demand
- Sub-Economic Deposit Type
- Monopolistic Control

The Butt-Ugly:

- Molybdenum porphyries
- “Unconventional deposits”
- Specialty metals

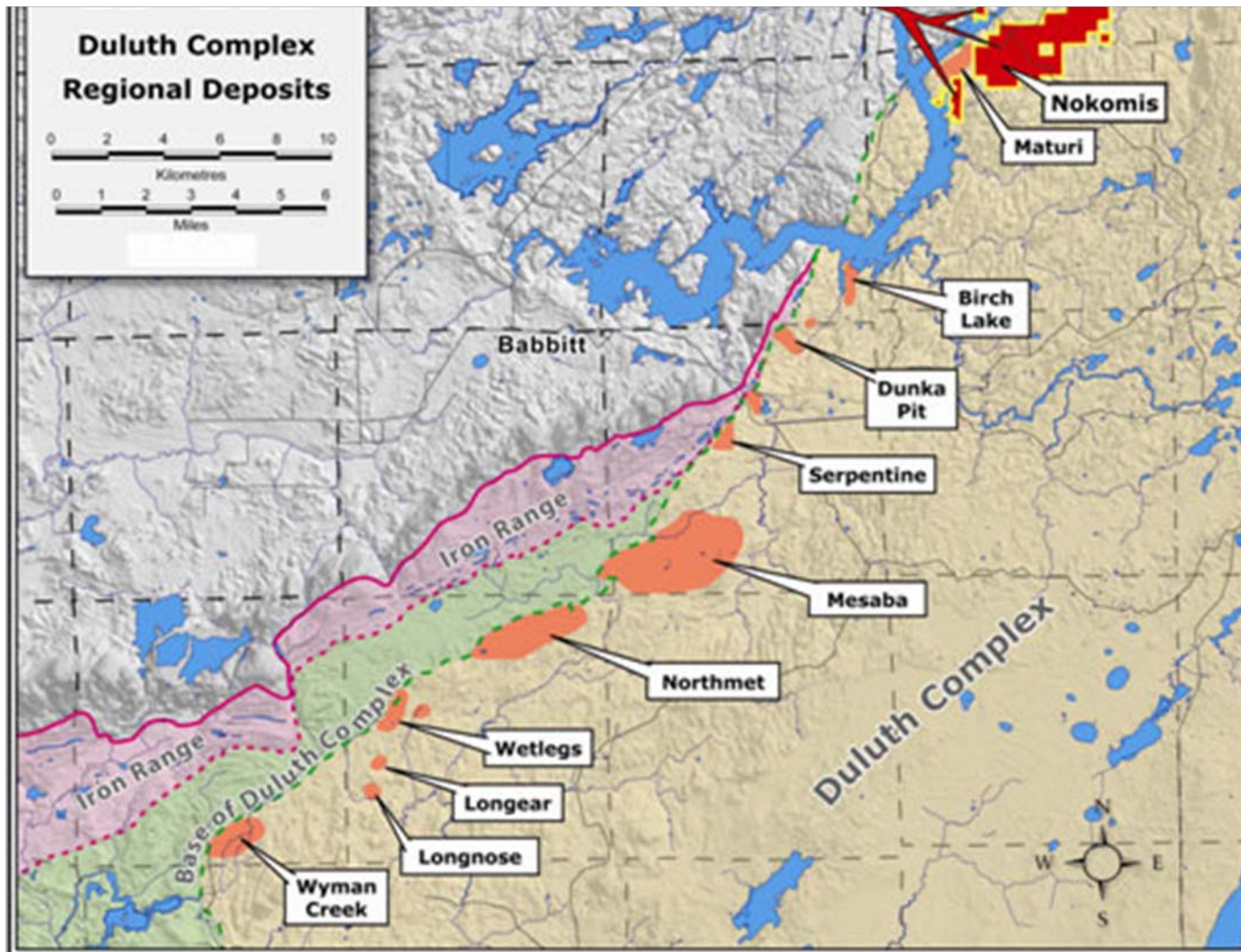
The Butt-Ugly: Mo Porphyry Deposit Mine/Mill Complex, Central Colorado



The Butt Ugly: Unconventional Deposits

- USGS Research in 1970's - 1980's
- Unusual Geological Environments
- Subeconomic: Past, Present, and Future

Unconventional Deposit Gabbro-Hosted Cu-Ni-PGE



Subeconomic Deposit Type

Volcanic-Hosted Uranium

Marysvale District, Utah



The Butt-Ugly: Specialty Metals Spor Mountain Beryllium, Central Utah



Rules of Thumb

Exceptions

- Polymetallic Deposits
Small Lead-Zinc-Silver Replacements near smelter complexes
- Porphyry Copper-Gold Deposits
Near existing mine/mill/smelter complexes
- Specialty Metals
A unique Heavy Rare Earth Element deposit

Juniors, Metals, and Projects

- The Good
- The Bad
- The Butt-Ugly

Why, Why Not, and Why Never?

- Timeline
- Cost of Production
- Access to Capital
- Exit Strategy

Monday Morning Musings from Mickey the Mercenary Geologist



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