



# **Hansen Project Update**

**South T-Bar Property Owners Association  
Canon City, Colorado  
June 27, 2015**

# Disclaimer

## **CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS:**

Certain information in this press release constitutes forward-looking statements under applicable securities law. Any statements contained in this press release that are not statements of historical fact may be deemed to be forward-looking statements. Forward-looking statements are often identified by terms such as “may”, “should”, “anticipate”, “expects” and similar expressions. Forward-looking statements necessarily involve known and unknown risks, including, without limitation, risks associated with exploration, marketing and transportation; loss of markets; volatility of commodity prices; currency and interest rate fluctuations; imprecision of reserve estimates; environmental risks; competition; inability to access sufficient capital from internal and external sources; changes in legislation, including but not limited to income tax, environmental laws and regulatory matters. Readers are cautioned that the foregoing list of factors is not exhaustive.

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## **COMPETENT PERSONS STATEMENT:**

*The information in this report that relates to Mineral Resources at the Hansen/Taylor Ranch Uranium Project is based on information compiled by Mr. Rex Bryan who is a member of the American Institute of Professional Geologists, which is a Recognised Overseas Professional Organisation. Mr. Rex Bryan compiled this information in his capacity as a Principal Geologist of Tetra Tech. Mr. Rex Bryan has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr. Rex Bryan consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*The information in this report that relates to Exploration Results is based on information compiled by Mr. Ben Vallerine, who is a member of The Australian Institute of Mining and Metallurgy. Mr Vallerine is Exploration Manager, USA for Black Range Minerals Ltd. Mr. Vallerine has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr. Vallerine consents to the inclusion in the report if the matters based on his information in the form and context in which it appears.*



# Hansen/Taylor Ranch Project – Resources

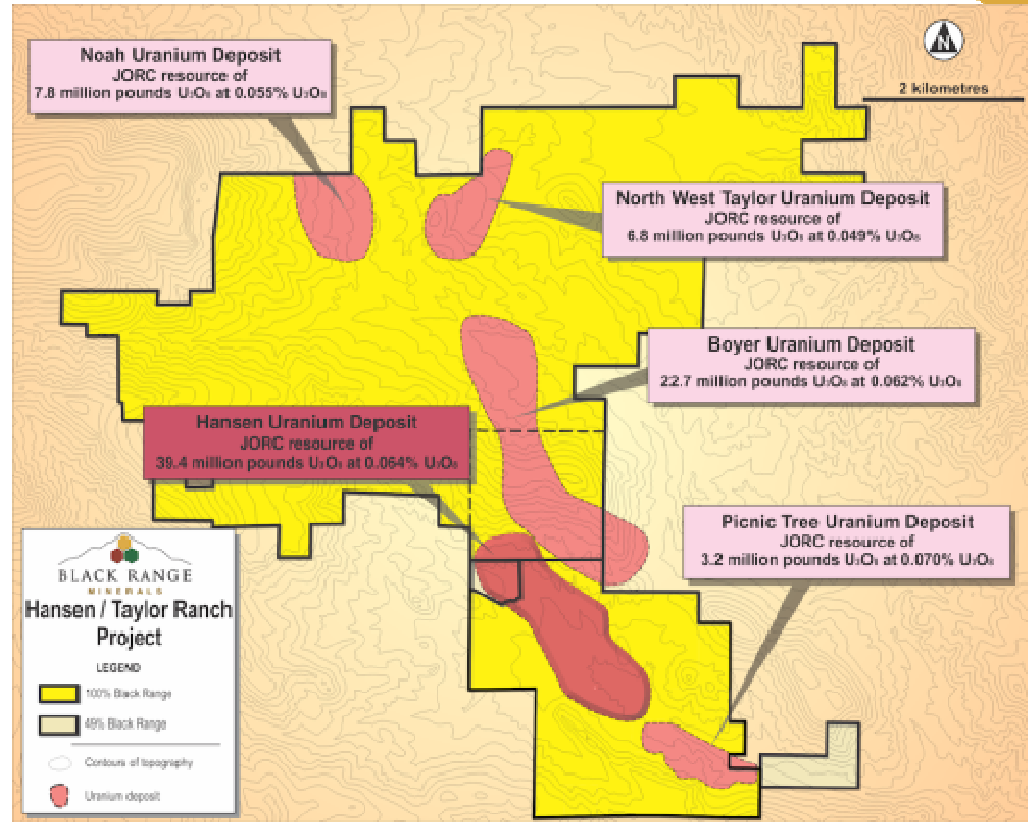
- More than 2,200 holes drilled for more than 1,100,000 ft.
- Project encompasses a series of large deposits over 6 miles of strike
- Robust grades and excellent thicknesses
- JORC compliant mineral resources applying a 0.025% cut-off:

**69.0 Mt at 0.060%  $U_3O_8$  for  
90.9 Mlbs of  $U_3O_8$**

- JORC compliant mineral resources, applying a 0.075% cut-off:

**16.6 Mt at 0.120%  $U_3O_8$  for  
43.8 Mlbs of  $U_3O_8$**

- Targeting initial development of the Hansen Deposit



Distribution of resources at the Hansen/Taylor Ranch Project

# Hansen Deposit – Scoping Study Economics

- Hansen Deposit is the largest and most advanced of all of the deposits within the Project

## Hansen Mineral Resources (only)

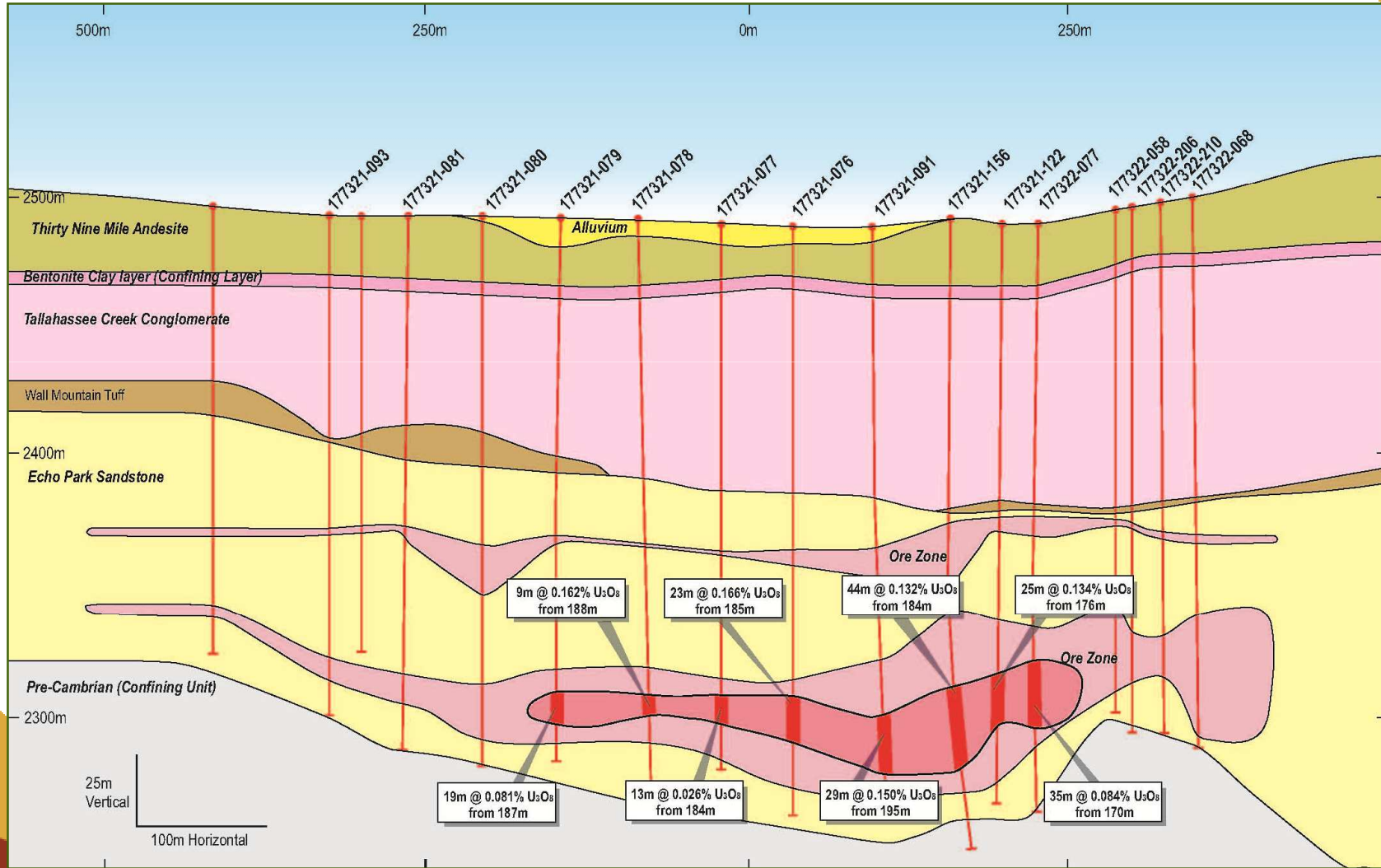
- At a 0.025% cut-off:       **28.0 Mt at 0.064% U<sub>3</sub>O<sub>8</sub> for 39.4 Mlbs of U<sub>3</sub>O<sub>8</sub>**
- At a 0.075% cut-off:       **7.0 Mt at 0.127% U<sub>3</sub>O<sub>8</sub> for 19.7 Mlbs of U<sub>3</sub>O<sub>8</sub>**

## Production Approach

- Preferred development methodology :
  - Underground Borehole Mining;
  - Ablation; and
  - Off-site milling
- 750,000 tonnes per annum @ 0.127% U<sub>3</sub>O<sub>8</sub> to **produce ~2Mlbs U<sub>3</sub>O<sub>8</sub> per annum**
  - **Capex estimate of <US\$80M with off-site milling**
  - **Opex estimate of ~US\$30/lb U<sub>3</sub>O<sub>8</sub>**
- Initial 7-8 year mine life, to be followed by development of other adjacent deposits
- Lowest environmental impact approach enabling a streamlined permitting process



# Hansen Uranium Deposit – Cross Section



Cross Section through the Hansen Uranium Deposit

# Hansen Deposit – Permitting

- Baseline environmental data collection has been progressing since 2011
- Fremont county discontinued residential and reduced surface water monitoring requirements.
- Ongoing quarterly groundwater and surface water sample collection within Hansen project area.
- Modification of current NOI (exploration permit) for bulk sampling program.
  - Less than 200 tons of material
  - Sample collection using borehole mining technique
  - Sample for metallurgic testing
- Preparation for renewal of the Fremont County Conditional use permit.

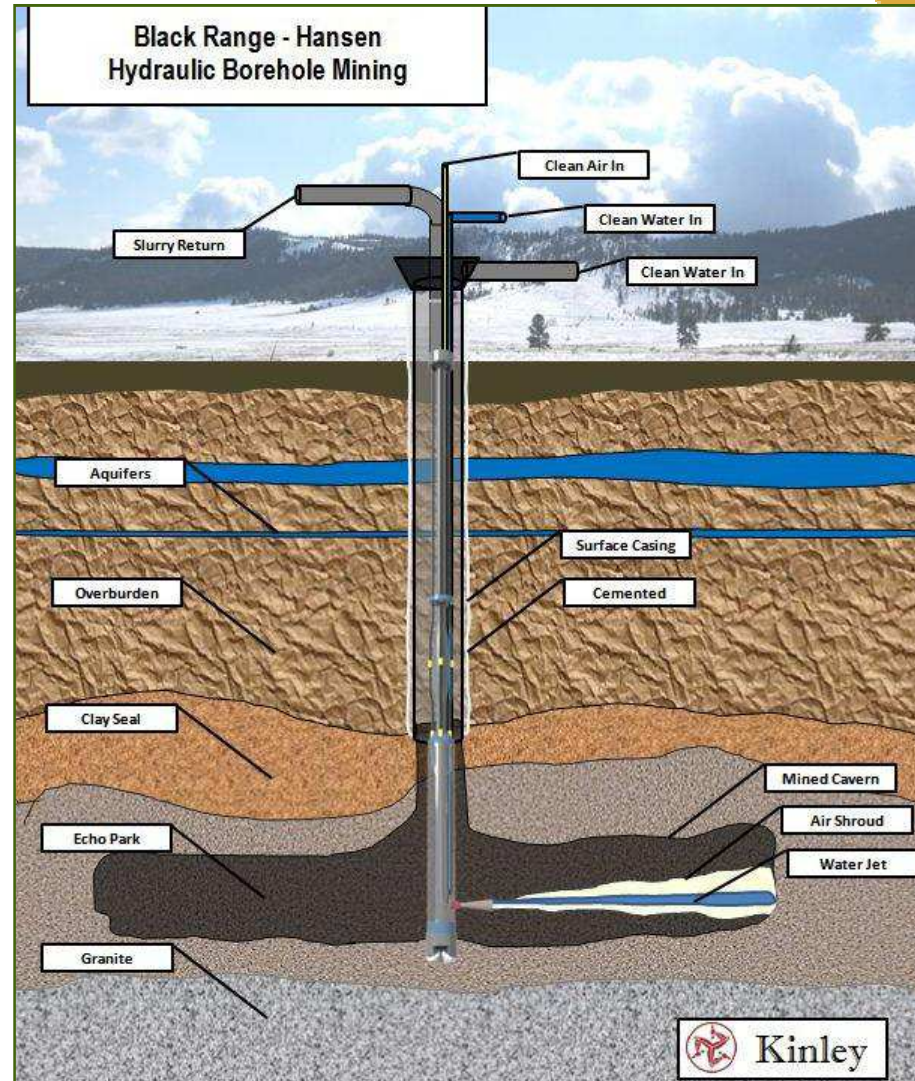


Installation of a water monitoring well at the Hansen Deposit during October 2013



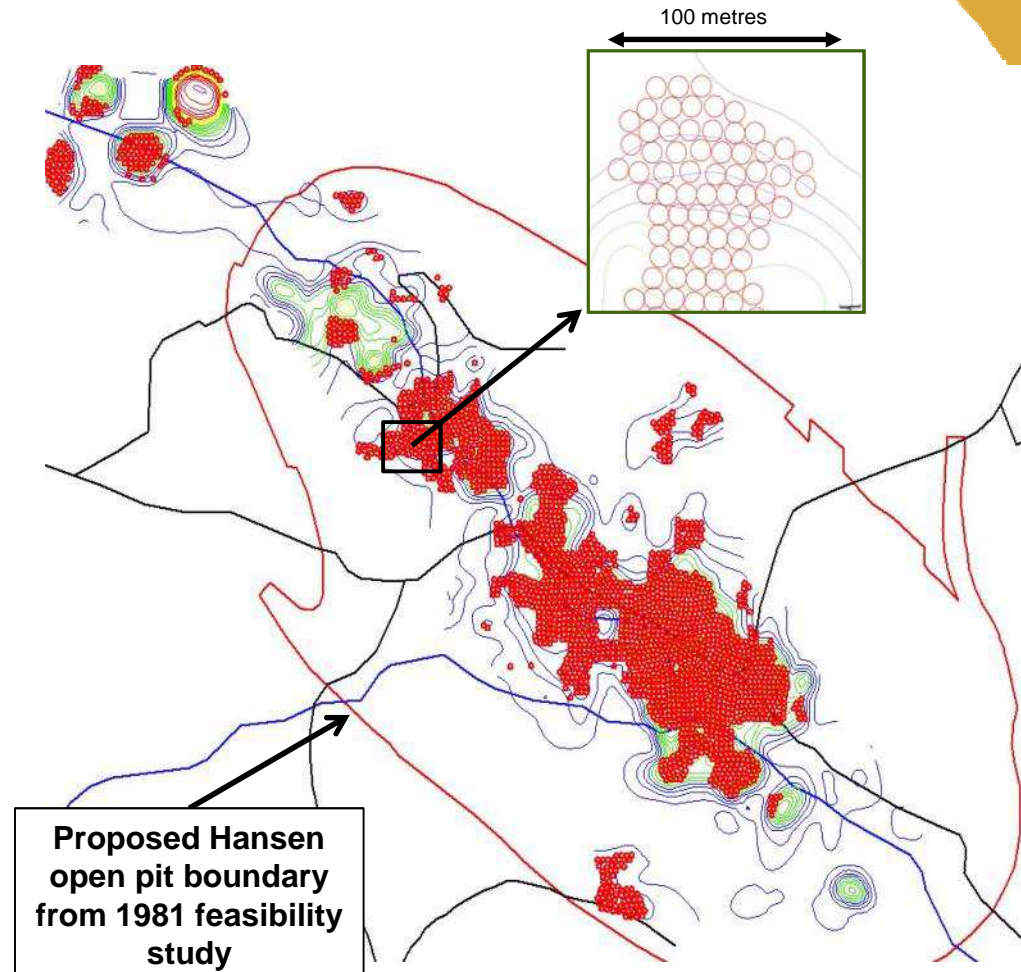
# Underground Borehole Mining

- Used in USA & Canada on various deposit types including uranium.
- Small surface footprint with mobile equipment.
- Selective mining method – which can target high-grade pods.
- Conventional 12” hole drilled and cased to ore horizon.
- High pressure water pumped through a nozzle that shoots at the mineralized rock face.
- ~35 ft. diameter cylindrical hole excavated within the mineralized horizon.
- Ore in a slurry air-lifted to surface in controlled, safe and closed environment.
- Backfill of cavity with cleaned sands.
- Very low environmental disturbance.



# Underground Borehole Mining Operations

- 180 hours per hole (drill, mine & backfill).
- Cutting pressure <1000psi.
- Approximately 2,800 holes required to mine Hansen Deposit.
- 2 overburden and 3 production rigs operating.
- Initial mine units produce circa 100,000t of ore containing on average ~300,000lbs of  $U_3O_8$ .
- Eliminates upfront Capex and lead time required for conventional open-pit or underground mining.
- Targeting an 8 year mine life.



11 metre cylinders plotted on high-grade mineralisation at the Hansen Deposit – indicating possible underground borehole mining layout on grade-thickness contours.



# Ablation Technology

- Applicable to sandstone-hosted uranium deposits
- Uranium minerals form a patina (outer coating) around individual grains that make up the mineralized sandstone host rock
- Ablation uses kinetic energy to force grains against each other, removing the patina from the barren sandstone grains
- The fine material comprises a high-grade, high-value ore
- Testwork on multiple sandstone-type deposits consistently produces a ore containing 90-95% of the uranium in ~10-20% of the mass
- The low volume ore can then be economically transported off-site for conversion to yellowcake at a conventional processing facility



Pre-Ablated Hansen Ore



Post-Ablated Barren Material

## Ablation and the Hansen Deposit

- Extensive testwork undertaken
- Consistently recovered ~95% of the  $U_3O_8$  in ~10-20% of the mass
- Potential to reduce 750,000t of ROM produced per annum to ~75,000t of ore
- Upgrading 0.127%  $U_3O_8$  ROM to ~1.20%  $U_3O_8$  ore

# Benefits of Ablation

## At the Mine

- An entirely physical process
- Observed >90% of mineralization separated into <10-20% of the mass
- Barren material (cleaned sands) can be used for back-fill

## Mine to Mill

- Up to ~90% reduction in transport costs
- An on-site mill is not required at many currently 'stranded' deposits – reducing capital costs

## At the Mill

- Up to ~90% less material to process, hence:
- Smaller tanks and equipment for comparable output, hence lower capital requirements
- No grinding, hence lower power consumption
- Shorter processing times anticipated, hence mill output capacity increased
- Higher grade input, hence mill output capacity increased, therefore lower unit operating costs
- Up to 90% less tailings to dispose, hence lower capital and reclamation expenses.

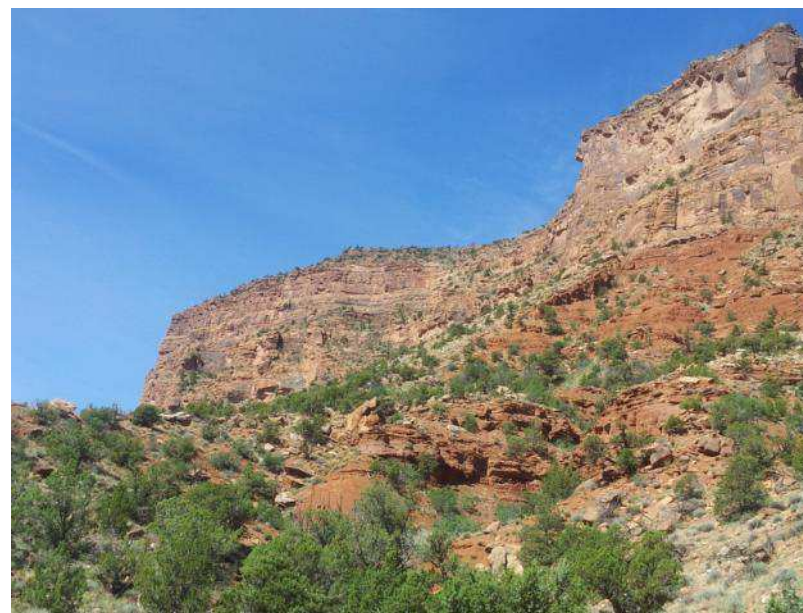


5 ton per hour Ablation Unit

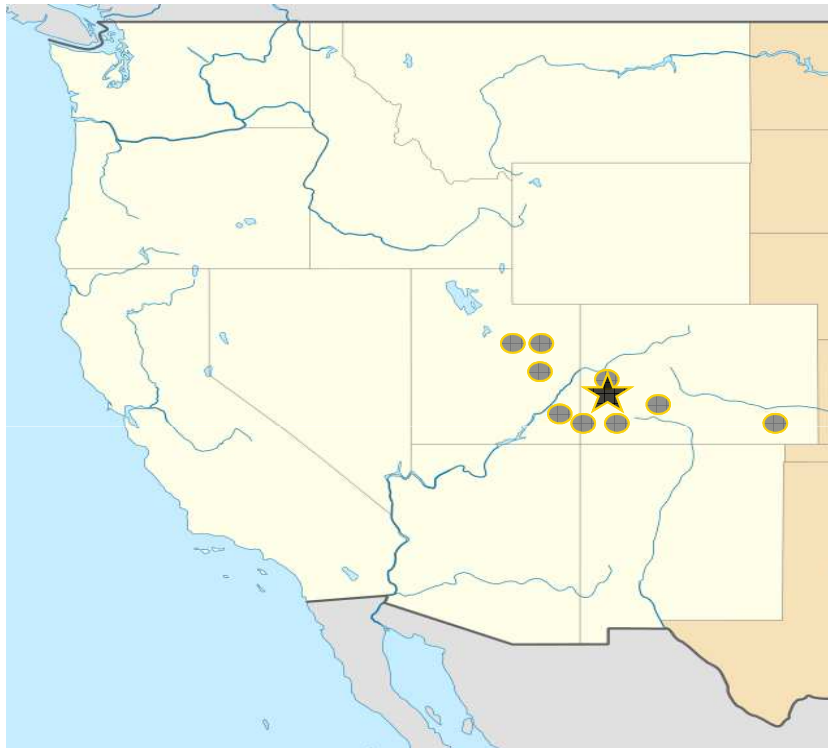
## Overall

- Economically recoverable resources are increased, as lower cut-off grades can be applied
- Opportunity to use as a clean-up technology such as legacy uranium mining sites

- Canadian Stock Exchange Listed CSE:WUC
- Experienced Management Team
- Owns the newly licensed Pinion Ridge Mill
- Near term production from Sunday mine complex
- Exchange 750 BLR shares for 1 WUC share.
- Results in 105 % premium for BLR shareholders
- Retain BLR assets in Black Range Minerals



# Mines and Mill Locations



- Piñon Ridge Mill
- Sunday Complex
- Van #4
- San Rafael
- Dunn
- Farmer Girl
- Sage
- Yellow Cat
- Baboon Basin
- Black Range Minerals

★ = Mill   ● = Mine

# Resource Table

Uranium & Vanadium Resources	Uranium Measured (lbs)	Uranium Indicated (lbs)	Uranium Inferred (lbs)	Grade (%)	Vanadium (lbs)	Grade (%)	Compliance
Sunday Complex		1,185,100	10,100,000	0.22	6,352,000	1.17	#
Van #4		376,600	10,000	0.30	1,312,500	1.03	#
San Rafael	1,700,000	1,705,000	1,860,000	0.22	7,106,000	0.3	**
Dunn	160,000	260,716	200,815	0.13	4,492,249	1.16	**
Farmer Girl		74,215		0.32	371,076	1.61	**
Sage	200,000	259,640	122,265	0.23	4,835,233	1.67	**
Yellow Cat		200,000	350,000	0.22	2,000,000	1.60	#
Baboon Basin		450,000	550,000	0.30	6,000,000	1.60	#
Black Range Minerals		39,370,000	51,000,000	0.06			*
<b>TOTAL</b>	<b>2,060,000</b>	<b>43,881,271</b>	<b>64,193,080</b>		<b>32,469,058</b>		
<b>Total Uranium (lbs)</b>	<b>110,134,351</b>						

\*JORC

\*\* 43-101

# in-house estimates





# Strategy

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- Prove and build 20 ton per hour Ablation unit
- Build Pinion Ridge mill to accept Ablation ore
- Bring near term mines into production
- Permit and bring Hansen deposit into production
- Expand resources