UW School of Energy Resources

In-Situ Recovery: Potential Production and Long Term Impacts on Wyoming

Presenter: Glenn Catchpole

(10:40 a.m. Session)
Cautionary Statement

This presentation may contain or refer United States and Canadian securities laws, which may include, but are not limited to, statements with respect to resource estimates, projections, our planned exploration and drilling programs, the availability of future financing for the acquisition or related exploration, and other plans, transactions, projections, estimates and expectations. Such forward-looking statements reflect our current views with respect to future events and are subject to certain risks, uncertainties and assumptions, including, the risks and uncertainties outlined in our most recent financial statements and reports and registration statement filed with the United States Securities and Exchange Commission (the “SEC”) (available at www.sec.gov) and with Canadian securities administrators (available at www.sedar.com). Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, believed, estimated or expected. We do not undertake to update forward-looking statements.

Investors are cautioned that the potential quantity and grade described in this presentation is conceptual in nature and does not meet the NI 43-101 classification of "measured", "indicated" or "inferred" mineral resources as defined by NI 43-101 and the CIM Definitions Standards incorporated by reference therein. There has been insufficient exploration to define a NI 43-101 categorized "inferred", "indicated" or "measured" mineral resource on the Arkose Property, and it is uncertain if further exploration will result in the target being delineated as such a categorized mineral resource.

Cautionary Statement for U.S. Investors concerning estimates of potential target mineral resources:

The NI 43-101 Technical Report referenced in this presentation is a requirement of NI 43-101 and includes estimations of potential mineral resources for further targeted exploration by the issuer disclosed pursuant to the applicable provisions of NI 43-101, as described herein. As a company listed on the TSX, we are required by Canadian law to provide disclosure in accordance with NI 43-101. U.S. reporting requirements for disclosure of mineral properties are governed by the United States Securities and Exchange Commission ("SEC") and included in the SEC's Securities Act Industry Guide 7 entitled "Description of Property by Issuers Engaged or to be Engaged in Significant Mining Operations" ("Guide 7"). NI 43-101 and Guide 7 standards are substantially different. For example, the terms "mineral reserve", "proven mineral reserve" and "probable mineral reserve" are Canadian mining terms as defined in accordance with NI 43-101. These definitions differ from the definitions in Guide 7. The NI 43-101 Technical Report and this presentation use or may use the terms "mineral resource," "potential uranium exploration target", "potential mineral resource", "potential mineral deposit" and "potential target mineral resource". U.S. Investors are advised that these terms and concepts are set out in and required to be disclosed by NI 43-101 as information material to the issuer; however, these terms and concepts are not recognized by the SEC or included in Guide 7, and these terms and concepts are normally not permitted to be used in reports and registration statements filed with the SEC. U.S. Investors should be aware that the issuer has no "reserves" as defined by Guide 7 and are cautioned not to assume that any part or all of potential target mineral resources will ever be confirmed or converted into Guide 7 compliant "reserves". U.S. Investors are cautioned not to assume that all or any part of a potential target mineral resource exists, or is economically or legally mineable.
Presentation Outline

• Wyoming Uranium Reserves
• History of Uranium Mining in Wyoming
• Current Status of Industry in Wyoming
• Projections of Future Uranium Production in Wyoming
• Benefits of Uranium Mining to Wyoming
• Summary
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## US Forward-Cost Reserves by State

Source: U.S. Energy Information Administration

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<th>STATE</th>
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• Benefits of Uranium Mining to Wyoming
Wyoming Uranium History

- First major discovery in state made in 1951 by Dr. John Love Near Pumpkin Buttes (central PRB).
- First commercial production began around 1953.
- Continuous U Production in Wyo Since 1957
- First commercial ISR production started 1968
- Wyoming has been leading uranium producer in U.S. since 1995 (all by ISR extraction method)
- Historically Produced About 221 Million Pounds (2nd only to New Mexico)
Wyo Historic Uranium Production

• From 1968 to 1980 Annual Production Ramped Up from about 4 million pounds per year to a maximum of 12 million pounds per year (in 1980)

• In 1979 Spot Price Peaked at $43.80 a Pound

• From 1980 to 1986 Annual Production Fell From the 12 million pounds a Year to less than 1 million pounds a year

• After 1986 Annual Production has been Bouncing Around at 1.5 to 2 million Pounds Per Year (1 to 2 ISR Mines)

• In 2009 Wyoming Uranium Production was 1.8 Million Pounds (1 mine); All by ISR Mining Method

• Total Wyoming Production ~ 221 million pounds
History of ISR Uranium Extraction

Late 1960’s – Birth of ISR (in Wyoming – Shirley Basin)
- Good grade, good permeability, relatively shallow

1970’s – Decade of ISR development (Texas & Wyoming)

ISR Today
- 36% of world uranium comes from ISR
- 83% of US production from ISR; 100% of Wyo Production
- Commercial 2009 ISR production from US (approximate)
  - Nebraska 600,000 lbs
  - Texas 1,000,000 lbs
  - Wyoming 1,800,000 lbs
  - Total 3,400,000 lbs
Why Only ISR Production Since 1986

So current spot price, $46.00/lb., not too bad compared to 1979 price of ~$44/lb., right?

wrong!!!
Real Uranium Spot Price  
(inflation adjusted)

- Peak Uranium Price in 1979 - $43.80/lb.
- In Equivalent Dollars Today (CPI) - $131.63/lb.
- Current Spot Price - $46.00/lb.
- In Equivalent 1979 Dollars (CPI) - $15.33/lb.

Consumer Price Index Inflation Factor – 3.005; Is it Relevant, Yes
Real Uranium Spot Price (inflation adjusted)

• In Equivalent 1979 Dollars (CPI) - Today’s Spot Price is $15.33/lb. [However not all U sold in the spot market]

• By the early 1990s the Spot Price had gone below $15.33/lb. and All Open Pit & Underground Uranium Mines/Mills in Wyoming Had Shut Down and All But One Had Gone Into Decommissioning (Sweetwater Mill Placed on Standby)

• Four or Five ISR Uranium Mines in USA Remained in Operation; Two of them in Wyoming (lower Capex & Opex)
Historic Uranium Spot Price
(all values approximate)

• 1970 – $8/lb.
• 1980 – $43/lb. (local high)
• 1985 - $15/lb.
• 1990 to 2001 - $7/lb. to $8/lb.
• 2002 to 2003 - $10/lb.
• 2004 - $15/lb.
• 2005 - $21/lb.
• 2006 - $38/lb.
• 2007 - $138/lb. (all time high)
• 2008 - $70/lb. 2009 - $46/lb (current)
Wyoming Uranium Production & Spot Price

Total ~221 million pounds

American Stock Exchange
Toronto Stock Exchange
Frankfurt Exchange
Uranerz ENERGY CORPORATION
Spot U Price vs. Wyo U Production

Historic Wyoming Uranium Production Correlates Closely with Selling Price of Uranium

Peak Annual Production in 1980 - 12 million Pounds

Peak Spot Price of Uranium 1979 (last boom) - $43.78/lb.


Future Spot Price ??? (RBC projects $80/lb.)

BMO – current world average production cost $31/lb.
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Indicator of Interest in Wyoming Uranium Deposits

Active Federal Mining Claims (Wyoming)*

2001 – ~ 5,425

Today - ~ 39,518 ~790,000 Acres

* As of July 2010
Status of ISR Operations in Wyo

- Two Existing ISR Mines (Powder River Basin)
- One in Production – Cameco’s Smith Ranch – Highland Facility
- One on Standby – Uranium One’s Christensen Ranch Facility (planned restart in 2011)
- Two/Three ISR Mines ~ Licensed but Not Yet Built (two located in the Powder River Basin and the other in the Gas Hills)
- Five Planned ISR Mines in Permitting Stage (3 advanced)
- Three ISR Mines in Pre-Permitting Stage
- Two Conventional Mines in Pre-Permitting Stage
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Primary Factors that Determine Production Levels

1. Quality of Deposits
   • For In-Situ Recovery Method to be economic need.....
   • Adequate Ore Grade & Thickness
   • Ore in Aquifer and with Good Permeability
   • Not too Deep

2. Regulatory Setting (N.M. Example)

3. Selling Price of Yellowcake
Projections of Future Uranium Production in Wyoming

• Therefore, to predict future uranium production in Wyoming and the number of mines that will be in operation, one must predict the future selling price yellowcake.

• As those individuals in this room who work for uranium companies know, there are many institutions who project future uranium prices but we also know that they are consistently wrong.

• The following is one such projection ……
## Projections of Future Uranium Spot Prices

<table>
<thead>
<tr>
<th>Year</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$44.50/lb.</td>
</tr>
<tr>
<td>2011</td>
<td>$55/lb.</td>
</tr>
<tr>
<td>2012</td>
<td>$75/lb.</td>
</tr>
<tr>
<td>2013</td>
<td>$80/lb.</td>
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<tr>
<td>2014</td>
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(as of 2nd Qtr. 2010)

Not All Uranium Sold on the Spot Market
Wyo Future Estimated Annual Uranium Production

Spot Price vs. Million Pounds

- Historical Highs
- RBC Forecast (2013)
- Current Price

American Stock Exchange
Toronto Stock Exchange
URZ
Frankfurt Exchange
U9E
Uranerz Energy Corporation
Graph Summary

- Low Case – 5 million lbs./yr. (~5 mines)
- Mid Case - 8 million lbs./yr. (~8 mines)
- High Case – 12 million lbs./yr. (~12 mines)

[some future mines could be conventional if they have competitive cost structure]
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Benefits of ISR Mining to Wyoming

1. Significant Tax Revenue

2. Quality, Good Paying, Safe Jobs

3. Other Economic Benefits… Prof. Taylor
Benefits of ISR Mining to Wyoming

1. Significant Tax Revenue

2. Quality, Good Paying, Safe Jobs
Tax Revenue

Uranium Mines Pay the following Taxes:

- Property Taxes
- Ad Valorem Taxes
- Severance Taxes
- Employee Payroll Taxes
- Federal Corporate Income Tax
- State Mineral Leases Royalties (to the State)
- Sales Tax
- Federal Land Fees (BLM)
Potential Tax Revenue

• For a typical ISR Uranium mine in Wyoming, producing one million pounds per year of yellowcake, the total of all taxes paid is approximately $4 to $5 million per year.

• If we reach a point where there are twelve (12) ISR Uranium mines in production the annual tax revenue to the State could amount to roughly $48 to $60 million per year.
Benefits of ISR Mining to Wyoming

1. Significant Tax Revenue

2. Quality, Good Paying, Safe Jobs
Careers and Opportunities

- Geologists
- Hydrologists
- Engineers / Environmental Specialists
- Health Physics
- Chemists
- Accountants / Human Resources
- Public and Government Relations
- GIS & Instrumentation Technicians
- Skilled Craftsmen
Potential Employment
(typical number of employees)

- Employees per Mine (ISR) 80 - 120
- Contractors per Mine (ISR) 30 - 50
- Wyoming Office 15 - 30
- TOTAL (per ISR Mine) 125 - 200

- If 12 ISR Mines in Operation; 1,500 – 2,400 Quality Jobs for Wyoming Citizens

(does not include vendor & service company jobs)
Summary

• Wyoming – Largest Reserves in US
• Historically – #2 Producing State
• Currently – 1 Mine Producing (#1 State) more in restart and licensing
• Projections – 5 to 12 m lbs./yr. (price?) for 20+ years, 220 million + Pounds?
• Benefits – jobs, taxes, economy