



## Strategic U.S. Uranium and Vanadium Assets

# Forward Looking Statements

Certain information contained in this presentation constitutes “forward-looking information” (as defined in the Securities Act (Ontario)) and “forwarding-looking statements” (as defined in the United States Private Securities Litigation Reform Act of 1995 and similar Canadian legislation concerning the business, operations and financial performance and condition of Western Uranium Corporation (“Western)). Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as “plans”, “expects” or “does not expect”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates” or “does not anticipate”, or “believes”, or variations of such words and phrases or state that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “occur”, “be achieved” or “has the potential to”. Forward-looking statements are based on the opinions and estimates of management as of the date such statements are made, and they are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of each of Western to be materially different from those expressed or implied by such forward-looking information. Western believes that the expectations reflected in this forward-looking information are reasonable, but no assurance can be given that these expectations will prove to be correct, and such forward-looking information included in this presentation should not be unduly relied upon. This information speaks only as of the date of this presentation. In particular, this presentation may contain forward-looking information pertaining to the following: the likelihood of the benefits to be derived from the Black Range transaction (the “Transaction”); the rationale of the Transaction; the estimates of each of Black Range’s and Western’s mineral resources; expectations regarding the milling of ores and associated cash flows; and expectations with respect to the enhanced recoveries and efficiencies with respect to the application of the kinetic separation. There can be no assurance that such statements will prove to be accurate or that they will not differ materially from those anticipated in the forward-looking information. Accordingly, readers should not place undue reliance on forward-looking statements. These factors are not and should not be construed as being exhaustive. Statements relating to “mineral resources” are deemed to be forward-looking information, as they involve the implied assessment, based on certain estimates and assumptions that the mineral resources described can be profitably produced in the future. The forward-looking information contained in the presentation is expressly qualified by this cautionary statement.

**Cautionary Note to United States Investors Concerning Estimates of Measured, Indicated and Inferred Mineral Resources:** This presentation may use the terms “measured”, “indicated” and “inferred” mineral resources. United States investors are advised that while such terms are recognized and required by Canadian regulations, the United States Securities and Exchange Commission does not recognize them. “Inferred mineral resources” have a great amount of uncertainty as to their existence, and as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimates of inferred mineral resource may not form the basis of feasibility or other economic studies. United States investors are cautioned not to assume that all or any part of measured or indicated mineral resource will ever be converted into mineral reserves. United States investors are also cautioned not to assume that all or any part of an inferred mineral resource exists, or is economically or legally mineable.

**CAUTIONARY STATEMENTS:** The operating parameters and recovery estimates derived from field trials have been developed by Western utilizing internal and skilled third party resources. No technical report developed in accordance with NI 43-101 standards has been undertaken to confirm such parameters and recoveries, which therefore cannot be relied upon.

January 2021

## **Near-Term Commercial Production**

- Sunday Mine Complex is production-ready, permitted and developed
- Quick re-start enabled by 2019/2020 exploration, development, and mining
- Low re-start CAPEX - infrastructure upgraded and mine workings rehabilitated
- High-grade target zones identified, drilled, mined, and ore stockpiled

## **Large Conventional U.S. Uranium and Vanadium Resources**

- Uranium resource (Colorado and Utah)
- Vanadium resource (Uravan Mineral Belt)
- Cost Advantage from uranium and vanadium co-production

## **Kinetic Separation Technology**

- Proprietary process that separates waste rock from minerals for processing
- Production unit built and available under NRC regulatory framework

## **Oil and Gas Royalty Property**

- Contributed 160 acre DJ-Basin property into 3,200 acre pooled unit
- 16 well permits approved and operator drilling 8 wells in the unit
- Operator targeting 8 wells for Q3 2021 well completion and production

# Tight Shareholder Capital Structure

**30.1 M**  
**Shares Issued**

**41.4M**  
**Shares Fully Diluted**

**C\$32.8M**  
**Market Capitalization**

## Capital Structure <sup>(1)</sup>

Share Price	C\$1.09
Market Capitalization	C\$32.8M
52 week closing price range	C\$0.32 - C\$1.24
Shares Issued	30.1M
Warrants	8.5M
Stock Options	2.8M
Shares Fully Diluted	41.4M

## Major Shareholders <sup>(1)</sup>

George Glasier	15.9%
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## Exchange / Stock Ticker

CSE	WUC
OTCQX	WSTRF

<sup>(1)</sup> At 12/31/2020





**George Glasier, *President, CEO and Director***

- Founder and leader of Western Uranium & Vanadium Corporation / 30+ years in uranium and vanadium
- Extensive experience in sales and marketing, project development and permitting uranium processing facilities
- Founder of Energy Fuels Inc. which is currently the largest uranium and vanadium resource holder in the U.S.
- Senior Executive and minority owner of Energy Fuels Nuclear, Inc., formerly the largest uranium producer in the United States led by Bob Adams, uranium pioneer and a founder of the U.S. uranium industry

**Robert Klein, *Chief Financial Officer***

- Oversees accounting and finance, and is closely involved in capital markets activities, corporate transactions, investor relations, public relations, and legal and compliance
- Previously, Vice President- Finance for Western and Chief Operating Officer at the Cross River Group
- Formerly, Managing Director at Analytical Research, and CFO of Five Points Capital, a Soros hedge fund spin-out
- Holds CFA designation, MBA from the University of Maryland, and began his career in public accounting

**Michael Rutter, *Vice President Operations***

- Oversees resource properties and the advancement of Kinetic Separation for Western
- Former Maintenance and Operations Superintendent for Energy Fuels in uranium / vanadium resource production
- Previously oversaw maintenance, planning and development for Lisbon Valley Mining's copper resources
- Initially gained mining, smelting, and refining experience as an electrician supporting Asarco's solvent extraction / electro-winning (SX/EW) process and electrical mining equipment

**Dr. Kaiwen Wu, Consulting Geologist**

- Supervised Sunday Mine Complex Project
- Previously, Senior Exploration Geologist for Energy Fuels overseeing uranium and vanadium exploration
- Expertise conventional sandstone hosted vanadium/uranium deposits; extensive experience in CO/UT Mineral Belt
- Holds Ph.D. In Geological Science from the University of Texas at El Paso

**Bryan Murphy**, *Non-Executive Director, Chairman*

- President of Magellan Limited, a firm providing advisory services to public and private companies
- CFO and Head of Finance for Biome Renewables Inc., an early stage renewable energy and design and engineering company
- Previously, Co-Founder and Managing Partner of Quest Partners, a boutique advisory firm serving private companies with corporate finance, M&A, and strategy advice
- Seasoned restructuring and turn-around professional with extensive international experience and relationships advising high-growth businesses across North America, Europe, and the Middle East
- Holds HBA and MBA from University of Western Ontario from the Richard Ivey School of Business
- Earned ICD.D designation from Institute of Corporate Directors and Rotman School of Management

**Andrew Wilder**, *Non-Executive Director*

- Founder and CEO of Cross River Group, a business development and finance firm focused on clean energy and environmental infrastructure
- Co-Founder and Advisor for Inventiv Capital Management, an infrastructure asset management firm
- Co-Founder and COO of North Sound Capital, a \$3B AUM long/short equity hedge fund
- Co-Founder Columbus Avenue Consulting, an independent fund administration business
- Extensive operations background & holds Chartered Accountant (Canada) and CFA designations

**Denis Frawley**, *Corporate Secretary*

- Senior Partner at Ormston List Frawley LLP, a Toronto based law firm
- Practices law in the areas of corporate, commercial and securities law, with an emphasis on advising businesses who require securities advice under both Canadian and U.S. law
- Member of the Law Society of Ontario and the New York State Bar Association

## URANIUM

- **Nuclear Power Reactors:** uranium sole fuel source
- **Highest Energy Density:** one 10 gram uranium pellet equals 17,000 cubic feet natural gas = 149 gallons oil = 1 ton of coal
- **Carbon Free - Baseload Power – Limited Land Use:** Making nuclear the optimal available climate change technology

## VANADIUM

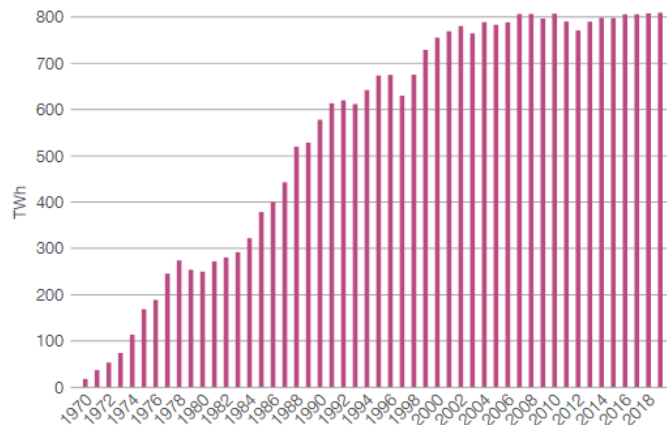
- **Steel Making and Aerospace:** addition of 2 lbs vanadium to 1 ton of steel doubles its strength and reduces weight
- **Vanadium Redox Flow Batteries (VRFB):** long duration grid-scale storage applications scaling better than lithium ion: solve renewable intermittency issues from solar, wind and hydro. Strong VRFB growth in China, Japan, and Australia in support non-baseload energy sources.
- **Vanadium Section 232 Investigation:** U.S. Department of Commerce report due to President Biden in February 2021

## OIL AND GAS

- **Petroleum Products:** gasoline, diesel fuel, jet fuel, heating oil, hydrocarbon gas liquids (HGLs), and petrochemical feedstocks

United States - Nuclear Electricity Production

Nuclear electricity production



Source: World Nuclear Association, IAEA PRIS

## Nuclear Power Generation

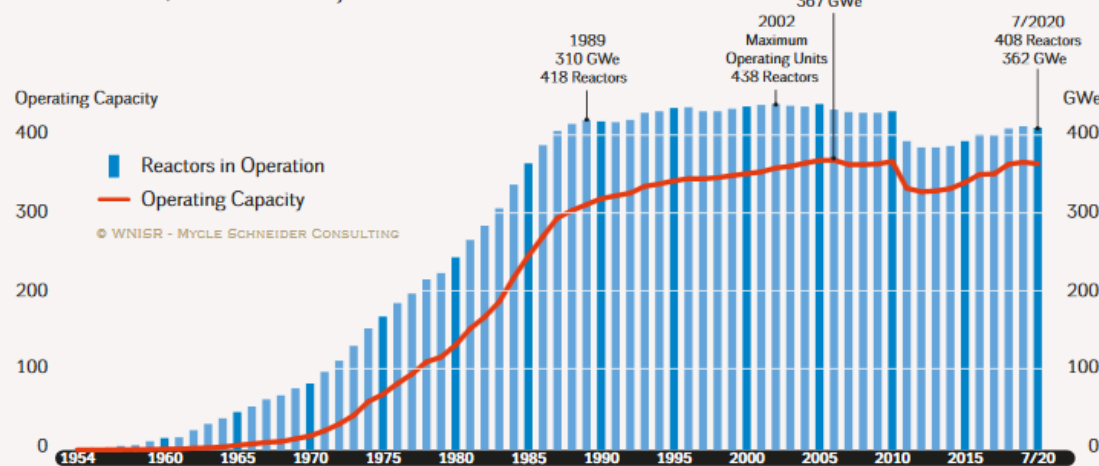
- ~10% of World electricity from 442 reactors
- ~20% of U.S. electricity from 94 reactors

## Nuclear Operating Capacity

- World and U.S. nuclear power generation has recovered from a 2011 post-Fukushima contraction and are near historical peak generation levels

## Nuclear Reactors and Net Operating Capacity in the World

in Units and GWe, from 1954 to 1 July 2020



Source: World Nuclear Industry Status Report



# Nuclear Fuel Demand Catalysts

**Nuclear Reactor Status Counts (January 2021)**

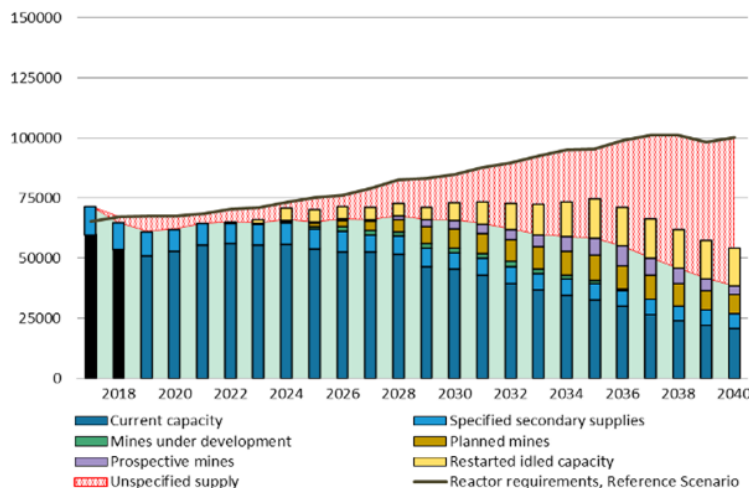
Country	Operable	Construction	Planned
U.S.	94	2	3
France	56	1	0
China	49	16	39
Russia	38	2	21
India	23	6	14
Rest of World	182	26	21
<b>World</b>	<b>442</b>	<b>53</b>	<b>98</b>

Source: WNA - World Nuclear Performance Report 2019

- Increasing global nuclear fuel reactor requirements
- Historically low utility inventories and uncontracted demand
- Japanese nuclear restarts pending (25 permitted reactors)
- New nuclear reactor construction (53 reactors)
- Next generation reactors: small modular reactors (SMRs) and advanced reactors deployed in the second half of the decade
- Climate change decarbonization initiatives increasing nuclear power utilization for its clean energy attributes

**Projection Uranium Production to 2040- Reference Scenario Supply (tonnes U) <sup>(1)</sup>**

Figure 7: Reference Scenario supply, tU

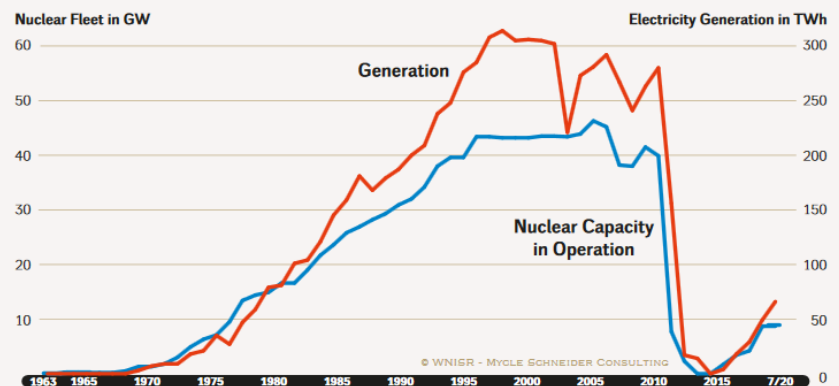


<sup>(1)</sup> Source: The Nuclear Fuel Report: Global Scenarios for Demand and Supply Availability 2019-2040

## Japan Post-Fukushima: 9 Reactor Restarts & 25 Permits Pending

### Rise and Fall of the Japanese Nuclear Program - 1963 to July 2020

Fleet (in GW) and Electricity Generation (in TWh)



Source: World Nuclear Industry Status Report

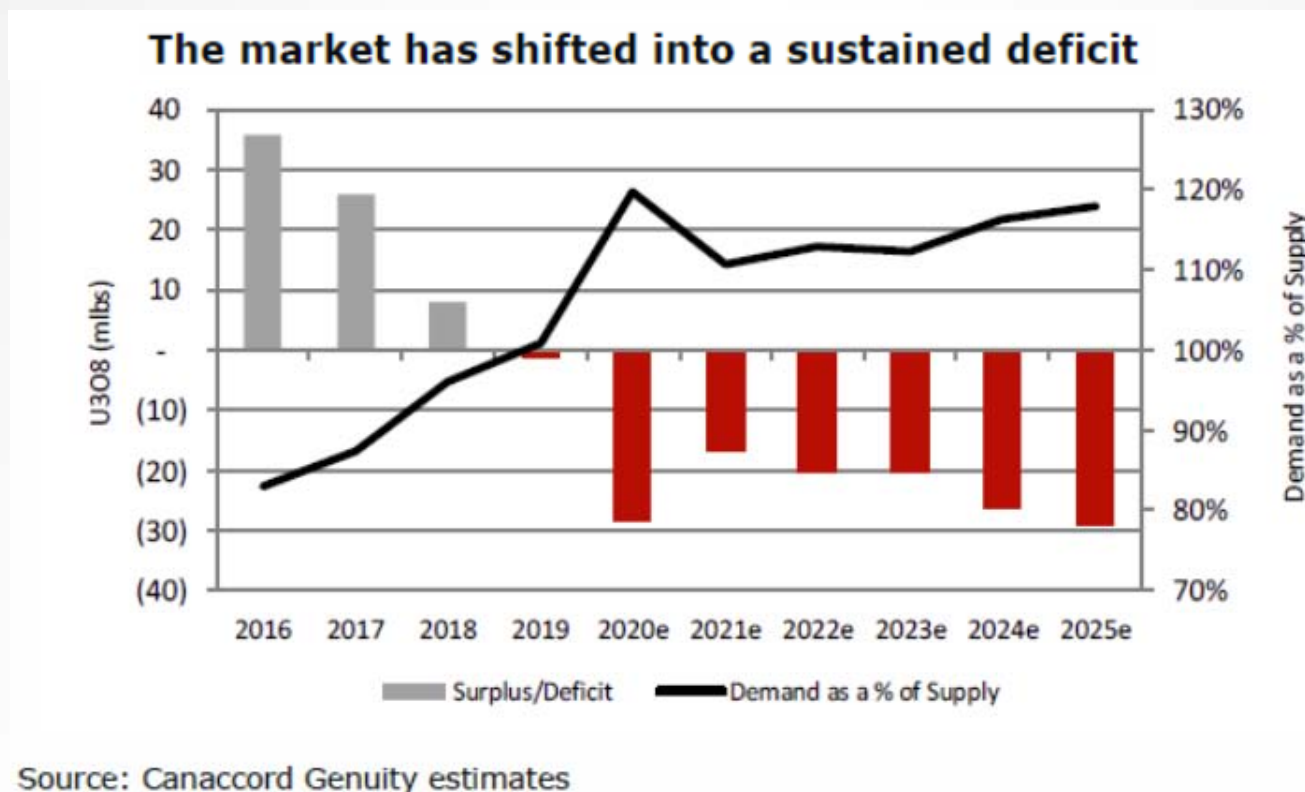
# Uranium Structural Supply Deficit

## Declining Uranium Primary Production

- **Spot Prices < Average Global Production Costs:** closed uranium mines in recent years and curtailed new uranium mine development which requires 7 to 10 year lead times
- **COVID-19 Supply Disruptions 2020/2021 :** suspended mine operations in multiple countries
- **World's Largest Producers Buying on the Spot Market:** Kazatomprom, Cameco, and Orano
- **Additional Mine Closures in 2021 due to depletion:** Ranger (ERA) and COMINAK (Orano)

### 2020 GLOBAL URANIUM SUPPLY DEFICIT:

Uranium Demand – Uranium Production = 30M lbs. to 50M lbs. + (estimate)



### TRUMP ADMINISTRATION (2017 – 2021)

- **FOCUS:** Market distortions caused by foreign state-owned enterprises
- **GOALS:** Energy Independence, National Security, Critical Minerals Supply Chains
- **PROCESS:** Uranium section 232 investigation and Nuclear Fuel Working Group's report - Restoring America's Competitive Nuclear Energy Advantage
- **PROGRAMS:**
  - **Strategic Uranium Reserve:** Proposed 10 year \$1.5B Program with \$75M appropriation funding in 2021; U.S. Department of Energy establishing domestic uranium purchase program
  - **Russian Suspension Agreement:** Extended until 2040 with up to 75% reductions Russia imports

### BIDEN ADMINISTRATION (Starting January 2021)

- **FOCUS:** Counteracting climate change impacts (Top 4 policy priority)
- **GOALS:** Achieve zero-carbon electricity generation by 2035 through a clean energy economy
- **PROCESS:** All departments and agencies of U.S. government accountable for climate initiatives
- **PROGRAMS:**
  - **Campaigned on Environmental Agenda and nominated a Pro-Climate Cabinet**
  - **Paris Agreement** – Rejoined international climate change treaty on Day #1
  - **Future Policy-** Promotion of clean energy over fossil fuels
  - **Future Policy-** Incentivize existing clean energy assets and new clean technology development

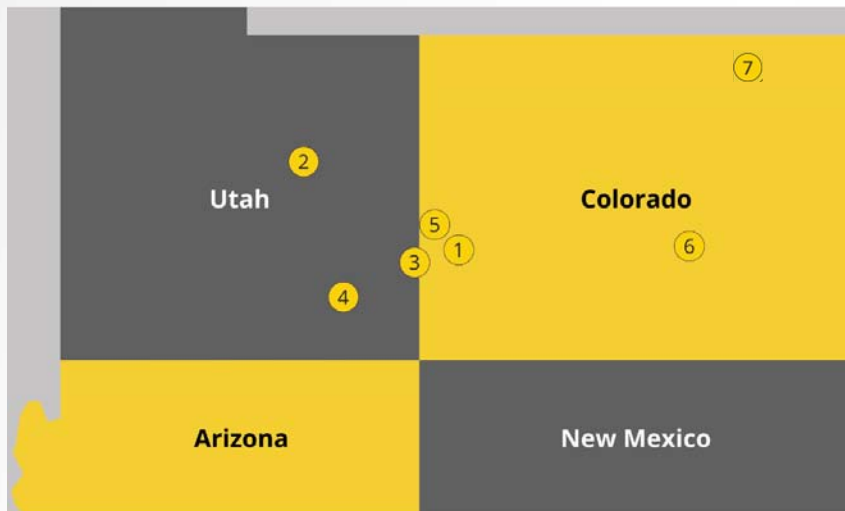
Nuclear produces ~55% of U.S. carbon-free electricity thus a major beneficiary of Future Policy

# Resource Portfolio

## Historic Uranium Resources and Vanadium Mineralization and Mine Locations <sup>(1)</sup>

Projects	HISTORIC* (Formerly Measured, Indicated and Inferred)		Vanadium to Uranium Ratio	Technical Report
	Uranium (lbs)	Grade (%)		
★ ① Sunday Mine Complex	2,913,914	0.25 to 0.36	6 : 1	NI 43-101 **
② San Rafael	5,264,300	0.25 to 0.33	1.35 : 1	NI 43-101 ***
③ Sage	581,905	0.15 to 0.23	6.25 : 1	NI 43-101 ****
⑥ Hansen/Taylor Ranch	46,480,000	0.058 to 0.062	NA	JORC Code *****

<sup>(1)</sup> See Important Caution Regarding Historic Mineral Resources and asterisk references on page 25.



### ★ Production-Ready Mines

#### Five Sunday Complex Mines

- Sunday Mine
- Carnation Mine
- St. Jude Mine
- West Sunday Mine
- Topaz Mine

Additional Uranium and Vanadium Mines: (4)Dunn (5)Van 4

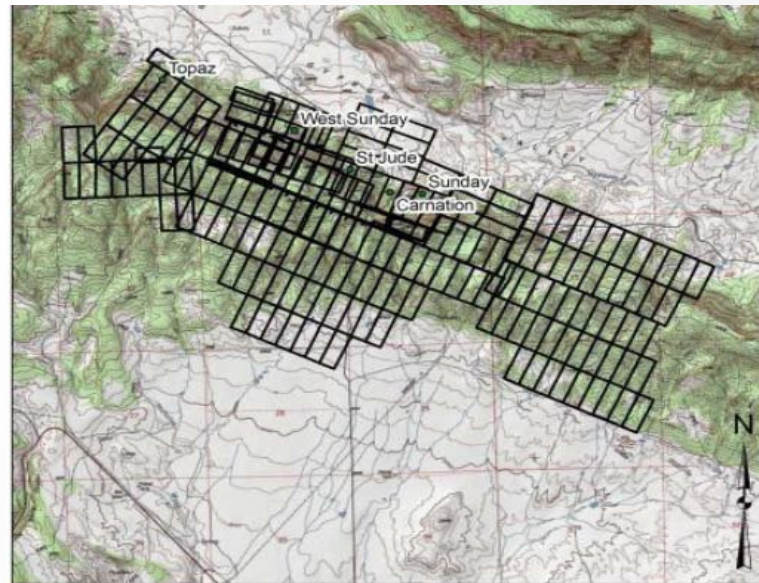
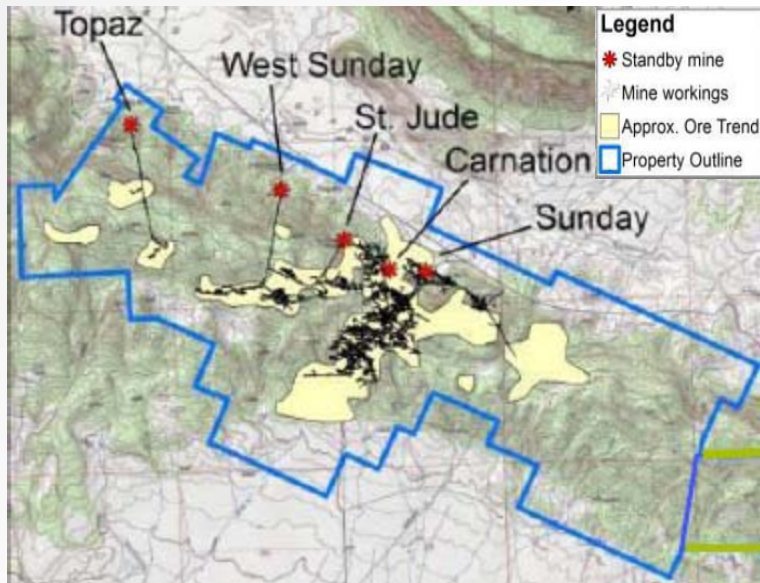
⑦ Bullen Oil & Gas Property, Weld County



# Sunday Mine Complex, Colorado



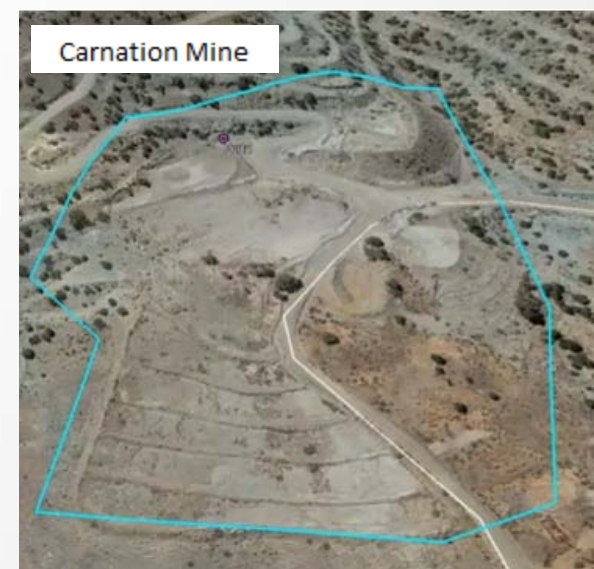
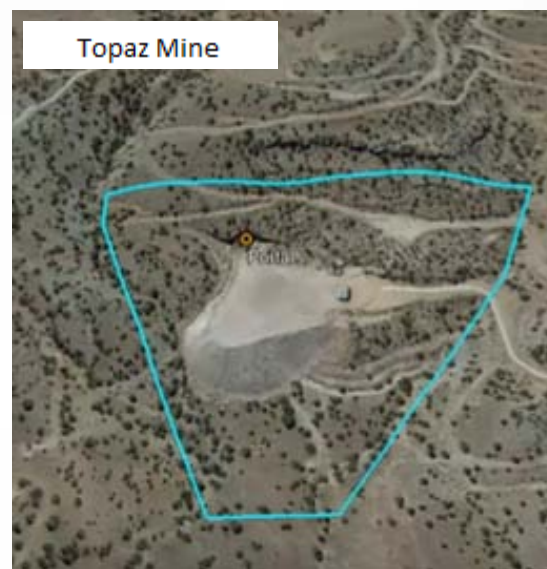
Panaramic view of the SMC from left to right: Sunday, Carnation, St. Jude, and West Sunday Mines





# Sunday Mine Complex

## Google Earth Views





# Sunday Mine Complex

## Arial Views

Sunday Mine



West Sunday Mine



St. Jude Mine



Topaz Mine



Carnation Mine

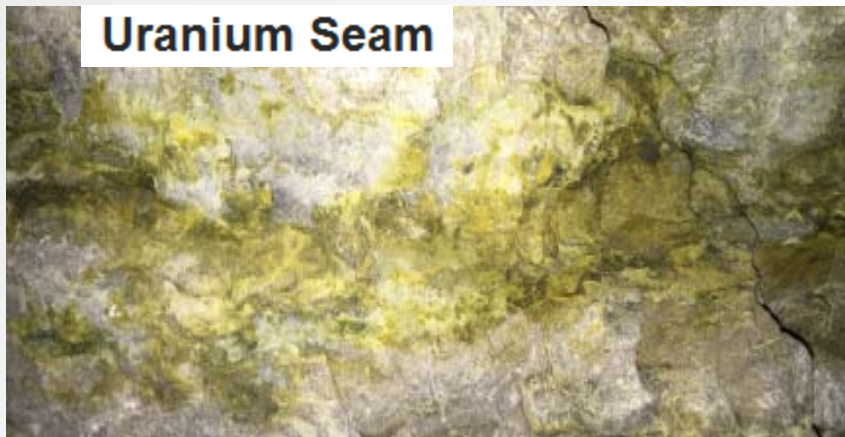




# Sunday Mine Complex

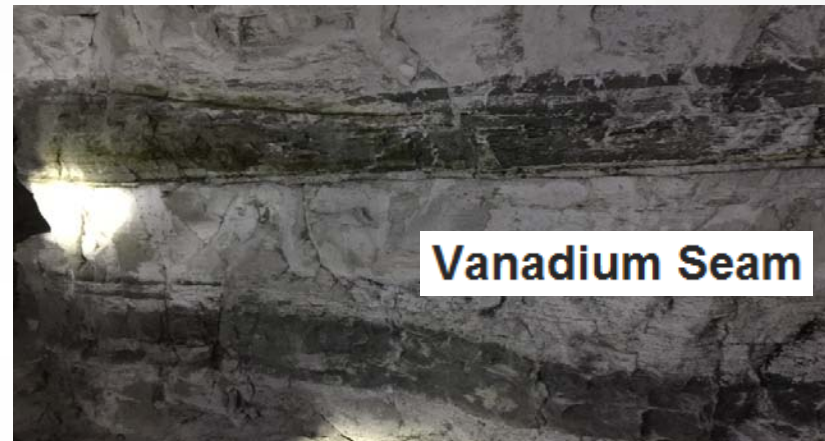
## High-Grade Ore Bodies

**Uranium Seam**



- $U^3O^8$  grades (~0.25% to 0.36%)

**Vanadium Seam**

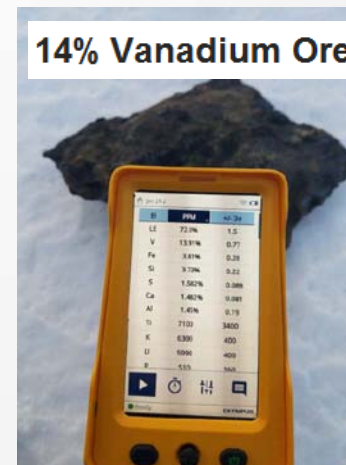


- $V^2O^5$  grades (~1.49% to 2.16%)

**Uranium-Vanadium Seam**



**14% Vanadium Ore**



# Sunday Mine Complex Portals





# Sunday Mine Complex Project

**SAMPLING**



**DEVELOPMENT DRILLING**



**MINING**



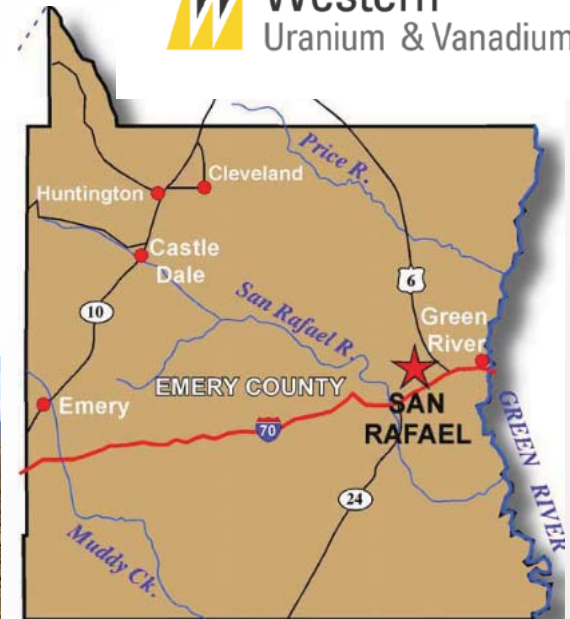
**UNDERGROUND STOCKPILING**





# San Rafael Project, Utah

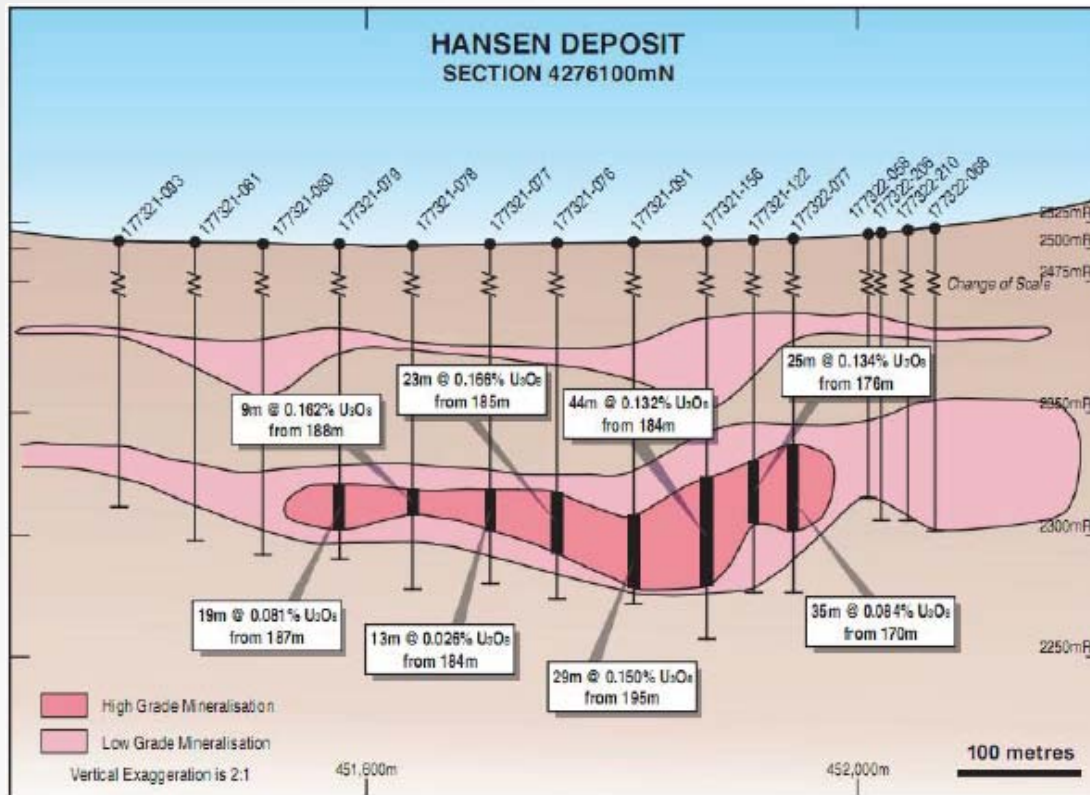
- Development project situated on ~3,540 acres in Emery County, Utah
- San Rafael Uranium District and Tidwell Mineral Belt location
- More than 3,000 historic holes drilled; last drill program 2007 to 2009
- Last NI 43-101 Technical Report update 2014
- Mining method: adjacent mines using conventional underground mining, but structural potential for In-Situ Recover (ISR)



# Hansen/Taylor Ranch Project, Colorado



- Tallahassee Creek Uranium District development project in Fremont County, Colorado
- 13,000 total project acres are among largest historic U.S. uranium resources; Western controls majority
- Sandstone hosted deposits at shallow depth with thick high-grade ore body
- Last JORC Code Mineral Resource Estimate update 2014
- Last development: Five monitor wells installed & baseline water sampling program 2013-2015
- Potential mining methods: open-pit, ISR, borehole and underground conventional

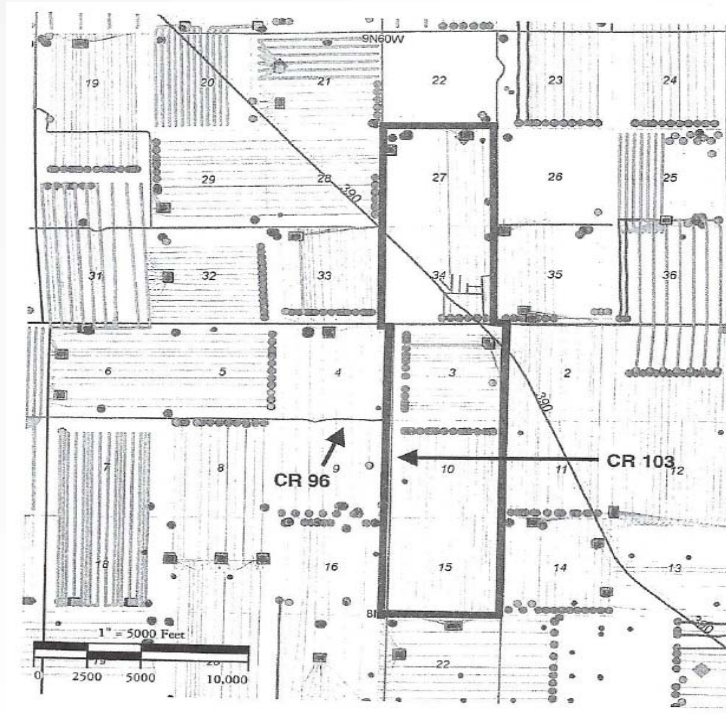
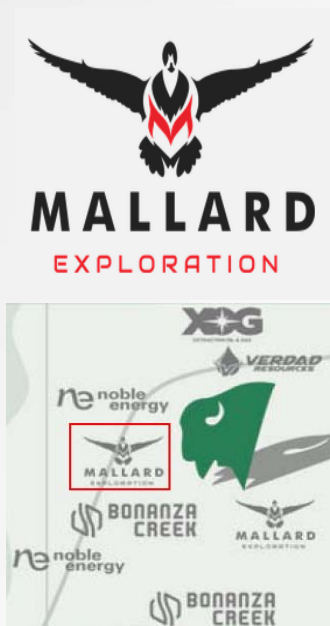




# Oil & Gas Property Weld County Colorado | DJ-Basin

## Bullen Oil & Gas Property (160 acres) - royalty interest in a 3,200 acre pooled unit

- Mallard Exploration (operator) acquired O&G rights from Bison Oil & Gas (2020)
- Maximum capacity 24 horizontal wells with 16 wells permitted to-date
- D-J Basin: production approved for Niobrara, Fort Hays, Codell, and Carlile Formations
- Drilling 8 southern wells: Q3 2021 target for well completion and production
- Drilling 8 northern wells could commence if southern wells determined successful



## 3,200 Acre Pooled Unit Parcels:

27-9N-60W  
34-9N-60W  
3-8N-60W  
10-8N-60W  
15-8N-60W

# Kinetic Separation



- Feedstock sandstone-hosted deposits
- Uranium and vanadium minerals exist within the matrix of sandstones and as a patina around individual sand grains
- Uses kinetic energy to force particles against each other, without any chemicals, to remove the mineralized patina from barren sandstone grains
- **The resulting fine material is a high-grade and high-value ore**
- Produces an ore comprised of 85-95% of the uranium/vanadium in approximately 10-20% of the mass of pre-separation material



# Kinetic Separation Benefits

## At the Mine

- Observed >90% of mineralization separated into <10-20% of the mass
- Barren material (cleaned sands) can be used for backfill

## Transportation

- Up to ~90% reduction in transport costs

## Processing

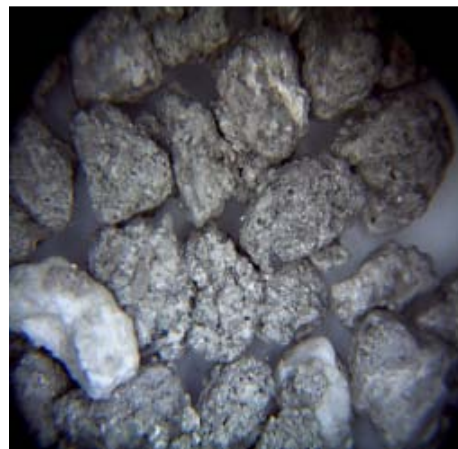
- Up to ~90% less material to process
- Smaller tanks and equipment for comparable output
- Lower power consumption
- Higher grade input and increased output
- Reduced waste product

## Overall

- Economic recoverable resources are increased using lower cut-off grades
- Opportunity to use as a cleanup technology such as legacy uranium mining sites

## Regulation

- Current NRC regulation for uranium recovery requires a milling license with exemptions



Pre-Separation Ore



Post-Separation Barren Material



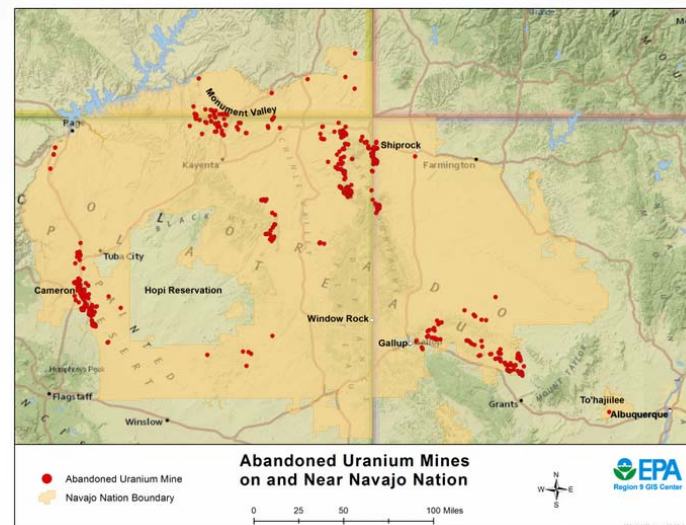
Post-Separation Ore



# Kinetic Separation Environmental Cleanup and Remediation



Colorado Legacy Uranium Ore Stockpile



A report published in August 2014 by the Department of Energy titled “Defense-Related Uranium Mines, Report To Congress” identified 4,225 mines which provided uranium ore to the AEC between 1947 & 1970.

An alternative to remediation or reclamation approach of existing waste-rock piles suggested in the 2014 report is the application of Kinetic Separation on the waste-rock, protore, & low grade stockpiles in existence today. ~69% of the mines identified are located in Colorado and Utah in addition to the many abandoned Navajo Nation uranium mines.

SOURCE: <http://energy.gov/sites/prod/files/2014/09/f18/Defense-RelatedUraniumMinesReporttoCongress-FINAL.pdf>

## **Historic Strategic Positioning**

Western was founded in 2014 to acquire uranium property packages in the post-Fukushima down market. This included the Sunday Mine Complex (SMC) that was fully developed by Union Carbide for almost \$50 million in the 1970's. Ownership of this developed project reduced share dilution by minimizing mine expenses. In 2019/2020 at a cost of over \$1 million, the SMC restarted mining operations and attained production-ready status. This first production center is now on standby.

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## **In Anticipation of a 2021 Uranium Cycle Up Market Positioning to Leverage Share Price to a Uranium Price Increase by:**

- Pursuing value-added projects
- Commencing Sunday Mine Complex follow-on work
- Developing a second production center
- Exploring for additional high-grade low cost resources

## Uranium Investment Thesis

The electrification-of-everything trend is expanding electricity requirements. Climate change policy, government support, and new technologies are launching a multi-decade growth period for clean energy and nuclear power generation. However, nuclear fuel production is declining. A prolonged period of uranium prices below average global production costs has created a structural supply deficit that COVID-19 disruptions have worsened. Analysts are projecting that a \$45 to \$60 incentive price is needed to balance uranium production with future nuclear fuel demand requirements.

## Western Uranium & Vanadium Corp. Opportunity

- Tight capital structure (30M shares) provides leverage to uranium price increases
- Opportunity to further increase leverage through value-added projects
- Sunday Mine Complex (SMC) Production-Ready and able to re-start on short notice
- SMC among limited number of available U.S. conventional uranium/vanadium mines
- SMC permitted, developed with underground infrastructure in place
- SMC low cost production due to uranium/vanadium co-products
- Western Leadership: CEO George Glasier's track record of uranium mining success

## **TOTAL HISTORIC URANIUM RESOURCES ~ 55,000,000 lbs**

**\*Important Caution Regarding Historic Mineral Resources:**

Historic mineral resources are not mineral reserves and do not have a demonstrated economic viability. All referenced historic mineral resources are historic estimates under NI 43-101. In order to disclose the historic resources as current, Western would need to complete and file an NI 43-101 technical report on [www.sedar.com](http://www.sedar.com). The mineral resource estimates set out above may be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic, legal, political and other factors. There is insufficient information available to assess the extent to which the potential development of the mineral resources described herein may be affected by these risks and the other risk factors discussed in the Company's most recent Management Discussion and Analysis.

**\*\*Anthony R. Adkins, CPG**, is responsible for validating the database as adequate for resource estimation and for estimating the mineral resources pertaining to the Sunday Complex described herein. Mr. Adkins is a Qualified Person and is independent of Western within meaning of NI 43-101.

**\*\*\*O. Jay Gatten, P. Geol., LLC** was commissioned by Western to prepare an Independent Technical Report compliant with the Canadian National Instrument, 43-101 on the San Rafael Uranium Project, an advanced-stage uranium property. The report was finalized on November 19, 2014 and filed on [sedar.com](http://www.sedar.com) on November 20, 2015.

**\*\*\*\*Colorado Plateau Partners** (a Joint Venture between Energy Fuels and Lynx-Royal) completed a NI 43-101 Technical Report on the Sage Plain Project (Technical Report on Colorado Plateau Partners LLC (Energy Fuels Resources Corporation/Lynx-Royal JV) Sage Plain Project, San Juan County, Utah and San Miguel County, Colorado by Douglas C. Peters, Certified Professional Geologist, Peters Geosciences Golden, Colorado December 16, 2011)

**\*\*\*\*\*The information in this presentation that relates to Mineral Resources at the Hansen/Taylor Ranch Uranium Project** has been prepared in accordance with JORC standards and is based on information compiled by Mr. Rex Bryan who is a Registered Member of the Society for Mining, Metallurgy and Exploration (SME), which is a Recognized Professional Organization. Mr. Rex Bryan compiled this information in his capacity as a Principal Geologist of Tetra Tech.

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