

**Preliminary Feasibility Study  
Reno Creek ISR Project  
Campbell County, Wyoming**

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Appendix A– Technical Report on Resources for the Reno Creek ISR Project

## Glossary

Aquifer – A saturated permeable geologic unit that can transmit quantities of water under ordinary hydraulic gradients.

Aquitard – A less permeable bed in a stratigraphic sequence. An aquifer overlain and underlain by aquitards is considered in a confined state.

Assay – The value of U3O8 in samples, usually analyzed by ‘wet chemical’ or spectrographic methods. Comparison of this ‘chemical’ value to a ‘radiometric equivalent is important to establish the state of equilibrium of a uranium deposit.

Central Processing Plant (CPP) – The facility building that houses the recovery, elution, precipitation and drying circuits for an ISR operation.

Elution – Process of extracting one material from another by washing with a solvent to remove adsorbed material from an adsorbent (as in washing of loaded ion-exchange resins to remove captured ions).

Environmental Impact Statement (EIS) – A document required by the National Environmental Policy Act (NEPA) for certain actions “significantly affecting the quality of the human environment.” An EIS is a tool for decision-making, describing positive and negative environmental effects of a proposed action, and usually also listing one or more alternative actions that may be chosen instead of the action described in the EIS.

Header House – A small building that is centrally located in each wellfield where solutions are distributed to injection wells and collected for recovery wells. Each header house also contains the monitoring equipment and controls for all wells in the associated wellfield.

Inferred Mineral Resource – An ‘Inferred Mineral Resource’ is that part of a Mineral Resource for which quantity and grade or quality can only be estimated, based on geological evidence and limited sampling, and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The inferred resources have been classified relative to their proximity to sample locations and are reported in accordance to the CIM Definition Standards for Mineral Resources and Mineral Reserves.

Indicated Mineral Resource – An ‘Indicated Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed. The indicated resources have been classified relative to their proximity to sample locations and are reported in accordance to the CIM Definition Standards for Mineral Resources and Mineral Reserves.

Injection Well – A well that is used to deliver the lixiviant to the subsurface ore zone deposit.

In Situ Recovery (ISR) – A mining process used to recover minerals such as uranium through boreholes drilled into a deposit. A leaching solution is pumped into the deposit where it

makes contact with the ore. The solution bearing the dissolved ore content is then pumped to the surface and processed.

Ion Exchange (IX) – The process in which ions are exchanged between a solution and an insoluble solid, usually a resin.

Leach Amenability – Suitability of a geologic unit, in terms of its geochemistry, mineralogy, and permeability, for the leaching and extraction of specific minerals (e.g., in situ recovery of uranium).

Lixiviant – A liquid medium used in hydrometallurgy to selectively extract the desired metal from the ore or mineral. It assists in rapid and complete leaching. The metal can be recovered from it in a concentrated form after leaching.

Measured Mineral Resource – A ‘Measured Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity. The measured resources have been classified relative to their proximity to sample locations and are reported in accordance to the CIM Definition Standards for Mineral Resources and Mineral Reserves.

NRC – United States Nuclear Regulatory Commission.

Patented Mining Claim – Claim on federal land for which the Federal Government has conveyed the title, thus making it private land. Claim owner has exclusive title to locatable minerals and, in most cases, to surface.

Pattern – The basic unit of an ISR wellfield made up of a combination of recovery and injection wells.

Permeability – The state or quality of a material or membrane that causes it to allow liquids or gases to pass through it.

Production Unit (PU) – An area within a resource unit that will be operated, restored and reclaimed on the same schedule. Multiple production units can be contained within one resource unit, and each production unit may contain multiple wellfields.

Recovery Well – A well that is used to pump the uranium bearing lixiviant to the surface.

Resource Unit – An area of the project that encompasses an area with similar mineralization that is also geographically separated from other mineralized areas.

Royalty – The mineral owner’s, or royalty holder’s, share of the value of minerals produced.

Satellite Plant – A facility that may produce a solution enriched in uranium or a resin loaded with uranium that may be readily transported to another facility for elution, precipitation and drying.



Transmissivity – For a saturated confined aquifer, transmissivity is equal to the hydraulic conductivity (a measure of permeability) times the thickness of the aquifer. A term used to describe the rate of flow of ground water.

Wellfield – A grouping of well patterns whose lixiviant flows are controlled, distributed and monitored from a single header house. The size of a wellfield is limited by the number of wells that are connected to the associated header house.

Yellowcake –  $U_3O_8$  or ‘uranium’ used by the industry to describe the product of a mining and processing operation. Sold in private transactions on the spot market or through long-term contracts in US\$ per pound.

## **Preliminary Feasibility Study Reno Creek ISR Project Campbell County, Wyoming**

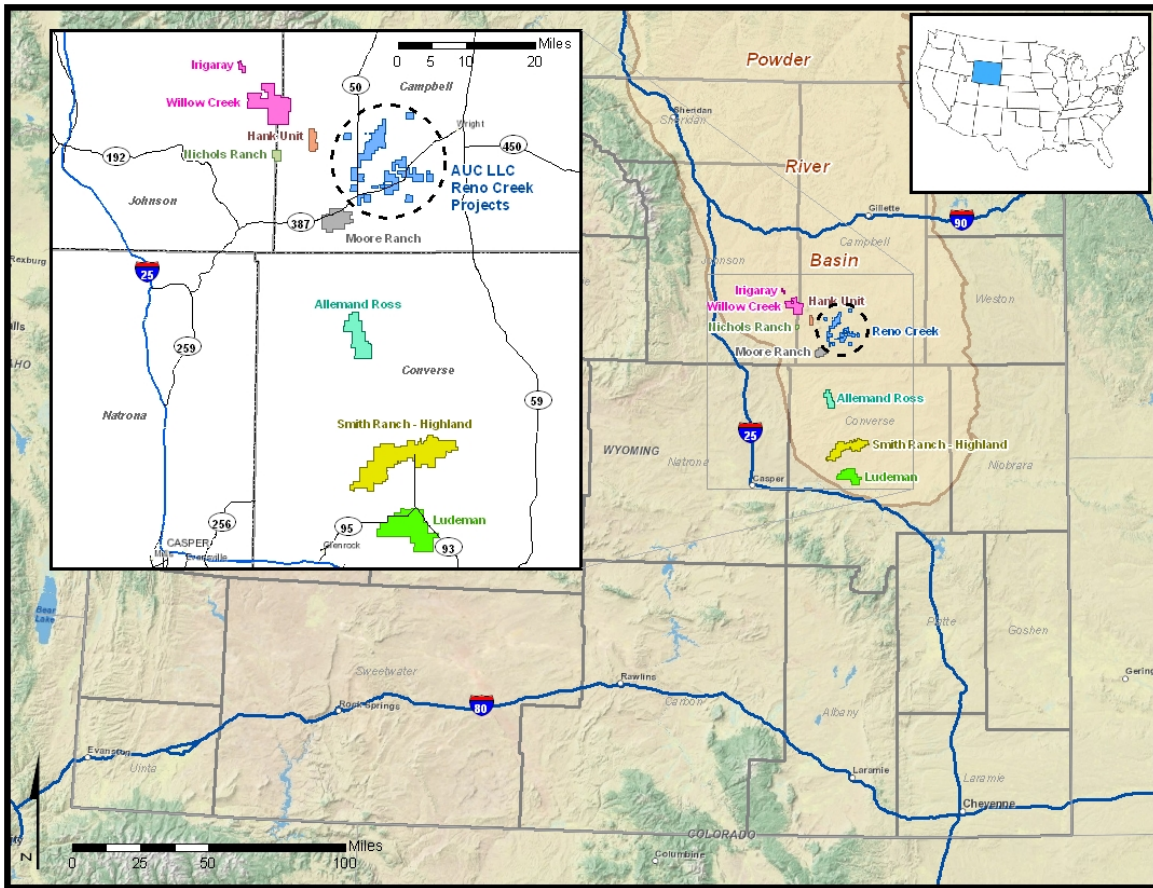
### **1.0 Summary**

This independent Preliminary Feasibility Study (PFS) for the Reno Creek ISR Project (Project) has been prepared for AUC LLC (AUC) by TREC, Inc. (TREC) in accordance with the guidelines set forth under National Instrument (NI) 43-101 and NI 43-101F1 for the submission of technical reports on mining properties. The purpose of this PFS is to evaluate the technical and economic feasibility of the Project using the most current scientific and engineering information available. The results of this PFS demonstrate both the technical and economic feasibility of the Project.

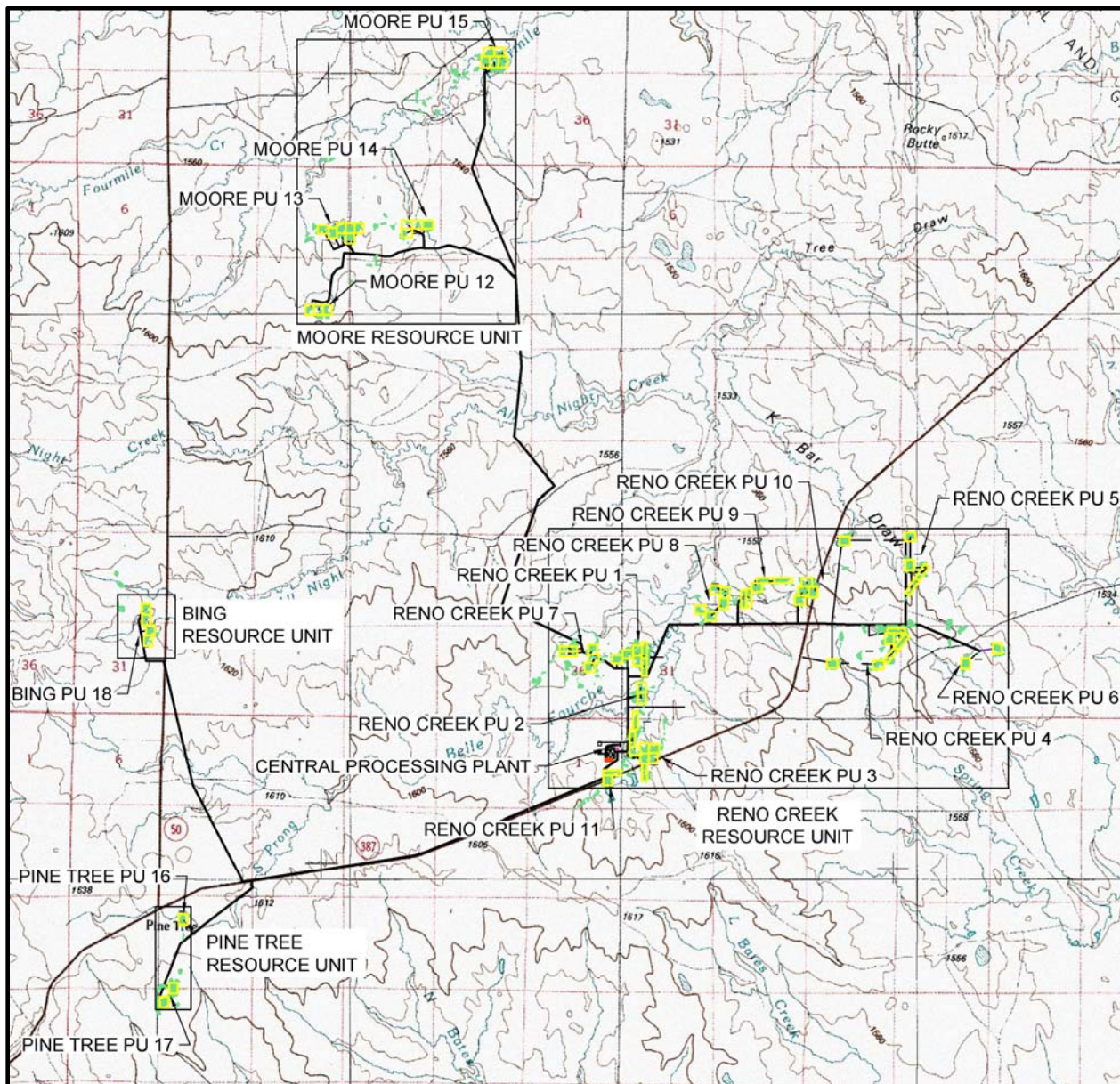
This revised PFS includes new information that has been made available to the authors since the time of the original January 2013 submission. AUC has an additional royalty obligation to Strathmore Minerals as a consequence of the purchase of properties incorporated in the Project. This additional royalty was assigned to AUC coincident with the purchase by Bayswater Uranium and was not included in the base economic analysis presented in the PFS. The additional royalty provides AUC the option to repurchase the royalty at any time prior to commercial production. The royalty and payment options and economic effects are discussed in further detail in Section 22.4.

The Project is located in Campbell County, Wyoming, USA. The Project will consist of five Resource Units (of which two are operated as a single unit), which incorporate 18 Production Units (PU) and associated wellfields, header houses, and a central processing plant (CPP). The Project is a 100 percent AUC controlled property and located in southwest corner of Campbell County Wyoming. Figure S-1 identifies the Project location, plus nearby proposed and operating uranium recovery projects owned by other companies. These include the operating Uranium One Willow Creek facility, the operating Cameco Smith Ranch-Highland facilities, the Uranerz Energy Corporation's Nichols Ranch/Hank Project, which is currently constructing a satellite plant in the Pumpkin Buttes area and the Uranium One Moore Ranch Project which has been permitted but construction has not begun. Allemand Ross and Ludeman are in the permitting process. Figure S-2 shows the locations of the Resource Units and PUs within the Project.

Figure S-1: Location of Reno Creek ISR Project





**Figure S-2: Reno Creek ISR Project Site Map**

The Project includes approximately 21,240 acres of claims and mineral leases. The Project is composed of four Resource Units (Figure S-2), of which one, the Reno Creek Resource Unit combines two contiguous sub-units, North Reno Creek and Southwest Reno Creek. This combined unit will be operated as a single cohesive unit, i.e. the Reno Creek Resource Unit. The Moore and Bing Resource Units contain roll-front uranium mineralization in the same and contiguous stratigraphic horizons as the Reno Creek Resource Unit. The Pine Tree Resource Unit contains mineralization in the same stratigraphic horizons as the Reno Creek Unit plus a slightly higher stratigraphic unit. AUC is currently permitting a portion of the resources in the southeast portion of the Project, identified as the Permit Area. The Permit Area incorporates most of the Reno Creek Resource Unit. AUC intends to amend its Permits in the future to incorporate production from the Moore, Bing, and Pine Tree Units.

The Project area includes 688 unpatented mining claims, four fee (private) mineral leases and seven State of Wyoming mineral leases. Most of the land is privately owned, excepting only the State lease lands. No BLM or other federal lands are in the Project. The Project has identified 21.9 million pounds of NI 43-101-compliant Measured and Indicated resources and 1.6 million pounds of NI 43-101-compliant Inferred resources (ref., Behre Dolbear, November, 2012, Appendix A), and referred to here as the Technical Report on Resources.

The Project consists of the proposed development of a commercial uranium *in situ* recovery and processing (ISR) operation. This PFS uses design information provided for the Project by AUC and is supplemented with preliminary designs for certain facility components (e.g., wellfield piping, CPP, laboratory, header houses, etc.) prepared by TREC to develop estimates of capital costs, operating costs, and closure costs. This PFS also presents an economic analysis based on the projected capital, operating and closure expenditures and estimates of projected revenue from the sale of natural uranium concentrates based on assumptions presented herein.

Prior to the start of mining, AUC will be required to obtain the following permits, licenses, and approvals.

- Source Materials License (U.S. Nuclear Regulatory Commission (NRC))
- Permit to Mine (Wyoming Department of Environmental Quality (WDEQ))
- Permit to Appropriate Groundwater (Wyoming State Engineer's Office)
- Class I Disposal Well Permit (WDEQ)
- WYPDES construction storm water (WDEQ)
- 11e.(2) Byproduct/Waste Disposal Agreement (with licensed tailings operator)
- Air Quality Permit (WDEQ)

The two most significant permits/licenses are (a) the Permit to Mine, issued by the WDEQ/Land Quality Division (LQD) and (b) the Source Materials License, required and issued by the NRC for mineral processing of natural uranium. In October 2012, AUC submitted application for the Source Materials License to the NRC for the Project which includes most of the Reno Creek Resource Unit. The Permit to Mine application has been submitted to the WDEQ/LQD in January 2013.

The Project exhibits minimal environmental risks for development:

- It is located more than ten miles from any sage-grouse core area habitat.
- There are no documented threatened or endangered species present, nor are any species listed as candidates for the endangered species act.
- There are no cultural resources present on the site qualified for the National Register of Historic Places.
- The Production Zone is physically confined by aquitards across the entire project area.

The targeted mineralized zones for in situ uranium recovery at the Project occur within sand units ranging from 50 feet to 200 feet in thickness, and at depths ranging from 170 feet to 450 feet below surface.

The mineralized areas generally occur along trends that vary in thickness ranging from 1 foot to 30 feet thick with an average thickness of approximately 14.8 feet. The mineralized bodies range in grade from 0.043 percent to greater than 0.114 percent  $U_3O_8$ , with an average grade estimated at 0.052 percent  $U_3O_8$ . Additional mining targets within the Bing, Moore and Pine Tree

Resource Units may exist in the Project area. Additional future drilling in these areas will be needed to fully define any additional target areas and to upgrade the present resource estimate. Any such resources from additional mining targets are not included in the evaluation in this PFS.

Additional development drilling was recently completed in the Moore Unit, with analysis in process, and additional drilling is planned for 2013 in the Bing and Pine Tree Resource Units. As more detailed mineral resource information is acquired, the wellfield design and mine plan will adjust accordingly. The Project boundaries will adapt to in-coming drilling results. The specific details of mineral extraction may also be adjusted to ensure that the highest yield of recovered minerals is obtained. Since the resource quantities stated include measured and indicated from extensive exploration drilling, the total resources have a potential to increase.

A National Instrument (NI) 43-101 compliant Technical Report on Resources was prepared for the Project by Behre Dolbear and the results were used in the development of this PFS (ref., Behre Dolbear, November, 2012, Appendix A). A recoverability factor calculated from leach test results (see Section 13, Appendix A), including the results of the successful 1980 Pilot Program, was used to determine the estimated recovery (lbs) for the Project. The results are summarized in Table S-1.

**Table S-1: Summary of Mineral Resource and Recoverable Uranium Estimates**

<b>Resource Unit</b>	<b>Estimated Resource (Million-lbs U<sub>3</sub>O<sub>8</sub>)</b>	<b>Recoverability Factor (%)*</b>	<b>Estimated Recovery (Million-lbs U<sub>3</sub>O<sub>8</sub>)</b>
<b>North Reno Creek</b>			
Measured (M)	2.96	71.4%	2.11
Indicated (I)	5.13	71.4%	3.66
M+I	8.09	71.4%	5.77
<b>Southwest Reno Creek</b>			
Measured (M)	3.32	71.4%	2.37
Indicated (I)	3.55	71.4%	2.53
M+I	6.87	71.4%	4.90
<b>Bing</b>			
Measured (M)	0.21	71.4%	0.15
Indicated (I)	0.72	71.4%	0.51
M+I	0.93	71.4%	0.66
<b>Moore</b>			
Measured (M)	1.56	71.4%	1.11
Indicated (I)	2.97	71.4%	2.12
M+I	4.53	71.4%	3.23
<b>Pine Tree</b>			
Measured (M)	0.32	71.4%	0.23
Indicated (I)	1.13	71.4%	0.81
M+I	1.45	71.4%	1.04
<b>TOTAL</b>			
Measured (M)	8.37	71.4%	5.98
Indicated (I)	13.5	71.4%	9.64
<b>M+I</b>	<b>21.9</b>	<b>71.4%</b>	<b>15.6</b>

1. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
2. \* The estimated production is based on 71.4 percent recovery of in place mineral resources and includes 70 percent mining recovery and 1.4 percent recovery during groundwater restoration for a total combined recovery factor of approximately 71.4 percent.

*Cautionary Statement: The estimated recovery used in this PFS is based on both AUC personnel and industry experience at similar facilities. There can be no assurance that recovery at this level will be achieved.*

An estimated recoverable resource of 15.6 mlbs of uranium is assumed for the analyses in this report.

In order to produce and sell the uranium resources at the Project, infrastructure including PUs and a CPP will be designed and constructed. PUs are designated areas above the defined mineralized zone that will feature wells and piping for the in situ recovery process and are sized for the desired production goals. Each mineral Resource Unit defined in the NI 43-101 compliant Technical Report on Resources (ref., Behre Dolbear, 2012, Appendix A) will be developed into one or more PUs for the uranium recovery process. Each PU will be divided into wellfields, with each wellfield consisting of up to thirty individual well patterns. A pattern will be made up of a configuration of recovery and injection wells collectively known as production wells. Each production well will be piped individually to a central location within each wellfield called a header house. The header house is the point at which the flow rates to each injection and from each recovery well will be monitored and controlled in order to balance the flows within each wellfield. Each header house will be connected to a trunk line system, which will connect to the CPP.

The piping/well system will inject a groundwater based-leaching solution (barren lixiviant) into the mineralized zone and recover the uranium-enriched solution (pregnant lixiviant) after it has passed through the mineralized zone. The mineralized zone is the geological sandstone unit where economic concentrations of uranium exist, and in which the leaching solutions are injected and recovered. It is bounded between zones of low permeability, typically shales or mudstones, termed aquitards.

AUC anticipates the patterns for the injection and recovery wells to follow the conventional five-spot pattern consisting of a recovery well surrounded by four injection wells. Depending on the mineralized zone shape, alternative pattern designs may also be used. The dimensions of the patterns vary depending on the mineralized zone, but the injection wells will typically be between 50 and 120 feet apart. This report assumes the average distance will be 100 feet. In order to effectively recover the uranium and also to complete the groundwater restoration, the wells will be completed so that they can be used as either injection or recovery wells. During mining operations, a slightly greater volume of water will be recovered from the mineralized zone aquifer than injected, in order to create an inward flow gradient within the PUs. This is referred to as “bleed”. AUC anticipates that the bleed will average about one percent of flow.

PU1, which will consist of six wellfields, will be installed concurrently with the CPP. The remainder of the PUs will be installed and brought on line sequentially to maintain the required CPP throughput to achieve production goals. As production occurs, the head grade from the operating wellfields will decrease toward economic limits, and additional wellfields will be placed into operation in order to maintain the desired flow rate and head grade at the CPP. Eventually, all the patterns in a given PU will reach their economic limit and uranium recovery operations in that area will be terminated. Thereafter, groundwater restoration activities will commence. This sequential installation, production, and restoration cycle will be implemented until all PUs have been restored. At this time, final decommissioning of the CPP and reclamation will be conducted.

Each wellfield includes a number of injection wells, recovery wells, monitoring wells, one header house and associated piping and power supply. Header houses will be located within the wellfields, and will collect pregnant lixiviant from up to 30 recovery wells (per header house) and transfer the pregnant lixiviant to trunk lines and then the CPP. Barren lixiviant from the CPP will pass through the trunk lines, into the header houses and then be distributed to approximately 42 injection wells per header house.



Monitoring wells will include both interior and exterior wells. Interior monitoring wells will be located within the PU boundaries and may be screened in the aquifers above (or below as required) the mineralized zone to monitor potential vertical movement of in situ recovery fluids. Each PU will also be surrounded by exterior monitoring wells to monitor the potential for lateral movement of the in situ lixiviant. The screened interval of these exterior monitor wells will be within the production sand.

Underground Injection Control (UIC) deep disposal wells (DDW) are also required for disposal of liquid wastes from wellfield bleed and groundwater restoration operations.

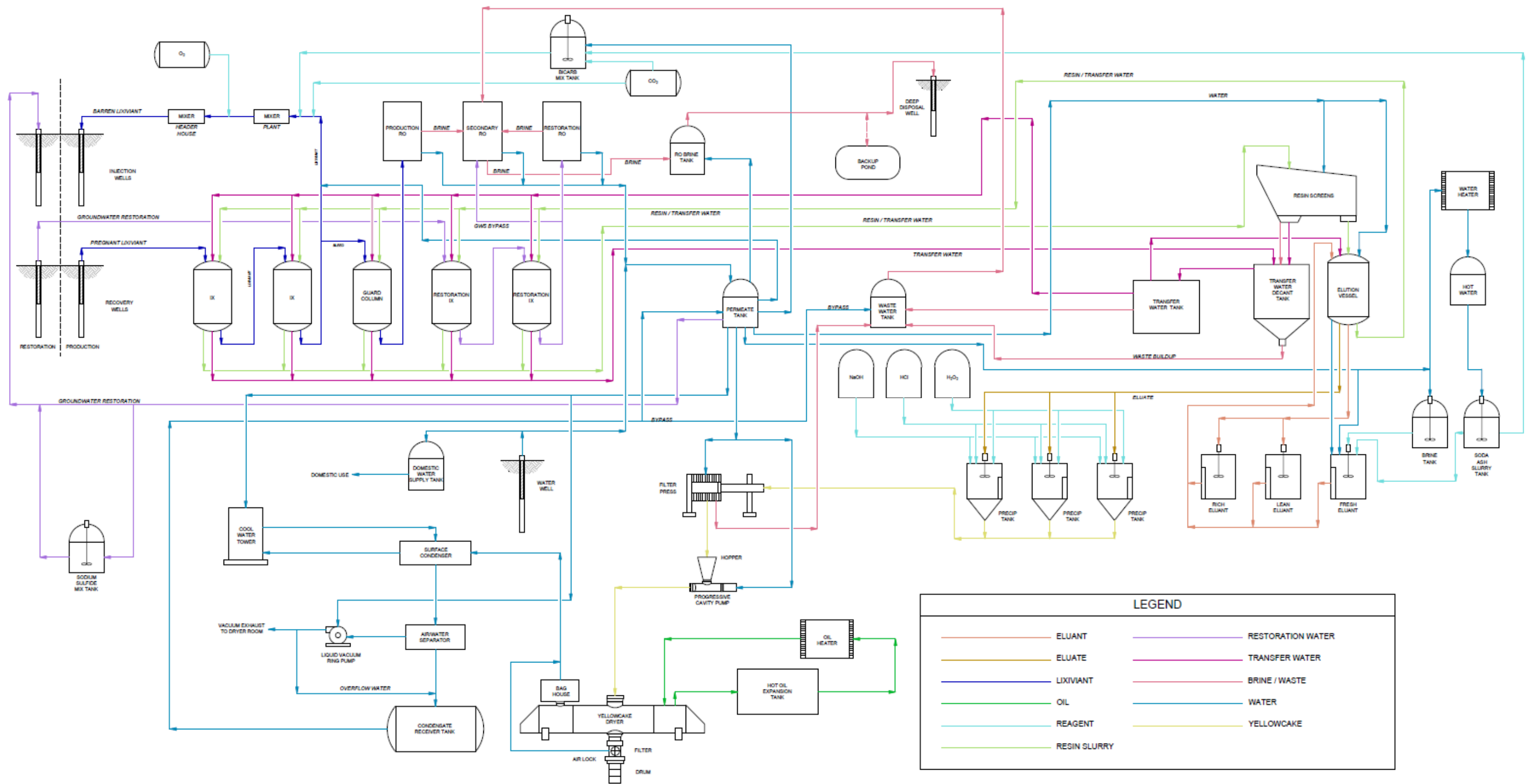
The Project Resource Units will include the following components:

**Table S-2: Project Header House and Well Inventory by Resource Unit**

Item	Resource Units			
	Reno Creek	Bing	Moore	Pine Tree
Header Houses	50	4	18	3
Injection Wells	1,500	120	540	90
Recovery Wells	2,100	168	756	126
Interior Monitoring Wells	100	8	36	6
Exterior Monitoring Wells	250	20	90	6

The CPP will be designed to process up to approximately 1.5 million pounds of dry yellowcake per year through five major solution circuits: the recovery/extraction ion exchange (IX) circuit; the lixiviant make-up circuit; the elution circuit; a yellowcake precipitation circuit; and the dewatering, drying and packaging circuit. The CPP will be designed to process approximately 8000 gallons per minute (gpm) of groundwater extracted from the mineralized zone. The system will recycle and reuse most of the solutions inside each circuit. A bleed will be taken from the overall process to ensure that slightly less water is injected back into the wellfield than was initially recovered to maintain an inward groundwater gradient within each PU. This bleed solution will be treated via reverse osmosis and the brine routed to the DDWs. The yellowcake will be packaged in approved 55 gallon steel drums, and transported to the licensed uranium conversion facility. A simplified process flow diagram is provided in Figure S-3.

Figure S-3: Process Flow Diagram – Central Processing Plant



TREC prepared an estimate of Capital and Operating Costs on the basis of the design data and assumptions described herein. The costs were developed on a first principles basis, including specifications and current vendor quotes for all major pieces of equipment and installation and construction costs.

Table S-3 summarizes the economics of the Project based on the assumptions, costs and revenues as discussed herein.

**Table S-3: Summary of Economics**

ITEM	UNITS	VALUE	\$/Lb U <sub>3</sub> O <sub>8</sub>
<b>Revenue</b>			
U <sub>3</sub> O <sub>8</sub> Price	\$/Lb	\$ 65.00	
Production	kLbs	15,616	
<b>Total Gross Revenue</b>	<b>\$000s</b>	<b>\$ 1,015,056</b>	<b>\$ 65.00</b>
Surface & Mineral Royalties	\$000s	\$ 39,181	\$ 2.51
Ad Valorem + Severance Tax	\$000s	\$ 60,017	\$ 3.84
<b>Total Net Revenue</b>	<b>\$000s</b>	<b>\$ 915,859</b>	<b>\$ 58.65</b>
<b>Operating Costs<sup>1</sup></b>			
Plant & Wellfield Operating Costs	\$000s	\$ 134,109	\$ 8.59
Restoration, D&D and Reclamation Costs	\$000s	\$ 32,821	\$ 2.10
<b>Total Operating Costs</b>	<b>\$000s</b>	<b>\$ 166,930</b>	<b>\$ 10.69</b>
<b>Capital Costs<sup>1</sup></b>			
Pre-Construction Capital	\$000s	\$ 11,604	\$ 0.74
Plant (CPP) Development Costs	\$000s	\$ 55,935	\$ 3.58
Wellfield Development Costs	\$000s	\$ 160,732	\$ 10.29
Indirect Costs	\$000s	\$ 4,136	\$ 0.26
<b>Total Capital Costs</b>	<b>\$000s</b>	<b>\$ 232,407</b>	<b>\$ 14.88</b>
<b>Project Cash Flow</b>	<b>\$000s</b>	<b>\$ 516,522</b>	<b>\$ 33.08</b>
<b>Administrative Support Costs<sup>1</sup></b>			
Administrative Costs		\$ 5,715	\$ 0.37
Financial Assurance		\$ -	\$ -
License / Permit Amendments	\$000s	\$ 4,050	\$ 0.26
<b>Total Administrative Support Costs</b>	<b>\$000s</b>	<b>\$ 9,765</b>	<b>\$ 0.63</b>
<b>Total Cost (including taxes and royalties)</b>	<b>\$000s</b>	<b>\$ 508,299</b>	<b>\$ 32.55</b>
<b>Net Cash Flow (Pre-Tax)</b>	<b>\$000s</b>	<b>\$ 506,757</b>	<b>\$ 32.45</b>
<b>Present Value (8%)</b>	<b>\$000s</b>	<b>\$ 247,246</b>	
<b>IRR</b>		<b>45%</b>	

Notes:

1) All costs include contingency, weighted average of approximately 12%.

AUC has an additional royalty obligation to Strathmore Minerals as a consequence of the purchase of properties incorporated in the Project by Bayswater Uranium. This additional royalty was assigned to AUC and has not been included in the base economic analysis presented in this PFS. The additional royalty provides AUC the option to repurchase the royalty at any time prior to commercial production. The royalty and payment options are discussed in further detail below and in Section 22.4.

Using the estimated capital costs, operating costs and closure costs presented herein, a cash flow statement was developed and is provided in Table S-4. The statement assumes no escalation, no debt, no interest or capital repayment and no depreciation or income tax costs. The sale price for the produced uranium is assumed to be fixed at \$65.00 per pound through the life of the project. This price level reflects the Author's assessment of current industry projections. The revenue for the cash flow estimate was developed using the recoverable resource estimate for the Project of 15.6 million pounds of  $U_3O_8$ .

Table S-5 provides a summary of the estimated development costs compiled by TREC based on the Project preliminary design and quantities and unit costs obtained from various sources. The predicted level of accuracy of the capital cost estimate is +/- 25 percent. The estimated costs for the major items identified in this study have been sourced in the United States.

Pre-construction capital costs provided by AUC to TREC have been included in the capital cost estimate. Pre-construction capital costs include corporate overheads plus final permit/license application costs that are anticipated between the date of this report and initiation of construction.

Contracted construction management services will be used to assist AUC personnel in performing engineering, procurement and construction management (EPCM) for Project facilities construction. Additionally, AUC will employ a wellfield construction crew consisting of 28 persons to construct the wellfields. Costs for construction of PU 1 are included as initial capital costs and are shown in Table S-5. The costs for construction of PUs 2 through 18 are identified as "subsequent capital" in Table S-5.

The current manpower estimates for the project during the peak operating phase assumes 70 plant and wellfield staff. Additionally, construction of the wellfields included as subsequent capital costs, will require the same 28 person crew identified for the initial wellfield construction. Groundwater restoration activities also will be performed by the wellfield construction crew.

Solid wastes generated from the operations will normally consist of spent resin, empty packaging, miscellaneous pipes and fittings, tank sediments, personal protective equipment and domestic refuse. These materials will be classified as contaminated or non-contaminated based on their radiological characteristics. Non-contaminated solid waste will be collected on the site in designated areas and disposed of in the nearest permitted sanitary landfill. Contaminated solid waste consists of solid waste contaminated with radioactive material and that cannot be decontaminated. These materials will be temporarily stored on site and periodically transported for disposal. AUC will establish an agreement for disposal of this waste as 11.e(2) byproduct material in a licensed waste disposal or uranium mill tailings facility. This report assumes that an existing operational disposal facility, a uranium mill tailings facility, located within approximately 150 miles of the Project Site, will be utilized for disposal of 11.e(2) byproduct material.

TREC developed the operating cost estimates by evaluating each process unit operation and associated operating services (power, water, air, waste disposal), infrastructure (offices, change rooms, shop), salary plus burden and environmental control (heat, air conditioning, monitoring). The operating cost estimate is based on AUC's life of mine schedule and associated wellfield deliverables, process flow sheets, process design, materials balance and project manpower schedule. The annual operating and closure cost summary is provided in Table S-6. The predicted level of accuracy of the operating cost estimate is +/- 25 percent.

This PFS assumes the project start date is January 1, 2013 (Year -2). The cash flow includes pre-construction costs starting in Year -2 (2013) and construction starting in Year 1 (2015). The start of production is assumed to be Quarter 1, Year 2 (2016), pending regulatory approvals. A summary schedule for the project is provided on Figure S-5. The schedule shows the proposed plan for construction, production, groundwater restoration, and decommissioning of each PU. However, the plan is subject to change due to extraction schedules, variations with production area recoveries, production plant issues, economic conditions, etc.

The Net Present Value (NPV) calculations make the simplifying assumption that cash flows occur in the middle of the periods. The NPV is calculated from the discounted cash flow model and is based on the capital, operating and closure cost estimates and a constant uranium price of \$65.00 per pound for AUC's anticipated life of mine schedule.

Total initial capital costs are estimated at \$75.5 million, including initial capital costs for the CPP of \$43.8 million, the capital cost for PU1 of \$18.9 million, and indirect costs of \$12.7 million. The estimated payback is in Quarter 2 of Year 4 (2018) with the commencement of construction in Quarter 1 of Year 1 (2015) and generates net earnings before income tax over the life of the project of **US\$506.8 million**. It is estimated that the project has an internal rate of return (**IRR of 45 percent**) and a NPV of **US\$247.2 million** applying an eight percent discount rate. The cost per pound is \$32.55. See Tables S-4, S-5, S-6 and S-7.

Bayswater Uranium Corporation (Bayswater) and its subsidiary NCA Nuclear Inc. (NCA) agreed to pay Strathmore Minerals Corporation (Strathmore) a five percent gross royalty on all mineral products produced from a defined set of mineral holdings (the Property) which comprise a portion of the Reno Creek NI 43-101 compliant measured and indicated resources. The royalty was assigned to and assumed by AUC at the closing of the acquisition from Strathmore. Pursuant to the assignment, AUC retains the right to purchase each one percent of the royalty for \$2 million at any time prior to commercial production, up to 100 percent of the royalty for a total of \$10 million. With Bayswater consent, up to one half of the royalty buyout can be paid in Bayswater shares.

The cash flow and economic indicators presented in Tables S-3, S-4 and as discussed elsewhere in the PFS are calculated at the project level and do not include the royalty obligation of AUC to Strathmore. As referred to herein, the "project level" is defined as the costs, revenues and resulting economic indicators associated with the Project and does not include the impact of the Strathmore royalty. The impact on net revenue, net cash flow, NPV and IRR at the AUC level of royalty buy-out versus no buy-out are summarized in Table S-8. The royalty buyout using half cash and half shares has the smallest impact on project cash flow and Net Present Value, reducing the NPV to \$243.3 million. The greatest effect on project cash flow occurs if the royalty is paid out over time, reducing the project NPV to \$225.1 million. AUC has the right at

any time prior to commercial production to purchase the royalty as provided in the royalty agreement.

**Table S-4: Cash Flow Statement (\$US 000s)**

Item	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Total	\$ per Pound
Production (000 lbs) <sup>1</sup>	0	0	0	739	1,482	1,564	1,570	1,577	1,579	1,578	1,577	1,555	1,371	759	265	1	0	0	15,616	
Gross Sales <sup>2</sup>	\$0	\$0	\$0	\$48,043	\$96,314	\$101,658	\$102,031	\$102,489	\$102,667	\$102,591	\$102,481	\$101,105	\$89,085	\$49,326	\$17,209	\$55	\$0	\$0	\$1,015,056	
Less: Surface & Mineral Royalty of Approx. 3.9% <sup>3</sup>	\$0	\$0	\$0	\$1,854	\$3,718	\$3,924	\$3,938	\$3,956	\$3,963	\$3,960	\$3,956	\$3,903	\$3,439	\$1,904	\$664	\$2	\$0	\$0	\$39,181	\$2.51
Less: Ad Valorem + Severance Tax <sup>4</sup>	\$0	\$0	\$0	\$2,842	\$5,698	\$6,014	\$6,036	\$6,063	\$6,074	\$6,069	\$6,063	\$5,981	\$5,270	\$2,918	\$987	\$3	\$0	\$0	\$60,017	\$3.84
<b>Net Sales</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$43,347</b>	<b>\$86,898</b>	<b>\$91,720</b>	<b>\$92,057</b>	<b>\$92,470</b>	<b>\$92,631</b>	<b>\$92,562</b>	<b>\$92,463</b>	<b>\$91,222</b>	<b>\$80,377</b>	<b>\$44,504</b>	<b>\$15,558</b>	<b>\$50</b>	<b>\$0</b>	<b>\$0</b>	<b>\$915,859</b>	
<b>OPERATING COSTS</b>																				
Plant & Wellfield Operating Costs	\$0	\$157	\$1,177	\$10,250	\$11,086	\$11,096	\$11,097	\$11,098	\$11,098	\$11,098	\$11,098	\$11,095	\$11,071	\$10,983	\$5,793	\$3,281	\$2,333	\$299	\$134,109	\$8.59
Restoration, D&D & Reclamation Costs	\$0	\$0	\$0	\$0	\$0	\$492	\$984	\$1,879	\$2,774	\$1,879	\$2,283	\$3,266	\$3,266	\$2,774	\$3,178	\$1,791	\$6,932	\$1,323	\$32,821	\$2.10
<i>Subtotal (Operating Cost)</i>	<i>\$0</i>	<i>\$157</i>	<i>\$1,177</i>	<i>\$10,250</i>	<i>\$11,086</i>	<i>\$11,588</i>	<i>\$12,081</i>	<i>\$12,977</i>	<i>\$13,873</i>	<i>\$12,977</i>	<i>\$13,380</i>	<i>\$14,361</i>	<i>\$14,338</i>	<i>\$13,757</i>	<i>\$8,971</i>	<i>\$5,071</i>	<i>\$9,264</i>	<i>\$1,621</i>	<i>\$166,930</i>	<i>\$10.69</i>
<b>CAPITAL COSTS</b>																				
Pre-Construction Capital	\$5,823	\$5,781	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,604	\$0.74
Plant (CPP) Development Costs	\$0	\$8,935	\$35,006	\$3,462	\$8,532	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$55,935	\$3.58
Wellfield Development Costs	\$0	\$0	\$9,453	\$18,276	\$15,347	\$8,823	\$15,347	\$15,347	\$8,823	\$21,871	\$15,347	\$21,871	\$2,298	\$2,298	\$2,298	\$2,298	\$919	\$115	\$160,732	\$10.29
Indirect Costs	\$0	\$0	\$4,136	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,136	\$0.26
<i>Subtotal (Capital Cost)</i>	<i>\$5,823</i>	<i>\$14,717</i>	<i>\$48,594</i>	<i>\$21,738</i>	<i>\$23,879</i>	<i>\$8,823</i>	<i>\$15,347</i>	<i>\$15,347</i>	<i>\$8,823</i>	<i>\$21,871</i>	<i>\$15,347</i>	<i>\$21,871</i>	<i>\$2,298</i>	<i>\$2,298</i>	<i>\$2,298</i>	<i>\$2,298</i>	<i>\$919</i>	<i>\$115</i>	<i>\$232,407</i>	<i>\$14.88</i>
<b>Project Cash Flow</b>	<b>-\$5,823</b>	<b>-\$14,873</b>	<b>-\$49,771</b>	<b>\$11,359</b>	<b>\$51,934</b>	<b>\$71,309</b>	<b>\$64,629</b>	<b>\$64,146</b>	<b>\$69,936</b>	<b>\$57,714</b>	<b>\$63,735</b>	<b>\$54,989</b>	<b>\$63,741</b>	<b>\$28,449</b>	<b>\$4,288</b>	<b>-\$7,320</b>	<b>-\$10,184</b>	<b>-\$1,736</b>		
<b>ADMINISTRATIVE SUPPORT COSTS</b>																				
Administrative Costs	\$0	\$60	\$247	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$321	\$247	\$99	\$5,715	\$0.37
Financial Assurance	\$0	\$0	\$8,600	\$3,496	\$1,249	\$2,747	\$2,747	\$1,498	\$2,747	-\$1,498	\$2,996	\$0	-\$2,747	-\$2,996	-\$2,747	-\$3,995	-\$6,672	-\$5,424	\$0	\$0.00
License / Permit Amendments	\$0	\$0	\$350	\$350	\$350	\$1,000	\$1,000	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,050	\$0.26
<i>Subtotal (Administrative Support Cost)</i>	<i>\$0</i>	<i>\$60</i>	<i>\$9,197</i>	<i>\$4,241</i>	<i>\$1,993</i>	<i>\$4,142</i>	<i>\$4,142</i>	<i>\$2,893</i>	<i>\$3,142</i>	<i>-\$1,103</i>	<i>\$3,391</i>	<i>\$395</i>	<i>-\$2,352</i>	<i>-\$2,601</i>	<i>-\$2,352</i>	<i>-\$3,674</i>	<i>-\$6,425</i>	<i>-\$5,325</i>	<i>\$9,765</i>	<i>\$0.63</i>
<b>NET CASH FLOW (PRE-TAX)</b>	<b>-\$5,823</b>	<b>-\$14,933</b>	<b>-\$58,969</b>	<b>\$7,118</b>	<b>\$49,941</b>	<b>\$67,168</b>	<b>\$60,488</b>	<b>\$61,253</b>	<b>\$66,794</b>	<b>\$58,817</b>	<b>\$60,344</b>	<b>\$54,594</b>	<b>\$66,093</b>	<b>\$31,050</b>	<b>\$6,640</b>	<b>-\$3,646</b>	<b>-\$3,759</b>	<b>\$3,588</b>		
Opening Cash Balance	\$0	-\$5,823	-\$20,757	-\$79,725	-\$72,607	-\$22,667	\$44,501	\$104,989	\$166,242	\$233,036	\$291,853	\$352,197	\$406,791	\$472,883	\$503,934	\$510,574	\$506,928	\$503,169		
+ Net Cash Flow	-\$5,823	-\$14,933	-\$58,969	\$7,118	\$49,941	\$67,168	\$60,488	\$61,253	\$66,794	\$58,817	\$60,344	\$54,594	\$66,093	\$31,050	\$6,640	-\$3,646	-\$3,759	\$3,588		
<b>CLOSING CASH BALANCE</b>	<b>-\$5,823</b>	<b>-\$20,757</b>	<b>-\$79,725</b>	<b>-\$72,607</b>	<b>-\$22,667</b>	<b>\$44,501</b>	<b>\$104,989</b>	<b>\$166,242</b>	<b>\$233,036</b>	<b>\$291,853</b>	<b>\$352,197</b>	<b>\$406,791</b>	<b>\$472,883</b>	<b>\$503,934</b>	<b>\$510,574</b>	<b>\$506,928</b>	<b>\$503,169</b>	<b>\$506,757</b>		

Notes:

- 1) Production schedule estimated by AUC LLC.
- 2) Uranium price is assumed to remain at \$65 per pound U<sub>3</sub>O<sub>8</sub> for the life of the project.
- 3) Surface and mineral royalties are provided by AUC LLC and based on a weighted average over the area of the project. See Section 22.4 for a summary and discussion of the Strathmore royalty payment options.
- 4) Ad Valorem is calculated as 5.98% of adjusted taxable value and Severance tax is calculated as 4% of adjusted taxable value. See Section 22.3 of the PFS for a detailed explanation of Ad Valorem and Severance taxes.
- 5) The sum of the Indirect Costs does not match the Development Cost Summary, Table S-5 under "Indirect Capital" because Financial Assurance costs in Table S-5 are presented in this Cash Flow Statement under the category "Financial Assurance" in Year 1.

Total cost per pound: \$32.55

**Total Cost: \$ 508,299**

The IRR and NPV analyses are based on Years -2 to Year 16.

**IRR = 45%** assuming no escalation, no debt, no debt interest, no corporate income tax or capital repayment

NPV	
Discount Rate	(\$US 000s)
6%	\$294,559
8%	\$247,246
10%	\$207,932

**Table S-5: Development Cost Summary**

Item Description <sup>1</sup>	Initial Capital <sup>2</sup> CPP & PU1 (\$US 000s)	Subsequent <sup>3</sup> Capital PUs 2-18 (\$US 000s)	Total Capital Costs (\$US 000s)
<b>DIRECT COSTS<sup>4</sup></b>			
<b>Plant (CPP) Development Costs</b>			
IX Circuit	\$ 6,131	\$ -	\$ 6,131
Elution Circuit	\$ 879	\$ -	\$ 879
Drying & Precipitation Circuit	\$ 4,204	\$ -	\$ 4,204
Groundwater Restoration Circuit <sup>5</sup>	\$ 893	\$ 4,623	\$ 5,516
Building & Infrastructure <sup>6</sup>	\$ 15,306	\$ -	\$ 15,306
Installation Costs	\$ 4,335	\$ -	\$ 4,335
Deep Disposal Wells <sup>7</sup>	\$ 6,360	\$ 6,360	\$ 12,720
<i>Subtotal</i>	\$ 38,108	\$ 10,983	\$ 49,091
Contingency (Average of approximately 14%)	\$ 5,708	\$ 1,136	\$ 6,844
<b><i>Plant Development Cost Subtotal</i></b>	<b>\$ 43,816</b>	<b>\$ 12,119</b>	<b>\$ 55,935</b>
<b>Wellfield Development Costs</b>			
Wellfield Cost <sup>8</sup>	\$ 16,736	\$ 98,186	\$ 114,922
Contingency (Average of approximately 13%)	\$ 2,170	\$ 12,729	\$ 14,899
<b><i>Wellfield Development Cost Subtotal</i></b>	<b>\$ 18,906</b>	<b>\$ 110,915</b>	<b>\$ 129,821</b>
<b>INDIRECT COSTS</b>			
Engineering, Procurement & Construction Management	\$ 1,060	\$ -	\$ 1,060
Labor <sup>9</sup>	\$ 2,879	\$ -	\$ 2,879
Financial Assurance <sup>10</sup>	\$ 6,880	\$ -	\$ 6,880
<i>Subtotal</i>	\$ 10,819	\$ -	\$ 10,819
Contingency (Average of approximately 18%)	\$ 1,917	\$ -	\$ 1,917
<b><i>Indirect Cost Subtotal</i></b>	<b>\$ 12,735</b>	<b>\$ -</b>	<b>\$ 12,735</b>
<b>TOTAL DEVELOPMENT COSTS</b>	<b>\$ 75,457</b>	<b>\$ 123,034</b>	<b>\$ 198,491</b>

**Notes:**

- 1) Individual line item costs are shown without contingency. Contingency must be considered as part of the total cost.
- 2) Costs associated with CPP incurred in Years -1 and 1, and costs associated with PU1 incurred in Years 1 and 2.
- 3) Subsequent development costs will be incurred following startup.
- 4) Includes 6% sales tax on applicable items.
- 5) Cost for some restoration items, including secondary RO, will be incurred in Years 2 and 3.
- 6) Includes cost of land acquisition for the CPP site.
- 7) Four deep disposal wells; two in Year 1, one in Year 2 and one in Year 3.
- 8) Initial and Subsequent Wellfield CAPEX are referenced from the Wellfield Development Costs Summary, Table S-7, and are shown on this table, Table S-5, without contingency. Initial Capital costs include Production Unit 1 and miscellaneous wellfield costs. AUC labor is included in Wellfield Completion / Restoration Labor shown in the Wellfield Development Cost Summary, Table S-7 and is not included in this table.
- 9) Labor costs incurred prior to commencement of CPP & PU1 production.
- 10) The costs for Bonding are incurred before the start of production, and are also shown with contingency in Year 1 of the Annual Operating Cost Summary, Table S-6. On the Cash Flow Statement, Table S-4, they are included under Financial Assurance.



**Table S-6: Annual Operating Cost Summary**

LIFE OF MINE OPERATING COSTS	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Total	Average Contingency	\$ per Pound
Plant Operating Labor <sup>1</sup>	\$0	\$0	\$0	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$686,438	\$480,506	\$343,219	\$0	\$16,611,788	5%	\$1.06
Plant Operating Expenses	\$0	\$0	\$375,620	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$2,682,997	\$1,878,098	\$1,341,499	\$0	\$65,304,154	10%	\$4.18
Wellfield Operating Labor <sup>1</sup>	\$0	\$0	\$0	\$576,844	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$766,561	\$310,214	\$0	\$0	\$0	\$8,575,744	5%	\$0.55
Wellfield Operating Expenses	\$0	\$0	\$153,398	\$1,643,546	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,184,090	\$883,863	\$0	\$0	\$0	\$24,587,449	10%	\$1.57
Project General & Administrative <sup>2</sup>	\$0	\$156,513	\$647,969	\$1,290,857	\$1,386,226	\$1,396,784	\$1,397,522	\$1,398,427	\$1,398,778	\$1,398,628	\$1,398,410	\$1,395,692	\$1,371,944	\$1,293,392	\$1,229,937	\$922,062	\$647,969	\$298,984	\$19,030,093	7%	\$1.22
<b>Plant &amp; Wellfield Operating Costs<sup>3</sup></b>	<b>\$0</b>	<b>\$156,513</b>	<b>\$1,176,986</b>	<b>\$10,250,116</b>	<b>\$11,085,615</b>	<b>\$11,096,173</b>	<b>\$11,096,911</b>	<b>\$11,097,816</b>	<b>\$11,098,167</b>	<b>\$11,098,017</b>	<b>\$11,097,800</b>	<b>\$11,095,082</b>	<b>\$11,071,334</b>	<b>\$10,982,913</b>	<b>\$5,793,448</b>	<b>\$3,280,666</b>	<b>\$2,332,686</b>	<b>\$298,984</b>	<b>\$134,109,227</b>		<b>\$8.59</b>
Wellfield Restoration <sup>4</sup>	\$0	\$0	\$0	\$0	\$0	\$491,848	\$983,696	\$1,475,543	\$1,967,391	\$1,475,543	\$1,475,543	\$2,459,239	\$2,459,239	\$1,967,391	\$1,967,391	\$983,696	\$0	\$0	\$17,706,520	25%	\$1.13
Decontamination / Decommissioning / Reclamation <sup>5</sup>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$403,534	\$807,068	\$403,534	\$807,068	\$807,068	\$807,068	\$807,068	\$1,210,602	\$807,068	\$6,931,714	\$1,322,513	\$15,114,306	25%	\$0.97
<b>Restoration, D&amp;D and Reclamation Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$491,848</b>	<b>\$983,696</b>	<b>\$1,879,077</b>	<b>\$2,774,459</b>	<b>\$1,879,077</b>	<b>\$2,282,611</b>	<b>\$3,266,307</b>	<b>\$3,266,307</b>	<b>\$2,774,459</b>	<b>\$3,177,993</b>	<b>\$1,790,764</b>	<b>\$6,931,714</b>	<b>\$1,322,513</b>	<b>\$32,820,826</b>		<b>\$2.10</b>
<b>Total Operating Costs</b>	<b>\$0</b>	<b>\$156,513</b>	<b>\$1,176,986</b>	<b>\$10,250,116</b>	<b>\$11,085,615</b>	<b>\$11,588,021</b>	<b>\$12,080,607</b>	<b>\$12,976,893</b>	<b>\$13,872,626</b>	<b>\$12,977,095</b>	<b>\$13,380,411</b>	<b>\$14,361,388</b>	<b>\$14,337,641</b>	<b>\$13,757,372</b>	<b>\$8,971,441</b>	<b>\$5,071,430</b>	<b>\$9,264,400</b>	<b>\$1,621,498</b>	<b>\$166,930,053</b>	<b>12%</b>	<b>\$10.69</b>
LIFE OF MINE ADMINISTRATIVE SUPPORT COSTS	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Total	Average Contingency	\$ per Pound
Administrative <sup>6</sup>	\$0	\$60,394	\$247,475	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$321,213	\$247,475	\$98,738	\$5,714,694	0%	\$0.37
Financial Assurance <sup>7</sup>	\$0	\$0	\$8,599,798	\$3,495,819	\$1,248,507	\$2,746,715	\$2,746,715	\$1,498,208	\$2,746,715	-\$1,498,208	\$2,996,416	\$0	-\$2,746,715	-\$2,996,416	-\$2,746,715	-\$3,995,221	-\$6,672,061	-\$5,423,555	\$0	25%	\$0.00
License / Permit Amendments	\$0	\$0	\$350,000	\$350,000	\$350,000	\$1,000,000	\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,050,000	0%	\$0.26
<b>Administrative Support Costs</b>	<b>\$0</b>	<b>\$60,394</b>	<b>\$9,197,273</b>	<b>\$4,240,769</b>	<b>\$1,993,457</b>	<b>\$4,141,665</b>	<b>\$4,141,665</b>	<b>\$2,893,158</b>	<b>\$3,141,665</b>	<b>-\$1,103,258</b>	<b>\$3,391,366</b>	<b>\$394,950</b>	<b>-\$2,351,765</b>	<b>-\$2,601,466</b>	<b>-\$2,351,765</b>	<b>-\$3,674,009</b>	<b>-\$6,424,586</b>	<b>-\$5,324,817</b>	<b>\$9,764,694</b>	<b>0%</b>	<b>\$0.63</b>

Notes:

- 1) Labor costs incurred before the start of production are included in the Development Cost Summary, Table S-5.
- 2) Includes site administrative labor, product shipment, and property tax.
- 3) Years 14, 15 and 16 represent operating expenses, such as power and administrative labor, which are associated with restoring, decommissioning and reclaiming the wellfields.
- 4) Includes groundwater restoration costs. Labor costs are included in Wellfield Completion / Restoration Labor on the Wellfield Development Costs Summary, Table S-7.
- 5) Includes plant equipment removal and disposal, building demolition and disposal, header house demolition and disposal, soil removal and disposal, well abandonment, wellfield equipment removal and disposal, topsoil replacement, revegetation and miscellaneous reclamation costs.
- 6) Administrative costs provided by AUC LLC and includes legal fees, insurance, rent, office supplies, etc.
- 7) Assumes cash bond posted by AUC LLC with 0% interest accumulated on cash surety. Negative values represent positive cash flow from bond release.

**Table S-7: Wellfield Development Cost Summary**

LIFE OF MINE WELLFIELD DEVELOPMENT COSTS	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Total	Average Contingency	\$ per Pound
Wellfield Completion / Restoration Labor <sup>1</sup>	\$0	\$0	\$0	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$919,275	\$114,909	\$30,910,622	5%	\$1.98
Initial Wellfield Capital	\$0	\$0	\$9,452,981	\$9,452,981	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,905,962	12%	\$1.21
Subsequent Wellfield Capital	\$0	\$0	\$0	\$6,524,423	\$13,048,846	\$6,524,423	\$13,048,846	\$13,048,846	\$6,524,423	\$19,573,269	\$13,048,846	\$19,573,269	\$0	\$0	\$0	\$0	\$0	\$0	\$110,915,194	12%	\$7.10
<b>Total Wellfield Development Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,452,981</b>	<b>\$18,275,592</b>	<b>\$15,347,034</b>	<b>\$8,822,611</b>	<b>\$15,347,034</b>	<b>\$15,347,034</b>	<b>\$8,822,611</b>	<b>\$21,871,457</b>	<b>\$15,347,034</b>	<b>\$21,871,457</b>	<b>\$2,298,188</b>	<b>\$2,298,188</b>	<b>\$2,298,188</b>	<b>\$2,298,188</b>	<b>\$919,275</b>	<b>\$114,909</b>	<b>\$160,731,778</b>	<b>11%</b>	<b>\$10.29</b>

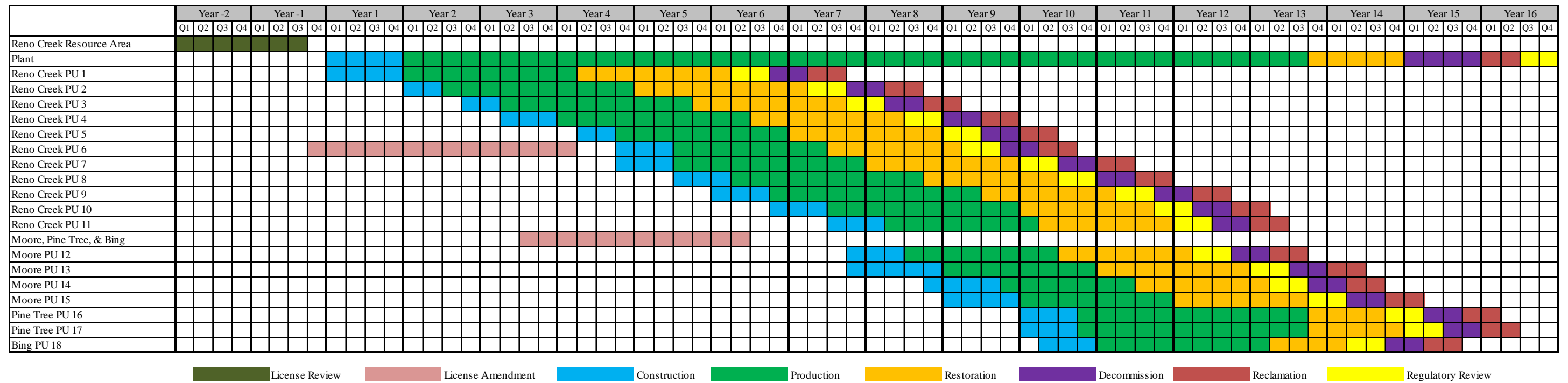
Notes:

1) Includes all labor associated with constructing, restoring, decommissioning and reclaiming the wellfields and is included in the Wellfield Development Cost line in the Cash Flow Statement, Table S-4. Labor costs incurred in Year 1 are included in the Development Cost Summary, Table S-5.

**Table S-8: Comparison of Economics between Project Base Case and Various Strathmore Royalty Payment Options (\$US 000s)**

ITEM	Project Level (Excludes Strathmore Royalty, see Table 22-1)	Including Strathmore Royalty			
		Strathmore Royalty Buyout Options		Strathmore Royalty Paid Over Life of Production	
		Assuming Purchase of 50% Royalty for Cash and 50% by Bayswater for Shares	Purchase 100% of Royalty for Cash		
<b>Gross Revenue</b>	\$ 1,015,056	\$ 1,015,056	\$ 1,015,056	\$ 1,015,056	
Less Surface & Mineral Royalties	\$ 39,181	\$ 39,181	\$ 39,181	\$ 39,181	
Less Ad Valorem & Severance Taxes	\$ 60,017	\$ 60,017	\$ 60,017	\$ 60,017	
Less Strathmore Royalty	\$ -	\$ -	\$ -	\$ 40,223	
<b>Net Revenues</b>	\$ 915,859	\$ 915,859	\$ 915,859	\$ 875,636	
<b>Operating Costs</b>					
Plant & Wellfield Operating Costs	\$ 134,109	\$ 134,109	\$ 134,109	\$ 134,109	
Restoration, D&D, & Reclamation Costs	\$ 32,821	\$ 32,821	\$ 32,821	\$ 32,821	
<b>Total Operating Costs</b>	\$ 166,930	\$ 166,930	\$ 166,930	\$ 166,930	
<b>Capital Costs</b>					
Pre-Construction Costs	\$ 11,604	\$ 11,604	\$ 11,604	\$ 11,604	
Cash Buyout of Strathmore Royalty	\$ -	\$ 5,000	\$ 10,000	\$ -	
Plant Development Costs	\$ 55,935	\$ 55,935	\$ 55,935	\$ 55,935	
Wellfield Development Costs	\$ 160,732	\$ 160,732	\$ 160,732	\$ 160,732	
Indirect Costs	\$ 4,136	\$ 4,136	\$ 4,136	\$ 4,136	
<b>Total Capital Costs</b>	\$ 232,407	\$ 237,407	\$ 242,407	\$ 232,407	
<b>Administrative Costs</b>	\$ 9,765	\$ 9,765	\$ 9,765	\$ 9,765	
<b>Total Costs</b>	\$ 508,299	\$ 513,300	\$ 518,300	\$ 548,523	
<b>Net Cash Flow (Pre-Tax)</b>	\$ 506,757	\$ 501,756	\$ 496,756	\$ 466,533	
<b>Net Present Value (8%)</b>	\$ 247,246	\$ 243,276	\$ 239,307	\$ 225,086	
<b>IRR</b>	45%	44%	43%	42%	

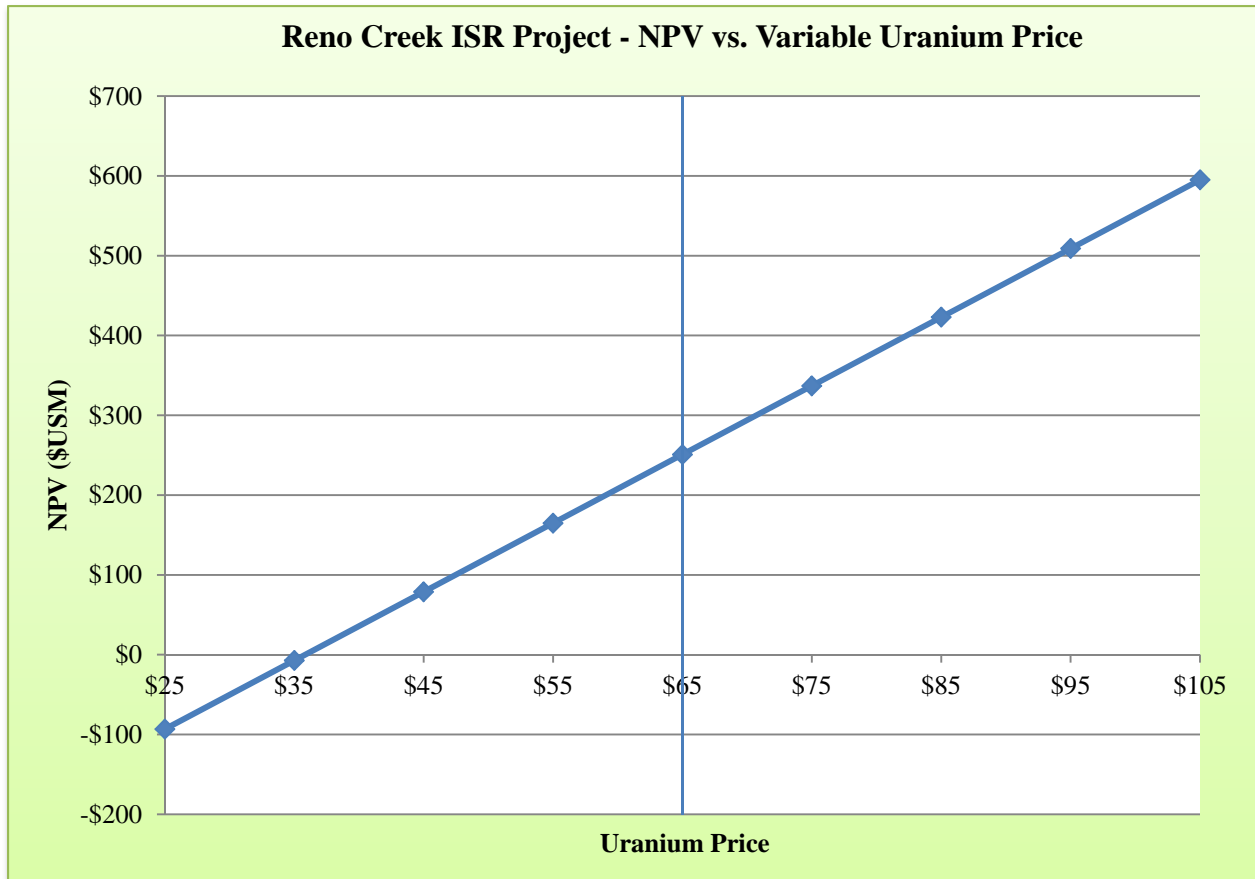
Figure S-4: Life of Mine Schedule



Note: Each PU will contain multiple header houses. Production may begin in one header house while another is still under construction. Thus there will be overlap of construction and production activities in some PUs that is not depicted above.

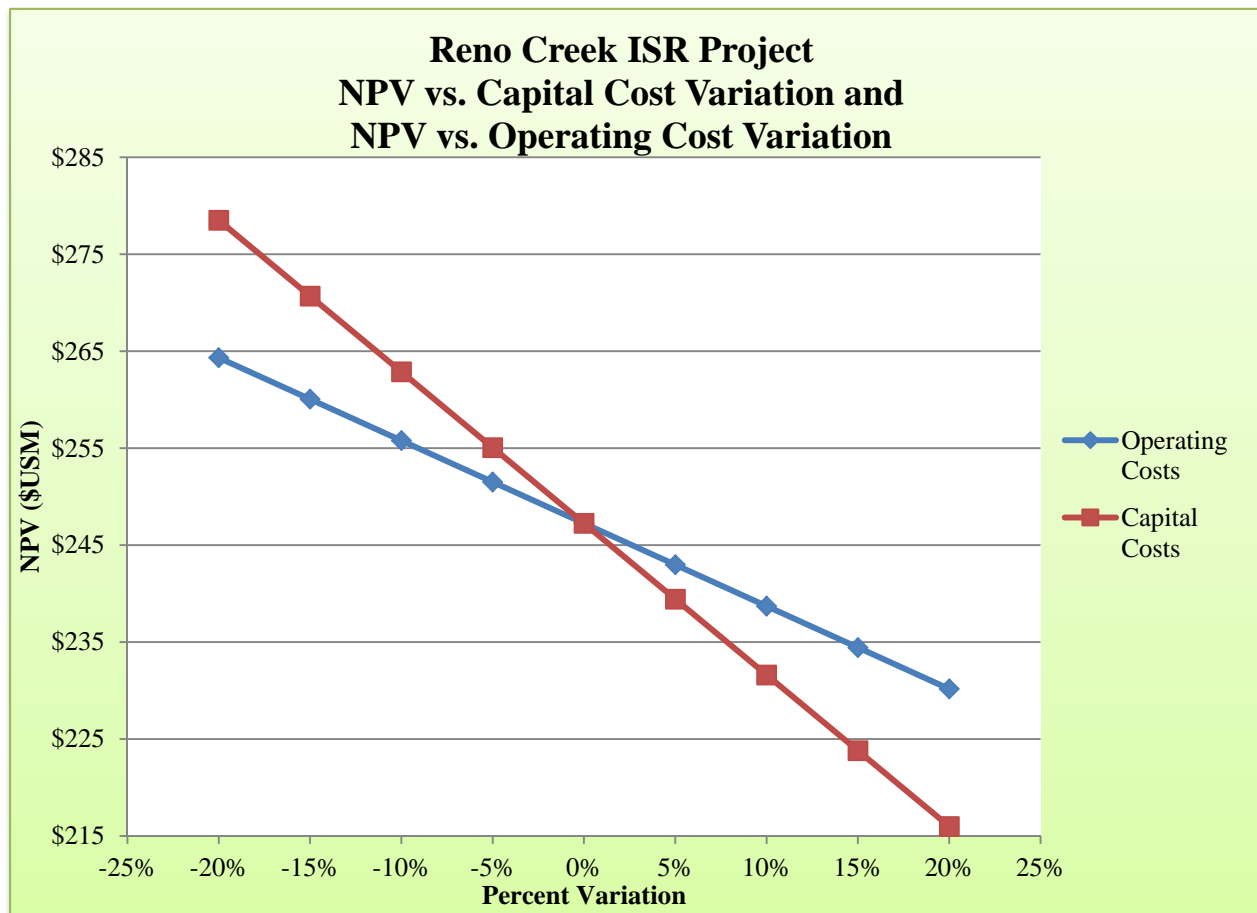
The Project is sensitive to changes in the price of uranium as shown in the figure below (NPV vs Variable Uranium Price). A US\$1 change in the uranium price results in a US\$8.6 million dollar change to the NPV at a discount rate of eight percent and changes the IRR by approximately 1%.

**Figure S-5: NPV vs Variable Uranium Price**



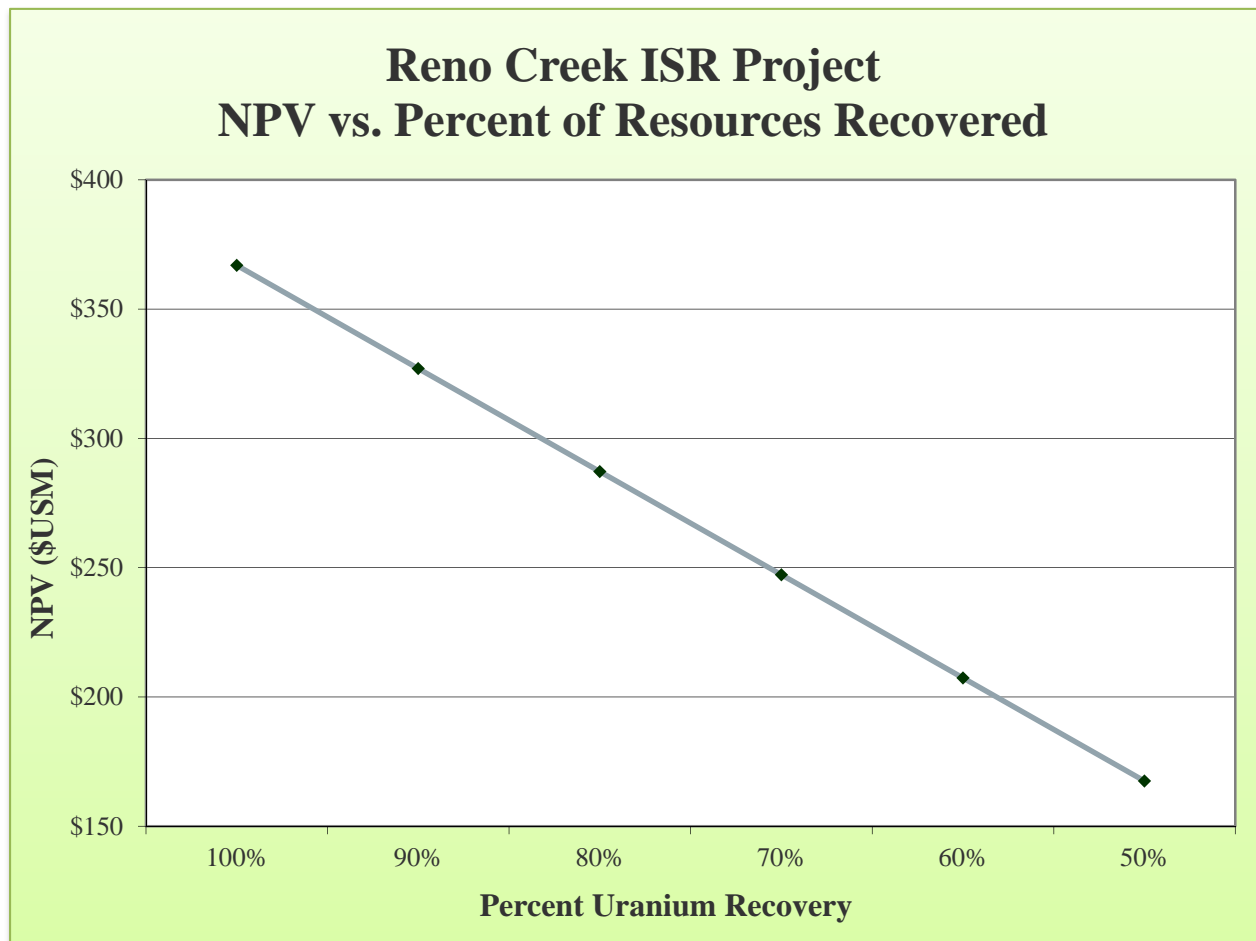
The Project is slightly sensitive to changes in either capital or operating costs as shown in the figure below (NPV vs Capital Cost Variation and NPV vs Operating Cost Variation). A five percent variation in operating costs results in a US\$4.3 million variation in NPV and a five percent variation in capital costs results in a US\$7.8 million variation to the NPV. This analysis is based on an eight percent discount rate and a \$65/lb uranium price.

**Figure S-6: NPV vs. Capital Cost Variation and NPV vs. Operating Cost**



The estimated production is based on 71.4 percent recovery of in place mineral resources and includes 70 percent mining recovery and 1.4 percent recovery during restoration for a total combined recovery factor of approximately 71.4 percent. However, there is no assurance that recovery at such a level will be achieved. The figure below illustrates the sensitivity of NPV to uranium recovery. As illustrated, the NPV changes approximately \$39.9 million per 10 percent change in Uranium recovery based on an eight percent discount rate.

**Figure S-7: NPV vs. Percent of Resources Recovered**



The estimated financial results are based on the estimated capital, operating and closure costs and assumptions presented in this PFS. Additionally, it is assumed that uranium recovery is consistent with AUC’s and TREC’s production model.

AUC’s facility will be permitted to produce 2.0 mlbs per year of yellowcake and operate at up to 11,000 gpm of lixiviant. This PFS assumes a maximum production of slightly over 1.5 mlbs per year at an average flow rate of 8,000 gpm. Thus, additional uranium processing of product through the Project CPP is possible and could further improve the economics of the Project presented in this PFS by expanded production or tolling revenues.

Other ISR current and historic projects in the Powder River Basin are either no longer producing or are in various stages of development or permitting, thus indicating that this region of Wyoming is a proven Uranium mining district. Current activities in or near the Powder River Basin include the operating Uranium One Willow Creek facility, the operating Cameco Smith Ranch-Highland facilities, Cameco’s North Butte project which is permitted for commercial ISR operation and is in construction, the Uranerz Energy Corporation, Nichols Ranch Project, which is currently constructing a satellite plant in the Pumpkin Buttes area and the Uranium One Moore Ranch Project which has been permitted but construction has not begun. In addition, Strata Energy’s Ross Project, at the northeastern extent of the Basin, is in permitting.

## Conclusions and Recommendations

The Author has assumed that AUC's operations at the Project will be conducted in conformance with applicable laws, regulations and requirements of the various federal and state agencies. It is also assumed that organization and management controls will be established to ensure compliance with applicable regulations and implement AUC's policy for providing a safe working environment including the philosophy of maintaining radiation exposures as low as reasonably achievable (ALARA).

The Author finds that the Project is technically and economically viable based on the assumptions contained herein. There is no certainty that the mineral recovery or the economics presented in this PFS will be realized. In order to realize the full economic benefits described in this PFS, the following activities are required, at a minimum:

- Upon receipt of its permits and licenses for the Reno Creek Resource Units, initiate baseline studies for license/permit license amendments to allow development in the Moore, Bing and Pine Tree Resource Units and outside the current Reno Creek Permit area. This recommendation would result in cost to AUC of approximately \$4 million which is included in this PFS.
- Pursue and execute an 11e.(2) Byproduct/Waste Disposal Agreement (with licensed disposal operator) in a timeframe prior to operations. This recommendation would result in little or no costs outside AUC labor.
- Further evaluate capital/operating cost optimization and review regional consolidation of other ISR uranium projects that would benefit from the centrally located processing plant. These costs are estimated to be approximately \$250,000.
- The Moore, Pine Tree, and Bing Resource Units are not fully explored. All three areas exhibit substantial areas both laterally and along strike where additional exploration and development drilling is recommended.
- Per the previous recommendation, the Author further recommends continued development drilling and hydrogeological evaluations to expand resources within the Project boundary that may lead to fully confirming/defining additional resources for the Project and adjoining properties. This recommendation would result in costs to AUC in the range of \$5 to \$10 million.
- Finalize project facility designs including identification of long lead procurement items and cost-benefit/optimization evaluations of current design. This recommendation would result in costs to AUC in the range of \$1 million to \$2 million and is included in this PFS.
- Evaluate potential waste disposal alternatives to deep disposal wells. This recommendation would result in little or no costs outside AUC labor.



## 2.0 Introduction

### 2.1 Report Preparation

TREC, Inc. (TREC) was retained by AUC LLC (AUC), to prepare this independent Preliminary Feasibility Study (PFS) for the Reno Creek ISR Project (Project) to be located in Campbell County in northeast Wyoming, USA (see Figure 1). This PFS has been prepared for AUC in accordance with the guidelines set forth under National Instrument (NI) 43-101 and NI 43-101F1 for the submission of technical reports on mining properties.

AUC is the owner and operator of the Reno Creek Project. AUC is owned by Pacific Road Resource Funds (87 percent) and Bayswater Uranium (13 percent). The Project was acquired from Strathmore Resources in April of 2010.

### 2.2 Terms of Reference

Units of measurement unless otherwise indicated are feet (ft), miles, acres, pounds avoirdupois (lbs.), and short tons (2,000 lbs.). Uranium production is expressed as pounds  $U_3O_8$ , the standard market unit. Grades reported for historical resources and the mineral resources reported and used herein are percent  $eU_3O_8$  (equivalent  $U_3O_8$  by calibrated geophysical logging unit). ISR refers to in situ recovery, sometimes also termed ISL or in situ leach. Unless otherwise indicated, all references to dollars (\$) refer to the United States currency.

### 2.3 Sources of Information

This PFS was prepared by TREC and is based on information provided by AUC, and other professional consultants, and generally accepted uranium ISR practices. The wellfield design includes the anticipated wellfield layout provided by AUC with associated numbers and locations of wells and header houses. The cost estimates presented herein are based on wellfield layouts, process flow diagrams, tank and process equipment sizes and locations, building dimensions, personnel and capital equipment requirements were based on information provided by AUC in conjunction with TREC engineering support. The Technical Report on Resources was developed by Behre Dolbear (BDB) (ref., Behre Dolbear, November, 2012, Appendix A).

The Capital Cost and Operating Cost estimates were developed primarily from TREC cost data, historical information, and vendor quotes for similar ISR projects currently being designed, constructed, or in production in the United States. Quantities, recovery and performance were assumed based on similar ISR projects. Unit costs were based on similar ISR facilities, vendor quotes, and TREC data.

The capital costs and operating cost estimates are based on total production of 15.6 million pounds (rounded) of  $U_3O_8$  equivalent. Capital and operating costs are presented in 2012 US dollars. No allowance for escalation has been provided. The authors of this PFS predict the accuracy of the estimates at approximately +/- 25 percent.

Financial modeling was performed by TREC based on anticipated operating schedules, capital and operating costs, internal AUC and TREC databases, and local/state taxes and royalties.

Exploratory drilling within the project area was the primary source of information and data for the Technical Report on Resources estimate (ref., Behre Dolbear, 2012, Appendix A). The data from historical drilling of 4,983 exploratory holes, conducted by Rocky Mountain Energy (RME), American Nuclear Corporation (ANC), Tennessee Valley Authority (TVA), Utah

International and Cleveland Cliffs were used to supplement the recent drilling data from 800 holes performed by AUC. The findings in the Technical Report on Resources are based on published and unpublished data including:

- Lithologic and geophysical logs, and intercept grade calculations for historic and recent drilling;
- Drill hole location data for historic and recent drilling;
- Mineralization intercept grade calculations; and
- Cross sections constructed from geophysical logs of recent and historical drilling.

A more detailed summary pertaining to the drilling program for the Project is provided in Section 10 of Appendix A, the Technical Report on Resources.

#### 2.4 Site Visits

Author Douglass H. Graves, P.E. conducted a Project site visit on October 17, 2012. The purpose of the visit was to observe the geography and geology of the Project site, verify work done at the site by AUC, observe the potential locations of Project components, current site activities, and location of exploration activities and gain knowledge on existing site infrastructure.

### 3.0 Reliance on Other Experts

The information, conclusions, opinions, and estimates contained herein are based on:

- Information supplied by AUC and third party sources (to the extent identified and as referenced herein);
- Assumptions, conditions, and qualifications as set forth in this PFS; and
- Data, reports, and other information supplied by AUC and third party sources (to the extent identified and as referenced herein).

For this PFS, the Author has relied on property ownership information provided by AUC and has not independently researched property title or mineral rights for the Project properties. The Author expresses no legal opinion as to the ownership status of the Project properties controlled by AUC.

This PFS was prepared by TREC with reliance on reports and information from others as well as internal TREC experts. The table below identifies the experts and their contributions/responsibilities in the development of the PFS.

**Table 3-1: Summary of Independent Experts**

<i>Independent Expert</i>	<i>Contribution/Responsibility</i>
Douglass H. Graves, P.E. (QP)	Primary Author, PFS coordination, capital and operating cost estimates, economic analysis.
Wendy Stansbury, P.E.	Review of PFS report, capital and operating cost estimating and economic analysis.
Brian Pile	Review of PFS report, capital and operating cost estimating and economic analysis.
Samuel Hensler, E.I.T.	Preliminary plant designs, capital and operating costs, and sensitivity analysis.
Anna Tingstad, P.E.	Wellfield designs, operating and subsequent capital cost estimates.
Alex Edwards	Preliminary plant designs, capital and operating costs, and sensitivity analysis.
Robert Maxwell, P.G. - Behre Dolbear	Preparation of Technical Report on Resources, Reno Creek Uranium Project, see Appendix A.
Betty Gibbs – Behre Dolbear	Preparation of Technical Report on Resources, Reno Creek Uranium Project, see Appendix A.

## 4.0 Property Description and Location

### 4.1 Property Description

The Reno Creek Project is composed of four Resource Units (Figure 1). The Reno Creek Resource Unit combines two contiguous sub-units, North Reno Creek and Southwest Reno Creek, and will be operated as a single cohesive unit, i.e. the Reno Creek Resource Unit. The Moore and Bing Resource Units contain roll-front uranium mineralization in the same and contiguous stratigraphic horizons as the Reno Creek Units. The Pine Tree Resource Unit contains mineralization in the same stratigraphic horizons as Reno Creek plus a slightly higher stratigraphic unit.

The contiguous Reno Creek Resource Unit is currently being permitted for mining by ISR methods and will include 11 ISR Production Units (PU) and a Central Processing Plant (CPP). The CPP will be located on land owned by AUC. The proposed mine Project boundary is shown on Figure 1.

The Moore Resource Unit (four PUs) lies approximately five miles to the north of the Reno Creek proposed permit area. The Moore Resource Unit will be connected to the CPP via pipelines.

The Pine Tree Resource Unit (two PUs) lies approximately 5 miles to the southwest of Reno Creek, immediately southeast of the intersection of U.S. Highway 387 and Wyoming Highway 50, also known as Pine Tree Junction. Current plans also envision that the Pine Tree Resource Unit will be connected to the CPP via pipelines.

The Bing Resource Unit (one PU) lies adjacent to (west of) Wyoming Highway 50, 3 miles north of Pine Tree Junction, and will be connected to the CPP via pipelines. See Figure 2.

Collectively, AUC controls mineral lands within the Reno Creek Project totaling approximately 21,240 acres, consisting of 688 unpatented lode mining claims, seven State of Wyoming mineral leases, and four private mineral leases. Mineral ownership status and resource units are shown on Figure 3.

Surface ownership at the project consists of both privately owned (fee) ranch lands and lands owned by the State of Wyoming. State surface ownership corresponds to state mineral ownership. There is no BLM or other federal land in the Project. The breakdown of land status including private fee, unpatented mining lode claims, and state leases for the Reno Creek Project is shown in Table 4-1.

**Table 4 -1: Project Lease and Claim Acreages**

<b>Township and Range</b>	<b>State of Wyoming Leases (Acres)</b>	<b>Fee Mineral Leases (Acres)</b>	<b>Federal Lode Mining Claims (Acres)</b>
T42N R73W	640	0	720
T42N R74W	640	0	2,700
T43N R73W	640	480	4,380
T43N R74W	1,280	800	5,440
T44N R73W	640	0	0
T44N R74W	0	1,440	800
T44N R75W	640	0	0
<b>Total</b>	<b>4,480</b>	<b>2,720</b>	<b>14,040</b>

#### 4.2 Reno Creek ISR Project Location

The Reno Creek ISR Project is located in Campbell County, in northeastern Wyoming, approximately 10 miles southwest of the town of Wright, see Figure 2. The approximate latitude and longitude location for each resource unit follows.

<b>Reno Creek Resource Unit</b>	Latitude 43°40'36.23" North - Longitude 105°40'55.78" West
<b>Moore Resource Unit</b>	Latitude 43°44'50.84" North - Longitude 105°43'59.56" West
<b>Pine Tree Resource Unit</b>	Latitude 43°36'52.22" North - Longitude 105°46'35.91" West
<b>Bing Resource Unit</b>	Latitude 43°39'39.35" North - Longitude 105°47'17.33" West

#### 4.3 Mineral Tenure, Rights, Leases and Surface Use Agreements

AUC holds 688 unpatented lode mining claims with federally owned minerals. No royalties are due to the federal government from mining on lode claims. The claims will remain under AUC's ownership and control provided that AUC adheres to required Bureau of Land Management (BLM) filing and annual payment requirements. Legal surveys of unpatented claims are not required and to the author's knowledge have not been completed. The state, private and State lease payments, and BLM mining claim annual maintenance fee payments are up to date as of 2012.

Royalties on fee mineral leases vary with the ownership of the minerals. State mineral leases have a five percent gross royalty attached. Fee or private minerals have varying royalty rates and calculations depending on the agreements negotiated with individual mineral owners. In addition, surface use agreements may include a production royalty or production payment depending on agreements negotiated with individual surface owners at various levels. AUC has calculated that the average combined mineral plus surface production royalty applicable to the project is approximately four percent.

AUC has executed surface use agreements with all landowners, who hold surface ownership over minerals proposed to be mined by AUC within the ISR mining permit boundary at the Reno Creek Resource Unit, including leases on State land. AUC has secured the majority of surface access agreements needed from landowners within the Moore Resource Unit. Additional access agreements associated with the Pine Tree and Bing Resource Units are currently being negotiated. AUC is in process of purchasing the land identified for the CPP.

## 4.4 Environmental Liabilities

### 4.4.1 *Residual Liabilities*

As part of the mine permit and licensing process, detailed environmental baseline evaluations have been performed to characterize environmental conditions at the Project. No significant residual liabilities were identified. In addition, there are no known residual liabilities associated with the Uranium ISR Pilot Project (see Section 6) Rocky Mountain Energy's Uranium ISR Pilot Project (see Section 6) that was operated in the early 1980s at the Reno Creek Resource Unit. Also, as part of the ISR planning process, AUC has performed exploration drilling for uranium and delineation drilling for mine planning purposes. In conjunction with this drilling, AUC has installed 41 monitor and observation wells. These relatively shallow wells (generally less than 450 feet in depth) each have a surety bond posted to insure they are properly plugged, abandoned and that surface reclamation is performed at the completion of mining.

### 4.4.2 *Environmental Management and Regulation*

To the Author's knowledge, operations at the Project site and facilities are currently conducted in conformance with applicable laws, regulations and requirements of the various federal and state agencies. Future conformance with these various laws, regulations and requirements is assumed. The organization and management controls outlined below will be established by AUC to ensure compliance and further implement AUC's policy to provide a safe working environment including the philosophy of maintaining radiation exposures as low as reasonably achievable (ALARA):

- Management Control Program,
- Management Audit and Inspection Program,
- Qualifications for Personnel Conducting the Radiation Safety Program,
- Radiation Safety Training,
- Security, and
- Radiation Safety Controls and Monitoring.

## 4.5 Permits Required to Conduct Work

The two most significant permits/licenses are (1) the Source and Byproduct Materials License, to be issued by the NRC; and (2) the Permit to Mine, to be issued by the WDEQ. The NRC license application for the Reno Creek Permit Area was submitted in October 2012. The WDEQ Permit to Mine for the Reno Creek Permit Area was submitted in January 2013.

Upon receiving the license application, the NRC performs a completeness review to ensure all sections are complete. Once the application is deemed complete a technical and environmental review will be performed to ensure criteria from NUREG-1569 and NUREG-1748 have been met. The public will be notified that the NRC is preparing an EIS and are welcome to send in comments to identify issues that must be addressed in the EIS. Based on both NRC expertise and issues raised by the public the NRC will prepare a Draft Environmental Impact Statement (DEIS). The public will have the opportunity to provide feedback through written and public hearing statements. Based on the comments on the DEIS, the NRC prepares the Supplemental

Environmental Impact Statement (SEIS) to the Generic Environmental Impact Statement (GEIS) for ISR facilities. A Safety Evaluation Report (SER) will also be prepared by the NRC in parallel with the SEIS.

Any injection or pumping operations will require permits from the WDEQ and will comply with the Wyoming Environmental Quality Act. The Wyoming Environmental Quality Act takes precedence over EPA quality standards in Wyoming due to a grant of primacy from the EPA. Primacy indicates the State has primary enforcement responsibility for public water systems in their state. To be granted primacy, the State must meet certain EPA requirements (see EPA 40CFR142, subparagraph B).

BLM owned lands are not present within the Project and thus no BLM Plan of Operations and associated EIS is required. Permit/license amendments will be required for the Bing, Moore and Pine Tree Resource Units.

The various federal and state permits and licenses that are needed for the Project are summarized in Table 4-2. Prior to the start of mining (the injection of lixiviant into the mineralized zone aquifers), AUC will obtain all the following necessary permits, licenses, and approvals required by the NRC and WDEQ. The status of AUC’s permitting for the Project is as follows:

**Table 4-2: Status of Permits and Licenses**

<b>SUMMARY OF PROPOSED, PENDING, AND APPROVED PERMITS FOR THE RENO CREEK ISR PROJECT</b>		
<b>Regulatory Agency</b>	<b>Permit or License</b>	<b>Status</b>
<i><b>Federal</b></i>		
US Nuclear Regulatory Commission (USNRC)	Source Materials License (10 CFR 40)	Application submitted October 5, 2012. Includes license application, an Environmental Report, and a Technical Report
U.S. Army Corps of Engineers	Determination of Jurisdictional Wetland	Wetland delineation has been completed and forwarded to ACOE in April 2012
US Environmental Protection Agency (USEPA)	Aquifer Exemption (40 CFR 144, 146)	Aquifer reclassification information to be submitted to EPA after preparation by WDEQ-WQD
<i><b>State</b></i>		
Wyoming Department of Environmental Quality/Air Quality Division (WDEQ/AQD)	Air Quality Permit	Application approval prior to start of construction – 3 <sup>rd</sup> quarter 2013
WDEQ/Water Quality	Groundwater Reclassification	Aquifer reclassification application to be reviewed and classified by WDEQ-WQD –

Division (WQD)	(WDEQ Title 35-11)	2 <sup>nd</sup> quarter 2013
	Underground Injection Control Permit (Deep Disposal Well) (WDEQ Title 35-11)	Class I UIC Permit application under review by the WDEQ-WQD. Expect approval by 1st quarter 2013
WDEQ/Land Quality Division (LQD)	Underground Injection Control Class III Permit (Permit to Mine) (WDEQ Title 35-11)	Class III UIC (Permit to Mine) Permit application submitted January 2013
	Mineral Exploration Permit (WDEQ Title 35-11)	Approved Mineral Exploration Permit DN #401 is currently in place for the exploration actions of Reno Creek Project areas.
	Industrial Storm Water NPDES Permit (WDEQ Title 35-11)	An Industrial Storm Water NPDES will be required for the Central Processing Plant Area – 3 <sup>rd</sup> quarter 2013
	Construction Storm Water NPDES Permit (WDEQ Title 35-11)	Construction Storm Water NPDES authorizations are applied for and issued annually under a general permit based on projected construction activities. The Notice of Intent will be filed at least 30 days before construction activities begin in accordance with WDEQ requirements – 3 <sup>rd</sup> quarter 2013
	Underground Injection Control Class V (WDEQ Title 35-11)	The Class V UIC permit will be applied for following installation of an approved site septic system during facility construction. 3 <sup>rd</sup> quarter 2013

Drilling for exploration, permitting and mine planning has been conducted at the Project. Additional delineation drilling will be conducted by AUC to better identify and define mineralization within specified areas of interest. AUC has one Drill Notification permit from WDEQ/LQD for all exploration drilling (DN#401).

Additionally, monitoring wells have been installed and monitoring conducted to provide baseline information in support of permit and license applications and to serve future mining needs. The volume and extent of exploration and other drilling is described in detail in the Technical Report on Resources provided in Appendix A.

#### 4.6 Other Relevant Factors that Affect Access, Title or Ability to Perform Work

The primary relevant factors that affect access, title or ability to perform work have been addressed above and include land title, land owner relations and access for drilling or development and permitting/licensing.



## 5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

### 5.1 Access

The Project is located in Campbell County, WY, in the northeast portion of the state. The Project lies 50 miles southwest of Gillette, WY, and 82 miles northeast of Casper, WY. The closest population center is Wright, WY (pop. 1,504) which is 10 miles west of the project area on Highway 387. The Project area is bisected by Highway 387 and is accessed on the northwest via Clarkelen/Turnercrest Road and on the southeast by Cosner Road. These roads are improved, all-weather, unpaved roads maintained by Campbell County. See Figure 2.

During the construction, operation, restoration and decommissioning phases of the project, immediate access to the proposed project area will be from State Highway 387, from either or both the east and the west. The workforce for each phase will be primarily from Gillette using State Highway 59 then westbound State Highway 387, and from Casper using Interstate Highway 25 then eastbound State Highway 387.

The primary state and U.S. highways are well maintained year round. The county roads within the proposed project area that receive less traffic, generally speaking, are maintained and are in good condition, depending on the season and how recently maintenance occurred. In addition to the designated routes, there are a number of routes that traverse the proposed project area for grazing access and other uses such as oil and gas facility access, CBM and oil and gas exploration and production. The two-track roads in some portions of the proposed project area may require upgrading or maintenance for winter usage..

### 5.2 Topography, Elevation and Vegetation

The Project area is within the Northwestern Great Plains eco-region. It is a semiarid rolling plain of shale and sandstone punctuated by occasional buttes. Elevation within the proposed project area ranges from approximately 5,041 to 5,296 feet above mean sea level. Topography within the proposed project area is primarily level to gently rolling, though numerous prominent ephemeral drainages dissect the site, see Figure 1. Similar terrain characterizes un-mined lands surrounding the proposed project area.

Vegetation within the Project area is generally described as mixed grass prairie dominated by rhizomatous wheatgrasses, various bunchgrasses, and shrubs. The proposed project area is comprised primarily of sagebrush shrubland and upland grassland. Interspersed among these major vegetation communities, within and along the ephemeral drainages, are less abundant vegetation types of grassland and meadow grassland. Trees within the proposed project area were limited in number and extent. These included plains cottonwood and Russian olive which occurred in a small stand near the reservoir.

### 5.3 Proximity to Population Centers and Transport

The Project is located in Campbell County, in eastern Wyoming, approximately 10 miles west of the town of Wright. Campbell County population in 2010 was 46,133. The nearest town, Wright has a population of approximately 1,500. The large population center of Gillette is located approximately 50 miles from the Project and has a population of approximately 29,000 as of 2010. Figure 2 shows the locations of these population centers with respect to the Project.

The Burlington Northern Santa Fe (BNSF) Railroad runs in a north-south direction approximately 12.5-miles east and 53-miles south of the proposed Project area. There are no rail lines within the proposed Project boundary. It is not anticipated that these railroads will be utilized as a transportation option for any aspect of proposed project operations.

The closest air transportation is via the Gillette-Campbell County Airport (GCC). Five daily flights provide limited service to Denver, CO, Salt Lake City, UT, and Rock Springs, WY. Casper-Natrona County Airport (CPR) provides a comparable number of flights to Denver and Salt Lake City. The primary carriers at both airports are Delta and United Airlines.

#### 5.4 Climate

The Project is located in a semi-arid or steppe climate. The region is characterized seasonally by cold harsh winters, hot dry summers, relatively warm moist springs and cool autumns. Though summer nights are normally cool, the daytime temperatures can be quite high. Conversely, there can be rapid changes during the spring, autumn and winter when frequent variations of cold-to-mild or mild-to-cold can occur.

For purposes of the regional analysis, meteorological data were acquired through the Western Regional Climate Center (ref., WRCC, 2011) for 20 COOP and ASOS stations operated by the National Weather Service (NWS). These include Casper Airport (AP), Douglas, Gillette AP, Glenrock, Kaycee, Lance Creek, Midwest, Reno, and others. In addition, Glenrock Coal Mine and Antelope Coal Mine meteorological data have been obtained through the Air Science division of Inter-Mountain Laboratories (ref., IML Air Science) located in Sheridan, Wyoming. For the site-specific analysis, baseline meteorological information for the Project was collected from the Reno Creek meteorological station by IML Air Science. The Reno Creek Project meteorological station is located at N 43° 34' 14.4'', W 105° 49' 42.4''. Parameters recorded at this station include wind speed, wind direction, ambient temperature, relative humidity, barometric pressure, solar radiation, precipitation and pan evaporation.

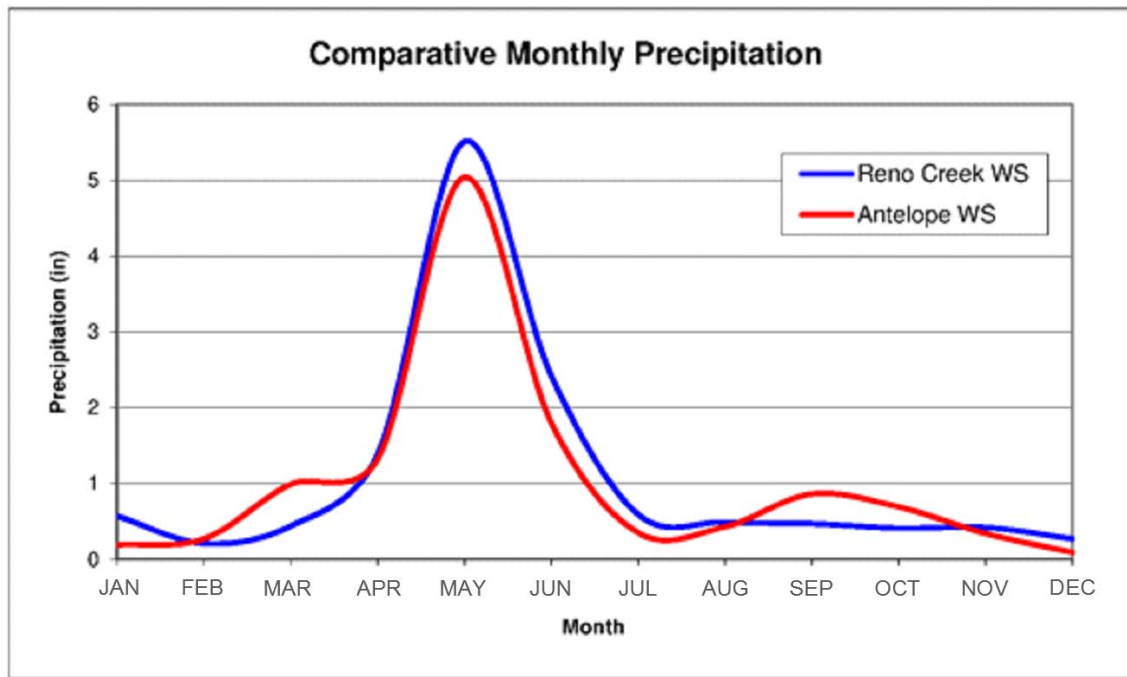
The region has annual average maximum temperatures of 58.5° F and average minimum temperatures of 33.6° F. July has the highest maximum temperatures with averages near 90° F while the lowest minimum temperatures are observed in January with averages near 10° F. The average site temperature during the baseline monitoring year was 44.3° F with temperatures experiencing a maximum exceeding 95.9° F and minimum falling below -25.1° F (Table 5-1). Cold weather may limit the time periods for certain portions of capital construction, but should not significantly affect the operation of an ISR facility. ISR operations at the Project will be conducted year-round.

The Project region has an annual average precipitation ranging from 11 to 15 inches (Figure 5-1). Precipitation at the Project location during the baseline year totaled 13.4 inches with precipitation peaking in May and June. All other months recorded less than an inch of precipitation. The region is prone to severe thunderstorm and much of the precipitation is attributed to these events. Severe weather does arise throughout the region, but is limited to four to five severe events per year. These severe events are generally split between hail and damaging wind events. Tornadoes can occur but on rare occasions, with less than one tornado per county per year (ref., Martner, 1986). Snow frequents the region throughout winter months (40-50 in/year), but provides much less moisture than rain events.

Windy conditions are fairly common to the area. Nearly five percent of the time hourly wind speed averages exceed 25 mph. The predominant wind directions are west and west/southwest with the wind blowing out of that those directions over 25 percent of the time. Surface wind speeds are relatively high all year-round, with hourly averages from 11 to 15 mph. Higher average wind speeds are encountered during the winter months while summer months experience lower average wind speeds.

**Table 5-1: Project Monthly Temperature Statistics**

	<b>Average Temperature</b>	<b>Minimum Temperature</b>	<b>Maximum Temperature</b>
<b>Month</b>	(°F)	(°F)	(°F)
<b>Jan</b>	22.5	-19.9	43.5
<b>Feb</b>	20.1	-25.1	50.0
<b>Mar</b>	34.3	4.2	59.6
<b>Apr</b>	38.5	17.1	72.6
<b>May</b>	45.2	25.3	71.7
<b>Jun</b>	59.5	39.1	89.7
<b>Jul</b>	72.2	50.6	95.9
<b>Aug</b>	71.5	48.8	95.3
<b>Sep</b>	60.7	35.9	86.7
<b>Oct</b>	49.9	26.1	86.4
<b>Nov</b>	30.3	-12.1	71.3
<b>Dec</b>	25.9	-7.6	48.7
<b>Year-Round</b>	44.2	15.2	72.6

**Figure 5-1: Regional Monthly Average Precipitation**

Sources: National Climatic Data Center, 2011; IML Air Science meteorological database, 2011

Period: (varies by monitoring location)

### 5.5 Surface Rights, Local Resources and Property Infrastructure

As a result of energy development over the past 50 years, the Project areas has existing or nearby electrical power, gas, and adequate phone and internet connectivity. The local economy is geared toward coal mining and oil and gas production as well as ranching operations, providing a well-trained and capable pool of workers for ISR production and processing operations.

AUC has leases and surface owner agreements within the proposed mining permit area to enable construction of all operational facilities. The agreements also include AUC's right to appropriate both surface and groundwater for exploration, development and operational uses.

AUC is in process of purchasing the CPP site that is currently equipped with buildings, power, telephone and well water. The site is located within the Reno Creek Resource Unit near the intersection of Wyoming Highway 387 and the Clarkelen County Road, see Figure 1.

AUC and Uranerz (an adjacent mineral rights holder in North Reno Creek) have recently signed a boundary agreement that allows each party to mine and reclaim up to its mineral ownership boundary without setbacks. The agreement provides for each company to install and operate monitor wells on the other company's property during mining, restoration, and reclamation.

## 6.0 History

The History for the Project is discussed in detail in the Reno Creek ISR Project, Technical Report on Resources, Appendix A of this PFS. Refer to Section 6, History of the resource report. The Author agrees with the information provided in Section 6 of the Technical Report on Resources as it satisfies standard industry requirements.

In addition to the information presented in Section 6 of the Technical Report on Resources, there are several historic and current uranium ISR projects located in the Powder River Basin that are indicative of uranium ISR mining in this area. A brief discussion of Rocky Mountain Energy's pilot operation (from Section 6 of the Technical Report on Resources, Appendix A of this PFS) and other nearby projects are discussed below:

Rocky Mountain Energy Reno Creek R&D Project RME applied for and received a research and development (R&D) Pilot Plant license in 1978 from the NRC and Wyoming DEQ. RME tested two injection/recovery patterns under the license (ref., RME, 1981, 1982, and 1983). In January 1979, RME completed a 100 gpm pilot plant. Two test patterns were installed and operated. Pattern 1 unsuccessfully used an acid lixiviant that proved to be impractical due to formation plugging. AUC possesses reports and letters from government agencies documenting hydrologic conditions, operation of the well fields, restoration, and regulatory signoff of the facility (ref., RME, 1983, Reno Creek Restoration Reports & Addenda).

Operation of Pattern 2 began in October 1980 using a sodium carbonate ( $\text{Na}_2\text{CO}_3$ )/sodium bicarbonate ( $\text{NaHCO}_3$ ) lixiviant and hydrogen peroxide ( $\text{H}_2\text{O}_2$ ) oxidant. Pattern 2 was constructed as a modified 5-spot, consisting of 2 recovery wells, 4 injection wells, and 6 monitor wells. Pattern 2 was operated from October 1980 to December 1980. Uranium recovery and average head grade were encouraging, with uranium head grade peaking at 65 mg/L, and recovery of approximately 1,200 pounds of  $\text{U}_3\text{O}_8$ . In order to demonstrate restoration, leaching was stopped while  $\text{U}_3\text{O}_8$  concentrations were still at 15 mg/L.

Restoration of Pattern 2 began in December 1980 and continued until April 16, 1983. All groundwater parameters returned to baseline ranges with the exception of pH, uranium, and vanadium. Of these parameters, all were either below Wyoming Department of Environmental Quality (WDEQ) Class I Groundwater Standards (domestic use) or do not have Class I maximum concentration limits (WDEQ, 1980). Pattern 2 pilot testing culminated in regulatory signoff in June 1983 with the approval of carbonate leaching for commercial operations at Reno Creek under Materials License Number SUA-1338.

Willow Creek Uranium ISR Project (Formerly Christensen Ranch and Irigaray) -- The Willow Creek commercial ISR mine owned by Uranium One, is located about 25 miles west-northwest of the Project. Willow Creek was brought out of standby in 2011 and is currently producing. The project has production capabilities of up to 2.5 m lbs of  $\text{U}_3\text{O}_8$  per year.

North Rolling Pin -- The North Rolling Pin pilot test project was located approximately 15 miles west of the Project. The Wyoming Department of Environmental Quality, Land Quality Division (WDEQ-LQD) issued license 3RD for the North Rolling Pin site, and the Nuclear Regulatory Commission (NRC) granted a source materials license in late 1979 for the same site. Approval was granted in 1974 (SUA-1199) for research and development activities on North Rolling Pin.

The pilot test for North Rolling Pin was approximately 125 feet deep and was conducted using an oxidized carbonate leach solution. The pilot test was successfully able to recover uranium using the *in situ* recovery method followed by groundwater restoration.

Collins Draw -- The Collins Draw project, located near the North Rolling Pin test project, was conducted at depths of 450 feet (+/- 50 feet) and both ammonium bicarbonate and sodium bicarbonate leach solutions were used individually in adjacent well field pattern areas. Leaching operations at Collins Draw lasted from May 1980 to July 1981. The operators of the Collins Draw pilot test concluded that the technology developed at Collins Draw would be applicable to other mineralized areas in the Powder River Basin.

Ruth -- The Ruth pilot plant operated during 1982 through 1984 with 32,000 pounds of  $U_3O_8$  being produced using sodium bicarbonate-amended lixiviant. Groundwater was successfully restored at the Ruth project, forming the basis for a commercial ISR license from both NRC and WDEQ. This operation is located in Section 14 of T42N, R77W, approximately 20 miles west of the Project.

Other ISR projects in the Powder River Basin are either in various stages of development or permitting. Cameco's North Butte project is permitted for commercial ISR operation and is currently in construction. Additionally, Uranerz Energy Corporation, Nichols Ranch Project, is currently constructing a satellite plant in the Pumpkin Buttes area. The Uranium One Moore Ranch Project has been permitted but construction has not begun.

## 7.0 Geologic Setting

The Production Zone Aquifer (PZA) is the sandstone horizon containing uranium mineralization, and is the unit in which leaching solutions will be injected and recovered. The PZA is bounded between overlying and underlying zones of low permeability, typically shales or mudstones, termed aquitards. The PZA is fully saturated at all areas of the Project with the exception of a small area east of Highway 387 in the northeastern portion of the Reno Creek Resource Unit, where partially saturated conditions exist. RME successfully operated its R&D ISR operation in this area.

The Geological Setting including regional, local and project surficial geology for the Project is discussed in detail in the Reno Creek ISR Project, Technical Report on Resources, Appendix A of this PFS. Refer to Section 7, Geologic Setting of the resource report. Refer to Figures 1 and 4 through 7, attached to this PFS, for illustration of the location of mineral resources, Project stratigraphic chart, mineralized sections, geochemical/geophysical anomalies and conceptual roll front, respectively. The Author agrees with the information provided in Section 7 of the Technical Report on Resources as it satisfies standard industry requirements.

In addition to the information included in the Technical Report on Resources, the following provides a discussion of the hydrogeology and its relevance to the planned ISR mining approach. Additional detailed hydrogeologic information can be obtained from the Reno Creek ISR Project Nuclear Regulatory Commission (NRC) License Application (ref., AUC, 2012)

A Hydrologic Integrity Evaluation was conducted by RME in 1982 which consisted of using drill rigs to re-enter previously drilled exploration boreholes to determine the extent to which these boreholes were sealed. During borehole re-entry investigations, mudstone obstructions were generally encountered at the mudstones above, between, and below the Felix Coal (see Figure 4), within the unidentified mudstone present in the middle portion of the PZA, and within a basal mudstone near the bottom of the PZA that separates a relatively less permeable sand within the PZA (identified as the #5 sand by RME).

In the northern block area of investigations (ref., AUC, 2012), the mudstone overlying the Felix coal consistently held up to surface gauge hydrostatic pressures of 120 to 150 psi without bleeding off. Similar results were seen at slightly lower pressure in the mudstone separating the Upper and Lower Felix, and the mudstone below the Felix. The results of the packer testing indicated that the mudstone above the Felix consistently held up to surface gauge pressures of 120 to 150 psi, and the mudstones between and below the Felix withstood somewhat lower pressures. Regardless of location, packer testing of the basal PZA mudstone did not usually withstand much pressure and suggested that this mudstone provided minimal confinement between the upper ore sands and lower ore sand #5 (RME nomenclature). RME concluded that the sands of the PZA should be treated as one hydrologic unit.

Results of the pump and injection tests conducted by RME indicated that the production zone sand has good permeability and is amenable to ISR recovery. Transmissivity values ranged from 149 to 555 ft<sup>2</sup>/day; permeability values ranged from 0.9 to 4.1 ft/day; and storativity values ranged from  $4.0 \times 10^{-5}$  to  $1.0 \times 10^{-3}$ . No responses were observed in the overlying aquifer during any hydraulic testing activities. RME did not identify an underlying aquifer during their investigations.

The significance of the Hydrologic Integrity Evaluation conducted by RME demonstrates that the numerous exploratory boreholes do not provide a conduit to crossflow of groundwater between aquifer units, due to the natural sealing capacity of the swelling clays present in confining units with respect to the production zone sand. Recent pump testing conducted at the Reno Creek Resource Unit by AUC has provided additional confirmation of the hydraulic isolation of the overlying aquifer and underlying unit (which is not considered an aquifer) with respect to the production zone.

Based on hydrologic testing conducted by AUC at the Reno Creek Resource Unit, the following presents a general summary of results that impact the proposed ISR operations (ref., AUC, 2012).

- The PZA is a discrete and continuous aquifer and is geologically confined across the entire project area;
- The PZA is fully saturated in the western portion of the Reno Creek Resource Unit and transitions to partially saturated conditions in the eastern third of the Resource Unit;
- Hydrologic testing completed at four separate locations across the Reno Creek Resource Unit provides substantial characterization of the PZA;
- Calculated transmissivities were found to vary across the site, between 20 ft<sup>2</sup>/day to 1,428 ft<sup>2</sup>/day; calculated hydraulic conductivities range between 0.3 ft/day and 13 ft/day;
- No drawdown responses were observed during any pump testing in the overlying aquifer and underlying unit, indicating that there is adequate confinement of the PZA for the purposes of ISR operations;
- Based on the results of testing, no hydrologic boundaries were detected in the PZA;
- Transmissivities were evaluated at multiple locations in the water table SM unit, overlying aquifer, and underlying unit. In general, these units have significantly lower transmissivities in relation to the PZA. These units are discontinuous across the Reno Creek Resource Unit;
- Based on the lack of sustainable well yields and extremely low values of transmissivity evaluated in the two pump tests conducted in the perched water table SM unit and the four tests conducted in the underlying unit, these intervals do not meet the definition of an aquifer;
- As discussed in the License Application Technical Report, AUC anticipates monitoring the wells completed in the SM unit and underlying unit for a limited time. No additional wells will be installed in these units in the future, unless they meet the definition of an aquifer; and
- In addition, a groundwater model based on the hydrologic data collected within the Reno Creek Resource Unit is presented in the NRC License Application (ref., AUC, 2012).



## 8.0 Deposit Types

Deposit Types for the Reno Creek ISR Project are discussed in detail in the Reno Creek ISR Uranium Project, Technical Report on Resources, Appendix A of this PFS. Refer to Section 8, Deposit Types of the Technical Report on Resources. Refer to Figure 5, attached, for mineralization cross-sections. Refer to Figures 6A through 6E, attached, for illustrations of the measured and indicated resource locations for the four resource units. Refer to Figure 7, attached, for an illustration of a typical uranium roll front deposition. The Author agrees with the information provided in Section 8 of the Technical Report on Resources as it satisfies standard industry requirements.

## 9.0 Exploration

Exploration for the Project is discussed in detail in the Reno Creek ISR Project, Technical Report on Resources, Appendix A of this PFS. Please refer to Section 9, Exploration, of the Technical Report on Resources. The Author agrees with the exploratory drilling procedures performed in the Project Area and with the information provided in Section 9 of the Technical Report on Resources as it satisfies standard industry requirements.

## 10.0 **Drilling**

Drilling for the Project is discussed in the Reno Creek ISR Project, Technical Report on Resources, Appendix A of this PFS. Please refer to Section 10, Drilling, of the Technical Report on Resources. The Author agrees with the information provided in Section 10 of the Technical Report on Resources as it satisfies standard industry requirements.

## 11.0 **Sample Preparation, Analysis and Security**

Sample preparation, analysis and security for the Project are discussed in the Reno Creek ISR Project, Technical Report on Resources, Appendix A of this PFS. Please refer to Section 11, Sample Preparation, Analysis and Security of the Technical Report on Resources. The Author agrees with the information provided in Section 11 of the Technical Report on Resources as it satisfies standard industry requirements.

## 12.0 Data Verification

Data verification for the Project is discussed in the Reno Creek ISR Project, Technical Report on Resources, Appendix A of this PFS. Please refer to Section 12, Data Verification of the Technical Report on Resources. The Author agrees with the information provided in Section 12 of the Technical Report on Resources as it satisfies standard industry requirements.

### 13.0 **Mineral Processing and Metallurgical Testing**

Mineral processing and metallurgical testing for the Project is discussed in the Reno Creek ISR Project, Technical Report on Resources, Appendix A of this PFS. Please refer to Section 13, Mineral Processing and Metallurgical Testing of the Technical Report on Resources. The Author agrees with the information provided in Section 13 of the Technical Report on Resources as it satisfies standard industry requirements.

#### 14.0 Mineral Resource Estimates

Mineral resource estimates for the Project are discussed in Section 14 of the Reno Creek ISR Project, Technical Report on Resources, Appendix A of this PFS. A recoverability factor of 71.4 percent was used in this PFS. Section 25.1.1 provides a summary of how this factor was determined. Table 14-1 below summarizes the mineral resources and estimated recovery (pounds).

**Table 14-1: Summary of Mineral Resource Estimates**

Resource Unit	Estimated Resource (Million-lbs U <sub>3</sub> O <sub>8</sub> )	Recoverability Factor (%)*	Estimated Recovery (Million-lbs U <sub>3</sub> O <sub>8</sub> )
<b>North Reno Creek</b>			
Measured (M)	2.96	71.4%	2.11
Indicated (I)	5.13	71.4%	3.66
M+I	8.09	71.4%	5.77
<b>Southwest Reno Creek</b>			
Measured (M)	3.32	71.4%	2.37
Indicated (I)	3.55	71.4%	2.53
M+I	6.87	71.4%	4.90
<b>Bing</b>			
Measured (M)	0.21	71.4%	0.15
Indicated (I)	0.72	71.4%	0.51
M+I	0.93	71.4%	0.66
<b>Moore</b>			
Measured (M)	1.56	71.4%	1.11
Indicated (I)	2.97	71.4%	2.12
M+I	4.53	71.4%	3.23
<b>Pine Tree</b>			
Measured (M)	0.32	71.4%	0.23
Indicated (I)	1.13	71.4%	0.81
M+I	1.45	71.4%	1.04
<b>TOTAL</b>			
Measured (M)	8.37	71.4%	5.98
Indicated (I)	13.5	71.4%	9.64
<b>M+I</b>	<b>21.9</b>	<b>71.4%</b>	<b>15.6</b>

1. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
2. The estimated production is based on 71.4 percent recovery of in place mineral resources and includes 70 percent mining recovery and 1.4 percent recovery during restoration for a total combined recovery factor of approximately 71.4 percent.

***Cautionary Statement: The estimated recovery used in this PFS is based on both AUC personnel and industry experience at similar facilities. There can be no assurance that recovery at this level will be achieved.***

The Author has reviewed the Technical Report on Resources estimate developed by BDB (ref., Behre Dolbear, 2012, Appendix A) and finds that it meets NI 43-101 industry requirements.



## 15.0 Mineral Reserve Estimates

The Project has not advanced to convert the mineral resource estimates to mineral reserves.

## 16.0 Mining Methods

This section of the PFS presents descriptions for injection, recovery and uranium processing; the cost estimate approach; and assumptions used to develop the capital costs and operating costs. The information presented in Section 16 meets the content requirements of NI 43-101 and NI 43-101F1.

AUC plans to mine the Project mineralized zones using the ISR recovery method. This same method is successfully used elsewhere in the United States, especially in Wyoming.

Figure 1 identifies four Resource Units and 18 PUs which have been designated to produce uranium from the mineralized zones at the Project. Each PU contains multiple wellfields, each of which has a header house. The injection and recovery wells located within the PUs will be typically arranged in five-spot patterns. However, in some situations, AUC may use other well patterns to most effectively target the mineralization. Monitor wells will be installed at each PU or larger area as dictated by geologic and hydrogeologic parameters, and as approved by the WDEQ/LQD. The CPP and appurtenant facilities will be constructed according to accepted engineering practices.

### 16.1 Geotechnical and Hydrological Mine Design and Plans

#### 16.1.1 Wellfields

Wellfields are the groups of wells, installed and completed in the mineralized zones that are sized to effectively target delineated mineralization and reach the desired production goals. One header house controls the operation of each Wellfield. The mineralized zones are the geological sandstone units where the leaching solutions are injected and recovered via wells in an ISR wellfield and it is bounded between aquitards. The following subsections describe the wellfield design used as the basis for the Project cost estimates included in this PFS. The life of mine construction, production and closure schedule is provided in Figure 8.

##### 16.1.1 Proposed Wellfield Design

This PFS assumes the patterns for the injection and recovery wells will follow the conventional five-spot pattern consisting of a recovery well surrounded by four injection wells. Depending on the shape of the mineralized zone, other patterns, including seven-spot, line drive or staggered line drive patterns, may also be used. The dimensions of the patterns vary depending on the mineralized zone, the aquifer transmissivity, etc. The preliminary wellfield design developed for this report assumes injection wells will be spaced 100 feet apart on the corners of a 5-point square pattern. Costing has been developed assuming this spacing, but may be anywhere between 50 and 120 feet apart. In order to effectively recover the uranium, and also to complete the groundwater restoration, the wells will be completed so that they can be used as either injection or recovery wells, allowing flow direction to be reversed at any time during the production or restoration phases of the Project, see Figures 9A-C. A slightly greater volume of water (~1%) will be recovered from the mineralized zone aquifer than injected (bleed) in order to create an inward flow gradient towards the recovery wells to minimize the potential for excursions of lixiviant from the wellfields.

### 16.1.2 *Wellfield Installation*

AUC has performed, and the Author understands that AUC intends to continue to perform delineation drilling in each proposed Resource Unit prior to installing the injection and recovery wells to better define mineral resources for design of PUs. This allows the designing geologist to reasonably know the width, depth, and thickness of the mineralized zone and the depth of the underlying shale prior to specifying the screen interval for the injection and recovery wells, which optimizes the locations of specific injection and recovery wells. A PU will consist of patterns of recovery and injection wells (e.g., the pattern area) within a ring of monitor wells. The monitor wells will be used to detect horizontal excursions, if any, of the groundwater-based leaching solutions away from the mineralized zone. Monitor wells will also be completed in the overlying aquifer (or potentially the underlying aquifer in some PUs), as necessary, to detect vertical excursions, if any. Inside the pattern area, wells (which may double as recovery or injection wells) will also be completed in the mineralized zone to provide baseline water quality information prior to the mining process and to gauge groundwater restoration performance after mining is complete.

Pilot holes for monitor, recovery and injection wells will be drilled through the target completion interval. The hole will be logged, reamed, casing set, and cemented to isolate the completion interval. Production wells are planned to be under-reamed as part of the well completion process. After underreaming, setting the screen and, possibly, installing a sand filter pack, the well will be air lifted and/or swabbed to remove any remaining drilling mud and/or cuttings. The primary goal of this well development is to allow clear formation water to freely enter the well screen.

Typical well completion schematics for production wells (recovery and injection wells), and monitor wells are shown on Figures 9A-C.

### 16.1.3 *Mechanical Integrity Testing (MIT)*

After an injection, recovery or monitor well has been completed, and before it is made operational, AUC will perform a MIT of the well casing. In the integrity test, the bottom of the casing adjacent to or below the confining layer above the zone of interest is sealed as is the top of the casing, and a pressure gauge is installed to monitor the pressure inside the casing. The pressure in the sealed casing is then increased to a specified test pressure and must maintain 90 percent of this pressure for ten minutes to pass the test. If any well casing that fails the test cannot be repaired, the well will be plugged and abandoned.

In accordance with WDEQ and NRC requirements, MITs will be repeated once every five years for all production wells. A MIT will also be performed on any well that is damaged during operations or has had a drill bit cutting tool inserted in the well. Results of MIT will be maintained on-site and will be reported, as required to WDEQ.

### 16.1.4 *Production*

The proposed uranium ISR process will involve the dissolution of the water-soluble uranium compound from the mineralized host sands at near neutral pH ranges. The lixiviant contains oxygen and sodium bicarbonate. The oxygen oxidizes the uranium, which is then complexed with the bicarbonate. The uranium-rich solution (typically ranging from 20 ppm to 250 ppm, but

may be higher or lower) will be pumped from the recovery wells to the nearby processing facility for uranium concentration with ion exchange (IX) resin. A slightly greater volume of water will be recovered from the mineralized zone aquifer than injected, referred to as “bleed”, in order to create an inward flow gradient towards the PUs. Thus, overall recovery flow rates will always be slightly greater than overall injection rates. This bleed solution will be treated via RO and the permeate used as makeup water in the process or discharged, as permitted, and the brine will be disposed via injection into Deep Disposal Wells (DDW).

#### 16.1.5 Wellfield Piping System

Pipelines will transport the pregnant and barren lixivants to and from the IX columns of the CPP. The individual well flow rates and manifold pressures will be monitored in the header houses. These data will be transmitted to the CPP for remote monitoring through a master control system. The user will be capable of shutting down header house production lines from the control system. High density polyethylene (HDPE), PVC, stainless steel, or equivalent piping will be used in the wellfields and will be designed and selected to meet design operating conditions.

The lines from the CPP, header houses and individual well lines will be buried for freeze protection and to minimize pipe movement. Other ISR mines in Wyoming have successfully buried HDPE pipelines. Figure 1 illustrates the approximate location for trunk lines to/from the wellfields and the Plant.

#### 16.1.6 Header Houses

Header houses will be used to distribute barren lixiviant to injection wells and collect pregnant lixiviant from recovery wells. Each header house will be connected to two production trunk lines and two restoration trunk lines as needed. The header houses will include manifolds, valves, flow meters, pressure gauges, instrumentation and oxygen for incorporation into the barren lixiviant, as required. See Figure 10 for a typical header house (PID).

Each header house will service approximately 72 wells (42 injection and 30 recovery) depending on resource delineation. Table 16-1 presents the current anticipated header house and well summary by Resource Unit.

**Table 16-1: Project Header House and Well Inventory by Resource Unit**

Item	Resource Units			
	Reno Creek	Bing	Moore	Pine Tree
Header Houses	50	4	18	3
Injection Wells	1,500	120	540	90
Recovery Wells	2,100	168	756	126
Interior Monitoring Wells	100	8	36	6
Exterior Monitoring Wells	250	20	90	6

Injection wells, recovery wells, monitor wells and header houses in the four Resource Units were determined using a conventional five-spot pattern as described above, which assigns approximately 8.4 acres of mineral resource, 42 injection wells, 32 recovery wells, and seven

monitor wells to each header house. The mineral resources were provided by AUC, as identified in the Technical Report on Resources (ref., Behre Dolbear, 2012).

### 16.1.7 Wellfield Reagents, Electricity and Propane

Due to the varying nature of production over the life of the mine, wellfield reagents, electricity and other consumable costs are expected to vary by year. The wellfield production schedule is presented in Figure 8.

## 16.2 Production Unit Design, Production Rates and Mine Life

The mining approach is governed by how the production units are designed, the rate of mineral recovery and the duration of the mine development, mineral recovery, processing and closure. The following describes each of these mine development and operation components.

### 16.2.1 Production Unit Design

The Project is divided into four Resource Units – Reno Creek, Bing, Moore and Pine Tree. Figure 1 illustrates the four Resource Units, their boundaries and proposed trunk lines to reach each Resource Unit. Each Resource Unit is further subdivided into PUs.

Within each PU, the preliminary design assumes that there will be multiple wellfields. Each wellfield is serviced by one header house and is expected to produce approximately 600 gpm per header house for a maximum operation flow of approximately 8,000 gpm. Table 16-2 summarizes the total area of each Resource Unit and the area of wellfields within each Resource Unit.

**Table 16-2: Total Area and Estimated Wellfield Area by Resource Unit**

Item	Resource Units			
	Reno Creek	Bing	Moore	Pine Tree
Production Units	11	1	4	2
Total Area (Acres) within monitor well rings	331.5	22.5	100.5	24
Wellfield (Acres) (Resource surface area)	220.9	15.0	67.4	15.8

### 16.2.2 Production Rates

The development plan is subject to change due to recovery schedules, variations with production area recoveries, CPP operations, economic conditions, etc. Figure 8 presents the life of mine schedule used in the evaluations in this document. Mineral resource head grade is assumed to average 45 ppm over the entire production schedule. Peak production of approximately 1.5 mlbs per year is anticipated in Year 3 continuing through Year 11. Uranium production will continue through Year 14 and total production over the life of the mine is estimated to be 15.6 mlbs.

### 16.2.3 Mine Life

AUC has estimated the mine life based on head grade, estimated resource, flow rates and closure requirements for the four Resource Units. Figure 8 provides the operating and production schedule for the Project as currently defined. Production will generally occur at each PU consecutively (see Figure 8) and the Project production will occur over a period of approximately 12 years. Restoration and reclamation will also be implemented concurrently with production and will continue approximately three years beyond the production period. The overall mine life, as illustrated in Figure 8, is approximately 16 years from initiation of construction activities to completion of restoration and decommissioning/reclamation.

The Project cash flow analysis assumes closure of the wellfields and CPP approximately three years after economic depletion of the uranium within the target mineralized zones of the four Resource Units.

### 16.3 Mine Development

Mine development will begin simultaneous with construction of the CPP and PU 1 (six header houses). Each header house is expected to produce 600 gpm of pregnant lixiviant, which is the flow requirement for initial CPP IX circuit operation. The six header houses in PU 1 will begin production, as close to simultaneously as possible, in the first quarter of Year 2, see Figure 8.

As the productivity or head grade from the initial headers houses or PU decreases below economic limits, patterns from additional header houses or PUs will be placed into operation in order to maintain the desired flow rate and head grade at the CPP. Table 16-3 summarizes the estimated resource and number of header houses per Resource Unit.

**Table 16-3: Anticipated Resource Development Plan**

Resource Unit	Number of PUs	Total Pounds (Millions)	Number of Header Houses	Pounds Recoverable (Millions)	Average Lixiviant Concentration (ppm)
Reno Creek	11	15.0	50	10.7	45
Bing	1	0.93	4	0.66	45
Moore	4	4.53	18	3.23	45
Pine Tree	2	1.45	3	1.04	45

License/Permit amendments will be required prior to initiation of header house and wellfield construction in the Moore, Pine Tree and Bing Resource Units. It is anticipated that the baseline studies, amendment preparation, review and approval will require approximately three years to complete, see Figure 8.

Resource definition drilling (delineation drilling) is on-going. As more detailed mineral resource information is acquired, the wellfield design and mine plan will adjust accordingly. The project boundaries may adapt to in-coming delineation drilling results. The specific details of mineral extraction may also be adjusted to ensure the highest yield of recovered minerals is obtained.

### 16.4 Mining Equipment

Details of the mining equipment necessary for the construction of wellfields, header houses and the CPP are discussed in Section 21. Construction equipment required by AUC to complete

construction of the wellfields including pickup trucks, cementers, slurry trucks, etc., are also discussed in Section 21. The CPP consists of multiple tanks, pumps, filters and other processing equipment.

## 17.0 Recovery Methods

The information presented in Section 17 meets the content requirements of NI 43-101 and NI 43-101F1. The design of the Project is consistent with that of currently and historical operating ISR facilities in Wyoming. It includes no untested technologies or equipment.

### 17.1 Plant Description

The CPP will house the process equipment in a 50,000 square foot metal building. Bulk chemical storage tanks will be located both within and outside of the CPP. A 2,000 square foot laboratory area and a 3,400 square foot maintenance area will be provided in the CPP as well as change rooms. A 12,000 square foot building will also be constructed north of the CPP to serve as a combined office and shop/warehouse building. In addition to office spaces for professional staff, the 12,000 square foot building will include the computer server room, lunchroom, and restroom facilities, the warehouse and maintenance shop with all the required tools/equipment and various supplies for performing maintenance. See Figure 11 for the site layout.

#### 17.1.1 CPP Processing

The proposed CPP will have four major solution circuits: the uranium recovery/extraction circuit (IX); the elution circuit to remove the uranium from the IX resin; a yellowcake precipitation circuit; and the dewatering, drying and packaging circuit. Figure 12 presents a simplified, typical process flow diagram for the CPP.

### 17.2 Plant Design

The major process components of the CPP are described in Section 21. The systems within the CPP have been designed to recycle and reuse most of the solutions inside each circuit. A low-volume bleed (approximately 1% of flow) is permanently removed from the groundwater-based leaching solution flow to ensure a constant inward flow gradient to the PUs and ensure that the leaching solution in the target mineralized zone is contained by the inward movement of groundwater within the designated recovery area. This bleed solution will be routed to RO treatment and the permeate will be used as process make up water. Brine will be disposed of via DDWs.

As described in Section 21, pregnant lixiviant from the wellfields will be pumped to the CPP for processing as described below:

IX Circuit -- Uranium dissolved from the underground deposits in the wellfields will be extracted from the solution in the IX circuit. This evaluation assumes an average uranium headgrade of 45 ppm based on the production model and leach tests. Subsequently, the barren lixiviant will be reconstituted to the proper bicarbonate strength, and oxidant will be added, if needed, prior to being pumped back to the wellfield for reinjection. A low-volume bleed, approximately 1 percent during production and 4 percent of the circulating lixiviant flow during restoration, will be permanently removed from the lixiviant flow. The bleed will be treated by RO. A portion of the permeate will be returned to the wellfield, and a portion will be used as plant makeup water. Brine will be disposed of by means of injection into a DDW.



Elution Circuit -- When it is fully loaded with uranium, the IX resin will be subject to elution. The elution process will reverse the loading reactions for the IX resin and strip the uranium from the resin. The resulting rich eluate will be an aqueous solution containing salt and sodium carbonate and/or sodium bicarbonate.

Yellowcake Precipitation Circuit -- Yellowcake will be produced from the rich eluate. The eluate from the elution circuit will be de-carbonated in slurry tanks by lowering the pH below two standard units with strong mineral acid. The yellowcake product will be precipitated with hydrogen peroxide using sodium hydroxide for pH control.

Yellowcake Dewatering, Drying and Packaging Circuit -- The precipitated yellowcake slurry will be transferred to a filter press where excess liquid will be removed. Following a fresh water wash step that will flush any remaining dissolved chlorides, the resulting product cake will be transferred to the yellowcake dryer which will further reduce the moisture content, yielding the final dried free-flowing product. Refined yellowcake will be packaged in 55-gallon steel drums.

Prior to completion of the CPP and initial wellfield, AUC will secure a contract with a uranium hexafluoride processing facility. For the purposes of this PFS, it has been assumed that drummed yellowcake will be shipped via truck approximately 1,220 miles to the Honeywell uranium hexafluoride processing facility in Metropolis, Illinois. This conversion facility is the first manufacturing step in converting the yellowcake into reactor fuel.

#### 17.2.1 *Liquid Disposal (Deep Disposal Well)*

Typical ISR mining operations require a disposal well for limited quantities of fluids that cannot be returned to the wellfields, primarily bleed from wellfield operations and brine from RO water treatment operations. The RO system used for treating the bleed and for groundwater restoration will be in the CPP. Four DDWs will be required for disposal of liquid waste and AUC has applied for the WDEQ permits for their construction. The capital and operating cost estimates for this PFS assume that four DDWs will be completed and used for this Project. Anticipated brine generation rates for the CPP during production, production and restoration, and restoration only phases are presented on Figure 12.

A back-up storage pond has been designed for the CPP brine waste management operations. The back-up pond is required in the event that part of the DDW system becomes inoperable and/or during MIT and allows time for repair or replacement of system components, see Figure 11.

The brine back-up pond has an operating capacity of 1.6 ac-ft with 30 days of storage during maximum flow (production and restoration phase). It is assumed that the brine back-up pond will only be used to temporarily store fluid which requires disposal in the DDWs.

#### 17.2.2 *Solid Waste Disposal*

Solid wastes will normally consist of spent resin, empty packaging, miscellaneous pipes and fittings, tank sediments, used personal protective equipment and domestic trash. These materials will be classified as contaminated or non-contaminated based on their radiological characteristics.

Non-contaminated solid waste is waste which is not contaminated with radioactive material or which can be decontaminated and re-classified as non-contaminated waste. This type of waste

may include trash, piping, valves, instrumentation, equipment and any other items which are not contaminated or which may be successfully decontaminated. Per the license application for the Project permit area Environmental Report (ER) (ref., AUC, 2012) non-contaminated solid waste for the CPP is estimated to be approximately 22 tons per month. Non-contaminated solid waste will be collected in designated areas at the Project site and disposed of in the nearest permitted sanitary landfill which is located near Gillette, Wyoming, approximately 50 miles north of the CPP (ref., AUC, 2012).

Contaminated solid waste consists of solid waste contaminated with radioactive material and that cannot be decontaminated. This waste will be classified as 11e.(2) byproduct material. This byproduct material will consist of filters, personal protective equipment, spent resin, piping, etc. These materials will be temporarily stored on-site and periodically transported for disposal. AUC will establish an agreement for disposal of this waste as 11e.(2) byproduct material in a licensed waste disposal site or licensed mill tailings facility.

Per the ER, production is estimated to generate approximately 100 cubic yards per year of contaminated 11e.(2) byproduct material. This estimate is based on the waste generation rates of similar *in situ* uranium recovery facilities.

### 17.3 Energy, Water and Process Material Requirements

Chemicals that are anticipated to be used during processing and the assumed annual peak production consumption rates listed in the table below. There may be small quantities of other chemicals used at the site which are not listed in the table below.

**Table 17-1: Estimated Chemical Consumption Rates**

Reagent Consumption		
CO <sub>2</sub> Consumption	1.77	LB/LB U <sub>3</sub> O <sub>8</sub>
O <sub>2</sub> Consumption	5.29	LB/LB U <sub>3</sub> O <sub>8</sub>
Soda Ash Consumption	4.95	LB/LB U <sub>3</sub> O <sub>8</sub>
NaCl Consumption	3.13	LB/LB U <sub>3</sub> O <sub>8</sub>
HCl Sol'n Consumption	2.88	LB/LB U <sub>3</sub> O <sub>8</sub>
H <sub>2</sub> O <sub>2</sub> Sol'n Consumption	0.50	LB/LB U <sub>3</sub> O <sub>8</sub>
NaOH Sol'n Consumption	0.58	LB/LB U <sub>3</sub> O <sub>8</sub>
Na <sub>2</sub> S Consumption	3.42	LB/Kgal

The different types of chemicals will be stored, used and managed so as to ensure worker and environmental safety in accordance with standards developed by regulatory agencies and vendors. The hydrochloric acid and hydrogen peroxide storage areas will include secondary containment. Sodium hydroxide and the various acid and caustic chemicals are of potential concern and will be stored and handled with care. To prevent unintentional releases of hazardous chemicals and limit potential impacts to the public and environment, AUC will implement its internal operating procedures consistent with federal, state and local requirements.

Estimates used in the evaluation presented in this document assume the consumption of approximately 5,500 MBH (thousand British thermal units per hour) of propane and 26.8 million kWh annually of electricity to heat and light the CPP and operate the wellfield and plant process equipment.

## 18.0 Project Infrastructure

The information presented in Section 18 meets the content requirements of NI 43-101 and NI 43-101F1. The basic infrastructure (power, water, and transportation) necessary to support an ISR mining operation at the proposed Project is located within reasonable proximity of the site as further described below.

Tailings storage areas, waste disposal areas, and heap leach pad(s) will not be a part of the infrastructure for the Project as ISR operations do not require these types of facilities.

### 18.1 Electrical Power

Powder River Energy Corporation (PRECorp) is anticipated to be the power provider for the Project. The nearest power source for the Project is estimated to be within two miles of the proposed CPP. Main power for the Reno Creek Resource Unit will be distributed from a point near the plant. From the distribution point, power will be carried overhead to medium voltage transformers located near each header house and the CPP site. The other resource units will have independent distribution systems, but will have individual transformers for each header house. Low voltage lines will be run from these transformers to each service entrance on header house buildings and at the CPP site.

Smaller loads will have a transformer that will reduce from 480 volts to 208/120 volts as required. All three-phase motors will be started and controlled through standard MCCs. A lock-out point will be provided for each motor and the driven machinery as required by the National Electrical Code (NEC).

### 18.2 CPP Fuel

CPP heating will be achieved through use of propane gas.

### 18.3 Sanitary Sewer

A septic system was designed for the PFS and includes treatment and disposal of sanitary waste from the CPP, office/shop/warehouse buildings.

This system includes one 3,000 gallon precast concrete septic tank, one 1,500 gallon precast concrete dosing tank, dosing pump and low-pressure pipe drainfield. This system will not likely be commissioned until the end of the construction phase; therefore, portable sanitation units will be required during the construction phase. The system will be completely isolated from any process water sources.

### 18.4 Fresh Water Well

The Project facilities will require fresh water for showers and other domestic uses. Fresh water will also be available for plant wash down and yellowcake wash, however permeate will be the primary source for all non-potable demands. The domestic water supply system was conceptually designed for this PFS and will consist of a new water supply well, a water treatment (chlorination) capability, treated water storage and a water distribution system. This system will not likely be commissioned until the end of the construction phase; therefore, an alternate potable water source will be required during the construction phase. All potable water sources will also be isolated from any process or raw water systems.

One fresh-water well will be installed near the CPP and equipped with a five-horsepower pump. The well depth at the CPP is anticipated to be 120 feet. The fresh-water well will be in a sandstone interval that is hydrologically isolated from the ore zone. Monitoring and reporting of water quality parameters will meet state and federal requirements.

### 18.5 Roads

Transportation routes within 50-miles (80 km) of the proposed project include Interstate highways, non-Interstate U.S. highways, state highways, county roads and local roads. The state transportation routes from the nearest communities are via State Highway 387 between Wright and the highways leading to Kaycee and Edgerton-Midwest. From Wright, State Highway 59 leads north 40 miles to Gillette.

Local access roads within the proposed Project area are Clarkelen/Turnercrest Road and Cosner Road. These roads are improved, all-weather, unpaved roads. In addition to the designated routes, there are a number of routes that traverse the proposed project area for grazing access and other uses such as oil and gas facility access, CBM and oil and gas exploration and production.

The primary state and U.S. highways are well maintained year around. The county roads within the proposed project area that receive less traffic, generally speaking, are maintained and are in fair condition, depending on the season and how recently maintenance occurred. However, the privately owned two-track roads in some portions of the proposed project area can be difficult to navigate in winter and wet weather months due to minimal maintenance and poor drainage. Many of the two-track roads are indistinct, difficult to delineate, or do not have obvious end points.

During the construction, operation, restoration and decommissioning phases of the Project, immediate access to the Project area will be from State Highway 387, from the east or the west. The workforce for each phase will be primarily from Gillette, Wyoming using State Highway 59 then westbound State Highway 387 and from Casper, Wyoming using Interstate Highway 25 then eastbound State Highway 387.

Primary access roads will be used for routine access to the CPP area. The proposed CPP borders Clarkelen Road, a County Road. Therefore, minimal access road construction is required. The close proximity of the CPP to all-weather maintained graveled county roads will be beneficial with respect to transportation of equipment, supplies, personnel and product to and from the CPP.

The secondary access roads will be used at the Project to provide access to the header house buildings. The secondary access roads will be constructed with limited cut and fill construction and may be surfaced with small sized aggregate or other appropriate material.

The temporary wellfield access roads are for access to drilling sites, wellfield development, or ancillary areas assisting in wellfield development. Where possible, AUC will use existing two-track trails or designate two-track trails where the land surface is not typically modified to accommodate the road. These roads will not be surfaced. The temporary wellfield access roads will be used throughout the PUs.

## 19.0 Market Studies and Contracts

The information presented in Section 19 meets the content requirements of NI 43-101 and NI 43-101F1.

### 19.1 Product markets, Analyses and Pricing

Sales of  $U_3O_8$  are predominantly contracted on a long term basis with prices determined by a pre-set formulae linked to the reported long term and/or spot prices. AUC has not entered into nor have they initiated negotiations on a contract for uranium sales. For PFS modeling purposes AUC has adopted a price forecast based on averaging uranium price forecasts developed by several investment banks and forecast consulting firms. The PFS assumes  $U_3O_8$  production is sold at a contract price of US\$65.00 per pound based on a compilation from various price projection sources.

Demand for uranium is expected to continue to rise for the foreseeable future. Although the Fukushima Daiichi nuclear accident has affected nuclear power projects and policies in some countries, nuclear power remains a key and growing part of the global energy mix. Several governments have plans for new nuclear power plant construction, with the strongest expansion expected in China, India, the Republic of Korea and the Russian Federation. The speed and magnitude of growth in generating capacity elsewhere is still to be determined.

By the year 2035, according to the joint NEA-IAEA Secretariat, world nuclear electricity generating capacity is projected to grow from 375 GWe net (at the end of 2010) to between 540 GWe net in the low demand case and 746 GWe net in the high demand case, increases of 44% and 99% respectively. Accordingly, world annual reactor-related uranium requirements are projected to rise from 63,875 tonnes of uranium metal (tU) at the end of 2010 to between 98,000 tU and 136,000 tU by 2035 (ref., IAEA, 2011).

Although ample geologic resources are available, meeting projected demand will require timely investments in new uranium production facilities. This is because of the long lead times (typically in the order of ten years or more in most producing countries) required to develop production facilities that can turn resources into refined uranium ready for nuclear fuel production.

### 19.2 Contracts

AUC has no contracts in place for property development other than the leases and claims described in Section 4.0. No contracts will be required mining or processing as this will be performed with in house resources. Contracts for transportation, handling and sales will be developed in the future, prior to commencement of production.

## 20.0 Environmental Studies, Permitting, and Social or Community Impact

The information presented in Section 20 meets the content requirements of NI 43-101 and NI 43-101F1.

AUC submitted its license application to NRC license in October, 2012. Its WDEQ application for a permit to mine was submitted in January of 2013 (ref., AUC, 2012 and AUC, 2013). The area addressed by the license and permit applications is shown on Figure 1 and includes the Reno Creek Resource Unit. This area does not include the Moore, Bing or Pine Tree PU's. License and permit amendments will be developed in the future for these areas, see the life of mine schedule, Figure 8. The results of the baseline studies performed for the license and permit applications for the Reno Creek Project area indicate that specific environmental concerns are not likely for the Moore, Bing or Pine Tree Resource Units.

### 20.1 Environmental Studies and Issues

NRC license pre-submittal meetings were held November 15-17, 2011 between AUC and the NRC in Wright, Wyoming. The public were invited to attend but none were present at the meetings. The pre-submission audit consisted of a site tour and an audit of the preliminary draft application. The NRC staff commented on the document and those comments were addressed within the final application. Because NRC comments have been addressed in the current the license application, it is anticipated that the license will be approved with minimal requests for additional information. Therefore, it is anticipated that no major issues will be raised that will prevent approval of the necessary permit or license amendments for the Moore, Bing and Pine Tree Resources Areas. A summary of the results of site-specific environmental studies is detailed below.

#### 20.1.1 Surface and Groundwater Quality

All streams within the proposed Project area and two mile buffer are classified as ephemeral streams incapable of supporting fish populations or drinking water supplies. All drainages in the proposed project area are also ephemeral in nature. The predominant source of surface water is from thunderstorms and spring snowmelt. No land is used for crops or other irrigated vegetation within the proposed Project boundary. The few water bodies that do exist across the proposed project area are scattered and small and are primarily man-made stock watering impoundments. The impoundments accumulate limited rainfall and snowmelt, plus CBM discharge water and water from stock wells.

Surface water runoff from precipitation (rain and snowmelt) at the proposed project facilities will flow from the facilities area to natural drainages. None of the runoff will flow directly into either artificial or natural streams or wetlands. The potential for contamination of surface-water runoff is also minimal because the CPP and back-up pond are self-contained. All exterior chemical and fuel tanks will have a means of secondary containment, including cement curbs, berms and CPP walls. The CPP and back-up pond area will be graded and sloped to direct precipitation runoff away from building foundations in all directions to a storm water conveyance system. The storm water conveyance system will be designed to pass the 50-year flood. Due to the location of the CPP, back-up pond, and wellfield areas related to the surrounding topography, impacts from flooding are expected to be minimal.

Within the proposed Project area, the overlying aquifer is considered the uppermost aquifer. Based on the depth to the top of the overlying aquifer and the observed sequence of finer grained silt and shale that overlies this aquifer, the overlying aquifer is considered isolated from the surface water drainages present in the proposed Project area. As all surface drainages in the Project area are characterized as ephemeral, the lack of a perennial wetting front and the distance between ground surface and the top of the overlying aquifer support this conclusion of isolation between surface water infiltrations reaching the overlying aquifer.

The underlying unit within the proposed Project area is comprised of relatively ratty sandstones that are discontinuous and often lenticular. This underlying unit is not continuous or hydraulically connected across the Project area, based on geologic data and potentiometric data.

Based upon the extremely low well yields and hydraulic conductivities at wells completed in this underlying unit, this unit does not meet the definition of an aquifer according to 10 CFR Part 40.

Rocky Mountain Energy (RME) conducted a series of hydrogeological investigations within the Project area in 1982. The significance of the Hydrogeological Integrity Study conducted by RME demonstrates that the numerous exploratory boreholes do not provide a conduit to crossflow of groundwater between aquifer units, due to the natural sealing capacity of the swelling clays present in confining units with respect to the production zone sand. Recent pump testing and re-entry of many historical drill holes conducted across the Project area has also provided additional confirmation of hydraulic isolation of the overlying aquifer and underlying unit (which is not considered an aquifer) with respect to the production zone.

Groundwater flow in the Production Zone Aquifer (PZA) is to the northeast and structural dip is to the northwest at approximately 35 to 50 feet per mile. Geologic confinement of the PZA by the overlying and underlying aquitards exists across the entire project area. Aquifer conditions transition from fully saturated in the western portion of the Project area to partially saturated conditions in the eastern project area. Based on available information to date, partially saturated conditions exist in approximately 30 percent of the Project area.

#### 20.1.2 *Cultural and Historic Resources*

Cultural resources, which are protected under the National Historic Preservation Act (NHPA) of 1966, are nonrenewable remains of past human activity. There are no culturally significant places listed in either the National Register of Historic Places (NRHP) or state registers for the Project area. An intensive Class III Cultural Resource Evaluation for the Project was conducted between August 5, 2010 and December 11, 2010. Seventy-nine cultural localities are known within the Project area, all of which have been evaluated as not eligible for the NHRP. To date there are no Native American Heritage sites which have been formally identified and recorded which are associated with the Project area. However, the Project area is geographically located 7.5-miles from the Pumpkin Buttes which have been identified as a traditional cultural property (TCP). The Project area is located well beyond the TCP boundary which negates the necessity to obtain a mandatory Memorandum of Agreement (MOA) for the operation of the Project facility. Regardless, AUC commits to ongoing monitoring of historic and cultural resources as project development progresses. Mitigation measures consistent with approved ISR operations elsewhere in Wyoming are proposed by AUC to avoid or reduce cultural resource impacts. Based on the cultural resources evaluations conducted to date, it is deemed unlikely that any such resources will be discovered during construction or operation.

### 20.1.3 *Paleontological Resources*

The BLM utilizes the Potential Fossil Classification System (PFYC) for land use planning efforts and for the preliminary assessment of potential impacts and proper mitigation needs for specific projects. The entirety of the Project area is considered the Wasatch Formation which the BLM designates a PFYC Class 5. This rating suggests that a very high relative abundance of vertebrate, invertebrate or plant fossils may exist in the area. However, the Class III survey conducted in 2010 found no fossil or other paleontological evidence at the Project area.

### 20.1.4 *Visual and Scenic Resources*

A site-specific Visual Resource Management (VRM) evaluation for the Project area was conducted July 2011 based on methods provided in BLM Manual 8410. The key factors of landform, vegetation, water, color, influence of adjacent scenery, scarcity and cultural modifications were evaluated and scored according to the rating criteria. If the visual resource evaluation rating is 19 or less, no further evaluation is required. Based on the site specific evaluation the total score of the scenic quality inventory for the Project is eight (8) out of the possible 32. Therefore, no further evaluation is required for existing scenic resources and any changes to scenic resources from Project facilities.

### 20.1.5 *Threatened, Endangered, or Candidate Species*

The USFWS has identified three federally listed species potentially occurring in Campbell County that require monitoring for project development. Those include two plant species, the Ute ladies'-tresses (threatened) and blowout penstemon (endangered), and one vertebrate species, the greater sage-grouse (candidate) (USFWS 2010). No individuals or populations of blowout penstemon or Ute ladies'-tresses were found during field surveys of the Reno Creek Permit area, and local habitat was confirmed unsuitable for either plant species. Other than a single female sage-grouse that was documented in 2011, no threatened, endangered, candidate, or proposed wildlife species have been documented in the Reno Creek Permit survey area during surveys. There are three sage-grouse leks within four miles of the Reno Creek Permit boundary; all are east and southeast of the boundary. The closest core areas are the Buffalo and Thunder Basin areas located approximately 20 miles west and east, respectively, of the Project area. However, no core or connectivity areas for sage-grouse have been designated by the State of Wyoming in the Project area or the four mile review area. The sage-grouse is currently considered a candidate species under the Endangered Species Act (ESA), and will undergo an annual review of its status to determine if a change in that decision is warranted. As part of the permitting process, the Moore, Bing and Pine Tree properties will be surveyed and it is anticipated that findings will be similar to the Reno Creek Permit Area.

## 20.2 Byproduct Disposal

11e.(2) or non-11e.(2) byproduct disposal methods are discussed in detail in Section 17. Deep disposal wells, landfills, and licensed 11e.(2) facilities will be used depending on the level of contamination for the given waste product.

## 20.3 Permitting Requirements, Permit Status, Financial Assurance

Permitting requirements, status and financial assurance are discussed in other sections of this PFS. A summary of each of these subjects is provided below.



### 20.3.1 *Permit Status*

Permit status is discussed in Section 4.5. In summary, the Source Materials License application for the Project Permit Area has been submitted to the NRC and is under review. The Permit to Mine application for the Project Permit Area was submitted to the WDEQ/LQD in January 2013.

Other permits are in the process of being developed or have been developed and submitted to the appropriate regulatory agencies, see Table 4-1.

The Moore, Bing and Pine Tree Resource Units will require that license and permit amendments be developed prior to construction or operations in these areas.

### 20.3.2 *Financial Assurance*

Financial Surety will be required by the State of Wyoming and the NRC. The Project will be secured for the entire estimated amount of total closure costs which include groundwater restoration, facility decommissioning and reclamation. The financial surety cost estimate assumes zero percent interest earned on the surety bond. The annual financial surety amount is based on the estimated amount of annual development that would require closure in the case of default by the owner.

## 20.4 Community Affairs

AUC has an ongoing community affairs program, directed by senior staff, its environmental manager, and its land department. AUC maintains routine contacts with landowners, local communities and businesses, and the general public. The senior operational managers, environmental manager, and landman will be onsite at the facility, and are included in the administrative support labor costs in operating costs.

## 20.5 Project Closure

### 20.5.1 *Well Abandonment / Groundwater Restoration*

Groundwater restoration will begin as soon as practicable after uranium recovery in each wellfield is completed (as determined by project economics). If a depleted wellfield is near an area that is being recovered, a portion of the depleted area's restoration may be delayed to limit interference with the on-going recovery operations. A reductant, sodium sulfide, is planned to be used to enhance the groundwater restoration process.

Restoration completion assumes up to seven pore volumes of groundwater will be extracted and treated by reverse osmosis. Following completion of successful restoration activities, the injection and recovery wells will be plugged and abandoned in accordance with WDEQ/LQD regulations. Monitor wells will also be abandoned following verification of successful groundwater restoration.

### 20.5.2 *Demolition and Removal of Infrastructure*

Simultaneous with well abandonment operations, the trunk and feeder pipelines will be removed, tested for radiological contamination, segregated as either solid 11e.(2) or non-11e.(2) then chipped and transported to appropriate disposal facilities. The header houses will be disconnected from their foundations, decontaminated, segregated as either solid 11e.(2) or non-11e.(2), and transported to appropriate disposal facilities. The CPP processing equipment and

ancillary structures will be demolished, tested for radiological properties, segregated and either scrapped or disposed of in appropriate disposal facilities based on their radiological properties.

### *20.5.3 Site Grading and Revegetation*

Following the removal of wellfield and CPP infrastructure, site roads, which the surface owner does not desire to keep, will be removed and the site will be re-graded to approximate pre-development contours and the stockpiled topsoil placed over disturbed areas. The disturbed areas will then be seeded.

## 21.0 Capital and Operating Costs

The information presented in Section 21 meets the content requirements of NI 43-101 and NI 43-101F1.

TREC prepared this estimate of capital and operating Costs on the basis of the design data and assumptions described herein. The costs were developed on a first principles basis, including specifications and current vendor quotes for all major pieces of equipment and installation and construction costs.

### 21.1 Capital Costs

The capital costs provided below address the development of a 1.5 mlbs annual capacity CPP located within the Project area and the associated wellfields within the PUs. Capital cost estimates are representative of the capital and infrastructure costs required for the estimated resources as of the date of this report. The current life of mine schedule, Figure 8, anticipates that pre-production construction work will begin in Year 1. This work consists of constructing a 1.5 mlbs annual capacity CPP and developing the first PU within the Reno Creek Resource Unit. The further development of wellfields will be expensed as “Subsequent” capital costs and are discussed in Section 21.2.

Detailed discussion of mining and recovery methods and associated infrastructure are provided in Sections 16, 17 and 18.

The following sections provide a summary of the quantities and assumptions used to develop the initial capital costs for the CPP and PU 1. Table 21-1 provides a summary of all capital costs and illustrates how the development costs have been divided between initial capital and “Subsequent” capital costs. Total initial capital costs are estimated at \$75.5 million, including initial capital for the CPP of \$43.8 million, the capital cost for PU1 of \$18.9 million, and indirect costs of \$12.7 million. Life-cycle capital costs, the cost for all development, is estimated at US\$198.5 million, and includes both indirect costs and EPCM.

**Table 21-1: Development Cost Summary**

Item Description <sup>1</sup>	Initial Capital <sup>2</sup> CPP & PU1 (\$US 000s)	Subsequent <sup>3</sup> Capital PUs 2-18 (\$US 000s)	Total Capital Costs (\$US 000s)
<b>DIRECT COSTS<sup>4</sup></b>			
<b>Plant (CPP) Development Costs</b>			
IX Circuit	\$ 6,131	\$ -	\$ 6,131
Elution Circuit	\$ 879	\$ -	\$ 879
Drying & Precipitation Circuit	\$ 4,204	\$ -	\$ 4,204
Groundwater Restoration Circuit <sup>5</sup>	\$ 893	\$ 4,623	\$ 5,516
Building & Infrastructure <sup>6</sup>	\$ 15,306	\$ -	\$ 15,306
Installation Costs	\$ 4,335	\$ -	\$ 4,335
Deep Disposal Wells <sup>7</sup>	\$ 6,360	\$ 6,360	\$ 12,720
<i>Subtotal</i>	\$ 38,108	\$ 10,983	\$ 49,091
Contingency (Average of approximately 14%)	\$ 5,708	\$ 1,136	\$ 6,844
<b><i>Plant Development Cost Subtotal</i></b>	<b>\$ 43,816</b>	<b>\$ 12,119</b>	<b>\$ 55,935</b>
<b>Wellfield Development Costs</b>			
Wellfield Cost <sup>8</sup>	\$ 16,736	\$ 98,186	\$ 114,922
Contingency (Average of approximately 13%)	\$ 2,170	\$ 12,729	\$ 14,899
<b><i>Wellfield Development Cost Subtotal</i></b>	<b>\$ 18,906</b>	<b>\$ 110,915</b>	<b>\$ 129,821</b>
<b>INDIRECT COSTS</b>			
Engineering, Procurement & Construction Management	\$ 1,060	\$ -	\$ 1,060
Labor <sup>9</sup>	\$ 2,879	\$ -	\$ 2,879
Financial Assurance <sup>10</sup>	\$ 6,880	\$ -	\$ 6,880
<i>Subtotal</i>	\$ 10,819	\$ -	\$ 10,819
Contingency (Average of approximately 18%)	\$ 1,917	\$ -	\$ 1,917
<b><i>Indirect Cost Subtotal</i></b>	<b>\$ 12,735</b>	<b>\$ -</b>	<b>\$ 12,735</b>
<b>TOTAL DEVELOPMENT COSTS</b>	<b>\$ 75,457</b>	<b>\$ 123,034</b>	<b>\$ 198,491</b>

**Notes:**

- 1) Individual line item costs are shown without contingency. Contingency must be considered as part of the total cost.
- 2) Costs associated with CPP incurred in Years -1 and 1, and costs associated with PU1 incurred in Years 1 and 2.
- 3) Subsequent development costs will be incurred following startup.
- 4) Includes 6% sales tax on applicable items.
- 5) Cost for some restoration items, including secondary RO, will be incurred in Years 2 and 3.
- 6) Includes cost of land acquisition for the CPP site.
- 7) Four deep disposal wells; two in Year 1, one in Year 2 and one in Year 3.
- 8) Initial and Subsequent Wellfield CAPEX are referenced from the Wellfield Development Costs Summary, Table 22-6, and are shown on this table, Table 21-1, without contingency. Initial Capital costs include Production Unit 1 and miscellaneous wellfield costs. AUC labor is included in Wellfield Completion / Restoration Labor shown in the Wellfield Development Cost Summary, Table 21-6 and is not included in this table.
- 9) Labor costs incurred prior to commencement of CPP & PU1 production.
- 10) The costs for Bonding are incurred before the start of production, and are also shown with contingency in Year 1 of the Annual Operating Cost Summary, Table 21-4. On the Cash Flow Statement, Table 22-1, they are included under Financial Assurance.

The predicted level of accuracy of the capital cost estimate is +/- 25 percent. The budget prices for the major items identified in this study have been sourced in the United States.

The capital costs developed for and presented in this PFS are based on typical uranium ISR wellfield designs and the PFS preliminary design. Pre-construction capital costs for permitting, drilling work, etc., are identified in the Cash Flow summary.

The design includes process flow diagrams, mass balance, water balance, materials balance, chemical consumption estimates, tank sizes, and specific processing circuit components (i.e., type of filter press, dryer, etc.). Line sizing, material types, pumps, valves and instrumentation have been identified and priced. In addition, the wellfield design used for this PFS includes estimated well and header house locations, well depths, construction materials and anticipated flow rates. To facilitate the development of capital cost estimates, TREC used the following from the PFS preliminary design and similar projects for which TREC has provided engineering, procurement and construction management services:

- Mechanical equipment requirements,
- CPP design and equipment takeoffs,
- Building layouts,
- Chemical types and consumption rates,
- Well details and depths,
- Wellfield layout (injection, recovery and monitoring well locations), and
- Anticipated well and total system production rates.

The capital cost estimates were developed using a series of detailed estimating spreadsheets including:

- Injection, recovery and monitoring well estimating sheets,
- Header house estimating sheets,
- Wellfield piping, electrical cable and trenching estimating sheets,
- Vendor estimates for mechanical equipment and structures, and
- Miscellaneous capital equipment (i.e., light vehicles, support and maintenance vehicles).

### 21.1.1 Wellfields

The Project includes four Resource Units for the *in situ* recovery of uranium from the mineralized zones (see Figure 1). Figure 1 presents locations of the CPP along with the preliminary trunk line layout for each of the Resource Units and associated PU's.

PU 1 will be the first production area constructed and has been considered an initial capital cost, as most of the area will be completed prior to production. During the initial construction of the PU and CPP, it is assumed that approximately 28 wellfield installation staff and 9 administrative staff will be required to perform the construction. The administrative personnel required to manage wellfield construction will also manage plant production staff and are described again in Section 21.2.

**Table 21-2: Initial Construction Personnel**

<b>Administration</b>	
Mine Manager	1
Environmental Manager	1
Radiation Safety Officer	1
IT Tech and Data Base	1
Purchasing Agent	1
Environmental Technician	3
Warehouse Foreman	1
<i>Subtotal:</i>	9
<b>Wellfield Completion / Restoration</b>	
MIT operator/laborer	2
Construction/Reclamation crew foreman	1
Construction/Reclamation crew /laborer	5
Well Logger/technician	2
Casing and cementing crew/laborers	5
Hole and Well Plugging	4
Staff Geologist	6
Senior Geologist	2
Drilling Supervisor	1
<i>Subtotal:</i>	28
<b>Total:</b>	<b>37</b>

Salaries and labor burden used for this PFS are based on the salaries, wages and benefits provided by AUC.

The current Project schedule anticipates that pre-production construction will occur in Year 1 and the remaining PUs will be developed and constructed in Year 2 through Year 10. The remaining wellfield costs are considered on-going development costs (subsequent wellfield installation costs) and are discussed later in this section.

Non-labor, pre-production construction costs were estimated based on the preliminary wellfield design including the number, location, depth and construction material specifications for well and header houses. A preliminary design for the Project, CPP and wellfields, was developed and used to estimate quantities. The detailed cost estimates were compiled using information from this preliminary design and TREC's cost database.

The first PU will begin construction in Year 1 and is therefore included in initial capital costs, and was designed to consist of:

- 252 injection wells,
- 180 recovery wells,
- 42 monitor wells, and
- 6 header houses.

Additionally, costs for associated trunk and feeder pipelines, electrical service and wellfield fencing are included.

### 21.1.2 *Central Processing Plant*

The proposed location of the CPP is shown on Figure 1 and the CPP layout is depicted on Figure 11 and is estimated to be approximately 50,000 square feet. All process equipment will be housed in the CPP which will consist of a typical industrial metal building. The CPP will include a 3,000 square foot laboratory. An additional 12,000 square foot office/shop/warehouse building will be located near the CPP, see Figure 11.

AUC anticipates contracting the construction of the CPP to a third party and will provide one construction manager/engineer to oversee and verify CPP construction. All process equipment and bulk storage tanks in the CPP design are included in plant development costs.

The CPP is permitted to process 11,000 gpm of lixiviant and produce 2.0 mlbs of  $U_3O_8$  annually. This PFS is based on an average peak production of approximately 1.5 mlbs of  $U_3O_8$  annually.

### 21.1.3 *Piping*

Piping will be required between the various processing units and bulk storage tanks. Estimates for pipe length and material type were developed based on the preliminary design for the CPP and experience on other similar projects. Piping will consist primarily of HDPE and PVC with some carbon steel and stainless steel.

### 21.1.4 *Earthwork and Topsoil Management*

Earthwork that will be required for the Project will include site grading for the CPP/laboratory, office/shop/warehouse building area, internal access roads and excavation and backfill for header houses, buried piping and electrical service. Injection and recovery pipelines will be buried a minimum of 48 inches below the existing ground surface and each header house will have a containment structure with a sump. Topsoil will be salvaged from any disturbed areas prior to construction in accordance with WDEQ/LQD requirements using common earth moving equipment. Topsoil salvage operations for the wellfield will be limited to the removal of topsoil at header house locations, pipeline trench alignments and separation of topsoil from mud pits at drill sites. Topsoil that is salvaged during construction activities will be stored in designated topsoil stockpiles and managed per regulatory requirements.

### 21.1.5 *Concrete*

Concrete will be used for foundations below all structures and flatwork within the CPP. A drilled pier foundation system has been assumed to support the building, with all processing equipment being supported by a mat foundation. The foundation assumptions are based on the results of the geotechnical report (ref., Inberg-Miller Engineers, 2012) which recommended the design of either a drilled pier or mat foundation system due to expansive soils located in the building footprint. A conceptual foundation system design was prepared for developing costs for this PFS. Processing circuits may also be contained by sloping the concrete floor slab with drainage to a sump for spill containment and recovery. All chemical storage tanks will include secondary containment and recovery systems.

### 21.1.6 *Structural Steelwork*

Structural steel work includes the frame for the CPP/laboratory, office/shop/warehouse building, resin shakers, elution/precipitation equipment access, and filter press and dryer support.

Estimates have been prepared from the preliminary layout designs, and preliminary vendor building designs and pricing.

### 21.1.7 *Electrical and Instrumentation*

Accessible overhead electrical is expected to be near the Project vicinity and is assumed to be within two miles of the Project buildings. Power drops will be distributed to the CPP site, wellfields, etc. One 500 kW diesel generator is included in the capital cost for back-up power for vital functions at the CPP. Power supply, consumption and distribution quantities and costs are included in the cost estimates for the various Project components. The cost estimates assume that electrical capacity is available in the regional electrical utility's system.

Detailed wellfield instrumentation designs had not been completed at the time this PFS was prepared. Therefore, instrumentation and control costs have been estimated based on providing an automated system to monitor operations at central locations such as the CPP and header houses.

For the PU 1 wellfields and CPP capital cost estimates, the following instrumentation was assumed and associated costs were developed:

#### PU 1 Wellfields -

- Pressure transmitters for injection and recovery feeder lines within header houses,
- Flow meters for injection and recovery feeder lines within header houses,
- Manual/automated shut off, flow control valves,
- SCADA and telemetric monitoring and controls.

#### CPP –

- Pump speed control,
- Pressure transmitters,
- Flow transmitters,
- Liquid level transducers,
- pH measurement,
- Automatic shut off valves,
- Temperature controls,
- Automated chemical feed controls, and
- SCADA monitoring and control.

### 21.1.8 *Infrastructure and Facilities*

#### 21.1.8.1 Sanitary Sewer

A septic system is assumed to service both the CPP and office/shop/warehouse building. The system will be for treatment/disposal of sanitary waste from the CPP, office/shop/maintenance buildings. All other wastewater generated from within the CPP will be disposed of via the DDWs.



#### 21.1.8.2 Fresh Water Well

The Project facilities will require fresh water for showers and other domestic uses. Fresh water will also be available for plant wash down and yellowcake wash, however permeate will be the primary source for all non-potable demands. One fresh-water well will be installed near the CPP. The well depth at the CPP is anticipated to be 120 feet. The well will include a five-horsepower pump.

#### 21.1.8.3 Roadwork and Site Drainage

There are three types of roads that will be used for access to the Project. They include primary access roads, secondary access roads and temporary wellfield access roads. Figure 1 shows the local road network and the CPP access road.

The construction for the primary access road to the CPP is included in the CPP capital costs. AUC will construct or improve approximately 30 miles of new roads for wellfield access.

Culverts and drainage ditches have been designed for the CPP. These costs are included in the CPP capital costs. The access road to the CPP will be 30 feet wide with gravel surface. Snow removal and periodic surface maintenance will be required.

The secondary access roads will be used at the Project to provide access to the wellfield header houses. The secondary access roads will be constructed with limited cut and fill construction, culverts as necessary and may be surfaced with small sized aggregate or other appropriate material.

The temporary wellfield access roads are for access to drilling sites, wellfield development, or ancillary areas assisting in wellfield development, operation and maintenance. The temporary wellfield access roads will be used throughout the Resource Units.

#### 21.1.8.4 Communications

On-site communications will be comprised of inter-connected mobile and fixed systems. The mobile system will consist of a base radio station with hand-held and vehicle-mounted slave sets. The fixed system will include a master “communications manager” controlling a network of fixed handsets and an Ethernet data network for external communications.

#### 21.1.8.5 Laboratory Equipment

Laboratory equipment will consist of ICP for uranium and metals analyses, an auto-titrator for alkalinity and chloride measurements, specific conductance meter and other equipment, materials and supplies required to efficiently operate the mine and CPP. In addition, the laboratory will require fume hoods, reagent storage cabinets and other safety equipment. Costs for laboratory equipment, supplies and set-up have been included in the CPP capital cost estimate.

Uranium analysis of column tails will ultimately determine resin transfer frequency while knowledge of column feed grade and flow will allow the operator to predict breakthrough. The laboratory instrumentation will be used to verify calibration and operation of automated process control equipment. In the event of monitor well excursions, the CPP laboratory will be equipped to perform rapid conductivity analysis to monitor efforts at wellfield balancing.

21.1.8.6 Deep Disposal Wells

Two DDWs will be constructed before production commences. Two additional DDWs are anticipated.

21.1.8.7 Vehicles and Miscellaneous

Vehicles and equipment that will be required include:

**Table 21-3: Anticipated Vehicles and Equipment**

<u>Item</u>	<u>No.</u>
Pick-up Trucks	11
Cement Silo	1
Water truck	1
Redi-mix truck	1
Hose-reel Units	2
Pulling Unit	2
Portable Air Compressor	1
AWD Forklift	3
Backhoe	4
Farm Tractor/Implements	2
Motor Grader	2
Tool sets	20
Welder	4
Utility Trailer	1
Flat Reel	2
Telehandler	1
VacTruck	2
Grout Trailer	2
Pipe chippers	2
MIT Truck	2
HDPE Fusion Equipment	4 Lots

21.1.8.8 Security

Due to the remote location of the facilities and continuous operation, manned security is not anticipated to be necessary. The backup pond at the CPP will be enclosed by a wildlife

exclusion fence. The CPP facility will be enclosed by a standard eight foot chain link security fence. In addition, typical operations will be 24 hours per day and seven days per week. AUC personnel will be on-site continuously.

#### 21.1.8.9 Owner's Costs

AUC will provide site representatives during initial CPP and wellfield construction. Additionally, AUC will provide the crews to construct wellfield components including well logging, MIT testing, geological interpretation, wellhead and header house construction and trenching and pipeline construction as described above.

#### *21.1.9 EPCM and Expenses*

Engineering, procurement and construction management (EPCM) services will be performed with contracted services. The capital cost estimate assumes an AUC construction and management staff of 37 working on the CPP and wellfield construction.

#### *21.1.10 Contingency and Sales Tax*

Variable contingency ranging from 5 to 30 percent has been applied to individual materials, activities and estimates. The weighted average of all applied contingency is equivalent to 12 percent over the total cost of the project. The magnitude of contingency for each item was determined by how recently the quote was received, the historical cost volatility of the item and the level of confidence in the designated quantity, e.g. trunkline lengths. This level of contingency has been substantiated on other similar sized construction projects for which the Author has recent experience. Sales tax has been assumed to be six percent for all materials. See Section 22.3 for additional discussion on taxes.

### 21.2 Operating Costs

#### *21.2.1 Operating Cost Estimate Allocation and Methodology*

The operating costs have been developed by evaluating each process unit operation and the associated required services (chemicals, power, water, air, waste disposal), infrastructure (offices, change rooms shop), salary and burden, and environmental control (heat, air conditioning, monitoring). The basis for the operating cost estimate is the life of mine schedule presented on Figure 8 and is based on design wellfield flows and head grade, process flow-sheets, preliminary process design, materials balance and estimated Project manpower requirements. The Annual Operating Cost Summary for the Project is provided in Table 21-4. Total operating costs have been estimated at \$10.69 per pound of U<sub>3</sub>O<sub>8</sub> produced including plant and wellfield operating costs of \$8.59 and restoration, D&D and reclamation costs of \$2.10 per pound. In addition, administrative support costs have been estimated at \$0.63 per pound of U<sub>3</sub>O<sub>8</sub> produced, see Table 21-4. Wellfield development costs have been estimated at \$10.29. See Table 21-6.

The predicted level of accuracy of the operating and closure cost estimates is approximately +/- 25 percent. The prices for the major items identified in this PFS have been sourced in the United States.

**Table 21-4: Annual Operating Costs Summary**

LIFE OF MINE OPERATING COSTS	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Total	Average Contingency	\$ per Pound	
Plant Operating Labor <sup>1</sup>	\$0	\$0	\$0	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$686,438	\$480,506	\$343,219	\$0	\$16,611,788	5%	\$1.06	
Plant Operating Expenses	\$0	\$0	\$375,620	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$2,682,997	\$1,878,098	\$1,341,499	\$0	\$65,304,154	10%	\$4.18	
Wellfield Operating Labor <sup>1</sup>	\$0	\$0	\$0	\$576,844	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$766,561	\$310,214	\$0	\$0	\$8,575,744	5%	\$0.55	
Wellfield Operating Expenses	\$0	\$0	\$153,398	\$1,643,546	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,184,090	\$883,863	\$0	\$0	\$24,587,449	10%	\$1.57	
Project General & Administrative <sup>2</sup>	\$0	\$156,513	\$647,969	\$1,290,857	\$1,386,226	\$1,396,784	\$1,397,522	\$1,398,427	\$1,398,778	\$1,398,628	\$1,398,410	\$1,395,692	\$1,371,944	\$1,293,392	\$1,229,937	\$922,062	\$647,969	\$298,984	\$19,030,093	7%	\$1.22	
<b>Plant &amp; Wellfield Operating Costs<sup>3</sup></b>	<b>\$0</b>	<b>\$156,513</b>	<b>\$1,176,986</b>	<b>\$10,250,116</b>	<b>\$11,085,615</b>	<b>\$11,096,173</b>	<b>\$11,096,911</b>	<b>\$11,097,816</b>	<b>\$11,098,167</b>	<b>\$11,098,017</b>	<b>\$11,097,800</b>	<b>\$11,095,082</b>	<b>\$11,071,334</b>	<b>\$10,982,913</b>	<b>\$5,793,448</b>	<b>\$3,280,666</b>	<b>\$2,332,686</b>	<b>\$298,984</b>	<b>\$134,109,227</b>		<b>\$8.59</b>	
Wellfield Restoration <sup>4</sup>	\$0	\$0	\$0	\$0	\$0	\$491,848	\$983,696	\$1,475,543	\$1,967,391	\$1,475,543	\$1,475,543	\$2,459,239	\$2,459,239	\$1,967,391	\$1,967,391	\$983,696	\$0	\$0	\$17,706,520	25%	\$1.13	
Decontamination / Decommissioning / Reclamation <sup>5</sup>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$403,534	\$807,068	\$403,534	\$807,068	\$807,068	\$807,068	\$807,068	\$807,068	\$1,210,602	\$807,068	\$6,931,714	\$1,322,513	\$15,114,306	25%	\$0.97
<b>Restoration, D&amp;D and Reclamation Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$491,848</b>	<b>\$983,696</b>	<b>\$1,879,077</b>	<b>\$2,774,459</b>	<b>\$1,879,077</b>	<b>\$2,282,611</b>	<b>\$3,266,307</b>	<b>\$3,266,307</b>	<b>\$2,774,459</b>	<b>\$3,177,993</b>	<b>\$1,790,764</b>	<b>\$6,931,714</b>	<b>\$1,322,513</b>	<b>\$32,820,826</b>		<b>\$2.10</b>	
<b>Total Operating Costs</b>	<b>\$0</b>	<b>\$156,513</b>	<b>\$1,176,986</b>	<b>\$10,250,116</b>	<b>\$11,085,615</b>	<b>\$11,588,021</b>	<b>\$12,080,607</b>	<b>\$12,976,893</b>	<b>\$13,872,626</b>	<b>\$12,977,095</b>	<b>\$13,380,411</b>	<b>\$14,361,388</b>	<b>\$14,337,641</b>	<b>\$13,757,372</b>	<b>\$8,971,441</b>	<b>\$5,071,430</b>	<b>\$9,264,400</b>	<b>\$1,621,498</b>	<b>\$166,930,053</b>	<b>12%</b>	<b>\$10.69</b>	
LIFE OF MINE ADMINISTRATIVE SUPPORT COSTS	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Total	Average Contingency	\$ per Pound	
Administrative <sup>6</sup>	\$0	\$60,394	\$247,475	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$321,213	\$247,475	\$98,738	\$5,714,694	0%	\$0.37	
Financial Assurance <sup>7</sup>	\$0	\$0	\$8,599,798	\$3,495,819	\$1,248,507	\$2,746,715	\$2,746,715	\$1,498,208	\$2,746,715	-\$1,498,208	\$2,996,416	\$0	-\$2,746,715	-\$2,996,416	-\$2,746,715	-\$3,995,221	-\$6,672,061	-\$5,423,555	\$0	25%	\$0.00	
License / Permit Amendments	\$0	\$0	\$350,000	\$350,000	\$350,000	\$1,000,000	\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,050,000	0%	\$0.26	
<b>Administrative Support Costs</b>	<b>\$0</b>	<b>\$60,394</b>	<b>\$9,197,273</b>	<b>\$4,240,769</b>	<b>\$1,993,457</b>	<b>\$4,141,665</b>	<b>\$4,141,665</b>	<b>\$2,893,158</b>	<b>\$3,141,665</b>	<b>-\$1,103,258</b>	<b>\$3,391,366</b>	<b>\$394,950</b>	<b>-\$2,351,765</b>	<b>-\$2,601,466</b>	<b>-\$2,351,765</b>	<b>-\$3,674,009</b>	<b>-\$6,424,586</b>	<b>-\$5,324,817</b>	<b>\$9,764,694</b>	<b>0%</b>	<b>\$0.63</b>	

Notes:

- 1) Labor costs incurred before the start of production are included in the Development Cost Summary, Table 21-1.
- 2) Includes site administrative labor, product shipment, and property tax.
- 3) Years 14, 15 and 16 represent operating expenses, such as power and administrative labor, which are associated with restoring, decommissioning and reclaiming the wellfields.
- 4) Includes groundwater restoration costs. Labor costs are included in Wellfield Completion / Restoration Labor on the Wellfield Development Costs Summary, Table 21-6.
- 5) Includes plant equipment removal and disposal, building demolition and disposal, header house demolition and disposal, soil removal and disposal, well abandonment, wellfield equipment removal and disposal, topsoil replacement, revegetation and miscellaneous reclamation costs.
- 6) Administrative costs provided by AUC LLC and includes legal fees, insurance, rent, office supplies, etc.
- 7) Assumes cash bond posted by AUC LLC with 0% interest accumulated on cash surety. Negative values represent positive cash flow from bond release.

### 21.2.2 Personnel - Salaries and Benefits

The salaries and benefits for the AUC personnel will be spread across the duration of the Project based on the level of activity within any given year, see Figure 8. Project staffing includes

- Administration staff,
- CPP operation staff,
- Wellfield operation staff, and
- Wellfield development / restoration staff

Total staff at full production is estimated to be 70. The wellfield development / restoration crew, described previously in this section, will continue to build and develop wellfields until approximately Year 10 and will restore wellfields until Year 14. The costs associated with wellfield development / restoration labor are shown in Table 21-6. As the production begins within PU 1 and at the CPP and expands to the other PUs, production and operations crews will be required. The bulk of the administrative staff will be required from initial development through restoration.

The manpower estimate does not include home and corporate office staff. Note that it is anticipated that there will be an Environmental Health and Safety Manager included in the administration staff. The salaries and labor burden are based on the salaries, wages and benefits provided by AUC. Some of the administrative personnel in the table below are also included in Table 21-3.

The anticipated administrative, plant and wellfield operations staff at full production will consist of:

**Table 21-5: Administrative, Plant and Wellfield Operations Staff**

<b>Administration</b>	
Mine Manager	1
Environmental Manager	1
Radiation Safety Officer	1
IT Tech and Data Base	1
Purchasing Agent	1
Receptionist/File Clerk	3
Environmental Technician	3
Custodian	1
Warehouse Foreman	1
Subtotal	13
<b>CPP Operations</b>	
CPP Supervisor (Engineer)	1
CPP Foreman	1
Dryer Operator	1
CPP Operator	8
Lab Supervisor/Chemist	1
Lab Technicians	2
Maintenance Supervisor	1
Maintenance Technician	2

Electrical/Instrumentation	1
Subtotal	18
<b>Wellfield</b>	
Monitor well samplers/laborers	3
Wellfield maintenance foreman	1
Wellfield maintenance/operators	3
Pulling unit/swabbing operators	3
Wellfield Engineer	1
Subtotal	11
<b>Total Personnel</b>	<b>42</b>

### 21.2.3 Consultants

The use of consultants during operations is anticipated to be minimal and therefore not included as an operating cost. Potential services that could be required include data management, compliance issues (i.e., lixiviant excursions detected in monitoring wells), specialized monitoring, surveying, CPP and/or wellfield optimization and public relations.

### 21.2.4 Office, Site and Administrative Costs

Administrative costs for the site office include office consumables, rent, travel and entertainment, power, heat, regulatory agency interaction, interest expense, postage, communications, office equipment repairs and training. Salaries and capital purchases are included in other categories as described herein.

### 21.2.5 Insurance and Financial Assurance

Insurance, in addition to that required for staffing (i.e., health, workers compensation, unemployment), will be required. This PFS assumes insurance requirements including general liability, automobile and structural (fire and weather damage). In addition, financial assurance for restoration, decommissioning and reclamation has been estimated assuming that the project will be self-bonded. The financial assurance costs are included with other insurance costs provided in Table 21-4.

### 21.2.6 Taxes, Leases, Fees and Royalties

Various taxes, leases, maintenance, land impact and access fees are required and included in the operating cost estimates and financial evaluation of this PFS. These items are described in detail in Section 22.

### 21.2.7 Wellfield Operating Costs

Non-labor wellfield operating costs include recovery well pump servicing, repair and replacement; pipeline repair; power; well rehabilitation; MIT; header house maintenance; fence repair; and well access road maintenance. In addition, PUs 2 through 18 will be constructed largely in Year 2 through Year 10. These costs are included in the wellfield subsequent capital costs (post production) as shown in Table 21-1 and 21-6.

AUC will provide the wellfield construction personnel for construction of header houses and wellfield components for the PUs. The construction crew previously described in this section will continue to develop wellfields throughout the life of the Project.

Non-labor, “Subsequent” capital costs for construction of the PUs were estimated based on the preliminary wellfield design including the number, location, depth and construction material specifications for wells and header houses and the hydraulic conveyance (piping) system associated with the wellfields. Additionally, trunk and feeder pipelines, electrical service and wellfield fencing are included in the cost estimates. Subsequently, quantity takeoffs, costs from recent projects and vendor pricing for pipe, well casing, pumps, power cable, valves, meters, etc. were used to develop the detailed cost estimates. Installation costs were determined from recent project experience, vendor/contractor quotes, labor and equipment rates and production estimates.

**Table 21-6: Wellfield Development Costs Summary**

LIFE OF MINE WELLFIELD DEVELOPMENT COSTS	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Total	Average Contingency	\$ per Pound
Wellfield Completion / Restoration Labor <sup>1</sup>	\$0	\$0	\$0	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$919,275	\$114,909	\$30,910,622	5%	\$1.98
Initial Wellfield Capital	\$0	\$0	\$9,452,981	\$9,452,981	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,905,962	12%	\$1.21
Subsequent Wellfield Capital	\$0	\$0	\$0	\$6,524,423	\$13,048,846	\$6,524,423	\$13,048,846	\$13,048,846	\$6,524,423	\$19,573,269	\$13,048,846	\$19,573,269	\$0	\$0	\$0	\$0	\$0	\$0	\$110,915,194	12%	\$7.10
<b>Total Wellfield Development Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,452,981</b>	<b>\$18,275,592</b>	<b>\$15,347,034</b>	<b>\$8,822,611</b>	<b>\$15,347,034</b>	<b>\$15,347,034</b>	<b>\$8,822,611</b>	<b>\$21,871,457</b>	<b>\$15,347,034</b>	<b>\$21,871,457</b>	<b>\$2,298,188</b>	<b>\$2,298,188</b>	<b>\$2,298,188</b>	<b>\$2,298,188</b>	<b>\$919,275</b>	<b>\$114,909</b>	<b>\$160,731,778</b>	<b>11%</b>	<b>\$10.29</b>

Notes:

1) Includes all labor associated with constructing, restoring, decommissioning and reclaiming the wellfields and is included in the Wellfield Development Cost line in the Cash Flow Statement, Table 22-1. Labor costs incurred in Year 1 are included in the Development Cost Summary, Table 21-1.



### 21.2.8 CPP Operating Costs

#### 21.2.8.1 Reagents

The initial chemical reagent loading of the system is included in capital costs. Chemical consumption for the CPP has been estimated based on the proposed process design. Oxygen and carbon dioxide reagent costs are included under wellfield operating costs. The estimated annual chemical consumption and costs for the various reagents are included in operating costs.

#### 21.2.8.2 Maintenance

Annual maintenance and repairs for the CPP have been estimated at two percent of capital equipment costs.

#### 21.2.8.3 Power

Power costs for the wellfields are included in the wellfield operating costs described above. The estimated annual power costs are based on estimated power consumption for major process equipment and services including lights, pumps, motors, filter press, dryer, air conditioning and hot water, and basic service and demand charges from the local electrical utility. Power demand estimates is included in operating costs.

#### 21.2.8.4 Product Freight

It has been assumed for this PFS that uranium product (yellowcake) will be shipped via truck 1,220 miles to the Honeywell Uranium Hexafluoride processing facility in Metropolis, Illinois. An average truck shipment contains approximately 40 drums, or up to 38,000 lbs (19 tons) of yellowcake. Based on the projected annual production rate ranging from 265,000 to 1.58 million lbs of yellowcake per year, approximately 1 to 42 shipments with 40 drums each will be required annually for a total of over 411 shipments over the life of the Project. Freight costs have been estimated and are included in the operating costs.

#### 21.2.8.5 Waste Disposal

It is estimated that the site will produce approximately 22 tons of non-contaminated solid waste per month (see Section 17). This estimate is based on the waste generation rates of similar uranium ISR facilities. Non-contaminated solid waste will be collected on the site in designated areas and disposed of in the nearest permitted sanitary landfill.

Contaminated solid waste consists of solid waste contaminated with radioactive material and that cannot be decontaminated. This byproduct material will consist of filters, personal protective equipment, spent resin, piping, etc. These materials will be temporarily stored on site and periodically transported for disposal. AUC will establish an agreement for disposal of this waste as 11e.(2) byproduct material in a licensed disposal facility.

It is estimated that the Project will generate approximately 100 cubic yards per year of contaminated 11e.(2) byproduct material. This estimate is based on the waste generation rates of similar uranium ISR facilities. Byproduct material generated during operation and groundwater restoration will include:

- Filtrate and spent filter media from production and restoration circuits,
- General sludge, scale, etc. from maintenance operations,
- Affected soil collected from spill areas,
- Spent/damaged ion exchange resin, and
- Contaminated PPE.

#### 21.2.9 *Well Abandonment/Groundwater Restoration*

After economic recovery in each wellfield is completed, groundwater restoration will begin as soon as practical. If a completed wellfield is near an area that is being mined, a portion of the completed area's restoration may be delayed to limit interference with the on-going extraction operations.

Restoration completion assumes up to seven pore volumes of groundwater that has been treated by RO. A reductant, such as sodium sulfide, will be used to enhance the groundwater restoration process.

Following completion of successful restoration activities, all injection and recovery wells will be abandoned in accordance with WDEQ/LQD requirements. Monitor wells will also be abandoned following verification of successful groundwater restoration.

#### 21.2.10 *Demolition and Removal of Infrastructure*

Simultaneous with well abandonment operations, the trunk and feeder pipelines will be removed, tested for radiological contamination, segregated as either radiologic waste or non-radiologic solid waste, chipped and transported to appropriate disposal facilities. The header houses will be disconnected from their foundations, decontaminated, segregated as either radiological waste or non-radiologic solid waste, cut and crushed and transported to appropriate disposal facilities. The CPP, processing equipment, laboratory and office/shop/maintenance buildings will be demolished, tested for radiological properties, segregated and either scrapped or disposed of in appropriate disposal facilities based on their radiological properties.

#### 21.2.11 *Site Grading and Re-vegetation*

Following the removal of wellfield, CPP and infrastructure, site roads will be removed and the site will be re-graded to approximate pre-development contours, as appropriate, and the stockpiled topsoil placed over disturbed areas. The disturbed areas will then be seeded.

#### 21.2.12 *Closure Costs*

Restoration and closure costs for the Project are estimated to be approximately \$32.7 million. A summary of the closure cost estimate is provided in Table 21-4. The closure costs are based on 2012 dollars and material volumes developed in conjunction with the capital cost estimates used in this PFS. Unit costs for closure are based on a combination of State of Wyoming costs for financial assurance purposes and the TREC cost database.

## 22.0 Economic Analysis

The information presented in Section 22 meets the content requirements of NI 43-101 and NI 43-101F1.

### 22.1 Assumptions

A cash flow statement was developed based on the capital, operating and closure cost estimates and the production schedule, see Figure 8. The statement assumes no escalation, no debt, no interest, no corporate income tax or capital repayment. The sale price for the produced uranium is assumed at \$65.00 per pound for the life of the Project. This basis for this price is discussed in Section 19.

AUC has an additional royalty obligation to Strathmore Minerals as a consequence of the purchase of properties incorporated in the Project by Bayswater Uranium. This additional royalty was assigned to AUC and has not been included in the base economic analysis presented in this PFS. The additional royalty provides AUC the option to repurchase the royalty at any time prior to commercial production. The royalty and payment options are discussed in further detail in Section 22.4.

Uranium recovery from the mineral resource was determined based on an estimated recovery factor of 71.4 percent. The production schedule assumes an average solution uranium grade (head grade) of 45 ppm.

The sales for the cash flow are developed by applying the recovery factor to the resource estimate for the Project (Section 14). The total uranium production over the life of the Project is estimated to be 15.6 mlbs. The production estimates and operating cost distribution used to develop the cash flow are based on the mine plan schedule presented on Figure 8. **It should be noted that recovery is based on both site-specific laboratory recovery data as well as the experience of AUC personnel and other industry experts at similar facilities. There can be no assurance that recovery at this level will continue to be achieved during production. This PFS is preliminary in nature and includes mineral resources which may not be recoverable at the rates indicated herein.**

This PFS assumes Year -2 as the Project start date. Pre-production expenses start on the Project start date. Capital expenditure/construction is assumed to start in Year 1, as it is anticipated that the license/permit approval process will take approximately two years to complete. The start of production is one year after the start of construction, or the beginning of Year 2, see Figure 8. The NPV assumes cash flows take place in the middle of the periods and is calculated based on a discounted cash flow.

### 22.2 Cash Flow Forecast and Production Schedule

The following sections provide a summary of the quantities and assumptions used to develop the initial capital costs for the CPP and PU 1. Table 21-1 provides a summary of all capital costs and illustrates how the development costs have been divided between initial capital and “Subsequent” capital costs. Total initial capital costs are estimated at \$75.5 million, including initial capital costs for the CPP of \$43.8 million, the capital cost for PU1 of \$18.9 million, and

indirect costs of \$12.7 million. Life-cycle capital costs, the cost for all development, is estimated at US\$198.5 million, including indirect costs and EPCM.

The estimated payback is in Quarter 2 of Year 4 (2018) with the commencement of construction in Quarter 1 of Year 1 (2015) and generates net earnings before income tax over the life of the project of **US\$506.8 million**. It is estimated that the project has an internal rate of return (**IRR of 45 percent**) and a NPV of **US\$247.2 million** applying an eight percent discount rate. The cost per pound is \$32.55. See Tables 22-1, 21-1, 21-4 and 21-6.

Figure 8 presents the Project schedule, as currently defined, and was used to develop cash flow and economic analysis from the capital, operating and closure costs. The schedule illustrates the proposed plan for production, groundwater restoration, and decommissioning of each Production Unit. However, the plan is subject to change due to recovery rates, variations with Resource Unit recoveries, CPP issues, economic conditions, etc.

**Table 22-1: Cash Flow Statement (\$US 000s)**

Item	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Total	\$ per Pound
Production ('000 lbs) <sup>1</sup>	0	0	0	739	1,482	1,564	1,570	1,577	1,579	1,578	1,577	1,555	1,371	759	265	1	0	0	15,616	
Gross Sales <sup>2</sup>	\$0	\$0	\$0	\$48,043	\$96,314	\$101,658	\$102,031	\$102,489	\$102,667	\$102,591	\$102,481	\$101,105	\$89,085	\$49,326	\$17,209	\$55	\$0	\$0	\$1,015,056	
Less: Surface & Mineral Royalty of Approx 3.9% <sup>3</sup>	\$0	\$0	\$0	\$1,854	\$3,718	\$3,924	\$3,938	\$3,956	\$3,963	\$3,960	\$3,956	\$3,903	\$3,439	\$1,904	\$664	\$2	\$0	\$0	\$39,181	\$2.51
Less: Ad Valorem + Severance Tax <sup>4</sup>	\$0	\$0	\$0	\$2,842	\$5,698	\$6,014	\$6,036	\$6,063	\$6,074	\$6,069	\$6,063	\$5,981	\$5,270	\$2,918	\$987	\$3	\$0	\$0	\$60,017	\$3.84
<b>Net Sales</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$43,347</b>	<b>\$86,898</b>	<b>\$91,720</b>	<b>\$92,057</b>	<b>\$92,470</b>	<b>\$92,631</b>	<b>\$92,562</b>	<b>\$92,463</b>	<b>\$91,222</b>	<b>\$80,377</b>	<b>\$44,504</b>	<b>\$15,558</b>	<b>\$50</b>	<b>\$0</b>	<b>\$0</b>	<b>\$915,859</b>	
<b>OPERATING COSTS</b>																				
Plant & Wellfield Operating Costs	\$0	\$157	\$1,177	\$10,250	\$11,086	\$11,096	\$11,097	\$11,098	\$11,098	\$11,098	\$11,098	\$11,095	\$11,071	\$10,983	\$5,793	\$3,281	\$2,333	\$299	\$134,109	\$8.59
Restoration, D&D & Reclamation Costs	\$0	\$0	\$0	\$0	\$0	\$492	\$984	\$1,879	\$2,774	\$1,879	\$2,283	\$3,266	\$3,266	\$2,774	\$3,178	\$1,791	\$6,932	\$1,323	\$32,821	\$2.10
<i>Subtotal (Operating Cost)</i>	<i>\$0</i>	<i>\$157</i>	<i>\$1,177</i>	<i>\$10,250</i>	<i>\$11,086</i>	<i>\$11,588</i>	<i>\$12,081</i>	<i>\$12,977</i>	<i>\$13,873</i>	<i>\$12,977</i>	<i>\$13,380</i>	<i>\$14,361</i>	<i>\$14,338</i>	<i>\$13,757</i>	<i>\$8,971</i>	<i>\$5,071</i>	<i>\$9,264</i>	<i>\$1,621</i>	<i>\$166,930</i>	<i>\$10.69</i>
<b>CAPITAL COSTS</b>																				
Pre-Construction Capital	\$5,823	\$5,781	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,604	\$0.74
Plant (CPP) Development Costs	\$0	\$8,935	\$35,006	\$3,462	\$8,532	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$55,935	\$3.58
Wellfield Development Costs	\$0	\$0	\$9,453	\$18,276	\$15,347	\$8,823	\$15,347	\$15,347	\$8,823	\$21,871	\$15,347	\$21,871	\$2,298	\$2,298	\$2,298	\$2,298	\$919	\$115	\$160,732	\$10.29
Indirect Costs	\$0	\$0	\$4,136	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,136	\$0.26
<i>Subtotal (Capital Cost)</i>	<i>\$5,823</i>	<i>\$14,717</i>	<i>\$48,594</i>	<i>\$21,738</i>	<i>\$23,879</i>	<i>\$8,823</i>	<i>\$15,347</i>	<i>\$15,347</i>	<i>\$8,823</i>	<i>\$21,871</i>	<i>\$15,347</i>	<i>\$21,871</i>	<i>\$2,298</i>	<i>\$2,298</i>	<i>\$2,298</i>	<i>\$2,298</i>	<i>\$919</i>	<i>\$115</i>	<i>\$232,407</i>	<i>\$14.88</i>
<b>Project Cash Flow</b>	<b>-\$5,823</b>	<b>-\$14,873</b>	<b>-\$49,771</b>	<b>\$11,359</b>	<b>\$51,934</b>	<b>\$71,309</b>	<b>\$64,629</b>	<b>\$64,146</b>	<b>\$69,936</b>	<b>\$57,714</b>	<b>\$63,735</b>	<b>\$54,989</b>	<b>\$63,741</b>	<b>\$28,449</b>	<b>\$4,288</b>	<b>-\$7,320</b>	<b>-\$10,184</b>	<b>-\$1,736</b>		
<b>ADMINISTRATIVE SUPPORT COSTS</b>																				
Administrative Costs	\$0	\$60	\$247	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$321	\$247	\$99	\$5,715	\$0.37
Financial Assurance	\$0	\$0	\$8,600	\$3,496	\$1,249	\$2,747	\$2,747	\$1,498	\$2,747	-\$1,498	\$2,996	\$0	-\$2,747	-\$2,996	-\$2,747	-\$3,995	-\$6,672	-\$5,424	\$0	\$0.00
License / Permit Amendments	\$0	\$0	\$350	\$350	\$350	\$1,000	\$1,000	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,050	\$0.26
<i>Subtotal (Administrative Support Cost)</i>	<i>\$0</i>	<i>\$60</i>	<i>\$9,197</i>	<i>\$4,241</i>	<i>\$1,993</i>	<i>\$4,142</i>	<i>\$4,142</i>	<i>\$2,893</i>	<i>\$3,142</i>	<i>-\$1,103</i>	<i>\$3,391</i>	<i>\$395</i>	<i>-\$2,352</i>	<i>-\$2,601</i>	<i>-\$2,352</i>	<i>-\$3,674</i>	<i>-\$6,425</i>	<i>-\$5,325</i>	<i>\$9,765</i>	<i>\$0.63</i>
<b>NET CASH FLOW (PRE-TAX)</b>	<b>-\$5,823</b>	<b>-\$14,933</b>	<b>-\$58,969</b>	<b>\$7,118</b>	<b>\$49,941</b>	<b>\$67,168</b>	<b>\$60,488</b>	<b>\$61,253</b>	<b>\$66,794</b>	<b>\$58,817</b>	<b>\$60,344</b>	<b>\$54,594</b>	<b>\$66,093</b>	<b>\$31,050</b>	<b>\$6,640</b>	<b>-\$3,646</b>	<b>-\$3,759</b>	<b>\$3,588</b>		
Opening Cash Balance	\$0	-\$5,823	-\$20,757	-\$79,725	-\$72,607	-\$22,667	\$44,501	\$104,989	\$166,242	\$233,036	\$291,853	\$352,197	\$406,791	\$472,883	\$503,934	\$510,574	\$506,928	\$503,169		
+ Net Cash Flow	-\$5,823	-\$14,933	-\$58,969	\$7,118	\$49,941	\$67,168	\$60,488	\$61,253	\$66,794	\$58,817	\$60,344	\$54,594	\$66,093	\$31,050	\$6,640	-\$3,646	-\$3,759	\$3,588		
<b>CLOSING CASH BALANCE</b>	<b>-\$5,823</b>	<b>-\$20,757</b>	<b>-\$79,725</b>	<b>-\$72,607</b>	<b>-\$22,667</b>	<b>\$44,501</b>	<b>\$104,989</b>	<b>\$166,242</b>	<b>\$233,036</b>	<b>\$291,853</b>	<b>\$352,197</b>	<b>\$406,791</b>	<b>\$472,883</b>	<b>\$503,934</b>	<b>\$510,574</b>	<b>\$506,928</b>	<b>\$503,169</b>	<b>\$506,757</b>		

Notes:

- 1) Production schedule estimated by AUC LLC.
- 2) Uranium price is assumed to remain at \$65 per pound U<sub>3</sub>O<sub>8</sub> for the life of the project.
- 3) Surface and mineral royalties are provided by AUC LLC and based on a weighted average over the area of the project. See Section 22.4 for a summary and discussion of the Strathmore royalty payment options.
- 4) Ad Valorem is calculated as 5.98% of adjusted taxable value and Severance tax is calculated as 4% of adjusted taxable value. See Section 22.3 of the PFS for a detailed explanation of Ad Valorem and Severance taxes.
- 5) The sum of the Indirect Costs does not match the Development Cost Summary, Table 21-1 under "Indirect Capital" because Financial Assurance costs in Table 21-1 are presented in this Cash Flow Statement under the category "Financial Assurance" in Year 1.

Total cost per pound: \$32.55

**Total Cost: \$ 508,299**

The IRR and NPV analyses are based on Years -2 to Year 16.

**IRR = 45% assuming no escalation, no debt, no debt interest, no corporate income tax or capital repayment**

NPV	
Discount Rate	(\$US 000s)
6%	\$294,559
8%	\$247,246
10%	\$207,932

## NPV/IRR

The Net Present Value (NPV) for three discount rates has been calculated and is presented in Table 22-2. The estimated internal rate of return (IRR) is also presented.

**Table 22-2: Net Present Value versus Discount Rate and IRR**

Discount Rate	NPV (\$US 000s)
6%	\$294,559
8%	\$247,246
10%	\$207,932

### 22.3 Taxes and Other Fees

AUC will be required to pay various state and local taxes related to production and the ownership of property. These taxes will be in the form of severance, *ad valorem*, and real property taxes. There are also State and county sales/use taxes.

There is no State income tax in Wyoming at this time but income from the Project will be included in AUC's federal corporate income tax returns. The cost of corporate income tax is not included in this analysis. All other taxes, royalties and fees are included.

The basis for both the state severance tax and the county *ad valorem* tax is the taxable value of product sold from the mine. Taxable value is computed by:

- (a) Taking the net sales value attributable to production from the mine before processing (gross sales less production taxes and royalties) times an industry factor established by the state,
- (b) Adding back total production taxes<sup>1</sup> and private royalties,
- (c) Dividing the resultant number by the pounds sold, and
- (d) Multiplying this factor by the pounds produced.

<sup>1</sup>This can be either what was paid for the prior year or an iteration calculation

The current industry factor is 0.548827. Since significant value is added to the product produced from the mine during the processing and drying phase of the operations, the industry factor is an attempt to properly allocate the portion of the value of yellowcake sold attributable to the Project back to the Project, the point the mineral was severed.

The state severance tax is calculated at four percent of the taxable value. The county *ad valorem* tax is computed on the taxable value multiplied by the county mill levy. The 2012 mill levy in Campbell County is 59.771 per thousand dollar of assessed value, see Table 22-1.

The assessed value (taxable value) of real and personal property taxes, other than the *ad valorem* taxes described above, is calculated by multiplying the fair market value of the property (based on depreciated values) times the rate of 11.5 percent for industrial property. The county mill levy rate is then multiplied by the assessed value to determine the property taxes. Using the current mill levy and an 11.5 percent assessment factor, county property taxes are approximately 0.07 percent of the fair market value. These taxes are accounted for under Project General & Administrative costs provided in Table 21-4.

Wyoming has a four percent sales/use tax and each county has the authority to assess additional sales taxes up to two percent. The combined current sales/use tax for the state and Campbell County is six percent. However, the Department of Revenue is currently allowing a sales tax exemption for:

- Manufacturing equipment within the CPP,
- Chemicals consumed during the manufacturing process (within the plant only), and
- Power consumed for the use of manufacturing (i.e. pumps, dryers, etc. not building heating or lighting).

Sales tax is accounted for in capital costs, see Table 21-1 and no tax exemptions have been included in the PFS.

This evaluation does not include the effect of federal and state income taxes. AUC is the wholly owned subsidiary of AUC Holdings, Inc., and is treated as a disregarded entity for federal income tax purposes. All of its taxable income and loss is included in the federal tax return for AUC Holdings. Based on the terms of the sales agreements covering the sale of yellowcake, AUC Holdings might be subject to state income taxes in the state where the title to the yellowcake transfers.

The following Table 22-3 summarizes the taxes directly incurred at the Project.

**Table 22-3: Taxes**

Tax	Rate	Basis	Recipient
Severance Tax	4.00%	Adjusted taxable value	State
County Ad Valorem Tax	5.98%	Gross revenue	County
Property Tax	0.07%	Property value (w/ land improvements)	County
Sales Tax	6.00%	Goods and services	State

#### 22.4 Royalties

Pursuant to the development of the project, AUC will be required to pay royalties to mineral owners plus payments and fees related to production and use of surface property. Production payments based on sales of uranium will be paid to surface property owners related to lode mining claims at the Project. Royalties were calculated from individual royalty agreement summaries provided by AUC for the surface and mineral agreements for the Project area. Based on the information provided by AUC, the private surface use and private minerals royalties average approximately four percent. These costs are summarized in Table 22-1.

Additionally, fees will be paid to the State for the sub-surface leases. These fees have been calculated and provided by AUC. They are included in the Annual Operating Cost summary, see Table 21-4.

Bayswater Uranium Corporation (Bayswater) and its subsidiary NCA Nuclear Inc. (NCA) agreed to pay Strathmore Minerals Corporation (Strathmore) a five percent gross royalty on all mineral products produced from a defined set of mineral holdings (the Property) which comprise a portion of the Reno Creek NI 43-101 compliant measured and indicated resources. The royalty was assigned to and assumed by AUC at the closing of the acquisition from Strathmore. Pursuant

to the assignment, AUC retains the right to purchase each one percent of the royalty for \$2 million at any time prior to commercial production, up to 100 percent of the royalty for a total of \$10 million. With Bayswater consent, up to one half of the royalty buyout can be paid in Bayswater shares.

The cash flow and economic indicators presented in Table 22-1 and as discussed elsewhere in the PFS are calculated at the project level and do not include the royalty obligation of AUC to Strathmore. As referred to herein, the “project level” is defined as the costs, revenues and resulting economic indicators associated with the Project and does not include the impact of the Strathmore royalty. The impact on net revenue, net cash flow, NPV and IRR at the AUC level of royalty buy-out versus no buy-out are summarized in Table 22-4. The royalty buyout using half cash and half shares has the smallest impact on project cash flow and Net Present Value, reducing the NPV to \$243.3 million. The greatest effect on project cash flow occurs if the royalty is paid out over time, reducing the project NPV to \$225.1 million. AUC has the right at any time prior to commercial production to purchase the royalty as provided in the royalty agreement.



Table 22-4: Comparison of Economics between Project Base Case and Various Strathmore Royalty Options (\$US 000s)

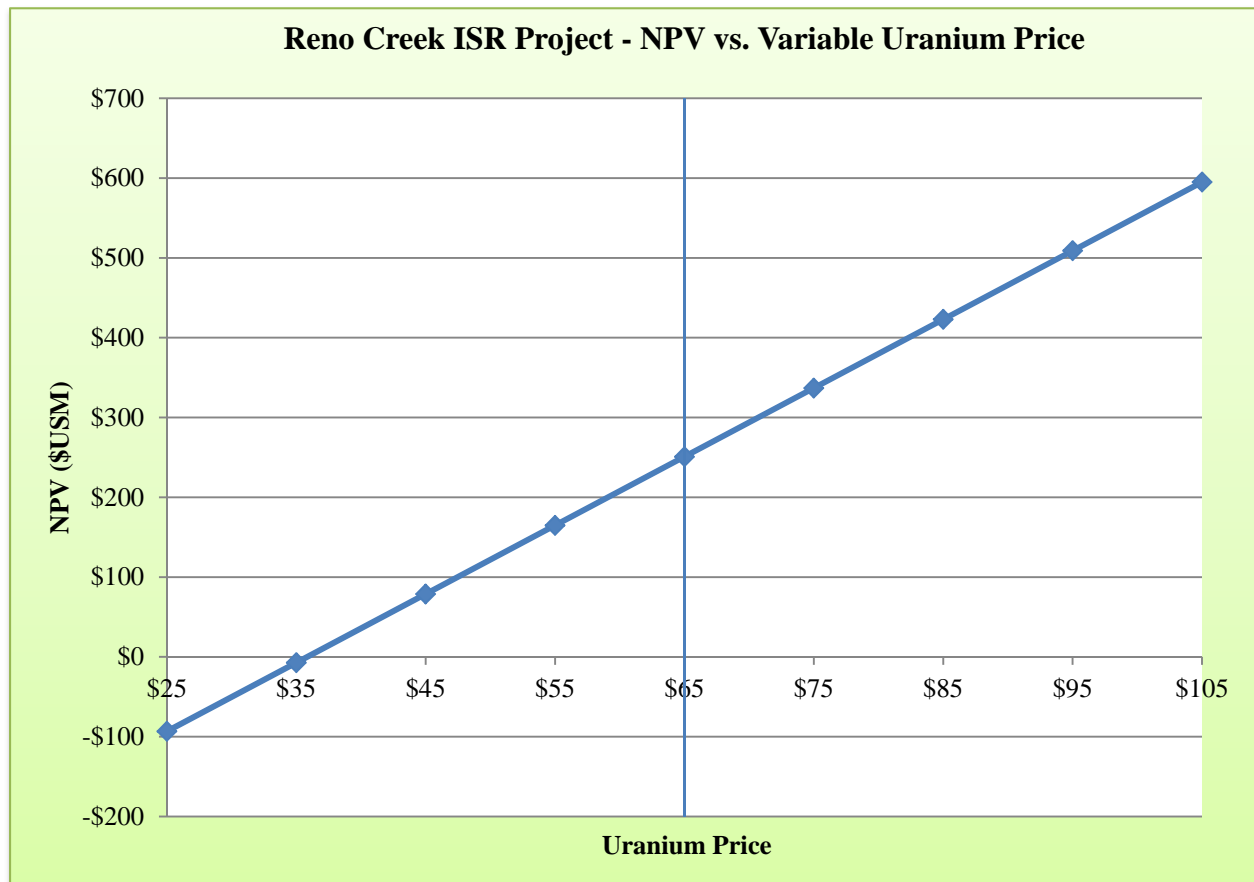
ITEM	Project Level (Excludes Strathmore Royalty, see Table 22-1)	Including Strathmore Royalty			
		Strathmore Royalty Buyout Options		Strathmore Royalty Paid Over Life of Production	
		Assuming Purchase of 50% Royalty for Cash and 50% by Bayswater for Shares	Purchase 100% of Royalty for Cash		
<b>Gross Revenue</b>	\$ 1,015,056	\$ 1,015,056	\$ 1,015,056	\$ 1,015,056	
Less Surface & Mineral Royalties	\$ 39,181	\$ 39,181	\$ 39,181	\$ 39,181	
Less Ad Valorem & Severance Taxes	\$ 60,017	\$ 60,017	\$ 60,017	\$ 60,017	
Less Strathmore Royalty	\$ -	\$ -	\$ -	\$ 40,223	
<b>Net Revenues</b>	\$ <b>915,859</b>	\$ <b>915,859</b>	\$ <b>915,859</b>	\$ <b>875,636</b>	
<b>Operating Costs</b>					
Plant & Wellfield Operating Costs	\$ 134,109	\$ 134,109	\$ 134,109	\$ 134,109	
Restoration, D&D, & Reclamation Costs	\$ 32,821	\$ 32,821	\$ 32,821	\$ 32,821	
<b>Total Operating Costs</b>	\$ <b>166,930</b>	\$ <b>166,930</b>	\$ <b>166,930</b>	\$ <b>166,930</b>	
<b>Capital Costs</b>					
Pre-Construction Costs	\$ 11,604	\$ 11,604	\$ 11,604	\$ 11,604	
Cash Buyout of Strathmore Royalty	\$ -	\$ 5,000	\$ 10,000	\$ -	
Plant Development Costs	\$ 55,935	\$ 55,935	\$ 55,935	\$ 55,935	
Wellfield Development Costs	\$ 160,732	\$ 160,732	\$ 160,732	\$ 160,732	
Indirect Costs	\$ 4,136	\$ 4,136	\$ 4,136	\$ 4,136	
<b>Total Capital Costs</b>	\$ <b>232,407</b>	\$ <b>237,407</b>	\$ <b>242,407</b>	\$ <b>232,407</b>	
<b>Administrative Costs</b>	\$ <b>9,765</b>	\$ <b>9,765</b>	\$ <b>9,765</b>	\$ <b>9,765</b>	
<b>Total Costs</b>	\$ <b>508,299</b>	\$ <b>513,300</b>	\$ <b>518,300</b>	\$ <b>548,523</b>	
<b>Net Cash Flow (Pre-Tax)</b>	\$ <b>506,757</b>	\$ <b>501,756</b>	\$ <b>496,756</b>	\$ <b>466,533</b>	
<b>Net Present Value (8%)</b>	\$ <b>247,246</b>	\$ <b>243,276</b>	\$ <b>239,307</b>	\$ <b>225,086</b>	
<b>IRR</b>	<b>45%</b>	<b>44%</b>	<b>43%</b>	<b>42%</b>	

### 22.5 Sensitivity Analysis

This analysis is based on a fixed commodity price of \$65.00 per pound and the cash flow results presented herein. The sensitivity to changes in the price of uranium, capital and operating costs have been calculated from the cash flow statements and are presented below.

The Project is sensitive to changes in the price of uranium as shown on Figure 22-1 below (NPV vs Variable Uranium Price). A one dollar change in the price of uranium can have an impact to the NPV of approximately \$8.6 million based on a discount rate of eight percent. It will also impact the IRR by approximately one percent.

**Figure 22-1: NPV vs. Variable Uranium Price**



The Project NPV is also slightly sensitive to changes in either capital or operating costs as shown on Figure 22-2 below (NPV vs Capital Cost Variation and NPV vs Operating Cost Variation). A five percent variation in operating cost results in a \$4.3 million variation in NPV and a five percent variation in capital cost results in a \$7.8 million variation to the NPV. This analysis is based on an eight percent discount rate and a fixed \$65.00 uranium price per pound.

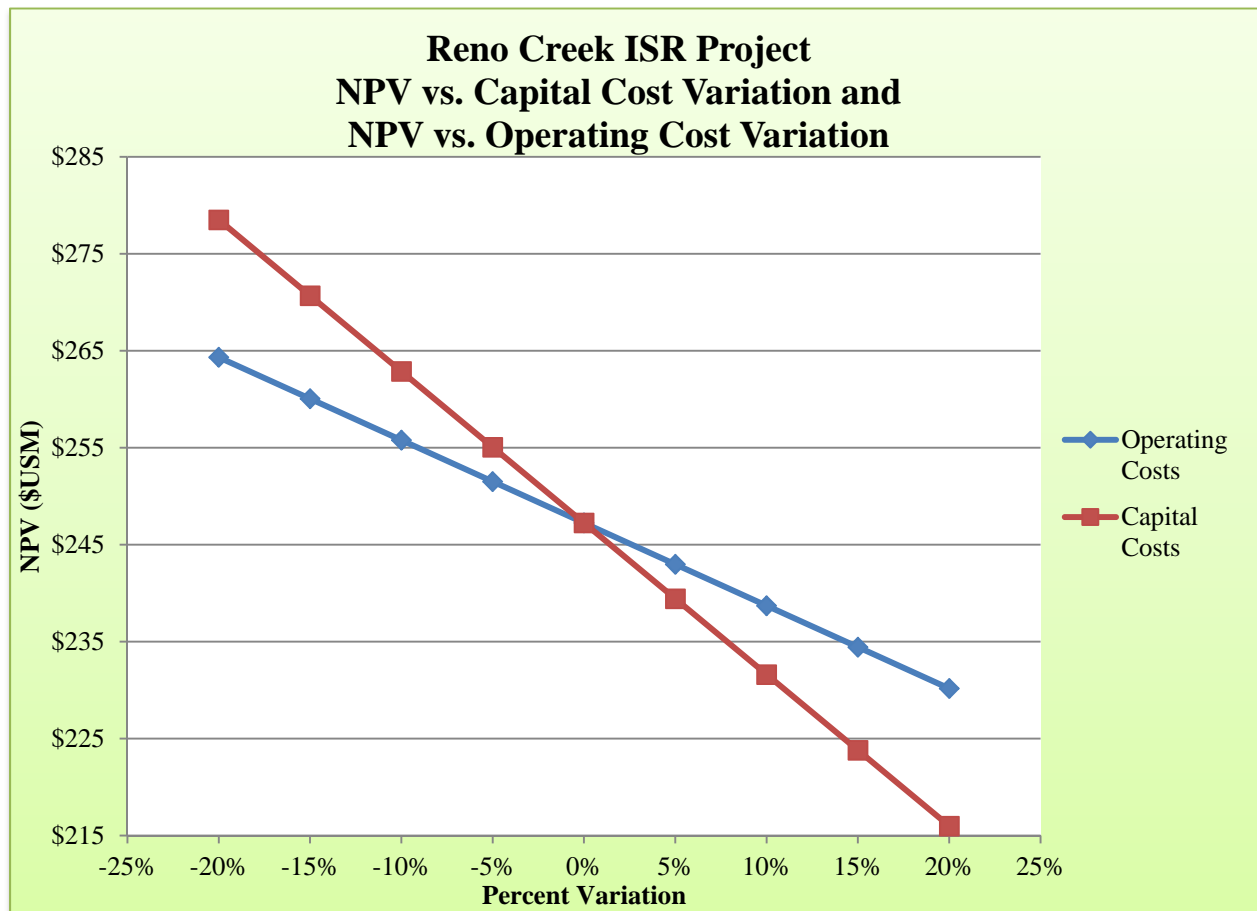
### 22.6 Capital and Operating Costs

Capital and operating costs were discussed in Section 21 and are summarized in Tables 21-1 and 21-4, respectively. Capital costs are sensitive to wellfield costs – which may increase if well spacing needs to be reduced or additional injection/recovery wells are required. In addition, a

shortage of drilling rigs and the increasing costs of well and piping materials (PVC, HDPE) may also lead to increased capital costs. Delays in regulatory approvals or additional requirements from regulatory agencies to obtain approvals could also increase capital costs. Operating costs are sensitive to consumable process chemicals, fuel, electricity and labor costs due to possible labor shortages and the need to provide increased compensation packages to attract workers as a result of potential low unemployment in Wyoming and employee competition from other natural resource extraction industries.

Cost estimates have been prepared with an estimated range of +/- 25 percent accuracy based on a relatively higher level of confidence in the design and quantity data. For example, an overall cost change of +/- 30 percent, the NPV for the capital and operating costs ranges from approximately \$200.4 million to \$294.1 million. Figure 22-2 illustrates the sensitivity of capital and operating costs to the NPV.

**Figure 22-2: NPV Sensitivity to Capital and Operating Costs (based on an 8 percent discount rate)**



### 23.0 **Adjacent Properties**

Adjacent Properties are discussed in the Reno Creek ISR Project, Technical Report on Resources, Appendix A of this PFS. Please refer to Section 23, Adjacent Properties of the Technical Report on Resources. The Author agrees with the information provided in Section 23 of the Technical Report on Resources as it satisfies standard industry requirements.

#### 24.0 **Other Relevant Data and Information**

There are additional opportunities for economic growth and development that are currently being explored, but neither costs nor revenues have been included in this PFS.

AUC's facility will be permitted to produce a maximum of 2.0 mlbs per year of yellowcake and run at up to 11,000 gpm of lixiviant. Thus, additional uranium processing of product through the Project CPP could further improve the economics of the Project presented in this PFS by expanded production or tolling revenues.

## 25.0 Interpretation and Conclusions

The Project, located in northeast Wyoming, USA, is technically and economically viable. The proposed wellfield, recovery and processing facilities are very similar to other operations in the State of Wyoming. The site is located a distance from major towns, but is near paved highways and adjacent to all-weather graveled county access roads and within reasonable commuting distance from good sources of labor. Power and communications are also available.

The uranium in the Project area has shown amenability to ISR extraction from Project site-specific bench-scale core leach testing and R&D results (ref., Behre Dolbear, November, 2012). The sand units will be mined using injection and recovery wells designated specifically for the target sand horizons.

An economic analysis has been performed based on the current Project uranium production estimates using the attached production schedule in conjunction with the estimated recoverable resource of 15.6 mlbs of uranium which was provided in the Technical Report on Resources (ref., Behre Dolbear, November, 2012), see Appendix A. A recovery factor of 71.4 percent was used in the economic evaluation and is in line with CIM guidance (ref., CIM Council, 2003). Based on the estimated recovery of 15.6 mlbs of U<sub>3</sub>O<sub>8</sub>, the potential economic performance of the Project is summarized in Table 25-1.

**Table 25-1: Net Present Value versus Discount Rate and IRR**

Discount Rate	NPV (\$US 000s)
6%	\$294,559
8%	\$247,246
10%	\$207,932

This analysis also assumes a constant price per pound for U<sub>3</sub>O<sub>8</sub> over the life of the Project. The calculated cost per pound of uranium produced is \$32.55 per pound including all costs, with an estimated steady state operating cost, not including wellfield development or administrative support costs, of approximately \$10.69 per pound, see Table 22-1.

### 25.1 Risk Assessment

The Project is located in a State where ISR projects have been and are operated successfully. The ISR technology has been proven effective in geologic formations within Wyoming as described herein. Two Wyoming ISR facilities are currently in operation (Smith Ranch and Willow Creek) and two others are currently under construction.

The Property is located in the Campbell County, northeast Wyoming, USA. The Project is located in a sparsely populated area approximately 15 miles west of Wright and 50 miles south of Gillette. Electrical power and a major transportation corridor (Wyoming State Highway 59) are located within or near the site. Thus, the basic infrastructure necessary to support an ISR mining operation - power, water and transportation, are located within reasonable proximity of the site.

The following sections describe the potential risks to development of the Project and attainment of the financial results presented in this PFS.

### 25.1.1 Uranium Recovery and Processing

Bench-scale tests have been performed on 12 core samples from the Project. The most significant potential risks to meeting the production and thus financial results presented in this PFS will be associated with the success of the wellfield operation and recovery of uranium from the targeted host sands. A potential problem that could occur in the wellfield recovery process is unknown or variable geochemical conditions resulting in uranium recovery rates from the mineralized zones that are significantly different than previous bench-scale tests.

The percent recovery results of several bottle roll leach amenability tests AUC had performed by Energy Labs are presented in Table 13.3 of the Technical Report on Resources (ref., Behre Dolbear, 2012, Appendix A). Results of column leach tests performed by J.E. Litz and Associates from core samples in the Reno Creek Permit Area are presented in Table 13.4 of the Technical Report on Resources (ref., Behre Dolbear, 2012, Appendix A) and indicate an average uranium recovery of 86 percent; therefore, a recovery factor of 71.4 percent (as determined in earlier bench scale studies and used in this PFS) should be achievable and conservative given the following considerations:

- The assumption of an average head grade of 45 ppm will allow production to continue from wells long after the peak grade has been achieved therefore more fully depleting the resources within the host sandstones. The wellfield design package includes instrumentation and data collection equipment to optimize wellfield production by monitoring flow rates, injection pressure and formation pressure allowing control of hydraulic factors, and
- Analogous projects with similar geologic settings (i.e. mineralization in the Fox Hills at Powertech's Centennial deposit) have seen leach testing results from bottle roll tests of 71 to 79 percent and confidently used a 75 percent recovery factor. These results can be found in the Preliminary Economic Analysis completed in support of Powertech's project.

Another potential concern is reduced hydraulic conductivity in the formation due to chemical precipitation or lower hydraulic conductivities than estimated, high flare and/or recovery of significant amounts of groundwater, the need for additional injection wells to increase uranium recovery rates, variability in the uranium concentration in the host sands and discontinuity of the mineralized zone confining layers. The risks associated with these potential issues have been minimized to the extent possible by extensive delineation and hydraulic studies of the site.

Process risk encompasses the risk associated with the process selection for recovering of uranium, its proper implementation and attaining a final uranium product of acceptable quality. The CPP will be designed for average pregnant lixiviant flow rates and characteristics and the performance of the CPP and uranium production will vary with these criteria. Pregnant lixiviant properties, in particular solids and impurity contents, will also influence CPP operation. Continual monitoring of pregnant lixiviant quality, tank bottoms chemistry and uranium product will be performed to optimize the process and provide for acceptable quality of the final product.

### 25.1.2 Delays in Obtaining Licenses/Permits and Approvals

The most significant potential risk to meeting the proposed schedule and attaining the performance described in this PFS is that of obtaining the required licenses/permits and

approvals needed to commence mining in a timely fashion. This PFS assumes initiation of wellfield and facility construction will occur in Year -1 in the Reno Creek permit area. Additional license/permit amendments will be required for the Moore, Bing and Pine Tree Resource Units. The life of mine Schedule, Figure 8 illustrates the estimated timing for these amendments. The timeframe for obtaining licenses/permits and approvals could be extended depending on the schedule of the regulating authorities, i.e., the Wyoming DEQ and USNRC.

The two most significant permits/licenses are (1) the Permit to Mine, issued by the WDEQ/LQD, and (2) the Source and Byproduct Materials License, required and issued by the NRC for mineral processing of natural uranium.

The NRC is in the process of reviewing AUC's Source and Byproduct Materials License. The Permit to Mine application was submitted to WDEQ in January 2013. Other uranium operating companies with similar permit applications for Wyoming ISR mines have recently had those permits approved. It is difficult to predict the time that will be required for the regulatory agencies to complete their reviews and issue permits/licenses. The projected two year period is both within the range of recent permitting activities for other uranium operators and within the statutory and regulatory guidelines for the respective agencies.

#### 25.1.3 *Market and Contracts*

Unlike other commodities, most uranium does not trade on an open market. Contracts are negotiated privately by buyers and sellers. Changes in the price of uranium can have a significant impact on the economic performance of the Project. As discussed in Section 22, a \$1.00 change in the price of uranium can have an impact to the NPV of approximately \$8.6 million, based on a discount rate of eight percent. This analysis assumes a fixed price per pound for U<sub>3</sub>O<sub>8</sub> over the life of the Project. This PFS assumes U<sub>3</sub>O<sub>8</sub> production is sold at a contract price of US\$ 65.00 per pound. The Author believes that these estimates are appropriate for use in this evaluation. At the time of writing this PFS, AUC has no long term pricing contracts in place.

The marketability of uranium and acceptance of uranium mining is subject to numerous factors beyond the control of AUC. The price of uranium may experience volatile and significant price movements over short periods of time. Factors known to affect the market and the price of uranium include demand for nuclear power; political and economic conditions in uranium mining, producing and consuming countries; costs; interest rates, inflation and currency exchange fluctuations; governmental regulations; availability of financing of nuclear plants, reprocessing of spent fuel and the re-enrichment of depleted uranium tails or waste; sales of excess civilian and military inventories (including from the dismantling of nuclear weapons) by governments and industry participants; production levels and costs of production in certain geographical areas such as Russia, Africa and Australia; and changes in public acceptance of nuclear power generation as a result of any future accidents or terrorism at nuclear facilities.

#### 25.1.4 *Resources*

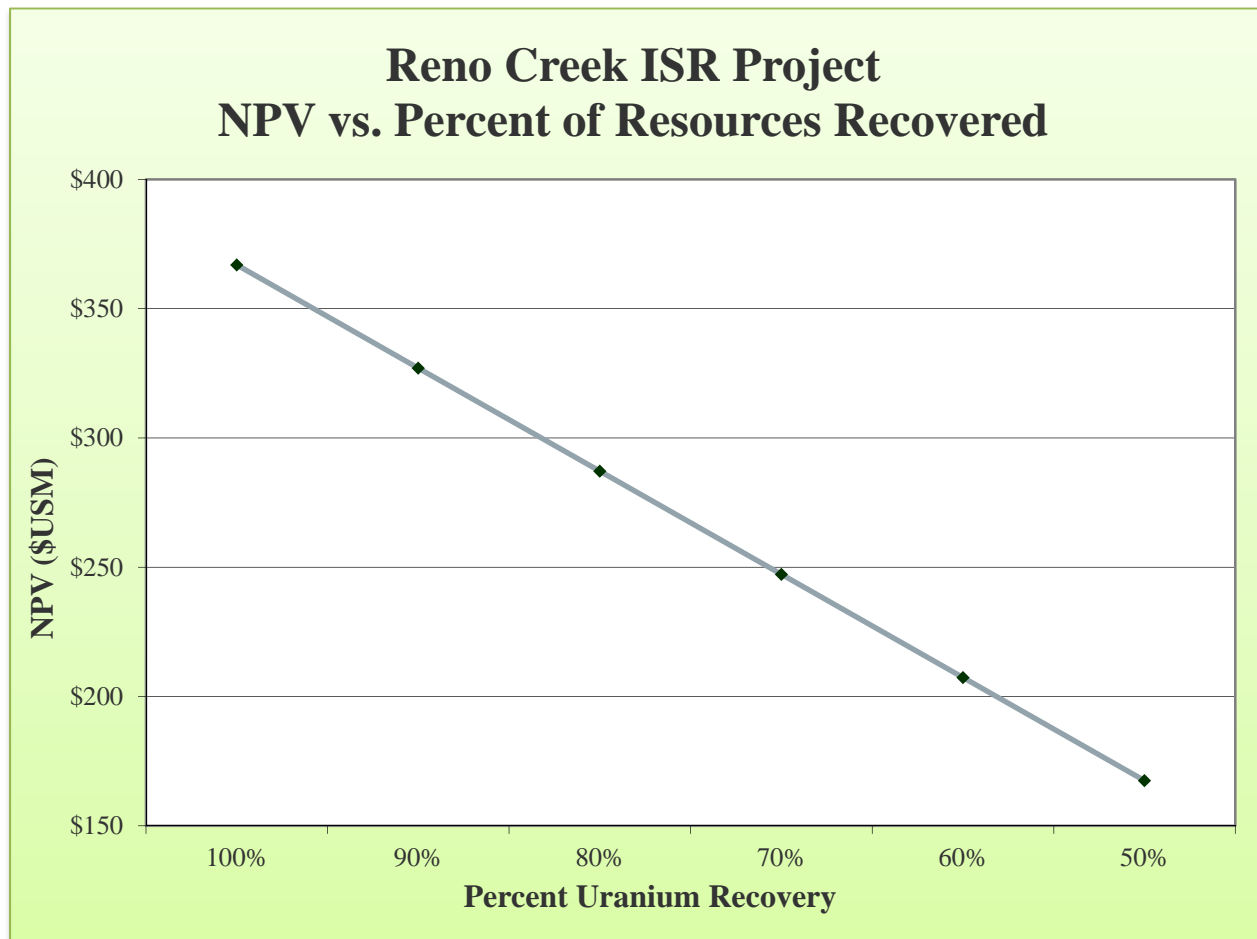
As previously discussed, an existing NI 43-101 compliant Technical Report on Resources estimate has been developed for this project (ref., Behre Dolbear, November, 2012, Appendix A). This PFS uses measured and indicated resources for the development of the economic indicators presented herein.



The estimated quantity of recovered uranium used in this PFS is based primarily on the recovery data from site-specific, bench-scale testing of mineralized samples. The recovery value of 71.4 percent, used herein, is relatively typical of industry experience for wellfield recovery. The Author can provide no assurance that recovery of the resources presented herein will be achieved. This PFS is based on the assumptions and information presented herein.

Figure 25-1 illustrates the sensitivity of NPV to uranium resource recovery. The NPV changes approximately \$39.9 million per 10 percent change in uranium recovery based on an eight percent discount rate.

**Figure 25-1: NPV Sensitivity to Uranium Resource Recovery**



*25.1.5 Operations*

Some operational risks exist in the Project implementation but are generally considered to be addressable either through wellfield modifications or CPP optimization. The CPP will be designed as a batch precipitation and drying operation, which allows for process variations and enhanced control.

The IX and elution processes have been, and are being used at other ISR facilities in Wyoming, Texas, and Nebraska. The process does not use any unusual or innovative methods and the

reagents for the process are readily available from regional sources. Initial process optimization will be required to minimize the use of reagents, minimize loss of product and ensure proper product quality.

Health and safety programs will be implemented to control the risk of on and off site exposures to uranium and process chemicals. Standard industry practices exist for this type of operation and novel approaches to risk control and management will not be required.

Therefore, the results of this PFS demonstrate both the technical and economic viability of the Project.

## 27.0 Recommendations

The results of the PFS, based on assumptions and calculations presented herein, indicate that the Project is technically and economically viable. In order to realize the full economic benefits described in this PFS, the following activities are recommended by the Author, at a minimum:

- Upon receipt of its permits and licenses for the Reno Creek Resource Units, initiate baseline studies for license/permit license amendments to allow development in the Moore, Bing and Pine Tree Resource Units, outside the current Reno Creek Permit area. This recommendation would result in cost to AUC of approximately \$4 million which is included in this PFS.
- Pursue and execute an 11e.(2) Byproduct/Waste Disposal Agreement (with licensed disposal operator) in a timeframe prior to operations. This recommendation would result in little or no costs outside AUC labor.
- Further evaluate capital/operating cost optimization and review regional consolidation of other ISR uranium projects that would benefit from the centrally located processing plant. These costs are estimated to be approximately \$250,000.
- The Moore, Pine Tree, and Bing Resource Units are not fully explored. All three areas exhibit substantial areas both laterally and along strike where additional exploration and development drilling is recommended.
- Per the previous recommendation, the Author further recommends continued development drilling and hydrogeological evaluations to expand resources within the Project boundary that may lead to fully confirming/defining additional resources for the Project and adjoining properties. This recommendation would result in costs to AUC in the range of \$5 to \$10 million.
- Finalize project facility designs including identification of long lead procurement items and cost-benefit/optimization evaluations of current design. This recommendation would result in costs to AUC in the range of \$1 million to \$2 million and is included in this PFS.
- Evaluate potential waste water disposal alternatives to deep disposal wells. This recommendation would result in little or no costs outside AUC labor.

## 27.0 References

- AUC LLC, 2012. USNRC Application, Combined Source and 11e.(2) Byproduct Material License, Reno Creek ISR Project, Campbell County, Wyoming, Technical Report. September, 2012.
- AUC LLC 2013. WDEQ Permit to mine app.
- Behre Dolbear, 2012. Technical Report on Resources of the Reno Creek ISR Project, Campbell County, Wyoming. Prepared for AUC, LLC. November 30, 2012
- CIM Council, 2003. Estimation of Mineral Resources and Mineral Reserves, Best Practice Guidelines.
- IAEA, 2011. Uranium 2011: Resources, Production and Demand
- State of Wyoming GIS Database, 2012. <http://wygl.wygisc.org/DataServer/>.
- IML Air Science meteorological database, 2011
- Inberg-Miller, 2012. Subsurface Exploration and Geotechnical Engineering Report
- Martner, 1986. Wyoming Climate Atlas
- National Climatic Data Center, 2011. <http://www.ncdc.noaa.gov/>.
- Rocky Mountain Energy, 1982, Hydrogeologic Integrity Evaluation of the Reno Creek Project Area, Vol. I and II.
- Rocky Mountain Energy, 1981, Hydrologic Analysis of the Reno Creek – Pattern 2 Property for In Situ Uranium Recovery.
- Rocky Mountain Energy, 1983, Reno Creek Pattern 2 Restoration Reports & Addenda from 1981, 1982, and 1983.
- Western Regional Climate Center (WRCC, 2011). <http://www.wrcc.dri.edu/>
- Wyoming State Climate Office, 2005. [http://www.wrds.uwyo.edu/sco/climate\\_office.html](http://www.wrds.uwyo.edu/sco/climate_office.html).

**28.0 Date and Signature Page and Certification****CERTIFICATION****Reno Creek Uranium ISR Project Preliminary Feasibility Study**

I, Douglass H. Graves, P.E., of 1800 West Koch, Bozeman, Montana, USA, do hereby certify that:

- I have been retained by AUC LLC of Denver, Colorado, to manage, coordinate and develop the documentation for the Reno Creek Uranium ISR Project Preliminary Feasibility Study.
- I am a principal and President of TREC, Inc., 1800 West Koch, Bozeman, Montana, USA.
- I graduated with a Bachelor of Science degree in Watershed Sciences from Colorado State University in 1975.
- I graduated with a Bachelor of Science degree in Civil Engineering from Montana State University in 1982.
- I am a Professional Engineer in Wyoming, Montana, Colorado, South Carolina, Arizona, Idaho, Michigan, Oklahoma and Missouri.
- I have worked as an Engineer for 35 years.
- I have read the definition of “qualified person” set out in National Instrument (NI) 43-101 and certify by reason of my education, professional registration and relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
- I visited the Reno Creek project site on October 17, 2012.
- I have read the NI 43-101 and the Reno Creek Uranium ISR Project Preliminary Feasibility Study which has been prepared in compliance with NI 43-101 and Form 43-101F1.
- I am responsible for the coordination, compilation and preparation of the Reno Creek Uranium ISR Project Feasibility Study dated January 2013 with the exception of Sections 6 through 15 which reference Appendix A, the “Technical Report on Resources of the Reno Creek Uranium Project, Campbell County, Wyoming USA” dated November 30, 2012 and prepared by others (see accompanying certifications). I coordinated and assisted in the development of the various cost estimates, summaries, analyses, risk evaluation and recommendations.
- To the best of my knowledge, information and belief, the Preliminary Feasibility Study contains all scientific and technical information that is required to be disclosed to make the Preliminary Feasibility Study not misleading.
- I am independent of the issuer applying all of the tests of NI 43-101.

- I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

Dated this 17<sup>th</sup> of May, 2013.

*“Signed and Sealed”*

*/s/ Douglass H. Graves*

Douglass H. Graves, P.E.

Wyoming P.E. Number 4845

**CERTIFICATE OF QUALIFICATIONS**  
**Robert D. Maxwell**

I, Robert D. Maxwell do hereby certify that:

1. I am a Senior Associate of Behre Dolbear & Company (USA), Inc. 6430 S. Fiddler's Green Circle, Suite 250 Greenwood Village, CO 80111.
2. I have been retained by AUC LLC of Denver, Colorado to assist in the development of the "Technical Report on Resources of the Reno Creek Uranium Project, Campbell County, Wyoming USA" dated November 30, 2012 and included as Appendix A to this Reno Creek Uranium ISR Project Preliminary Feasibility Study.
3. I am a graduate of Texas Western College with a Bachelor of Science in the Sciences, 1964 and the University of Colorado at Denver with a Master of Business Administration, 1991.
3. I am certified as Profession Geologist #10903 by the American Institute of Professional Geologists.
4. I have worked as a geologist and a mineral property evaluator. My relevant experience for the purpose of the Technical Report on Resources of the Reno Creek Uranium Project is:  
Project Manager for resource evaluation for possible acquisitions or joint ventures of:  
    Akdala and South Inkai Kazakhstan uranium deposits for a confidential client  
    BHP Billiton Ambrosia Lake uranium holdings  
    Strathmore Ambrosia Lake uranium holding for a confidential client  
    Uranium Resources, Inc Grants mineral belt uranium holdings  
Principal Investigator for resource evaluation for possible acquisitions or joint ventures of:  
    Homestake Mining Company Ambrosia Lake uranium holdings for Conoco  
    Bokum Corp. New Mexico uranium holdings for Conoco  
    Susquehanna Western Inc. south Texas uranium holdings for Conoco  
    Florence Arizona copper deposit for Conoco  
    Pathfinder Mines Wyoming uranium holdings for Cogema  
    Milwaukee Railroad northwestern USA minerals for ITT Rayonier  
    Kemmerer Coal Wyoming coal for Marathon Oil Company
5. I have read the definition of "qualified person" as set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am responsible for the preparation of all Sections except number 14.0 of the "Technical Report on Resources of the Reno Creek Uranium Project, Campbell County, Wyoming USA" dated November 30, 2012 and included as Appendix A to this Preliminary Feasibility Study.
7. I visited the site June 19, and July 27, 2012.
8. I have had prior involvement with portions of the property that is the subject of the Technical Report as a principal investigator for Rio Algom Mining Corporation's due diligence prior to acquiring portions of the Project in the late 1990s.

9. To the best of my knowledge, information, and belief, my sections of the Technical Report contain all scientific and technical information that is required to be disclosed to make the report not misleading.
10. I am independent of AUC LLC as set out in Section 1.4 of National Instrument 43-101.
11. I have read National Instrument 43-101F1, and the Technical Report on Resources of the Reno Creek Uranium Project, Campbell County, Wyoming USA” dated November 30, 2012 and included as Appendix A to this Reno Creek Uranium ISR Project Preliminary Feasibility Study has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.
12. I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

Dated this 17th day of May, 2013.

“Signed and sealed”

**/s/ Robert D. Maxwell**

Robert D. Maxwell

AIPG # 10903



**CERTIFICATE OF QUALIFICATIONS****Betty L. Gibbs**

I, Betty L. Gibbs do hereby certify that:

1. I am a Senior Associate of Behre Dolbear & Company (USA), Inc. 6430 S. Fiddler's Green Circle, Suite 250 Greenwood Village, CO 80111.
2. I have been retained by AUC LLC of Denver, Colorado to assist in the development of the "Technical Report on Resources of the Reno Creek Uranium Project, Campbell County, Wyoming USA" dated November 30, 2012 and included as Appendix A to this Reno Creek Uranium ISR Project Preliminary Feasibility Study.
3. I am a graduate of Colorado School of Mines with an Engineer in Mines Degree, 1969 and a Master of Science Degree in 1972.
3. I am registered as a Qualified Person with the Mining and Metallurgical Society of America (MMSA).
4. I have worked as a mining engineer and ore reserves specialist. My relevant experience for the purpose of the "Technical Report on Resources of the Reno Creek Uranium Project" is:
  - COMINAK uranium mine in Niger, Africa for confidential client (for debt placement) and
  - American Gilsonite Mine operations purchase due diligence, for confidential client.

Principal, investigator for database development, resource evaluation, mine planning, technical systems evaluation and software management:

- American Colloid Corporate technical data management systems evaluation,
  - Rio Algom, data capture and preliminary evaluations for several uranium projects,
  - Conquista uranium project for Conoco Minerals,
  - Gulf Minerals, ore reserves and mine planning on coal and uranium projects, and
  - Climax Molybdenum, mine engineering and planning for open pit and underground molybdenum operation.
5. I have read the definition of "qualified person" as set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
  6. I am responsible for the preparation of Section 12.0 (Data Verification) and 14.0 (Mineral resource Estimates) of the "Technical Report on Resources of the Reno Creek Uranium Project, Campbell County, Wyoming USA" dated November 30, 2012 and included as Appendix A to this Preliminary Feasibility Study.
  8. I have had no prior involvement with the property that is the subject of the Technical Report.

9. As of the date of this report and to the best of my knowledge, information, and belief, my sections of the “Technical Report on Resources of the Reno Creek Uranium Project, Campbell County, Wyoming USA” dated November 30, 2012 and included as Appendix A to this Reno Creek Uranium ISR Project Preliminary Feasibility Study contains all scientific and technical information that is required to be disclosed to make the report not misleading.
10. I am independent of AUC LLC as set out in Section 1.4 of National Instrument 43-101.
11. I have read National Instrument 43-101F1, and the “Technical Report on Resources of the Reno Creek Uranium Project, Campbell County, Wyoming USA” dated November 30, 2012 and included as Appendix A to this Reno Creek Uranium ISR Project Preliminary Feasibility Study” has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.
12. I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

Dated this 17<sup>th</sup> day of May, 2013.

“Signed and sealed”

**/s/ Betty L. Gibbs**

Betty L. Gibbs, MMSA QP #1164

# TABLES

**TABLE A-1**  
**Cash Flow Statement (\$US 000s)**  
**Preliminary Feasibility Study**  
**Reno Creek ISR Project**

Item	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Total	\$ per Pound
Production ('000 lbs) <sup>1</sup>	0	0	0	739	1,482	1,564	1,570	1,577	1,579	1,578	1,577	1,555	1,371	759	265	1	0	0	15,616	
Gross Sales <sup>2</sup>	\$0	\$0	\$0	\$48,043	\$96,314	\$101,658	\$102,031	\$102,489	\$102,667	\$102,591	\$102,481	\$101,105	\$89,085	\$49,326	\$17,209	\$55	\$0	\$0	\$1,015,056	
Less: Surface & Mineral Royalty of Approx. 3.9% <sup>3</sup>	\$0	\$0	\$0	\$1,854	\$3,718	\$3,924	\$3,938	\$3,956	\$3,963	\$3,960	\$3,956	\$3,903	\$3,439	\$1,904	\$664	\$2	\$0	\$0	\$39,181	\$2.51
Less: Ad Valorem + Severance Tax <sup>4</sup>	\$0	\$0	\$0	\$2,842	\$5,698	\$6,014	\$6,036	\$6,063	\$6,074	\$6,069	\$6,063	\$5,981	\$5,270	\$2,918	\$987	\$3	\$0	\$0	\$60,017	\$3.84
<b>Net Sales</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$43,347</b>	<b>\$86,898</b>	<b>\$91,720</b>	<b>\$92,057</b>	<b>\$92,470</b>	<b>\$92,631</b>	<b>\$92,562</b>	<b>\$92,463</b>	<b>\$91,222</b>	<b>\$80,377</b>	<b>\$44,504</b>	<b>\$15,558</b>	<b>\$50</b>	<b>\$0</b>	<b>\$0</b>	<b>\$915,859</b>	
<b>OPERATING COSTS</b>																				
Plant & Wellfield Operating Costs	\$0	\$157	\$1,177	\$10,250	\$11,086	\$11,096	\$11,097	\$11,098	\$11,098	\$11,098	\$11,098	\$11,095	\$11,071	\$10,983	\$5,793	\$3,281	\$2,333	\$299	\$134,109	\$8.59
Restoration, D&D & Reclamation Costs	\$0	\$0	\$0	\$0	\$0	\$492	\$984	\$1,879	\$2,774	\$1,879	\$2,283	\$3,266	\$3,266	\$2,774	\$3,178	\$1,791	\$6,932	\$1,323	\$32,821	\$2.10
<i>Subtotal (Operating Cost)</i>	<i>\$0</i>	<i>\$157</i>	<i>\$1,177</i>	<i>\$10,250</i>	<i>\$11,086</i>	<i>\$11,588</i>	<i>\$12,081</i>	<i>\$12,977</i>	<i>\$13,873</i>	<i>\$12,977</i>	<i>\$13,380</i>	<i>\$14,361</i>	<i>\$14,338</i>	<i>\$13,757</i>	<i>\$8,971</i>	<i>\$5,071</i>	<i>\$9,264</i>	<i>\$1,621</i>	<i>\$166,930</i>	<i>\$10.69</i>
<b>CAPITAL COSTS</b>																				
Pre-Construction Capital	\$5,823	\$5,781	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,604	\$0.74
Plant (CPP) Development Costs	\$0	\$8,935	\$35,006	\$3,462	\$8,532	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$55,935	\$3.58
Wellfield Development Costs	\$0	\$0	\$9,453	\$18,276	\$15,347	\$8,823	\$15,347	\$15,347	\$8,823	\$21,871	\$15,347	\$21,871	\$2,298	\$2,298	\$2,298	\$2,298	\$919	\$115	\$160,732	\$10.29
Indirect Costs	\$0	\$0	\$4,136	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,136	\$0.26
<i>Subtotal (Capital Cost)</i>	<i>\$5,823</i>	<i>\$14,717</i>	<i>\$48,594</i>	<i>\$21,738</i>	<i>\$23,879</i>	<i>\$8,823</i>	<i>\$15,347</i>	<i>\$15,347</i>	<i>\$8,823</i>	<i>\$21,871</i>	<i>\$15,347</i>	<i>\$21,871</i>	<i>\$2,298</i>	<i>\$2,298</i>	<i>\$2,298</i>	<i>\$2,298</i>	<i>\$919</i>	<i>\$115</i>	<i>\$232,407</i>	<i>\$14.88</i>
<b>Project Cash Flow</b>	<b>-\$5,823</b>	<b>-\$14,873</b>	<b>-\$49,771</b>	<b>\$11,359</b>	<b>\$51,934</b>	<b>\$71,309</b>	<b>\$64,629</b>	<b>\$64,146</b>	<b>\$69,936</b>	<b>\$57,714</b>	<b>\$63,735</b>	<b>\$54,989</b>	<b>\$63,741</b>	<b>\$28,449</b>	<b>\$4,288</b>	<b>-\$7,320</b>	<b>-\$10,184</b>	<b>-\$1,736</b>		
<b>ADMINISTRATIVE SUPPORT COSTS</b>																				
Administrative Costs	\$0	\$60	\$247	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$395	\$321	\$247	\$99	\$5,715	\$0.37
Financial Assurance	\$0	\$0	\$8,600	\$3,496	\$1,249	\$2,747	\$2,747	\$1,498	\$2,747	-\$1,498	\$2,996	\$0	-\$2,747	-\$2,996	-\$2,747	-\$3,995	-\$6,672	-\$5,424	\$0	\$0.00
License / Permit Amendments	\$0	\$0	\$350	\$350	\$350	\$1,000	\$1,000	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,050	\$0.26
<i>Subtotal (Administrative Support Cost)</i>	<i>\$0</i>	<i>\$60</i>	<i>\$9,197</i>	<i>\$4,241</i>	<i>\$1,993</i>	<i>\$4,142</i>	<i>\$4,142</i>	<i>\$2,893</i>	<i>\$3,142</i>	<i>-\$1,103</i>	<i>\$3,391</i>	<i>\$395</i>	<i>-\$2,352</i>	<i>-\$2,601</i>	<i>-\$2,352</i>	<i>-\$3,674</i>	<i>-\$6,425</i>	<i>-\$5,325</i>	<i>\$9,765</i>	<i>\$0.63</i>
<b>NET CASH FLOW (PRE-TAX)</b>	<b>-\$5,823</b>	<b>-\$14,933</b>	<b>-\$58,969</b>	<b>\$7,118</b>	<b>\$49,941</b>	<b>\$67,168</b>	<b>\$60,488</b>	<b>\$61,253</b>	<b>\$66,794</b>	<b>\$58,817</b>	<b>\$60,344</b>	<b>\$54,594</b>	<b>\$66,093</b>	<b>\$31,050</b>	<b>\$6,640</b>	<b>-\$3,646</b>	<b>-\$3,759</b>	<b>\$3,588</b>		
Opening Cash Balance	\$0	-\$5,823	-\$20,757	-\$79,725	-\$72,607	-\$22,667	\$44,501	\$104,989	\$166,242	\$233,036	\$291,853	\$352,197	\$406,791	\$472,883	\$503,934	\$510,574	\$506,928	\$503,169		
+ Net Cash Flow	-\$5,823	-\$14,933	-\$58,969	\$7,118	\$49,941	\$67,168	\$60,488	\$61,253	\$66,794	\$58,817	\$60,344	\$54,594	\$66,093	\$31,050	\$6,640	-\$3,646	-\$3,759	\$3,588		
<b>CLOSING CASH BALANCE</b>	<b>-\$5,823</b>	<b>-\$20,757</b>	<b>-\$79,725</b>	<b>-\$72,607</b>	<b>-\$22,667</b>	<b>\$44,501</b>	<b>\$104,989</b>	<b>\$166,242</b>	<b>\$233,036</b>	<b>\$291,853</b>	<b>\$352,197</b>	<b>\$406,791</b>	<b>\$472,883</b>	<b>\$503,934</b>	<b>\$510,574</b>	<b>\$506,928</b>	<b>\$503,169</b>	<b>\$506,757</b>		

Notes:

- 1) Production schedule estimated by AUC LLC.
- 2) Uranium price is assumed to remain at \$65 per pound U<sub>3</sub>O<sub>8</sub> for the life of the project.
- 3) Surface and mineral royalties are provided by AUC LLC and based on a weighted average over the area of the project. See Section 22.4 for a summary and discussion of the Strathmore royalty payment options.
- 4) Ad Valorem is calculated as 5.98% of adjusted taxable value and Severance tax is calculated as 4% of adjusted taxable value. See Section 22.3 of the PFS for a detailed explanation of Ad Valorem and Severance taxes.
- 5) The sum of the Indirect Costs does not match the Development Cost Summary, Table A-2 under "Indirect Capital" because Financial Assurance costs in Table A-2 are presented in this Cash Flow Statement under the category "Financial Assurance" in Year 1.

Total cost per pound: \$32.55

**Total Cost: \$ 508,299**

The IRR and NPV analyses are based on Years -2 to Year 16.

**IRR = 45% assuming no escalation, no debt, no debt interest, no corporate income tax or capital repayment**

Discount Rate	NPV (\$US 000s)
6%	\$294,559
8%	\$247,246
10%	\$207,932

**TABLE A-2**  
**Development Cost Summary**  
**Preliminary Feasibility Study**  
**Reno Creek ISR Project**

Item Description <sup>1</sup>	Initial Capital <sup>2</sup> CPP & PU1 (\$US 000s)	Subsequent <sup>3</sup> Capital PUs 2-18 (\$US 000s)	Total Capital Costs (\$US 000s)
<b>DIRECT COSTS<sup>4</sup></b>			
<b>Plant (CPP) Development Costs</b>			
IX Circuit	\$ 6,131	\$ -	\$ 6,131
Elution Circuit	\$ 879	\$ -	\$ 879
Drying & Precipitation Circuit	\$ 4,204	\$ -	\$ 4,204
Groundwater Restoration Circuit <sup>5</sup>	\$ 893	\$ 4,623	\$ 5,516
Building & Infrastructure <sup>6</sup>	\$ 15,306	\$ -	\$ 15,306
Installation Costs	\$ 4,335	\$ -	\$ 4,335
Deep Disposal Wells <sup>7</sup>	\$ 6,360	\$ 6,360	\$ 12,720
<i>Subtotal</i>	\$ 38,108	\$ 10,983	\$ 49,091
Contingency (Average of approximately 14%)	\$ 5,708	\$ 1,136	\$ 6,844
<b><i>Plant Development Cost Subtotal</i></b>	<b>\$ 43,816</b>	<b>\$ 12,119</b>	<b>\$ 55,935</b>
<b>Wellfield Development Costs</b>			
Wellfield Cost <sup>8</sup>	\$ 16,736	\$ 98,186	\$ 114,922
Contingency (Average of approximately 13%)	\$ 2,170	\$ 12,729	\$ 14,899
<b><i>Wellfield Development Cost Subtotal</i></b>	<b>\$ 18,906</b>	<b>\$ 110,915</b>	<b>\$ 129,821</b>
<b>INDIRECT COSTS</b>			
Engineering, Procurement & Construction Management	\$ 1,060	\$ -	\$ 1,060
Labor <sup>9</sup>	\$ 2,879	\$ -	\$ 2,879
Financial Assurance <sup>10</sup>	\$ 6,880	\$ -	\$ 6,880
<i>Subtotal</i>	\$ 10,819	\$ -	\$ 10,819
Contingency (Average of approximately 18%)	\$ 1,917	\$ -	\$ 1,917
<b><i>Indirect Cost Subtotal</i></b>	<b>\$ 12,735</b>	<b>\$ -</b>	<b>\$ 12,735</b>
<b>TOTAL DEVELOPMENT COSTS</b>	<b>\$ 75,457</b>	<b>\$ 123,034</b>	<b>\$ 198,491</b>

Notes:

- 1) Individual line item costs are shown without contingency. Contingency must be considered as part of the total cost.
- 2) Costs associated with CPP incurred in Years -1 and 1, and costs associated with PU1 incurred in Years 1 and 2.
- 3) Subsequent development costs will be incurred following startup.
- 4) Includes 6% sales tax on applicable items.
- 5) Cost for some restoration items, including secondary RO, will be incurred in Years 2 and 3.
- 6) Includes cost of land acquisition for the CPP site.
- 7) Four deep disposal wells; two in Year 1, one in Year 2 and one in Year 3.
- 8) Initial and Subsequent Wellfield CAPEX are referenced from the Wellfield Development Costs Summary, Table A-4, and are shown on this table, Table A-2, without contingency. Initial Capital costs include Production Unit 1 and miscellaneous wellfield costs. AUC labor is included in Wellfield Completion / Restoration Labor shown in the Wellfield Development Cost Summary, Table A-4 and is not included in this table.
- 9) Labor costs incurred prior to commencement of CPP & PU1 production.
- 10) The costs for Bonding are incurred before the start of production, and are also shown with contingency in Year 1 of the Annual Operating Cost Summary, Table A-3. On the Cash Flow Statement, Table A-1, they are included under Financial Assurance.

**TABLE A-3  
Annual Operating Cost Summary  
Preliminary Feasibility Study  
Reno Creek ISR Project**

<b>LIFE OF MINE OPERATING COSTS</b>	<b>Year -2</b>	<b>Year -1</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>	<b>Year 11</b>	<b>Year 12</b>	<b>Year 13</b>	<b>Year 14</b>	<b>Year 15</b>	<b>Year 16</b>	<b>Total</b>	<b>Average Contingency</b>	<b>\$ per Pound</b>	
Plant Operating Labor <sup>1</sup>	\$0	\$0	\$0	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$1,372,875	\$686,438	\$480,506	\$343,219	\$0	\$16,611,788	5%	\$1.06	
Plant Operating Expenses	\$0	\$0	\$375,620	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$5,365,995	\$2,682,997	\$1,878,098	\$1,341,499	\$0	\$65,304,154	10%	\$4.18	
Wellfield Operating Labor <sup>1</sup>	\$0	\$0	\$0	\$576,844	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$769,125	\$766,561	\$310,214	\$0	\$0	\$8,575,744	5%	\$0.55	
Wellfield Operating Expenses	\$0	\$0	\$153,398	\$1,643,546	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,191,395	\$2,184,090	\$883,863	\$0	\$0	\$24,587,449	10%	\$1.57	
Project General & Administrative <sup>2</sup>	\$0	\$156,513	\$647,969	\$1,290,857	\$1,386,226	\$1,396,784	\$1,397,522	\$1,398,427	\$1,398,778	\$1,398,628	\$1,398,410	\$1,395,692	\$1,371,944	\$1,293,392	\$1,229,937	\$922,062	\$647,969	\$298,984	\$19,030,093	7%	\$1.22	
<b>Plant &amp; Wellfield Operating Costs<sup>3</sup></b>	<b>\$0</b>	<b>\$156,513</b>	<b>\$1,176,986</b>	<b>\$10,250,116</b>	<b>\$11,085,615</b>	<b>\$11,096,173</b>	<b>\$11,096,911</b>	<b>\$11,097,816</b>	<b>\$11,098,167</b>	<b>\$11,098,017</b>	<b>\$11,097,800</b>	<b>\$11,095,082</b>	<b>\$11,071,334</b>	<b>\$10,982,913</b>	<b>\$5,793,448</b>	<b>\$3,280,666</b>	<b>\$2,332,686</b>	<b>\$298,984</b>	<b>\$134,109,227</b>		<b>\$8.59</b>	
Wellfield Restoration <sup>4</sup>	\$0	\$0	\$0	\$0	\$0	\$491,848	\$983,696	\$1,475,543	\$1,967,391	\$1,475,543	\$1,475,543	\$2,459,239	\$2,459,239	\$1,967,391	\$1,967,391	\$983,696	\$0	\$0	\$17,706,520	25%	\$1.13	
Decontamination / Decommissioning / Reclamation <sup>5</sup>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$403,534	\$807,068	\$403,534	\$807,068	\$807,068	\$807,068	\$807,068	\$807,068	\$1,210,602	\$807,068	\$6,931,714	\$1,322,513	\$15,114,306	25%	\$0.97
<b>Restoration, D&amp;D and Reclamation Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$491,848</b>	<b>\$983,696</b>	<b>\$1,879,077</b>	<b>\$2,774,459</b>	<b>\$1,879,077</b>	<b>\$2,282,611</b>	<b>\$3,266,307</b>	<b>\$3,266,307</b>	<b>\$2,774,459</b>	<b>\$3,177,993</b>	<b>\$1,790,764</b>	<b>\$6,931,714</b>	<b>\$1,322,513</b>	<b>\$32,820,826</b>		<b>\$2.10</b>	
<b>Total Operating Costs</b>	<b>\$0</b>	<b>\$156,513</b>	<b>\$1,176,986</b>	<b>\$10,250,116</b>	<b>\$11,085,615</b>	<b>\$11,588,021</b>	<b>\$12,080,607</b>	<b>\$12,976,893</b>	<b>\$13,872,626</b>	<b>\$12,977,095</b>	<b>\$13,380,411</b>	<b>\$14,361,388</b>	<b>\$14,337,641</b>	<b>\$13,757,372</b>	<b>\$8,971,441</b>	<b>\$5,071,430</b>	<b>\$9,264,400</b>	<b>\$1,621,498</b>	<b>\$166,930,053</b>	<b>12%</b>	<b>\$10.69</b>	
<b>LIFE OF MINE ADMINISTRATIVE SUPPORT COSTS</b>	<b>Year -2</b>	<b>Year -1</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>	<b>Year 11</b>	<b>Year 12</b>	<b>Year 13</b>	<b>Year 14</b>	<b>Year 15</b>	<b>Year 16</b>	<b>Total</b>	<b>Average Contingency</b>	<b>\$ per Pound</b>	
Administrative <sup>6</sup>	\$0	\$60,394	\$247,475	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$394,950	\$321,213	\$247,475	\$98,738	\$5,714,694	0%	\$0.37	
Financial Assurance <sup>7</sup>	\$0	\$0	\$8,599,798	\$3,495,819	\$1,248,507	\$2,746,715	\$2,746,715	\$1,498,208	\$2,746,715	-\$1,498,208	\$2,996,416	\$0	-\$2,746,715	-\$2,996,416	-\$2,746,715	-\$3,995,221	-\$6,672,061	-\$5,423,555	\$0	25%	\$0.00	
License / Permit Amendments	\$0	\$0	\$350,000	\$350,000	\$350,000	\$1,000,000	\$1,000,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,050,000	0%	\$0.26	
<b>Administrative Support Costs</b>	<b>\$0</b>	<b>\$60,394</b>	<b>\$9,197,273</b>	<b>\$4,240,769</b>	<b>\$1,993,457</b>	<b>\$4,141,665</b>	<b>\$4,141,665</b>	<b>\$2,893,158</b>	<b>\$3,141,665</b>	<b>-\$1,103,258</b>	<b>\$3,391,366</b>	<b>\$394,950</b>	<b>-\$2,351,765</b>	<b>-\$2,601,466</b>	<b>-\$2,351,765</b>	<b>-\$3,674,009</b>	<b>-\$6,424,586</b>	<b>-\$5,324,817</b>	<b>\$9,764,694</b>	<b>0%</b>	<b>\$0.63</b>	

Notes:

- 1) Labor costs incurred before the start of production are included in the Development Cost Summary, Table A-2.
- 2) Includes site administrative labor, product shipment, and property tax.
- 3) Years 14, 15 and 16 represent operating expenses, such as power and administrative labor, which are associated with restoring, decommissioning and reclaiming the wellfields.
- 4) Includes groundwater restoration costs. Labor costs are included in Wellfield Completion / Restoration Labor on the Wellfield Development Costs Summary, Table A-4.
- 5) Includes plant equipment removal and disposal, building demolition and disposal, header house demolition and disposal, soil removal and disposal, well abandonment, wellfield equipment removal and disposal, topsoil replacement, revegetation and miscellaneous reclamation costs.
- 6) Administrative costs provided by AUC LLC and includes legal fees, insurance, rent, office supplies, etc.
- 7) Assumes cash bond posted by AUC LLC with 0% interest accumulated on cash surety. Negative values represent positive cash flow from bond release.

**TABLE A-4**  
**Wellfield Development Costs Summary**  
**Preliminary Feasibility Study**  
**Reno Creek ISR Project**

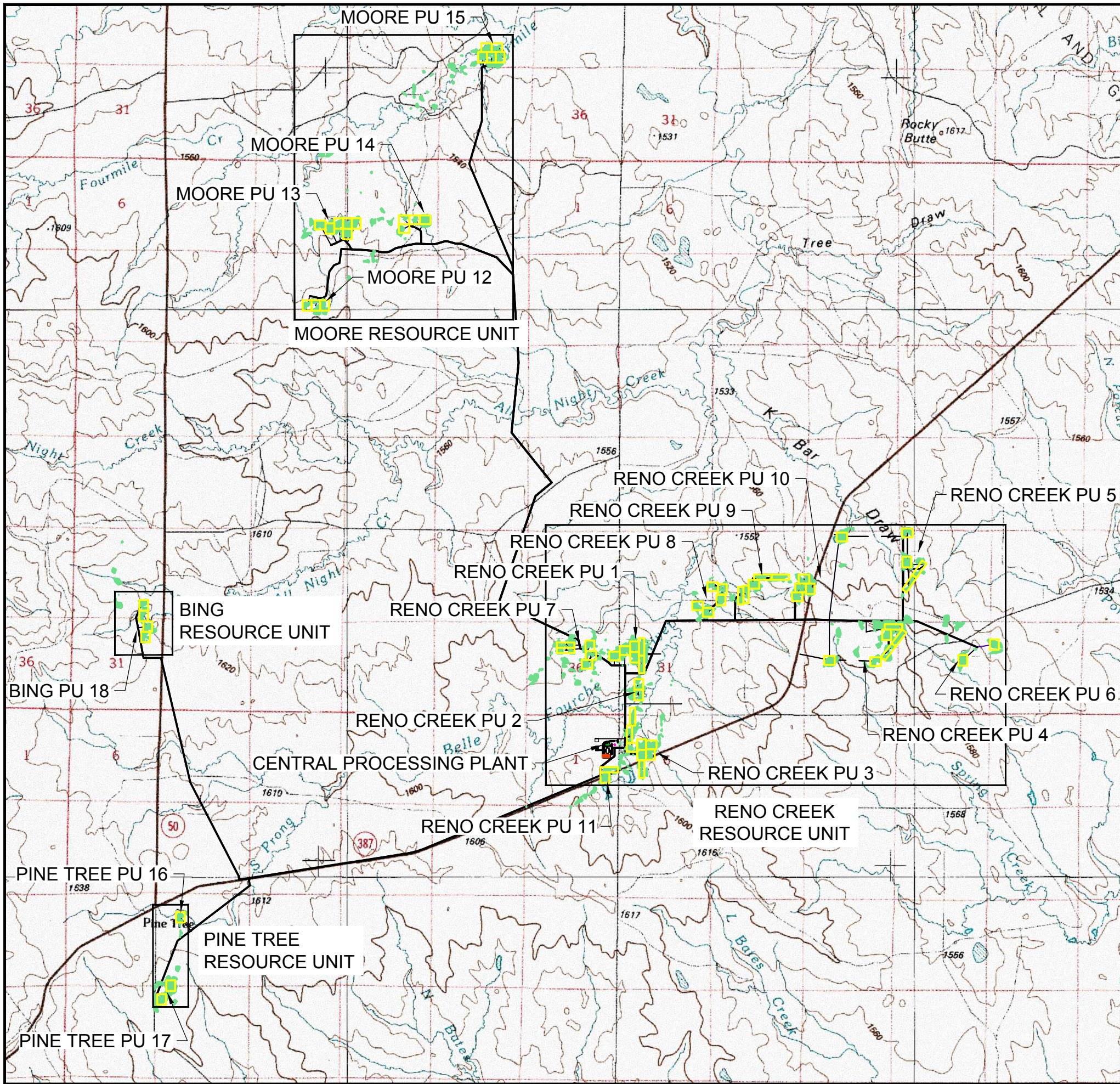
<b>LIFE OF MINE WELLFIELD DEVELOPMENT COSTS</b>	<b>Year -2</b>	<b>Year -1</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>	<b>Year 11</b>	<b>Year 12</b>	<b>Year 13</b>	<b>Year 14</b>	<b>Year 15</b>	<b>Year 16</b>	<b>Total</b>	<b>Average Contingency</b>	<b>\$ per Pound</b>
Wellfield Completion / Restoration Labor <sup>1</sup>	\$0	\$0	\$0	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$2,298,188	\$919,275	\$114,909	\$30,910,622	5%	\$1.98
Initial Wellfield Capital	\$0	\$0	\$9,452,981	\$9,452,981	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,905,962	12%	\$1.21
Subsequent Wellfield Capital	\$0	\$0	\$0	\$6,524,423	\$13,048,846	\$6,524,423	\$13,048,846	\$13,048,846	\$6,524,423	\$19,573,269	\$13,048,846	\$19,573,269	\$0	\$0	\$0	\$0	\$0	\$0	\$110,915,194	12%	\$7.10
<b>Total Wellfield Development Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,452,981</b>	<b>\$18,275,592</b>	<b>\$15,347,034</b>	<b>\$8,822,611</b>	<b>\$15,347,034</b>	<b>\$15,347,034</b>	<b>\$8,822,611</b>	<b>\$21,871,457</b>	<b>\$15,347,034</b>	<b>\$21,871,457</b>	<b>\$2,298,188</b>	<b>\$2,298,188</b>	<b>\$2,298,188</b>	<b>\$2,298,188</b>	<b>\$919,275</b>	<b>\$114,909</b>	<b>\$160,731,778</b>	<b>11%</b>	<b>\$10.29</b>

Notes:

1) Includes all labor associated with constructing, restoring, decommissioning and reclaiming the wellfields and is included in the Wellfield Development Cost line in the Cash Flow Statement, Table A-1. Labor costs incurred in Year 1 are included in the Development Cost Summary, Table A-2.

# FIGURES





**LEGEND**

- TOWNSHIP
- RESOURCE UNIT BOUNDARY
- WELLFIELD BOUNDARY
- STREAM
- TRUNKLINE
- CONTOUR LINE
- MEASURED & INDICATED MINERAL RESOURCE

**NOTE:**  
 PU: PRODUCTION UNIT  
 WELLFIELD: ONE HEADER HOUSE AND ASSOCIATED WELLS

**MINERAL RESOURCE SURFACE ACREAGE:**

RENO CREEK	221 ACRES
MOORE	67 ACRES
PINE TREE	16 ACRES
BING	15 ACRES

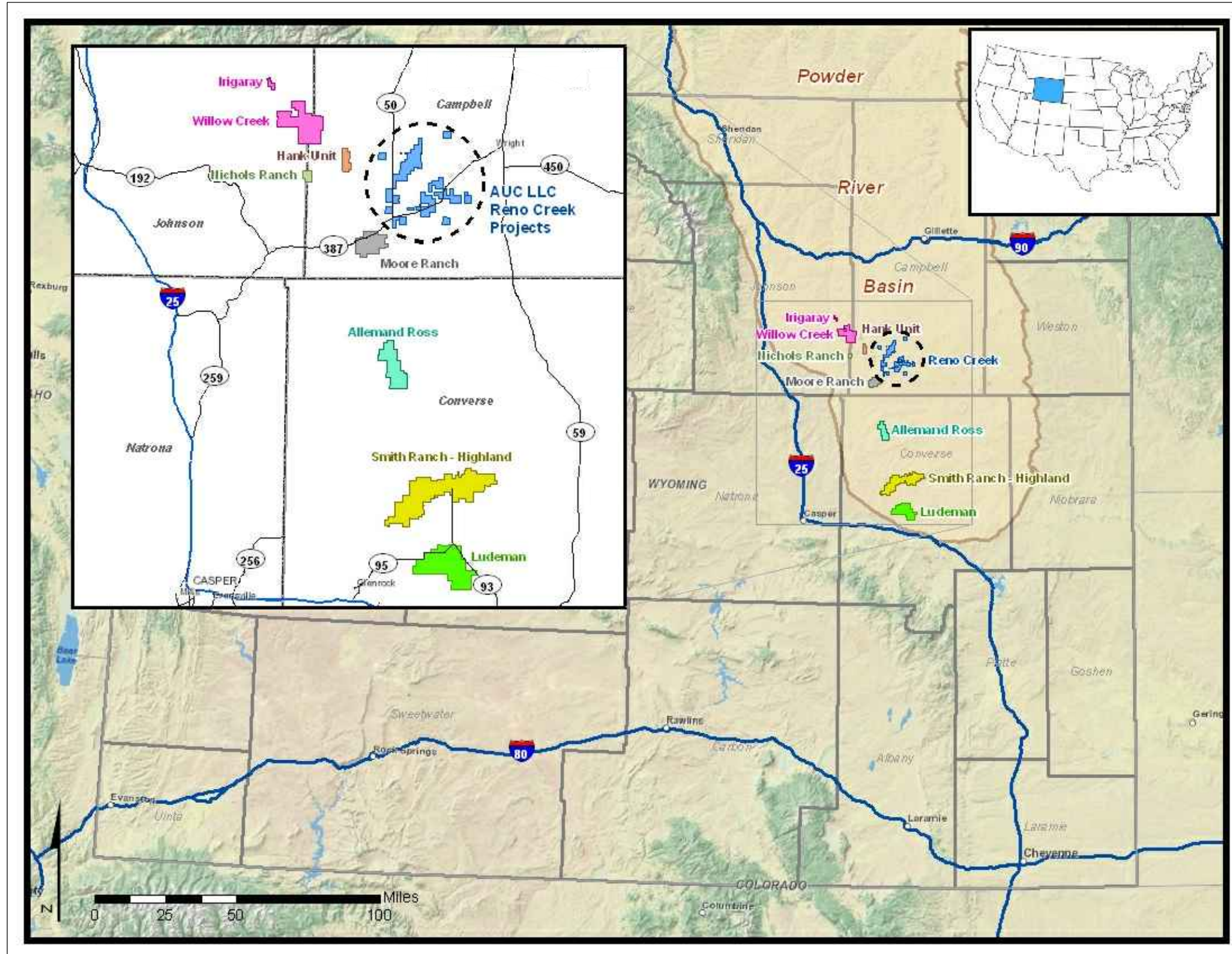


PROJECT SITE MAP  
 PRELIMINARY FEASIBILITY STUDY  
 RENO CREEK ISR PROJECT  
 CAMPBELL COUNTY, WYOMING

**FIGURE 1**

Drawn: AMT	Checked: RRU	Approved: BMP
Rev. #	Description	Date
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-	-	-



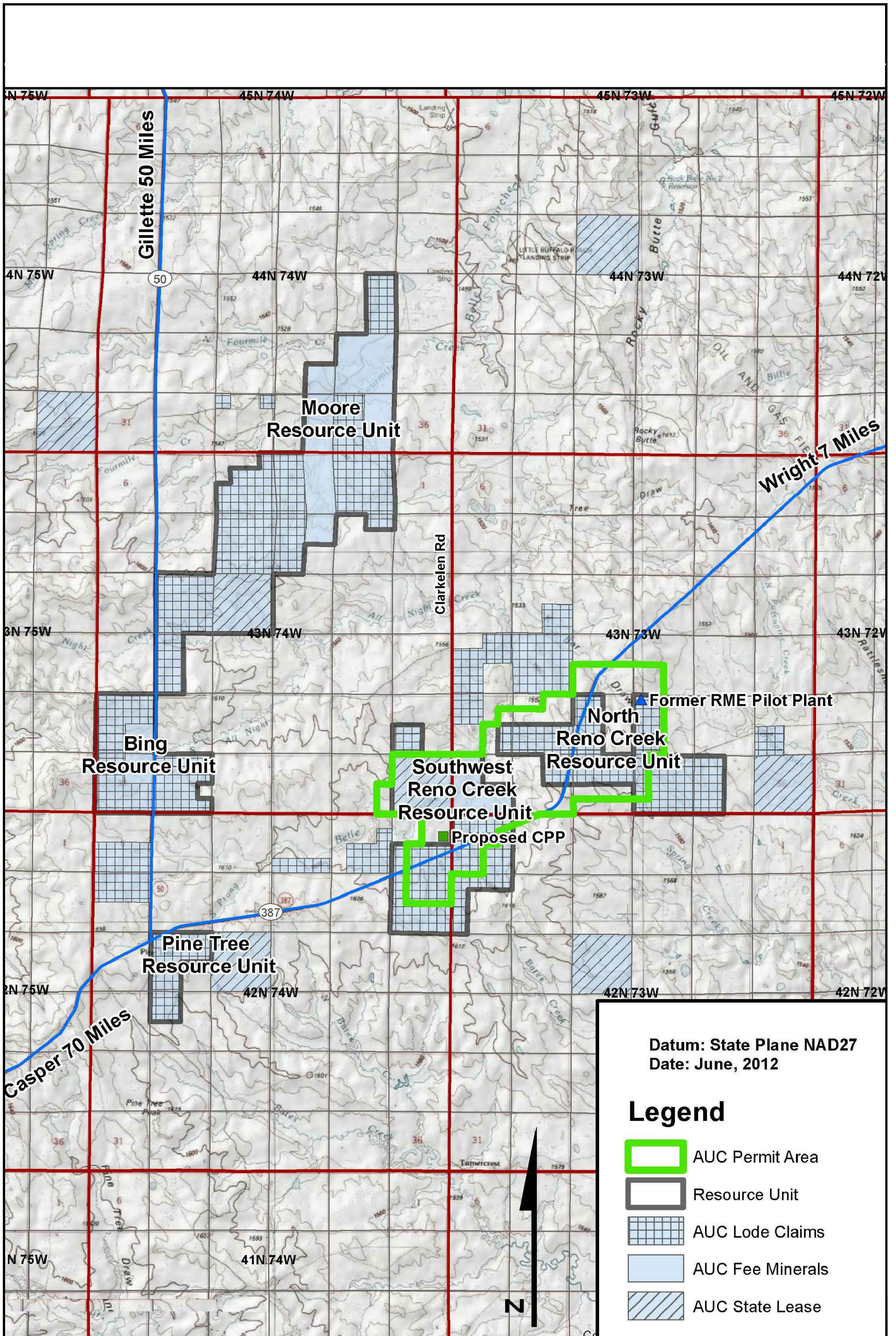


GENERAL LOCATION/VICINITY MAP  
 PRELIMINARY FEASIBILITY STUDY  
 RENO CREEK ISR PROJECT  
 CAMPBELL COUNTY, WYOMING

**FIGURE 2**

Drawn: AUC	Checked: STH	Approved: DHG
Rev. #	Description	Date
-	-	-
-	-	-
-	-	-





Datum: State Plane NAD27  
Date: June, 2012

### Legend

- AUC Permit Area
- Resource Unit
- AUC Lode Claims
- AUC Fee Minerals
- AUC State Lease



SURFACE AND MINERAL RIGHTS MAP  
PRELIMINARY FEASIBILITY STUDY  
RENO CREEK ISR PROJECT  
CAMPBELL COUNTY, WYOMING

Drawn:  
AUC  
Checked:  
STH  
Approved:  
DHG

**FIGURE 3**

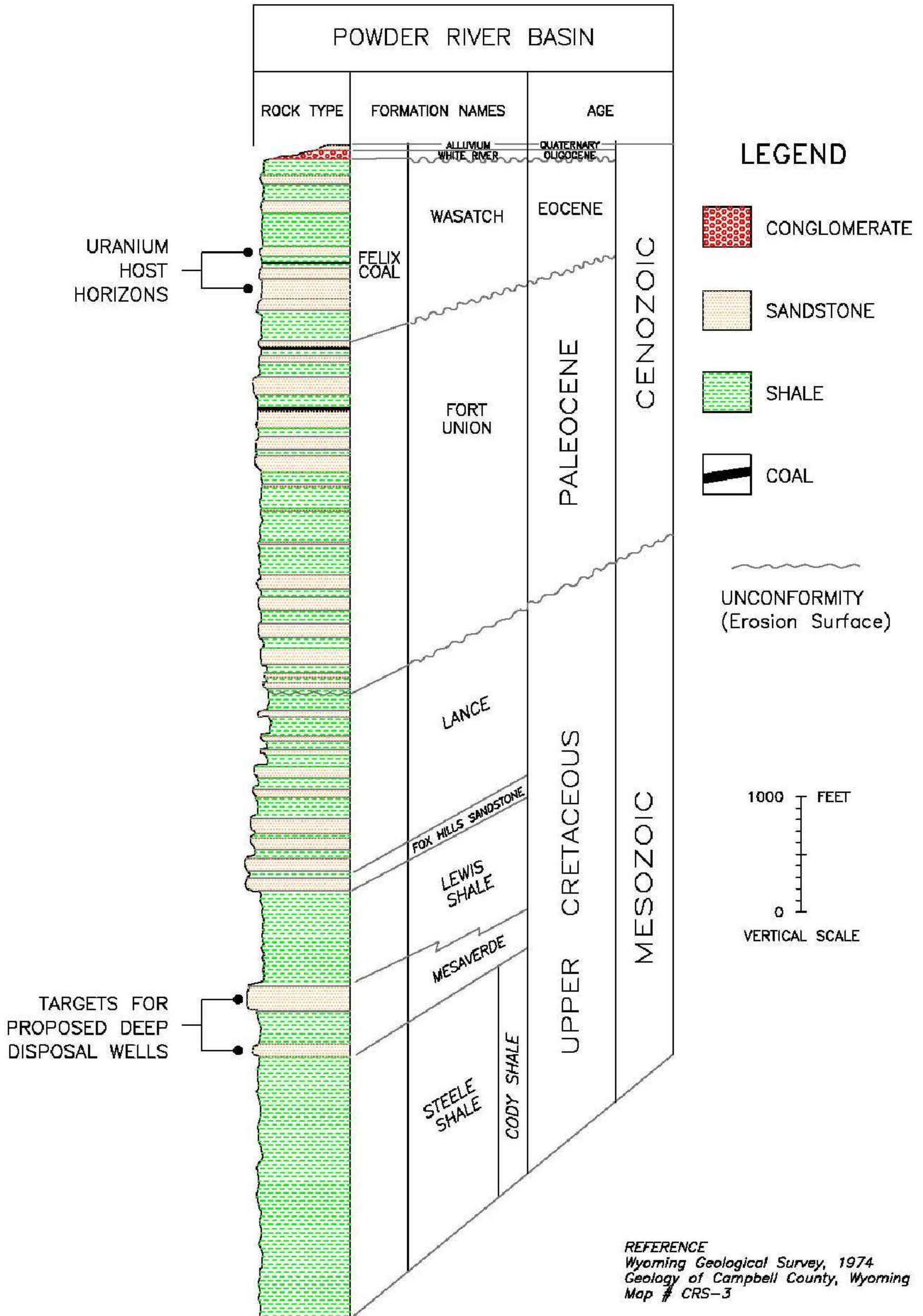
Rev. #	Description	Date
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# Partial Stratigraphic Column

## Reno Creek Project

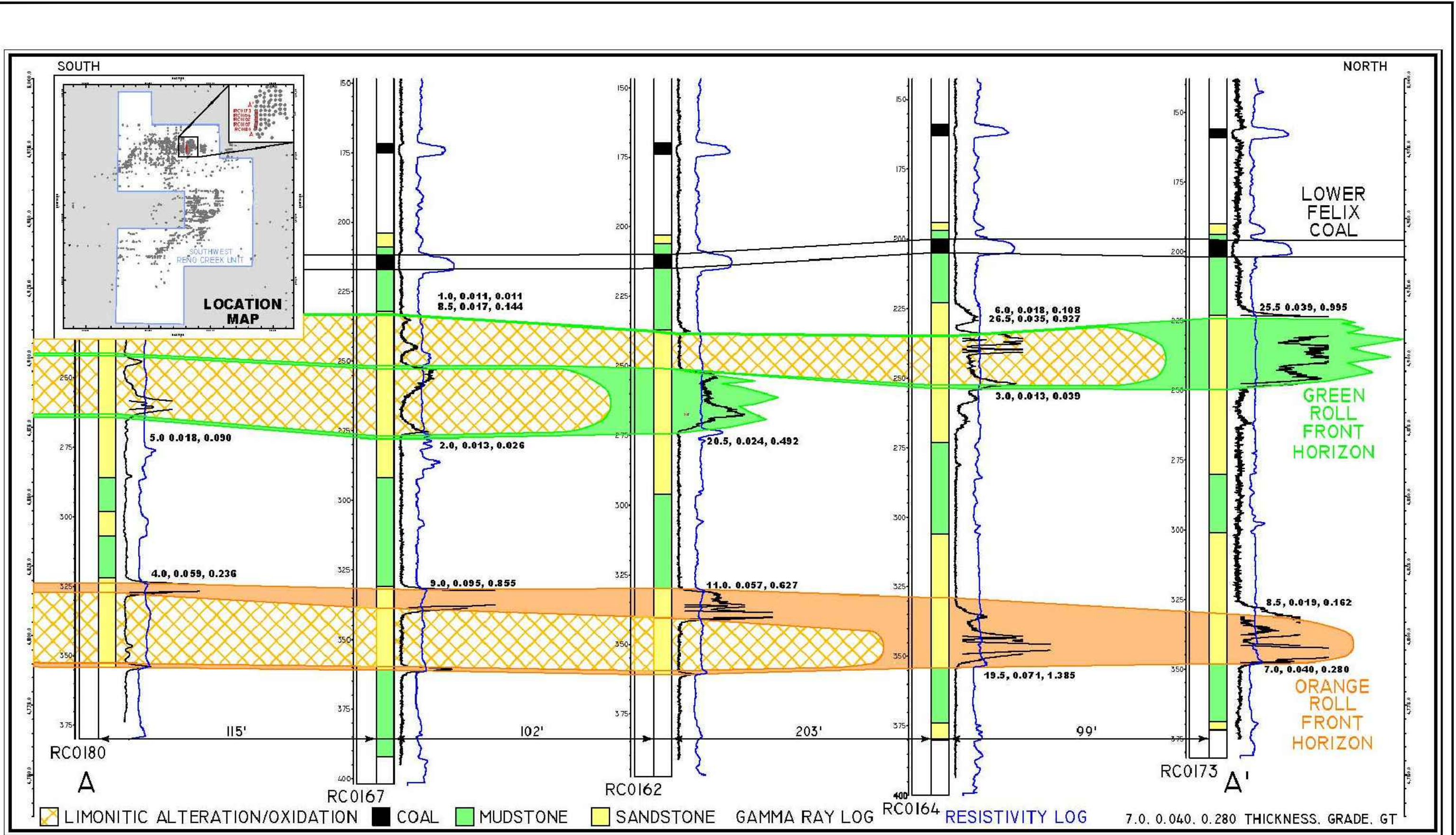
(VERTICAL SEQUENCE OF ROCK FORMATIONS WITHIN CAMPBELL COUNTY)



STRATIGRAPHIC CHART  
PRELIMINARY FEASIBILITY STUDY  
RENO CREEK ISR PROJECT  
CAMPBELL COUNTY, WYOMING

Drawn:	AUC	FIGURE 4	
Checked:	STH	Rev. #	Description
Approved:	DHG		Date
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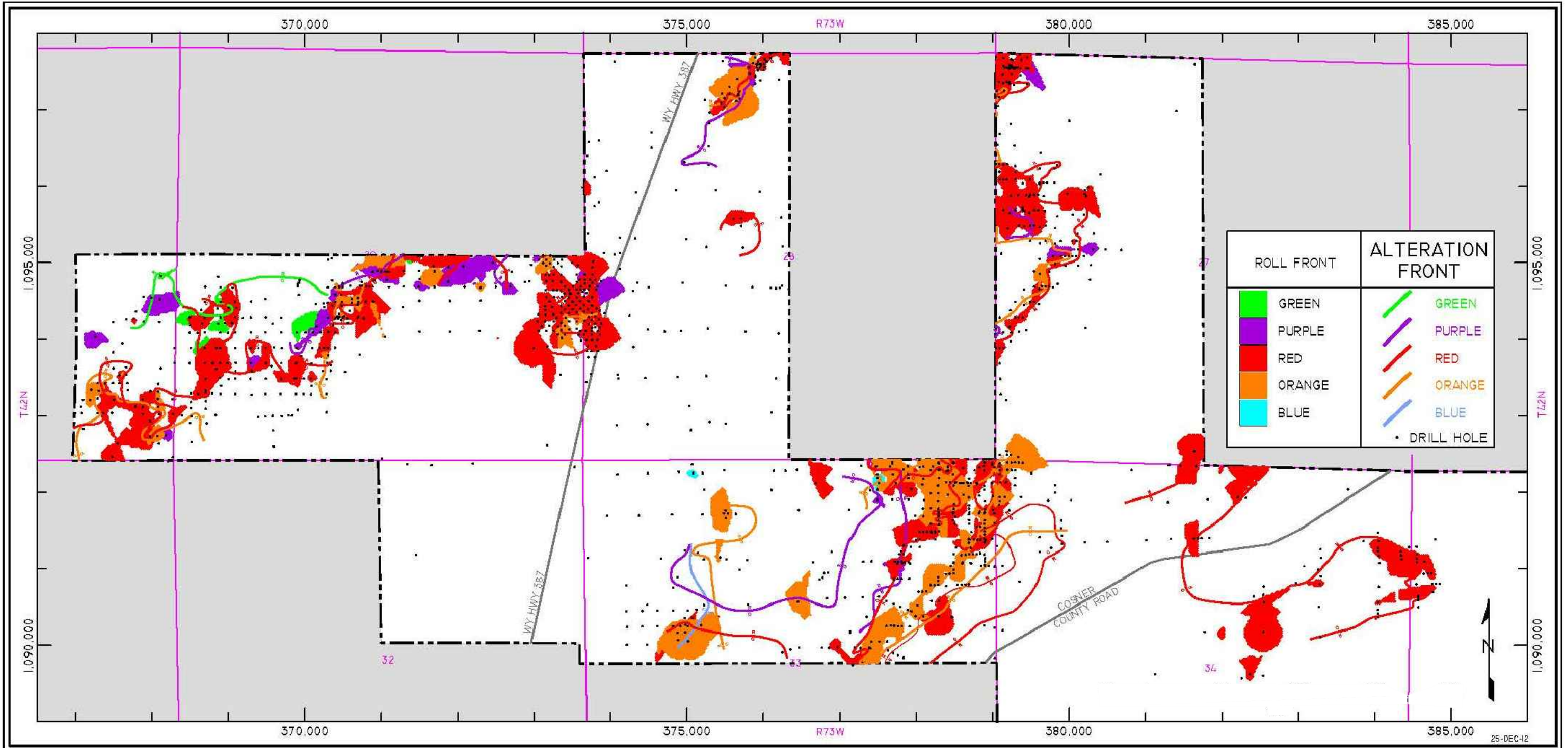
MINERALIZED CROSS-SECTIONS  
 PRELIMINARY FEASIBILITY STUDY  
 RENO CREEK ISR PROJECT  
 CAMPBELL COUNTY, WYOMING

**FIGURE 5**

Drawn: AUC	Checked: STH	Approved: DHG
Rev. #	Description	Date
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NORTH RENO CREEK RESOURCE UNIT: MEASURED (0-50') + INDICATED (50-250') & GT  $\geq$  0.3

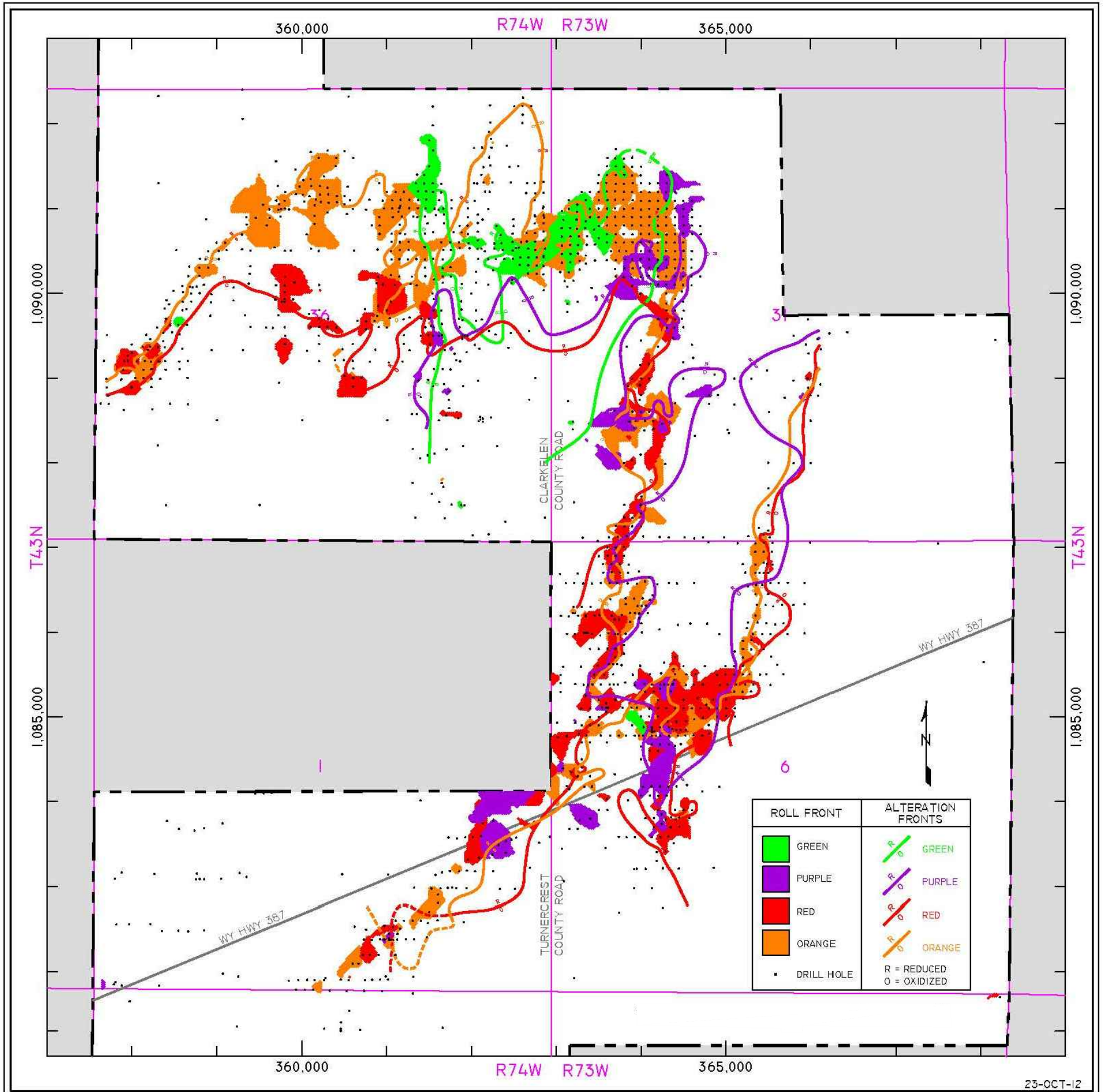


M & I RESOURCES  
 N RENO CREEK RESOURCE UNIT  
 PRELIMINARY FEASIBILITY STUDY  
 RENO CREEK ISR PROJECT

**FIGURE 6A**

Drawn: AUC	Checked: STH	Approved: DHG
Rev. #	Description	Date
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-	-	-
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SOUTHWEST RENO CREEK RESOURCE UNIT: MEASURED (0-50') + INDICATED (50-250') & GT  $\geq$  0.3



23-OCT-12



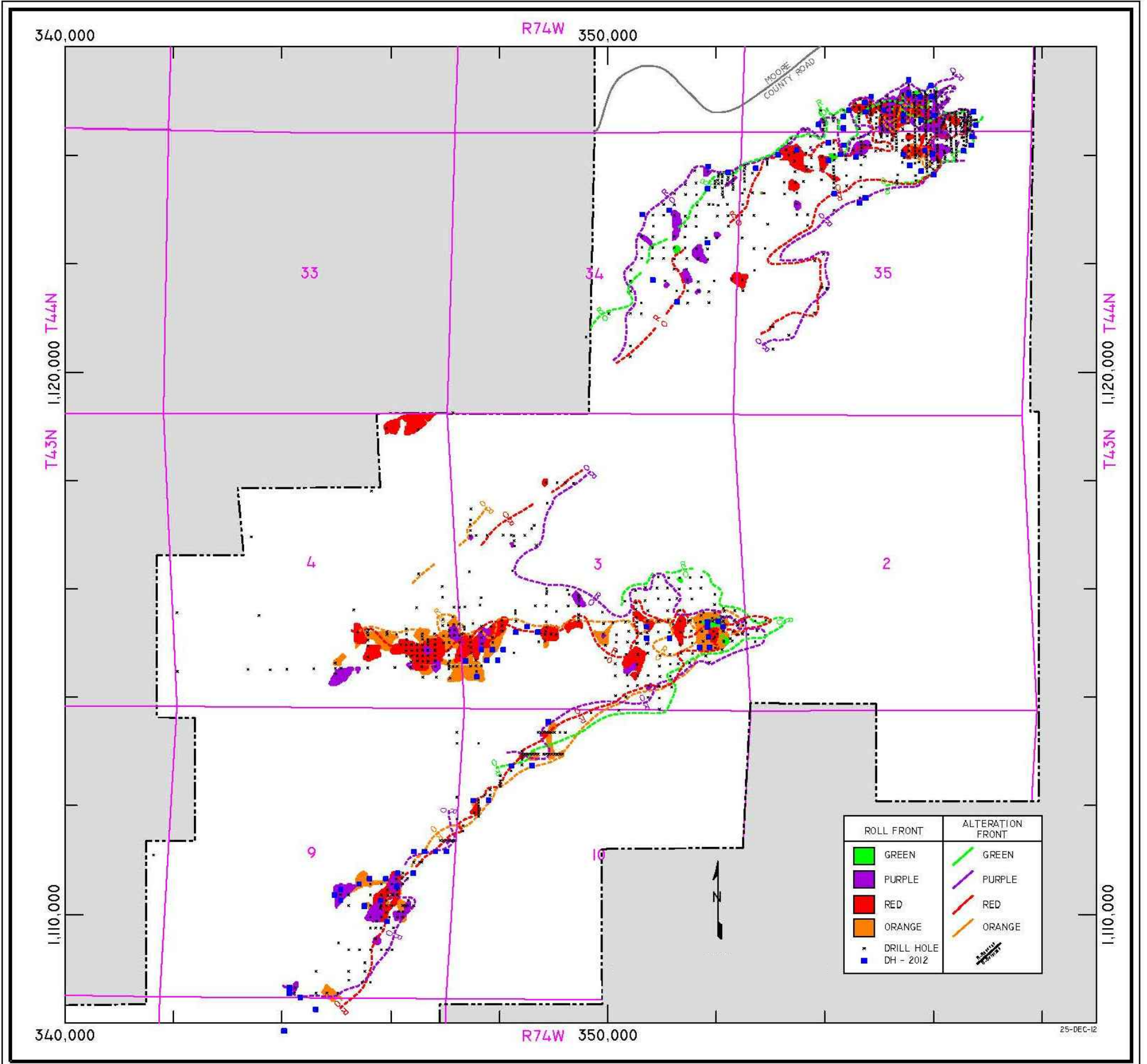
M & I RESOURCES  
 SW RENO CREEK RESOURCE UNIT  
 PRELIMINARY FEASIBILITY STUDY  
 RENO CREEK ISR PROJECT

Drawn: AUC  
 Checked: STH  
 Approved: DHG

FIGURE 6B		
Rev. #	Description	Date
-	-	-
-	-	-
-	-	-



MOORE RESOURCE UNIT: MEASURED (0-50') + INDICATED (50-250') & GT  $\geq$  0.3



M & I RESOURCES  
MOORE RESOURCE UNIT  
PRELIMINARY FEASIBILITY STUDY  
RENO CREEK ISR PROJECT

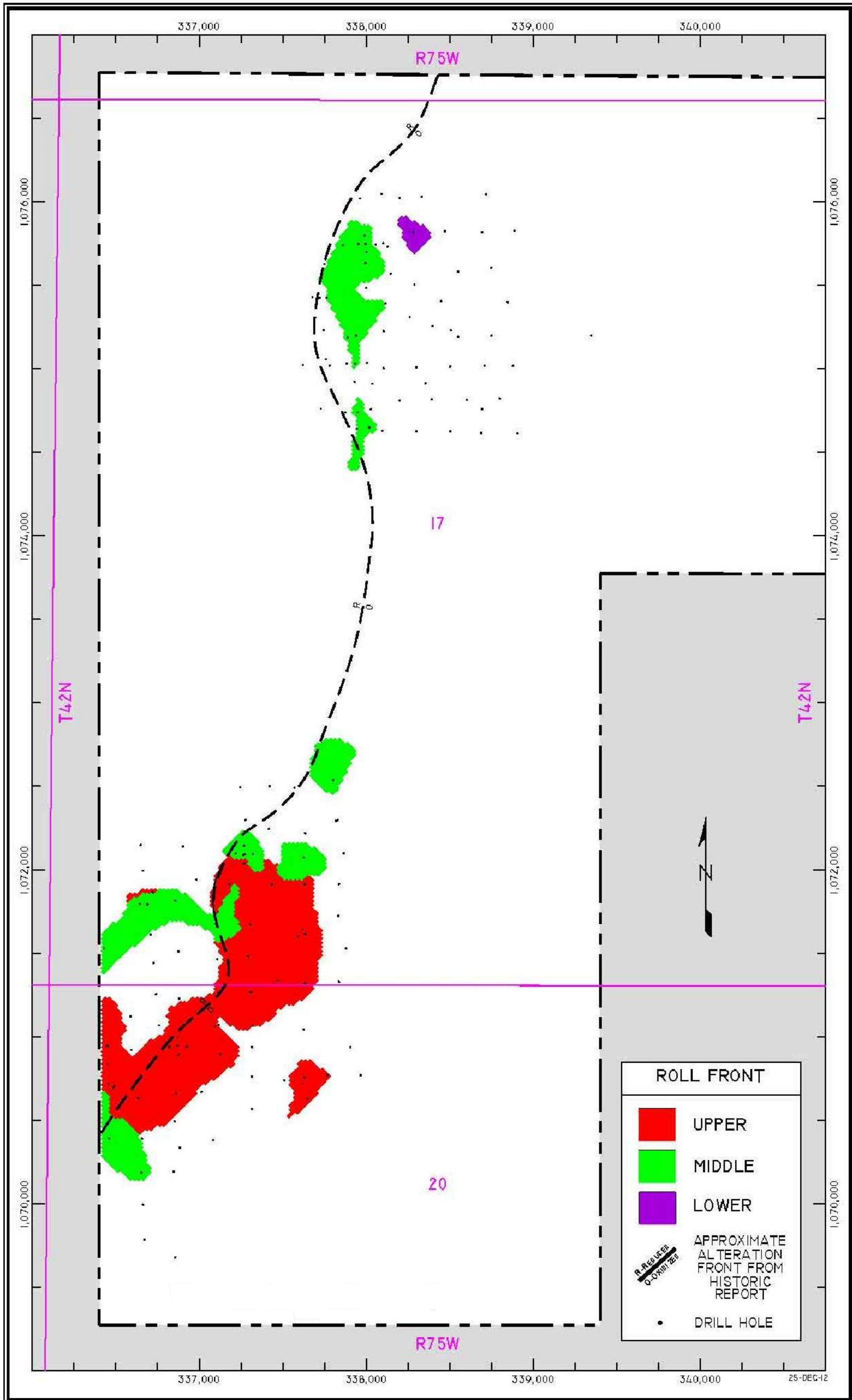
Drawn:  
AUC  
Checked:  
STH  
Approved:  
DHG

FIGURE 6C

Rev. #	Description	Date
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PINE TREE RESOURCE UNIT:  
 MEASURED (0-50') + INDICATED (50-250') & GT  $\geq$  0.3

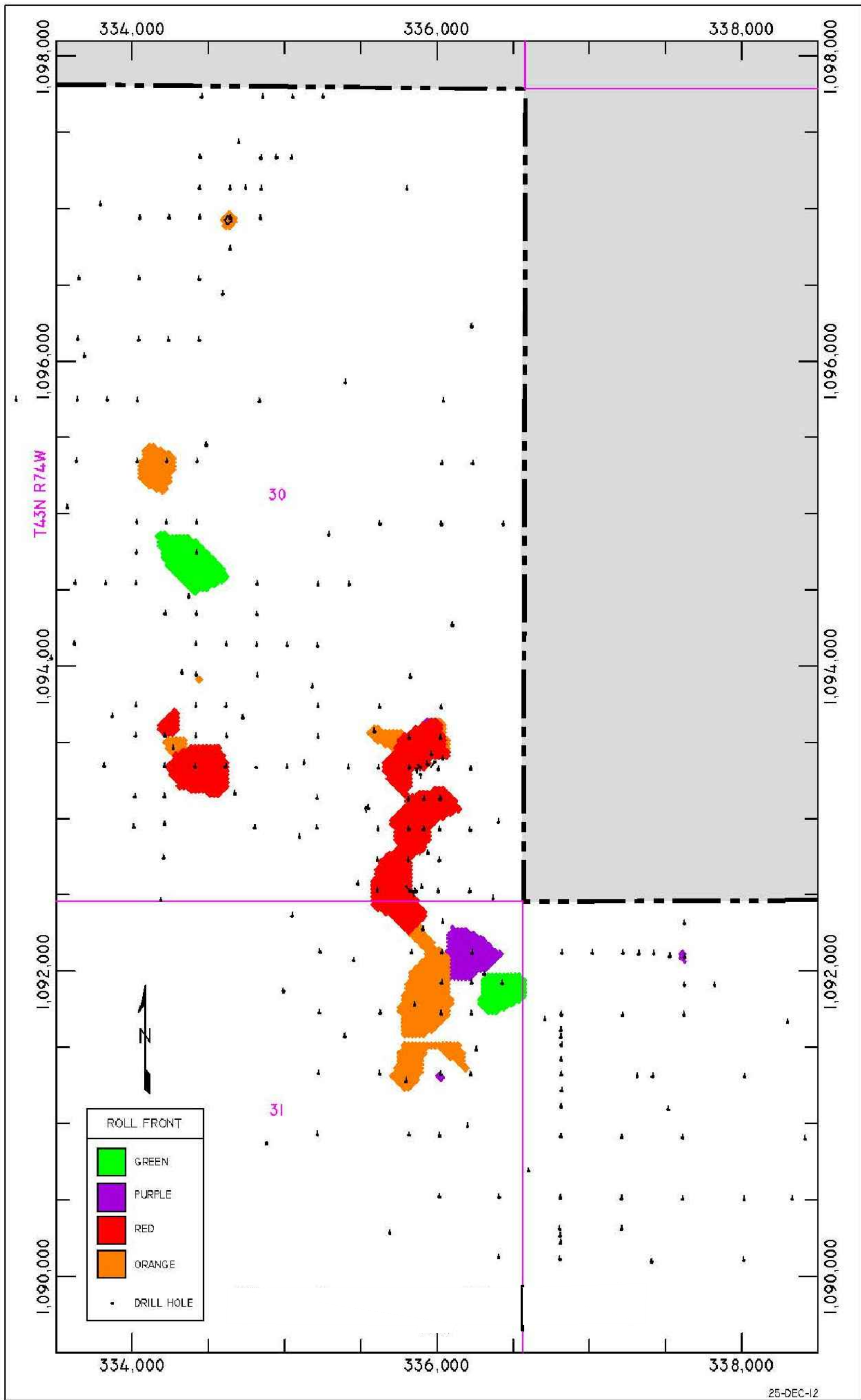


M & I RESOURCES  
 PINE TREE RESOURCE UNIT  
 PRELIMINARY FEASIBILITY STUDY  
 RENO CREEK ISR PROJECT

Drawn: AUC  
 Checked: STH  
 Approved: DHG

FIGURE 6D		
Rev. #	Description	Date
-	-	-
-	-	-
-	-	-

# BING RESOURCE UNIT: MEASURED (0-50') + INDICATED (50-250') & GT ≥ 0.3

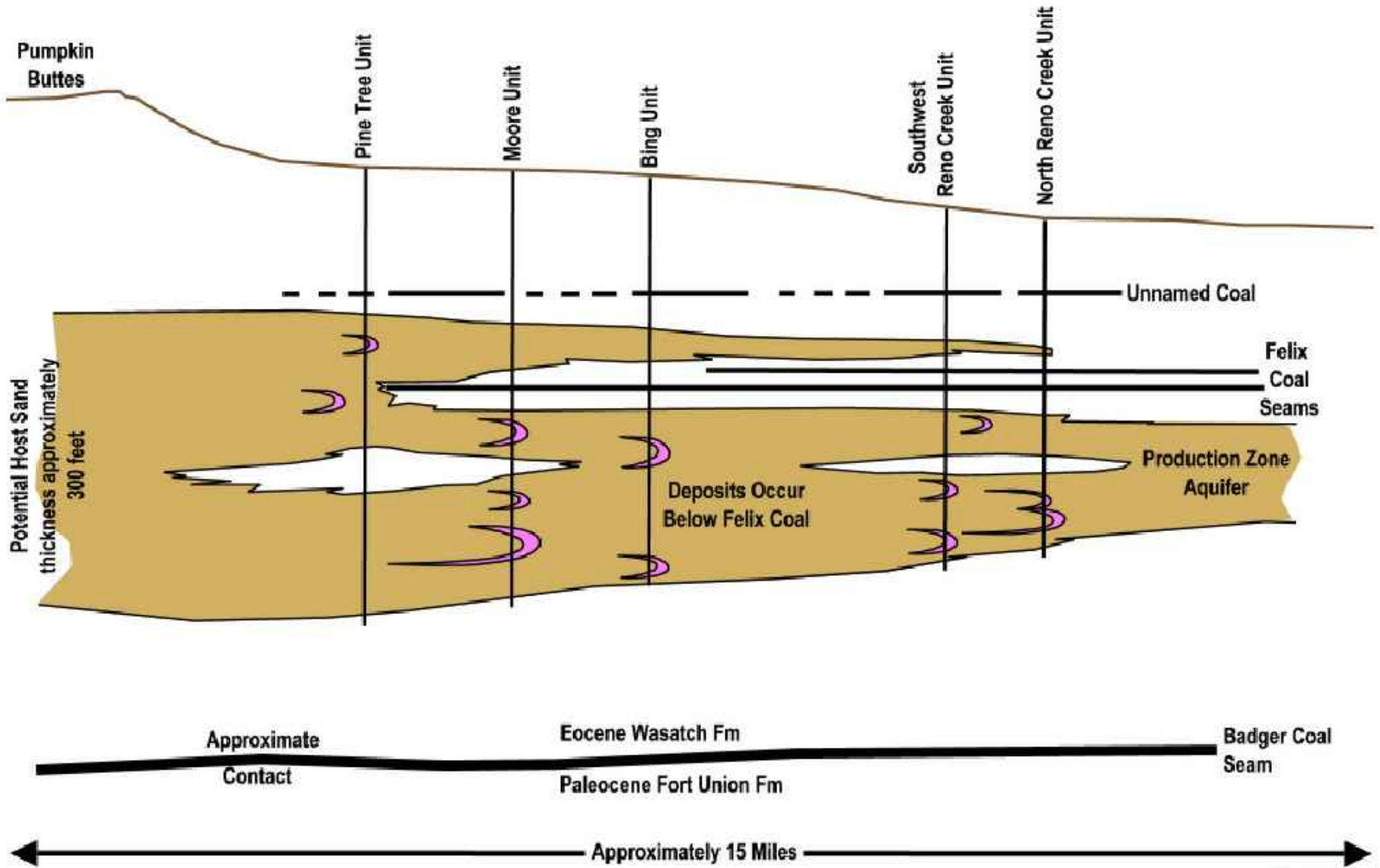


M & I RESOURCES  
BING RESOURCE UNIT  
PRELIMINARY FEASIBILITY STUDY  
RENO CREEK ISR PROJECT

Drawn:  
AUC  
Checked:  
STH  
Approved:  
DHG

FIGURE 6E		
Rev. #	Description	Date
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-	-	-
-	-	-

# Diagram of Deposits in Relation to Local Coal Seams



CONCEPTUAL URANIUM ROLL FRONT DEPOSIT  
PRELIMINARY FEASIBILITY STUDY  
RENO CREEK ISR PROJECT  
CAMPBELL COUNTY, WYOMING

Drawn:  
AUC  
Checked:  
STH  
Approved:  
DHG

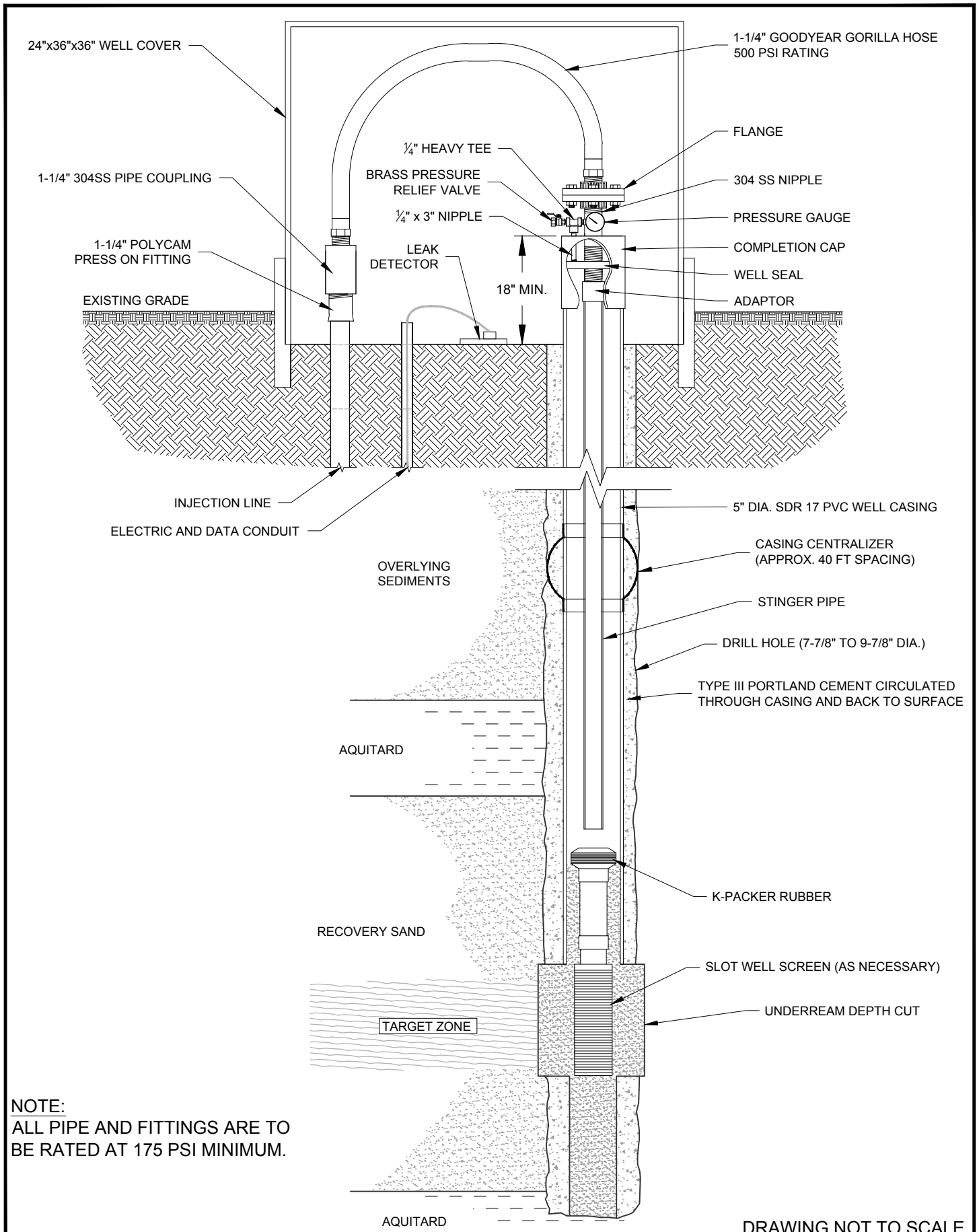
**FIGURE 7**

Rev. #	Description	Date
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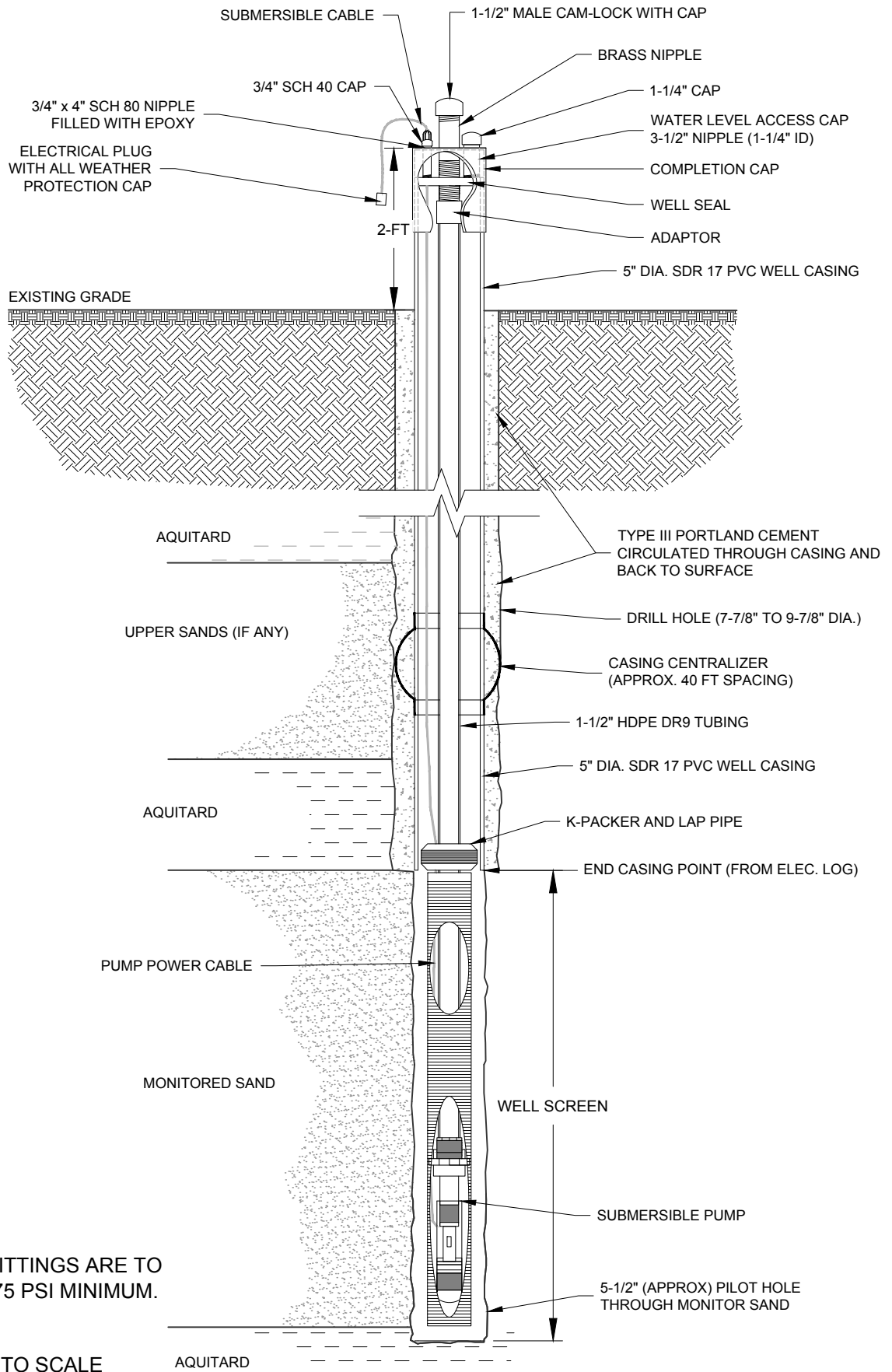






TYPICAL INJECTION WELL DETAIL  
PRELIMINARY FEASIBILITY STUDY  
RENO CREEK ISR PROJECT  
CAMPBELL COUNTY, WYOMING

Drawn: RRU	<table border="1"> <tr> <th colspan="3">FIGURE 9B</th> </tr> <tr> <th>Rev. #</th> <th>Description</th> <th>Date</th> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>-</td> <td>-</td> <td>-</td> </tr> </table>			FIGURE 9B			Rev. #	Description	Date	-	-	-	-	-	-
FIGURE 9B															
Rev. #				Description	Date										
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Approved: BMP															



**NOTE:**  
 ALL PIPE AND FITTINGS ARE TO  
 BE RATED AT 175 PSI MINIMUM.

DRAWING NOT TO SCALE

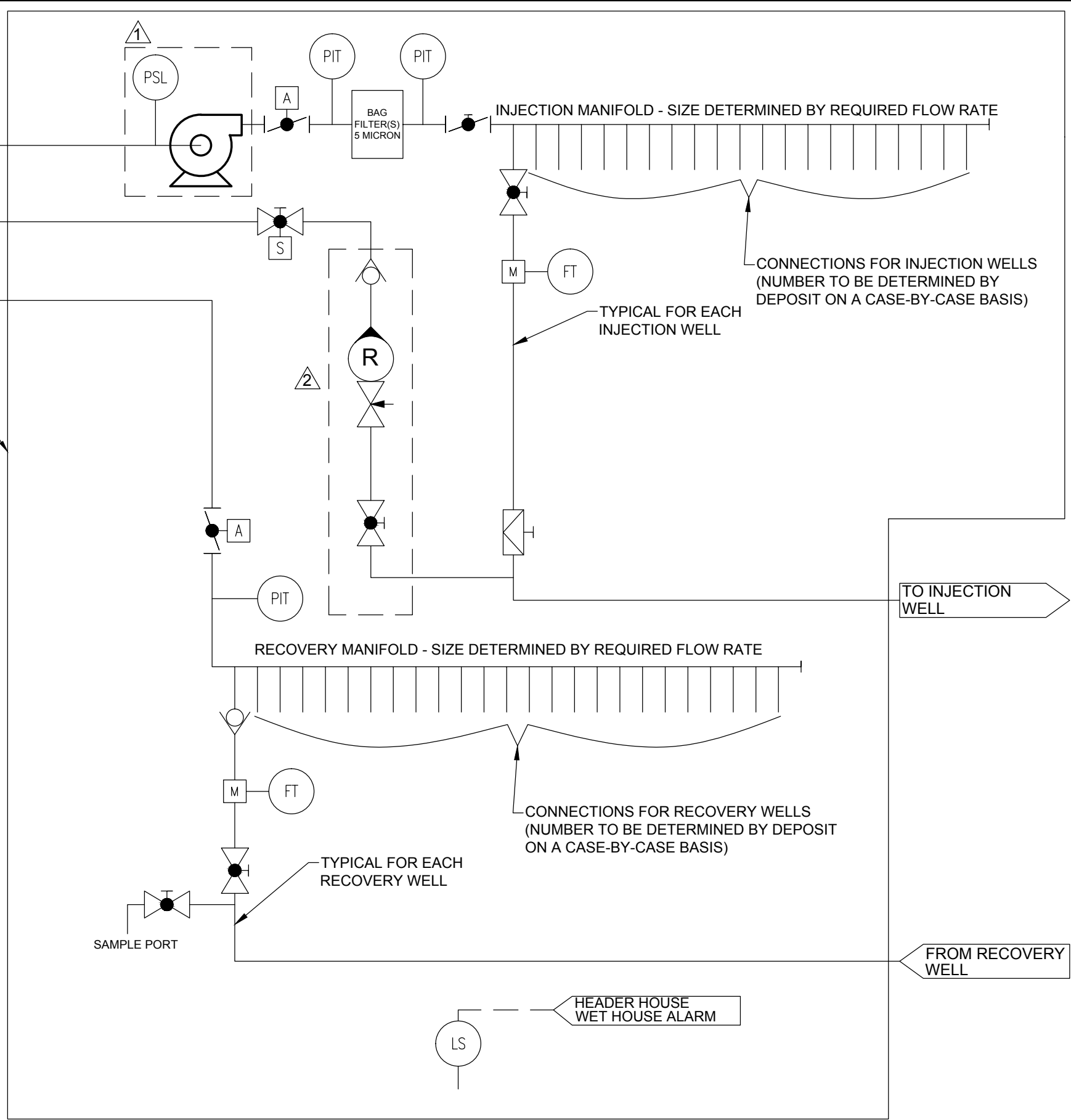


TYPICAL MONITORING WELL DETAIL  
 PRELIMINARY FEASIBILITY STUDY  
 RENO CREEK ISR PROJECT  
 CAMPBELL COUNTY, WYOMING

Drawn:	RRU	<b>FIGURE 9C</b>		
Checked:	STH			
Approved:	BMP	Rev. #	Description	Date
		-	-	-
		-	-	-
		-	-	-

- NOTES:
- ① WILL ONLY BE INSTALLED WHEN NECESSARY
  - ② TYPICAL EQUIPMENT PER INJECTION WELL

LEGEND	
<u>TYPE OF CONTROL-INSTRUMENT DIAGRAMS</u>	
PIT	PRESSURE INDICATING TRANSMITTER
PSL	PRESSURE SWITCH, LOW
FT	FLOW TRANSMITTER
LS	LEVEL SWITCH
M	MAGNETIC FLOWMETER
<u>VALVES</u>	
	BALL VALVE
	BUTTERFLY VALVE
	DIAPHRAGM VALVE
	NEEDLE VALVE
	CHECK VALVE
	ROTAMETER
<u>VALVE OPERATORS</u>	
	ELECTRIC SOLENOID
	VALVE ACTUATOR
	MANUAL ACTUATOR

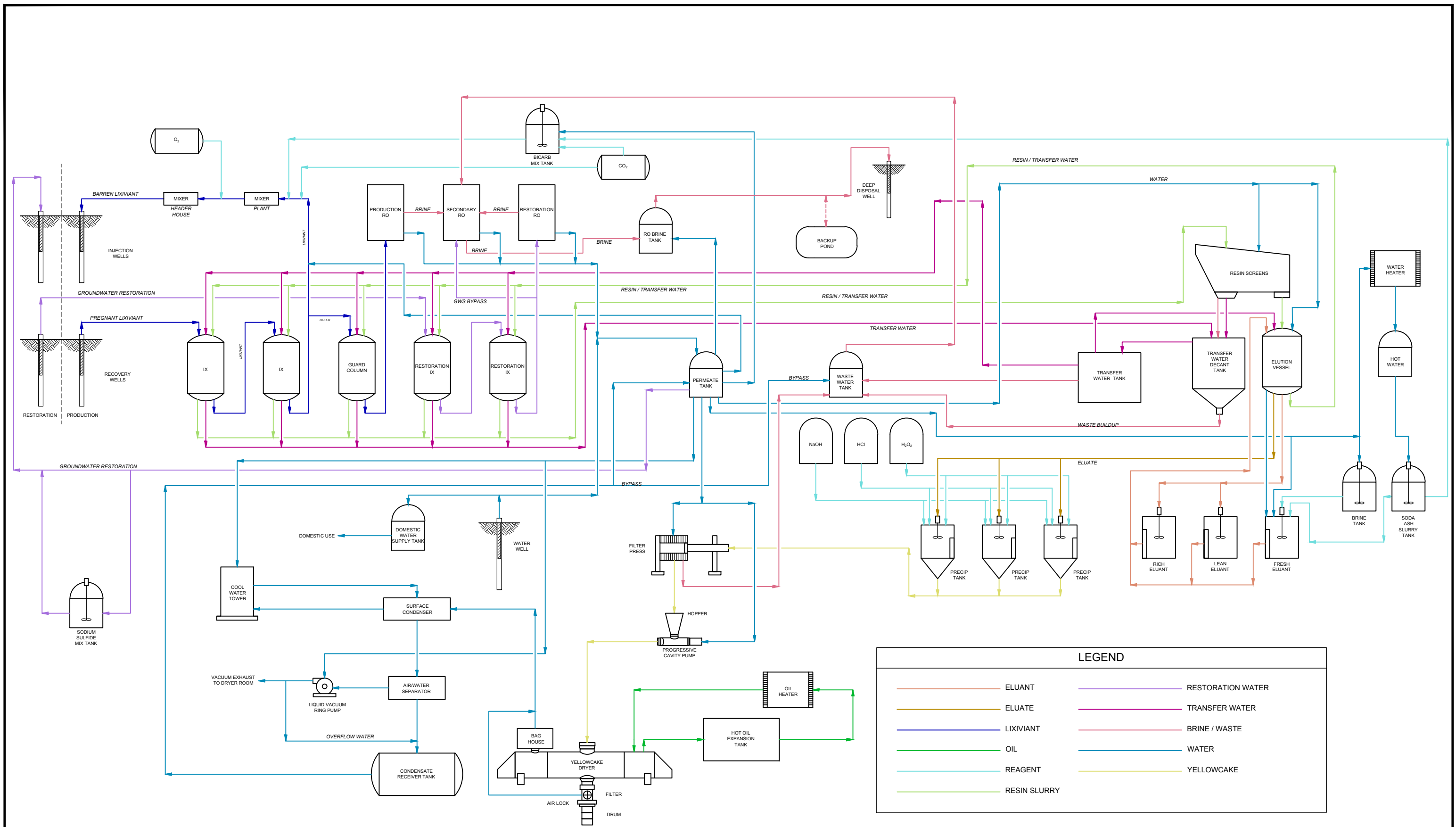


HEADER HOUSE PIPING SCHEMATIC  
PRELIMINARY FEASIBILITY STUDY  
RENO CREEK ISR PROJECT  
CAMPBELL COUNTY, WYOMING

FIGURE 10		
Drawn: STH	Checked: AJE	Approved: BMP
Rev. #	Description	Date







**LEGEND**

ELUANT	RESTORATION WATER
ELUATE	TRANSFER WATER
LIXIVANT	BRINE / WASTE
OIL	WATER
REAGENT	YELLOWCAKE
RESIN SLURRY	

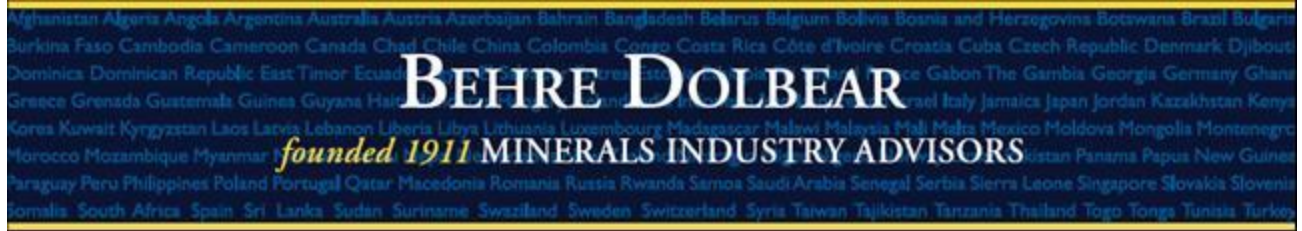


**PLANT PROCESS FLOW DIAGRAM  
PRELIMINARY FEASIBILITY STUDY  
RENO CREEK ISR PROJECT  
CAMPBELL COUNTY, WYOMING**

**FIGURE 12**

Drawn: STH	Checked: AJE	Approved: BMP
Rev. #	Description	Date

# APPENDIX A



**RENO CREEK ISR PROJECT**

**TECHNICAL REPORT ON RESOURCES OF THE  
RENO CREEK ISR PROJECT,  
CAMPBELL COUNTY, WYOMING, USA  
FOR  
AUC LLC**

**LATITUDE 43°36'52" TO LATITUDE 43°44'51" NORTH  
LONGITUDE 105°37'22" TO LONGITUDE 105°47'17" WEST**

**(BEHRE DOLBEAR PROJECT 12-181)**

**30 NOVEMBER 2012**

**PREPARED BY:**

**ROBERT D. MAXWELL, CPG, AIPG #10903  
BETTY L. GIBBS, MMSA QP #1164**

**BEHRE DOLBEAR & COMPANY (USA), INC.  
6430 SOUTH FIDDLER'S GREEN CIRCLE, SUITE 250  
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(303) 620-0020**

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## GLOSSARY

Alluvial Fan – A cone-shaped deposit of alluvium (material transported by a stream) made by a stream where it empties into a level plain or meets a slower stream.

Aquifer – A saturated permeable geologic unit that can transmit quantities of water under ordinary hydraulic gradients.

Aquitard – A less permeable bed in a stratigraphic sequence. An aquifer overlain and underlain by aquitards is considered in a confined state.

Assay – The value of  $U_3O_8$  in samples, usually analyzed by ‘wet chemical’ or spectrographic methods. Comparison of this ‘chemical’ value to a ‘radiometric equivalent is important to establish the state of equilibrium of a uranium deposit.

Cutoff – The factor used to separate ore and waste such that only material classified above the cutoff will be extracted in order to recover the mineral of interest. Evaluation of a deposit expected to be mined by in situ recovery uses a grade x thickness product (GT) to qualify a mineralized intercept for inclusion as a resource.

Elution – Process of extracting one material from another by washing with a solvent to remove adsorbed material from an adsorbent (as in washing of loaded ion-exchange resins to remove captured ions); used to obtain uranium ions during the in situ recovery process.

Environmental Impact Statement (EIS) – A document required by the National Environmental Policy Act (NEPA) for certain actions “significantly affecting the quality of the human environment.” An EIS is a tool for decision-making, describing positive and negative environmental effects of a proposed action, and usually also listing one or more alternative actions that may be chosen instead of the action described in the EIS.

Equilibrium – A uranium deposit is in equilibrium when the proportion of uranium to naturally occurring daughter products (isotopes produced by the radioactive decay of uranium) is not disturbed. A deposit is in disequilibrium when there is a disparity favorable or unfavorable) in the normal ratio between uranium and its daughter products. One cause of disequilibrium is oxygenated groundwater moving through the host rock. Uranium can be mobilized and moved down the groundwater gradient; thus, the uranium content of the host rock can be overestimated, if calculations are based solely upon the radioactivity of remaining daughter products.

Facies – General appearance or nature of one part of a geologic unit as contrasted with other parts.

Fee Ownership (fee simple right) – The ownership of real property, with the accompanying rights of selling, leasing, occupying, or mortgaging property.

Fluvial – A fluvial sedimentary deposit consists of material transported by suspension or laid down by a river or stream.

Gamma Ray, Resistivity, and Self-potential Logs – Records of downhole radioactive intensity and electrical properties of geologic units penetrated by a drill hole. The logs are interpreted to derive

the value and position of uranium mineralization, rock types, and rock properties, sometimes described as ‘electric logs’.

Humate – Containing humic acid, which is a principal component of humate (humic) substances. These are the major organic constituents of soil (humus), peat, coal, many upland streams, dystrophic lakes, and ocean water. Humic acid is produced by biodegradation of dead organic matter.

#### Inferred Mineral Resource

An ‘Inferred Mineral Resource’ is that part of a Mineral Resource for which quantity and grade or quality can be estimated based on geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

Due to the uncertainty, which may attach to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource, as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.

#### Indicated Mineral Resource

An ‘Indicated Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

In Situ Recovery (ISR) – A mining process used to recover minerals such as uranium through boreholes drilled into a deposit. A leaching solution is pumped into the deposit where it makes contact with the ore. The solution bearing the dissolved ore content is then pumped to the surface and processed.

Interstices – Pore spaces between the constituent mineral grains of a geologic unit.

IX – Ion exchange.

Leach Amenability – Suitability of a geologic unit, in terms of its geochemistry, mineralogy, and permeability, for the leaching and extraction of specific minerals (e.g., in situ recovery of uranium).

Lithology – Physical character of a rock (rock type, mineralogy, particle size distribution, etc.) generally determined megascopically or with the aid of a hand lens.

**Lixiviant** – A liquid medium used in hydrometallurgy to selectively extract the desired metal from the ore or mineral. It assists in rapid and complete leaching. The metal can be recovered from it in a concentrated form after leaching.

**Measured Mineral Resource**

A ‘Measured Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

**NRC** – United States Nuclear Regulatory Commission.

**Patented Mining Claim** – Claim on federal land for which the Federal Government has conveyed the title, thus making it private land. Claim owner has exclusive title to locatable minerals and, in most cases, to surface.

**Permeability** – The state or quality of a material or membrane that causes it to allow liquids or gases to pass through it.

**Royalty** – The mineral owner’s or royalty holder’s share of the value of minerals produced.

**Satellite Plant** – A facility that may produce a solution enriched in uranium or a resin loaded with uranium that may be readily transported to another facility for precipitation and drying.

**Terrestrial** – A terrestrial sedimentary deposit is made on land above tidal reach because of the activity of glaciers, wind, rain-wash, and stream (fluvial) systems.

**Transmissivity** – For a saturated confined aquifer, transmissivity is equal to the hydraulic conductivity (a measure of permeability) times the thickness of the aquifer. A term used to describe the rate of flow of ground water.

**Yellowcake** –  $U_3O_8$  or ‘uranium’ used by the industry to describe the product of a mining and processing operation. Sold in semi-transparent private transactions via spot market or long-term contract in US\$ per pound.

## 1.0 SUMMARY

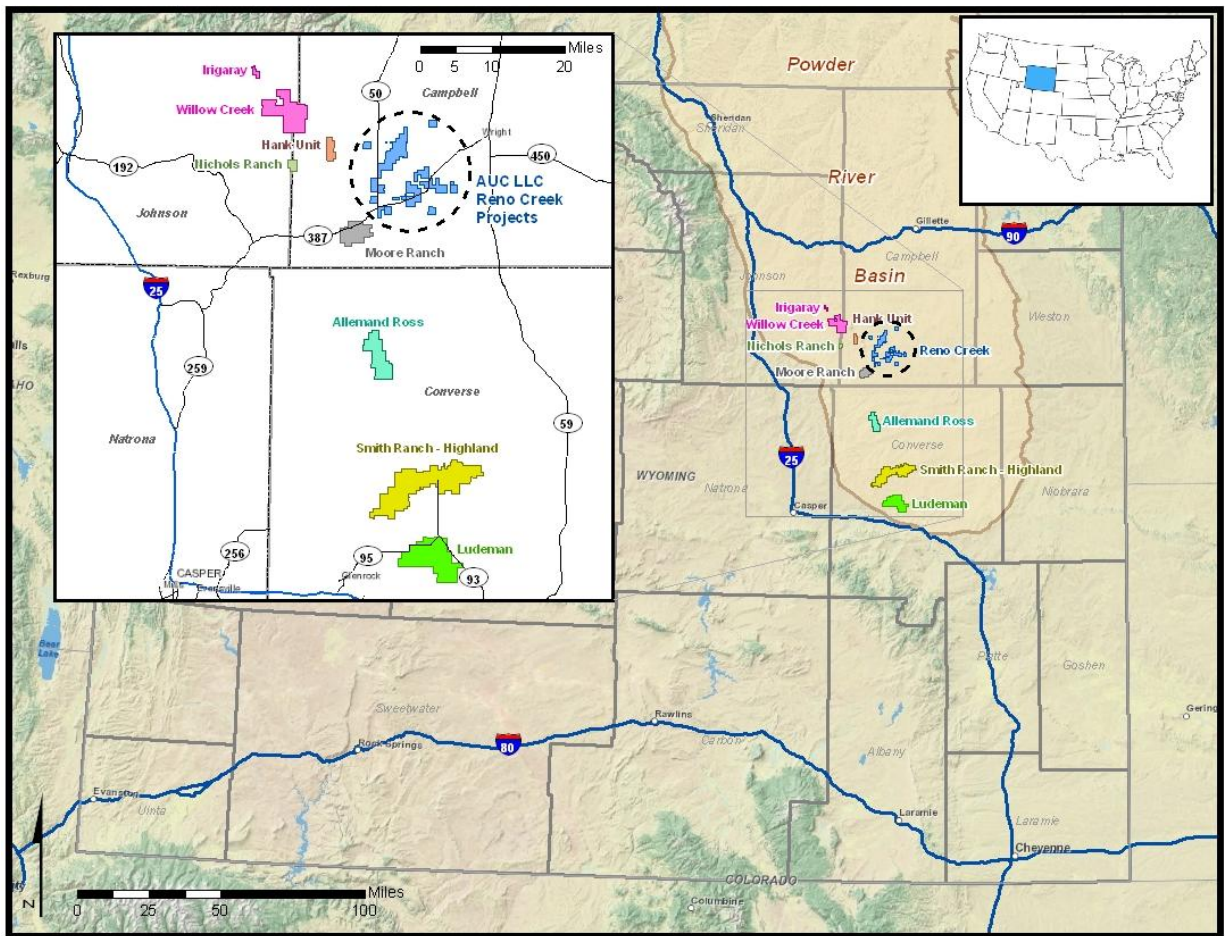
AUC LLC (AUC) engaged Behre Dolbear & Company (USA), Inc. (Behre Dolbear) to review and provide a report on uranium resources of the Reno Creek ISR Project (Project), Campbell County, Wyoming, USA. The Project is operated by AUC. Ms. Betty L. Gibbs and Mr. Robert D. Maxwell, who are Qualified Persons under Canadian National Instrument (NI) 43-101, were appointed by Behre Dolbear to supervise and be responsible for the study. Mr. Maxwell visited the Project on June 19, 2012 and July 27, 2012. Ms. Gibbs has not visited the property.

AUC LLC, a Delaware Corporation, is the current owner and operator of the Reno Creek Project. AUC LLC is the wholly owned subsidiary of AUC Holdings, also a U.S. based corporation, whose shares are held by Pacific Road Resource Funds (approximately 87%) and Bayswater Uranium Corporation (approximately 13%). AUC Holdings acquired the Reno Creek Project, including AUC LLC, from Strathmore Minerals Corporation in April 2010.

### 1.1 PROPERTY DESCRIPTION AND LOCATION

The Project consists of five resource units: North Reno Creek, Southwest Reno Creek, Moore, Pine Tree, and Bing. North Reno Creek and Southwest Reno Creek are contiguous and the other units are within 5 miles of the two (Figure 1.1).

- The North Reno Creek Unit and Southwest Reno Creek Unit are currently being permitted for mining by in situ recovery (ISR) methods, and will include 12 ISR Production Units and a Central Processing Plant (CPP). The proposed permit boundary encompasses the production units and CPP. An application for a Source Material License from the U.S. Nuclear Regulatory Commission (NRC) was submitted on October 5, 2012.
- The Moore Unit lies approximately 5 miles to the northwest of the Reno Creek Unit and proposed permit area. The Moore Unit will be connected to the CPP via pipelines.
- The Pine Tree Unit lies approximately 5 miles to the southwest of the Reno Creek Units, immediately southeast of the intersection of U.S. Highway 387 and Wyoming Highway 50, also known as Pine Tree Junction. The Pine Tree Unit will be connected to the CPP via pipelines.
- The Bing Unit lies adjacent to (west) of Wyoming Highway 50, 3 miles north of Pine Tree Junction. The Bing Unit will be connected to the CPP via pipelines.



**Figure 1.1. Reno Creek ISR Project location**

The Project is located in the Pumpkin Buttes Uranium District in Campbell County, Wyoming in the south central portion of the Powder River Basin. Figure 1.1 depicts the general site location of the Project and surrounding area. The North Reno Creek and Southwest Reno Creek Units are located 7.5 miles southwest of Wright, 31 miles northeast of Edgerton, and 41 miles south of Gillette. The primary access roads to the Moore Resource Unit, from Highway 387, are Wyoming Highway 50 and the Clarkelen Road, which runs north and south and is a Campbell County-maintained gravel road. Additionally, there are private, two-track roads established from coal bed methane (CBM) development and agricultural activity, which provide access to other areas within the Project. No part of the Project is more than 2 miles from a public, all weather road.

AUC LLC is the current owner and operator of the Reno Creek Project. AUC is owned by Pacific Road Resource Funds (87%) and Bayswater Uranium (13%). The Project was acquired from Strathmore Resources in April of 2010.

The Project controls approximately 21,000 acres, consisting of 688 unpatented lode mining claims, 7 State of Wyoming mineral leases, and 4 private (fee) mineral leases. AUC has executed surface use and access agreements with all landowners who hold surface ownership within the proposed ISR mining permit boundary at North Reno Creek and Southwest Reno Creek including leases on State land. AUC has secured the majority of surface use and access agreements needed from landowners within the Moore



Unit. Surface use and access agreements for the Bing and Pine Tree Units will be negotiated in upcoming months.

AUC and Uranerz have recently signed a boundary agreement that allows each party to mine and reclaim up to its mineral ownership boundary. The agreement provides for each company to install and operate monitor wells on the other company's property during mining, restoration, and reclamation.

## **1.2 HISTORY AND STATUS**

Owners or operators of properties in the Project, prior to acquisition by AUC, were American Nuclear/TVA, Cleveland Cliffs Iron Company, Energy Fuels, International Uranium Corporation, Power Resources Inc., Rio Algom Mining Corporation, Rocky Mountain Energy, and Utah International Mining Corporation. Exploration and development work consisted of drilling vertical holes with documentation of stratigraphy and radiation via downhole geophysical logging. The most significant activity was Rocky Mountain Energy's Pilot Plant on the North Reno Creek property with very limited production (approximately 1,200 pounds of  $U_3O_8$ ).

Exploration on the property has continued and approximately 800 rotary holes, core holes, and monitoring wells have been drilled by AUC during the past 3 years within the North Reno Creek and Southwest Reno Creek Units. AUC is nearing completion of a 100-hole rotary and core program at the Moore Unit. Evaluation of results will be conducted over the next few months.

To date, more than 7,550 drill holes have been drilled by AUC and previous uranium exploration companies on, and nearby, the five Resource Units held by AUC. Data from the drilling, including survey coordinates, collar elevations, depths, and grade of uranium intercepts, have been incorporated into AUC's database.

As a result of energy development over the past 50 years, all of the properties where AUC's deposits lie have existing or nearby electrical power, gas, and have adequate phone and Internet connectivity. The local economy is geared toward coal mining and oil and gas production as well as ranching operations that provide a well-trained and capable pool of workers for ISR production and processing operations. AUC has leases and surface use and access agreements within the proposed mining permit area to enable construction of all operational facilities.

Specific permits will be acquired to conduct the work proposed for the property. Table 1.1 summarizes the list of permits and licenses needed for the Project.

<b>TABLE 1.1 SUMMARY OF PROPOSED, PENDING, AND APPROVED PERMITS FOR THE RENO CREEK ISR PROJECT</b>		
<b>Regulatory Agency</b>	<b>Permit or License</b>	<b>Status</b>
<i>Federal</i>		
U.S. Nuclear Regulatory Commission (NRC)	Source Materials License (10 CFR 40)	Application was submitted October 5, 2012. Includes license application, an Environmental Report, and a Technical Report
U.S. Army Corps of Engineers	Determination of Jurisdictional Wetland	Wetland delineation has been completed and forwarded to ACOE in April 2012
U.S. Environmental Protection Agency (EPA)	Aquifer Exemption (40 CFR 144, 146)	Aquifer reclassification information to be submitted to EPA after preparation by WDEQ-WQD
<i>State</i>		
Wyoming Department of Environmental Quality/Air Quality Department	Air Quality Permit	Application approved prior to start of construction – 3 <sup>rd</sup> quarter 2013
WDEQ/Water Quality Division (WQD)	Groundwater Reclassification (WDEQ Title 35-11)	Aquifer reclassification application to be reviewed and classified by WDEQ-WQD – 2 <sup>nd</sup> quarter 2013
	Underground Injection Control Permit (Deep Disposal Well) (WDEQ Title 35-11)	Class I UIC Permit application under review by the WDEQ-WQD. Expect approval by 4th quarter 2012
WDEQ/Land Quality Division (LQD)	Underground Injection Control Class III Permit (Permit to Mine) (WDEQ Title 35-11)	Class III UIC (Permit to Mine) Permit application to be submitted December 2012
	Mineral Exploration Permit (WDEQ Title 35-11)	Approved Mineral Exploration Permit DN #401 is currently in place for the exploration actions of Reno Creek Project areas
	Industrial Storm Water NPDES Permit (WDEQ Title 35-11)	An Industrial Storm Water NPDES will be required for the Central Processing Plant Area – 3 <sup>rd</sup> quarter 2013
	Construction Storm Water NPDES Permit (WDEQ Title 35-11)	Construction Storm Water NPDES authorizations are applied for and issued annually under a general permit based on projected construction activities. The Notice of Intent will be filed at least 30 days before construction activities begin in accordance with WDEQ requirements – 3 <sup>rd</sup> quarter 2013
	Underground Injection Control Class V (WDEQ Title 35-11)	The Class V UIC permit will be applied for following installation of an approved site septic system during facility construction. 3 <sup>rd</sup> quarter 2013



### **1.3 GEOLOGY AND MINERALIZATION**

The uranium deposits within the Project area occur in medium to coarse-grained sand facies in the lower portion of the Eocene-age Wasatch Formation. The uranium mineralization occurs as interstitial fillings between and coatings on the sand grains along roll front trends formed at a bio-chemical interface within the host sandstone aquifers. Sinuous fronts of mineralization occur in up to five sandstone units. Stacking of roll front mineralization occurs at many places throughout the Project causing resources to occur at different stratigraphic levels in the same area.

Sandstones are commonly cross-bedded, graded sequences fining upward from very coarse at the base to fine grained at the top, representing sedimentary cycles from 5 feet to 20 feet thick. Stacking of depositional cycles has resulted in sand body accumulations over 200 feet thick. The North Reno Creek, Southwest Reno Creek, Moore, and Bing Units share similar stratigraphy and geology. The Pine Tree Unit lies slightly higher in the stratigraphic section.

Roll front uranium minerals in the unoxidized zone are commonly coffinite and pitchblende (a variety of uraninite). Low concentrations of vanadium (<100 ppm) are sometimes associated with the uranium deposits.

### **1.4 MINERAL RESOURCES**

It is the authors' opinion that the resources were properly estimated by AUC using appropriate methodologies that are compliant with NI 43-101 standards, and result in an appropriate estimation of quantities and grades. As presented in Table 1.2, Measured and Indicated Resources for the Reno Creek ISR Project total 20.9 million tons grading 0.052%  $U_3O_8$  yielding 21.9 million pounds of  $U_3O_8$ . Inferred Resources total 1.56 million tons grading 0.050%  $U_3O_8$  yielding 1.55 million pounds of  $U_3O_8$ . It is also the authors' opinion that the triangulation gridding method used for volumetric measurements is an appropriate way to estimate quantities and grades given the sinuous and irregular nature of the deposits.

<b>TABLE 1.2</b>				
<b>RENO CREEK ISR PROJECT</b>				
<b>SUMMARY OF MEASURED AND INDICATED RESOURCES – IN-PLACE<sup>1</sup></b>				
<b>Class</b>	<b>Tons<sup>2</sup></b> <b>(millions)</b>	<b>Thickness</b> <b>(feet)</b>	<b>Grade</b> <b>(%U<sub>3</sub>O<sub>8</sub>)</b>	<b>Pounds U<sub>3</sub>O<sub>8</sub><sup>2</sup></b> <b>(millions)</b>
<b>North Reno Creek</b>				
Measured	2.69	18.9	0.055	2.96
Indicated	5.44	15.2	0.047	5.13
<b>Total</b>	<b>8.13</b>	<b>16.4</b>	<b>0.050</b>	<b>8.09</b>
<b>Southwest Reno Creek</b>				
Measured	2.86	17.5	0.058	3.32
Indicated	3.58	14.1	0.050	3.55
<b>Total</b>	<b>6.44</b>	<b>15.6</b>	<b>0.053</b>	<b>6.87</b>
<b>Moore</b>				
Measured	1.27	13.9	0.061	1.56
Indicated	3.21	11.5	0.046	2.97
<b>Total</b>	<b>4.48</b>	<b>12.2</b>	<b>0.051</b>	<b>4.53</b>
<b>Bing</b>				
Measured	0.20	19.3	0.052	0.21
Indicated	0.84	15.2	0.043	0.72
<b>Total</b>	<b>1.04</b>	<b>16.0</b>	<b>0.045</b>	<b>0.93</b>
<b>Pine Tree</b>				
Measured	0.15	10.8	0.105	0.32
Indicated	0.66	10.0	0.086	1.13
<b>Total</b>	<b>0.81</b>	<b>10.2</b>	<b>0.089</b>	<b>1.45</b>
<b>Reno Creek Project</b>				
Measured	7.18	17.3	0.058	8.38
Indicated	13.70	13.4	0.050	13.50
<b>Total</b>	<b>20.9</b>	<b>14.8</b>	<b>0.052</b>	<b>21.9</b>
<sup>1</sup> Cutoff ≥ 0.30 grade × thickness per intercept				
<sup>2</sup> Columns may not add due to rounding				

The reader is cautioned that due to the uncertainty, which may attach to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource, because of continued exploration. Confidence in the Inferred Mineral Resource estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of pre-feasibility or other feasibility studies.

The results of the estimation of Inferred U<sub>3</sub>O<sub>8</sub> resource in the Project are summarized in Table 1.3.

<b>TABLE 1.3</b>				
<b>RENO CREEK ISR PROJECT</b>				
<b>SUMMARY OF INFERRED RESOURCES – IN-PLACE<sup>1</sup></b>				
<b>Class</b>	<b>Tons<sup>2</sup> (millions)</b>	<b>Thickness (feet)</b>	<b>Grade (%U<sub>3</sub>O<sub>8</sub>)</b>	<b>Pounds U<sub>3</sub>O<sub>8</sub><sup>2</sup> (millions)</b>
<b>North Reno Creek</b>				
Inferred	0.85	14.4	0.050	0.85
<b>Southwest Reno Creek</b>				
Inferred	0.41	11.0	0.040	0.32
<b>Moore</b>				
Inferred	0.25	7.9	0.062	0.31
<b>Bing</b>				
Inferred	0.02	12.29	0.050	0.02
<b>Pine Tree</b>				
Inferred	0.03	4.7	0.11	0.06
<b>Reno Creek Project</b>				
<b>Inferred Total</b>	<b>1.56</b>	<b>12.1</b>	<b>0.050</b>	<b>1.55</b>
<sup>1</sup> Cutoff ≥ 0.30 grade × thickness per intercept				
<sup>2</sup> Columns may not add due to rounding				

The authors consider that the AUC work on all units confirms the pre-2001 information and that the resources of the Project meet NI 43-101 standards for currently compliant resources due to the facts that:

- 1) Recent confirmation drilling by AUC at the Southwest Reno Creek Unit confirmed that uranium mineralization reported by previous operators is present at the locations shown on historical maps. AUC's confirmation was performed by drilling step-out holes (100 feet from old holes), in accordance with recommendations by the authors. Continuity was confirmed on a large scale by approximately 800 holes that joined 2 mineralized areas over a mile apart. AUC drilling in this area (located in the west half of Section 31, T 43N, R73W) added approximately 2.0 million pounds of resources.
- 2) All uranium deposits in the 80-mile long Powder River Basin trend consist of bands of narrow classic C-shaped roll fronts as found at the Reno Creek Deposit.
- 3) The mineral forming process and the resulting deposits do not vary within the trend nor are they expected to vary within the Reno Creek Project.
- 4) The mineralized sands in the Reno Creek, Moore, and Bing units are the same geologic horizon, and are confined by the same aquitards.
- 5) The authors have reviewed maps covering competitor's operations and positions (not available for publication) showing continuity of sandstone horizons between resources units.

## 1.5 PROPOSED RECOVERY TECHNIQUE

AUC has determined that essentially all significant mineralization and resources at Reno Creek lie either in fully saturated areas or are deep enough below the water table to be fully accessible using in situ recovery (ISR) methods. The ISR process, contemplated by AUC, is a phased, iterative approach in which AUC will sequentially construct and operate a series of Production Units. Each Production Unit will include individual well fields equipped with a header house. AUC expects each header house will serve between 15 to 30 recovery wells and 25 to 50 injection wells (recovery and injection wells collectively referred to as production wells), depending upon the design of each well field.

## 1.6 CONCLUSIONS AND RECOMMENDATIONS

The authors conclude the Measured and Indicated resources of approximately 21.9 million pounds of  $U_3O_8$  for the Reno Creek ISR Project are compliant with Canadian NI 43-101 guidelines. The authors conclude there is limited risk that the estimate of quantity, quality, and physical characteristics of the resources of the Project will be unfavorably affected by future investigation.

The authors recommend that AUC proceed with their proposed drilling program summarized below and the completion of a Pre-Feasibility Study (PFS), currently underway.

- A 100-hole program recommended in the Moore Unit resource area before year-end 2012 (this work is currently underway). The purpose of the drilling will be to bolster AUC's knowledge of lithologic conditions in the area, including the verification of projected oxidation/reduction boundaries. Coring at 3 locations is recommended to assess permeability and porosity, rock density, and disequilibrium conditions. Approximate cost: US\$450,000 plus overhead expense, assays, and reclamation of drill sites.
- Core and rotary drilling at the North Reno Creek Unit planned for completion by the end of 2013. Approximately 4 core holes will be completed to further assess permeability and porosity, rock density, disequilibrium, and metallurgical recovery conditions. Approximately 100 rotary holes are also planned to expand resources and further delineate roll front trends. Approximate cost: US\$400,000 plus overhead expense, assays, and reclamation of drill sites.
- Drilling programs at the Bing and Pine Tree Resource Units planned but not scheduled at this time.

## 2.0 INTRODUCTION

### 2.1 PURPOSE OF THE REPORT

This Technical Report was developed for AUC to describe uranium resources of the Reno Creek ISR Project that are in compliance with the requirements of Canadian NI 43-101 and 43-101F1.

### 2.2 SOURCES OF INFORMATION AND DATA

This report has been constructed and compiled from information and data including drill hole location maps and data sheets; gamma-ray, resistivity, and self-potential curves plotted by depth; and core hole data from drilling by AUC as well as historical data. Behre Dolbear work was conducted in the period between January 2, 2011 and October 2012.

### 2.3 AUTHORS

AUC, through Behre Dolbear, engaged the authors listed below to undertake the Technical Report for the Reno Creek ISR Project.

**Ms. Betty Gibbs**, Behre Dolbear & Company (USA), Inc. Senior Associate and Mining Engineer collaborated with AUC on data reduction, reviewed AUC estimation procedures, and independently verified a portion of the North Reno Creek Unit. Ms. Gibbs has been involved in the minerals industry at for more than 42 years as an engineer, author, university professor, and consultant. Ms. Gibbs has been at the forefront of technology development and adaptation for the mining industry. An active participant in professional organizations and societies, Ms. Gibbs has conducted seminars, short courses, and presented papers regarding resource and mining programs. Ms. Gibbs is a Qualified Person under Canadian National Instrument 43-101 through the Mining and Metallurgical Society of America (MMSA). She is responsible for the preparation of Section 14.0 and contributed to Sections 12.1, 25.0, and 26.0 of this report and the results contained herein.

**Mr. Robert D. Maxwell**, Behre Dolbear & Company (USA), Inc. Senior Associate and geologist, is a contributing author of this report. He has over 30 years of professional experience, most of it in uranium exploration, development, and evaluation. He has been involved in several evaluations related to major uranium project acquisitions. Mr. Maxwell conducted a review of AUC reports and data. He field checked the Project on June 19, 2012 and July 27, 2012. He collected samples from AUC core drilling for verification by assay. There has been no material change to the scientific or technical information about the property since that date. Mr. Maxwell is a Qualified Person under Canadian National Instrument 43-101 through the American Institute of Professional Geologists and is responsible for the preparation of all of this report except Section 14.0 and the results contained herein.

### 2.4 CURRENCY AND UNITS OF MEASUREMENT

All references to currency are US dollars (US\$). Units of measurement are the English system of inches, miles, tons, etc.

### **3.0 RELIANCE ON OTHER EXPERTS**

The authors relied on no other experts for the preparation of this report.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

### 4.1 PROPERTY DESCRIPTION

The Reno Creek ISR Project is composed of 5 units named based on exploration history and location (Figure 4.1). The North Reno Creek, Southwest Reno Creek, Moore, Pine Tree, and Bing Units contain roll-front uranium mineralization in the same and contiguous stratigraphic horizons.

- The contiguous North Reno Creek and Southwest Reno Creek Units are currently being permitted for mining by ISR methods, and will include 12 ISR Production Units and a Central Processing Plant (CPP). The proposed mine permit boundary and CCP site are shown on Figure 4.1. The Moore, Pine Tree, and Bing Units will be added into the mine permit, via an amendment to the operating license, at an appropriate time in the future.
- The Moore Unit lies approximately 5 miles to the northwest of the Reno Creek proposed permit area. The Moore Unit will be connected to the CPP via pipelines.
- The Pine Tree Unit lies approximately 5 miles to the southwest of Reno Creek, immediately southeast of the intersection of U.S. Highway 387 and Wyoming Highway 50, also known as Pine Tree Junction. Current plans also envision that the Pine Tree Unit will be connected to the CPP via pipelines.
- The Bing Unit lies approximately 5 miles west of the Reno Creek Units adjacent to (west) of Wyoming Highway 50, 3 miles north of Pine Tree Junction. The Bing Unit will be connected to the CPP via pipelines.

Collectively, AUC controlled mineral lands within the Project total approximately 21,240 acres, consisting of 688 unpatented lode mining claims, 7 State of Wyoming mineral leases, and 4 private mineral leases. Mineral ownership status and resource areas are shown on Figure 4.1.



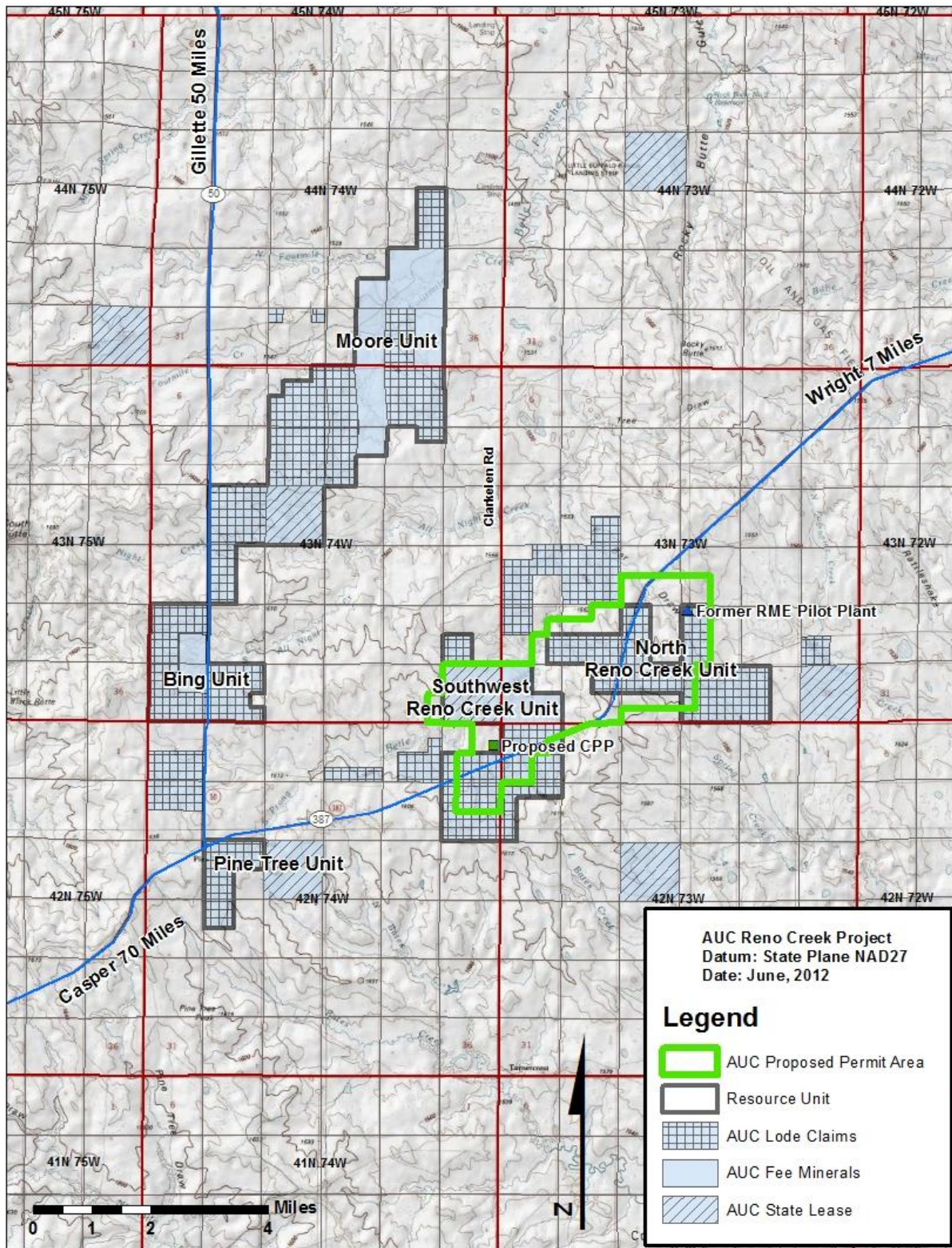


Figure 4.1. Reno Creek ISR Project land and resource unit locations



Surface ownership at the Project consists of both privately owned (fee) ranch lands and lands owned by the State of Wyoming. State surface ownership corresponds to state mineral ownership. The breakdown of land status including private fee, unpatented mining lode claims, and state leases for the Reno Creek ISR Project is shown in Table 4.1.

<b>Township and Range</b>	<b>State of Wyoming Leases (Acres)</b>	<b>Fee Mineral Leases (Acres)</b>	<b>Federal Lode Mining Claims (Acres)</b>
T42N R73W	640	0	720
T42N R74W	640	0	2,700
T43N R73W	640	480	4,380
T43N R74W	1,280	800	5,440
T44N R73W	640	0	0
T44N R74W	0	1,440	800
T44N R75W	640	0	0
<b>Total</b>	<b>4,480</b>	<b>2,720</b>	<b>14,040</b>

## 4.2 LOCATION

The approximate latitude and longitude location for each resource unit follows.

- **North Reno Creek** Latitude 43°40'36.23" North – Longitude 105°37'21.87" West
- **Southwest Reno Creek** Latitude 43°40'26.44" North – Longitude 105°40'55.78" West
- **Moore** Latitude 43°44'50.84" North – Longitude 105°43'59.56" West
- **Pine Tree** Latitude 43°36'52.22" North – Longitude 105°46'35.91" West
- **Bing** Latitude 43°39'39.35" North – Longitude 105°47'17.33" West

## 4.3 MINERAL TENURE, RIGHTS, AND ROYALTIES

AUC has executed surface use and access agreements with all landowners, who hold surface ownership within the proposed ISR mining permit boundary at North Reno Creek and Southwest Reno Creek Units, including leases on state land. AUC has secured the majority of surface use and access agreements needed from landowners within the Moore Unit. Additional access agreements associated with the Pine Tree and Bing Units are currently being investigated.

AUC holds 688 unpatented lode claims on federally owned minerals. No royalties are due to the federal government from mining on lode claims. The claims will remain under AUC's ownership and control, provided that AUC adheres to required Bureau of Land Management (BLM) filing and annual payment requirements. Legal surveys of unpatented claims are not required and to the authors' knowledge have not been completed. Payments for state and private leases and BLM mining claim filing payments are up to date as of 2012.

Royalties on fee mineral leases vary with the ownership of the minerals. State mineral leases have a 5% gross royalty attached. Fee or private minerals have varying royalty rates and calculations, depending on the agreements negotiated with individual mineral owners. In addition, surface use and access agreements may include a production royalty, depending on agreements negotiated with individual surface owners at

various levels. AUC has calculated that the average combined mineral plus surface production royalty, applicable to the Project, is approximately 4%.

#### **4.4 OTHER SIGNIFICANT FACTORS OR RISKS**

No significant factors or risks are known that may affect access, title, or the right or ability to perform work on the property.

## 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

### 5.1 TOPOGRAPHY, ELEVATION, AND VEGETATION

Topography in the Reno Creek, Moore, Pine Tree, and Bing resource areas ranges from generally flat to gently rolling hills, though numerous drainages dissect the area. AUC's properties lie within the Northwestern Great Plains and Powder River Basin (PRB). The elevation in the area ranges from approximately 4,500 feet to 5,300 feet above mean sea level.

All drainages in the area are ephemeral in nature (Figure 4.1). The predominant source of surface water is from thunderstorms and spring snow melts. The watershed hydrology includes man made livestock ponds and small reservoirs for the Wyoming Pollutant Discharge Elimination System (WYPDES) discharge sites, from CBM de-watering activities.

Environmental investigations and surveys confirmed that neither sage grouse nor other threatened or endangered species are present, within the proposed mining permit area. In addition, no significant archeological or cultural features were identified. Additional details concerning environmental issues are found in Section 20.0.

Vegetation within the PRB is generally described as mixed grass prairie dominated by wheat grasses, various bunch grasses, and shrubs and within the Project area is comprised primarily of sagebrush shrub land, and upland grassland. Interspersed among these major vegetation communities, within and along the ephemeral drainages, are less abundant vegetation types of grassland and meadow grassland (Figure 5.1 and Figure 5.2).



**Figure 5.1. View west from North Reno Creek Unit in Section 27 R43N T73W**



**Figure 5.2. View east to Pine Tree Unit**

## **5.2 ACCESS TO THE PROPERTY**

AUC's properties are located in the southern portion of the PRB in the Pumpkin Buttes Uranium District in Campbell County, Wyoming. They are located in an area utilized for livestock grazing, oil and gas production, and CBM production.

The North Reno Creek and Southwest Reno Creek Resource Units are located 7.5 miles southwest of Wright, 31 miles northeast of Edgerton on Wyoming Highway 387. Access to North Reno Creek, Southwest Reno Creek, and Pine Tree Units, from the east and west, is via Wyoming Highway 387. Access to the Bing Resource Unit is provided via Wyoming Highway 50.

The primary access roads to the Moore Resource Unit, from Wyoming Highway 387, are Wyoming Highway 50 and the Clarkelen Road, which runs north and south and is a Campbell County-maintained gravel road. Additionally, there are private, two-track roads established from CBM development and agricultural activity, which provides access to other areas within the Project. No part of the Project is more than 2 miles from a public, all weather road.

## **5.3 PROXIMITY OF THE PROPERTY TO POPULATION CENTERS AND TRANSPORTATION**

The Project is located in southwest Campbell County, Wyoming. The nearest community is Wright, a small, incorporated town (population 1,550) at the junction of Wyoming Highways 387 and Wyoming Highway 59 located 7.5 miles to the northeast of the North Reno Creek Resource Unit. Gillette, a major local population center with a regional airport, is located along Interstate 90, 41 miles north of the Project area via Wyoming Highway 59. The towns of Edgerton and Midwest are located in Natrona County and lie southwest of the Project on Wyoming Highway 387. Casper is a major population center with a

regional airport and lies approximately 80 miles to the southwest on Interstate 25. A major north-south railroad, used primarily for haulage of coal, lies approximately 20 miles east of the Project.

#### **5.4 CLIMATE AND LENGTH OF OPERATING SEASON**

The Project area is subject to extremes in temperature from summer to winter months ranging from 100°F in July to August to -25°F in December and January. Yearly precipitation totals range typically between 10 inches and 15 inches. Snow accumulation depths, throughout the winter months, are between 30 inches and 60 inches per year. Winds from the southwest are predominant and commonly range from 10 miles to 40 miles per hour. Evaporation rates are relatively high and are related to surface air temperatures, water temperatures, wind speed, and relative humidity. Despite occasional muddy spring conditions and cold winter conditions, work can be effectively carried on nearly year around on the Reno Creek ISR Project.

To determine the sub-regional weather and baseline meteorological conditions required for licensing and permitting, AUC installed a meteorological station at the eastern end of the North Reno Creek Resource Unit. This meteorological station has been providing continuous digital hourly-averaged meteorological data for over the 12-month baseline data collection period. The meteorological data collected include wind speed, wind direction, sigma theta, temperature, relative humidity, barometric pressure, solar radiation, precipitation, evaporation, and evaporation pan water temperature. AUC also installed an additional anemometer located at the up-wind west side of the Project, which enables an understanding of wind conditions across the Project area.

#### **5.5 SURFACE RIGHTS FOR ISR OPERATIONS, POWER, MINING PERSONNEL, AND LAND AVAILABLE FOR PROCESSING FACILITIES**

As a result of energy development over the past 50 years, all of the properties where AUC's deposits lie, have existing or nearby electrical power, gas, and have adequate phone and internet connectivity. The local economy is geared toward coal mining and oil and gas production as well as ranching operations, providing a well-trained and capable pool of workers for ISR production and processing operations.

AUC has leases and surface use and access agreements within the proposed mining permit area to enable construction of all operational facilities. Working with local ranchers, AUC has developed several arrangements to appropriate both surface and groundwater for exploration and baseline uses.

AUC has obtained rights to a central processing plant site (CCP, Figure 4.1) that is currently equipped with buildings, power, telephone, and well water. The site is located within the Southwest Reno Creek Resource Unit near the intersection of Wyoming Highway 387 and the Clarkelen County Road.



## **6.0 HISTORY**

### **6.1 PRIOR OWNERSHIP AND OWNERSHIP CHANGES**

In the 2004 to 2007 timeframe, Strathmore Minerals Corporation and American Uranium Corporation acquired lands in the Reno Creek ISR Project area. In 2007, they entered into a joint venture partnership to consolidate the Reno Creek properties. Strathmore Minerals Corporation and American Uranium Corporation subsequently sold the North Reno Creek and Southwest Reno Creek properties and the Pine Tree, Moore, and Bing properties and the holding company, AUC LLC, to AUC Holdings in 2010. The Project's history, prior to the Strathmore/AUC era, is described below.

#### **6.1.1 North Reno Creek and Southwest Reno Creek Units**

Substantial historical exploration, development, and mine permitting were performed at North Reno Creek. Beginning in the late 1960s and continuing into the mid-1980s, Rocky Mountain Energy (RME), a wholly owned mining subsidiary of the Union Pacific Railroad, drilled approximately 5,800 exploration holes on their holdings, much of which AUC controls today. Exploration drilling delineated approximately 10 miles of roll front uranium deposits. By the mid-1970s, a partnership was formed between RME, Mono Power Company (South California Edison), and Halliburton Services to develop and mine Reno Creek using ISR methods.

In 1992, RME's Reno Creek project was acquired by Energy Fuels Nuclear Inc. (EFI). Over the next decade, EFI and its successor, International Uranium Corporation (IUC), continued to advance their Reno Creek holdings toward full permitting and uranium recovery. In 2001, IUC's property was sold to Rio Algom Mining Corp. Thereafter, Rio Algom sold their holdings to Power Resources Inc. (United States subsidiary of Cameco), which dropped its claims in 2003.

Most of Southwest Reno Creek was controlled and explored by American Nuclear Corporation (ANC) and the Tennessee Valley Authority (TVA). Approximately 700 holes were drilled over several years during the life of the joint venture.

#### **6.1.2 Moore, Pine Tree, and Bing Units**

Substantial exploration was conducted in the 1960s, near and on AUC's Pine Tree, Bing, and Moore properties by Cleveland Cliffs Iron Company (Cleveland Cliffs) and Utah International Mining Company (Utah International). Utah International held lands that comprised all of AUC's Pine Tree resource area in Sections 17 and 20, T42N, R74W and a portion of the Moore resource area in Section 3, T43N, R74W and Sections 26 and 35, T44N, R74W. Surface and mineral leases, as well as federal claims held by Utah International, Inc., were known as the 'A' Group (Pine Tree Property) and 'B' Group (Moore Property).

In the late 1970s, Utah International became Pathfinder Mines, Inc. and continued development of the Pine Tree and Moore properties, as possible open pit mining operations. By the early 1980s, activities consisted of assessment drilling to maintain leases and claims on areas containing the main mineralization. During the 1980s, RME obtained ownership of claims and leases on and in the area of the Moore properties. RME continued evaluation of these properties with annual assessment drill programs until about 1990.

The Bing project was explored exclusively by Cleveland Cliffs. Several hundred exploration holes were drilled and a limited hydrologic testing program was conducted in the area in the 1970s.

## 6.2 TYPE, AMOUNT, QUANTITY, AND RESULTS OF WORK BY PREVIOUS OWNERS

AUC has acquired several data sets from Areva, Cameco, and Strathmore and controls thousands of geophysical logs, maps, reports, and other data that are pertinent to all of the Reno Creek Resource Units.

### 6.2.1 Disequilibrium Studies

RME conducted extensive coring and assay testing to confirm uranium values and evaluate potential disequilibrium at the Reno Creek and Moore Units. Twenty-three core holes on the AUC property were tested foot-by-foot through extensive portions of the production zone sandstone, with multiple comparisons run. In some cases, RME tested as much as 130 feet of sandstone; in others they tested 2 feet to 40 feet bracketing all of the intercepts that met or exceeded the 0.02% radiometrically equivalent  $U_3O_8$  ( $eU_3O_8$ ) cutoff grade. Twenty core holes were located on the North Reno Creek Unit and 3 core holes were on the Moore Unit.

RME ran three separate comparisons on a foot-by-foot basis.

- Beta Minus Gamma versus Closed Can
- Chemical (Fluorimetric) Analysis versus Downhole Probe
- Delayed Fission Neutron (DFN) versus Downhole Probe

All of these were designed to estimate a level of potential uranium disequilibrium between a grade derived in a manner that either directly measures uranium or measures an indirect factor that closely relates to uranium concentrations and a radiometric grade from the downhole probe or closed can test (reliant on gross gamma ray measurements and the potential fractionation of uranium from its daughter products). Disequilibrium is represented by a ratio between the chemical and radiometric analyses. Favorable measurements exceed 1.0 while unfavorable measurements are less than 1.0.

Thirty-four separate intercepts averaging greater than 0.02%  $eU_3O_8$  (compositing the hundreds of half foot measurements described above) were extracted from the 23-core hole database. The 34 intercepts had 46 comparisons conducted using a combination of methods. The results of these comparisons are shown in the weighted averages below:

- |                                      |      |
|--------------------------------------|------|
| • Beta Minus Gamma versus Closed Can | 1.80 |
| • Chemical Analysis versus Probe     | 1.47 |
| • DFN versus Probe                   | 1.21 |

Of the 46 comparisons, 37 were favorable (greater than 1.0) and 9 were unfavorable (less than 1.0). Of the 9 unfavorable results, 6 were greater than 0.8. Three of the 9 were less than 0.8.

Sample RN 43C is the one intercept for which it is possible to suggest dispersion of uranium by oxidizing groundwater. It is the shallower of two intercepts in the hole, and is in an area that has approximately a 20 foot to 30 foot head above the shallow intercept.

Utah International/Pathfinder also conducted equilibrium analyses on 4 drill holes at the Pine Tree project. They evaluated 57 separate half-foot intervals using a chemical analysis by x-ray fluorescence and compared those measurements to radiometric analyses. Over those samples, the average ratio of

chemical to radiometric was 1.10. All of the intervals were in excess of 0.05% eU<sub>3</sub>O<sub>8</sub>, which was Utah's cutoff grade at the time. No equilibrium data are available for the Bing deposit.

### **6.2.2 North Reno Creek and Southwest Reno Creek**

RME reports, maps, and cross sections in AUC's possession indicate that over 5,800 exploratory holes were drilled by RME in the greater Pumpkin Buttes area, with at least 1,083 holes completed on the North Reno Creek Unit. AUC possesses survey data, electric logs, and lithologic logs for nearly all of RME's drill holes at North Reno Creek. ANC and TVA drilled approximately 700 holes on the Southwest Reno Creek Unit, and while few electric logs are available, maps and data that summarize the results of the work are incorporated into AUC's database and are used for current mapping and resource estimates.

Extensive hydrologic testing was conducted by RME to enable permitting, construction, and operation of an ISR pilot plant located near the northeast portion of the mineralized trend (Figure 4.1). The well patterns at the plant site were sited in the partially saturated portion of the local hydrologic regime to assure that operations could be successfully conducted in that area. RME's pilot test pattern #2 was successfully operated and restored in an area with 20 to 30 feet of hydrologic head present above the mineralization (RME, 1981, 1982, and 1983). The fully saturated/partially saturated boundary was depicted on potentiometric maps by RME, and lies almost at the same position as Wyoming Highway 387, with partially saturated conditions being present east of the highway. Recent testing by AUC determined that current groundwater conditions remain very similar to conditions in the 1980s. Further discussion of AUC's hydrologic investigations is found in Section 20.1 of this report.

RME also conducted a large scale Hydrogeologic Integrity Test and issued a two-volume report describing the results (RME, 1982). The investigation had two objectives.

- Determine if historical exploration holes drilled, prior to the enactment of drill hole abandonment regulations, had naturally sealed themselves.
- Determine if there is hydraulic communication between the production zone aquifers (PZA) and the overlying aquifer using a series of pump tests in the PZA.

RME's tests of historical drill holes indicated that all holes had been adequately sealed through the production zone aquifer and overlying aquitard. Pump testing by RME and subsequent testing by AUC showed that there was no detectable communication between the PZA and the overlying aquifer.

Following RME's exit from the project, further extensive hydrologic and baseline studies were performed for several years at North Reno Creek by EFI and its successor, IUC. IUC was pursuing permits for a commercial operation and installed a monitoring well ring around a mineralized area in Section 29, 43N, R73W (Figure 4.1). Copies of IUC's documents have been acquired by AUC and were reviewed and used to aid current permitting efforts.

### **6.2.3 Moore Unit**

Drilling by Utah International/Pathfinder Mines was performed in the 1970s on what is now referred to as the Moore Unit resulting in identification of alteration fronts and resources in Sections 26 and 35, T44N, R74W and the east half of Section 3, T43N, R74W. The Utah/Pathfinder Moore drilling consists of more than 1,000 holes identified as drill hole B-series (B-1 through B-1066).



Upon acquisition of leases and claims in the Moore property area, RME drilled extensively in the 1980s. The locations were selected to extend known mineralized trends and to more closely identify alteration fronts. RME also installed six wells and conducted a multi-well pump test that determined favorable saturated ground water conditions exist at the Moore Unit (Hydro Engineering for Union Pacific Resources, 1987).

Data acquired by AUC for the Moore Unit includes 272 historical logs, reports, cross sections, and an electronic database containing coordinates, natural gamma ray log counts per second (CPS) data, and uranium intercept data for approximately 1,390 holes. RME, Pathfinder, and Cleveland Cliffs originally generated the data.

#### **6.2.4 Pine Tree Unit**

Drilling by Utah International/Pathfinder Mines, in the 1970s on their Pine Tree property, resulted in general identification of alteration fronts in what is now AUC's Pine Tree Unit in Sections 17 and 20, T42N, R74W. The total amount of drilling during this time consisted of more than 400 holes identified as the A-series (A-1 through A-480). AUC has acquired logs for 288 of those drill holes as well as Pathfinder's tabulations of survey information and uranium intercept data, all of which have been incorporated into AUC's Pine Tree database.

#### **6.2.5 Bing Unit**

Cleveland Cliffs drilled several hundred holes in the general Bing resource area including wells constructed for pump testing purposes. Analysis of Cleveland Cliff's pump test data is currently underway; however, water production reported from one of the tests indicates that pumping rates of over 20 gallons per minute (gpm) were achieved. The drilling was conducted from 1968 through 1982.

AUC's data acquisition for the Bing area included approximately 200 electric logs to support the AUC resource estimate, but did not include intercept reports. AUC personnel scanned the original electronic logs to estimate thickness and grades of radiometric equivalent  $U_3O_8$  ( $eU_3O_8$ ) for use in resource estimates for the Bing Unit.

### **6.3 HISTORICAL MINERAL RESOURCE ESTIMATES**

Strathmore Minerals Corporation prepared two National Instrument 43-101 Mineral Resources Reports for the Reno Creek Properties, entitled: "Reno Creek Uranium Property Campbell County, Wyoming" and "Southwest Reno Creek Uranium Property Campbell County, Wyoming," both updated on January 30, 2009. Charles D. Snow was the author of both reports.

Using a polygonal resource estimation method, Snow reported resources of 5.7 million tons at an average thickness of 11.9 feet and average grade of 0.065% for a total of 7.4 million pounds (Measured and Indicated) of  $U_3O_8$  at North Reno Creek. Snow's Southwest Reno Creek Technical Report reported resources of 2.6 million tons at an average thickness of 11.4 feet and average grade of 0.068% for a total of 3.5 million pounds (Measured and Indicated) of  $U_3O_8$  at Southwest Reno Creek.

The combined units reported approximately 8.3 million tons at an average grade of 0.066% and an average thickness of 11.7 feet for a total of 10.9 million pounds of Measured and Indicated  $U_3O_8$ .

An additional 2.6 million tons at an average thickness of 13.2 feet and average grade of 0.065%, yielding 3.4 million pounds of Inferred resources of  $U_3O_8$  were reported in North Reno Creek. At Southwest Reno Creek, Snow reported an additional 1.2 million tons at an average thickness of 11.4 feet and average grade of 0.057%, yielding 1.3 million pounds of Inferred Resources of  $U_3O_8$ .

The Snow reports did not estimate the resource by individual roll front. Behre Dolbear and AUC conducted a new resource estimate, which did not take into account the results of the two older NI 43-101 reports.

## 6.4 PRODUCTION

Very limited production (approximately 1,200 pounds of  $U_3O_8$ ) occurred at RME's pilot ISR operation, located in North Reno Creek (Figure 4.1). RME applied for and received a research and development (R&D) Pilot Plant license in 1978 from the NRC and Wyoming DEQ. RME tested two injection/recovery patterns under the license (RME, 1981, 1982, and 1983). Both were conducted in an area of lower grade (0.038%  $U_3O_8$ ) than the average of the deposit.

In January 1979, RME completed a 100 gpm pilot plant. Two test patterns were installed and operated. Pattern #1 utilized sulfuric acid lixiviant at a pH of 1.7 because of high recoveries indicated in amenability tests. Testing at Pattern #1 began in February 1979 and was terminated in November 1979 because results from this pattern were unsatisfactory. Severe permeability losses were noted and despite attempts to improve recovery and injectivity, the acid pattern ultimately proved that this formation could not be leached effectively using acid lixiviants. Restoration and stabilization of the groundwater of Pattern #1 was acknowledged and signed off by the NRC in March 1986. AUC possesses reports and letters from government agencies documenting hydrologic conditions, operation of the well fields, restoration, and regulatory signoff of the facility (RME, Reno Creek Pattern #2 Restoration Reports & Addenda, 1983).

Operation of Pattern #2 began in October 1980 using a sodium carbonate ( $Na_2CO_3$ )/sodium bicarbonate ( $NaHCO_3$ ) lixiviant and hydrogen peroxide ( $H_2O_2$ ) oxidant. # 2 was constructed as a modified 5-spot, consisting of 2 recovery wells, 4 injection wells, and 6 monitor wells. Pattern #2 was operated from October 1980 to December 1980. The results, coupled with the column leach test results, led RME to switch to carbonate lixiviant for further testing and commercial development. Uranium recovery and average head grade were especially encouraging. Uranium head grade peaked at 65 mg/L and approximately 1,200 pounds of  $U_3O_8$  were recovered. In order to demonstrate restoration, leaching was stopped while  $U_3O_8$  concentrations were still at 15 mg/L.

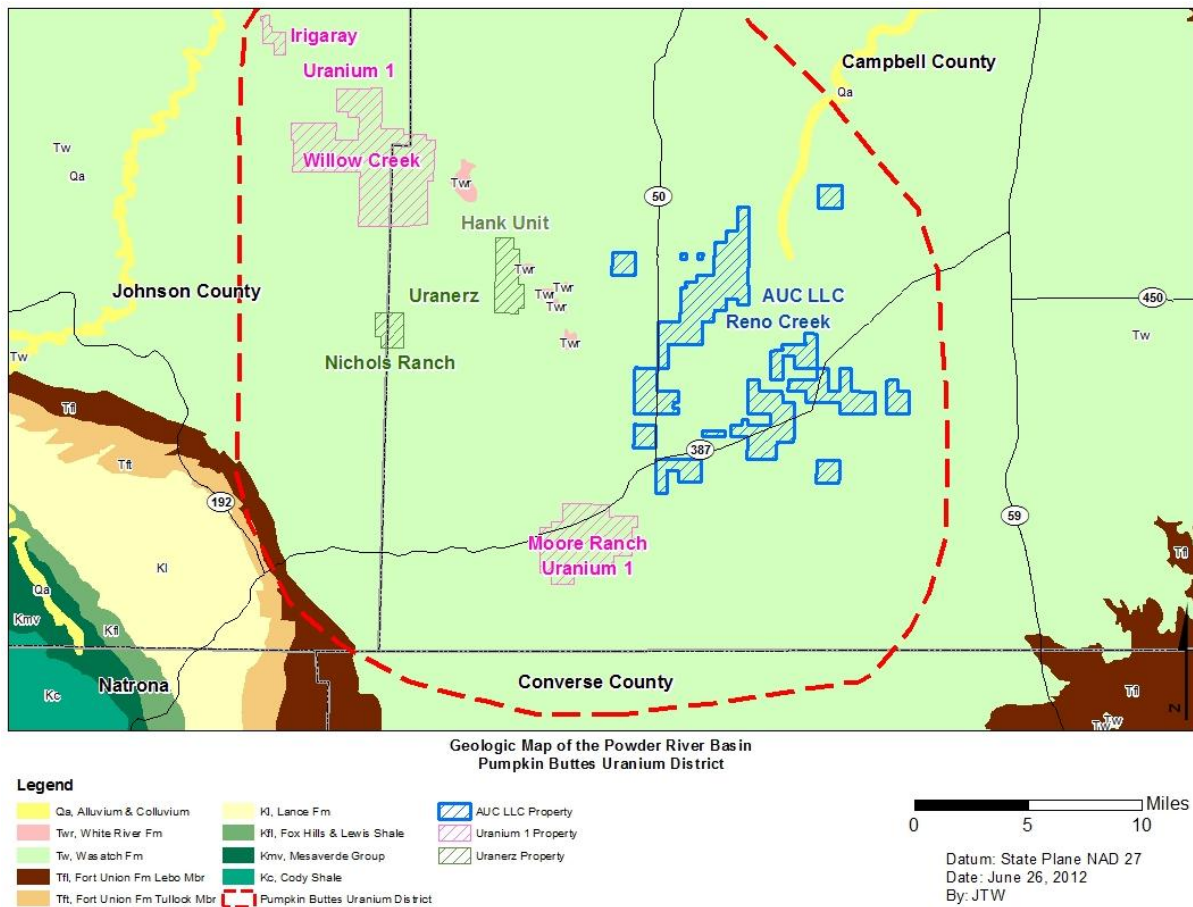
Restoration of Pattern #2 began in December 1980 and continued until April 16, 1983. All groundwater parameters returned to baseline ranges with the exception of pH, uranium, and vanadium. Of these parameters, all were either below Wyoming Department of Environmental Quality (WDEQ) Class I Groundwater Standards (domestic use) or do not have Class I maximum concentration limits (WDEQ, 1980). # 2 pilot testing culminated in regulatory signoff in June 1983 with the approval of carbonate leaching for commercial operations at Reno Creek under Materials License Number SUA-1338.

There has been no production from the Southwest Reno Creek, Moore, Pine Tree, or Bing Units.

## 7.0 GEOLOGICAL SETTING AND MINERALIZATION

### 7.1 REGIONAL GEOLOGY

The Project is located in the Pumpkin Buttes Uranium District in the central PRB of Northeastern Wyoming, as shown in Figure 7.1. Outcrop and host rock geology consists primarily of sedimentary units of the Eocene-age Wasatch Formation. Active uranium projects various stages of permitting, design, construction, or operation in the Pumpkin Buttes District posted on the map include Reno Creek (AUC LLC), Moore Ranch, Willow Creek (Uranium One – includes Irigaray and associated properties), and the Hank and Nichols Ranch (Uranerz) projects. Willow Creek is currently producing uranium using ISR methodology.



**Figure 7.1. Geologic map of the Powder River Basin Pumpkin Buttes Uranium District**

The Eastern Wyoming Uranium District encompasses an area of about 31,000 square kilometers (12,000 square miles) in Campbell, Johnson, and Converse counties within. The first uranium discoveries in the PRB near Pumpkin Buttes were in 1951 (Davis, 1969). Limited surface production began in 1953 followed by ISR development at Irigaray and Christensen Ranch. Other uranium deposits were found along a 60-miles northwest-southeast trend in the southwest part of the PRB.

The PRB extends over much of northeastern Wyoming and southeastern Montana, and consists of a large north-northwest trending asymmetric syncline. The basement axis lies near the western edge of the basin, and the present surface axis lies to the east of the basement axis near the Pumpkin Buttes, approximately 10 miles west of the project. The basin is bounded by the Big Horn Mountains to the west, the Black Hills to the east, and the Hartville Uplift and Laramie Mountains to the south.

The PRB is filled with sediments of marine and continental origin ranging in age from early Paleozoic through Cenozoic. Figure 7.2 depicts the upper portion of the stratigraphic column in the Reno Creek Project area. Sediments reach a maximum thickness of about 20,000 feet in the deepest parts of the basin. The top of the Precambrian is projected to be 17,500 feet deep in the Project area.

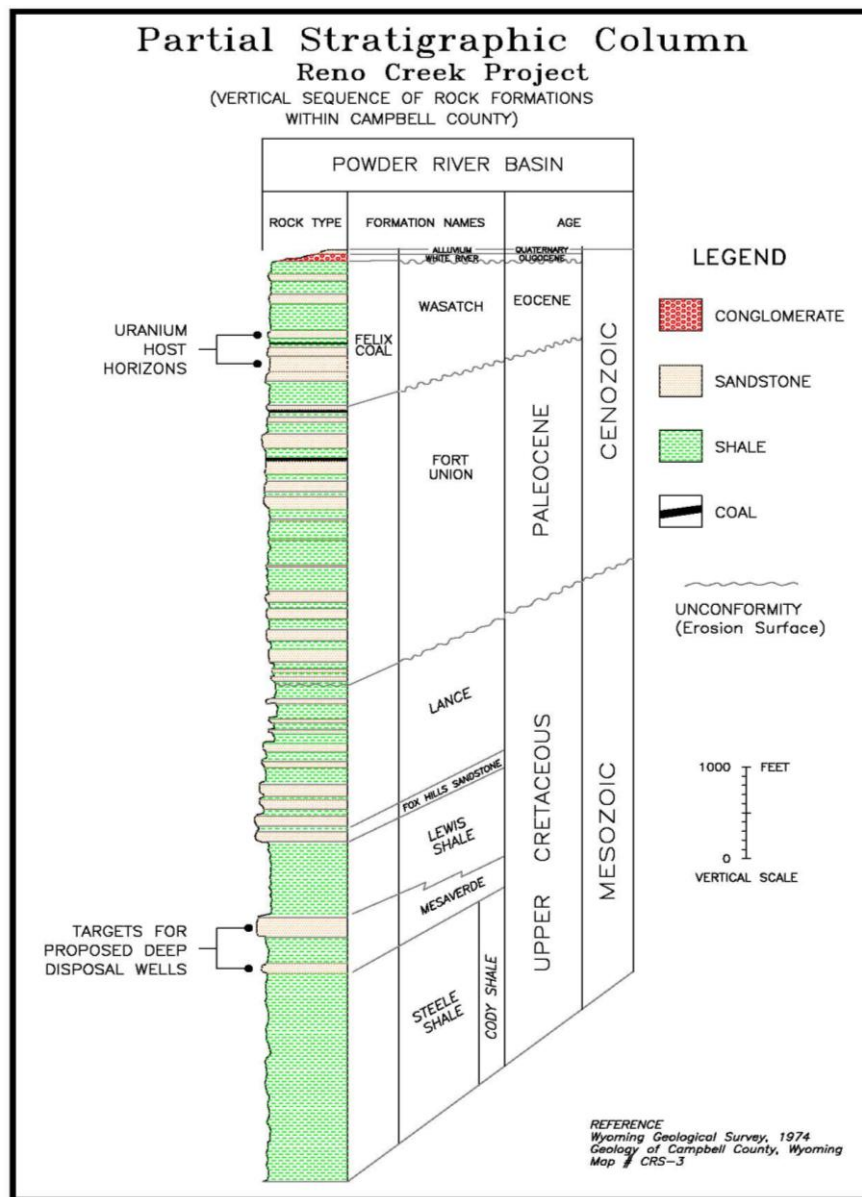


Figure 7.2. Stratigraphic column

Following a long period of stability during the Mesozoic, tectonic forces of late-Paleocene to early-Eocene age ushered in mountain building events related to the Laramide Orogeny. Uplift began to affect the western continental margin and modify the landscape of central and eastern Wyoming (Seeland, 1988). As a result of these tectonic forces, the PRB was the site of active subsidence surrounded by orogenic uplifts (Big Horn Mountains, Laramie Mountains, Black Hills, etc.). Northward flowing rivers deposited repeated sequences of sandstones, mudstones, and minor coals comprising the Eocene Wasatch Formation. Sandstones form the uranium-bearing host horizons at Reno Creek and surrounding areas. The Wasatch dips northwestward at approximately 1 degree to 2.5 degrees in this portion of the PRB (Sharp, et al., 1964).

During the Oligocene Epoch, regional volcanism to the west of the basin resulted in the deposition of tuffaceous claystone, sandstone, and conglomerate of the White River Formation. Remnants of the White River Formation overlie the Wasatch Formation capping the Pumpkin Buttes.

The Wasatch Formation unconformably overlies the Fort Union Formation around the margins of the basin. However, the two formations are conformable and gradational toward the basin center and the Project area. The Wasatch contains thick lenses of coarse, cross-bedded, arkosic sands deposited in a moderate to high-energy fluvial environment, and reaches a maximum thickness of 500 feet to 700 feet within the Project area. The Badger Coal is regarded as the approximate lower boundary of the Wasatch Formation in the Reno Creek, Moore, Pine Tree, and Bing areas.

CBM production present in parts of the Project area is from the Anderson/Big George Coal, at approximately 1,000 feet to 1,100 feet below ground surface. The coal seams occur approximately 600 feet below the base of the aquifer proposed for uranium ISR operations.

## **7.2 SITE GEOLOGY**

Mineralization in the Project area occurs in fluvial sandstones of the Eocene Wasatch formation. The sandstones are arkosic, fine- to coarse-grained, contain appreciable amounts of carbon trash, dispersed and in stringers, and contain local calcareous lenses. Unaltered sands are generally gray while altered sands are tan or pink, due to hematite or show yellowish coloring due to limonite (Utah International, Internal Memo, December 1971).

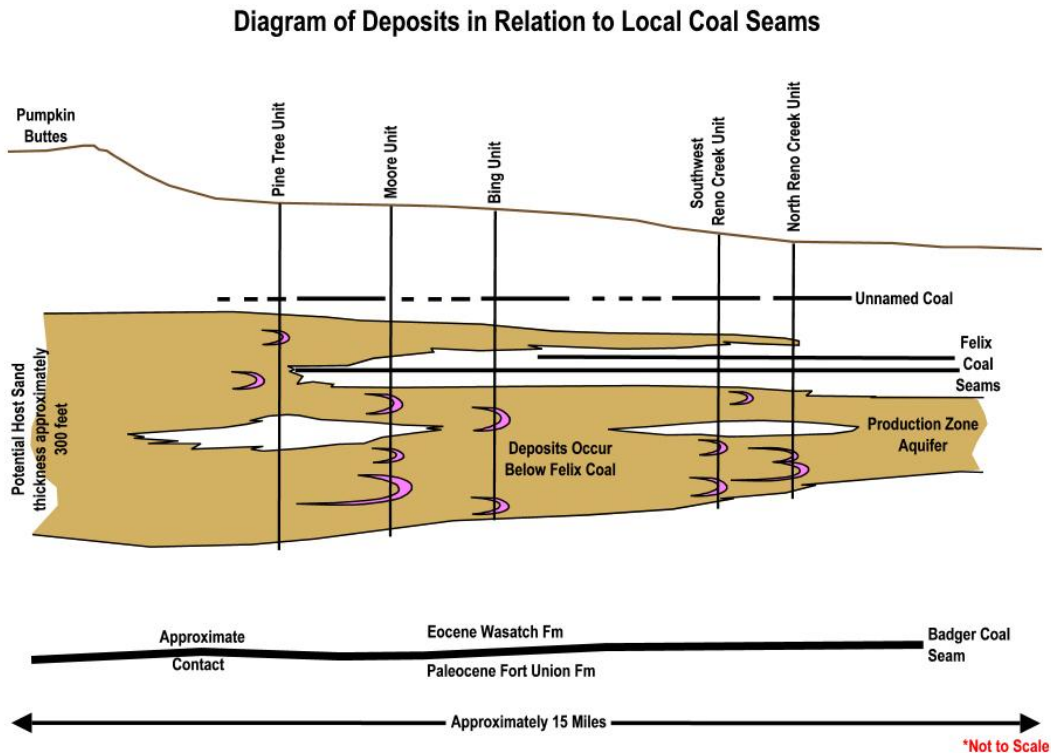
Pyrite is noted in several forms within the host sands. In unaltered sands, pyrite may be found as small to large single euhedral crystals associated with magnetite, ilmenite, and other dark detrital minerals. In altered sandstone, pyrite is absent or scarcely found as tarnished, very fine euhedral crystals. In areas of intense or heavy mineralization, pyrite may be found in massive, tarnished crystal aggregates (Utah International, Internal Memo, December 1971).

Major hydrostratigraphic units are described below. The Overlying Aquifer at North Reno Creek and Southwest Reno Creek is the overlying aquifer relative to the proposed production zone and overlies the Felix Coal marker across the entire area. This overlying aquifer/sandstone is regarded as a host for mineralization at the Pine Tree Unit, as shown on Figure 7.2 and Figure 7.3.

- The Overlying Aquitard is a continuous confining mudstone unit providing isolation between the production zone and overlying aquifer in the Reno Creek area and includes the Felix Coal seams.



- The Production Zone Aquifer (PZA) is the host for uranium deposits at the North Reno Creek, Southwest Reno Creek, Moore, Pine Tree, and Bing Units.
- The Underlying Aquitard is a continuous confining mudstone unit providing isolation between the PZA and underlying discontinuous units.



**Figure 7.3. Diagram of deposits in relation to coal seams**

### 7.2.1 North Reno Creek and Southwest Reno Creek Geology

In the North Reno Creek and Southwest Reno Creek Resource Units, the lower-most unit of the Wasatch Formation comprises the Underlying Aquitard, which lies below the Production Zone Aquifer (PZA) and above the Badger Coal. The aquitard is approximately 150 feet to 250 feet thick and consists of laterally continuous silt and clay rich mudstones, and locally, discontinuous lenticular sandstones. Based on geologic and hydrologic data at North Reno Creek and Southwest Reno Creek, sandstones within this unit do not meet the requirements of an aquifer.

The mineralized host sandstone, or PZA, overlies the underlying aquitard at North Reno Creek and Southwest Reno Creek. The PZA is a discrete and laterally continuous sandstone ranging from under 75 feet in thickness to approximately 220 feet thick. The sand unit occasionally contains semi-continuous mudstone lenses.

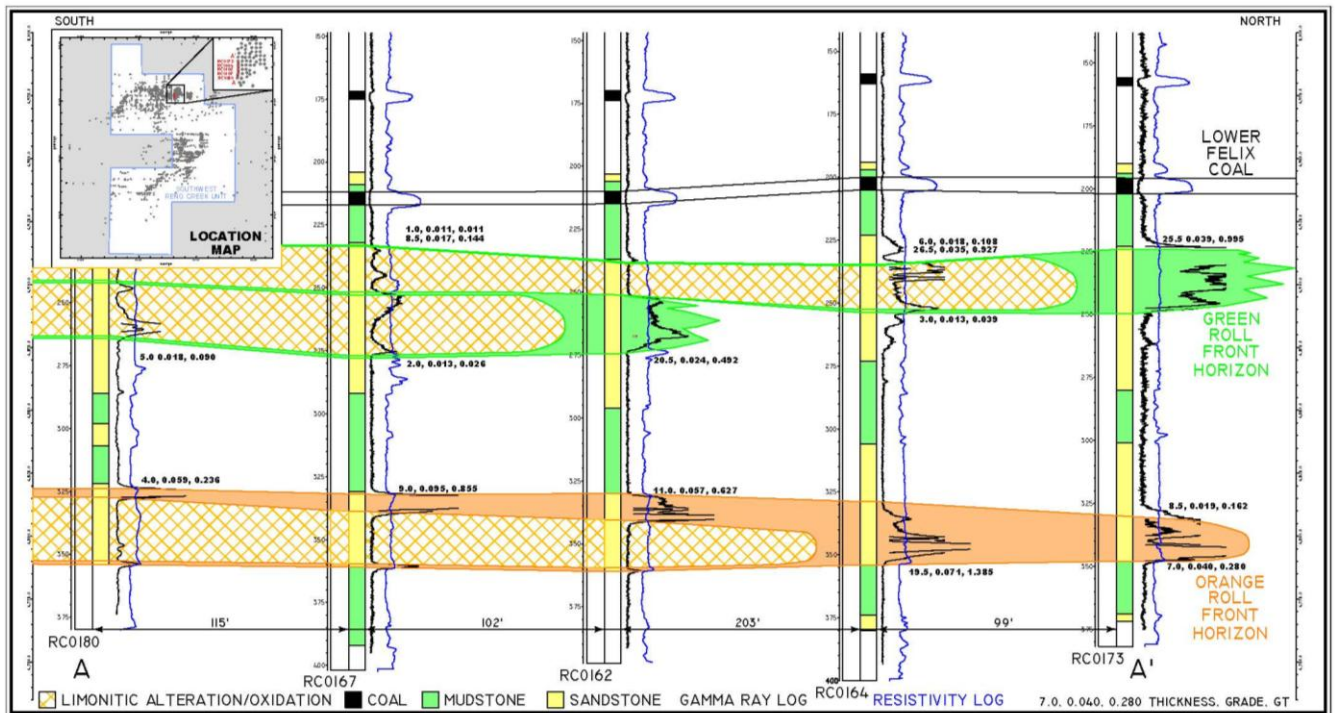
At various localities within the Project area, all horizons from the base to the top of the host sandstone can be favorable for uranium deposition. However, economically significant uranium mineralization occurs most frequently in the lower half of the PZA.

Hydrogeologic investigations by RME, IUC, and AUC have resulted in a thorough understanding of the groundwater conditions across the Project area, including the position of the water table in relation to mineralization. In the far eastern portion of the Project area, the PZA is partially saturated and, in some areas, very limited uranium mineralization is present above the potentiometric surface of the PZA. Based on recent work by AUC, the mineralization in the uppermost, unsaturated portion of the PZA is insignificant (approximately 1%). None of the resources presented in this report are above the water table.

Sandstones within the PZA that host the uranium mineralization are commonly cross bedded, graded sequences fining upward from very coarse at the base to fine grained at the top, representing sedimentary cycles from 5 feet to 20 feet thick. Stacking of depositional cycles has resulted in sand body accumulations over 200 feet thick.

AUC has divided the PZA host sandstone into five horizons to aid in tracking individual roll fronts. Fronts are mapped based on oxidized and reduced (redox) conditions. Oxidization (limonitic and hematitic stained sandstone) is the primary alteration product associated with the up-gradient side of the fronts (referred to as alteration fronts on subsequent figures).

The uppermost roll front horizon is coded as green, followed by the purple, red, orange, and blue with increasing depth. The relationship of the green and orange horizons is depicted on a diagrammatic cross section (Figure 7.4). The intervening purple and red roll fronts and the underlying blue horizon are not present in the area represented in the Southwest Reno Creek diagram.



**Figure 7.4. Cross Section A-A' Southwest Reno Creek**

The unit overlying the PZA in the North Reno Creek and Southwest Reno Creek area is the Overlying Aquitard. The unit consists of a laterally continuous sequence of silt and clay rich mudstones, thin coal seams (the Felix Coal seams), and discontinuous sandstones.

As shown in Figure 7.2, Figure 7.3, and Figure 7.4, the Felix Coal seams are laterally continuous in the North Reno Creek and Southwest Reno Creek areas and appear to extend northward into the Moore and Bing areas. The Felix Coals and the underlying Badger Coal provide important correlation points across the entire project area.

Wasatch sequences in the North Reno Creek and Southwest Reno Creek Resource Units dip slightly to the northwest. No faulting has been observed within the immediate area.

In the North Reno Creek and Southwest Reno Creek Resource Units, the lower-most unit of the Wasatch Formation comprises the Underlying Aquitard, which lies below the PZA and above the Badger Coal. The aquitard is approximately 150 feet to 250 feet thick and consists of laterally continuous silt and clay rich mudstones, and locally, discontinuous lenticular sandstones. This confining unit is present under the entire project area.

The mineralized host sandstone, or PZA, overlies the Underlying Aquitard at North Reno Creek and Southwest Reno Creek. The PZA is a discrete and laterally continuous sandstone ranging from under 75 feet to approximately 220 feet thick. The sand unit occasionally contains semi-continuous mudstone lenses.

At various localities within the Project area, all horizons from the base to the top of the host sandstone can be favorable for uranium deposition. However, economically significant uranium mineralization occurs most frequently in the lower half of the PZA.

In the far eastern portion of the Project area, the PZA is partially saturated, and in limited areas, uranium mineralization is present above the potentiometric surface of the PZA. Based on recent work by AUC, the mineralization in the uppermost, unsaturated portion of the PZA does not represent a significant percentage of the overall uranium resource. None of the resources presented in this report are found above the water table.

Sandstones within the PZA that host the uranium mineralization are commonly cross bedded, graded sequences fining upward from very coarse at the base to fine grained at the top, representing sedimentary cycles from 5 feet to 20 feet thick. Stacking of depositional cycles has resulted in sand body accumulations over 200 feet thick.

AUC has divided the PZA host sandstone into five horizons to aid in tracking individual roll fronts. Fronts are mapped based on oxidized and reduced (redox) conditions. Oxidization (limonitic and hematitic stained sandstone) is the primary alteration product associated with the up-gradient side of the fronts (referred to as alteration fronts on subsequent figures).

The uppermost roll front horizon is coded as green, followed by the purple, red, orange, and blue with increasing depth. The relationship of the green and orange horizons is depicted on a diagrammatic cross section (Figure 7.4). The intervening purple and red roll fronts and the underlying blue horizon are not present in the area represented in the Southwest Reno Creek diagram.

Resources and alteration fronts for the North Reno Creek and the Southwest Reno Creek Units are depicted on Figure 7.5 and Figure 7.6).



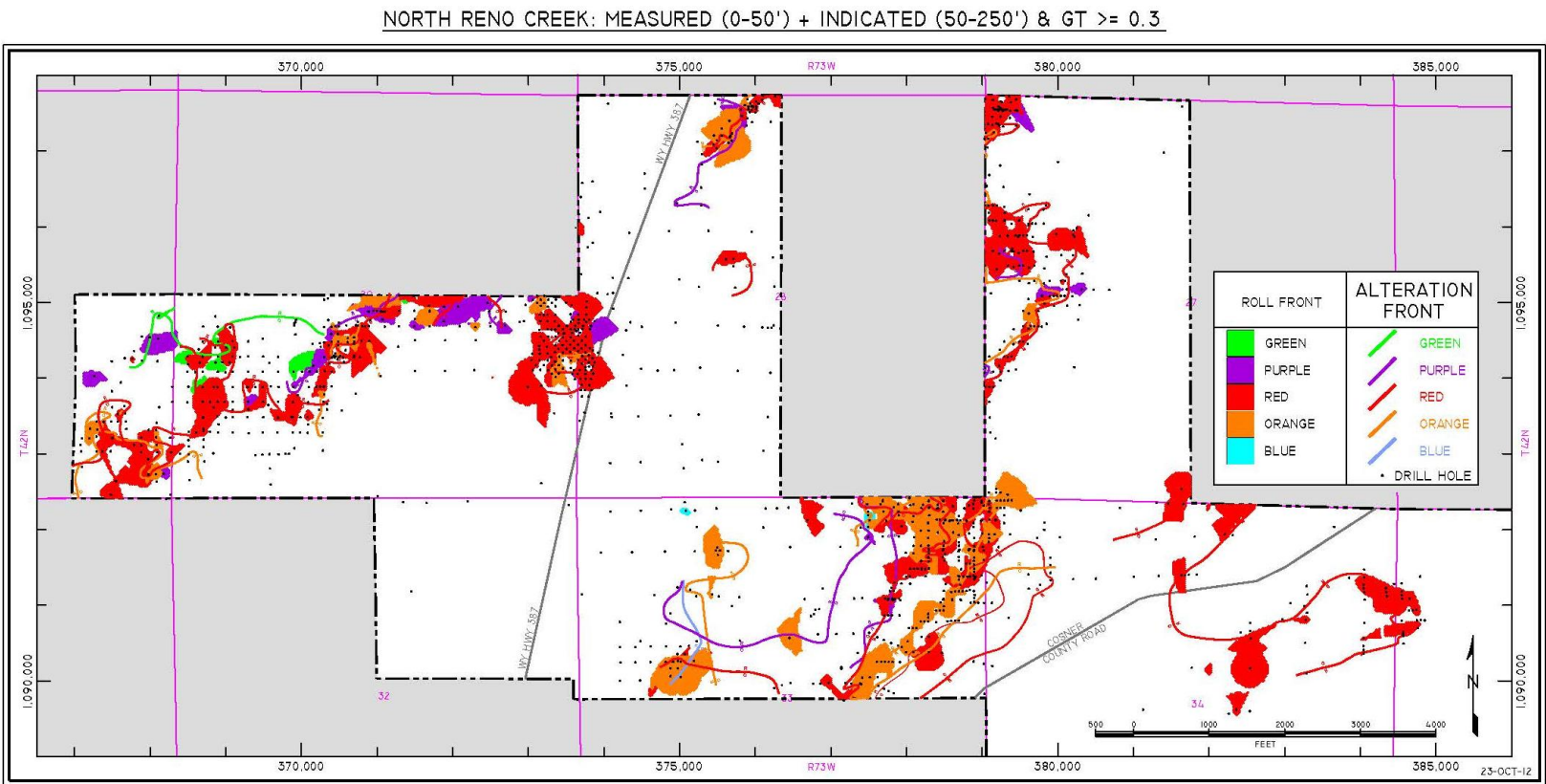
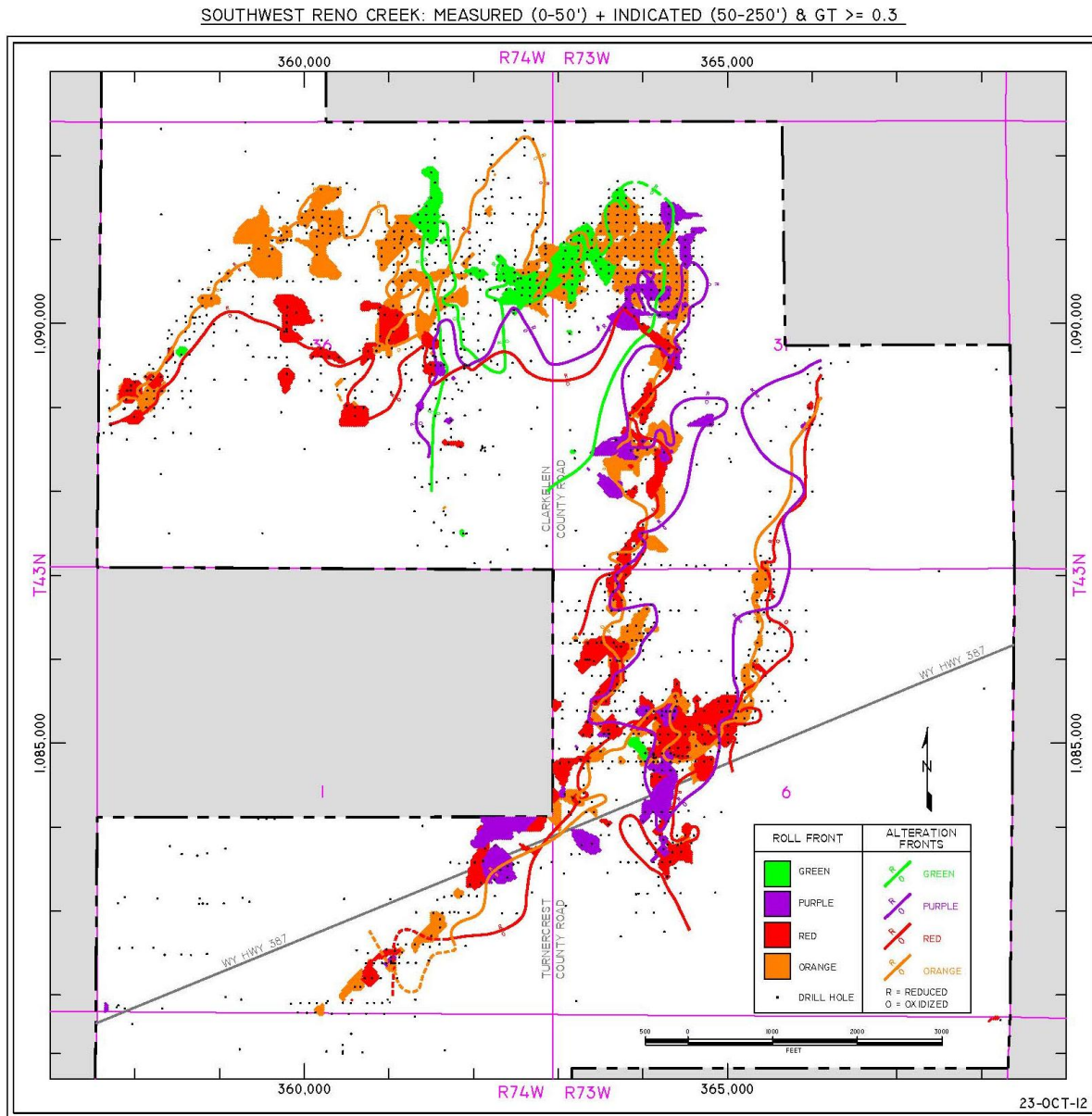


Figure 7.5. Measured and Indicated resources at North Reno Creek



**Figure 7.6. Measured and Indicated resources at Southwest Reno Creek**

### 7.2.2 Moore Resource Unit Geology

Geology at the Moore Unit is consistent with the Reno Creek and Bing Units. Historical RME cross sections and CBM logs enable correlations from the Moore area to the other units. There are two notably continuous coal beds approximately 40 feet to 50 feet apart within the upper portion of the section at the Moore Unit. The lower coal correlates with the Felix Coal bed, which is a marker bed in the Reno Creek resource area. The mineralized host sand lies 5 feet to 30 feet below this coal bed and at a depth of 200 feet to more than 350 feet below the surface. The host sand ranges from 80 feet to 150 feet in thickness.

AUC constructed a series of cross sections using extensive intercept and location data from recent database acquisitions. The cross sections enabled correlation and projections of mineralized horizons. The uppermost roll front horizon is coded as green, followed by the purple, red, orange, and blue with increasing depth.

Where available, geophysical logs were used (AUC has copies of 272 geophysical logs in the Moore area) in the cross sections since lithologic logs, which provide oxidation/reduction data helpful for tracking fronts are generally not available. Therefore, mapping of alteration fronts in Figure 7.7 is based on historical maps and geologic interpretations of gamma log signatures, with thinner high gamma intervals assumed to be “tails” on the oxidized side and thicker mineralized zones are assumed to be in the nose or protore zone in the unoxidized portion of the roll front.

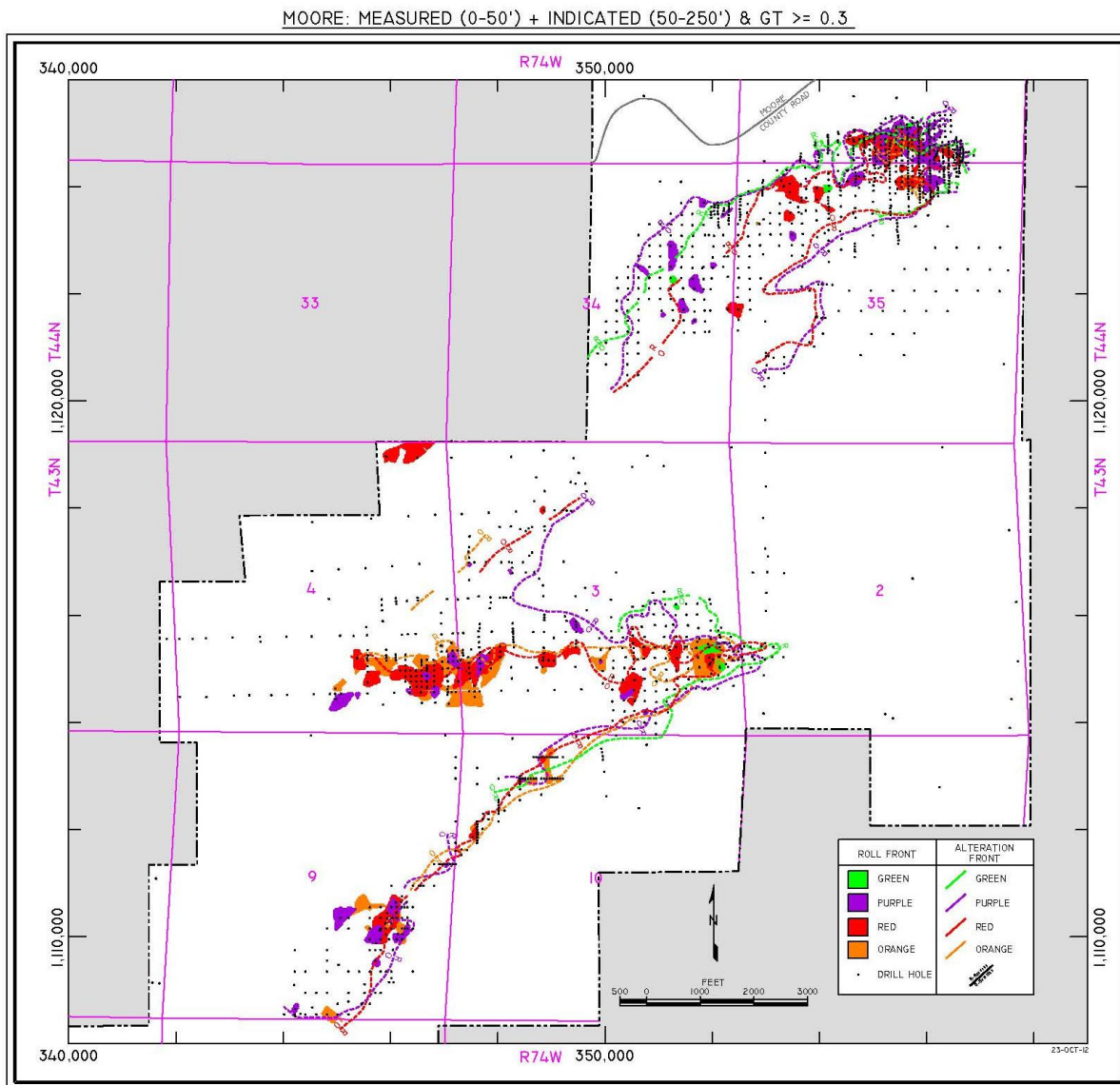
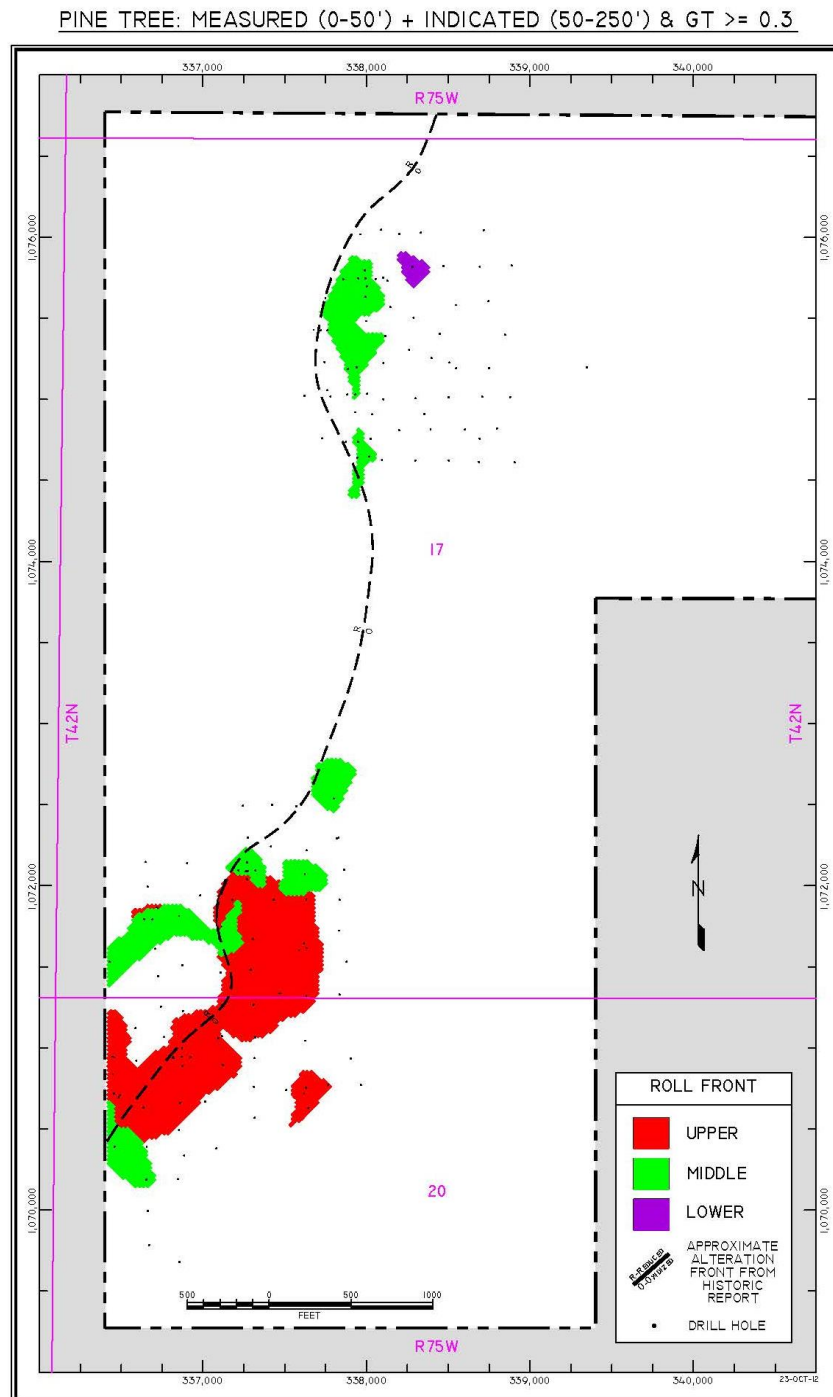


Figure 7.7. Moore Measured and Indicated resources

### **7.2.3 Pine Tree Resource Unit Geology**

On the basis of regional CBM well log correlations, the sands hosting mineralization at Pine Tree are located stratigraphically slightly higher in the Wasatch section than the host sands at North Reno Creek, and occupy the projected stratigraphic position of the Felix Coal, which is absent at Pine Tree. The position of the mineralization is based on its stratigraphic relationship above the Badger and Big George Coals. AUC separated roll front horizons into Upper, Middle, and Lower fronts at the Pine Tree Unit.

Where available, geophysical logs were used (288 geophysical logs in the Pine Tree Unit) to create cross sections; however, lithologic logs are scarce so oxidation/reduction data helpful for tracking individual roll fronts is limited at this time. Mapping of the alteration front in Figure 7.8 is generalized, based on historical data.



**Figure 7.8. Pine Tree Measured and Indicated resources**

### 7.2.4 Bing Resource Unit Geology

Based on review of CBM and historical geophysical logs, stratigraphy at the Bing Resource Unit consists of interbedded sand and clay units of the lower Wasatch formation. The mineralized sands appear to be similar to, and correlate with the host units at the Moore, North Reno Creek, and South Reno Creek Units.

Interbedded finer sediments consist of clays and mudstone units as well as thin coal beds that range from 2 feet to 8 feet in thickness

Based on regional correlations of CBM well logs, the Felix Coal bed marker bed is present in the Bing area. The host sand lies below the Felix Coal seam at a depth of 350 feet to 400 feet below the surface. The host sand ranges from 150 feet to 200 feet in thickness.

AUC divided the host sandstone into 4 horizons to aid in tracking individual roll fronts. The uppermost roll front horizon is coded as green, followed by the purple, red, and orange with increasing depth. Geophysical logs were used (AUC has copies of 200 geophysical logs in the Bing Unit area) to create cross sections and determine the mineralized roll front horizons. Lithologic logs are scarce so oxidation/reduction data helpful for tracking individual roll fronts is limited. Therefore, roll fronts are not included in Figure 7.9.

BING: MEASURED (0-50') + INDICATED (50-250') & GT  $\geq$  0.3

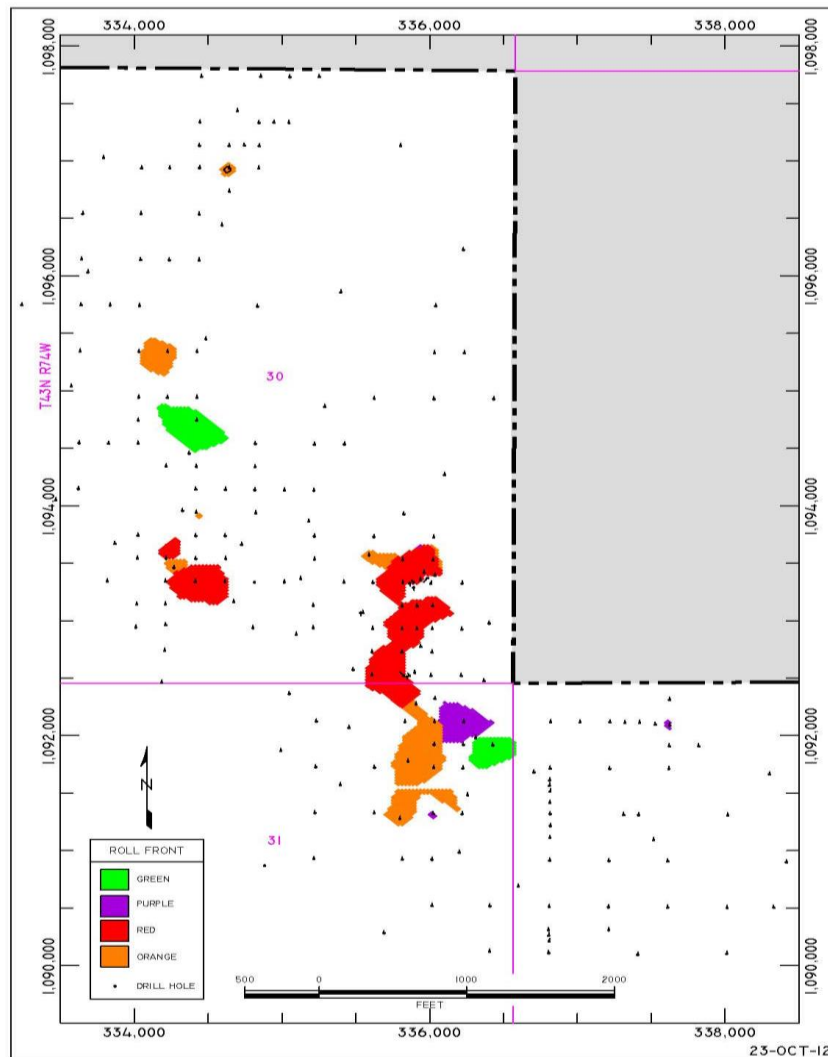


Figure 7.9. Bing Unit Measured and Indicated resources



### **7.2.5 Lithologic Characteristics**

Historical lithologic data generated by RME for the North Reno Creek and Southwest Reno Creek Units is extensive (AUC has over 1,000 historical lithologic logs on file). Lithologic data from the other resource units is much less complete, but forms an adequate basis to enable geologic mapping for use in current resource estimates and for planning future drilling.

AUC drilled approximately 800 exploration holes, well pilot holes, stratigraphic test holes, and core holes since August 2010 on the North Reno Creek and Southwest Reno Creek Units. A 100-hole drilling and coring program is nearing completion at the Moore Unit. Results will be evaluated over the next few months.

AUC has collected approximately 450 feet of core from 12 core holes for analysis and lithologic examination. In addition, cuttings samples were collected at 5-foot continuous intervals for lithologic descriptions by AUC geologists from surface to total depth. Copies of electric logs, lithologic logs, and a collection of core and cuttings samples have been saved for future reference, and are stored in AUC's locked storage facility in Wright, Wyoming.

A series of deep stratigraphic test holes penetrating the total thickness of the Wasatch Formation, through the Badger Coal marker at the top of the Fort Union Formation, were drilled in each of AUC's 7 well clusters within the proposed mine permit area at the North Reno Creek and Southwest Reno Creek Units to provide a more detailed sub-regional control. Locations of the well clusters are shown in Section 20.0.

Detail regarding lithology, permeability, and porosity can be found in this report in Section 13.1. On the basis of historical work, as well as current drilling, coring, and laboratory analyses, AUC's understanding of lithologic characteristics of the host sandstone, aquitards, and adjacent coals, sandstones, and mudstones is adequate to interpret geologic factors controlling uranium deposition and future ISR actions at all resource units.

## 8.0 DEPOSIT TYPE

### 8.1 DEPOSIT TYPE AND GEOLOGIC MODEL

In the Pumpkin Buttes Uranium District, which includes the Reno Creek, Moore, Bing, and Pine Tree deposits, important economic uranium deposits occur in medium to coarse-grained sand facies of the Eocene Wasatch Formation. Uranium mineralization at AUC's holdings occurs within the lower portion of the Wasatch Formation. The uranium mineralization occurs as interstitial fillings between and coatings on the sand grains along roll front trends formed at geochemical reduction-oxidation (redox) boundaries within the host sandstone aquifers.

Roll front uranium minerals in the unoxidized zone are commonly coffinite and pitchblende (a variety of uraninite). Low concentrations of vanadium (less than 100 ppm) are sometimes associated with the uranium deposits.

Uranium deposits accumulated along roll-fronts at the down-gradient terminations of oxidation tongues within the host sandstones. The deposits occur within sandstones, which are intermittently interbedded with lenses of siltstone and claystone, commonly referred to as mudstones at the project due to the mixture of particle sizes. The thickness of the mineralization is controlled by the thickness of the sandstone host containing the solution-front.

Uranium deposits are generally found within sand units ranging from 50 feet to 200 feet in thickness, and at depths ranging from 170 feet to 450 feet below ground surface. Uranium intercepts are variable in thickness ranging from 1 foot to 30 feet thick. Thin low-grade residual upper and lower limbs of the roll fronts are found in the less permeable zones at the top and bottom of oxidized sand units bounded by unoxidized mudstones.

While in solution, uranium is readily transported and remains mobile as long as the oxidizing potential of the groundwater is not depleted. When the dissolved uranium encounters a reducing environment, it is precipitated and deposited at the interface between the oxidizing and reducing environments known as the redox or alteration front.

Oxidation or alteration of the PZA sandstone in the Reno Creek area was produced by the down-gradient movement of oxidizing, uranium-bearing groundwater solutions. Uranium mineralization was precipitated by reducing agents and carbonaceous materials in the gray, reduced sands. The host sandstones, where altered, exhibit hematitic (pink, light red, brownish-red, orange-red) and limonitic (yellow, yellowish-orange, yellowish-brown, reddish-orange) alteration colors, which are easily distinguished from the unaltered medium-bluish gray sands. Feldspar alteration, which gives a "bleached" appearance to the sands from the chemical alteration of feldspars into clay minerals, is also present. Limonitic alteration dominates near the "nose" of the roll fronts. The remote barren interior portions of the altered sands are usually pinkish-red in color. The uranium mineralization is contained in typical Wyoming roll-front deposits that are highly sinuous in map view. Figure 7.4 is a diagrammatic cross section of roll fronts using geophysical logs from the Southwest Reno Creek Resource Unit.

Carbon trash is occasionally present in both the altered and reduced sands. In general, the unaltered sands have a greater percentage of organic carbon (approximately 0.2%) than the altered sands (0.13%) in selected cores analyzed by previous operators. Carbon in unaltered sands is shiny, while dull and flaky in the altered sands. Pyrite is occasionally observed in reduced drill core, at concentrations of approximately 0.5%.



## **9.0 EXPLORATION**

Exploration drilling, described in Section 10.0, was performed on the AUC North Reno Creek and Southwest Reno Creek Units, which are the first areas scheduled for ISR extraction. A 100-hole drilling and coring program is nearing completion at the Moore Unit. Interpretation of the results is pending. AUC has not conducted exploration on the Pine Tree or Bing Units but recommends drilling in these areas in the future.

## 10.0 DRILLING

### 10.1 TYPE AND EXTENT OF DRILLING

To date, more than 7,550 drill holes have been drilled by AUC and previous uranium exploration companies on, and nearby, the 5 Resource Units held by AUC. The historical data sets in AUC's possession were generated by competent companies that exercised rigorous standards and used acceptable practices of the day. All available data from geologic reports, drilling, survey coordinates, collar elevations, depths, electric log data, and grade of uranium intercepts, have been incorporated into AUC's system. Review and QA/QC of AUC's files and databases for all resource areas was conducted by the authors, and the data was found to be adequate and sufficient to support current 43-101 compliant resource estimates and other discussions contained in this report.

Drilling of 807 rotary holes, core holes, and monitoring wells was conducted during the past 3 years by AUC within the North Reno Creek and Southwest Reno Creek Units. AUC has recently completed a 100-hole rotary and core program at the Moore Unit. Evaluation of results will be conducted over the next few months. A preliminary evaluation of results from the Moore Unit drilling indicates general agreement with historical data.

#### 10.1.1 North Reno Creek and Southwest Reno Creek Unit Drilling

The North Reno Creek area was extensively explored from the late 1960s through 1991 by Union Pacific Railroad and its subsidiaries RME and Union Pacific Resources. Energy Fuels Nuclear (later IUC) and Power Resources acquired the properties and drilled an additional 300 to 400 holes in the 1990s and early 2000s period.

Additionally, ANC and TVA explored Southwest Reno Creek during approximately the same period that RME was active in the area. ANC and TVA drilled approximately 695 holes in the general area on properties adjacent to RME's holdings. All of the historical drilling and testing were conducted in accordance with the standard and accepted practices of the time.

North Reno Creek and Southwest Reno Creek Resource Units include approximately 2,665 historical drill holes and plugged wells within the Project permit boundary. Approximately 100 of the holes were cased wells that were plugged and abandoned by previous operators.

AUC drilled approximately 800 holes from August 2010 through July 2012, including 12 core holes and 44 cased wells that will remain in place for an extended period for groundwater monitoring purposes. Recent drilling by AUC confirmed intercepts in the historical data by drilling step-out holes (100 feet from old holes), in accordance with recommendations by the authors. Continuity also was confirmed on a large scale by drilling that joined 2 mineralized areas over a mile apart. AUC drilling in this area (located in the west half of Section 31, T43N, R73W), added over 2.0 million pounds of resources.

The holes that were not cased, to be used as wells, were plugged and abandoned in accordance with WDEQ-LQD Chapter 8 and per the WDEQ approved AUC Reno Creek Project Drilling Notification 401 (DN401).

AUC's practice in the Pumpkin Buttes Uranium District was to drill bore holes using 4¾-inch to 5¼-inch diameter bits by conventional rotary drill rigs circulating drilling mud. The cuttings were

collected over 5-foot intervals and laid out on the ground in rows of 20 samples (100 feet) by the driller. The site geologist examined the cuttings, in the field, to determine lithology and geochemical alteration.

Upon completion of the drilling, drill holes were logged, from the bottom of the hole upward, with a gamma-ray, self-potential, and resistance probe. All of AUC's drill holes were logged by an independent downhole geophysical contractor, Century Geophysical Corporation. Lithologic and geophysical logs are stored electronically and on hard copy by AUC (Figure 10.1).



**Figure 10.1. Drilling rig and logging truck from completed location on Southwest Reno Creek Unit**

### **10.1.2 Moore Unit Drilling**

A 100-hole drilling and coring program is nearing completion at this time, but results are not yet available for inclusion in this report. Drilling was done by several companies in the Moore resource areas. Wide-spaced drilling on traverse lines was done in the late 1960s by Cleveland Cliffs, which had a very large land holding in the PRB at that time. Cleveland Cliffs drilled some 177 holes in the Section 9, T43N, R74W resource area.

Utah International/Pathfinder Mines, Inc. began grid drilling in the late 1960s on their holdings, which included much of the resource area in Sections 26 and 35, T44N, R74W and a portion of Section 3, T43N, R74W. They drilled the B-series of holes, which comprised over 1,000 drill holes through the late 1970s and into the early 1980s. Drill spacing over the resource area is generally 200 feet with some areas being drilled on 50-foot to 100-foot spacing.

In the 1980s, RME drilled more than 400 holes on the Moore resource area now held by AUC. In 1986, RME conducted a 6-hole hydrologic test site in Section 26, T44N, R74W on the Moore deposit. This test work confirmed strongly mineralized roll-front trends and favorable hydrologic characteristics at the northern deposit on the Moore property. Core analysis and pump testing indicated sufficient permeability and hydraulic head to successfully accommodate ISR procedures. No abnormal leakage across the upper aquitard was detected during the 48-hour pump test, indicating that old drill holes are sealed within the area of influence of the test (RME Reno Creek Exploration 1987 Progress Report).

Data acquired by AUC for the Moore Unit includes 272 historical logs, reports, cross sections, and an electronic database containing coordinates, gamma ray log counts per second (CPS) data, and uranium intercept data for approximately 1,390 holes. The data was originally generated by RME, Pathfinder, and Cleveland Cliffs. No drilling has been performed in the Moore project area by AUC.

### **10.1.3 Pine Tree Unit Drilling**

AUC has not drilled at the Pine Tree Unit at this time, but plans to in the future. Drilling in the Pine Tree area was performed by Utah International, Inc. and its successor, Pathfinder Mines from the early 1970s into the mid-1980s.

More than 560 holes were drilled in and around the Pine Tree project area with 2 mineralized areas found in Sections 17 and 20, T42N, R74W. The mineralized areas lie about 1,500 feet apart. Drilling was done on a 200-foot offset grid. The majority of drilling was completed by the mid-1970s. A 5-hole hydrologic test pattern was set up in 1979 by Pathfinder Mines, but AUC does not have results of that test work.

Through data acquisition, AUC has obtained copies of drill hole geophysical logs for 288 of the A-Series of drill holes. Of these holes, 155 logs contained conversion factors (*i.e.*, k-factors, dead times, and water factors). Logs were scanned into electronic format and digitized using the Neuralog, Inc. hardware and software. The “.las” files were utilized to extract grade data.

Intercept values at a 0.05% cutoff grade were compared to the original intercept listing from Utah International, Inc. An adequate correlation was found between the 2 data sets.

### **10.1.4 Bing Unit Drilling**

AUC has not drilled at the Bing Unit at this time, but plans to in the future. AUC evaluated 200 logs from the Bing property in Sections 30, 31, and 32, T43N, R74W. Cleveland Cliffs drilled the holes from 1968 through 1982. More than 109,000 feet of drilling was logged. The extracted intercepts, from digitization of the geophysical logs at a 0.01% cutoff grade, were used for the resource estimation.

## **11.0 SAMPLE PREPARATION, ANALYSIS, AND SECURITY**

AUC developed Quality Assurance/Quality Control (QA/QC) procedures to guide drilling, logging, sampling, analytical testing, sample handling, and storage. The authors reviewed QA/QC procedures and determined that AUC followed the procedures and documented their activities properly.

### **11.1 DOWNHOLE GEOPHYSICAL LOGGING**

Geophysical logging was routinely conducted for every drill hole completed on the property by AUC and its predecessors. Geophysical logs typically collected data for gamma ray, single-point resistance, spontaneous potential, neutron, and drill hole deviation. Currently, geophysical logging is being conducted by a qualified independent contractor, Century Geophysical of Tulsa, Oklahoma. Natural gamma logs provide an indirect measurement of uranium content by logging gamma radiation in counts per second (CPS) at one-tenth foot intervals, CPS are then converted to equivalent  $U_3O_8$  ( $eU_3O_8$ ). The conversion requires an algorithm and several correction factors that are applied to the CPS value. The correction factors include a k-factor, dead time factor, and water factor. K-factors and dead times vary from probe to probe and can also vary in each probe over time, with each probe recalibrated on a regular basis at a U.S. Department of Energy test pit located in either Grand Junction, Colorado or Casper, Wyoming.

In all holes drilled by AUC, downhole deviation surveys provided true depth, azimuth, and distance from collar location. Deviation rarely exceeded 5 feet, so true depth correction is insignificant. AUC staff surveyed drill hole collar locations using GPS technology with 10-centimeter accuracy to provide easting and northing coordinates and elevations.

Century Geophysical delivered logging data to AUC in digital and hard copy paper formats, daily, to AUC's geologists via email. Digital files consisted of ".tif" presentations of electronic logs, and digital data for all information was recorded on the ".las" files. AUC staff examined the logs and any QA/QC issues were identified and corrected. The logs were transferred to electronic versions of the geologist's lithology logs for efficient comparison of all geophysical and field logging data.

AUC stored the current and historical logs in electronic format on an in-house secure server, and hard copies were filed in metal cabinets in the Lakewood, Colorado office. Electronic files are protected and backed up to prevent damage or loss.

### **11.2 CORE DRILLING**

AUC has collected approximately 450 feet of core from 12 core holes during the past 2 years at selected locations within the North Reno Creek and Southwest Reno Creek Resource Units.

Core samples were collected by AUC in the field by the supervising geologist, boxed and labeled with appropriate identification. Core boxes were transported to the AUC locked warehouse and stored securely until they were sampled and sent for analysis. When the core hole was completed, it was logged using a downhole geophysical tool.

Core samples were prepared for analysis in Wright, Wyoming at AUC's core storage facility. Each sample was documented and described in detail, and a sequenced sample identification number was given to each sample. The samples were wrapped in sealed plastic bags with the ID number placed inside the bag and written on the outside of the bag for repetitive reassurance the correct sample ID would be used. Once all the samples were prepared and a chain of custody prepared for each laboratory. Chain of

Custody forms are on file with AUC. Samples were either hand delivered to local laboratories or shipped to the out of town labs.

Laboratories used by AUC for analytical procedures on core samples were:

- **Core Laboratories, Denver Colorado:** Permeability and Porosity (P&P), laser particle size analysis, x-ray diffraction (XRD)
- **Core Laboratories, Houston Texas:** Nuclear Magnetic Resonance (NMR) effective porosity
- **Energy Laboratories, Casper Wyoming:** Bottle roll, closed can, radiometrics, and chemical analyses of metals including uranium
- **J.E. Litz and Associates, Golden Colorado:** Column leach
- **Weatherford Laboratories, Casper Wyoming:** P&P, bulk density

The authors have reviewed the methodologies and QA/QC procedures employed by AUC, and the QA/QC procedures used by the independent analytical laboratories contracted by AUC, and conclude that they provided results that are compliant with 43-101 standards.



## 12.0 DATA VERIFICATION

### 12.1 DATABASE

The drill hole database consists of historical data generated by several companies previously operating in the area (see Sections 6.0 and 10.0), and data from recent drilling conducted by AUC. Other historical and AUC generated information in AUC's files consists of over 100 maps, approximately 450 cross sections, tables, reports, and over 2,000 paper logs. Also available are digital databases of coordinates, downhole intervals, and digitized electronic logs. Any paper logs, not in digital form, were digitized by AUC. The authors reviewed electronic logs, cross sections, and maps produced by AUC and previous operators.

The author performed the following steps to verify data in the North Reno Creek Unit.

- 1) **Historical drill hole data** The authors compared original paper downhole logs with the information in the digital databases by checking 10 historical drill holes. Grades and thicknesses, handwritten on paper logs, were inconsistent and not useable. When other data sources were examined, matches with data in the digital databases were found in all cases. As noted above, AUC geologists relied on several sources for assembling roll front interval data, and made new interpretations of the roll front intervals, when needed. Comparisons were made between plan maps showing intervals by drill hole and cross sections compiled from original logs. No inconsistencies were found.
- 2) **AUC drill hole data.** The authors compared grades and thicknesses between the digital databases and paper logs from AUC drilling for 10 drill holes. All holes checked matched information in the digital database. AUC drilled holes have paper electronic logs and cutting/core logs, digital ".las" files, and computer generated composites at different grade cutoffs.
- 3) **Drill hole location coordinates.** Location and interval data were imported to the Micromine® software for additional location checking. Twenty of the 1,536 drill hole locations were checked with no errors detected.
- 4) **Roll front code data.** The roll front intervals, included in the digital databases, were plotted and examined by cross section through the deposit. Errors or uncertainties about roll front assignments were noted in the vertical locations for some roll fronts. Roll front interpretations from AUC drill holes were also reviewed and verified with the AUC geologists.
- 5) **Roll front composited data.** The authors compared grade and thickness composites for 10 drill holes in the North Reno Creek Unit digital databases. All composites checked matched the information in the digital databases.

AUC geologists collected and compiled roll front data for the other four Reno Creek ISR Project Units similarly with the same level of detailed geological interpretation and verification. The authors consider the data used for the resource estimation to be properly prepared and sufficiently accurate for the preparation of a resource estimate.

Data for the other units were collected and compiled with the same level of detailed geological interpretation and verification. The authors consider the data used for the resource estimation to be properly prepared and accurate for preparation of a resource.

### 12.1.1 Data Adequacy

The authors consider the two-dimensional (2-D) database to be of reasonable quality and adequate for the resource estimation. Further analysis for the detailed mapping of mineralized, production pay zones will require a complete, validated three-dimensional (3-D) data set. Extensive checking and further verification will be needed to make sure drill hole collar elevations are correct for all drill holes; and, that roll front elevations are correctly assigned for all mineralized intervals. The authors are satisfied that the digital data for 2-D resource estimation has been thoroughly checked by AUC professionals, and that the AUC geologists have competently made the roll front interpretations.

## 12.2 CORE SAMPLING

On July 27, 2012, to verify continuity and quality of mineralization, the author sampled 8 intercepts in 3 core holes (RC0007C, RC0009C, and RC0011C) drilled by AUC. The samples were chosen by selecting higher grade mineralization recorded on downhole radiometric logs. Cored intervals corresponding to the anomalies were checked for gamma radiation by a Mesa – 1 S/N 111 scintillometer to confirm the location of mineralization to be assayed. The samples were carried by the author to Energy Laboratories in Casper, Wyoming where they were assayed using EPA Method E901.1 for U<sub>3</sub>O<sub>8</sub> radionuclides as well as EPA Method SW6020 for U<sub>3</sub>O<sub>8</sub>, U, Se, Mo, and As. The results for U<sub>3</sub>O<sub>8</sub> are in Table 12.1. The methods are routinely used by industry to generate data for exploration and production and are derived from EPA standard methods.

**TABLE 12.1**  
**ANALYTICAL RESULTS FOR U<sub>3</sub>O<sub>8</sub>**

Sample ID	Core Hole	Depth (feet)	cU <sub>3</sub> O <sub>8</sub> % <sup>1,2</sup> (assay)	eU <sub>3</sub> O <sub>8</sub> % <sup>1,3</sup> (closed can)	c/e ratio
P 014162	RC0007C	380-380.5	0.173	0.135	1.28
P 014163	RC0009C	294-295	0.067	0.044	1.53
P 014164	RC0009C	296-297	0.061	0.039	1.57
P 014165	PZM11C	281-282	0.235	0.151	1.56
P 014166	PZM 11C	282-283	0.158	0.192	0.82
P 014167	PZM 11C	299-300	0.285	0.180	1.58
P 014168	PZM 11C	300-301	0.333	0.218	1.53
P 014169	PZM 11C	298-299	0.514	0.350	1.47

<sup>1</sup>The quality of mineralization is higher than average for Project resources because samples were selected from higher grade portions of mineralized intercepts.  
<sup>2</sup>Results using Method SW6020.  
<sup>3</sup>Results using Method E901.1.

The assays confirm the presence of mineralization as well as a slightly favorable state of disequilibrium (c/e = greater than 1) in the portions of the deposit sampled. It is the authors' opinion the results are adequate for the purpose used in this technical report.



## 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

### 13.1 CORE ANALYSES

AUC plans to use an ISR mineral extraction process to recover uranium from the host sandstone formations at the Reno Creek ISR Project. More specifically, AUC will employ a leaching solution composed of an oxidant and sodium bicarbonate for oxidation and complexation reactions to bring the uranium to the surface for further processing through a series of injection and recovery wells. In order to determine if the proposed uranium recovery method will be applicable, AUC collected core samples from 12 locations within the North Reno Creek and Southwest Reno Creek Units to provide data regarding the amenability of uranium to leaching and insights regarding the geochemistry and hydrologic properties of the sandstone host. The authors reviewed the methodologies and QA/QC procedures employed by AUC and the QA/QC procedures used by the independent analytical laboratories contracted by AUC, and conclude that they provided results that are compliant with 43-101 standards.

The following tests and analyses were performed on the core samples.

- Vertical and horizontal permeability and porosity analyses by various methods in major lithologic units including aquitards (claystones, mudstones, siltstones), unmineralized sandstones, and mineralized sandstones
- Effective porosity
- Bulk density (10 samples from Southwest Reno Creek)
- Grain size analysis
- Clay content and mineralogy
- PZA sandstone lithology, mineralogy, and petrology
- Uranium mineral(s) identification
- Metallurgical testing by bottle roll and column leach using varied oxidants and lixiviant strengths
- Assays of  $U_3O_8$  and closed can radiometric equivalent
- Testing provides data regarding amenability of uranium leaching and insights regarding geochemistry at the project

#### 13.1.1 Permeability and Porosity Measurements

AUC recovered core samples from the Overlying and Underlying Aquitards, the Overlying Aquifer, and the Production Zone Aquifer. Core from multiple zones was recovered to evaluate the characteristics of each of the lithologic units that are important to mining operations. Core Labs in Denver, Colorado analyzed samples for P&P. Samples in the Overlying Aquifer and Production Zone Aquifer were analyzed using the Klinkenberg Air P&P method. Samples from the Underlying and Overlying Aquitards were analyzed using a Liquid P&P method as well as the Klinkenberg Air P&P method (Table 13.1).

<b>TABLE 13.1</b>			
<b>PERMEABILITY AND POROSITY</b>			
<b>Zone</b>	<b>Method</b>	<b>Result</b>	
Production Zone Aquifer	Air P&P	Average Porosity = 30.3%	Average Permeability Klinkenberg = 1944 md
Overlying Aquitard	Liquid P&P	Permeability Specific to Brine = 0.00087 md	
Underlying Aquitard	Liquid P&P	Permeability Specific to Brine = 0.00058 md	

### 13.1.2 Effective Porosity (NMR)

Core Labs in Houston, Texas conducted 1 analysis of effective porosity on a PZA sandstone sample from core hole RC0007C. In this case, the Klinkenberg permeability was 1,801 md, the total porosity was 31.8%; however, the effective porosity measurement of this sample was 23.7%. Effective porosity excludes porosity related to bound water in clays resulting in a lower number (Table 13.2).

<b>TABLE 13.2</b>	
<b>NUCLEAR MAGNETIC RESONANCE (NMR)</b>	
<b>EFFECTIVE POROSITY ANALYSIS</b>	
Sample ID	004856
Borehole ID	RC0007C
Depth (feet)	379-380
Porosity (%)	30.4
Klinkenberg Permeability (md)	1,801
Air Permeability (md)	1,831
Porosity (%)	31.8
Effective Porosity (%)	23.7
Clay Bound Water	0.081
Qv by NMR	0.525

The P&P are within the normal range of ISR producing facilities and support the authors' conclusion that the mineralized sandstone is amenable to ISR production of uranium.

### 13.1.3 Metallurgical Testing

AUC conducted two types of metallurgical testing to verify the amenability of the deposits to ISR.

Bottle roll tests were performed by Energy Laboratories in Casper, Wyoming on select core from the Southwest Reno Creek Resource Unit to test for recovery of uranium from the uranium host rock. Bottle roll tests were performed on a variety of different portions of core targeting different grades and lithologies. Tests were performed on 1-foot to 3-foot lengths of core.

The tests consisted of pulverizing 200 grams of core and adding 5 pore volumes of lixiviant (NaHCO<sub>3</sub> and H<sub>2</sub>O<sub>2</sub>) and then rolling in a bottle for 16 hours. The leachate was then separated from the core sample and analyzed for uranium and trace metal concentrations. Six bottle roll stages were performed on each core sample. After the final test, the pulp was assayed for any remaining uranium (Table 13.3).

Sample ID	Hole ID	Lixiviant	Depth	Percent Recovery		
				Total by Leach	Total by Tail	Total by Grab
1	RC0001C	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	333-335	79.9	82.2	83.4
2	RC0002C	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	332-334	83.7	88.0	88.9
3	RC0002C	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	338.5-341	83.7	83.6	85.5
4	RC0006C	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	349.5-351.5	104.7	66.1	77.5
5	RC0006C	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	356-358	80.8	88.4	88.9
6	RC0007C	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	380-381	80.4	94.2	94.1
7	RC0007C	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	381-382	77.3	77.2	79.5
8	RC0008C	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	378.5-380	71.3	89.5	89.3
9	RC0009C (1)	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	268-271	70.9	82.7	82.2
10	RC0009C (2)	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	297-300	66.4	77.7	76.3

#### 13.1.4 Column Leach

Column leach tests were run on 4 core samples from the Southwest Reno Creek Resource Unit. The samples were sent to J.E. Litz and Associates in Golden, Colorado. The procedure for small column tests was to charge a 2-inch diameter by 18-inch tall column with up to 1,000 grams of dry or damp mineralized core. Fresh formation water was used and prepared using a lixiviant solution of NaHCO<sub>3</sub> and H<sub>2</sub>O<sub>2</sub>. The solution is then pumped upflow through the column at approximately one pore volume per day.

The effluent discharging the column was sampled daily and the solutions submitted for uranium analyses. At the end of the test, the column is emptied and the solids filtered and washed. A weighted composite of the discharge and filtration solutions were submitted for additional analyses. The residue was dried, de-lumped, blended, and a 1/8-split is prepared for uranium analysis. Uranium recoveries varied from 80% to 95% with an average recovery rate of 85.5% (Table 13.4).

Hole ID	Footage	Sample ID	Lixiviant	U <sub>3</sub> O <sub>8</sub> % Recovered
RC0009C	268-271	11-11-59R	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	83
RC0009C	297-300	11-11-60	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	84
RC0009C	297-300	11-11-60B	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.106 g/L	80
RC0002C	338.5-341	11-11-61A	NaHCO <sub>3</sub> , 1 g/L; H <sub>2</sub> O <sub>2</sub> , 0.5 g/L	95

#### 13.1.5 Equilibrium Study

Equilibrium occurs when the relationship of uranium with its naturally occurring radioactive daughter products is in balance. Oxygenated groundwater moving through a deposit can disperse uranium down the groundwater gradient, leaving most of the daughter products in place. The dispersed uranium will be in a favorable state of disequilibrium ( $c/e = \text{greater than } 1$ ) and the depleted area will be in an unfavorable state ( $c/e = \text{less than } 1$ ). The effect of disequilibrium can vary within a deposit and has been

observed to vary within an intercept. It follows that dispersed uranium will be more easily recovered than material from a depleted zone.

AUC performed equilibrium studies on 18 samples from 7 cores obtained from Southwest Reno Creek. The samples varied in grade and depth to mineralization to test for different variables. Closed can analysis was the method used to determine the percent of radiometric  $eU_3O_8$ , which was then compared to the assay/chemical  $U_3O_8$  ( $cU_3O_8$ ) for the same sample. Chemical analysis was conducted by ICP-MS. Seventeen of 18 samples tested had favorable (greater than 1.0) disequilibrium. The  $cU_3O_8/eU_3O_8$  ratio ranged from 0.82 to 1.79, as shown in Table 13.5.

Sample ID	Core Hole	Depth (feet)	$cU_3O_8$ % (assay)	$eU_3O_8$ % (closed can)	c/e ratio
014151	RC0001C	333-335	0.030	0.026	1.16
014152	RC0002C	332-334	0.087	0.054	1.62
014153	RC0002C	338.5-341	0.289	0.253	1.14
014154	RC0006C	349.5-351.5	0.026	0.020	1.32
014155	RC0006C	356-358	0.110	0.061	1.79
014156	RC0007C	380-381	0.250	0.145	1.72
014157	RC0007C	381-382	0.077	0.071	1.09
014158	RC0008C	378.5-380	0.840	0.562	1.49
014159	RC0009C	268-271	0.059	0.049	1.20
014160	RC0009C	297-300	0.068	0.052	1.31
P014162	RC0007C	380-380.5	0.173	0.135	1.28
P014163	RC0009C	294-295	0.067	0.044	1.53
P014164	RC0009C	296-297	0.061	0.039	1.57
P014165	PZM00011C	281-282	0.235	0.151	1.56
P014166	PZM00011C	282-283	0.158	0.192	0.82
P014167	PZM00011C	299-300	0.285	0.180	1.58
P014168	PZM00011C	300-301	0.333	0.218	1.53
P014169	PZM00011C	298-299	0.514	0.350	1.47

The AUC assays, coupled with historical disequilibrium studies by RME, confirm the presence of a slightly favorable state of disequilibrium ( $c/e =$  greater than 1) in the portions of the deposit sampled. AUC used a 1.0 disequilibrium factor for resource estimates. It is the authors' opinion the results are adequate for the purpose used in this technical report and that an adjustment for disequilibrium is not warranted.

### 13.1.6 Host Rock Characteristics

Sandstones at the Project are arkosic and/or feldspathic in composition. Quartz grains are a major component with moderate amounts of potassium and calcium feldspars. Accessory minerals include pyrite and calcium carbonate cement. Carbonaceous material is occasionally present in reduced portions of the sandstone.

Recent whole rock mineralogy work performed on core collected by AUC and reports from analytical work by RME in the late 1970s indicate that quartz ranges from 50% to 60%, feldspars comprise

approximately 20% to 25%, and clays present as smectite, kaolinite, and illite may comprise up to 20% of the total.

## 14.0 MINERAL RESOURCE ESTIMATES

### 14.1 BACKGROUND

In-place  $U_3O_8$  resources for the Reno Creek ISR Project were estimated and classified according to the CIM definition of a Mineral Resource classification of Measured, Indicated, and Inferred resources. The Project has been drilled on 50-foot to 100-foot spacing within areas defined as roll fronts, and on 200-foot to 400-foot spacing in areas not associated with roll fronts. To date, more than 7,550 drill holes have been drilled on and nearby, the 5 Resource Units evaluated. Electronic log gamma data are available for more than 75% of these holes, and interval data (thickness, grade, and GT) are available for about 95% of mineralized holes.

### 14.2 DATA PREPARATION

Data preparation included locating, editing and compiling drill hole location and downhole mineralized interval data for each roll front in each of the 5 Resource Units. This data was obtained from drill hole core and cutting description logs, electric logs, maps, cross sections and digital databases purchased from previous operators in the area. Data also was obtained from approximately 800 holes drilled and logged by AUC, lab analyses completed for AUC, and reports generated by AUC.

The following criteria were used to build databases for roll fronts in the 5 Reno Creek Resource Units.

- 1) **Coordinate data.** For historical drill holes, when coordinates from different data sources were available, they were compared, maps were constructed, and a final set of coordinates adopted. In general, X-Y-Z coordinates obtained from multiple sources showed little variance. For AUC drill holes, coordinates were determined via field measurements using Trimble GPS instrumentation.
- 2) **Downhole data.** Mineralized intervals were identified in each drill hole using characteristics of shape and position of natural gamma radiation from electronic logs. Cutoff criteria included 0.01%  $eU_3O_8$  grade and a 1.0-foot thickness. These low cutoffs were selected so that the low-end tail of the data distribution would be represented in the estimation methodology. No upper cutoff criteria were applied. Thicknesses and grades were multiplied to obtain GT values.
- 3) **Drill holes with roll front code data.** Approximately 250 north-south and east-west cross sections were constructed and spatial continuity of roll fronts was determined. Mineralized intervals were assigned a roll front code. The codes reflect a local stratigraphic naming convention consistent with those used by operators in the region.
- 4) **Alteration front data.** Core and cutting logs, electronic logs, roll front plan maps, and cross sections were used to construct alteration front maps.
- 5) **Composited data.** Mineralized intervals in each drill hole were composited using roll front codes to derive a single composited thickness, grade, and GT value for each roll front in each drill hole.
- 6) **Barren hole data.** Drill holes, with no mineralized intervals or mineralized intervals below cutoffs, were assigned thickness and grade values of 0.0.

All work described above was completed by AUC geologists. As noted above, separate digital databases were created for each roll front in each of the Units in the Reno Creek ISR Project, as follows:

- 1) **North Reno Creek Unit** – intervals within the green, purple, red, orange, and blue roll fronts.
- 2) **Southwest Reno Creek, Moore, and Bing Units** – intervals within the green, purple, red, and orange roll fronts. The blue roll front is not present in these Units.
- 3) **Pine Tree Unit** – intervals in the upper, middle and lower roll fronts.

Digital database records consisted of X-Y-Z coordinates and composited roll front interval data (thickness, grade, and GT values). Coordinate data was in Wyoming East State Plane, NAD 27 datum.

### 14.3 RESOURCE ESTIMATION

The mineral resource estimated by AUC used computerized geologic and volumetric modeling methods. More specifically, the estimation method used was a two-dimensional Delaunay triangulation and the software used was RockWorks®.

The Delaunay triangulation method connected data points (drill holes) via a triangular network with one data point at each triangle vertex, and constructed the triangles as close to equilateral as possible. Once the network is determined, the slope of each triangular plate was computed using the three X, Y, and Z vertex point values. Next, a 25 foot × 25 foot grid was superimposed over the triangular network, and each grid node (grid center) was assigned a Z-value, based on the intercept of the node and the sloping triangular plate. Only grid nodes falling within the boundary of the triangular network (convex hull) were estimated. Also computed was the distance of the grid node from a drill hole location and whether the node was located within AUC's property boundary. Next, the thickness and grade grids were multiplied to obtain a GT grid. Finally, the resource classification criteria, described in Section 14.4, was applied to the GT grid to obtain a classified resource.

The Delaunay triangulation estimation method was selected because:

- 1) The method exactly honors the drill hole interval data.
- 2) Grid cell values, less than drill hole composited values, will not be estimated.
- 3) A unique, reproducible triangular network is generated.
- 4) The mathematics are understandable and accepted by the industry.

The tonnage factor used in completing the resource estimate is 17 cubic feet per ton on a moisture-free (dry bulk density) basis, which is consistent with results of analyses from recent core drilling by AUC in Southwest Reno Creek. No disequilibrium factor was applied based on analysis of recent coring. These values are consistent with those used by other operators in the area (RME, 1988, TREC, 2010). Discussions of coring and associated analyses, QA/QC procedures, and recent equilibrium comparisons are included in Sections 11.0, 12.0, and 13.0.



#### 14.4 RESOURCE CLASSIFICATION METHOD

Based on the study results in this report, the Reno Creek ISR Project is classified as a resource, according to the following definition from NI 43-101 Guidelines.

*“A ‘Mineral Resource’ is a concentration or occurrence of natural, solid, inorganic, or fossilized organic material in or on the Earth’s crust in such form and quantity and of such grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.”*

The terms Measured, Indicate, and Inferred are defined in the NI 43-101 as follows.

*“A ‘Measured Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings, and drill holes that are spaced closely enough to confirm both geological and grade continuity.”*

*“An ‘Indicated Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings, and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.”*

*“An ‘Inferred Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geologic and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.”*

The Reno Creek ISR Project roll fronts display good geologic continuity, as demonstrated by drill hole results displayed on plan maps and cross sections. Thickness and grade continuity within the Project Units also is good; however, continuity vertically within roll fronts is more variable.

For the Reno Creek resource, the classification strategy was based on the following three criteria.

- 1) Distance between a grid cell node (center) and a drill hole location, as follows:
  - a) **Measured** – 0 feet to 50 feet between node and drill hole locations.
  - b) **Indicated** – 50 feet to 250 feet between node and drill hole locations.
  - c) **Inferred** – 250 feet to 500 feet between node and drill hole locations.



- 2) A GT cutoff of 0.30.
- 3) Whether the grid cell was within AUC's property boundary.

These criteria were selected because they are consistent with those commonly used at the other ISR projects in the area and their application reflects the current level of geologic certainty of the resource.

#### 14.5 MEASURED AND INDICATED RESOURCES

As noted in Section 14.2 of this report, the in-place resource was estimated separately for each roll front in each of the resource units. The roll front resources were summed for each unit. The results of the estimation of Measured and Indicated U<sub>3</sub>O<sub>8</sub> resource for the Reno Creek ISR Project are reported in Table 14.1. On a combined basis, they total 20.9 million tons grading 0.052% U<sub>3</sub>O<sub>8</sub> yielding 21.9 million pounds of U<sub>3</sub>O<sub>8</sub>.

<b>TABLE 14.1</b>				
<b>RENO CREEK ISR PROJECT – SUMMARY OF MEASURED AND INDICATED RESOURCES – IN-PLACE<sup>1</sup></b>				
<b>Class</b>	<b>Tons<sup>2</sup> (millions)</b>	<b>Thickness (feet)</b>	<b>Grade (%U<sub>3</sub>O<sub>8</sub>)</b>	<b>Pounds U<sub>3</sub>O<sub>8</sub><sup>2</sup> (millions)</b>
<b>North Reno Creek</b>				
Measured	2.69	18.9	0.055	2.96
Indicated	5.44	15.2	0.047	5.13
<b>Total</b>	<b>8.13</b>	<b>16.4</b>	<b>0.050</b>	<b>8.09</b>
<b>Southwest Reno Creek</b>				
Measured	2.86	17.5	0.058	3.32
Indicated	3.58	14.1	0.050	3.55
<b>Total</b>	<b>6.44</b>	<b>15.6</b>	<b>0.053</b>	<b>6.87</b>
<b>Moore</b>				
Measured	1.27	13.9	0.061	1.56
Indicated	3.21	11.5	0.046	2.97
<b>Total</b>	<b>4.48</b>	<b>12.2</b>	<b>0.051</b>	<b>4.53</b>
<b>Bing</b>				
Measured	0.20	19.3	0.052	0.21
Indicated	0.84	15.2	0.043	0.72
<b>Total</b>	<b>1.04</b>	<b>16.0</b>	<b>0.045</b>	<b>0.93</b>
<b>Pine Tree</b>				
Measured	0.15	10.8	0.105	0.32
Indicated	0.66	10.0	0.086	1.13
<b>Total</b>	<b>0.81</b>	<b>10.2</b>	<b>0.089</b>	<b>1.45</b>
<b>Reno Creek Project</b>				
Measured	7.18	17.3	0.058	8.38
Indicated	13.70	13.4	0.050	13.50

<b>Total</b>	<b>20.9</b>	<b>14.8</b>	<b>0.052</b>	<b>21.9</b>
<sup>1</sup> Cutoff $\geq 0.30$ grade $\times$ thickness per intercept				
<sup>2</sup> Columns may not add due to rounding				

Maps illustrating spatial distribution of the U<sub>3</sub>O<sub>8</sub> resource in the 5 Resource Units of the Reno Creek ISR Project are presented in Figure 7.5 to Figure 7.9. The Measured and Indicated resources for North Reno Creek and Southwest Reno Creek in this analysis are larger, and the Inferred resources are less than in the Snow NI 43-101 mineral resource reports, principally due to AUC's drilling of 807 additional holes in 2010, 2011, and 2012. Data from these holes defined new resources in previously undrilled areas, and extended resource trends between the North Reno Creek and Southwest Reno Creek Units.

The AUC estimates for the Moore, Bing, and Pine Tree Resource units contain compliant Measured, Indicated, and Inferred Resources. The new estimate incorporated hundreds of geophysical and lithologic logs, reports, and other data acquired by AUC since 2010. Previously, the estimates of resources for these units reported by Bayswater or others were non-compliant historical resources.

#### 14.6 INFERRED RESOURCE

The results of the estimation of Inferred U<sub>3</sub>O<sub>8</sub> resource in the Project are reported in Table 14.2 and total 1.56 million tons grading 0.050% U<sub>3</sub>O<sub>8</sub> yielding 1.55 million pounds of U<sub>3</sub>O<sub>8</sub>.

<b>TABLE 14.2</b>				
<b>RENO CREEK ISR PROJECT – SUMMARY OF INFERRED RESOURCES – IN-PLACE<sup>1</sup></b>				
<b>Class</b>	<b>Tons<sup>2</sup> (millions)</b>	<b>Thickness (feet)</b>	<b>Grade (%U<sub>3</sub>O<sub>8</sub>)</b>	<b>Pounds U<sub>3</sub>O<sub>8</sub><sup>2</sup> (millions)</b>
<b>North Reno Creek</b>				
Inferred	0.84	14.4	0.050	0.85
<b>Southwest Reno Creek</b>				
Inferred	0.41	11.0	0.040	0.32
<b>Moore</b>				
Inferred	0.25	7.9	0.062	0.31
<b>Bing</b>				
Inferred	0.02	12.2	0.050	0.02
<b>Pine Tree</b>				
Inferred	0.03	4.7	0.112	0.06
<b>Reno Creek Project</b>				
<b>Inferred Total</b>	<b>1.56</b>	<b>12.1</b>	<b>0.05</b>	<b>1.55</b>
<sup>1</sup> Cutoff $\geq 0.30$ grade $\times$ thickness per intercept				
<sup>2</sup> Columns may not add due to rounding				

#### 14.7 VERIFICATION OF ESTIMATE

The authors performed an audit of the database and a check estimate on several of the roll front databases in the North Reno Creek Unit. Comments about the database audit are presented in Section 12.0 of this report.

To check the estimation produced by AUC using the RockWorks® program, AUC's roll front digital data was imported to the Surfer® software and estimations were made using a triangulation-gridding method. This method included generating separate grids for thickness and grade, identifying the cells within the property boundary, and combining the grids to calculate a GT. Grid dimensions were 25-foot × 25-foot. The calculated GT was used to estimate pounds.

The pounds estimated by the authors using the Surfer® triangulation-gridding method were within ±5% of the results obtained by AUC. This variance is due to using slightly different origin coordinates for the Rockworks® and Surfer® grids, which results in slightly different values being calculated at grid node and triangle plate intersections. The variance is within an acceptable range.

It is the authors' opinion that the resources, as estimated by AUC, were done properly and result in an appropriate estimation of the quantities and grades. It is also the authors' opinion that the triangulation-gridding method used is an appropriate way to estimate quantities and grades for the irregular nature of the deposit.

#### 14.8 RESOURCE RISK

Resource estimation is based on data interpretation and extrapolation of limited sample volumes to very large volumes. Application of these tools can result in uncertainty or risk. Three elements of risk are identified for the Project.

- **Grade Interpretation Methods – Low to Moderate Risk.** Automated grade estimates depend on many factors and interpretation methods assume continuity between samples. A risk exists that a grade estimate at any three-dimensional location in a deposit will differ from the grade of mineralization mined.
- **Geological Definition – Low Risk.** The geological roll interpretation by the AUC geologists was checked. The host units are relatively flat lying, but there is a possibility of a misinterpretation of whether a split interval goes with one unit or another when multiple closely spaced intercepts are present.
- **Continuity – Low Risk.** The authors consider that AUC's work on the North Reno Creek and Southwest Reno Creek units confirms historical data generated by operators prior to AUC's entry into the Project and that methodologies employed and the resulting estimate of resources of the Project meet National Instrument 43-101 standards for current resources due to the following:
  - 1) Recent drilling by AUC at the Southwest Reno Creek Unit confirmed intercepts that uranium mineralization, reported by previous operators, is present at the locations shown on historical maps. AUC's confirmation was performed by drilling step-out holes (100 feet from old holes). Continuity was confirmed on a large scale by holes that joined 2 mineralized areas in Southwest Reno Creek over a mile apart. AUC drilling in this area (located in the west half of Section 31, T 43N, R73W), added approximately 2.0 million pounds of resources.

- 2) Roll fronts found in the Reno Creek ISR Project have a narrow, classic C-shape similar to other uranium deposits in the 80-mile long PRB trend consist of bands of narrow classic C-shaped roll fronts as found at the Reno Creek deposit.
- 3) The mineral forming process and the resulting deposits do not vary within the trend nor are they expected to vary within the Reno Creek ISR Project.
- 4) Except for roll fronts at the Pine Tree Unit, fronts occupy the same sandstone horizons and are confined by the same aquitards. Roll fronts at Pine Tree are in a sandstone that is stratigraphically higher than those in the other units.
- 5) The authors have reviewed maps (not available for publication) covering competitor's operations and positions in areas between AUC's units that indicate continuity of sandstone horizons between units.

#### 14.9 SUMMARY

The Project contains 21.9 million pounds of in-place  $U_3O_8$  Measured and Indicated resources in North Reno Creek, Southwest Reno Creek, Moore, Bing, and Pine Tree Units contained in up to 5 roll fronts. The average thickness of this resource is 14.8 feet, the average grade is 0.052%, and the average GT is 0.84. The Reno Creek ISR Project resource has a reasonable expectation of being viable and should be considered for future ISR development for the following reasons.

- 1) The estimated resource is significant in size.
- 2) The resource estimate is consistent with previous historical estimates for the property.
- 3) Geologic conditions are consistent with surrounding properties with planned ISR projects.
- 4) Host sandstones are:
  - a) bounded at top and bottom by aquitards
  - b) permeable and porous
  - c) below the water table
- 5) Previous operation of a pilot in situ well field on the site was successful.
- 6) The ground water in which the pilot well field was installed was successfully restored to pre-pilot plant conditions.
- 7) The ground surface area of the pilot test area was successfully reclaimed to pre-pilot plant conditions.

## **15.0 MINERAL RESERVE ESTIMATES**

Resources described in this document do not qualify as reserves.

## **16.0 MINING METHODS**

Extraction of uranium from the Reno Creek Project is expected to be via the ISR methodology described in Section 17.0.

## 17.0 RECOVERY METHODS

The extraction of uranium from fluvial and shoreline facies via ISR has been successful in Wyoming, Nebraska, and Texas in the United States and Kazakhstan. Recovery rates vary with host rock and lixiviant characteristics and a general guideline is to consider that recovery would equal about 70% of the in-place resources estimated based on surface drilling.

The ISR process, contemplated by AUC, is a phased, iterative approach, in which AUC will sequentially construct and operate a series of Production Units. Each Production Unit will include individual well fields equipped with a header house. AUC expects each header house will serve between 15 to 30 recovery wells and 25 to 50 injection wells (recovery and injection wells collectively referred to as production wells) depending upon the design of each well field.

The Reno Creek ISR chemical process, proposed for uranium recovery, incorporates both the oxidation and complexation of uranium. Gaseous oxygen, hydrogen peroxide, or other oxidant oxidizes the uranium, which is then complexed with bicarbonate in solution. The carbonate/bicarbonate production solution and oxidant are combined into a leaching solution or barren lixiviant. The lixiviant is injected into the mineralized sandstone formation, referred to as the PZA, through a series of injection wells that have been drilled, cased, cemented, and tested for mechanical integrity. Recovery wells pump the uranium-bearing solution or pregnant lixiviant from the PZA to the header house. The pregnant lixiviant will be transferred through a series of buried pipelines to a pressurized down flow ion exchange column circuit in the CPP.

AUC anticipates that injection/recovery well patterns will follow the conventional 5-spot pattern, consisting of a recovery well surrounded by 4 injection wells. However, depending upon the configuration of the mineralization, more or fewer injection wells may be associated with each recovery well. In order to recover uranium effectively, and to complete groundwater restoration, all production wells will be completed so that they can be used as either injection or recovery wells. The dimensions of the patterns will vary depending on the configuration of the mineralized zone, uranium grade, and accessibility, but the injection wells typically will be between 75 feet to 125 feet apart.

Monitor wells will be placed in each Production Unit and will include both interior and exterior wells. Interior monitor wells will be located within the well field boundaries and will be screened, as necessary. Each Production Unit will also be surrounded by an exterior Monitor Well Ring to monitor for the potential horizontal movement of lixiviant beyond the extent of the well fields.

Within the CPP, the process uses the following steps to process uranium from the recovered solutions:

- Loading of uranium complexes onto ion exchange resin.
- Elution (removal) of the uranium complexes from the ion exchange resin.
- Precipitation of uranium from the eluate.
- Drying and packaging of the uranium.
- Reconstitution of the barren lixiviant by the addition of carbon dioxide and/or carbonate/bicarbonate and oxidant, which is recycled back to the Production Units for continuing operations.

During ISR operations, a slightly greater volume of water will be recovered from the PZA than is injected, to create an inward flow gradient into the Production Units. The difference between the amount

of water recovered and injected is the well field “bleed.” The bleed rate will be adjusted, as necessary, to ensure that an inward flow gradient is maintained.

The ISR process selectively removes uranium from the deposit. No tailings are generated by the process; thus, eliminating a major concern associated with conventional uranium mining and milling. When installing an ISR Production Unit, only limited surface disturbance occurs. During the operating life of the Production Unit, vegetation is re-established over the Production Units and pipeline corridors to prevent erosion and buildup of undesirable weeds.

AUC is confident that the ISR process can be successfully employed at the Reno Creek ISR Project since it has been demonstrated through a successful site-specific pilot test conducted by RME at Reno Creek, as discussed in Section 6.3 of this report. The pilot test program along with bench-scale bottle roll and column leach studies (Section 13.0) have demonstrated both the technical feasibility of mobilizing and recovering uranium with a carbonate lixiviant.



## **18.0 PROJECT INFRASTRUCTURE**

Because of energy development in the Project area, over the past 50 years, all properties under AUC's control have existing or nearby access to electrical power, gas, telephone, and internet connectivity. AUC has secured leases and surface use and access agreements within the proposed mining permit area to enable construction of all operational facilities. Working with local ranchers, AUC has developed several arrangements to appropriate both surface and groundwater for the exploration and environmental baseline sampling uses within the proposed mine permit boundary. AUC has obtained rights to a CPP site that is currently equipped with buildings, power, telephone, and well water. The site is well located within the Southwest Reno Creek Resource Unit near the intersection of Wyoming Highway 387 and the Clarkelen County Road.

## **19.0 MARKET STUDIES AND CONTRACTS**

AUC has not performed a market study for the proposed Reno Creek production and has no contracts for delivery of uranium from the Project at this stage.

## **20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT**

The North Reno Creek Unit and Southwest Reno Creek Unit are currently being permitted for mining by in situ recovery (ISR) methods, and will include 12 ISR Production Units and a CPP. The proposed permit boundary encompasses the production units and CPP. An application for a Source Material License from the NRC was submitted on October 5, 2012.

AUC and former owners of the Reno Creek ISR Project conducted environmental investigations and permitting actions in preparation for proposed ISR mining within the current AUC proposed mine permit area. Wildlife Survey results conducted by AUC show that there will be no impact to sage grouse as no known sage-grouse leks occur within Project area and the nearest sage grouse Core Area is over 20 miles from the Project. No burrowing owls, black-tailed prairie dogs, mountain plovers, swift fox or any threatened or endangered (T&E) vertebrate species were observed during the 2008 or 2010 surveys. The vegetation survey for T&E habitat and species showed no blowout penstemon and no Ute ladies-tresses' present. The Wetlands Survey results show all of the Project area wetlands are recommended to the United States Army Corps of Engineers (USACE) to be non-jurisdictional due to the isolated nature of the wetland present, absence of a consistent ordinary high water mark, and the lack of interstate commerce. Cultural Resource and Archaeological Surveys showed the Project will have no adverse impact on cultural and historical resources.

AUC's environmental baseline sample locations and the current proposed mining permit boundary are tabulated in Figure 20.1. Locations of AUC's hydrogeologic investigation pump tests and other associated groundwater monitoring wells are depicted on Figure 20.2.

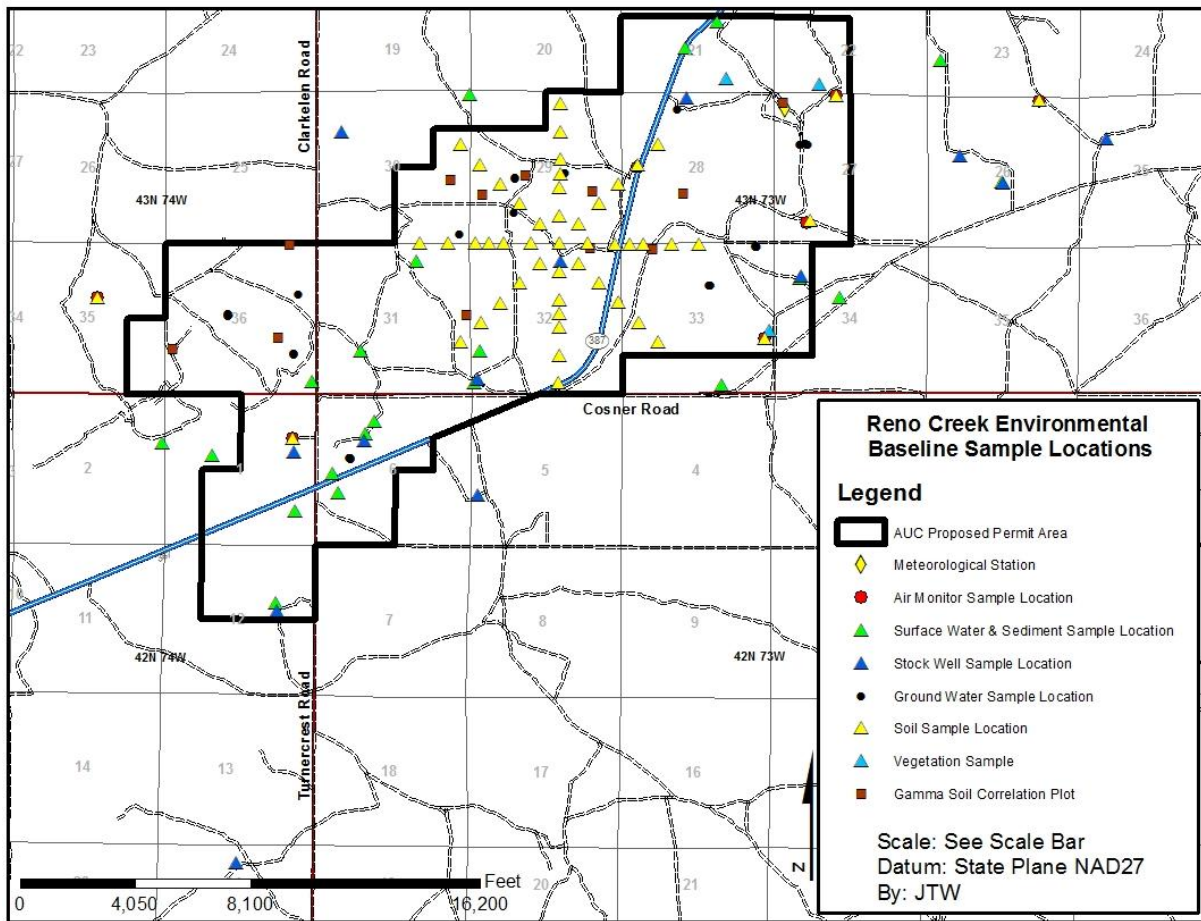
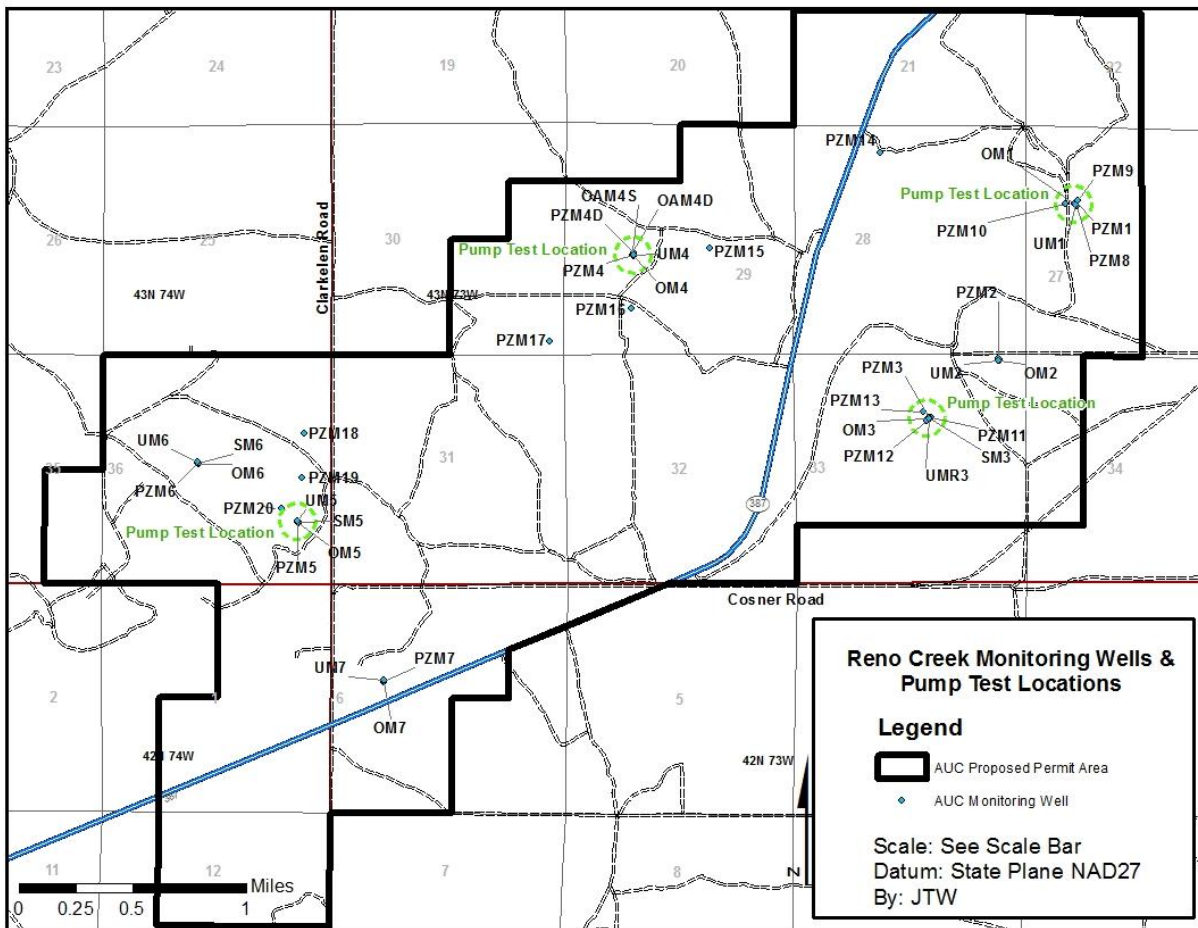


Figure 20.1. Environmental baseline sample locations



**Figure 20.2. Monitoring wells and pump test locations**

Based on the results of an extensive environmental assessment and baseline evaluation and sampling effort, AUC is not aware of any pre-existing environmental impacts or liabilities at the Reno Creek ISR Project. Previous surface and subsurface exploration and production activities have occurred on the subject properties involving exploration drilling for uranium, exploration for and production of oil and gas, and production of CBM gas. AUC acknowledges responsibility related to its current and ongoing drilling program, which is being conducted in accordance with rules and regulations outlined by WDEQ.

## 20.1 ENVIRONMENTAL PERMITTING

AUC’s environmental baseline sampling and assessment impact evaluation results for the North Reno Creek and Southwest Reno Creek mining permit area are discussed below.

### 20.1.1 Hydrology

Substantial hydrologic testing including 4 pump tests at multi-well, nested clusters was conducted by AUC in 2010 and 2011 at North Reno Creek and Southwest Reno Creek (Petrotek, 2012). Pumping was conducted from the PZA, which hosts uranium deposits within the proposed mining permit area. Observation wells completed in the PZA were also installed at each pump test cluster to confirm hydraulic communication exists across the entire PZA. All of the uranium mineralization included in the

resource estimates lies at least 20 feet below the water table, and in areas where groundwater is under both fully saturated and partially saturated aquifer conditions.

The PZA is geologically confined over the entire Project area. Pump testing identified no communication between the PZA and any overlying aquifer, surficial water bearing units, or underlying units. The hydrologic testing results within the PZA show excellent characteristics for mineability, hydraulic manageability, and restoration.

AUC has determined that essentially all significant mineralization and resources at North Reno Creek lie either in fully saturated areas or are deep enough below the water table to be fully accessible using ISR methods. Resources are present in areas where the PZA is under both fully saturated and partially saturated aquifer conditions, the boundary line being approximately at Wyoming Highway 387. The area of North Reno Creek, east of the highway where partially saturated conditions exist, contains a minor portion of the total resources at the Project. RME's pilot well field Pattern #2 was operated successfully in this area, indicating favorable groundwater conditions for ISR production.

#### **20.1.2 Land Use**

The land use evaluation results show that the proposed ISR activities will have no lasting overall impacts or any significant alteration or restrictions to neighboring of rangeland following completion of mining.

#### **20.1.3 Transportation**

Transportation evaluation results show no impacts from the proposed ISR activities, aside from small increases in the traffic volume and increase in vehicular emissions, there will be minimal degradation of local air quality.

#### **20.1.4 Geology and Soils**

There would be small impact to soils primarily from construction earthmoving activities associated with the construction and decommissioning phases of the proposed action. However, there will be no significant outlying impacts for the duration of the ISR operation.

#### **20.1.5 Water Resources**

Given the ephemeral nature of local drainages and the small area to be affected, the potential impact on surface water during construction and decommissioning would primarily be limited to uncommon precipitation or runoff events. Therefore, there would be no significant impact from the proposed ISR activities.

For groundwater impacts related to mining and restoration, both the State of Wyoming and NRC require approved restoration efforts to address any potential affected groundwater. Substantial groundwater modeling results also show that groundwater quality can be restored, thus ensuring adjacent aquifers will not be affected.

#### **20.1.6 Ecological Resources**

During any of the ISR operational phases, there will be limited and managed impacts due to Project-related traffic or habitat removal actions from the removal of topsoil. Any habitat disruption is not

anticipated to result in large transformation of the existing habitat. Neither sage grouse nor other threatened or endangered species are present within the proposed mining permit area.

#### **20.1.7 Air Quality/Meteorology**

During the construction and decommissioning phase earthmoving activities, there would be a highly localized and temporary, short-term effects on air quality, primarily and from vehicle emissions and fugitive dust. Use of mitigative measures, such as applying water for dust suppression, would limit fugitive dust emissions. There are no anticipated long-term air quality impacts from the proposed action.

#### **20.1.8 Archaeology, Historic, and Cultural**

The archaeological, historical, and cultural evaluation results show there are no historic or cultural resources eligible for listing on the National Register of Historic Places.

#### **20.1.9 Visual and Scenic**

There is the potential for small visual and scenic impact in the area surrounding the proposed project from existing well fields, pipelines, and utility lines associated with ISR mining and CBM and oil and gas development. There would be a small short-term impact to the visual landscape from the proposed ISR operation.

#### **20.1.10 Socio-economic**

The socio-economic impact is anticipated to be small, primarily positive, as a result of the employment of up to 65 people at the facility.

#### **20.1.11 Public and Occupational Health and Safety**

AUC conducted baseline radiological environmental monitoring for radon in the air and for uranium and radium concentrations in soils. The baseline data results were used to evaluate and model radiological exposure from potential localized fugitive dust emissions during construction and decommissioning actions. These modeling results showed that a radiation dose for the public was comparable to natural background exposure; therefore, there would be a very small impact from any public radiological exposure, primarily due to the facility's remote location and on-site security.

#### **20.1.12 Waste Management**

Waste generation and disposal from activities implemented during all phases of the proposed Project, under the proposed action, would likely result in small impacts during ISR operations. Permitted facilities are available to accept the wastes streams and properly handle and dispose of all waste types. On-site injection wells are also being considered for the ISR operation.

### **20.2 PERMITS REQUIRED**

Specific permits will be acquired to conduct the work proposed for the property. Table 20.1 summarizes the list of permits and licenses needed for the Reno Creek Project.

**TABLE 20.1**  
**SUMMARY OF PROPOSED, PENDING, AND APPROVED PERMITS FOR THE**  
**PROPOSED RENO CREEK ISR PROJECT**

<b>Regulatory Agency</b>	<b>Permit or License</b>	<b>Status</b>
<i>Federal</i>		
U.S. Nuclear Regulatory Commission (NRC)	Source Materials License (10 CFR 40)	Application was submitted on October 5, 2012. Includes license application, an Environmental Report, and a Technical Report
U.S. Army Corps of Engineers	Determination of Jurisdictional Wetland	Wetland delineation has been completed and forwarded to ACOE in April 2012
U.S. Environmental Protection Agency (EPA)	Aquifer Exemption (40 CFR 144, 146)	Aquifer reclassification information to be submitted to EPA after preparation by WDEQ-WQD
<i>State</i>		
Wyoming Department of Environmental Quality/Air Quality Department	Air Quality Permit	Application approved prior to start of construction – 3 <sup>rd</sup> quarter 2013
WDEQ/Water Quality Division (WQD)	Groundwater Reclassification (WDEQ Title 35-11)	Aquifer reclassification application to be reviewed and classified by WDEQ-WQD – 2 <sup>nd</sup> quarter 2013
	Underground Injection Control Permit (Deep Disposal Well) (WDEQ Title 35-11)	Class I UIC Permit application under review by the WDEQ-WQD. Expect approval by 4 <sup>th</sup> quarter 2012
WDEQ/Land Quality Division (LQD)	Underground Injection Control Class III Permit (Permit to Mine) (WDEQ Title 35-11)	Class III UIC (Permit to Mine) Permit application to be submitted December 2012
	Mineral Exploration Permit (WDEQ Title 35-11)	Approved Mineral Exploration Permit DN #401 is currently in place for the exploration actions of Reno Creek Project areas.
	Industrial Storm Water NPDES Permit (WDEQ Title 35-11)	An Industrial Storm Water NPDES will be required for the Central Processing Plant Area – 4 <sup>th</sup> quarter 2013
	Construction Storm Water NPDES Permit (WDEQ Title 35-11)	Construction Storm Water NPDES authorizations are applied for and issued annually under a general permit based on projected construction activities. The Notice of Intent will be filed at least 30 days before construction activities begin in accordance with WDEQ requirements – 3 <sup>rd</sup> quarter 2013
	Underground Injection Control Class V (WDEQ Title 35-11)	The Class V UIC permit will be applied for following installation of an approved site septic system during facility construction. 3 <sup>rd</sup> quarter 2013



### **20.3 EXPLORATION**

Recent exploration drilling has been conducted at the Reno Creek Property by AUC to better define mineralization within specified areas of interest. AUC has a Notification to Drill permit from the State of WDEQ Land Quality Division (LQD) for all exploration drilling.

### **20.4 PRODUCTION**

AUC and former owners of the Reno Creek ISR Project conducted environmental investigations and permitting actions in preparation for proposed ISR mining within the current AUC proposed mine permit area. Wildlife Survey results conducted by AUC show that there will be no impact to sage grouse as no known sage-grouse leks occur within Project area and the nearest sage grouse Core Area is over 20 miles from the Project. No burrowing owls, black-tailed prairie dogs, mountain plovers, swift fox or any threatened or endangered (T&E) vertebrate species were observed during the 2008 or 2010 surveys. The vegetation survey for T&E habitat and species showed no blowout penstemon and no Ute ladies-tresses' present. The Wetlands Survey results show all of the Project area wetlands are recommended to the United States Army Corps of Engineers (USACE) to be non-jurisdictional due to the isolated nature of the wetland present, absence of a consistent ordinary high water mark, and the lack of interstate commerce. Cultural Resource and Archaeological Surveys showed the Project will have no adverse impact on cultural and historical resources.

The applications include identification of a CPP and associated Production Units to be located within the Reno Creek Property boundary. The NRC has the responsibility to issue Source Material Licenses to "receive title to, receive, possess, use, transfer, or deliver any source material after removal from its place of deposit in nature" (Code of Federal Regulations (CFR) 40.1 and 40.3). The NRC is responsible for the oversight and implementation of the NEPA regulations. Pursuant to 10 CFR 51.20, all licenses for new uranium mills (including ISR facilities) will be required to submit a license application that will include an environmental report and a technical report. The 10 CFR 51.20 further requires that an EIS be conducted for new uranium mills (including ISR facilities).

NRC has issued an independent Generic Environmental Impact Statement (GEIS) for new uranium ISR operations to help meet this requirement. An additional site-specific environmental impact statement (SEIS) will be tiered off the GEIS. Environmental baseline information (hydrology, vegetation, wildlife, etc.) at the Reno Creek Property will be developed in order to complete the WDEQ LQD Permit to Mine. The WDEQ has primacy from the EPA to prepare and administer permits allowing injection or pumping operations for underground injection control programs in Wyoming, allowed under authority of the Safe Water Drinking Act.

### **20.5 CLOSURE**

After recovery of uranium in each Production Unit has been completed, AUC will begin aquifer restoration, as soon as practical. Following regulatory approval of successful restoration activities, all injection, recovery, and monitor wells will be abandoned in accordance with WDEQ-LQD Rules and Regulations. Simultaneous with well abandonment operations, Production Unit infrastructure, such as trunk lines, feeder pipelines, header houses, etc., will be removed, tested for radiological contamination, and transported to appropriate disposal facilities.

Following regulatory approval of aquifer restoration of the last Production Unit, the CPP, processing equipment, office, laboratory, and maintenance buildings will be demolished, tested for radiological

properties, segregated, and either scrapped or disposed of in appropriate disposal facilities, based on their radiological properties.

Following the removal of wellfield and plant infrastructure, site roads will be removed and the site will be re-graded to approximate pre-development contours and the stockpiled topsoil placed over disturbed areas. The disturbed areas will then be seeded. Once reclamation is complete and regulatory closure achieved, the site will be approved for unrestricted use.

AUC will provide information on financial assurance related to site operations, groundwater restoration, surface reclamation, and decommissioning of surface facilities in a Reclamation Action Plan (RAP) to the NRC and WDEQ. The RAP will provide detailed plans for restoration and site decommissioning, including financial assurance cost estimates. The RAP also will provide a methodology for annually updating financial assurance cost estimates, as required by the regulatory agencies, both to keep the estimates current and to reflect changes in AUC's operations.

## **21.0 CAPITAL AND OPERATING COSTS**

A report titled “Preliminary Feasibility Study (PFS), Reno Creek Uranium In Situ Recovery Project, Northeast Wyoming, USA” by Douglass H. Graves, P.E. and Matthew J. Yovich, P.E., of TREC, Inc. dated September 28, 2009 was prepared for NCA Nuclear, Inc. (the U.S. subsidiary of Bayswater Uranium Corporation) covering portions of North Reno Creek and Southwest Reno Creek Units, partly based on earlier reports prepared for Strathmore. The report is not the basis for the estimates of resources or other content used in this document because additional work has since been done by AUC. Therefore, the authors mention TREC’s 2009 PFS as a historical notation.

AUC has commissioned an independent third party contractor to prepare a new PFS covering the areas of all five resource units, incorporating the resource estimate contained herein, and on such, independent contractor’s first principles calculation of capital costs, operating costs, reclamation costs, etc. required to assess economic potential. Such a report is expected to be completed within the next few months.

## **22.0 ECONOMIC ANALYSIS**

AUC has commissioned an independent third party contractor to prepare a PFS covering the five resource units, incorporating the resource estimate contained herein, and on such, independent contractor's first principles calculation of capital, operating, and reclamation costs and other parameters required to assess economic potential. Such a report is expected to be completed within the next few months.

### 23.0 ADJACENT PROPERTIES

Table 23.1 summarizes published project holdings of various uranium companies within 2 miles of the Reno Creek Project. Figure 1.1 and Figure 7.1 show the locations of selected properties within the Pumpkin Buttes Mining District.

<b>TABLE 23.1 ADJACENT PROPERTIES<sup>1</sup></b>				
<b>Project</b>	<b>Ownership</b>	<b>Township</b>	<b>Range</b>	<b>Approximate Acreage</b>
Reno Creek	Uranerz	T43/42N	R73/74W	1,300
Moore Ranch	Uranium One	T41/42N	R74/75W	3,214
Ruby	Cameco	T43N	R74W	Not Available

<sup>1</sup>TREC, Inc., October 13, 2010, "Technical Report Reno Creek Property, Campbell County, Wyoming," by Douglass Graves, P.E., for Uranerz Energy Corporation

The estimates of in-place tonnage and grade presented in Table 23.2 are based on TREC, Inc.'s October 13, 2010, "Technical Report Reno Creek Property, Campbell County, Wyoming," by Douglass Graves, P.E. for Uranerz Energy Corporation.

<b>TABLE 23.2 ADJACENT PROPERTY ESTIMATES OF IN-PLACE TONNAGE AND GRADE</b>			
<b>Project</b>	<b>Source</b>	<b>Tons</b>	<b>Average Grade % eU<sub>3</sub>O<sub>8</sub></b>
Uranerz Reno Creek	TREC, 2010	3,831,477	0.056
Uranium One Moore Ranch	BRS, 2006	2,950,306	0.100

The authors have not verified the information and data for the adjacent properties.

## **24.0 OTHER RELEVANT DATA AND INFORMATION**

### **24.1 PRE-FEASIBILITY STUDY**

AUC plans to have a NI 43-101 compliant PFS completed later in 2012 using the results of resource estimates included in this Technical Report. The PFS will incorporate the timely development of all of the Reno Creek Units, beginning with North Reno Creek and Southwest Reno Creek followed by Moore, Bing, and Pine Tree. The PFS will include a targeted maximum production rate of 1.5 million pounds of  $U_3O_8$  per year from a CPP located on the Project.

## **25.0 INTERPRETATION AND CONCLUSIONS**

The authors conclude the Measured and Indicated resources of 21.9 million pounds of U<sub>3</sub>O<sub>8</sub> for the Reno Creek ISR Project are compliant with Canadian NI 43-101 guidelines.

The authors conclude there is limited risk that the estimate of quantity, quality, and physical characteristics of the resources of the Project will be affected by future investigation.

## 26.0 RECOMMENDATIONS

The authors recommend that AUC proceed with their proposed program described below and the completion of a PFS currently underway.

- A 100-hole program recommended in the Moore Unit resource area before year-end 2012 (this work is currently underway). The purpose of the drilling will be to bolster AUC's knowledge of lithologic conditions in the area, including the verification of projected oxidation/reduction boundaries. Coring at 3 locations is recommended to assess permeability and porosity, rock density, and disequilibrium conditions. Approximate cost: US\$450,000 plus overhead expense, assays, and reclamation of drill sites.
- Core and rotary drilling at the North Reno Creek Unit planned for completion by the end of 2013. Approximately 4 core holes will be completed to further assess permeability and porosity, rock density, disequilibrium, and metallurgical recovery conditions. Approximately 100 rotary holes are also planned to expand resources and further delineate roll front trends. Approximate cost: US\$400,000 plus overhead expense, assays, and reclamation of drill sites.
- Drilling programs at the Bing and Pine Tree Resource Units planned but not scheduled at this time.
- Incorporate the Measured and Indicated Resources estimates, stated in this report, in a PFS to evaluate the economics of development of the Reno Creek ISR Project.



## 27.0 REFERENCES

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**DATE AND SIGNATURE**

The undersigned qualified persons prepared, titled “Technical Report on Resources of the Reno Creek ISR Project, Campbell County, Wyoming, USA,” dated November 30, 2012.



Betty L. Gibbs  
MMSA, 0164QP

November 30, 2012



Robert D. Maxwell  
AIPG #10913

November 30, 2012

## CERTIFICATE OF QUALIFICATIONS

**Betty L. Gibbs**

I, Betty L. Gibbs do hereby certify that:

- 1) I am a Senior Associate of Behre Dolbear & Company (USA), Inc. with a business address of 999 Eighteenth Street, Suite 1500, Denver, Colorado 80202 U.S.A.
- 2) I am a graduate of Colorado School of Mines with an Engineer of Mines degree in 1969, and a Master of Science degree in 1972.
- 3) I am registered as a Qualified Person with the Mining and Metallurgical Society of America (MMSA).
- 4) I have worked as a mining engineer and ore reserves specialist. My relevant experience for the purpose of the Technical Report is:  
Project Manager for resource evaluation for possible acquisitions or joint ventures of:
  - COMINAK uranium mine in Niger, Africa for confidential client (for debt placement).
  - American Gilsonite Mine operations purchase due diligence, for confidential client
  - Principal Investigator for database development, resource evaluation, mine planning, technical systems evaluation, and software management:
    - American Colloid Corporate technical data management systems evaluation,
    - Rio Algom, data capture and preliminary evaluations for several uranium projects,
    - Conquista uranium project for Conoco Minerals,
    - Gulf Minerals, ore reserves and mine planning on coal and uranium projects, and
    - Climax Molybdenum, mine engineering and planning for open pit and underground molybdenum operation.
- 5) I have read the definition of “qualified person” as set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
- 6) I am responsible for the preparation of Sections 12.0 (Data Verification) and 14.0 (Mineral Resource Estimates) of the “Technical Report on Resources of the Reno Creek ISR Project, Campbell County, Wyoming USA for the Reno Creek Project” dated November 30, 2012.
- 7) I have had no prior involvement with the property that is the subject of the Technical Report.
- 8) As of the date of this report, to the best of my knowledge, information, and belief, my contribution to the Technical Report contains all scientific and technical information that is required to be disclosed to make the report not misleading.
- 9) I am independent of AUC LLC as set out in Section 1.4 of National Instrument 43-101.
- 10) I have read National Instrument 43-101F1, and the Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.
- 11) I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

Dated: November 30, 2012

“Signed and Sealed”

A handwritten signature in black ink that reads "Betty L. Gibbs". The signature is written in a cursive style with a large initial 'B' and a distinct 'L'.

Betty L. Gibbs, MMSA QP #1164

**CERTIFICATE OF QUALIFICATIONS**  
**Robert D. Maxwell**

I, Robert D. Maxwell do hereby certify that:

1. I am a Senior Associate of Behre Dolbear & Company (USA), Inc. 999 Eighteenth Street, Suite 1500, Denver, Colorado 80202.
2. I am a graduate of Texas Western College with a Bachelor of Science in the Sciences, 1964 and the University of Colorado at Denver with a Master of Business Administration, 1991.
3. I am certified as Profession Geologist #10903 by the American Institute of Professional Geologists.
4. I have worked as a geologist and a mineral property evaluator. My relevant experience for the purpose of the Technical Report is:
  - Project Manager for resource evaluation for possible acquisitions or joint ventures of:
    - Akdala and South Inkai Kazakhstan uranium deposits for a confidential client
    - BHP Billiton Ambrosia Lake uranium holdings
    - Strathmore Ambrosia Lake uranium holding for a confidential client
    - Uranium Resources, Inc Grants mineral belt uranium holdings
  - Principal Investigator for resource evaluation for possible acquisitions or joint ventures of:
    - Homestake Mining Company Ambrosia Lake uranium holdings for Conoco
    - Bokum Corp. New Mexico uranium holdings for Conoco
    - Susquehanna Western Inc. south Texas uranium holdings for Conoco
    - Florence Arizona copper deposit for Conoco
    - Pathfinder Mines Wyoming uranium holdings for Cogema
    - Milwaukee Railroad northwestern USA minerals for ITT Rayonier
    - Kemmerer Coal Wyoming coal for Marathon Oil Company
5. I have read the definition of “qualified person” as set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
6. I am responsible for the preparation of all Sections except Section 14.0 of the “Technical Report on Resources of the Reno Creek ISR Project, Campbell County, Wyoming USA” dated November 30, 2012.
7. I visited the site June 19, and July 27, 2012.
8. I have had prior involvement with portions of the property that is the subject of the Technical Report as a principal investigator for Rio Algom Mining Corporation’s due diligence prior to acquiring portions of the Project in the late 1990s.
9. To the best of my knowledge, information, and belief, my section of Technical Report contains all scientific and technical information that is required to be disclosed to make the report not misleading.
10. I am independent of AUC LLC as set out in Section 1.4 of National Instrument 43-101.
11. I have read National Instrument 43-101F1, and the Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.
12. I consent to the filing of this Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

Dated: November 30, 2012

“Signed and sealed”



Robert D. Maxwell  
AIPG # 10903