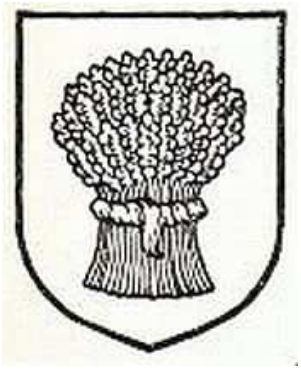
Wednesday, September 7, 2016



HALLGARTEN & COMPANY

Initiation of Coverage

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Western Uranium
(CSE:WUC, OTCQX:WSTRF, FSE:7WT)
Strategy: Long

Key Metrics		
Price (CAD)	$2.20	
12-Month Target Price (CAD)	$4.80	
Upside to Target	118%	
High-low (12 mth)	$1.20 - $5.00	
Market Cap (CAD mn)	$36.79	
Current Shares O/S	16.7	million
Fully-Diluted	17.6	million

	FY15	FY16e	FY17e
Hallgarten EPS		(0.02)	0.13
Actual EPS	(0.12)		
P/E	n/a	n/a	16.9

Western Uranium

All the Moving Parts for a Nascent Producer

- + The Sunday mine complex (SMC) is just one of a whole portfolio of past producing and prospective properties bunched in the same part of Colorado
- + The SMC was mined by Denison last decade and produces both Uranium and Vanadium
- + Company holds an exclusive license for the Ablation Mining Technology for extracting Uranium from sandstone hosted mineralisation
- + Sizeable stockpiles at the SMC means short term cashflow at no mining cost
- + The company has rights to the permitted Piñon Ridge mill which potentially puts it in a very exclusive club of miners with access to their own mill
- + In an ideal situation the company could have strong revenue streams from both Vanadium and Uranium
- + Management headed by former CEO of Energy Fuels, which was former owner of the mine property portfolio
- ✘ Uranium spot price remains in the dumps with attendant effect upon broader investor sentiment
- ✘ Financing is the next goal and this remains a tough market

Darkest Hour Before the Dawn?

In what was a bad four years for the mining space, special punishment was reserved for the uranium sub-space where every time it tried to stagger to its feet it was dealt a new, low-blow that sent it reeling. Even as mining markets have picked up in 2016, uranium has been, relatively, left behind as the spot price wallows and that acts as an anchor holding the sub-space from moving forward. Only the Rare Earth space gets to share in this "cruel and unusual" punishment.

However, the persistence of those that believe in the long term attractiveness of nuclear power has kept the space afloat and allowed even a few hardy near-producers or those holding past-producing properties, like Western Uranium, to soldier on through the tough times.

Western is a new construct but its components have "form" as would be said in the racing industry. Beyond the Sunday Mine Complex there is the collection of other properties it picked up from Energy Fuels, there is its CEO, who is ex-Energy Fuels, and there is its option on the Piñon Ridge project. In some senses it is akin to an "Energy Fuels Redux" but appearing on the scene after the space has bottomed with the benefits of hindsight and the worst behind it as it enters production.

In this review we shall look at the Sunday Mine Complex (with less focus on the rest of the portfolio), the Ablation technology, the proposed milling complex and the skillsets that the current management group has accumulated over their time in the industry.

Some Back History

Western Uranium (WUC.cx) was created by the merger between Homeland Uranium Inc. and Piñon Ridge Mining LLC with a name change to the current designation. In August 2014, WUC acquired its mining assets from Energy Fuels and in September 2015 acquired additional properties from Black Range Minerals. The mining assets are located along the Colorado-Utah border. Energy Fuels retained a 1% production royalty on all of the properties. The nearby Piñon Ridge mill project will be also brought into the fold in the near future.

Through the completed and mooted transactions, Western Uranium has become a Uranium developer with all the required moving parts. The most unique part is the milling project in that the Uranium scene in the US has been denuded of such assets. However it is also notable that the company now has what it claims to be the second largest uranium resource in the United States, with assets totaling over 100mn pounds of U3O8 and 35mn pounds of vanadium at its Sunday Mine Complex. Beyond that there are substantial stockpiles of mined ore not included in the resource statements. The SMC is fully permitted and production at the project is slated to commence in mid-2017 with an initial focus on the processing of stockpiles which come with no mining cost and should be viable even at the current reigning low Uranium spot price.

Western also holds an exclusive license to use ablation mining technology, a technology that improves the efficiency of the sandstone-hosted uranium mining process and which is attracting the attentions of other uranium developers that see it is a fast path to production within the constraints of low uranium prices.

The Sunday Mine

The Sunday Mine Complex consists of approximately 233 contiguous unpatented mining claims that total about 3,748 acres (1,517 ha). They are located on public lands administered by the BLM.

The property is best accessed from Colorado via State Highway 141 east out of Naturita, Colorado for about 6 kms until the 141/145 Highway junction, then about 36 kms south on Hwy 141, then about 10 kms northwest on County Road 20R. The State

Highway 141 is a paved all-weather road and the County Road 20R is a gravel road passable in all but the worst weather.

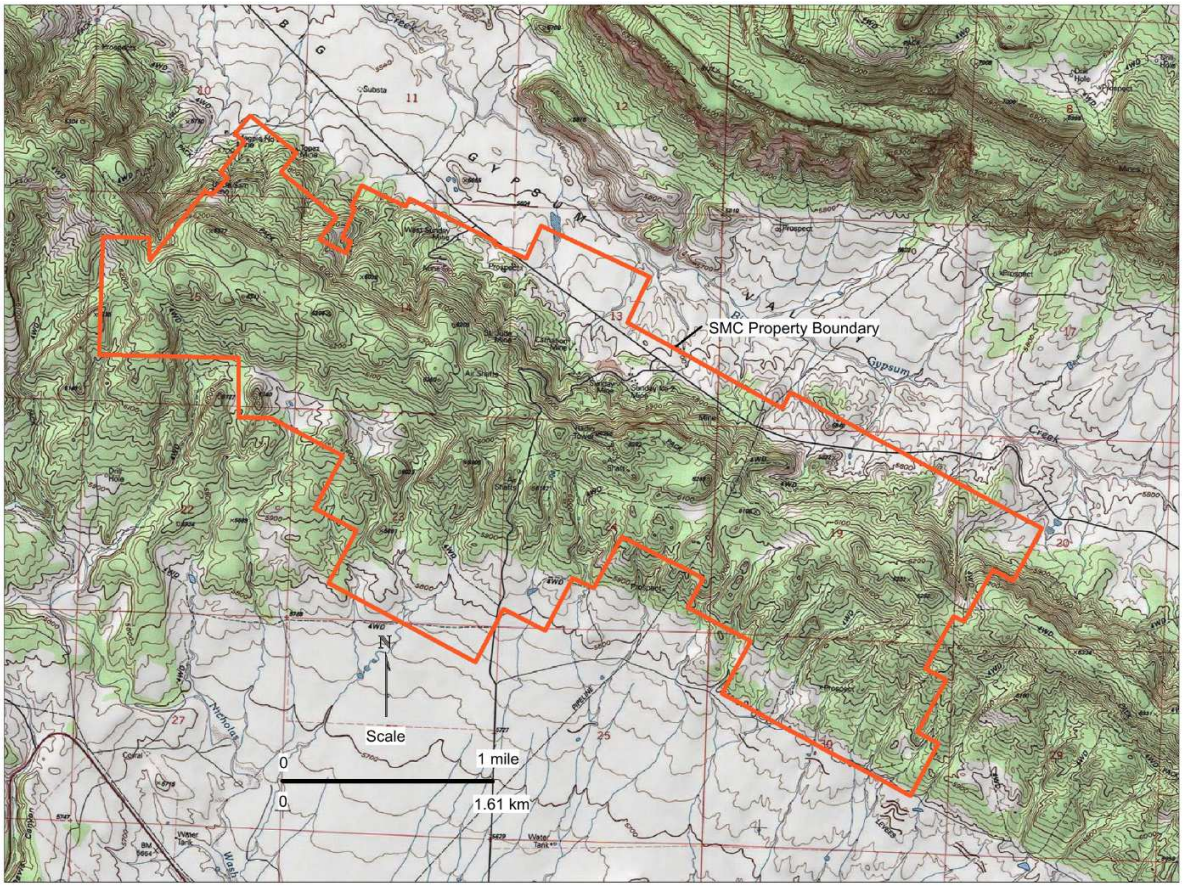
Population centers with some services near the project are the Nucla/Naturita, and Dove Creek areas of Colorado. The nearest city to support exploration and mining activities is Grand Junction or possibly Cortez, both in Colorado.

The Sunday Mine Complex has significant drilling and production history. Mining and drilling occurred contemporaneously from the 1950's through the mid 1980's. From the 1980's to the present, mining and drilling occurred only sporadically, typically when uranium or vanadium prices were high. The last mining interval was from 2006 to 2009, and based on the available records, only in 2009 did any drilling take place since mid-1980.

Below is a view of some of the sizeable stockpiles at site.

The Sunday Mine Complex consists of six different mines. These are the Topaz, West Sunday, Sunday, St. Jude, Carnation, and the GMG. The mines have had a number of owners and operators. Prior to WUC's acquisition of the complex in April 2014 the ownership was rather varied: Matterhorn Mining (1950's-

1960's, Climax Uranium 1960's, Union Carbide Corporation (UCC) 1970's-1980's, Atlas Minerals (1980's), Energy Fuels Nuclear (early 1990's), International Uranium Corp. (1990's-2000's), Denison Mines (2000's), and Energy Fuels (2010's).



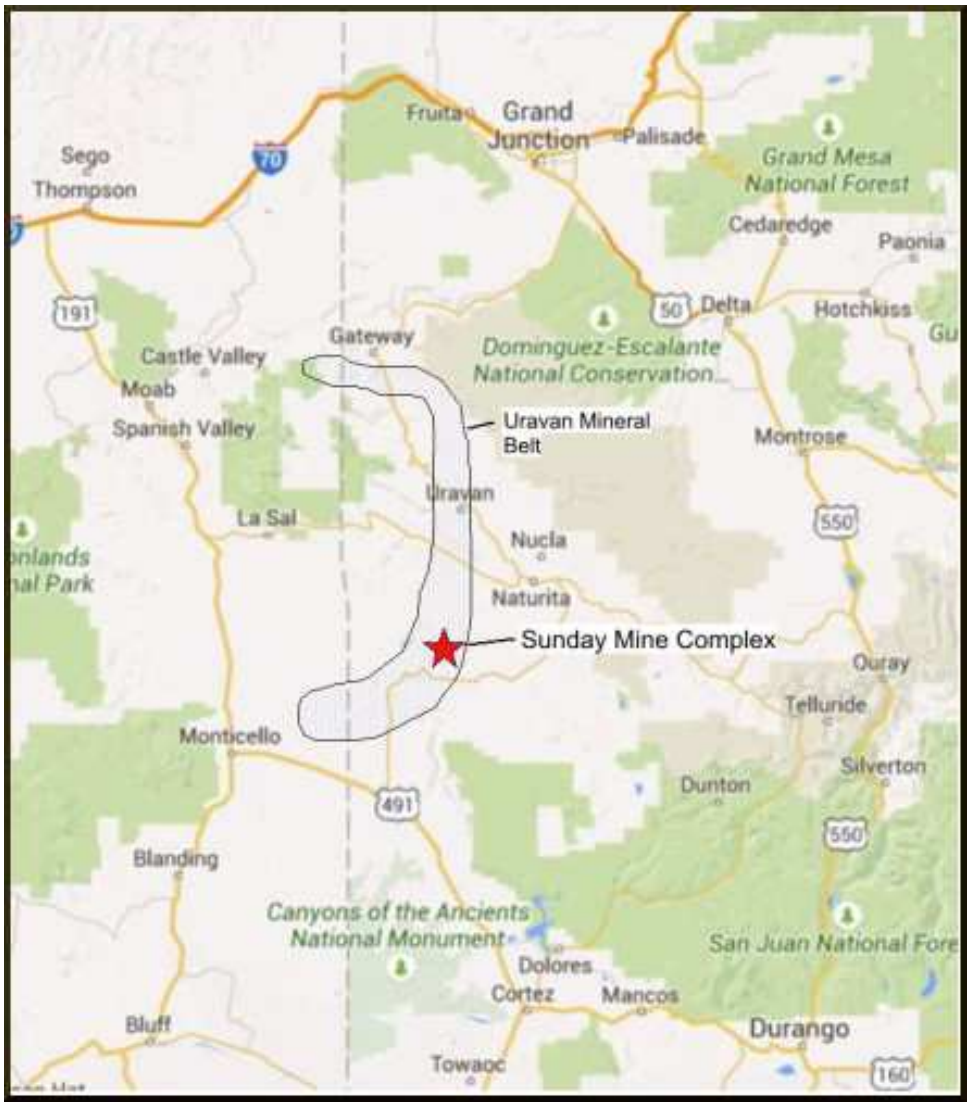
Geology

The Uravan Mineral Belt (outlined in the map below) has a long history of exploration and mining for uranium and vanadium. The deposits have been well studied by public and private entities.

Deposits containing uranium, vanadium and radium were first discovered in the Roc Creek area, about 22 miles north of the project, intensive mining of these ores did not begin in the Plateau region until 1911 when radium was the primary element of interest. This ceased after the Belgian Congo pitchblende deposits were discovered in 1923. Plateau mining resumed in about 1937, when vanadium became of interest and then since the early 1940's when uranium became ascendant. Except for two minor periods of activity, one in the 1990's and the other in the mid-2000's, the Uravan mineral belt has been fairly quiet.

Geologically, the main hosts for uranium-vanadium mineralization in the Sunday Mine Complex are fluvial sandstone beds assigned to the upper part of the Salt Wash Member of the Jurassic Morrison Formation, with minor production coming from conglomeratic sandstones assigned to the lower portion

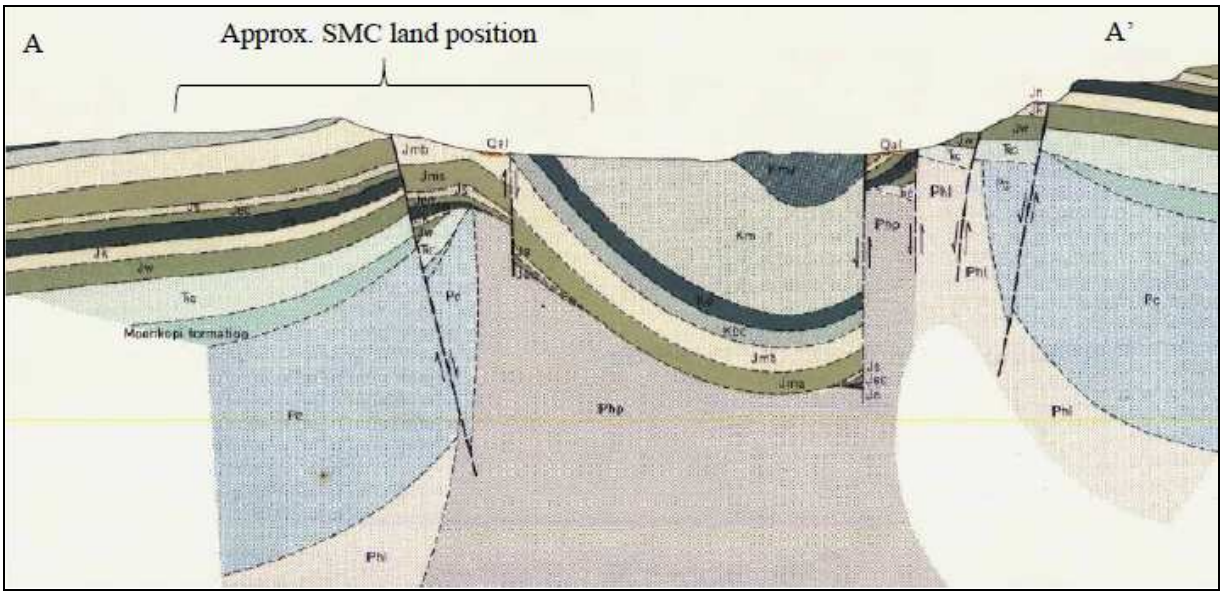
of the Brushy Basin Member of the Morrison Formation. Mineralization from both members is present at the property, with the mine production coming from the Salt Wash Member.



The Salt Wash Member consists primarily of interbedded sandstones, siltstones, and mudstones. The sandstones were originally deposited as fluvial sands and channel splays in a meandering river environment. The meandering sands coalesced to form three major sequences of sand bodies which occur through most of the formation. The sands are separated vertically by siltstones and mudstones. Beds generally strike NW-SE and dip SW, with some exceptions within fault bounded blocks adjacent to Big Gypsum Valley.

The SMC property is located on the south flank of Big Gypsum Valley, which is a collapsed salt-cored anticline. Several valley parallel (NW-SE) normal faults traverse the claim block dropping younger formations against older ones.

A cross-section prepared by the USGS across the deposit can be seen below:



Uranium and vanadium occur frequently occur together in the Uravan Belt with ratios that range from 1:5 to 1:10. An Energy Fuels internal document from 2013 shows that the U:V ratio of the Sunday Mine Complex is 1:5.36. Maps prepared by Denison Mines show a uniform 1:6 ratio. Twenty randomly selected drill holes with vanadium values and shown on the 1980's era maps were taken from over the expanse of the property. Only holes with intervals >1 ft and with U_3O_8 values >0.1% were selected. The results show U:V ratios that vary from 1:3.63 to 1:14, with a weighted average of 1:7.42. It's worth noting that a consistent change in the ratio does not appear to be associated with a change in the uranium grade.

Past Production

Detailed continuous production records for the mines in the SMC are not available. One estimate for the SMC area, is 379,600 tons (341,640 tonnes) with no grade given, for the period 1960-1980. Union Carbide mined the SMC for most of the 1970's and into the mid 1980's. The average desired grade from mines for the Union Carbide mill in Uravan was 0.20% U_3O_8. As a baseline, if the SMC shipped at this grade for the period above, then it would have produced about 1,366,500 pounds (621,136 kg) of uranium and 8,199,000 pounds (3,726,818 kg) of Vanadium.

Another report of the SMC depletion units observed that the production from some of the units (9 of 31) for the period 1978 to 1984 totalled 445,906 short tons at a grade of 0.19% for a total of 1,690,913 pounds U_3O_8.

Another estimate, from a well-experienced mine contractor active for Denison Mines at the SMC in the mid-2000's, is that 4,000,000 to 5,000,000 pounds may have been produced from the SMC over the years. According to the contractor, his average grade shipped to the White Mesa mill was 0.183% U_3O_8

with an approximate vanadium to uranium ratio of 6:1. He stated that records found in the old Sunday Mine office, left on site by Union Carbide, indicated that grades found in some areas of the mine exceeded 0.40% U_3O_8.

Denison Mines Production from the SMC

	2007	2008	2009	Av. Grade	Total Ore	Total lbs
Ore Tons (st)	35,158	67,325	43,711		146,194	
U3O8 grade	0.13%	0.19%	0.18%	0.17%		503,558
V2O5 grade	0.89%	1.03%	0.95%	0.97%		2,846,354

Resource

The NI43-101 report prepared by Anthony Adkins in July 2015 stated that the Sunday Mine Complex, based on historical records, appeared to have "very good to excellent potential" to host in excess of 3,000,000 pounds of Uranium-Vanadium resources with characteristics suitable for underground mining.

The extant resource estimate looks like this:

Sunday Mine Complex - Resource Estimate

Category	Tons	Grade U3O8	Contained lbs U3O8	Grade V2O5	Contained lbs V2O5
Measured	188,243	0.25%	935,150	1.49%	5,610,899
Indicated	14,974	0.24%	72,683	1.49%	436,097
Measured & Indicated	203,217	0.25%	1,007,833	1.49%	6,046,996
Inferred	264,604	0.36%	1,906,081	2.16%	11,436,484

It is important to note that 150,000 tonnes of material grading around 800ppm was left at the site (in four stockpiles) during the phase when Union Carbide operated the mine complex. This is NOT included in the above resource. This would be the first target or "easy pickings" for the mine reactivation.

Ablation Mining Technology (AMT)

Western Uranium holds the exclusive license (from Ablation Technologies, LLC) to use AMT in the uranium mining space. AMT is a method of mining mineral deposits from host rock. It was pioneered in the late 1990s as a means to extract gold but is now most talked about in the context of its potential for Uranium extraction.

The original deal was done between Ablation Technologies LLC and WUC's predecessor firm, Black Range Minerals in mid-2015. This has now carried over to WUC. The deal gives WUC a 100% interest in a 25-year license under which it can develop, market and utilise Ablation worldwide, for use at both its own projects as well as for projects owned by other parties. The terms are:

- 100% ownership of all of the existing Ablation equipment, including the pilot-scale plant and the 5tph Ablation Unit
- a 25-year license to all Ablation intellectual property and patented technology, together with copies of all engineering designs and drawings
- the right to continue to improve and commercialise Ablation and retain ownership of any improvements to the Ablation technology it develops

It is key to note that WUC can license out ablation technology machinery for a fee on a per tonne basis to other uranium companies and collect 100% of the fee, should WUC decide to go this route.

The Theory

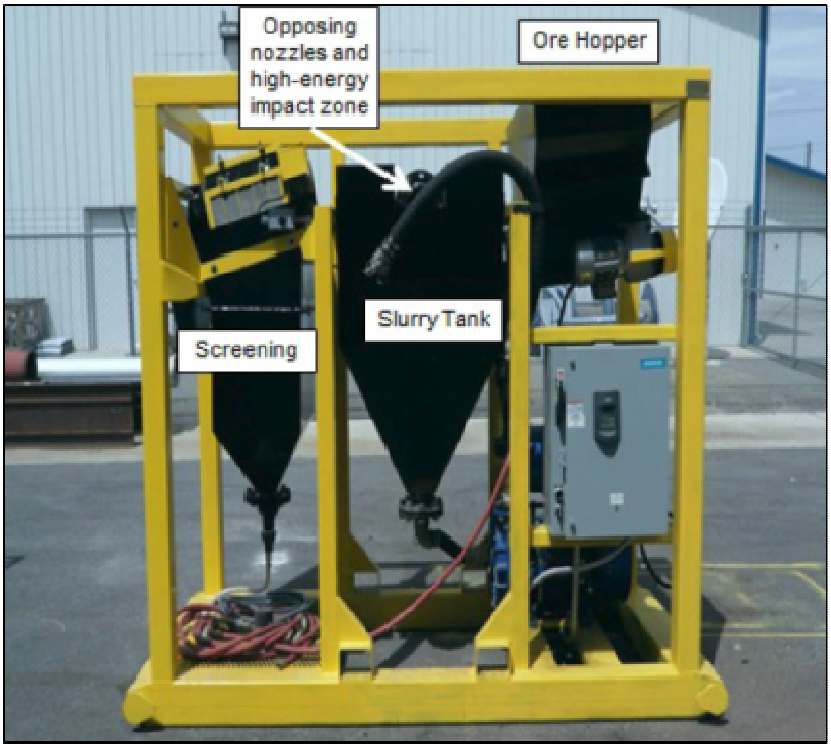
The processes that formed sandstone-hosted uranium deposits determine the location of the uranium mineralization within the host rock. The origin these deposits is the migration of mineral-bearing solutions through permeable surface and subsurface channels in the host rock, until conditions change due to natural lateral and/or vertical variations in the chemistry of the host rock. Although the host rock as a whole is relatively porous and permeable, the individual sand grains (commonly quartz and feldspar grains) are not permeable. As such mineral-bearing solutions flow predominantly around and between the impermeable sand grains. When the fluids encounter a reducing agent such as carbon, or a reduction in overall permeability, dissolved minerals precipitate out of solution to form a fine coating of stable minerals over individual sand grains within the host sandstone. When substantial quantities of minerals precipitate and are concentrated within a small volume of the host formation, a mineral deposit is formed.

In these deposits, uranium lies within a mineralized crust which coats, and is located between, individual sand grains that make up the majority of the host rock (as opposed to the mineralization being present within the individual sand grains themselves). The goal of Ablation is to strip the uranium (and Vanadium) coating from these grains of sand.

How it Works

Ablation Mining Technology aims to disassociate, or mine, mineral coatings from sand grains in sandstone hosted uranium mineral deposits.

The first step is to disassociate the mineralized crust from the underlying individual grains of the sandstone host rock. To do this, a sandstone host rock is typically crushed to minus 6.35 millimeters and then mixed with water to form slurry comprising approximately 20% solids. The slurry is pumped through opposing nozzles, creating two high-velocity slurry streams that directly collide with each other.



The collision of these high-velocity slurry streams creates a high energy impact zone where individual particle-to-particle (i.e. mineral-crusted sand grain to mineral-crusted sand grain) collisions impart energy that disassociates the mineral crust (ore) from the underlying sand grains (waste rock). The energy in the impact zone is carefully controlled to prevent destruction of the underlying sand grains themselves. Once the bond between the ore and the waste rock is broken, the Ablation is complete.

At this point, the coarse sand grands can be screened from the mineral fines, producing cleaned sand grains and uranium mineral ore fines. The cleaned sands can then be used as mine backfill and the uranium ore fines transported to a uranium mill (White Mesa in the first instance and eventually Piñon Ridge) to isolate the uranium from other minerals found in the ore, creating U_3O_8 (Yellowcake).

The Ablation process is not "uranium milling", *per se*, as defined by regulations. It is a process designed to conduct high-grade vanadium/uranium mining or separating valuable unrefined and unprocessed ore from waste material, thereby reducing significantly the future waste material generated by licensed processing or extraction activities or "uranium milling."

Triggers for Activation

As far as the move to production/development is concerned everything, not unsurprisingly, is predicated by the price of Uranium (and Vanadium). If WUC signs a long term uranium contract with a utility at $45 per lb, or above, then the ball is rolling. If WUC can sell into the spot market at $45 per lb or above, things can move forward also. If Uranium

stays at $26 spot and $38 contract, (and $3.50 per lb Vanadium) then WUC will be generating cashflow by processing stockpiles at current prices for the two constituent metals, but will not hasten to ramp up production. Therefore the envisioned 2017 production would be matched to corporate costs in order to break even or make a small profit. At $30 uranium and $3 vanadium, WUC' management believes that it should be able to generate positive cashflow, unlike the rest of the sector. The company posits that 2Q17 or 3Q17 should be the optimum time to ramp up the surface stock piles for production.

Mine Plan

In the first instance the company shall be exploiting the extant stockpiles at the SMC. These stockpiles save the $100 per tonne mining cost, under these low uranium and vanadium prices, therefore it makes sense to exploit these stockpiles first. When U_3O_8 prices permit (estimated to be $45 per lb) then the reopening of the underground at the Sunday mine complex represents an easy option, with the mine in good condition and with no water to contend with. The company also intends to source material from a number of mines that are in various states of readiness/repair in the vicinity but that lack an outlet to mill their ore. The goal would be to harvest material from mines within a 10-100 miles radius.

So the goal would be to have the 2-3 ablation mining machines working the stockpiles first. As the stockpiles were worked through then underground mining would come on. The company is working under the premise that with five portals and four surface stockpiles production could ramp up to 5-6 machines operating in two shifts at 20 tonnes per hour. It should take around 90 days to manufacture and assemble each Ablation machine with a cost of $300,000 per machine.

The time for building a machine is estimated as 60 days at a minimum, but the company is working upon the premise of 90 days to err on the side of caution. The process is the welding of the frame and then the securing the components such as nozzles, pump, piping, hoses, and screens. The completed module would need to be put into a mobile frame for transportation underground.

The Ablation technology reduces the amount of ore that leaves the mine by 90% so effectively upgrades the mined material by a factor of ten, reducing the amounts to be trucked and milled at the Piñon Ridge end of the operations. It should also be remembered that the ratio of Vanadium to Uranium is 8:1 at the Sunday Mine complex and this other metal shall likewise be upgraded by a factor of 10 in the Ablation process.

Western already has two contract mining companies lined up to reactivate the mine. These were the miners of the Sunday Complex when it was last in production so they know the ore body very well. Therefore, the only staff that WUC will have at the mines will be a mine engineer, geologist, health and safety officer, the COO, and another engineer that would be a jack-of-all-trades, a total of five people. Each ablation machine will need, on average 1.5 operators so for the ablation machines, this implies around 6-8 people to hire in for that role.

The Piñon Ridge Mill

The proposed Piñon Ridge Mill is situated in Montrose County, Colorado on an 880-acre private parcel. The Property is located in Paradox Valley, approximately 12 miles west of Naturita and approximately seven miles east of Bedrock, along the northeastern edge of Davis Mesa.

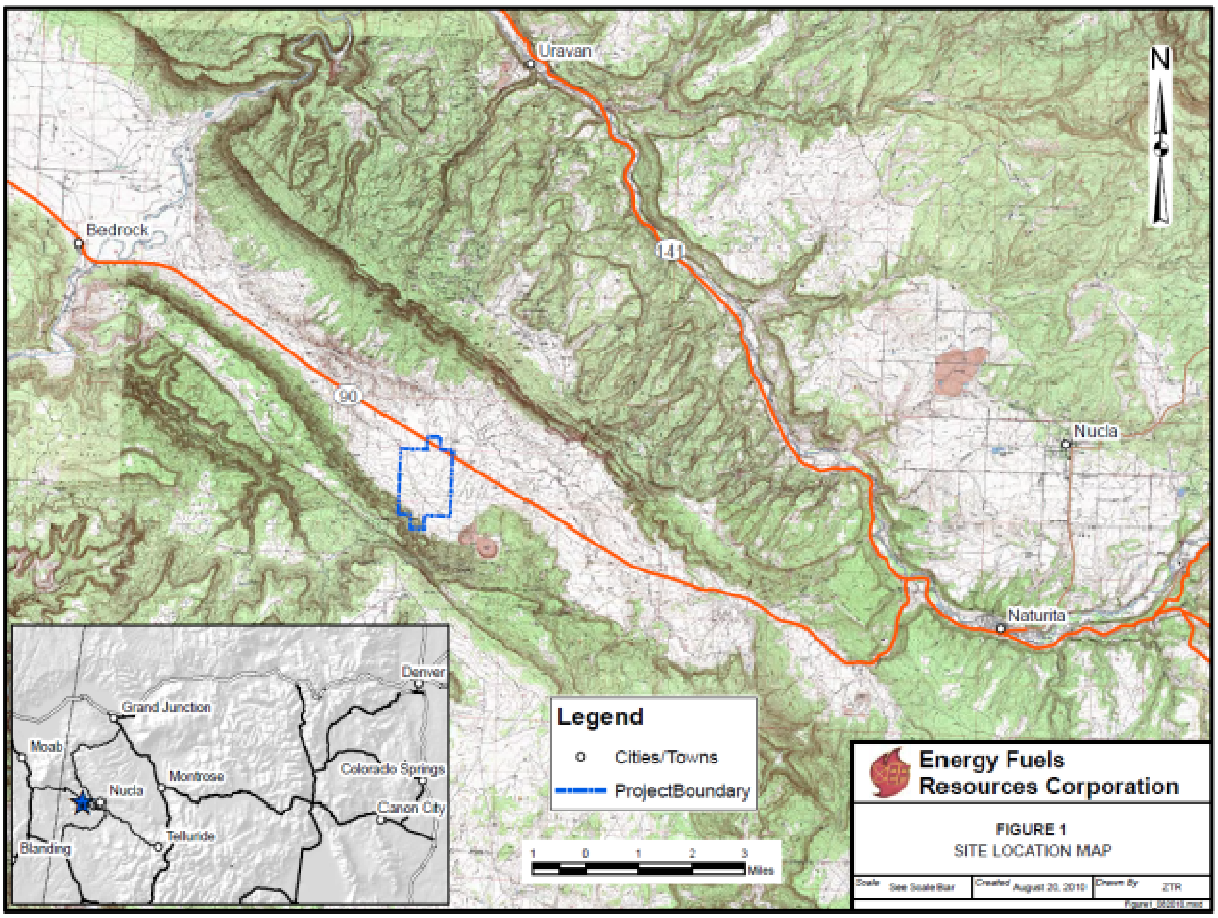
Some Background

The immediate vicinity has long had a uranium focus as directly behind the mill site is the former mine that had been operated by Cotter Corporation in the 1970s. The dumps can be seen in this photo of the site at the right.

Cotter is headquartered in Denver, Colorado. Originally incorporated in 1956 in New Mexico as a uranium production company, Cotter was purchased by and became a wholly owned subsidiary of Commonwealth Edison in 1975. The company, having been acquired in 2000 by General Atomics, a privately-owned defence contractor (making drones amongst other things), was itself was spawned out of General Dynamics.

Through its various mining and milling operations, Cotter has produced uranium, vanadium, molybdenum, silver, lead, zinc, copper, selenium, nickel, cobalt, tungsten and limestone. Cotter still owns numerous uranium/vanadium properties in the Uravan Mineral Belt, and currently owns or controls 15 uranium/vanadium mines in southwest Colorado. Combined recoverable reserves for the properties are approximately 20 million pounds of U_3O_8 and 100 million pounds of V_2O_5. Presently, all its western Colorado operations are claimed by the company to be on "standby status".

It is interesting to muse on how things might evolve here. Western has its own ore sources and there are various other potential suppliers of material to the new mill, however, with the former Cotter mine "up close and personal" with Piñon Ridge the natural evolution would be to source material from the mine (and the dumps). Might also let the imagination roam as to whether this well-resourced private entity might eventually make a move on Western Uranium. Time will tell.



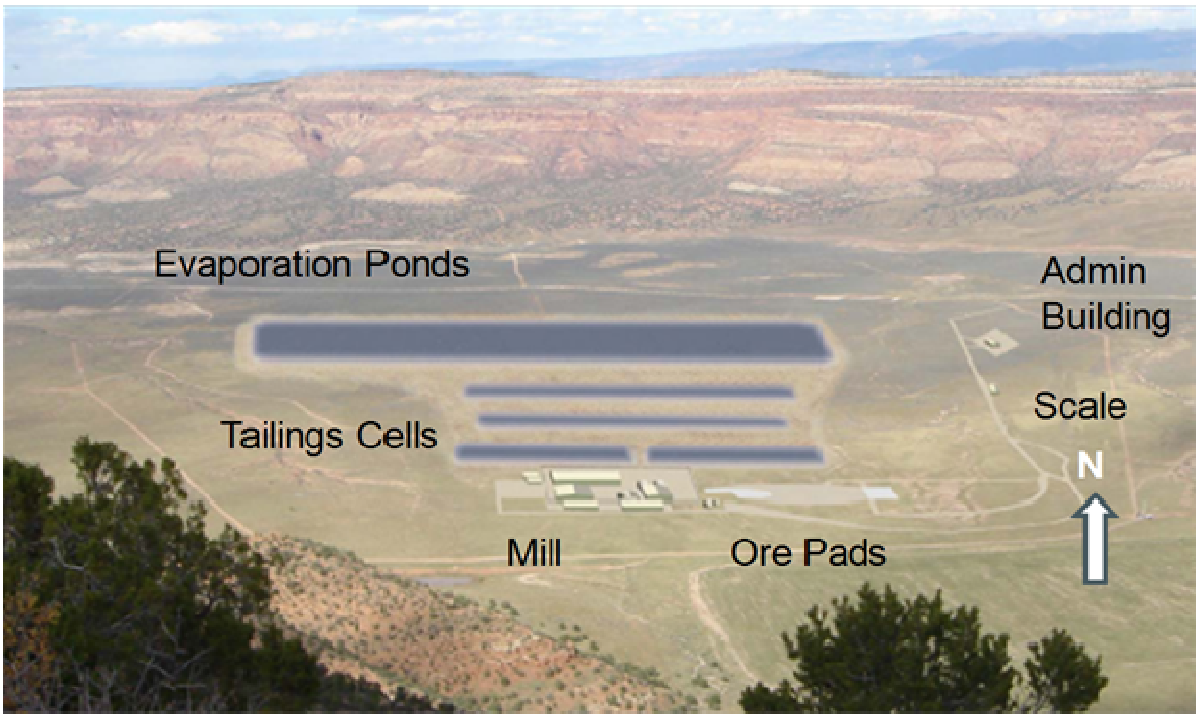
More Recent History

Energy Fuels acquired Piñon Ridge project in 2007, and had been looking to build a 500 ton per day mill there. A scoping study prepared in 2008 costed the mill at $120mn. The project first received a license in 2011. Energy Fuels subsequently acquired the already operational 2,000 ton per day White Mesa mill in Utah, meaning it no longer needed to construct a mill at Piñon Ridge.

The mill project was part of a package, sold in August 2014 by Energy Fuels, including historic uranium production sites and uranium exploration projects (including the Sunday Complex, the Willhunt and San Rafael projects, the Sage and Van 4 mines, and the Farmer Girl, Dunn and Yellow Cat projects) to a private investor group led by Baobab Asset Management and former Energy Fuels president George Glasier, who now heads WUC.

The Piñon Ridge Project is the first new uranium mill being proposed for construction in the United States in over 40 years. As originally proposed, it was to be a 7.4 million ton uranium milling operation over an expected 40 year life of mine. The mill would receive uranium ore from a number of mines in the region. The project included design and permitting of a uranium/vanadium processing facility, three tailings cells, evaporation ponds, and ore stockpile pads. The primary mill buildings and their respective

square feet of floor space were to be the semi-autogenous grinding (SAG) Mill/Leach Tank Building (22,000 sf), the Boiler Building (6,000 sf), the Solvent Extraction Building (49,000 sf) and the Drying/Packaging Building (46,000 sf).

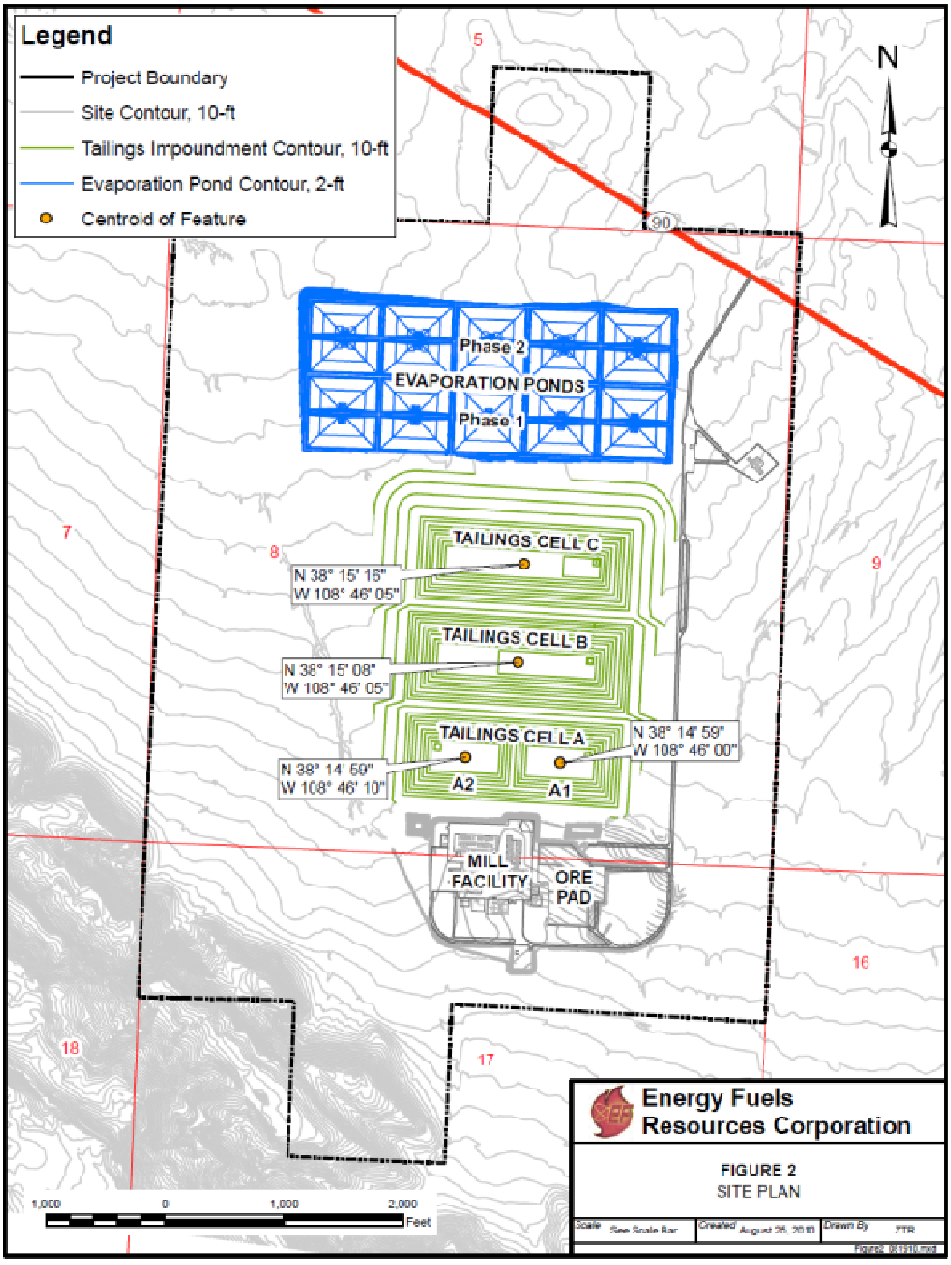


Several metal buildings located next to the primary process facilities will support milling operations. These buildings include the Warehouse (10,000 sf), Laboratory/Change Room/Mill Offices Building (22,000 sf) and the Truck Maintenance Building (6,000 sf).

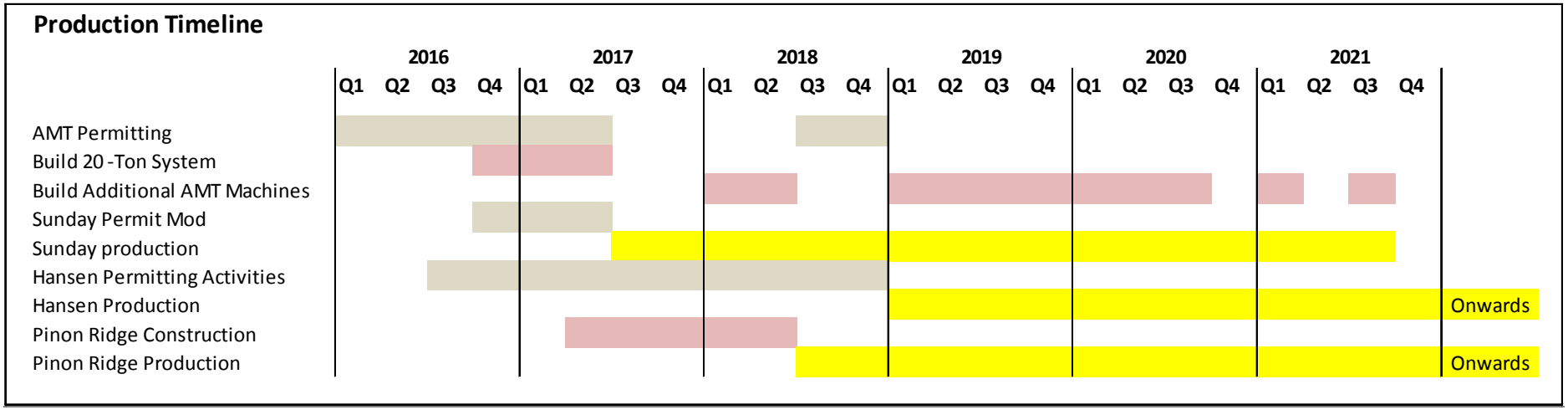
After extraction of the uranium, the finely ground waste materials (called tailings) are pumped as a slurry through a pipeline to a tailings cell for dewatering and permanent disposal. The tailings consist of all materials remaining in the ore following the extraction of uranium and vanadium. The main radioactive materials remaining in the tailings are Thorium-230 and Radium-226.

In 1992, dramatic changes to the US regulatory environment for uranium ore processing occurred making regulatory compliance an increased challenge for a new facility. The changes to the regulations included enforcement of a prescriptive liner for surface impoundments and reduction of the exposed tailings surface.

The plan on the following page shows the likely layout of the mill site. Each of the three proposed tailings cells (Cells A through C) have been designed to provide a minimum capacity to accommodate 2.5 million tons of tailings with 3 feet of freeboard, having liner footprint areas of 30.5 acres.



The limits of the tailings cells are lined with a double layer liner system with an intervening leak collection and recovery system to contain process solutions, enhance solution collection, and protect the groundwater regime.


Production Timeline
2016
2017
2018
2019
2020
2021
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
AMT Permitting
Build 20-Ton System
Build Additional AMT Machines
Sunday Permit Mod
Sunday production
Hansen Permitting Activities
Hansen Production
Pinon Ridge Construction
Pinon Ridge Production
Onwards
Onwards

Plans Reformulated

WUC plans to build the Piñon Ridge Mill in a reformulated plan. The current thinking is that the original 500 tpd plan was not accounting for the volume reduction in the ore processed that Ablation affords. Therefore a more appropriate throughput would be 100tpd processing ore containing 2% U_3O_8 (and the accompanying Vanadium). This would shrink capex massively, with $8mn alone being saved by not requiring a grinding circuit (the SAG mill). This smaller configuration will reduce the final capex to around $30mn for the mill complex.

Staffing will be around 85 people with 60 involved in the processing operation and around 25 as management and administrative support. Wages will be very competitive, averaging $40,000 to $75,000 per year, including benefits. While some of this potential workforce is available locally, some skilled occupations will require filling with labour hired from farther afield.

The end product on the Vanadium side will be V_2O_5 which shall be dispatched in 55 gallon drums to the marketplace. One should not discount the possibility that Glencore, the big player in the Vanadium space (and the offtaker for Largo Resources, for example) will also want to be involved here.

Western's goal is that production from stockpiles should begin in the 2nd quarter of 2017 and the mill should start operating in mid-2018.

Infrastructure

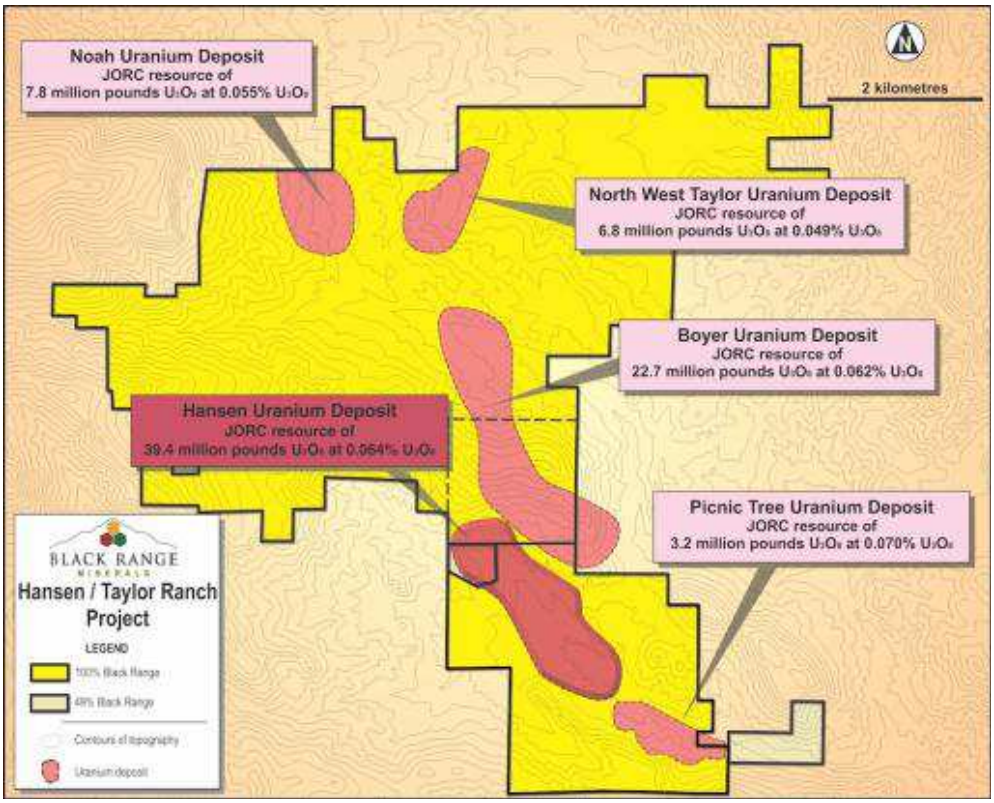
San Miguel Power Association will supply electric power to the project via an existing 69 kilovolt overhead transmission line or an existing 26.5 kV distribution line paralleling Highway 90.

The original estimate of the average water requirement was 300 gallons per minute for the milling process, dust suppression, washrooms, truck wash, fire suppression systems, and other miscellaneous uses. Most of the water will be used for processing purposes even though process water will be recycled wherever feasible to minimize consumption. However with the reduction to 500tpd in the mill throughput this went down to 170gls per minute and at 100 tpd (due to Ablation reducing ore quantities it is more likely to be 50 gls per minute at the beginning. The planned water source is groundwater, which will be pumped from a series of onsite and adjacent offsite deep production wells.

Hansen - The Next Cab off the Rank

With the Black Range deal a major uranium asset was brought on board in the form of the Hansen/Taylor Ranch property, which is located several hundred kilometres to the East of the planned mill. Uranium was first discovered in the Tallahassee Creek Uranium District in 1954. From then until 1972 some 16 small open pit and underground uranium mines operated in the district. The Hansen Deposit discovered in 1977 and was fully permitted for open-pit mining in 1981 (but never developed)

The property incorporates a series of large deposits over 6 miles of strike and these are shown below.



More than 2,200 holes drilled for more than 350,000 metres produced a JORC-compliant resource estimate for all the deposits of:

- At a 0.025% cut-off: 68.6 Mt at 0.060% U3O8 for 90.4mn lbs of U_3O_8
- At a 0.075% cut-off: 16.5 Mt at 0.120% U3O8 for 43.6mn lbs of U_3O_8

For just the Hansen deposit, the resource estimate was:

- At a 0.025% cut-off: 28.0 Mt at 0.064% U3O8 for 39.4mn lbs of U_3O_8
- At a 0.075% cut-off: 7.0 Mt at 0.127% U3O8 for 19.7mn lbs of U_3O_8

There was a scoping study produced under Black Range's management in H1 2012, in which the favoured development was:

- Underground Borehole Mining
- Ablation
- Off-site milling

The production metrics would have been:

- 750,000 tonnes per annum @ 0.127% U_3O_8 to produce ~2Mlbs U_3O_8 per annum
- Capex estimate of <US$80M with off-site milling*
- Opex estimate of ~US$30 per lb U_3O_8
- Initial 7-8 year mine life, to be followed by development of other adjacent deposits

These deposits have not been a high priority for Western Uranium due to the relatively low grades and the distance from the planned mill. However, they will gain importance once the mill is operational and hungry for feedstock. The onset of production is loosely penciled in for early 2019.

Supply Crunch

Hard core Uranium bulls know how Moses felt when he was doomed to wander forty years in the desert and never get to see the Promised Land. The great hope had been that the Japanese reopening would help matters and yet it hasn't (at least not yet). The second hope (quite a vain one) was that the Germans would see the light on their unilateral closure actions (and they have not). The one consolation being that everyone else in Europe regards the Germans as crazy for taking the action they did while still mouthing platitudes to low carbon emissions and ramping up coal-fired power at the same time!

To the dismay of many that see nuclear as a "green" solution to rising global energy demand, some have pitched nuclear as competing against wind and solar, with Germany being a particularly egregious example of "kooky" thinking on this front. Ironically though the German decision has prompted the country to buy nuclear-sourced electricity from France, the paragon of nuclear users with around 80% generated from this source.

This chart shows the countries with the strongest potential capacity additions in nuclear generation.

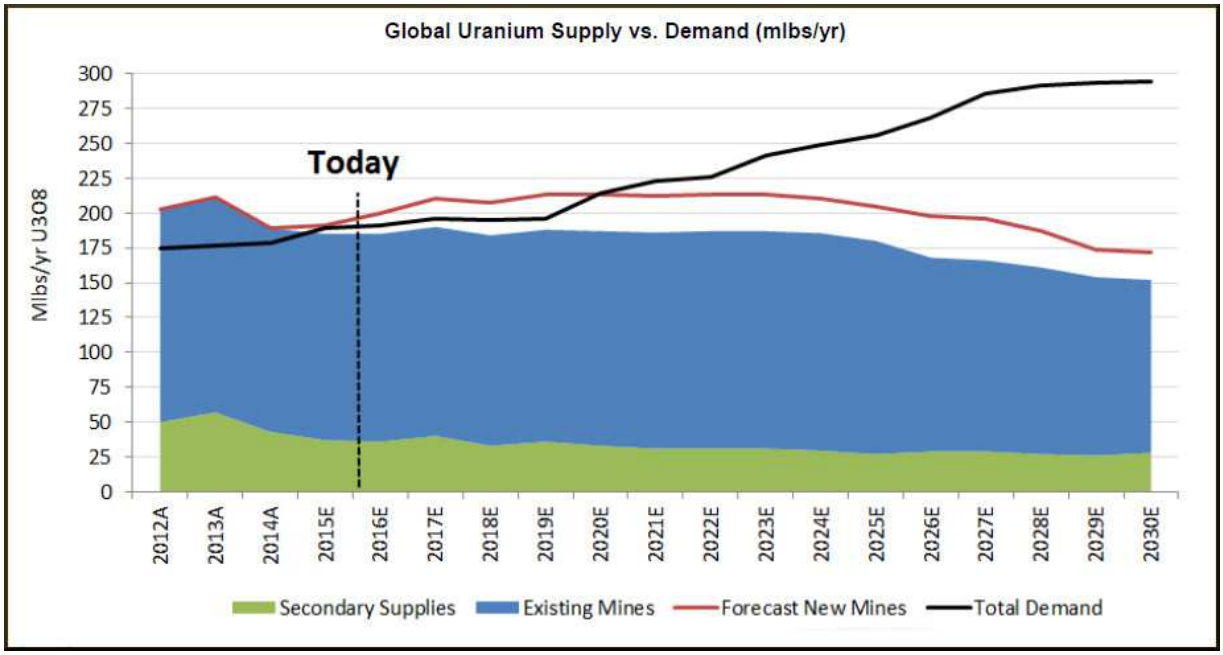
COUNTRY	NUCLEAR ELECTRICITY GENERATION 2014		REACTORS OPERABLE (1 Dec 2015)		REACTORS UNDER CONSTRUCTION (1 Dec 2015)		REACTORS PLANNED (1 Dec 2015)		REACTORS PROPOSED (1 Dec 2015)	
	Billion kWh	% e	No.	MWe net	No.	MWe gross	No.	MWe gross	No.	MWe gross
China	123.8	2.4	30	26,849	21	23,483	43	49,990	136	153,000
India	33.2	3.5	21	5,302	6	4,300	22	21,300	35	40,000
Japan	0	0	43	40,480	3	3,036	9	12,947	3	4,145
Russia	169.1	18.6	34	25,264	9	7,968	25	27,755	23	22,800
WORLD	**2411**	**c 11.5**	**439**	**382,248**	**64**	**67,797**	**159**	**180,015**	**329**	**374,020**

Source: Western Uranium

Probably all one needs to know is encompassed in the preceding table, which says more than any number of price charts. There is massive future demand baked into construction schedules that, with the amounts of money expended, will not be derailed.

The advocates of nuclear are looking past the mere showmanship of the German chancellor and the temporary shutdown of the Japanese generating capacity towards an uplands where this rising fleet of nuclear plants in emerging economies will be creating the added demand for yellowcake, rather than static or declining markets like those of Germany.

Current production (and even planned production) is not even vaguely able to meet this demand as the graph below demonstrates.



Parsing the Uranium Universe

We would divide the universe of Uranium stocks into three categories these days. There were hundreds of listed uranium plays in the heyday of the space last decade but this has now been whittled down by a brutal process of attrition driven by initially low prices, then a cycle of despair driven by seemingly secular revisionism triggered by Fukushima and then finally by the sheer lack of finance for virtually any mining space and particularly this one.

In the wake of this process we see the survivors divided into the following groups:

- Producers
- Near producers and former producers
- Advanced exploration and juniors

Normally we would put advanced exploration with near producers but the problem is that many of this category are merely wanting to be sold rather than getting into production. There will be a moment for them, a “day in the sun”, but it is not now. There are quite a number of those companies out there with sizeable reserves proved up but no real plan to move forward. When the turn in the U price comes they will be hoping to be bought by one of the producers, but there are more advanced explorers than producers so inevitably some attendees at the ball will be without partners for the dance.

Junior “juniors”, the moose pasture merchants, are basically not needed or wanted for probably the rest of this decade. If there is no resource, or a puny one, then it’s a case of “don’t call us, we’ll call you”.

The ideal place to be positioned now is in either producers or the near/former producers. While Western itself is not a former producer, both its principal mine property is and so is its management.

Producers will obviously be first movers, but near- and ex-producers should swiftly follow with the added advantage that they do not come freighted with long term contracts at low prices. That said, companies needing funds to go the final mile to production may be tempted to commit to contracts at revived, though still low, prices with offtakers/traders to grab that all-important final funding to make it across the production line.

Vanadium

This metal, as mentioned is a key co-product at the Sunday Mine complex and at most other properties in the Uravan Mineral Belt. At the right can be seen a high-grade Vanadium seam at the SMC.

Vanadium has its scientific roots in Latin America as it was originally discovered by Andrés Manuel del Río, a Spanish-born Mexican mineralogist, in 1801. Del Río extracted the element from a sample of a Mexican "brown lead" ore, later named vanadinite.

In 1831, the Swedish chemist Nils Gabriel Sefström rediscovered the element in a new oxide he found while working with iron ores. He named the new element Vanadium after Old Norse Vanadís. Vanadium has the atomic number 23. It is a hard, silvery gray, ductile and malleable transition metal. The formation of an oxide layer stabilizes the metal against oxidation. The element is found only in chemically combined form in nature.

The isolation of vanadium metal proved difficult. Henry Enfield Roscoe eventually produced the metal in 1867 by reduction of vanadium(II) chloride, VCl_2, with hydrogen. In 1927, pure vanadium was produced by reducing vanadium pentoxide with calcium.

Usage

The first large scale industrial use of vanadium in steels was found in the chassis of the Ford Model T, inspired by French race cars. Vanadium steel allowed for reduced weight while simultaneously increasing tensile strength. At the moment, Vanadium is used mainly as an alloy in a wide range of specialty steels and titanium alloys to provide greater strength, toughness, and wear-resistance.

Sources – Primary and otherwise

The element occurs naturally in about 65 different minerals and in fossil fuel deposits and is the 17th most common element in the earth's crust. The important thing to note is that, beyond recycling from steel slag) the sources of Vanadium are either mineral deposits or, rather uniquely, as an oil by-product.

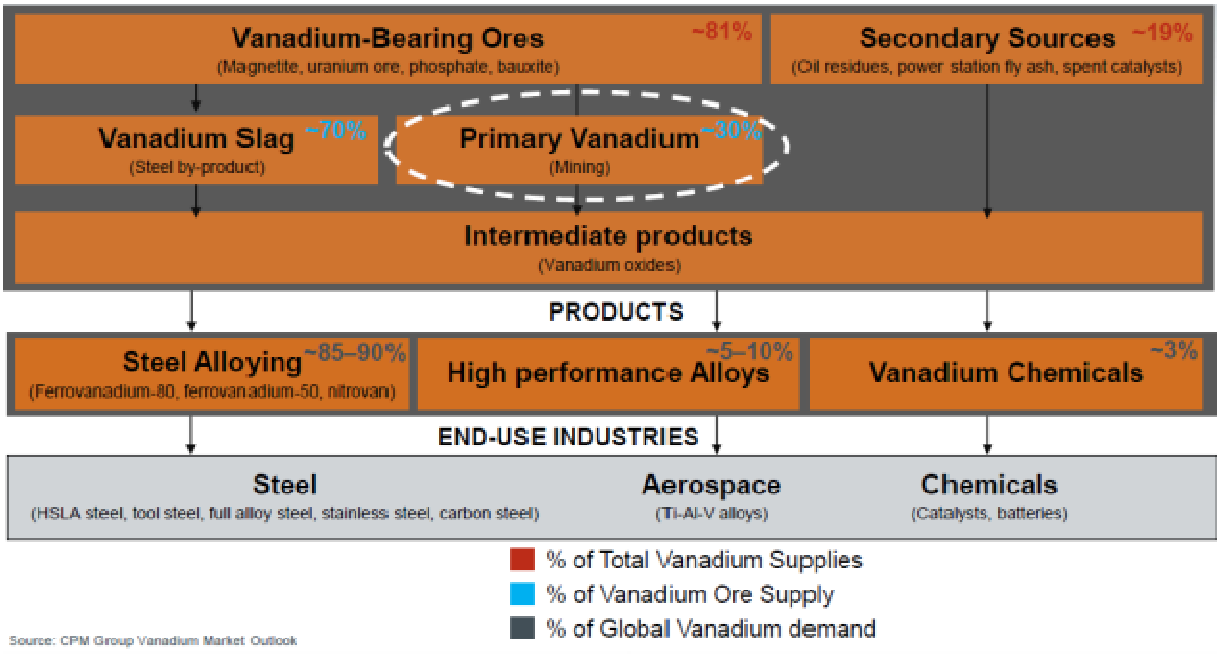
Vanadium occurs in deposits of phosphate rock, titaniferous magnetite, and uraniferous sandstone and siltstone, in which it usually constitutes less than 2% of the host rock. Significant amounts are also present in bauxite and carboniferous materials, such as coal, crude oil, oil shale, and tar sands. Amongst the major deposits are the titaniferrous magnetites of China, Russia, South Africa, Western Australia and New Zealand, as well as the oil-related deposits of Venezuela, Alberta (Canada), the Middle East and Queensland (Australia), in addition to ore and clay deposits in the USA.

	Commercially Exploitable reserves (10.2mt)	Reserve Base (31.094mt)
	%	%
Australia	1.6	7.7
China	19.6	9.6
Russia	48.9	22.5
South Africa	29.4	40.2
U.S.A	-	12.9
Others	0.5	7.1

The table above shows the state of resources according to Vanitec, a Vanadium producer/user association. We suspect it is somewhat outdated as several new sources (such as Madagascar) have become apparent over recent years. In particular the Australian share should be lifted and Brazil is worthy of being considered a potential player of consequence. The USGS in its latest survey on the metal said that world resources of vanadium exceed 63 million tons.

Dynamics

The dynamics of the Vanadium supply chain are interesting. In some ways we might compare the metal's supply chain to that of Lead, where the chief source is recycling. The chart below (from the consultants CPM) shows that much of the current Western supply is sourced primarily from steel scrap, then mining followed by secondary sources (which are also recycling in nature).



It is produced in China and Russia from steel smelter slag; other countries produce it either from the flue dust of heavy oil, or as a byproduct of uranium mining. It is mainly used to produce specialty steel alloys such as high speed tool steels. The most important industrial vanadium compound, vanadium pentoxide, is used as a catalyst for the production of sulfuric acid.

Vanadium is recovered as V_20_5 contained in an intermediate slag which is formed between iron-making and steel-making in integrated steelworks (eg Panzhihua in China, Highveld in South Africa and Nzhny Tagil in Russia). At these steel plants the Vanadium contained in the iron ore is taken into solution in the iron during the ironmaking process. The hot metal is then oxidised and a slag, which contains between 10% and 25% V_20_5, is formed and removed before the hot metal is passed on for final steelmaking. The slag containing l0-25% V_20_5 is then treated in a roast/leach process, the end product of which is Vanadates or Vanadium oxides.

The relation between (some) Uranium production and Vanadium supplies is worth mentioning in the context of Western Uranium. The production of U_3O_8 from carnotite ores creates a vanadium-bearing waste solution that must be neutralized to have the heavy metals fixed before waste disposal. An alternative treatment is a circuit which extracts vanadium and produces V_2O_5. For example, Denison Mines' White Mesa uranium processing mill near Blanding, Utah processes feed from that company's

mine properties on the Colorado Plateau as well as uranium/vanadium ores purchased from independent miners. For every 0.45 kg of U_3O_8 (triuranium octoxide concentrate - yellowcake) produced, White Mesa's Vanadium co-product recovery circuit produced approximately 1.8 kg of vanadium in the form of V_2O_5.

Many often forget that there are some metals that are interchangeable with others, particularly in alloying applications. It should be noted that from time to time there is competitive pressure from niobium, particularly in high-strength low-alloy steels (HSLA). According to Metals Pages, the additive amount of niobium in steel production is only one-half of that of vanadium, so every 3,000 tonnes of ferroniobium can substitute as much as 7,000 tonnes of 50% grade FeV. The substitution of ferroniobium however, is only economic at very high Vanadium prices.

Strategically Speaking

As the bulk of Vanadium production is concentrated in China, Russia and South Africa, where supply disruptions have occurred, one cannot be entirely sanguine about Vanadium's future accessibility. Those three countries account for around 90% of global supplies. Interestingly, the most recent British Geological Survey Risk List on Criticality of Supply (for 2015) had lifted Vanadium to number five on the list whereas just a few years before it has ranked a lowly 33 out of 45 metals.

The most likely scenario for a tighter market might be the evolution of a cartel (unlikely if the Australian projects on the drawing board get going) or a situation where China flips from being a net exporter (and sometime price spoiler) to being a net importer. This scenario could come about due to the Chinese

shifting to using a higher percentage of Vanadium in their steel production.

Speaking of US access to Vanadium the USGS commented, "While domestic resources and secondary recovery are adequate to supply a large portion of domestic needs, a substantial part of U.S. demand is currently met by foreign material".

New Applications - Worth Mentioning

The current state of the bulk of Vanadium demand is well-known with its strict correlation with steel consumption. New uses are potential X factor for the Vanadium space. While aerospace has been growing organically and increasing its share of the usage of the metal the area with the best potential for a quantum leap is in battery applications.

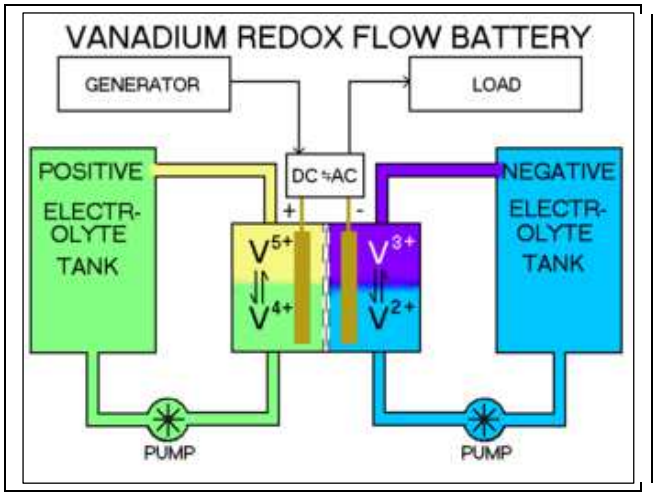
Chief amongst these is the Vanadium Redox (and redox flow) battery (VRB), which is a type of rechargeable flow battery that employs Vanadium ions in different oxidation states to store chemical potential energy. The present form (with sulfuric acid electrolytes) was patented by the University of New South Wales in Australia in 1986 where scientists carried out the first known successful demonstration and commercial development of the all-vanadium redox flow battery employing vanadium in a solution of sulfuric acid in each half in the 1980s. Although the use of Vanadium in batteries had been suggested back in the 1970s by a number of scientists including some at NASA.

There are currently a number of suppliers and developers of these battery systems including Ashlawn Energy in the United States, Renewable Energy Dynamics (RED-T) in Ireland, Cellstrom GmbH in Austria, Cellennium in Thailand, and Prudent Energy in the United States and China. The vanadium redox battery results from over 25 years of research, development, testing and evaluation in Australia, Europe, North America and elsewhere.

Source: Cellstrom GMBH

The preceding image gives a good idea of one of the more practical applications of such batteries. In this case the solar panels collect energy during the day and store it in the battery for release during the period when the solar panels cannot access sunlight.

A vanadium redox battery consists of an assembly of power cells in which two vanadium-based electrolytes are separated by a proton exchange membrane. The battery exploits the ability of vanadium to exist in solution in four different oxidation states, and uses this property to make a battery that has just one electroactive element instead of two.



Source: Vanadiumsite.com

The main advantages of the vanadium redox battery are that it can offer almost unlimited capacity simply by using larger and larger storage tanks, it can be left completely discharged for long periods with no ill effects, it can be recharged simply by replacing the electrolyte if no power source is available to charge it, and if the electrolytes are accidentally mixed the battery suffers no permanent damage. The VRB has also been shown to have the least ecological impact of all energy storage technologies.

The main disadvantages with vanadium redox technology are a relatively poor energy-to-volume ratio, and the system complexity in comparison with standard storage batteries.

Another emerging technology is the use of lithium-vanadium phosphate or fluorophosphate cathodes and lithium-vanadium oxide anodes in rechargeable lithium batteries. These batteries exhibit greater safety compared with the more generic lithium-cobalt oxide type cathodes seen in cellular telephone or laptop batteries (which have higher operating voltages and higher rates of energy storage). The vanadium phosphate cathode material can support 20% more energy storage than the conventional cobalt oxide, as much as 26% more than iron phosphate, and 56% more than manganese oxide. However, in order for such a battery to be practical, the cost of the battery is critical.

Subaru has developed a prototype of its G4e electric car, powered by lithium-vanadium phosphate batteries. This concept car has a 200-km range that is provided by a relatively small vanadium phosphate battery pack, double what their earlier R1e concept car could achieve.

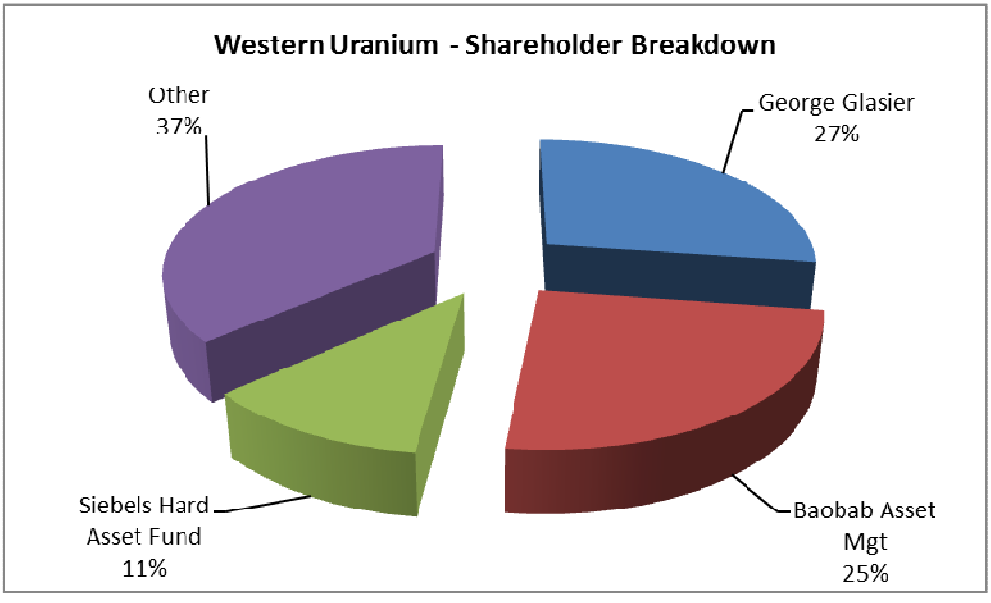
Financing

With market prices so beaten down, financing in the uranium space has been even more fraught than in other mining sub-spaces. Nevertheless Western Uranium has been able to undertake a number of financing this year.

In early January 2016, it completed a private placement raising gross proceeds of CAD $300,000 through the subscription for 101,009 common shares at a price of CAD $2.97, with a full warrant at an exercise price of CAD $3.50. This offering closed on December 31, 2015. The warrants expire five years from the date of issuance.

During April 2016, WUC initiated a private placement offering at a price per unit of CAD$1.70 with each unit consisting of one share of the common stock and one warrant to purchase a share of common stock at $2.60, with a term of five years. During April and May 2016 gross proceeds of CAD $791,090 were received through the issuance of 465,347 units.

In late June the company announced that it had closed a non-brokered private placement of 1,042,282 units for gross proceeds of US$1.37mn. These units were priced at CAD$1.70 each with the unit consisting of one common share of the company plus one common share purchase warrant of the company. Each warrant is exercisable at CAD$2.80 for a period of five years. In this case the warrants contain a provision that if the company's shares trade at or above CAD$4.25 per share for 15 consecutive trading days, the company may, at any time after the expiry of the applicable statutory hold period, accelerate the expiration of the warrants upon not less than 30 days of written notice by the company.



Management

George Glasier, Director, President and Chief Executive Officer, is the founder of Western Uranium Corporation. He has over thirty years' experience in the uranium industry in the United States, with extensive experience in sales and marketing; project development and permitting uranium processing facilities. He was the founder of Energy Fuels (Volcanic Metals Exploration Inc.) and served as its Chief Executive Officer and President from January 2006 to March 2010. He was responsible for assembling the management team, acquiring a portfolio of uranium projects, and leading the successful permitting process that culminated in the licensing of the Piñon Ridge uranium mill which was planned for construction in Western Montrose County, Colorado. He began his career in the uranium industry in the late 1970's with Energy Fuels Nuclear, which built and operated the White Mesa Mill near Blanding, Utah, becoming the largest uranium producer in the United States.

Russell Fryer serves as a Director for Western Uranium Corporation. He has 26 years' experience investing in developed and developing markets with a focus on mining and natural resources. With a background in engineering, he has advised mining companies in pre-production and production stages of mineral output. He is a director of Ecometals Limited. Previously, he was a Managing Director at Macquarie Bank. Before Macquarie, he managed investor capital in the natural resources sector at Baobab Asset Management and North Sound Capital. Throughout his career, he has also worked for investment banks such as Robert Fleming, HSBC and Deutsche Bank.

Michael Skutezky serves as a Director and Chairman of Western Uranium Corporation. After a career at Royal Bank of Canada as Assistant General Counsel, he moved into management as Senior Vice-President of National Trust Company and as Senior Vice-President and General Counsel of the Romanian subsidiary of Telesysteme International Wireless Corporation. He was General Counsel & Corporate Secretary of Century Iron Mines, a company listed on the TSX. He is currently a lawyer practicing in Toronto, Ontario. He is Chairman of Rhodes Capital, a private merchant bank providing services to the resource and technology sector.

Andrew Wilder is a Director and CFO. He is the founder and CEO of the Cross River Group, a firm that provides capital, strategic business development and operations to alternative asset managers and operating companies. Prior to founding Cross River, he co-founded Kiski Group, an advisory firm organized in 2009 to help institutions develop their alternative manager platforms by helping vet managers and offer infrastructure solutions in areas of investment and business risk management. In 2001, he co-founded North Sound Capital LLC, a long/short equity hedge fund manager which was launched with $15mn in July of 2001 and reached $3bn in AUM within 5 years. In 2003, he also co-founded Columbus Avenue Consulting, an independent fund administration business with 90 clients and $7 billion in AUA when it was subsequently sold in 2012. His prior career included heading operations for C. Blair Asset Management, a $500mn long/short equity hedge fund, and serving as a Manager in audit of Deloitte & Touche (in their Cayman Islands and Toronto practices).

Risks

The prime risk for the company is metal prices and country-risk. Ultimately other problems proceed from these two. If uranium firms up then financing will inevitably improve particularly for a company with the quality of the share register that it has currently.

Thus we would mention the major risks being:

- Ongoing lassitude in the Uranium stock price
- Another Fukushima-like event or major renunciation (like Germany's) of the nuclear option
- Environmental considerations in Colorado
- Difficult financing conditions do not improve, or actually worsen (though worse is hard to contemplate from the recent bathos)

While environmental considerations recede and another country indulging in a Merkel-like leap into the abyss is unlikely, the greatest risk is the financing one. The toughest task at this time is to pull off a financing in the absence of a move in the Uranium price. This requires an investor that is very committed to the space or an offtaker that is determined to add to their US-sourced supply. Therefore it is from this quarter (most probably a US-based nuclear generator) that Western Uranium is likely to find its largest source of support for the mill build and commitments to underpin the reactivation of the Sunday Mine complex.

Conclusion

New constructs in the uranium space are few and far between. The two main plays that we have chosen to represent Uranium in our field of vision are Western Uranium and GoviEx. The former is a "new" player (constituted of veteran parts) while GoviEx has recently been transformed with the absorption of Denison's African assets. In some ways these two companies are following parallel (yet sometimes intersecting paths). GoviEx picking up Ablation processing would make the similarities even more striking.

Western Uranium has pursued a "buying straw hats in winter" strategy that only yields dividends when the sun comes out. For the moment the sunny uplands of precious metals, Zinc and Lithium are getting much sunshine while Uranium remains in the penumbra of the Fukushima event and the ridiculous German response thereto. However when the rays do slant across the uranium part of the mining space there will be few players ready to catch those beams and monetize them, with Western being one of the hardy few.

As usual there will be a rush to find investable names and the sheer lack of coverage of Uranium miners means that all but the household names will occur to investors at first thought. The pure explorers have not been doing any work, so thus making no announcements and have thus been largely forgotten by the market. This leaves a rather wider area "in front of goal" with Western as one of the few players able to potentially score.

The strategy of production from stockpiles reduces dramatically the costs per lb of the end product, particularly when combined with the Ablation technology. This in turn will become an enabler for the mill while improved pricing will create a ramp-up scenario for the underground component of the Sunday Mine Complex and provide a trigger for developing the Hansen project as a feeder for the mill. A

perfect storm of Uranium and Vanadium prices awakening from their slumbers would position Western Uranium as the New Kid (producer) on The Block.

The turn will come just as it has for the other mining spaces and it could be brutally swift meaning that those nearest to production will be best positioned to benefit. Therefore we rate Western Uranium as a Long position in the Model Mining Portfolio and our 12-month target price of CAD$4.80.

Important disclosures

I, Christopher Ecclestone, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers.

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