

CLARKSON HILL URANIUM PROJECT  
MINERAL RESOURCE NI 43-101 TECHNICAL  
REPORT  
NATRONA COUNTY, WYOMING, USA



PREPARED FOR:  
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Effective date July 27, 2017

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## 1.0 SUMMARY

This Technical Report titled “CLARKSON HILL URANIUM PROJECT, MINERAL RESOURCE, NI 43-101 Technical Report, NATRONA COUNTY, WYOMING, USA” was prepared in accordance with National Instrument 43-101, Standards of Disclosure for Mineral Projects (NI 43-101) and the mineral resource estimates were prepared using the definitions in the Canadian Institute of Mining, Metallurgy, and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM Definition Standards). The effective date for mineral resources and of the Technical Report, is July 27, 2017.

This Report was prepared for Anfield by Douglas Beahm, PE, PG, Principal Engineer, BRS Engineering to support a current Mineral Resource estimate Clarkson Hill Uranium Project (Clarkson Hill or Project).

Currently available drill data consists of radiometric equivalent data (eU3O8) for 255 drill holes; 250 pre-2008 and 5 completed in 2008. No additional recent drilling is known. Of the total 238 drill holes 17 were cored. All original drill data including geophysical logs, lithological logs, and chemical assay certificates are available for the Project.

The Clarkson Hill Project is located in Natrona County, Wyoming, about 20 air miles southwest of Casper, WY. The property is located on portions of sections 7, 17, and 18 of T31N R82W at approximate latitude 42° 39' North and longitude 106° 41' West (refer to Figure 4.1 Location Map).

Land Ownership consists of Federal lands administered by the United States Bureau of Land Management (BLM), State lands, and private lands. The Mineral Ownership Map, Figure 4.2, represents the approximate location of unpatented mining lode claims held by Anfield. The 25 mining claims are unpatented mining lode claims comprise some 500 acres and are located on federal lands. The claims located and controlled by Anfield are referred to as CKH claims 1 through 3, 6 through 17, and 18 through 27. The claims have production royalties of 0.5% to 3.0%.

The initial discovery of mineralization at the Clarkson Hill Claims was made in the 1950s and “small amounts of ore were mined and shipped for treatment from the old pit area located in Section 17, T31N, R82W” (Ljung et al, March 1974). However, USGS and USBM databases list the Clarkson Hill Claims as a surface mine prospect with no reported production. Surface disturbance is limited and there is no known infrastructure, tailings, or mine waste is apparent at the site. Drill data utilized in the estimation of mineral resources at the Clarkson Hill Claims in the Technical Report reflect a deeper horizon and is not affected by the presence of “old pit”.

Uranium mineralization at the Clarkson Hill is typical of the Wyoming roll-front sandstone deposits (Figure 8.1) as described by Ganger and Warren (1979) and Rackley and others (1972). Geological reports from the previous operator, Mineral Exploration Company state that the majority of the mineralization at depth is within the underlying Fort Union Formation (Ljung, et al, March, 1974). The estimated mineral resources reflect only mineralization in the lower portion of the Fort Union Formation.

Metallurgical testing of core samples from Clarkson Hill was completed by Hazen Research Inc. (Hazen, 1977). Their report was based on the development of an acid leach conventional uranium processing facility. The evaluation was based on a 60 pound composite sample from four core holes with an average grade of 0.077% U<sub>3</sub>O<sub>8</sub>. Nine separate leach test were completed with acid concentrations ranging from 20.6 to 70.4 with an average of 33 pounds per ton H<sub>2</sub>SO<sub>4</sub> (sulfuric acid). Uranium extraction ranged from 93.5 to 96.1 %. These metallurgical studies demonstrate that the uranium mineralization at Clarkson Hill is recoverable by conventional acid leach methods but are considered preliminary in nature. Additional metallurgical testing is recommended.

The great majority of the data available for estimation of mineral resources is radiometric geophysical logging data from which the uranium content is interpreted. A disequilibrium factor (DEF), (Radiometric eU<sub>3</sub>O<sub>8</sub> to Chemical U<sub>3</sub>O<sub>8</sub>) is assumed to be 1, i.e. equilibrium is assumed. For the Clarkson Hill Uranium Project data is available for the evaluation of radiometric equilibrium. Available chemical data includes 17 core holes, however, only 13 were mineralized. The calculated DEF ranges from 0.96 to 1.06 depending on uranium grade with the lower factor observed for grade less than 0.05 %eU<sub>3</sub>O<sub>8</sub>. Thus, an assumption of radiometric equilibrium (DEF = 1) is reasonable with respect to mineral resources.

The pre-2008 drill data for the drill holes used in the estimate includes original hard copies of geophysical logs which are in possession of Anfield and are well preserved. The drill data has been reviewed and verified by the author. The post-2008 drill data is complete and includes both electronic and hard copies of the original data. Drill hole database entries have been spot checked.

Interpretation of the geophysical logs (pre and post 2008) followed industry standard methods. The interpretations of the pre-2008 geophysical logs are generally conservative based on the comparison to the logs re-interpreted by the author. Data verification is discussed in Section 12

## **1.1 Mineral Resources**

The mineral resource estimates are based on radiometric equivalent uranium grades %eU<sub>3</sub>O<sub>8</sub>. A minimum grade cut-off of 0.02 % eU<sub>3</sub>O<sub>8</sub>, minimum thickness of 2 feet, and minimum GT of 0.20 were used in the estimations along with a bulk dry density of 16 cubic feet per ton, as previously discussed. Mineral resources were estimated using the GT contour method which is considered appropriate for this type of deposit. The GT contour model Figure 14.1, provides a graphical

representation of the mineralization reflecting the location, quality, represented by GT, and continuity of the mineralization.

The mineral resource estimate reflects mineralization within the Fort Union Formation. Uranium mineralization is also found in the overlying Wind River Formation and was explored and reported to have been mined in limited quantities in shallow excavations (Ljung et al, March 1974). No estimate of mineral resources within the Wind River Formation was made due to limited data.

Based on the depths of mineralization (100 to 400 feet), average grade, thickness and GT, and continuity of the mineralization Clarkson Hill has reasonable prospects for eventual economic extraction, however, the current mineral resource will not support extensive capital expenditures and would need to be developed in association with, or as a tributary project to, a Central Processing Plant (CPP).

The deposit is closely drilled, approximately fifty to one hundred foot centers. The drilling demonstrates continuity particularly along the mineralized trends. Based on the drill density and the apparent continuity of the deposit along trend the mineral resource estimate would meet the criteria as an Indicated Mineral Resource. However, due to the lack of current drilling to verify the pre-2008 drill data the Author has classified the estimate as Inferred Mineral Resources under the CIM Standards on Mineral Resources and Reserves. Mineral resources are reported based on minimum grade cutoffs of 0.02 weight %  $eU_3O_8$  and at GT cutoffs of 0.10, .015, 0.20 and 0.50.

For reporting purposes the 0.20 cutoff is recommended and is thus highlighted in the mineral resource tabulations that follow. The author expects the majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with additional drilling. Mineral resources are not mineral reserves and do not have demonstrated economic viability, however, based on the depth, grade, and geological continuity in comparison to mine operations in similar host formations there is a reasonable prospect for eventual economic extraction.

Table 1.1 Inferred Mineral Resource Estimates

GT CUTOFF	TONS	GRADE %eU <sub>3</sub> O <sub>8</sub>	POUNDS eU <sub>3</sub> O <sub>8</sub>
0.10	1,170,000	0.053	1,230,000
0.15	1,056,000	0.056	1,175,000
0.20*	957,000	0.058	1,113,000
0.50	329,000	0.088	578,000

\*Recommended cutoff

## 1.2 Conclusions and Recommendations

Overall it is recommended that future resource estimations consider alternative mine extraction assumptions and mineral recovery methodologies including conventional open pit mining with heap leach or conventional mill recovery and/or In Situ Recovery (ISR). The depth, local geologic and hydrologic conditions, and local variations in the character of mineralization, will influence the ultimate selection of mining method. Leach solutions from heap leach and/or ISR would require a similar central processing facility for final product production.

The recommended Phase 1 non-contingent program with total estimated expenditures of \$500,000 (US dollars) includes:

1. Confirm by drilling the potential mineralized trends within the horizons and at the locations indicated by historical data. Estimated 50 drill holes at average depth of 500 feet or 25,000 feet of drilling at an estimated cost of \$250,000.
2. Confirm previous radiometric equilibrium evaluations by completing core holes and comparing chemical assays with radiometric data within the horizons and at the locations indicated by historical data. Estimated 10 core holes at a cost of \$10,000 each for a total estimated cost of \$100,000.
3. Confirm and expand previous metallurgical studies and investigations including the collection of additional core samples for testing utilizing an alkaline lixiviant. Estimated cost \$100,000.
4. Complete hydrological investigations and studies including determination of aquifer properties and current ground water levels and quality. Construction and testing of two monitor wells; estimated cost \$25,000 each for a total estimated cost of \$50,000.

Upon completion of Phase 1, Phase 2 recommendations include:

1. Complete a mineral reserve and economic feasibility study including preparation of an NI 43-101 compliant mineral reserve report.
2. Evaluate the potential for developing the Clarkson Hill Claims as a satellite operation feeding existing mineral processing facilities and/or consolidating the Clarkson Hill Claims with other properties to support the capital investment of a new central processing facility.

### **1.3 Summary of Risks**

The Clarkson Hill Project is located in an area for which the geology, nature of mineralization, and host formation (Fort Union Formation) is well known. Mining and milling have been successfully completed at projects within the same host formation at different localities within Wyoming. The Project does have some risks similar in nature to other mineral projects in general and uranium projects in particular. Risks common to mineral projects include:

- variance in the grade and continuity of mineralization from what was interpreted by drilling;
- changes in future commodity demand that could significantly change the assumed uranium prices used in the mineral resource estimates;
- environmental, social and political acceptance of the project could cause delays in conducting work or increase the costs from what was assumed;
- variance in operating costs from what was assumed in assessing reasonable prospects and cut-offs used in the mineral resource estimates;
- changes in the mining and mineral processing recovery from what was assumed in the resource estimates; and
- additional exploration may not result in discovery of additional mineral resources within the targeted areas.

With regard to the socio-economic and political environment, Wyoming mines have produced over 200 million pounds of uranium from both conventional and ISR mine and mill operations. Production began in the early 1950's and continues to the present. The state has ranked as the number one US producer of uranium since 1994. Wyoming is considered generally favorable to mine development provided established environmental regulations are met (refer to "Wyoming Politicians, Regulators Embrace Uranium Miners With Open Arms", Finch, 2006). An assessment by the Fraser Institute published in February 2017, ranks Wyoming as 7th out of 104 jurisdictions using a Policy Perception Index, which indicates a very favorable perception by the mining industry towards Wyoming mining policies.

To the author's knowledge there are no other significant risks that could materially affect the Mineral Resource estimates or interfere with the recommended work programs.

## 2.0 INTRODUCTION

This Technical Report titled “CLARKSON HILL URANIUM PROJECT, MINERAL RESOURCE, NI 43-101 Technical Report, NATRONA COUNTY, WYOMING, USA” was prepared in accordance with National Instrument 43-101, Standards of Disclosure for Mineral Projects (NI 43-101) and the mineral resource estimates were prepared using the definitions in the Canadian Institute of Mining, Metallurgy, and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM Definition Standards). The effective date for mineral resources and of the Technical Report, is July 27, 2017.

This Report was prepared for Anfield by Douglas Beahm, PE, PG, Principal Engineer, BRS Engineering to support a current Mineral Resource estimate Clarkson Hill Uranium Project (Clarkson Hill or Project).

The following is a brief list of terms and abbreviations used in this report:

Table 2.1 Terms and Abbreviations

URANIUM SPECIFIC TERMS AND ABBREVIATIONS				
Grade	Parts Per Million	ppm U <sub>3</sub> O <sub>8</sub>	Weight Percent	%U <sub>3</sub> O <sub>8</sub>
Radiometric Equivalent Grade		ppm eU <sub>3</sub> O <sub>8</sub>		% eU <sub>3</sub> O <sub>8</sub>
Thickness	meters	m	Feet	Ft
Grade Thickness Product	grade x meters	GT(m)	grade x feet	GT(Ft)

GENERAL TERMS AND ABBREVIATIONS					
	METRIC		US		Metric : US
	Term	Abbreviation	Term	Abbreviation	Conversion
Area	Square Meters	m <sup>2</sup>	Square Feet	Ft <sup>2</sup>	10.76
	Hectare	Ha	Acre	Ac	2.47
Volume	Cubic Meters	m <sup>3</sup>	Cubic Yards	Cy	1.308
Length	Meter	m	Feet	Ft	3.28
	Meter	m	Yard	Yd	1.09
Distance	Kilometer	km	Mile	mile	0.6214
Weight	Kilogram	kg	Pound	Lb	2.20
	Metric Tonne	Tonne	Short Ton	Ton	1.10

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Douglas Beahm, P.E., P.G. is the independent qualified person responsible for the preparation of this Report and the mineral resource estimates herein. Mr. Beahm is a Qualified Person (QP) under National Instrument 43-101 (NI 43-101) for the content of this Report, a Professional Engineer, a Professional Geologist, and a Registered Member of the Society of Mining, Metallurgy, and Exploration Inc. (SME) with 43 years of professional and managerial experience, a significant portion of which has involved uranium projects in Wyoming and Colorado.

Mr. Beahm has past work experience on the project in the preparation of a Technical Report on the project for Artha Resources in 2007 and 2008.

Mr. Beahm last visited Clarkson Hill on July 22, 2017. During this site visit;

- Evidence of past drilling was observed and several pre-2008 drill holes were located and mapped with a hand-held GPS (accuracy 3 meters). Drill holes were not well marked in the field. Mapped drill holes were compared to the locations in the drill hole database and matched within the mapping accuracy.
- Three of the five drill holes completed in 2008 were located. All were on CH claim 15 and all fell outside the area of the mineral resource estimate. The 2008 drill holes were marked in the field with orange plastic stakes. Aluminum tags were present but difficult to read.
- Several claim stakes were located and mapped with a hand-held GPS. Claim stakes were marked with aluminum tags. Mapped claim stake locations were compared to the reported locations from the database and were within the mapping accuracy.
- No evidence of recent claim staking and/or drilling was observed.

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

The author has fully relied upon, and disclaims responsibility for, information of the political, social and environmental risk of the Project by using information from the “Fraser Institute Annual Survey of Mining Companies 2016 (Feb. 2017). This information is used in Section 25 of the report.

The author has fully relied upon, and disclaims responsibility for, information of the status of and the vestment of record title to certain unpatented mining claims (collectively the “Claims”) provided by Anfield along with a summary of the property acquisition included in Section 4.

To the Author’s knowledge no form of environmental assessment has been completed on the Project.

## **4.0 PROPERTY DESCRIPTION AND LOCATION**

### **4.1 Property Description and Location**

The Clarkson Hill Project is located in Natrona County, Wyoming, about 20 air miles southwest of Casper, WY. The property is located on portions of sections 7, 17, and 18 of T31N R82W at approximate latitude 42° 39' North and longitude 106° 41' West (refer to Figure 4.1 Location Map).

Land Ownership consists of Federal lands administered by the United States Bureau of Land Management (BLM), State lands, and private lands. The Mineral Ownership Map, Figure 4.2, represents the approximate location of unpatented mining lode claims held by Anfield. The 25 mining claims are unpatented mining lode claims, comprise some 500 acres and are located on federal lands. The claims located and controlled by Anfield are referred to as CKH claims 1 through 3, 6 through 17, and 18 through 27. The claims have production royalties of 0.5% to 3.0%.

Anfield has a possessory right to explore, develop and produce on the unpatented lode mining claims and must pay an annual maintenance fee to the Bureau of Land Management of \$155.00 per claim on or before September 1. Surface use on mining claims on BLM lands are allowed subject to 3809 regulations and require both BLM and WDEQ/LQD permitting.

### **4.2 Anfield Acquisition of the Clarkson Project**

On September 14, 2016, Anfield Resources Inc. closed a transaction with Uranium One Americas Inc. (“Uranium One”) for the transfer of 24 uranium mining properties in Wyoming, which included the Clarkson Hill Project.

Under the terms of the leases and claims transfer agreement, Anfield has agreed to purchase the Properties for consideration of US\$6,550,000, of which US\$450,000 was paid upon execution of the agreement. The remaining US\$6,100,000 will be paid in annual installments over five years.

### **4.3 Permitting**

In order to conduct exploratory drilling Anfield would be required to obtain a Drilling Notification approved by the State of Wyoming Department of Environmental Quality, Land Quality Division (WDEQ/LQD) and the BLM to allow surface use for the purposes of exploration by drilling.

Although not required at this stage, mine development would require a number of permits depending on the type and extent of development, the most significant permits being the Permit to Mine issued by the WDEQ/LQD and the Source Materials License from the U.S. Nuclear

Regulatory Commission (NRC) required for mineral processing of natural uranium. Any injection or pumping operations will require permits from the WDEQ which has authority under the Safe Water Drinking Act that stems from a grant of primacy from the U.S. Environmental Protection Agency for administering underground injection control programs in Wyoming.

#### **4.6 Environmental Liabilities**

To the Author's knowledge, no specific environmental liabilities are known to exist, however, no formal environment assessment or audit has been completed. There are pre-existing surface disturbances on and adjacent to the Anfield properties including drill roads, drill sites, haul roads, shallow open pits and cuts, and associated mine waste. These pre-existing conditions preceded the Surface Mining Control and Reclamation Act (SMCRA) and could be considered for reclamation by the Wyoming Department of Environmental Quality (WDEQ) and its Abandoned Mine Lands Division (AML) with cooperation of the US BLM.

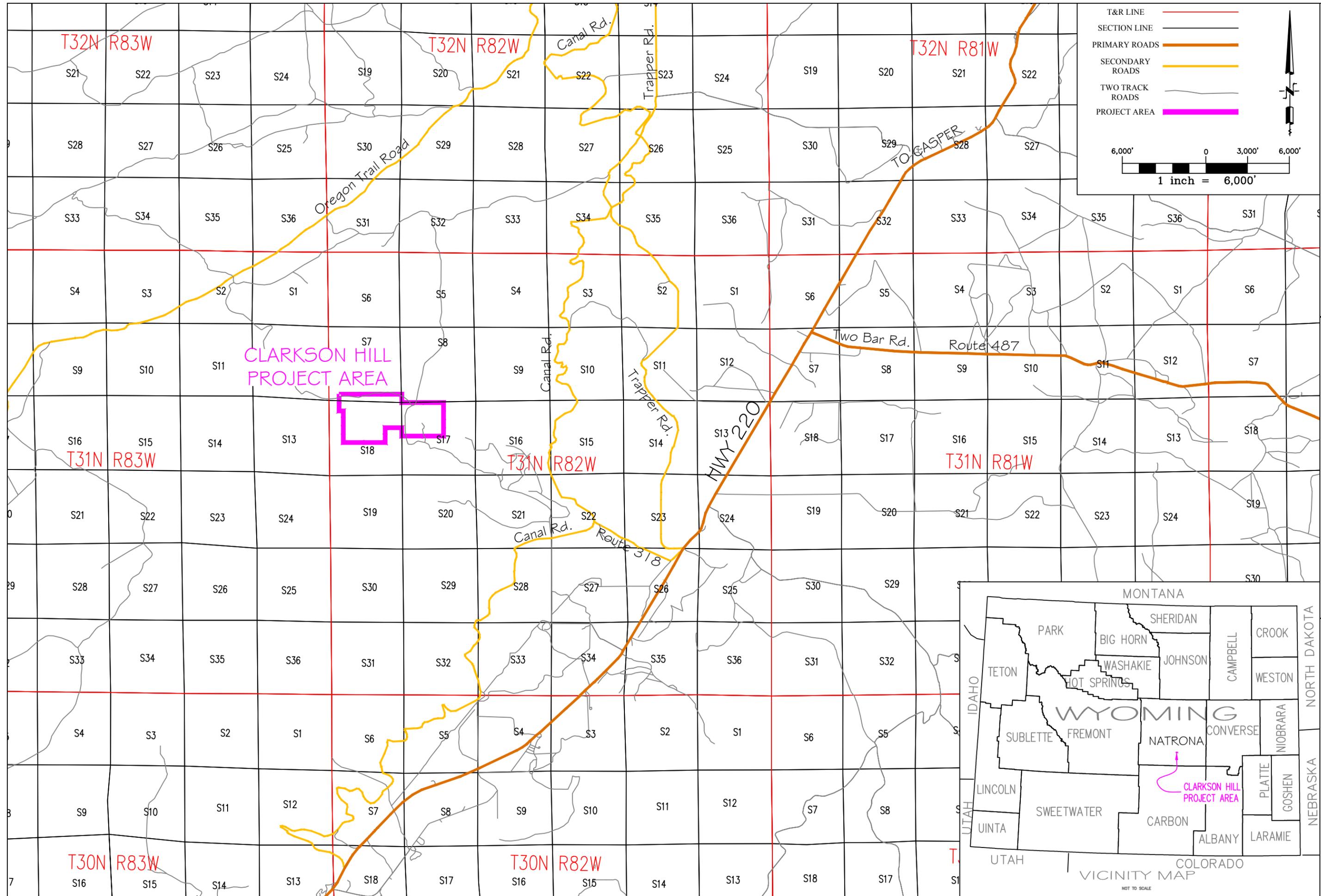
Current State of Wyoming mining regulations will require Anfield to reclaim any new mining activities but excludes Anfield from any environmental liability associated with historical mining. The AML fund is financed by a tax of 31.5 cents per ton for surface mined coal, 15 cents per ton for coal mined underground, and 10 cents per ton for lignite. 50% of AML fees are distributed to states with an approved reclamation program to fund reclamation activities. (<https://www.osmre.gov/programs/aml.shtm>)

#### **4.7 State and Local Taxes and Royalties**

The current Wyoming severance tax is four percent but after the allowable wellhead deduction the effective severance tax rate is approximately 3% of gross sales. In addition, the ad valorem (gross products) tax varies by county assessment but is approximately 6.5%. Federal income tax is assessed based on company profits. Due to the favorable regular tax depletion deduction most mining companies' effective tax rate is the Alternative Minimum Tax (AMT) rate of 20%.

#### **4.8 Encumbrances and Risks**

The unpatented lode mining claims will remain the property of Anfield provided they adhere to required filing and annual payment requirements with Fremont and Natrona Counties and the BLM. Legal surveys of unpatented lode mining claims are not required and are not known to have been completed. All of the unpatented lode mining claims have annual filing requirements (\$155 per claim) with the BLM, to be paid on or before September 1 of each year. Mining claims are subject to the Mining Law of 1872. Changes in the mining law could affect the Project.

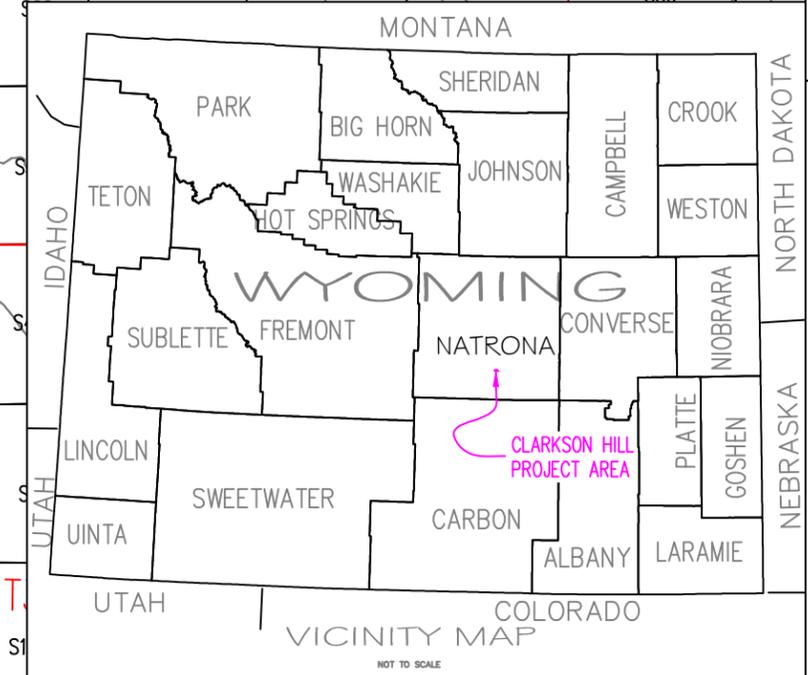


T&R LINE —  
 SECTION LINE   
 PRIMARY ROADS   
 SECONDARY ROADS   
 TWO TRACK ROADS   
 PROJECT AREA

6,000' 0 3,000' 6,000'  
 1 inch = 6,000'

NO.	REVISION DATE: 7/19/17	BY: CDS	ISSUED FOR: ANFIELD
	LAST PLOT DATE: 7/20/17		
	CAD FILENAME: USER/ANFIELD/CLARKSON_HILL/FIG 4.1.dwg		

**CLARKSON HILL URANIUM PROJECT**  
**43-101 MINERAL RESOURCES REPORT**  
**NATRONA COUNTY, WYOMING**

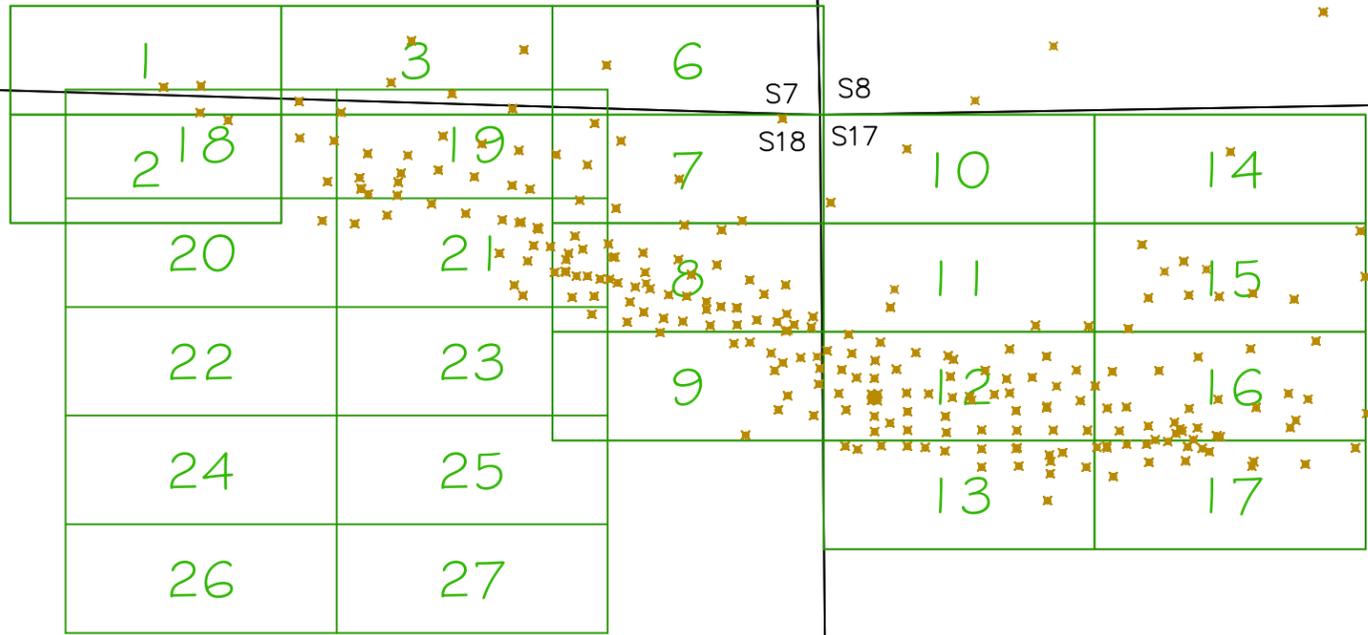


LOCATION MAP	
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DRAWN BY: CDS	REV: 4-1
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APPROVED:	

R83W  
R82W

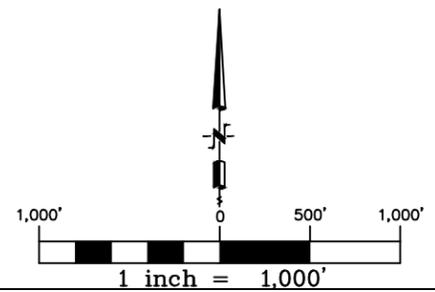
S12 S7  
S13 S18

S13 S18  
S24 S19



T31N

T&R LINE   
 SECTION LINE   
 DRILL HOLE   
 CLAIM BLOCK 



NO.	REVISION DATE: 7/19/17	BY: CDS	ISSUED FOR: ANFIELD
LAST PLOT DATE: 7/20/17		CAD FILENAME: USER/ANFIELD/CLARKSON HILL/FIG 4.2.dwg	



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MINERAL OWNERSHIP

FIGURE 4.2

SCALE: 1"=1,000'	DATE: 7/20/17
DRAWN BY: CDS	REV:
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APPROVED: DUB	

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

### **5.1 Accessibility**

The site is accessible from either Highway 220 or from the Oregon Trail Road, a Natrona County improved gravel road. From Highway 220 the site is approximately 4 miles northwest of the junction of the highway with Natrona County Road 318. From the Oregon Trail Road the site is approximately 3 miles to the southeast. Although the site is situated on public lands administered by the U. S. Bureau of Land Management, BLM, site access from either route will require an arrangement with intervening private land owners for ingress/egress.

Although past mining on a limited scale was completed on the site in the 1950's no infrastructure is present at the site. Utility corridors do exist along the Oregon Trail Road including power and gas transmission lines. The principal access roads to the site are maintained year-round and year-round operations could be conducted at the Project.

### **5.2 Topography, Elevation, Physiography**

The Clarkson Hill Project is located in a broad synclinal valley northeast of the North Granite Mountain Fault. Dip is gentle, approximately 4 degrees to the northeast (Rich, 1962). Geological units exposed at the surface include Tertiary White River and Wind River Formations and Quaternary alluvial and pediment gravel deposits.

The property extends from the base to the top of a small mesa known as Clarkson Hill. The top of the mesa is relatively flat lying at an elevation of approximately 6,200 feet above mean sea level. The mesa has approximately 200 feet of vertical relief with some relatively steep slopes, in excess of 3:1 (horizontal to vertical). The currently defined area of mineralization is at the base and along the slope of the mesa.

### **5.3 Climate, Vegetation and Wildlife**

Climate at the Project is continental semi-arid, with annual precipitation of 8-12 inches, mostly falling in the form of late autumnal to early spring snows. The summer months are usually hot with temperature occasionally exceeding 100°F, dry and clear except for infrequent rains. Winter conditions can be severe, and can include sub-zero temperatures and ground blizzards. Most drainages in the area are ephemeral, flowing only during storm events or spring snow melt. The North Platte river some 4-5 miles south of the Project is perennial and is one of the major river systems in Wyoming.

The climate of the Project is most similar to that of Casper Wyoming, some 20 air miles from the site for which a brief summary of weather conditions follows.

### Casper weather averages

Average Annual high temperature:	59.2°F
Average Annual low temperature:	31.3°F
Average Annual temperature:	45.25°F
Average annual precipitation - rainfall:	12.48 inches
Average annual snowfall:	75 inches

(<http://www.usclimatedata.com/climate/casper/wyoming/united-states/uswy0030>)

Most common native vegetation is sage brush and prairie grasses and to a lesser extent, rabbit brush. No threatened or endangered plants are known in the area. Limited upland areas have juniper and limber pine trees on north facing slopes.

Mule deer and pronghorn antelope are common, as are nesting raptors. Small rodents and rabbits are common. The Greater Sage Grouse, present in the general area of the Project, has been considered for listing as a threatened or endangered species.

### 5.4 Infrastructure

In addition to site access, mine development will require utilities and water supply. No current infrastructure is present at the site. The nature and scope of the mine operations will greatly influence utility and water supply demands. The closest utility services are along the ROW of the Oregon Trail Road. Water supply could be obtained from locally permitted and constructed wells or from surface water sources including the Platte River south of the Project area. Water rights for both surface and ground water are administered by the Wyoming State Engineer's Office and are subject to prior water rights. Options for on-site power demands would include extension of existing utilities to the Project or the generation of power on site.

The nearest community is the town of Casper, Wyoming. Casper is the second-largest city in Wyoming, according to the [2010 census](#), with a population of 55,316. Casper is the County Seat and has a long history as an oil boomtown ([https://en.wikipedia.org/wiki/Casper,\\_Wyoming](https://en.wikipedia.org/wiki/Casper,_Wyoming)). Several oilfield and mining service companies are located in Casper including a caterpillar dealership, several drilling companies, and industrial supply companies. Casper has an adequate workforce skilled in mining and mineral exploration to support the Project.

## **5.5 Surface Rights**

The 1872 Mining Law grants certain surface rights along with the right to mine provided the surface use is incident to the mine operations. In order to exercise those rights the operator must comply with a variety of State and Federal regulations (refer to section 20). For areas of private surface ownership appropriate surface-owner agreements would be required. Adequate surface rights can be obtained through permitting and licensing of site activities including potential waste disposal areas, heap leach pads, and potential plant sites.

The Code of Federal Regulations 43 CFR 3715 governs the use and occupancy under the mining laws for Federal Lands. Under these regulations, 3715.05, states "Mining operations means all functions, work, facilities, and activities reasonably incident to mining or processing of mineral deposits." For future mining and mineral processing the author concludes that Anfield can obtain through permitting and licensing of site activities, sufficient surface rights for possible future mining operations, including potential waste disposal areas, heap leach pads, ISR wellfields, and potential plant sites as was common with previous mine and mineral processing operations in the vicinity.

## **6.0 HISTORY**

The initial discovery of mineralization at the Clarkson Hill Claims was made in the 1950s and “small amounts of ore were mined and shipped for treatment from the old pit area located in Section 17, T31N, R82W” (Ljung et al, March 1974). However, USGS and USBM databases list the Clarkson Hill Claims as a surface mine prospect with no reported production. The surface disturbance, based on site observation by the author of the Technical Report is shallow (less than 20 feet in depth) and limited in aerial extent. Surface disturbance is limited and there is no known infrastructure, tailings, or mine waste is apparent at the site. Drill data utilized in the estimation of mineral resources at the Clarkson Hill Claims in the Technical Report reflect a deeper horizon and is not affected by the presence of “old pit”. Surface disturbance from past exploration and/or limited mining activities at the site are readily apparent from current aerial views and on the ground.

### **6.1 Ownership and Control**

Utah Construction and Mining conducted drilling on the property in 1959 but results are not available. Subsequently, the property was held by a private individual who in turn optioned the property to Nuclear Reserves Inc. In 1969, Nuclear Reserves Inc. entered into a joint venture with Minerals Exploration Company.

Minerals Exploration Company (MEC) held the property through the mid-1980’s until in light of declining uranium prices they dropped the claims. Initial staking of 14 claims in the intensely explored area was completed by Energy Metals Corporation (EMC) who also obtained the relevant data for the property. EMC optioned the Project to Artha Resources (Artha) who conducted limited verification drilling on the project. The project reverted from Artha to EMC.

The Project currently consists of 25 unpatented mining lode claims. EMC was subsequently acquired by Uranium One Inc. in August of 2008. Through subsequent transactions, Uranium One Inc. is now Uranium One Americas Inc. (Uranium One). Uranium One sold interest in twenty-four uranium projects located in Wyoming, including Clarkson Hill Project to Anfield. The transaction closed on September 14, 2016.

The aggregate consideration due from Anfield totals \$6,100,000.00 to be paid over a five year period. There are no overriding royalties due to Uranium One. As discussed in Section 4, the Project has production royalties of 0.5% to 3.0% to other parties.

## **6.2 Historical Mineral Resource Estimates**

Historical mineral resources are available from a number of sources. However, previous resource estimates are not relevant since there is a current mineral resource on the Project which is described in Section 14 of this Report.

## **7.0 GEOLOGICAL SETTING AND MINERALIZATION**

### **7.1 Regional Geology**

Clarkson Hill is located near the southern and eastern margin of the Wind River Basin just west of the Casper Arch which separates the Powder River and Wind River Basins. Both the Wind River and Fort Union Formations are terrestrial sedimentary deposits. The primary source of sediments for the Wind River and Fort Union Formations was the ancestral Granite Mountains to the west and south of the project. The Granite Mountains were formed during the Laramide Orogeny, a period of extensive mountain building which began at the end of the Mesozoic Era and continued into the early Cenozoic Era. Subsequent erosion of the Granite Mountain highlands coupled with the down-warping of adjacent basins such as the Wind River and Powder River Basins combined to accumulate thousands of feet of sedimentary deposits within the Wyoming basins. The Paleocene Fort Union is the oldest Tertiary formation and consists of sandstone, siltstone, shale, coal and local conglomerates. The Fort Union is overlain, often unconformably, by the Eocene Wind River Formation which consist of sandstones, conglomerates, siltstones, and shale. Overlying the Wind River Formation is the Oligocene White River Formation. The White River Formation also consists of sandstones, siltstone, and shale, however, along with fluvial deposition of the sands and clays, substantial volumes of windblown volcanic ash (tuffs) were also deposited. This volcanic ash is regarded by many as the source of uranium both at the Project for many of the Wyoming sandstone uranium deposits.

Surficial geology is shown on Figure 7.1, Geologic Map and Stratigraphic Column. Rich, 1962, shows the Clarkson Hill area to be within a broad synclinal valley located northeast of the North Granite Mountain Fault. Dip is gentle, approximately 4 degrees to the northeast (Rich, 1962).

### **7.2 Local Geology and Mineralization**

Uranium mineralization at Clarkson Hill occurs in both the Wind River and Fort Union Formations, according to both published and unpublished reports. Ljung, et al, March, 1974, states that the majority of the mineralization occurs locally within a 100 foot thick sandstone unit of the Fort Union Formation.

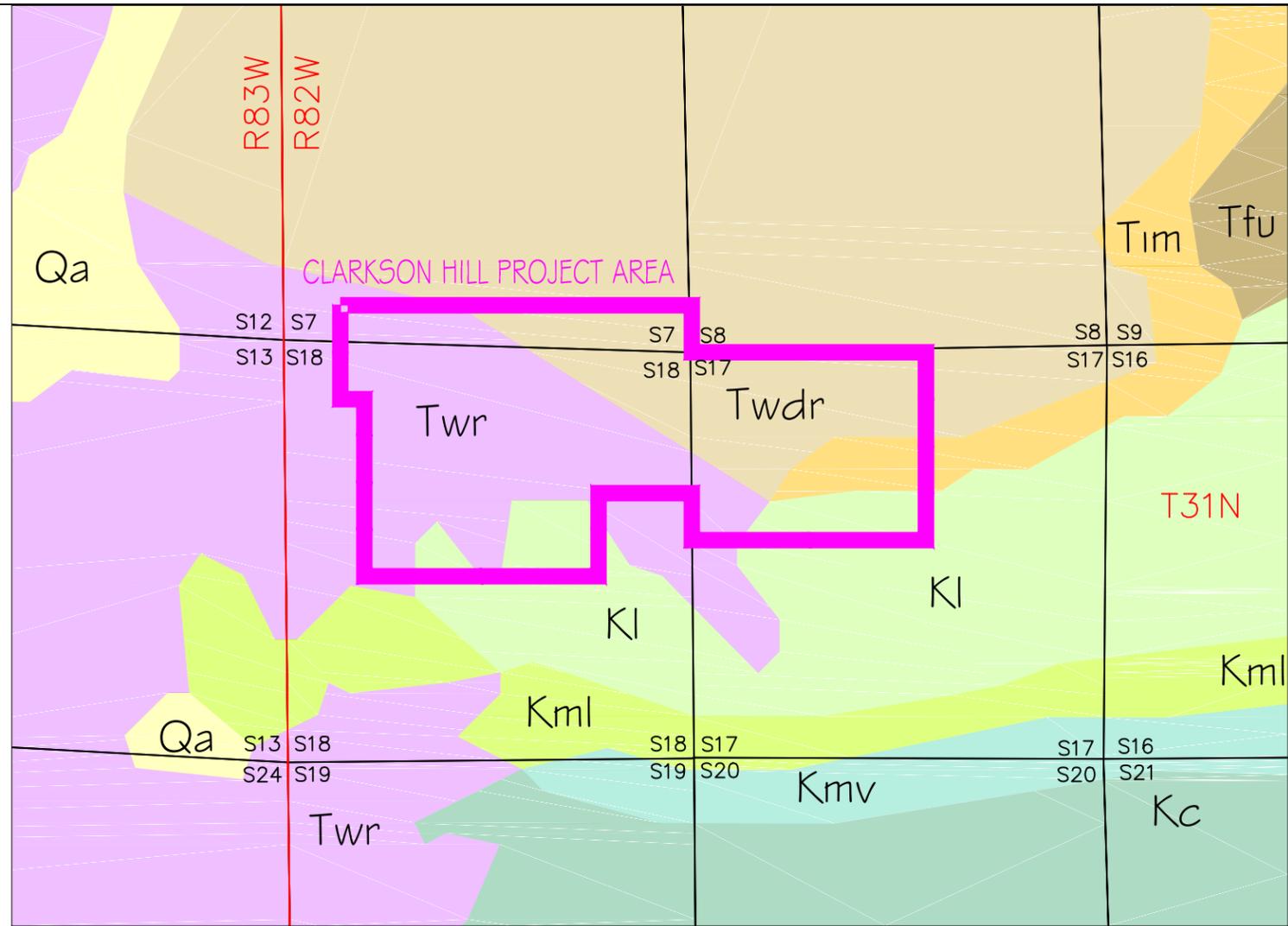
Near surface uranium mineralization occurs in the Wind River Formation in the vicinity of the Project and was explored in the 1950's by shallow excavations. Later drilling defined deeper mineralization within the Fort Union Formation near the contact with the Lance Formation , as shown on Figure 10.2: Cross Section A-A'. The Mineral Resource estimate is restricted to the uranium mineralization within the lower portion of the Fort Union Formation.

Uranium mineralization is typical of Wyoming sandstone-type (roll-front) mineralization as subsequently discussed in Section 8.

### **7.3 Geohydrology**

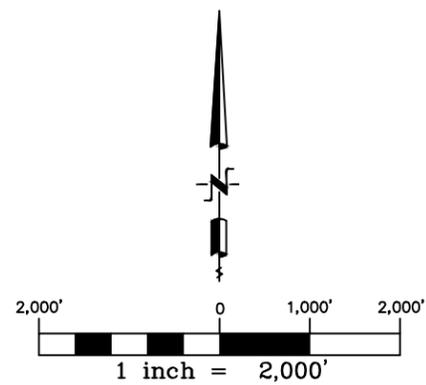
Ground water levels and aquifer properties are generally not known. In 1976 the previous operator attempted to complete a water supply well located in Section 17, T31N, R82W. A fluid level of 75 feet is shown of the geophysical log of the well. The well was perforated in multiple sand units, 50 to 100 feet, 110 to 125 feet, 165 to 180 feet, and 200 to 215 feet. According to the report the sand units were silty and the well production less than 2 gallons per minute.

Evaluation of geohydrologic conditions at the site is recommended if ISR methods are to be considered for exploitation of this project.

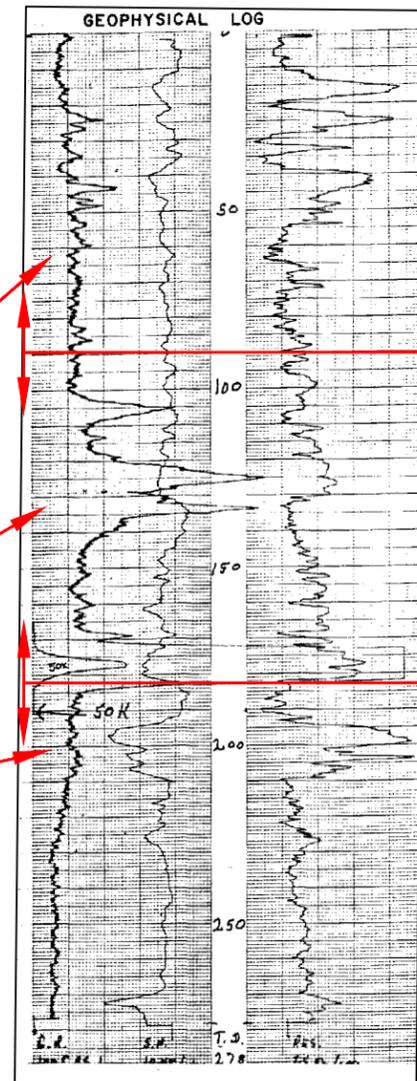


KEY TO GEOLOGIC MAP

- Qa ALLUVIUM AND COLLUVIUM
- Twr WHITE RIVER FORMATION
- Twdr WIND RIVER FORMATION
- Tim INDIAN MEADOWS FORMATION
- Tfu FORT UNION FORMATION
- Kl LANCE FORMATION
- Kml MEETEETSE FORMATION AND LEWIS SHALE
- Kmv MESAVERDE FORMATION
- Kc CODY SHALE



ERA	PERIOD	EPOCH	
CENOZOIC	QUATERNARY		ALLUVIUM AND TERRACE GRAVELS
			SEDIMENTARY UNITS UNDIVIDED
	TERTIARY	PLIOCENE	WHITE RIVER FORMATION
		MIOCENE	
		OLIGOCENE	WIND RIVER FORMATION
	EOCENE	FORT UNION FORMATION	
	PALEOCENE		
MESOZOIC	CRETACIOUS		LANCE FORMATION
			MEETEETSE FORMATION
			LEWIS SHALE, MESA VERDE, CODY SHALE, FRONTIER FORMATION



## 8.0 DEPOSIT TYPES

Wyoming uranium deposits are roll-front uranium deposits as defined in the “World Distribution of Uranium Deposits (UDEPO) with Uranium Deposit Classification”, (IAEA, 2009).

Uranium mineralization at the Clarkson Hill is typical of the Wyoming roll-front sandstone deposits (Figure 8.1) as described by Ganger and Warren (1979) and Rackley and others (1972). Minobras (1976) and Wilson (1960) describe radioactive anomalies at Clarkson Hill as located with conglomeratic sandstones of the Wind River Formation with uranium mineralization associated with carbonaceous siltstones. However, geologic reports from the previous operator, Mineral Exploration Company, acknowledge the occurrence of mineralization in the Wind River Formation but state that the majority of the mineralization at depth is within the underlying Fort Union Formation (Ljung, et al, March, 1974).

As discussed in Section 9, the source of the sedimentary hosts for uranium mineralization at Clarkson Hill is dominantly the Granite Mountains although some sediment could also have been derived from the Laramie Mountains to the east and south. Potential sources of uranium would include leaching of uranium from Oligocene volcanic detritus in the White River Formation and leaching of uranium from Granite Mountains. Roll-front deposits are characterized by oxidized or altered rock on one side of the roll-front and reduced or unaltered rock on the opposite side of the front (Hausel, 1986). Based on review of the drill data including geophysical logs and lithological descriptions, the author concludes that at Clarkson Hill the oxidized tongue of the geochemical system is located to the north and east of the mineralization with the reduced side of the roll-front to the south and west, however, Ljung, et al, March, 1974, report that secondary surficial oxidation does mask the alteration from the roll-front system in places.

**FIGURE 8.1 – ROLL-FRONT MINERALIZATION**

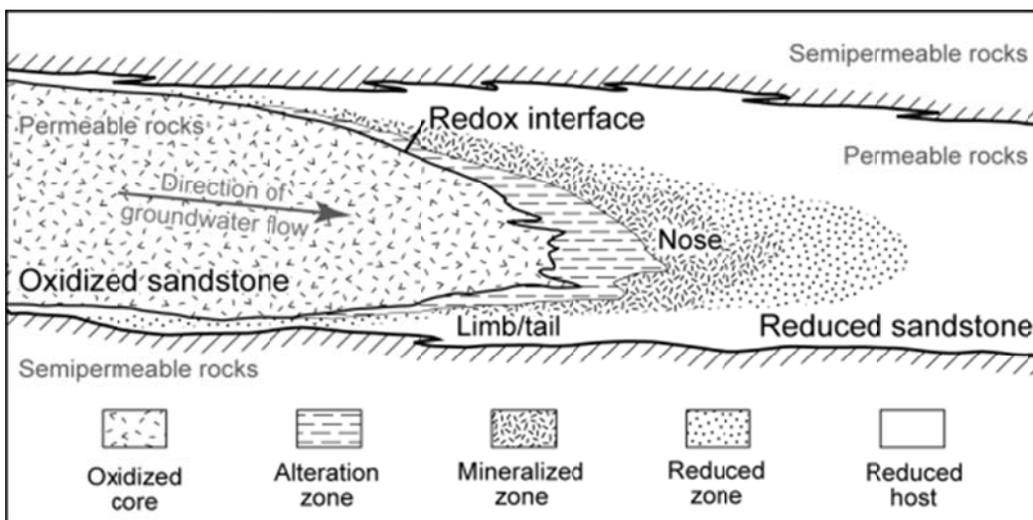


Figure 8.1 - Idealized cross-section of a sandstone-hosted roll front uranium deposit. Modified from Granger and Warren (1974) and De Voto (1978).

The key components for the formation of roll-front type deposits according to Granger and Warren (1979) include:

- A permeable host formation;
- A source of soluble uranium;
- Oxidizing ground waters to leach and transport the uranium;
- Adequate reductant within the host formation; and
- Time sufficient to concentrate the uranium at the oxidation/reduction interface.

At Clarkson Hill;

- Both the Wind River and Fort Union Formations are known sandstone hosts for uranium deposits in Wyoming;
- Both the White River Formation and Granite Mountains are in reasonable proximity and could have provided the source of uranium;
- Oxidation of the sandstone host is evident from the lithologic descriptions from drilling;
- Carbonaceous material is described to occur within the host formations in the vicinity by Minobras (1976) and Wilson (1960) and pyrite is described in lithologic descriptions from drilling. Either of these sources would provide adequate reductant; and
- Drilling at Clarkson Hill demonstrates the presence of uranium mineralization at an oxidation/reduction interface indicating that favorable hydrologic and geochemical conditions were present for sufficient time to concentrate uranium.

## **9.0 EXPLORATION**

The initial discovery of mineralization at the Clarkson Hill Claims was made in the 1950's from aerial and ground radiometric surveys (Ljung et al, March 1974). Early exploration was also aided by visible alteration in outcrops of the Wind River Formation. In the vicinity of the Project mineralization in the Wind River Formation is near surface. Later drilling led to the discovery of mineralization at depth in the Fort Union Formation.

The outcrop pictured on the cover of this report is an altered sandstone unit within the Fort Union Formation with anomalous gamma levels. This outcrop is up-dip from the mineralization at Clarkson Hill.

To the author's knowledge, no relevant exploration work other than drilling, as described in Section 10, Drilling, has been conducted on the property since that time.

## **10.0 DRILLING**

### **10.1 Drilling Methods**

Currently available drill data consists of radiometric equivalent data (eU3O8) for 255 drill holes; 250 pre-2008 and 5 completed in 2008. No additional recent drilling is known. Of the total 250 pre-2008 drill holes 17 were cored. All original drill data including geophysical logs, lithological logs, and chemical assay certificates are available for the Project.

The vast majority of the drilling (pre and post 2008) was conducted by air and/or mud rotary drilling (vertical) with limited core drilling for evaluation of radiometric equilibrium conditions. The principal data collected for mineral resource estimation by drilling was downhole radiometric equivalent assays. Geologic data collected included lithologic descriptions of drill cuttings and interpretation of geophysical logs (SP and Resistivity). Core recovery is not an issue as uranium grade is determined primarily by geophysical methods in an open drill hole. Evaluation of disequilibrium, discussed in Section 11, was based on comparisons of assay data from core and radiometric equivalent geophysical data.

The locations of drill holes and extent of drilling are shown on Figure 10.1. Drill hole coordinates and elevations are in state plane coordinates.

The locations of drill holes used in the mineral resource estimation are shown in greater detail on the GT Contour Maps provided in Section 14, Figure 14.1.

### **10.2 Drilling Length Versus True Thickness**

All drill holes were vertical and typically less than 500 feet in depth. Downhole drift surveys are available only for the 2008 drilling. These surveys show random deviation from vertical of less than 1° and less than a 0.6% variance in depth drilled as compared to true depth (Refer to Table 10.1). No deviation of the drill holes was assumed in the mineral resource estimation and this is considered reasonable. The dip of the host formation is slight approximately 4 degrees to the northeast (Rich, 1962). Drilling was conducted vertically. A slight variation from vertical is expected but will not impact interpreted mineralized thickness nor would a slight variation in horizontal location impact the mineral resource estimate. At a 4 degree dip penetrated by a vertical drill hole, the true thickness is 0.9976 (cosine of 4o) of the measured thickness. Thus, the 0.5 foot measurements of thickness from the geophysical logs would have a true thickness of 0.4988 or a difference of 0.0012 feet. This difference is far less than the accuracy to which geophysical logs can be interpreted and does not affect the resource estimate.

Table 10.1 – Downhole Drift and True Thickness

Hole Id	Drill Depth Feet	True Depth Feet	Difference Feet	Variance %
CKH 15-1	482.1	481.6	0.5	0.10
CKH 15-2	481.9	481.5	0.4	0.08
CKH 15-3	479.8	479.3	0.5	0.10
CKH 15-4	479.1	476.4	2.7	0.56
CKH 15-5	502.7	502.5	0.2	0.04

### 10.3 Summary and Interpretation of Relevant Drill Results

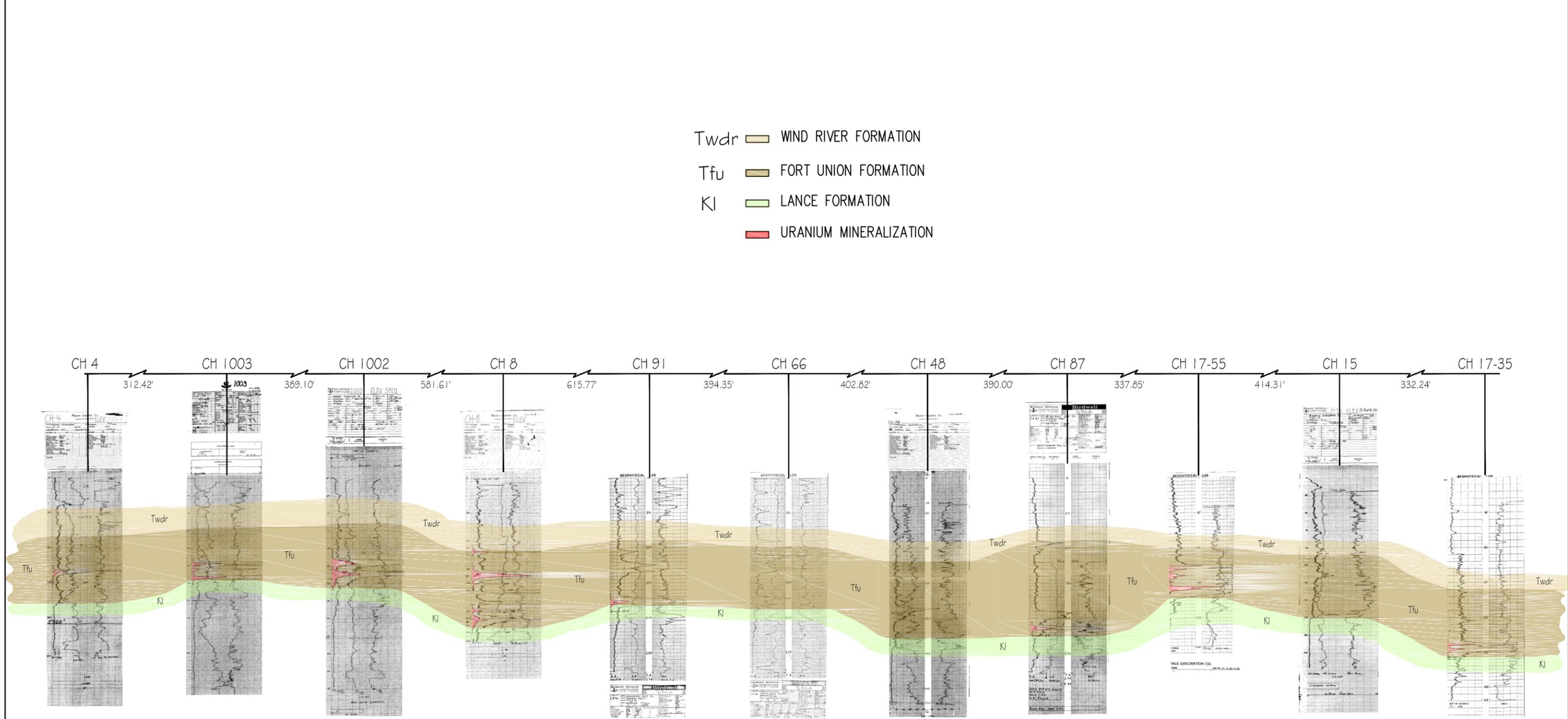
A drill hole map and a drill section showing the extent of uranium mineralization within the Fort Union formation follows;

- Figure 10.1, Drill Hole Map
- Figure 10.2, Cross Section A-A': View to North

The extent of grade and thickness of the uranium mineralization and its variability is shown in plan sections as shown on Figure 14.1. With respect to high grade intervals, the area of influence was limited in the development of the GT contour model and the GT model was limited to a maximum GT of 3.0.

The Author has reviewed the available drill data and considers the information suitable for the purposes of this Report. See Section 12 for details on drill data verification performed by the Author.





NO.	REVISION DATE: 7/18/17	BY: CDS	ISSUED FOR: ANFIELD
	LAST PLOT DATE: 7/20/17		
	CAD FILENAME: USER/ANFIELD/CLARKSON HILL/FIG 10.2.dwg		

**CLARKSON HILL URANIUM PROJECT**  
**43-101 MINERAL RESOURCES REPORT**  
**NATRONA COUNTY, WYOMING**

<b>CROSS SECTION A-A'</b>	
SCALE: NTS	DATE
DRAWN BY: CDS	7/20/17
CHECKED:	
APPROVED:	
<b>FIGURE 10.2</b>	



## **11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY**

### **11.1 Radiometric Equivalent Geophysical Log Calibration**

DOE supports the development, standardization, and maintenance of calibration facilities for environmental radiation sensors. Radiation standards at the facilities are primarily used to calibrate portable surface gamma-ray survey meters and borehole logging instruments used for uranium and other mineral exploration and remedial action measurements. This is an important quality control measure used by the geophysical logging equipment operators. The author has reviewed the geophysical logs and they have annotation of the calibration parameters necessary for the accurate conversion of gamma measurements recorded by the logging units to radiometric equivalent uranium grade. Anfield has acquired exploration files for the Project which includes original geophysical logs and data. This data is currently in the possession of the Author and will be transferred to Anfield upon completion of this report.

Calibration facilities are located at DOE sites at Grand Junction Regional Airport in Grand Junction, Colorado; Grants, New Mexico; Casper, Wyoming; and George West, Texas (<https://energy.gov/lm/services/calibration-facilities>). These calibration facilities were first established by the US Atomic Energy commission (AEC) in the 1950's to support the domestic uranium exploration and development programs of that era.

Early geophysical logs were analog which required manual interpretation. The standard method for estimation of the grade and thickness of uranium was the half-amplitude method. In the late 1960's this method was gradually replaced with computer processing. Dodd and Drouillard, 1967, state that borehole logging is the geophysical method most extensively used in the US for the exploration and evaluation of uranium deposits and that gamma-ray logging at that time supplied 80 percent of the basic data for ore reserve calculations and much of the subsurface geologic information. At that time calibration and correction factors were established for each logging unit and probe in the full scale model holes established by the AEC. GAMLOG and RHOLOG computer programs (Fortran II) were used to quantitatively analyze gamma-ray logs to obtain radiometric equivalent grade and thickness of mineralized intercepts (Dodd and Drouillard, 1967).

Calibration procedures and standards for the geophysical logging equipment used in the determination of radiometric equivalent uranium grade has been consistent through the various drilling campaigns and has relied on calibration facilities maintained by the US government. It is standard practice for geophysical logging companies to rely on these calibration facilities. Century calibrates to the primary standards located at ERDA facilities in Grand Junction, Colorado where a family of calibration models are maintained. These models consist of a barren zone bored in concrete and a mineralized zone constructed of a homogenous concentration of

uranium at a known grade followed by and underlying barren zone. There are different grade models to reflect the range on uranium concentrations typically found in the US. In addition, the models can be flooded to determine a water factor and there are models which are cased for the determination of a casing factor. Each of the models are approximately 9 feet deep consisting a 3 foot mineralized zone with 3 foot barren zones above and below. The facilities are secure. Logging unit operators logs the holes, provide the geophysical log data in counts per second (CPS) to the facility which in turn processes the data and provides the company with standard calibration values including; dead time, K Factor, and water and casing factors (Century, 1975).

## **11.2 Pre-2008 Drilling Analyses**

The pre-2008 drill data was originally collected by Minerals Exploration company (MEC) using company logging trucks and several third party contractors. The pre-2008 drill data includes geophysical logs from MEC (40%), Century Geophysical (4%), Birdwell (20%), Master Logging Inc. (10%), Velocity Radiation Surveys (22%), and GEO Nuclear Services (4%). It was then, and still is standard industry practice to routinely calibrate downhole geophysical logging equipment at the facilities operated by the US Department of Energy.

Standard electric logs consisted of recordings of gamma, self-potential, and resistivity. Self-potential and resistivity data are useful in defining bedding boundaries and for correlation of sandstone units and mineralized zones between drill holes. At the time of the pre-2008 drilling, equivalent U3O8 content was calculated from gamma logs using industry-standard methods developed by the Atomic Energy Commission (now the DOE: Department of Energy), using either manual or computer methods. The manual method is as follows:

For zones greater than 2 feet thick, first pick an upper and lower boundary of mineralization by choosing points approximately one-half height from background to peak of gamma anomaly. Then determine counts per second (cps) for each half-foot interval between the points, convert cps to GT (grade times thickness) using the appropriate dead-time, k-factor and water factor for the specific logging unit utilized, and divide GT by thickness to obtain grade - %U3O8.

These gamma log interpretations are the basis from which quantities of mineralization could be estimated. These interpretations were industry standard at the time 1950s through 1980s.

The pre-2008 sampling, logging, and gamma-probing practices varied based on the practices of previous operators. Based on the author's experience, all operators, whether using company-owned or contracted geophysical logging trucks, maintained calibration of the logging units through AEC (later DOE) standard calibration facilities located in Casper, Wyoming and Grand Junction, Colorado. The original geophysical logs are currently in the possession of Author and will be transferred to Anfield upon completion of this report.

The AEC published information the calibration standards for geophysical logging and on gamma log interpretation methods (Dodd and Drouillard, 1967). The standard manual log interpretation method was the half-amplitude method (Century, 1975). The AEC and its successor agency the Energy Research and Development Administration (ERDA) conducted workshops on gamma-ray logging techniques and interpretation as did private companies including Century Geophysical. The author and several peers in the uranium industry at the time attended the geophysical log interpretation workshop conducted by Century Geophysical. On November 19, 1976 the author received certification in geophysical log interpretation from Century after attending their short course.

### **11.3 Post-2008 Drilling**

In 2008, Artha Resources (a former operator) complete 5 drill holes at Clarkson Hill by vertical rotary drilling. Geophysical logging was provided by Century Geophysical Corporation an independent contractor. The geophysical log data consists of downhole natural gamma, resistivity, and SP; downhole drift surveys, and radiometric equivalent uranium assays for each ½ foot.

### **11.3 Security**

The original drill data is in currently in the possession of the Author and will be transferred to Anfield upon completion of this report. Drill cutting samples and core samples were generally not preserved.

### **11.4 Summary**

The author was active in uranium exploration and mining in Wyoming in the 1970's when earlier drilling programs were undertaken on the Clarkson Hill, participated in quality control and industry practice workshops, and observed that industry accepted practices were well understood by industry and followed at the time. The Author reviewed the available drill data and independently correlated mineralized horizons and determined appropriate composite intervals for use in mineral resource estimation, as discussed in Section 14. It is the Author's opinion that the available drill data is reliable and adequate for the estimation of Indicated and Inferred Mineral Resources.

## **12.0 DATA VERIFICATION**

Currently available drill data consists of radiometric equivalent data (eU3O8) for 255 drill holes; 250 pre-2008 and 5 completed in 2008. No additional recent drilling is known. Of the total 238 drill holes 17 were cored. All original drill data including geophysical logs, lithological logs, and chemical assay certificates are available for the Project.

### **12.1 Verification of Radiometric Database**

The pre-2008 drill data was originally collected by Minerals Exploration company (MEC) using company logging trucks and several third party contractors. The pre-2008 drill data includes geophysical logs from MEC (40%), Century Geophysical (4%), Birdwell (20%), Master Logging Inc. (10%), Velocity Radiation Surveys (22%), and GEO Nuclear Services (4%). It was standard industry practice at the time, and it is the current practice, to maintain calibration of geophysical logging equipment through use of the AEC/ERDA (now DOE) standard calibration pits located at Casper, Wyoming and Grand Junction, Colorado for quality control and assurance with respect to radiometric equivalent data.

Original geophysical logs are in possession of the Author. The drill logs contain header information for essentially all of the drill holes including K Factor, Dead Time, and Water Factor. Several of the drill holes headers also included notes as to the date of calibration of the logging unit at the ERDA test pits. Pre-2008 drill data generally consists of geophysical logs of drill holes including copies (blueprints) of original drill logs and copies of digital printouts of depth and counts per second (CPS) in ½ foot increments within the mineralized zones. The geophysical logs include natural gamma, resistivity, and spontaneous potential (SP). All drill holes were drilled with fluid and logged in the open hole with no casing. All drill holes were vertical with no drift data.

Radiometric equivalent data is available for all the drill holes used in the mineral resource estimate (Pre and Post-2008) and is incorporated into the drill hole database.

The pre-2008 drill data was combined with data from 2008 drilling in an electronic database. During the preparation of this Report the available electronic data was reviewed for each of the mineral resource areas. This process included:

- Plotting of the drill hole locations and comparing these to drill maps prepared by previous operators.
- Screening the drill hole data and preparing a subset of the data containing mineralized intercepts meeting grade, thickness and GT cut-off criteria.
- Correlating the mineralized intercept data such that mineral resource estimates reflected only continuous horizons within the Fort Union Formation.

- Excluding any spurious mineralized horizons (laterally or by depth from the continuous horizons) from the mineral resource estimate. This process excluded mineralization in the overlying Wind River Formation.
- Examining any mineralized intercepts which were either substantially higher or lower than the surrounding values to insure the data was considered reliable and therefore suitable to be used.

Verification of pre-2008 radiometric equivalent data follows.

## 12.2 Verification of Drill Data

Radiometric equivalent ( $\%eU_3O_8$ ) drill data from a total of 255 drill holes was available for the Clarkson. Of the total 255 drill holes 110 expressed uranium mineralization greater the 0.02  $\%eU_3O_8$  and a GT greater than 0.10 and thus were included in the mineral resource estimate.

Drilling campaigns were conducted by:

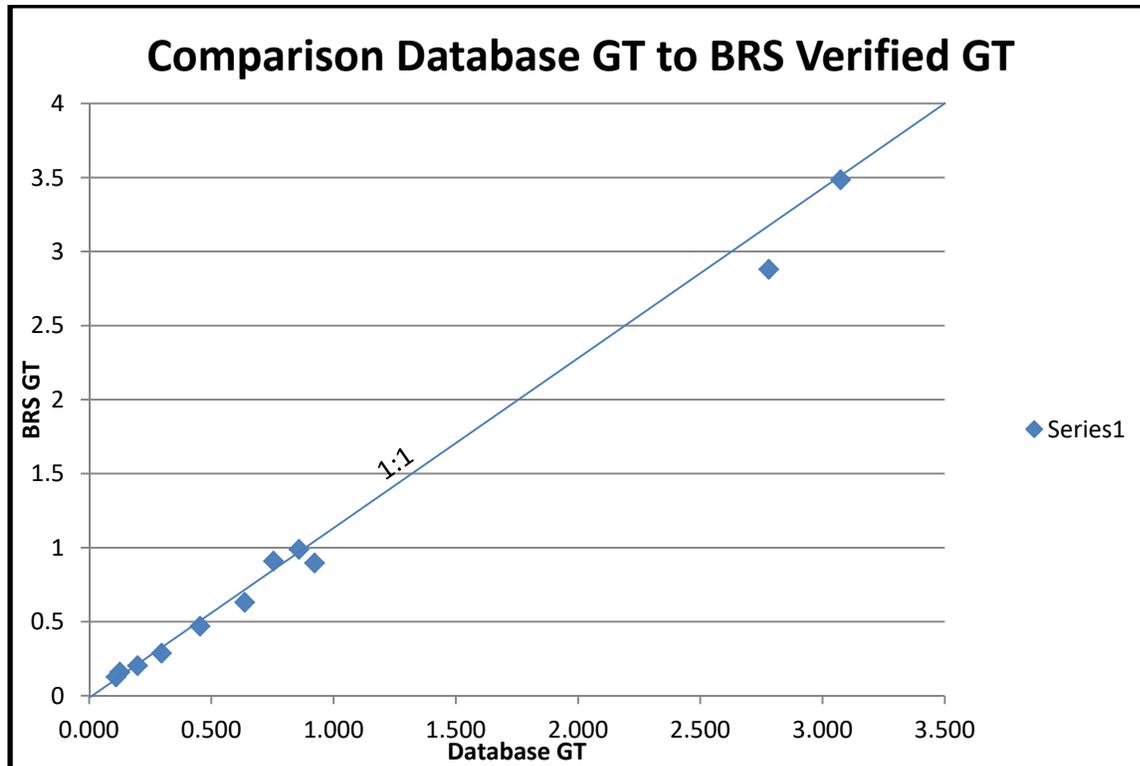
- Minerals Exploration Company (MEC) between 1968 and 1981.
  - Drill data exists for a total of 250 drill holes.
  - Radiometric equivalent data for all holes.
  - 12 drill holes (5%) were selected by Author over a range of GT values for verification purposes and were recalculated using standard half-amplitude method for log interpretation.
  - All drill holes were logged open with no casing.
  - All holes were filled with fluid
- Artha Resources 2008.
  - Drill data from 5 drill holes.
  - Radiometric equivalent data by ½ foot intervals.
  - Digital radiometric data database entry verified by the Author.

For verification purposes, 10% of the drill holes used in the mineral resource estimate (5% of total drill holes) were selected representing the range of mineralization observed and year drilled. The earliest year was 1968 and the latest was 1981. Mineralization in the selected drill holes ranged from a high GT value of 3.5 to a low value of 0.16. Barren holes were examined but not included in the analysis.

Examination of these drill holes confirmed that the drill hole database reasonably reflects the depth, thickness and radiometric equivalent uranium grade from the original geophysical logs. The only discrepancy noted was the omission of isolated mineralized intercepts of lower grade and thickness which were not included in the database, which the author concurs with.

Re-calculation by the Author shows the original interpretation of radiometric equivalent uranium grade is approximately 8.2% less the re-calculated values which means that the database is conservative with respect to grade as compared to the re-calculated holes. Figure 12.1.1 is a comparison of the drill hole database values to those re-calculated by the Author using the standard half-amplitude log interpolation method.

**FIGURE 12.2 – DATA COMPARISON**



Note: By comparison of the sum of the GT values in the Database GT values are 8% less than the re-interpreted GT values.

### 12.3 Verification of Disequilibrium Factor

Radioactive isotopes decay until they reach a stable non-radioactive state. The radioactive decay chain isotopes are referred to as daughters. When all the decay products are maintained in close association with the primary uranium isotope U238 for the order of a million years or more, the daughter isotopes will be in equilibrium with the parent isotope (McKay, 2008). Disequilibrium occurs when one or more decay products are dispersed as a result of differences in solubility between uranium and its daughters. Disequilibrium is considered positive when there is a higher proportion of uranium present compared to daughters and negative where daughters are accumulated and uranium is depleted. The disequilibrium factor (DEF) is determined by

comparing radiometric equivalent uranium grade eU<sub>3</sub>O<sub>8</sub> to chemical uranium grade. Radiometric equilibrium is represented by a DEF of 1, positive radiometric equilibrium by a factor greater than 1, and negative radiometric equilibrium by a factor of less than 1.

Except in cases where uranium mineralization is exposed to strongly oxidized conditions, most of the sandstone roll front deposits reasonably approximate radiometric equilibrium. The nose of a roll front deposit tends to have the most positive DEF and the tails of a roll front would tend to have the lowest DEF (Davis, 1969).

The great majority of the data available for estimation of mineral resources is radiometric geophysical logging data from which the uranium content is interpreted. Radiometric equilibrium conditions may affect the grade and spatial location of uranium in the deposit. Generally an equilibrium ratio (Radiometric eU<sub>3</sub>O<sub>8</sub> to Chemical U<sub>3</sub>O<sub>8</sub>) is assumed to be 1, i.e. equilibrium is assumed. For the Clarkson Hill Uranium Project data is available for the evaluation of radiometric equilibrium. Available chemical data includes 17 core holes, however, only 13 were mineralized. The Table 12.3 summarizes the results of the data available for evaluation of radiometric equilibrium conditions:

Table 12.3 – Disequilibrium

Grade Cutoff Weight % eU <sub>3</sub> O <sub>8</sub>	Number Core Holes	Number Samples	Equilibrium Ratio Chemical : Radiometric
> 0.03 % eU <sub>3</sub> O <sub>8</sub>	13	75	0.96
> 0.05 % eU <sub>3</sub> O <sub>8</sub>	11	44	1.06

In summary, based on available data and considering typical grade cutoffs in the range of 0.03 to 0.05 Weight % eU<sub>3</sub>O<sub>8</sub>, an assumption of radiometric equilibrium (DEF = 1) is reasonable with respect to mineral resources. It is recommended that in the future assessment of mineral reserves, additional data relative to radiometric equilibrium be developed and equilibrium be evaluated for each potential mining area by elevation with respect to the water table.

#### 12.4 Density of Mineralized Material

The density of mineralization used in the Clarkson Hill resource estimation was 16 cubic feet per ton. This is the most common figure used for sandstone hosted, roll-front uranium deposits in Wyoming and Colorado, as noted extensively throughout the literature on these deposits, and from the Author's working experience from mining similar sandstone-hosted deposits. Density studies were completed by a previous operator MEC (Bares et al, May, 1979) based on limited

data from 17 core holes (13 of which were mineralized). This study stated an average density of 16.9 cubic feet per ton.

Based on the limited number of core sampled for density, and the overall average being very similar to the 16 ft<sup>3</sup>/ton average used historically, the author has assumed a density factor of 16 ft<sup>3</sup>/ton for the mineral resource estimates reported in Section 14. The variance in the use of a density factor of 16 versus 16.9 cubic feet per ton is 5%.

### **12.5 Qualified Person's Opinion**

The pre-2008 drill data for the drill holes used in the mineral resource estimate includes original hard copies of geophysical logs which are in possession of Anfield and are well preserved. The drill data has been reviewed and verified by the Author as previously discussed. The Post-2008 drill data is complete and includes both electronic and hard copies of the original data. Drill hole database entries have been spot checked by the Author.

Interpretation of the geophysical logs (pre and post 2008) followed industry standard methods. The interpretations of the pre-2008 geophysical logs are generally conservative based on the comparison to the logs re-interpreted by the Author.

Based on the Author's review of the quality and completeness of the documentation and the data verification procedures completed, the Author considers the data reliable and suitable for the purposes used in the Report.

### **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

Metallurgical testing of core samples from Clarkson Hill was completed by Hazen Research Inc. and the results summarized in their report “Metallurgical Test Work on Uranium Ore Sample from Clarkson Hill, Wyoming”, dated July 29, 1977. Their report was based on the development of an acid leach conventional uranium processing facility. The evaluation was based on a 60 pound composite sample from four core holes with an average grade of 0.077% U<sub>3</sub>O<sub>8</sub>. Nine separate leach test were completed with acid concentrations ranging from 20.6 to 70.4 with an average of 33 pounds per ton H<sub>2</sub>SO<sub>4</sub> (sulfuric acid). Uranium extraction ranged from 93.5 to 96.1 %. These metallurgical studies demonstrate that the uranium mineralization at Clarkson Hill is recoverable by conventional acid leach methods.

#### Recommendations

While available metallurgical testing data demonstrates that uranium is recoverable from mineralized material the results were based on a limited samples and are considered preliminary. Additional metallurgical testing is recommended. Specifically, metallurgical studies which are representative of the portions of the mineral resource that may be incorporated into preliminary mine plans and which simulate the proposed mineral processing method are recommended. This may include both heap leach and ISR recovery and either acid or alkaline lixivants.

## **14.0 MINERAL RESOURCE ESTIMATES**

### **14.1 Mineral Resource Definitions**

The definition of Mineral Resources and the confidence categories are in accordance with CIM Definition Standards for Mineral Resources and Mineral Reserves, May 10, 2014. The effective date of the Mineral Resources is July 27, 2017.

### **14.2 Basis of Mineral Resource Estimates**

#### **14.2.2 Methodology**

The mineral resource estimates are based on radiometric equivalent uranium grades %eU<sub>3</sub>O<sub>8</sub>. A minimum grade cut-off of 0.02 % eU<sub>3</sub>O<sub>8</sub>, minimum thickness of 2 feet, and minimum GT of 0.20 were used in the estimations along with a bulk dry density of 16 cubic feet per ton, as previously discussed. Mineral resources were estimated using the GT contour method which is considered appropriate for this type of deposit. The GT was determined for each drill hole, by major stratigraphic horizon, and the GT was summed for all intercepts meeting the cut-off criteria by horizon for each hole. GT and T were then contoured using standard algorithms based upon the geological interpretation of the deposits. The GT contour model Figure 14.1, provides a graphical representation of the mineralization reflecting the location, quality, represented by GT, and continuity of the mineralization.

From the contoured GT ranges, the contained pounds of uranium were estimated by multiplying the measured areas by GT and applying the density factor. Similarly, the total tonnage was estimated by contouring thickness and multiplying by area to obtain cubic feet, then converting to tonnage by applying the density factor. Tonnage by GT range was estimated based on the ratio of GT areas to total tonnage and the results summed.

The mineral resource estimate reflects mineralization within the Fort Union Formation. Uranium mineralization is also found in the overlying Wind River Formation and was explored and reported to have been mined in limited quantities in shallow excavations (Ljung et al, March 1974). No estimate of mineral resources within the Wind River Formation was made due to limited data.

#### **14.2.3 Uranium Price Assumption**

Uranium does not trade on the open market and many of the private sales contracts are not publically disclosed. Monthly long term industry average uranium prices based on the month-end prices are published by Ux Consulting, LLC, and Trade Tech, LLC. CIM Guidance of Commodity Pricing (November 28, 2015) reviews methods for determining an appropriate long term commodity price assumption for use in cut-off calculations and to support assessment of

“reasonable prospects of eventual economic extraction”. Industry accepted practice is to use "Consensus Prices" obtained by collating public available commodity prices from credible sources. The following provides a summary of six analyst price forecasts made public in the last 6 months.

Analyst	Date Reported	2017	2018	2019	2020	2021	Long Term
Cantor Fitzgerald	4/27/2017	\$ 28.32	\$ 45.00	\$ 66.25	\$ 80.00	\$ 80.00	\$ 80.00
Hayward	1/25/2017	\$ 25.75	\$ 38.25	\$ 46.50	\$ 54.50	\$ 63.75	\$ 70.00
Macquarie	12/22/2016	\$ 21.00	\$ 24.00	\$ 27.00	\$ 30.00	\$ 33.00	\$ 33.00
RBC	3/15/2017	\$ 25.00	\$ 30.00	\$ 35.00	\$ 40.00	\$ 45.00	\$ 65.00
Scotia	4/17/2017	\$ 25.00	\$ 30.00	\$ 35.00	\$ 45.00	\$ 50.00	\$ 65.00
TD	4/19/2017	\$ 26.74	\$ 29.00	\$ 31.00	\$ 33.00	\$ 37.00	\$ 55.00

While the analysts’ forecasts vary, the median value of \$US65/lb is considered reasonable by the author for use in cut-off determination and to assess reasonable prospects for eventual economic extraction. References for these forecasts are provided in Section 27.

#### **14.2.4 Prospects for Eventual Economic Extraction**

Based on the depths of mineralization (100 to 400 feet), average grade, thickness and GT, and continuity of the mineralization Clarkson Hill has reasonable prospects for eventual economic extraction, however, the current mineral resource will not support extensive capital expenditures and would need to be developed in association with or as a tributary project to a Central Processing Plant (CPP)

The deposit has reasonable concentrations of mineralization and the location of mineralization is defined by drilling in three dimensions. It is the author’s opinion that, using a long term price of \$US65 per pound, mineral resources at Clarkson Hill could be recoverable by a combination of open pit methods in combination with underground mining from the highwall, provided that the mined material and/or an upgraded product could be shipped a reasonable distance to a facility capable of processing. There is also a reasonable prospect for eventual extraction via ISR. ISR extraction has been successful within similar mineralization and at similar or greater depths within the Fort Union Formation. Recommendations in this report include detailed study and evaluation of the local geohydrology with respect to ISR extraction.

### **14.3 Key Assumptions and Parameters**

Mineral resource estimates are based on radiometric equivalent uranium grades %eU3O8. A minimum grade cut-off of 0.02 %eU3O8, minimum thickness of 2 feet, and minimum GT of 0.20 were used in the estimations along with a bulk dry density of 16 cubic feet per ton, as subsequently discussed. Indicated and Inferred mineral resources were estimated using the GT contour method which is appropriate for this type of mineral deposit.

The deposit is closely drilled, approximately fifty to one hundred foot centers. The drilling demonstrates continuity particularly along the mineralized trends. Based on the drill density and the apparent continuity of the deposit along trend the mineral resource estimate would meet the criteria as an Indicated Mineral Resource. However, due to the lack of current drilling to verify the pre-2008 drill data the Author has classified the estimate as Inferred Mineral Resources under the CIM Standards on Mineral Resources and Reserves. Mineral resources are reported based on minimum grade cutoffs of 0.02 weight % eU3O8 and at GT cutoffs of 0.10, 0.20 and 0.50. For reporting purposes the 0.20 cutoff is recommended and is thus highlighted in the mineral resource tabulations that follow.

The GT Contour map shown in Figure 14.1 provides a graphical representation or model of the mineralization reflecting the location, quality represented by GT, and continuity of the mineralization. The mineral resource estimate is based on the total GT, by major stratigraphic horizon (lower portion of the Fort Union Formation), by hole, and above cut-off criteria. Drill data reflecting the thickness (T), grade (eU3O8), and GT was summed for all intercepts meeting cut-off criteria by horizon for each hole. GT and T were then contoured using standard algorithms based upon the geological interpretation of the deposits. From the contoured GT ranges, the contained pounds of uranium were estimated by multiplying the measured areas by GT and applying the density factor. Similarly, the total tonnage was estimated by contouring thickness and multiplying by area to obtain cubic feet, then converting to tonnage by applying the density factor. Tonnage by GT range was estimated based on the ratio of GT areas to total tonnage and the results summed.

#### **14.3.1 Cut-off Criteria**

The cut-off criteria 0.02 % eU3O8, a minimum thickness of 2 feet and a minimum GT of 0.20 was applied herein for the estimation of mineral resources. In most cases the governing criteria was the GT cut-off. The minimum grade, minimum thickness, and minimum GT cut-off criteria were assumed by the author based on similar Wyoming operations, including;

Project/Company	Grade Cutoff % eU3O8	GT Cutoff	Reference
Ur Energy, Lost Creek	0.02	0.20	Trec, 2016
EFR/Uranerz, Nichols Ranch	0.02	0.20	Beahm and Goranson, 2015
Crosshair Energy, Bootheel	0.015	0.15	Angnerian, 2012
AUC LLC, Reno Creek	0.02	0.30	Behre Dolbear, 2012

### 14.3.2 Bulk Density

Site specific bulk density data is available and is summarized in Section 12 of this report. This data was based on limited sample data and estimated a density of 16.9 ft<sup>3</sup>/ton. . The Author recommends a density of 16 ft<sup>3</sup>/ton be used for all mineral resource estimations, based on available data and direct mining experience within the host formation.

### 14.3.3 Radiometric Equilibrium

Evaluation of radiometric equilibrium is discussed on Section 12 of this report. Based on the available data and the geological setting of the mineral deposits, the Author considers it appropriate to assume a DEF factor of 1 for all mineral resource estimates.

## 14.4 Mineral Resource Summary

Mineral Resources for the Project are estimated by classification, meeting CIM standards and definitions as Inferred Mineral resources, at a 0.20 GT cut-off, as summarized in Table 14.1. Figure 4.1 displays the GT contour model for the mineral resource area.

Table 14.1 Inferred Mineral Resource Estimate

GT CUTOFF	TONS	GRADE %eU <sub>3</sub> O <sub>8</sub>	POUNDS eU308
0.10	1,170,000	0.053	1,230,000
0.15	1,056,000	0.056	1,175,000
0.20*	957,000	0.058	1,113,000
0.50	329,000	0.088	578,000

\*Recommended cutoff

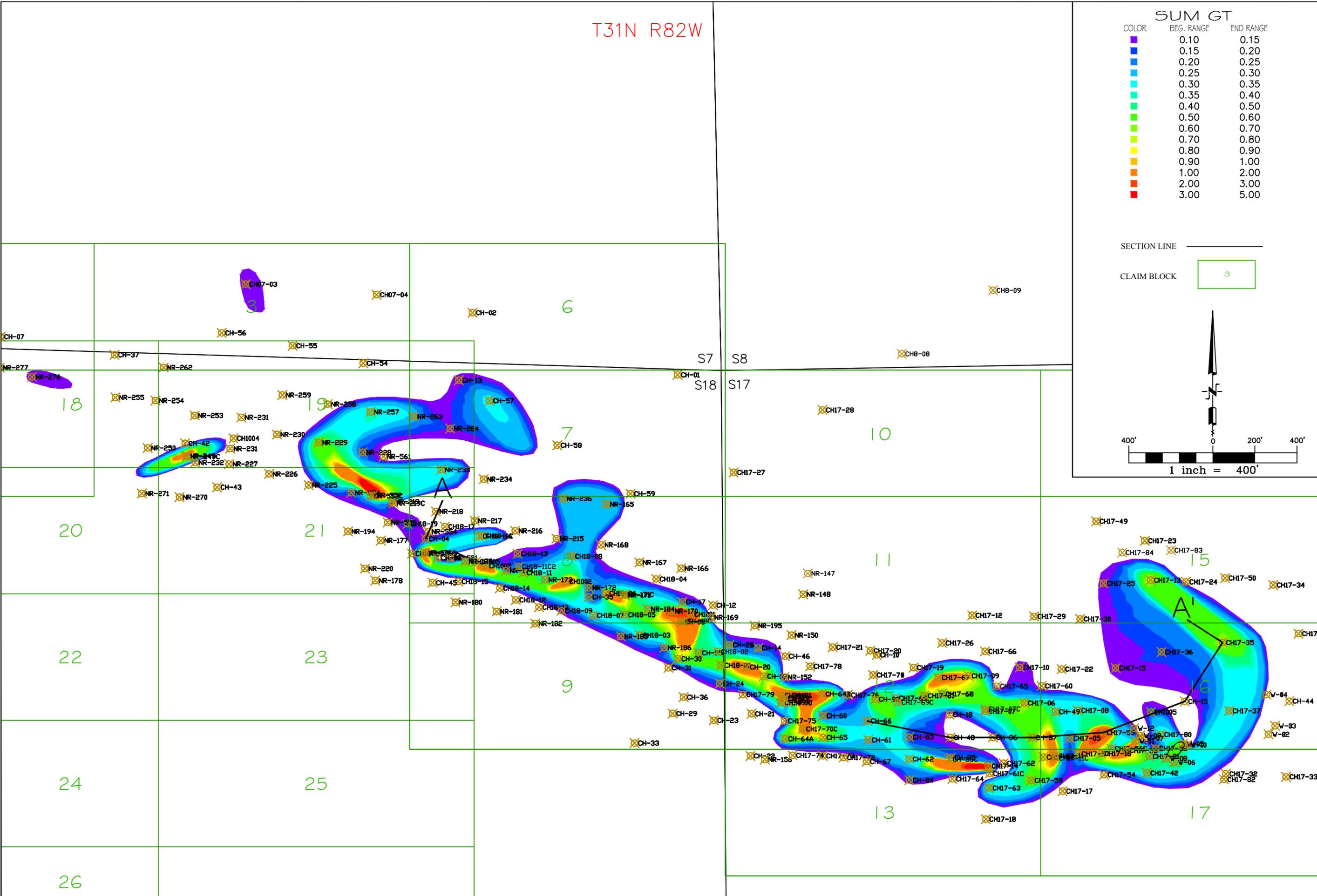
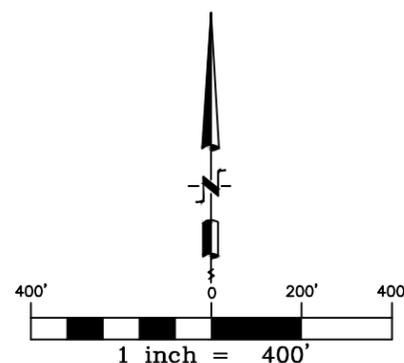
T31N R82W

SUM GT

COLOR	BEG. RANGE	END RANGE
Blue	0.10	0.15
Light Blue	0.15	0.20
Light Cyan	0.20	0.25
Cyan	0.25	0.30
Green	0.30	0.35
Light Green	0.35	0.40
Yellow-Green	0.40	0.50
Yellow	0.50	0.60
Orange	0.60	0.70
Red-Orange	0.70	0.80
Red	0.80	0.90
Dark Red	0.90	1.00
Orange-Red	1.00	2.00
Red	2.00	3.00
Dark Red	3.00	5.00

SECTION LINE

CLAIM BLOCK 3



NO. REVISION DATE: 7/18/17 BY: CDS ISSUED FOR: ANFIELD  
 LAST PLOT DATE: 7/20/17 CAD FILENAME: USER/ANFIELD/CLARKSON HILL/FIG 14.1.dwg

CLARKSON HILL URANIUM PROJECT  
 43-101 MINERAL RESOURCES REPORT  
 NATRONA COUNTY, WYOMING

MINERAL TRENDS MAP  
 FIGURE 14.1

REV.	DATE	BY	CHK
1	7/20/17	CDS	

SCALE: 1"=400'  
 DRAWN BY: CDS  
 CHECKED:  
 APPROVED:

## 14.6 Discussion on Mineral Resources

Mineral resources do not have demonstrated economic viability, but they have had technical and economic constraints applied to them to establish reasonable prospects for eventual economic extraction. Typically the tons and grade of the Inferred Mineral Resources are estimated on the basis of limited geological evidence and sampling, but the information is sufficient to imply, but not verify, geological and grade continuity. At Clarkson Hill, based on the pre-2008 drill data, geological evidence derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to reasonably assume geological and grade continuity and support classification of the mineral resources as indicated. However, due to the lack of verification drilling, the Author recommends classification as Inferred Mineral Resources. The author expects the majority of the Inferred could be upgraded to Indicated Mineral Resources with additional drilling.

The project is located in a geological setting and host formation for which the geology is well known and past mining, milling, and recovery of uranium has been successfully completed from similar deposits. The Mineral Resources do have risks similar in nature to mineral resources on other mineral projects in general and uranium projects in particular. Risks common to mineral projects include:

- variance in the grade and continuity of mineralization from what was interpreted by drilling;
- changes in future commodity demand that could significantly change the assumed uranium prices used in the mineral resource estimates;
- environmental, social and political acceptance of the project could cause delays in conducting work or increase the costs from what was assumed;
- variance in operating costs from what was assumed in assessing reasonable prospects and in determining the cut-offs used in the mineral resource estimates;
- differences in the mining and mineral processing recovery from what was assumed in the resource estimates.

With regard to assessing the socio-economic, political, environmental, permitting, legal, title, taxation, marketing, or other relevant factors which could materially affect the estimated mineral resources of the Project, the following information is pertinent. Wyoming mines have produced over 200 million pounds of uranium from both conventional and ISR mine and mill operations. Production began in the early 1950's and continues to the present. The State has ranked as the number one US producer of uranium since 1994. Wyoming is considered generally favorable to mine development provided established environmental regulations are met (refer to "Wyoming Politicians, Regulators Embrace Uranium Miners With Open Arms", Finch, 2006). An

assessment by the Fraser Institute published in February 2017, ranks Wyoming as 7th out of 104 jurisdictions using a Policy Perception Index, which indicates a very favorable perception by the mining industry towards Wyoming mining policies.

The Author is not aware of any other environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors which would materially affect the mineral resource estimates. To the Author's knowledge there are no other significant factors that may affect access, title, or the right or ability to perform work on the property, provided the conditions of all mineral leases and options, and relevant operating permits and licenses are met. The reader is cautioned that additional drilling on the project may or may not result in discovery of additional mineral resources on the property.

## **SECTIONS 15 THROUGH 22**

These sections are not applicable to this Report since this is not an Advanced Property.

### **23.0 ADJACENT PROPERTIES**

Not applicable.

#### **24.0 OTHER RELEVANT DATA AND INFORMATION**

To the author's knowledge there is no additional information or explanation necessary to make the Report understandable and not misleading.

## 25.0 INTERPRETATION AND CONCLUSIONS

This report summarizes the mineral resources within the Clarkson Hill Claims. The Technical Report provides an estimate of mineral resources, indicating that the available data does define a mineralization predominantly within the Sections 17 and 18, T31N, R82W. Data available for this mineral resource evaluation was complete with the exception of actual drill and or core samples and included:

- Copies of all geophysical logs;
- Copies of all lithological logs;
- Copies of chemical assays;
- Copies of reports and studies referenced in the Technical Report;
- Surveyed hole locations and elevations;
- Drill hole maps; and
- Geologic Cross Sections

At Clarkson Hill, based on the pre-2008 drill data, geological evidence derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to reasonably assume geological and grade continuity and support classification of the mineral resources as indicated. The 2008 drilling was located outside the area for which mineral resources were estimated and does not affect the estimate. Due to the lack of verification drilling, the Author recommends classification as Inferred Mineral Resources. The author expects the majority of the Inferred could be upgraded to Indicated Mineral Resources with additional drilling. Mineral resources are not mineral reserves and do not have demonstrated economic viability, however, based on the depth, grade, and geological continuity in comparison to mine operations in similar host formations there is a reasonable prospect for eventual economic extraction.

Wyoming is a State with a long history of uranium mining operations, is currently the largest producer of mined uranium in the USA, and is considered by the mining industry to be a State with a highly favorable Policy Perception Index. Assumptions regarding uranium prices, mining costs, and metallurgical recoveries are by their nature, forward-looking, and actual prices, costs, and performance results may be significantly different.

The author considers the risks to the Clarkson Hill mineral resource estimates to be reasonably understood, and can be mitigated during the recommended exploration work program. The author is not aware of any other specific risks or uncertainties that might significantly affect the mineral resource estimates.

## 26.0 RECOMMENDATIONS

Overall it is recommended that future resource estimations consider alternative mine extraction assumptions and mineral recovery methodologies including conventional open pit mining with heap leach or conventional mill recovery and/or In Situ Recovery (ISR). The depth, local geologic and hydrologic conditions, and local variations in the character of mineralization, will influence the ultimate selection of mining method. Leach solutions from heap leach and/or ISR would require a similar central processing facility for final product production.

The recommended Phase 1 non-contingent program with total estimated expenditures of \$500,000 (US dollars) includes:

- Confirm by drilling the potential mineralized trends within the horizons and at the locations indicated by historical data. Estimated 50 drill holes at average depth of 500 feet or 25,000 feet of drilling at an estimated cost of \$250,000.
- Confirm previous radiometric equilibrium evaluations by completing core holes and comparing chemical assays with radiometric data within the horizons and at the locations indicated by historical data. Estimated 10 core holes at a cost of \$10,000 each for a total estimated cost of \$100,000.
- Confirm and expand previous metallurgical studies and investigations including the collection of additional core samples for testing utilizing an alkaline lixiviant. Estimated cost \$100,000.
- Complete hydrological investigations and studies including determination of aquifer properties and current ground water levels and quality. Construction and testing of two monitor wells; estimated cost \$25,000 each for a total estimated cost of \$50,000.

Upon completion of Phase 1, Phase 2 recommendations include:

- Complete a mineral reserve and economic feasibility study including preparation of an NI 43-101 compliant mineral reserve report.
- Evaluate the potential for developing the Clarkson Hill Claims as a satellite operation feeding existing mineral processing facilities and/or consolidating the Clarkson Hill Claims with other properties to support the capital investment of a new central processing facility.

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## 28.0 DATE AND SIGNATURE PAGE

### SIGNATURE PAGE AND CERTIFICATE OF QUALIFIED PERSON

I, Douglas L. Beahm, P.E., P.G., do hereby certify that:

1. I am the Principal Engineer and President of BRS, Inc., 1130 Major Avenue, Riverton, Wyoming 82501.
2. I am the author of the report “CLARKSON HILL URANIUM PROJECT, MINERAL RESOURCE, NI 43-101 Technical Report, NATRONA COUNTY, WYOMING, USA” and dated July 27, 2017.
3. I graduated with a Bachelor of Science degree in Geological Engineering from the Colorado School of Mines in 1974. I am a licensed Professional Engineer in Wyoming, Colorado, Utah, and Oregon; a licensed Professional Geologist in Wyoming; a Registered Member of the SME.
4. I have worked as an engineer and a geologist for over 40 years. My work experience includes: uranium exploration, mine production, and mine/mill decommissioning and reclamation. Specifically, I have worked with numerous uranium projects hosted in sandstone environments in Wyoming.
5. I was last present at the site on July 22, 2017.
6. I am responsible for all sections of the report.
7. I am independent of the issuer applying all of the tests in NI 43-101.
8. I have prior working experience on the property as stated in the report. Specifically, I completed a previous Technical Report for the property on behalf of Artha Resources in 2007/2008.
9. I have read the definition of “qualified person” set out in National Instrument 43-101 and certify that by reason of my education, professional registration, and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with same.
11. As of the date of this report, to the best of my knowledge, information and belief, the parts of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

27 July , 2017

*Signed and Sealed*

Douglas L. Beahm