

## 18 Interpretation and Conclusions (Item 21)

SRK concludes the Centennial Project is a sufficiently drill-defined sandstone-hosted roll front uranium deposit to support the approximately 12.7Mlb of in-situ uranium resource stated by Powertech and audited by SRK. Historical and current drilling information support the resource estimation defining several deposits of uranium mineralization on private surface and mineral lands at the Centennial Project. Continued work is justified by Powertech towards the goal of defining the potential for ISR uranium recovery and production operations. Most of the basic information necessary to evaluate the conceptual development of the resources by ISR methods has been addressed at a scoping study level to determine the project's potential economic viability. SRK recommends that Powertech's 2010 aquifer testing program be completed, and the data be evaluated to better define the hydrogeologic characteristics, to progress the evaluation of the Centennial Project for ISR development.

Powertech's plan is to fully permit the Centennial Project for operations and upon receiving all permits to proceed, delineate the initial well fields, conduct detailed hydrogeologic studies of the initial well fields and aquifer enhancement in the Southern project area, and construct the processing facilities. Upon review of the detailed site-specific well field data, including additional resource definition and hydrogeologic data, Powertech plans to design, construct, and operate their production well fields. SRK recommends that Powertech continue the ongoing process of project permitting and hydrogeologic data collection, advancing towards project development and production.

Powertech technical and management staff have prior pertinent experience with ISR uranium mine development and operations. Therefore, Powertech developed much of the preliminary well field design and cost estimates in-house, with vendor quotes as support in many instances. Lyntek provided independent preliminary engineering design support for the surface uranium recovery and processing facilities, and is a major contributor to the estimate of project costs and tax estimates for Centennial. SRK prepared a preliminary economic analysis for the Project.

The base case economic analysis results indicate a pre-tax NPV of USD 51.8million at an 8% discount rate with an IRR of 18%. The economics are based on a USD65/lb U<sub>3</sub>O<sub>8</sub> long-term uranium price and a design production rate of 700,000lbs U<sub>3</sub>O<sub>8</sub>/yr. Operating costs are estimated at USD34.95/lb-U<sub>3</sub>O<sub>8</sub>. Total capital costs are estimated at USD129.3million comprised of initial capital costs of USD71.1million, and ongoing capital costs over the LoM of USD58.2million.

This Preliminary Assessment was conducted as a study of the potential ISR mineability of the project, utilizing industry standard criteria for Scoping Level studies, which is normally at ±35 to 40% on costing estimates. In many cases, the cost estimates provided by Powertech are defined to a pre-feasibility level, with vendor quote backup; as a result, contingency costs for the base case are set at 20%.

This Preliminary Assessment includes Inferred resources that have not been sufficiently drilled to have economic considerations at a pre-feasibility level applied to them. Mineral resources that are not mineral reserves do not have demonstrated economic viability. The preliminary assessment is preliminary in nature. It includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary assessment will be realized.

As with a pre-development mining property, there are risks and opportunity attached to the project that need further assessment as the project moves forward. SRK deems those risks, on the whole, as identifiable and manageable.

The results of this Preliminary Assessment indicate that ISR development of the Centennial project, through a combination of a central processing facility with satellite well fields, offers the potential for positive economics based upon the information available at this time.

## **18.1 Project Opportunity**

### **18.1.1 Resources**

The resources stated are for the defined areas of historical drilling which have been confirmed by Powertech's drilling. The Centennial Project land position has had sufficient drilling to define the mineralization, such that exploration upside on the present property position is considered by SRK to be minimal. SRK did not examine the exploration potential in the immediate region to know if there is upside potential for adding satellite uranium deposits on adjacent or nearby properties.

### **18.1.2 Infrastructure**

Infrastructure for Centennial is excellent, in that power, water, manpower, and available accommodations for a work-force are available in the immediate region, and rail access is located nearby. Available infrastructure is a definite positive for the project, and is not considered a project risk. Upon project completion, the central processing facility at the Centennial Project will be able to receive shipments from not only the satellite facility in Centennial South, but also other satellite facilities owned by Powertech or third party producers.

## **18.2 Project Risks**

### **18.2.1 Social/Political**

As with a uranium project in the USA, there will undoubtedly be some social/political/environmental opposition to development of the project. The project has already drawn some attention from environmental groups, local property owners and the Denver and Fort Collins media (primarily daily newspapers). This risk will require management by Powertech, particularly as the permitting process for mine development enters the public comment stage. With no current or previous ISR uranium operations in the State of Colorado, Powertech's proposed operation will be a first, likely drawing added attention. This manageable risk will require attention to public relations by Powertech.

### **18.2.2 Environmental and Permitting**

The Centennial project is the first uranium ISR facility that will submit permit applications for development in the State of Colorado. As such, there is inherent risk in a new permitting process, regulatory unfamiliarity with ISR methods, and an untested review period. The State of Colorado, Department of Natural Resources, is currently formulating the rules for the ISR permitting process, and it is therefore uncertain as to the timing of the permitting process.

The amount of time required for regulatory review of all permits associated with the commissioning of an ISR facility is highly variable and directly effects the viability of a project. The assumption presented in this Preliminary Assessment is that Powertech will have all permits

necessary to begin construction of the facility in late 2012. However, the timeframe for obtaining the necessary licenses, permits, and approvals could be extended due to regulatory requirements.

Both deep well injection and land application of treated wastewater from a uranium ISR processing facility have not been previously permitted in the State of Colorado. Powertech is presently pursuing both options, however the timeframe to obtain permits for either method is unknown; therefore, Powertech will actively pursue both options within the permitting process. It is possible that a combination of both styles of wastewater disposal could be utilized to speed restoration and increase the economic viability of the project.

### **18.2.3 Project Timing**

As a whole, the timing risks are less technical and more likely permitting delays due to opposition to development. These risks are largely up-front risks that have an effect on the timing for initiation of operations. The majority of project capital is not at risk until after the permits for construction and well-field development are in place, at which time the risks are operational.

### **18.2.4 Resources and Reserves**

Mineable reserves can only be defined after field pilot tests or mining operations have been undertaken. Resource estimates were utilized within this Preliminary Assessment. These resources have been coupled with a small number of laboratory leach studies that indicate 75% recoverability of the resource. There is no assurance that this level of recovery will be achieved by the project based on current information.

Powertech is planning to mine (by ISR methods) to the 0.2GT cut-off; however, Powertech has not yet demonstrated that ISR production will be economic at this relatively low cut-off. As demonstrated by Powertech, total project resources are sensitive to the cut-off, as a 0.5GT cut-off results in a loss of 3.9Mlbs U<sub>3</sub>O<sub>8</sub> relative to the 0.2 GT cut-off.

SRK also cautions that the resource is planned for ISR mining and recovery of uranium; however, a significant portion (74%) of the resource in the southern portion of the Centennial project (approximately 1/3 of the total project resources) is at or above the water table. This portion of the resource is presently considered as having the potential for economic extraction by ISR technology, because Powertech plans to inject water to locally raise the water table for this mineralization to allow for total saturation and thus permit ISR recovery of uranium. Demonstration that raising the water table can be adequately accomplished will not be done until injections permits are in hand; therefore, that portion of the resource above the water table is at risk of being considered potentially recoverable until that information is in hand.

### **18.2.5 Hydrogeology**

The primary hydrogeologic concern for the development of a uranium ISR project is orebody transmissivity (or hydraulic conductivity). Both have been characterized at a preliminary level, based upon localized aquifer testing and spot coring for geotechnical parameters. The results of these activities are considered by SRK to be marginal for ISR development without aquifer enhancement. Powertech plans to conduct more definitive aquifer testing during 2010 with the goal of reducing this current risk through acquisition of robust data. Hydrogeologic project risks are generally associated with lateral heterogeneity of the host aquifer and physical plugging of pore spaces due to geochemical reactions within the formation. Changes in orebody transmissivity that are lower than previously observed parameters to date, may increase the

length of time required for resource recovery, and potentially have a negative effect on the economics of the project.

Successful ISR conditions require hydraulic as well as aquifer containment; the deposits must be below the water table. The proposed ISR well field development plan calls for the need to augment (raise) the groundwater table to fully saturate those portion of the project areas where about 30% to 40% of the total project resource base is located at or above the water table. This is compounded by the relatively shallow depth of the mineralization in some areas. The challenge will be to elevate the water table by fresh-water injection to saturate the mineralization sufficiently to allow ISR recovery, maximizing hydraulic head and minimizing well field drawdown.

### **18.2.6 Uranium Recovery and Processing**

The greatest risk in the development of an ISR project is the lack of pilot-scale field-testing and site-specific assessment of percent recovery and rate of recovery, and average uranium concentration in the process solution composite. The lack of data from field application present risks associated with the production, and thus the financial results presented in the Assessment. The validity of the economic analysis is heavily dependent on the performance of the ISR well field and the ability of the operation to extract uranium from the host unit at a rate similar to those utilized in the economic analysis. Potential problems are several and include: a reduction in hydraulic conductivity due to mineral precipitation, or spatial variability; unforeseen uranium grade variability; discontinuity of confining geology; all of which have further effects on resource recovery and required infrastructure to maintain project economics.

Process risks include process selection, design, and construction on a commercial scale based upon limited laboratory studies specific to the project site. Uranium concentrations in the PC may be significantly higher or lower than presented in this Assessment. In addition, the PC may carry undesirable impurities which may reduce uranium production, or create the need for secondary circuits on the process facility. Centennial uranium mineralization does not contain identified impurities that will potentially need to be addressed in the processing facility.

### **18.2.7 Commodity Price Fluctuation**

The current spot price for uranium is USD41.50/lb  $U_3O_8$  and long-term contract price is approximately USD60.00/lb. Uranium prices have fluctuated greatly in the past five years from lows of near USD9.00/lb to over USD135.00/lb. Long-term market trends analyzing supply and demand indicate increases in future demand.

Commodity prices used for this study are based on industry averages for similar studies, and should be further examined by purchase of, or the initiation of an independent market analysis for uranium commodity price forecasts.

### **18.2.8 Radiological Waste and Contamination**

Radiologically contaminated solid wastes, that cannot be decontaminated, will be classified a 11e. (2) byproduct material, and will need to be disposed of in a licensed radiological waste facility. It is estimated that the Centennial project will generate at least 6,746ft<sup>3</sup> of 11e. (2) material per year. The long-term availability of radiological waste disposal facilities cannot be predicted. In addition, the availability of, and demand for, these facilities cannot be predicted and may lead to an increase in disposal prices.

The environmental radiological impact of the Centennial project will be assessed within the Supplemental Environmental Impact Statement prepared by the NRC as part of the Source Material License Application. It is anticipated that operations will not contribute to the dosage of the general public and the risk of radiological exposure is minimal to none.

### **18.2.9 Transport**

Transportation of IX resin or yellowcake by Powertech could result in an accident and product spillage. If such an event were to occur, all spilled materials would be collected, and contaminated materials would be removed from the site and processed at a uranium processing mill as alternate feed, or disposed of at a licensed radiological waste facility as 11e.(2) byproduct material.

Risk of release during shipment cannot be eliminated, however; proper mitigation through institution of shipping and spill response procedures can reduce the overall impact of such an event.

### **18.2.10 Occupational Health and Safety**

All site operations will be completed under the appropriate guidelines and procedures. Powertech will have at least one Certified Health Physicist, as well as several radiological technicians on site to deal with radiological emergencies. Proper administrative and engineering controls will be in place prior to commencement of facility operations, and all activities shall proceed in a manner that maintains radiological exposure as low as reasonably achievable (ALARA).

### **18.2.11 Summary Conclusion of Project Risks**

In summary, SRK considers there are three types of project risk associated with the planned development of Centennial as a uranium ISR well field and recovery operation: social-political risk, environmental-permitting risk, and technical risk risks associated with the hydrogeological aspects of the project. Powertech plans to mitigate risks as the project proceeds through permitting, construction and development. Identified operational risks related to hydraulic conductivity, and the ability to elevate the water table will not be fully understood until adequate pump testing is completed later this year and hydrogeological modeling has been reviewed. Other operational risks, including mining to a 0.2GT cut-off and the ability to satisfactorily raise the water table in an operation model may not be fully understood until the initial production well field is in operation. SRK's opinion is that there are significant risks for Centennial; however, most of those risks can be assessed and/or mitigated prior to commitment of initial capital for well field and process plant construction.