Uranium Corporation of India Ltd: An overview

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Uranium Corporation of India Ltd.
We Look Forward to

Meet and interact with owners/ representatives:
1. Of operating uranium mines looking for equity infusion
2. To explore investment opportunities in mines at advanced stage of exploration
3. For long term product off-take agreement from the investment sites

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To get to know Consultants/ Experts to help us thru’ the above process
UCIL’s Accumulated End to End Expertise in Uranium Mining

The success story continues …………………

- Concept based approaches
- Advanced Geophysical survey (HELIBORNE) supported by satellite imagery information
- Application advanced geophysical methods - TDEM, Z TEM etc
- Extensive ground truthing
- Mobile geo-chemical survey unit
- Strengthening of geo-analytical laboratories
- Technology adoption for deep drilling
- Outsourcing of drilling activities
Indian Uranium in Different Geological Settings

**Jharkhand**
- Operating mines at Jaduguda, Bhatin Narwapahar, Turamdih, Bagjata, Banduhurang and Mohuldih;
- Plants at Jaduguda and Turamdih;
- Vein type irregular low grade deposits, siliceous host rock

**Andhra Pradesh**
- Mine and plant at Tummalapalle;
- Carbonate host rock, large resource, narrow low grade mineralization with low dipping ore lenses

**Karnataka**
- Fracture controlled mineralization hosted in siliceous and carbonate host rocks

**Meghalaya**
- Sandstone hosted near surface mineralization
- High rainfall area (10000mm/yr)
- Poor infrastructure

**Rajasthan**
- Arid climate, non-availability of water sources nearby
UCIL Brings Wide Experience of Mining to the Table

**JADUGUDA MINE**
- In operation for last 5 decades
- 905m deep with an underground shaft at 555m depth
- Enhanced mine safety and productivity

**NARWAPAHAR MINE**
- Entry through shaft and decline
- Use of trackless equipment
- Modern mechanized mines with improved safety and productivity

**TURAMDIH MINE**
- Entry through three declines along the orebody
- Central decline with conveyor for ore hoisting
- Alkali leaching (under pressure) processing technology

**BAGJATA MINE**
- First open cast uranium mine in the country
- Low grade reserve, techno-economic viability through optimization of critical parameters

**MOHULDIH MINE**
Experience of Integrated Mine Planning

- Analysis of exploration details with integrated software
- Integration of geo-technical and geo-mechanical data towards mine planning
- Simulation of ore lenses disposition and mine layout
- Detailed mine planning with scheduling
Nearly 50 years of acid leaching operations

Use of modern, energy saving, efficient equipment and upgraded technology in new plant at Turamdih

MDU precipitation >> upgraded to Uranium Peroxide production

Recovery of valuable by-products

Recently constructed plant based alkali leaching (under Pressure)

Use of autoclave, HBF, Ultra-filtration, candle filters etc.

Precipitation of SDU
Experience of Different Generation of Mine Mechanization

CONVENTIONAL EQUIPMENT

Adit entry into the mine
Gran-by Car
Jack Hammer drill
Diesel Locomotive

TRACKLESS EQUIPMENT

Decline entry by Passenger Carrier
Tyre-mounted Drill Jumbo
Scissor Lift
Rock Bolter
Tyre mounted Loaders
Mine Truck
Acclaimed Environment Management Practices

- Waste rock of mine utilized as filling material in underground.
- Excess waste rock of mine reclaimed
- Wet disposal of tailings in three tailings pond at Jaduguda since 1968
- Well laid drainage system to treat the effluent
- Maximum re-use and monitoring before discharge into environment
Indian Uranium Sector: Statutory Regulations

SIGNIFICANT REGULATORY DOMAINS

- Land Acquisition and Lease
  - Land Acquisition Act, 1894
  - Mines and Minerals (Development & Regulation) Act, 1957
- Environment
  - Environment (Protection) Act, 1986
- Mine Safety
  - Mines Act, 1952
  - Atomic Energy Act, 1962
- Industrial Relations
  - Industrial Disputes Act, 1947
Radiological Aspects

- Atomic Energy Regulatory Board (AERB) – Under restructuring, to be vested with higher controlling power

Non-radiological aspects

- Ministry of Environment & Forest (MOEF)
- Directorate General of Mines Safety (DGMS)
UCIL brings the following expertise to table for its prospective partners:

- Expertise in working low grade, irregular shape deposits
- Processing through acid and alkali leaching routes
- Disposal of waste in well engineered impoundment facilities
- Remediation activities
- Access to varied skill & multifaceted research facilities
- Experience of working with indigenous people and understanding of their culture, beliefs.
UCIL’s Engagement with Society

It’s good to have UCIL in your neighborhood!!

- Public engagement
- Understanding public needs
- Partnering with PAPs

- Extending primary healthy care
- Extending education for all
- Self-employment and vocational training
- Promotion of indigenous heritage

Awards & Recognitions
THANK YOU

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