

# American Nuclear Energy Revival Briefing Series Session #3 – Uranium Mining

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# Double



Safe, clean, reliable.

Doubling uranium production by 2018.



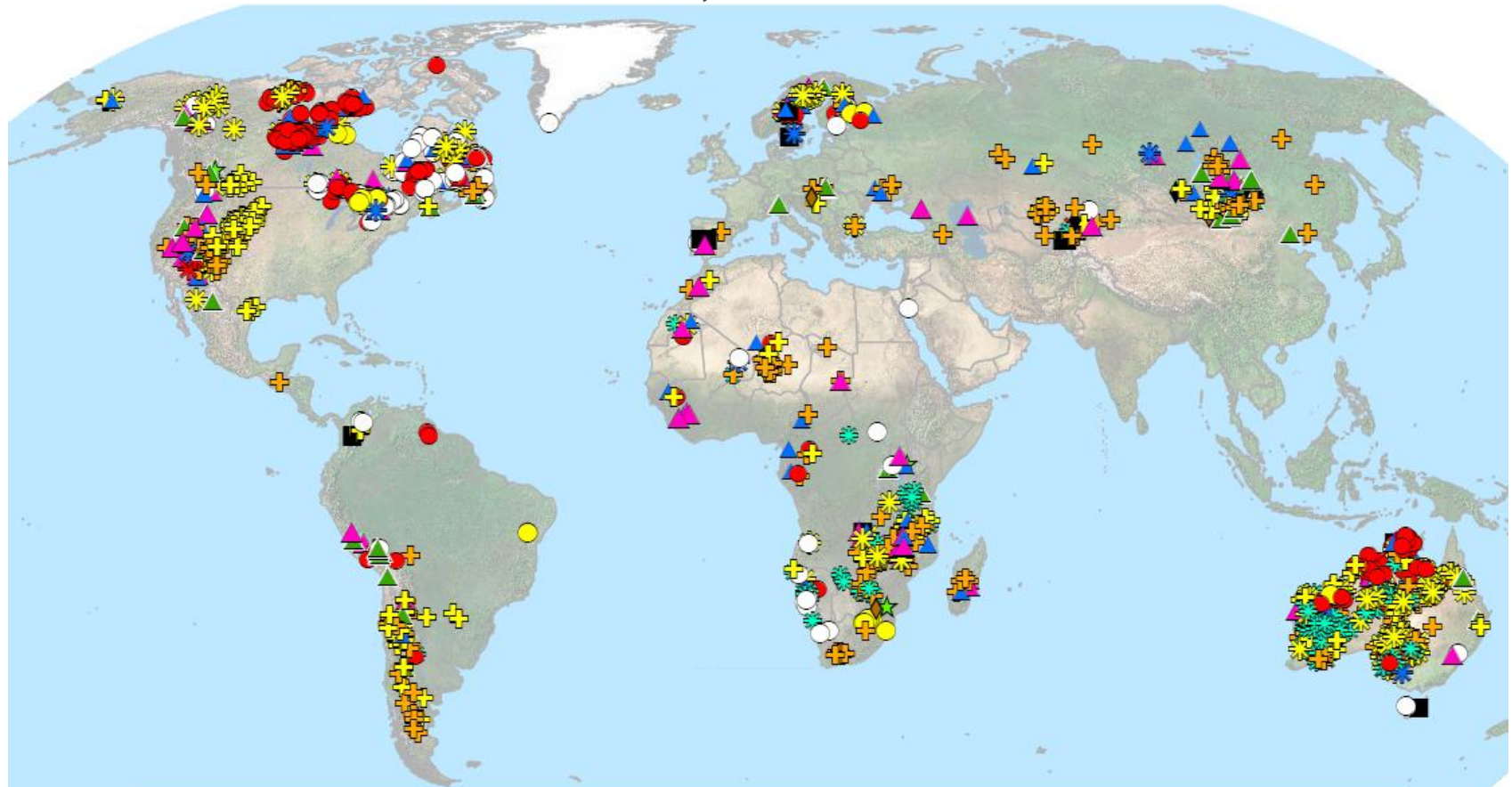
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# ▶ 1. Cameco

- Publicly-traded company listed on both the TSX:CCO & NYSE:CCJ
- Uranium exploration, mining, milling, conversion
  - ◆ Mine production in Canada, US, Kazakhstan
  - ◆ Refining production in Canada
  - ◆ Conversion in Canada, UK
- #1 Uranium producer in the United States (3 mlbs in 2009)
- Employ 264 people in Cheyenne & Casper, Crow Butte and Minneapolis
- *Our fuel powers 1 in every 14 households in the United States*

# ▶ 2. Uranium Supply

Uranium is an abundant element; 40 times more abundant than silver



U Deposit Model					
● UC	○ Alaskite	▲ Meta Vein-type	■ B. Shale	◆ Pedogenic	
+ Roll Front	* Bx Pipe	● Calcrete	■ Phos	◆ Peat	
+ Tabular	▲ Volc	▲ Intrusion Veins	◆ Lignite		
● QPC	* IOCG	* Skarn	★ Carbonatite		

## ▶ 2. Uranium Supply

- Future of the Nuclear Fuel Cycle report concluded:
  - ◆ There is no shortage of uranium resources that might constrain future commitments to build new nuclear plants for much of this century at least (MIT, 2010)
- Since 2003 approximately US\$3.4 B spent on exploration and deposit delineation across over 600 projects worldwide
- the low-cost Uranium resource base has increased by 40% (IAEA Red Book) to 5.47MtU or 70 year supply
- including higher-cost resources – nearly 11 MtU or 140 year supply



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# ▶ 3. Uranium Mining

- Framework

- ◆ Principle of conservation
- ◆ Principle of life-cycle management
- ◆ Principle of security
- ◆ Principle of corporate social responsibility

# ▶ 3. Uranium Mining

- Principle of conservation
  - ◆ minimum input, maximum output, minimum waste
  - ◆ consider our McArthur River Mine, Canada
  - ◆ footprint: 1 square mile
  - ◆ energy resource equivalent:
    - 71 Billion barrels of oil
    - 17 Billion tonnes of coal

# ▶ 3. Uranium Mining

- Principle of life-cycle management
  - ◆ eliminate externalities
  - ◆ stringent domestic regulations for water management, waste management, emissions management
  - ◆ stringent international regulations to manage the transboundary movement of the mining, milling and conversion products

# ▶ 3. Uranium Mining

- Principle of security
  - ◆ secure value chains
  - ◆ small volumes of fuel to produce large volumes of energy
  - ◆ easier to move, track and secure volumes
  - ◆ our US and Canadian production is in close proximity to the customers



# ▶ 3. Uranium Mining

- Principle of corporate social responsibility
  - ◆ focus on people, planet and profits
  - ◆ with respect to People:
    - Cameco invests heavily in the communities in which we operate
    - Canada's #1 industrial employer of First Nations peoples

- Discussion

# Double



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