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Zacks Small-Cap Research

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Deep Yellow Limited (DYLLF-OTCQX)

Zacks Initiates Coverage of Deep Yellow Limited, a Junior Uranium Mining Company

Based on comparative analysis of junior uranium companies in the developmental phase, a second quartile price-to-book (P/B) ratio of 4.2 indicates a share price target of US$0.68.

All $ figures in this report are US$ unless noted otherwise.

Current Price (08/28/20)	$0.19
Valuation (US$)	**$0.68**

OUTLOOK

Deep Yellow Ltd. (ASX: DYL) (OTCQX: DYLLF) is **being developed to become a tier-one uranium producer of uranium** ahead of the anticipated up-cycle. Ongoing annual supply deficits and the rationalization of capacity by the major producers, along with production cutbacks due to the pandemic, are hastening the inflection point in uranium's commodity cycle. Management is developing its Namibian uranium projects, one of which (the **Reptile Project**) has advanced to the PFS stage. Management is also **seeking M&A opportunities** to increase the company's reserves and to broaden Deep Yellow's geographic diversification in terms of mining jurisdictions.

SUMMARY DATA

52-Week High	**$0.23**
52-Week Low	**$0.07**
One-Year Return (%)	**2.26**
Beta	**0.41**
Average Daily Volume (shrs.)	**33,765**
Shares Outstanding (million)	**245.1**
Market Capitalization ($mil.)	**$47.6**
Short Interest Ratio (days)	**0.6**
Institutional Ownership (%)	**25.8**
Insider Ownership (%)	**10.9**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**N/A**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/M**
P/E using 2021 Estimate	**N/M**
P/E using 2022 Estimate	**N/M**

Risk Level	**Above Average**
Type of Stock	**Small - Value**
Industry	**Mining - Uranium**

ZACKS ESTIMATES

Revenue
(in $AUD)

	Q1	H1 (Dec)	Q3	H2 (Jun)	Year (Jun)
2018		200,442 A		214,237 A	414,679 A
2019		210,688 A		133,959 A	344,647 A
2020		191,829 A		120,402 E	312,231 E
2021					295,000 E

Earnings per Share
(EPS is operating earnings before non-recurring items)

	Q1	H1 (Dec)	Q3	H2 (Jun)	Year (Jun)
2018		-$0.0065 A		-$0.0069 A	-$0.0134 A
2019		-$0.0089 A		-$0.0101 A	-$0.0190 A
2020		-$0.0090 A		-$0.0085 E	-$0.0175 E
2021					-$0.0163 E

EPS in $AUD

Quarterly EPS may not equal annual EPS total due to rounding.

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EXECUTIVE SUMMARY - KEY POINTS

The **uranium industry** is setting up for an anticipated accelerated rise in uranium prices.

- **Supply/demand imbalances** in the past have created three distinct commodity cycles in the uranium industry. Each cycle has begun with an increase in the price(s) of uranium and of uranium equities (both major established producers and junior mining companies), which has **culminated in a rapid, exponential 1-2 year rally** in uranium stocks.
- Over the last five years (2015-2019), **demand has been growing steadily**. Over the next five years, **global nuclear reactor uranium requirements are expected to grow in the 0.5%-to-2.5% range**.
- The majority of uranium is supplied to nuclear power plants through **long-term contracts** which are priced at a premium to spot market. Though currently these long-term contracts allow certain uranium producers to continue selling some of their uranium production profitably, about half of the uranium producers have operating costs that are above the current spot price.
- Prior to the pandemic-related shut downs, **over 53 million lbs. $U_3 0_8$ of capacity have been mothballed since 2013** through the shutdowns of unprofitable mines or by the intentional capacity rationalization by major producers (Kazatomprom and Cameco).

The uranium industry is composed of many companies, from major established producers to more speculative junior exploration companies. Though larger producers tend to have greater resources to navigate periods of depressed market conditions, junior companies provide greater leverage to the rise in uranium prices.

Almost all uranium stocks should benefit from the anticipated growth of much needed primary supply driven by the expected upcoming fundamental supply deficit; however, certain groups of uranium stocks benefit differently from each stage of the up-cycle. Historically (observing the 2001-2007 up-cycle), current producers reacted well to the **initial rise in prices** (since their current production could immediately benefit from the increase in the price of uranium), and they significantly outperformed the price of the commodity, itself. However, extreme out-sized returns were enjoyed by junior mining companies that traded below $0.25 per share at the bottom.

Then, there was a **mid-phase** when the rate of increase of the spot price of uranium moderated to a single-digit rate. In this period, junior mining companies corrected about 50%, while producers corrected about half that amount (around 25%). During the **latter phase**, when the uranium spot price surged irrationally, junior mining companies that have become producers (and the commodity) exhibited solid triple-digit returns from the consolidation low that had occurred in the mid-phase. Surprisingly, in this late phase, out-sized returns were achieved by junior mining companies which announced, at that instant, they were entering the uranium space; on the other hand, these same junior companies later experienced greater that 95% declines as the cycle eventually unwound.

Deep Yellow Ltd. **is unique among junior mining companies** and is being positioned to provide a leveraged opportunity to participate in all phases of the expected upswing in uranium prices under a Dual Pillar strategy.

Management is focused on becoming a tier-one uranium producer with the capacity to deliver 5-to-10 million lbs. of uranium annually. CEO John Borshoff and his team previously achieved the same accomplishment with Paladin Energy Ltd by acquiring, developing and advancing the Langer Heinrich deposit into production within four years (2002-2006) and the Kayelekera Mine in Malawi (production 2009 to 2013) during the last uranium up cycle.

The first Pillar is organic growth, advancing the company's Namibian uranium tenements. The company's current flagship project, the 100%-owned **Reptile Project**, is in the exact same

jurisdiction and shares the same palaeochannel network as Langer Heinrich mine, as does EPL 3669 in the NOVA JV, in which Deep Yellow held a 65% interest reducing to a 39.5% interest on JOGMEC spending AUD$4.5 million to earn in its 39.5% interest (expected completion in August 2020). Also, basement/alaskite deposits are being investigated. Over the last four years, the **company's exploration campaigns have increased its Namibian reserves** from 93.6 million lbs. U_30_8 in 2016 **to 159.3 million lbs. U_30_8** in 2020.

Million lbs. U3O8 Year	Total	Resource Categories Measured	Indicated	Inferred
2016				
Totals	93.6	11.0	34.4	48.4
2020				
Totals	159.3	21.1	50.8	88.3

Source: Analyst's work

Management anticipates that the Deep Yellow's current Namibian EPLs (Exclusive Prospecting Licenses) could produce 2.5-to-3.5 million lbs. of uranium annually.

The management's Dual Pillar growth plan also calls for diversifying the company's uranium portfolio by **pursuing acquisitions/mergers** in order to create a multi-jurisdictional portfolio of uranium projects that mitigates operational, geographic and political risks. When utilities look to enter into an off-take primary supply contract with a producer, one of the many aspects considered is the ability to fulfill the contract, which entails ensuring a secure and reliable supply of uranium.

We expect that management will deliver on its plan to become a tier-one uranium producer with an annual operating capacity of 5-to-10 million lbs. of U_30_8, both through organic growth by means of developing its Namibian projects and through acquiring and developing additional uranium projects located in other jurisdictions.

OVERVIEW OF DEEP YELLOW LTD

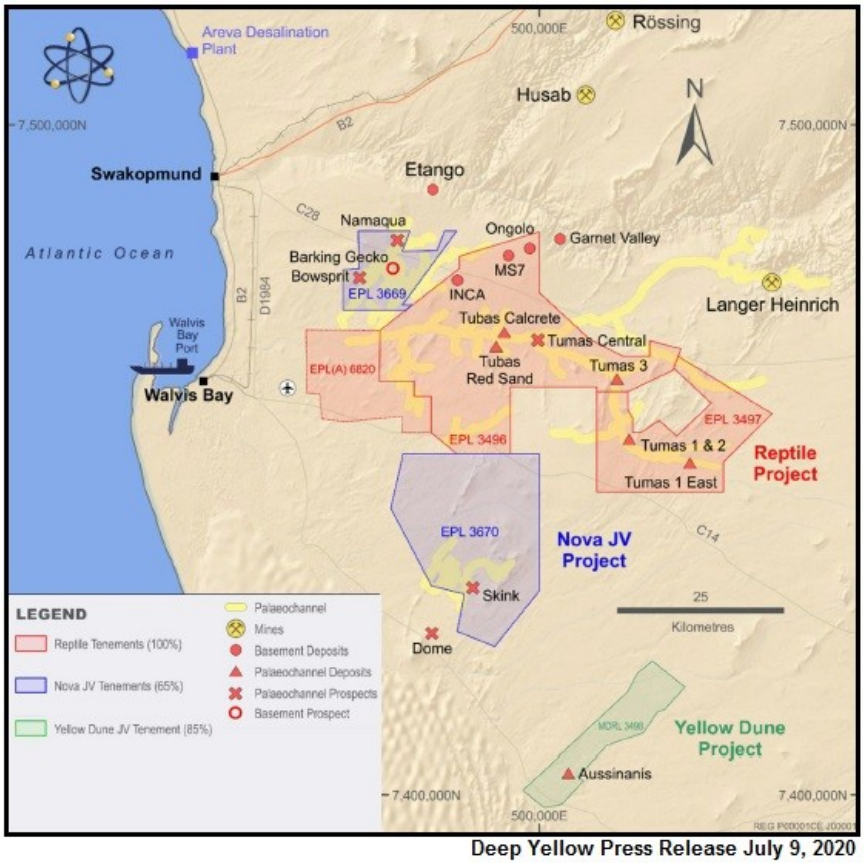
Headquartered in Subiaco, Western Australia, Deep Yellow Limited (ASX: DYL) (OTCQX: DYLLF) is a **junior uranium company** whose **management is focused on becoming a tier-one uranium producer** by becoming a secure and reliable supplier of uranium. The company's CEO, John Borshoff, achieved the same accomplishment as Founder and CEO of Paladin Energy by acquiring, developing and advancing both the Langer Heinrich mine into production within four years and, three years later, the Kayelekera mine in Malawi during the last uranium up cycle. Furthermore, Deep Yellow's current flagship project, the **Reptile Project**, is in the exact same jurisdiction and shares the same palaeochannel network as Langer Heinrich mine. To be sure, Deep Yellow has uranium assets and management experience to walk the same path again during the next up cycle.

In October 2016, John Borshoff was appointed CEO and Managing Director of Deep Yellow, and the company's focus shifted from not only expanding the resource base through exploration, but also pursuing multiple projects in order to create a multi-jurisdictional uranium platform. (See Corporate Strategy section below)

Deep Yellow was formed in 2005 with Paladin Energy later becoming a major shareholder from 2005 to 2017. Initially, the company focused on several Australian projects, but in October 2006, Deep Yellow merged with Raptor Partners Limited, a BVI registered company, in order to secure

prospective uranium prospects in Namibia (EPL 3496, EPL 3497 and EPL 3498 and one other EPL application at the time, which was later disposed).[i]

The **Reptile Project** consists of EPL 3496 and EPL 3497, which encompass **959.4 square kilometers**. The advanced project contains both palaeochannel-calcrete and basement/alaskite uranium deposits with JORC-compliant resource estimates. Combined, these deposits represent approximately 71.0 million lbs. U_30_8 of Measured and Indicated Mineral Resources and 88.3 million lbs. U_30_8 of Inferred Mineral Resources. A **Scoping Study** (SS) has been completed on the **Tumas deposits** (which represent 37.2 million lbs. U_30_8 of Measured and Indicated Mineral Resources), and a Pre-Feasibility Study (PFS) was commissioned in January 2020. **Management expects the PFS to be completed in December 2020**.



Deep Yellow Press Release July 9, 2020

Also within six months of John Borshoff being appointed CEO, in late-March 2017, Deep Yellow entered into a joint venture agreement with JOGMEC (Japan Oil, Gas and Metal National Corporation) regarding the **NOVA Joint Venture** (or NOVA JV). JOGMEC could earn a 39.5% interest in the project for **AUD$4.5 million** in exploration and development expenditures over a period of four years. The earn-in process has been completed with the latest of many exploration campaigns funded by JOGMEC. The NOVA JV consists of EPL 3669 and EPL 3670, which encompass **556.8 square kilometers**. Deep Yellow continues to be the manager of the NOVA JV holding 65% interest in the project, which will be reduced to 39.5% on confirmation of the JOGMEC earn-in.

Namibia

Namibia is a mining-friendly jurisdiction and has become the world's fourth largest producer of uranium. The government has effectively developed, supported and regulated the uranium mining industry. Namibia is a proven mining jurisdiction with well-developed infrastructure, including highways, formed roads, power grid and a deep water port (Walvis Bay).

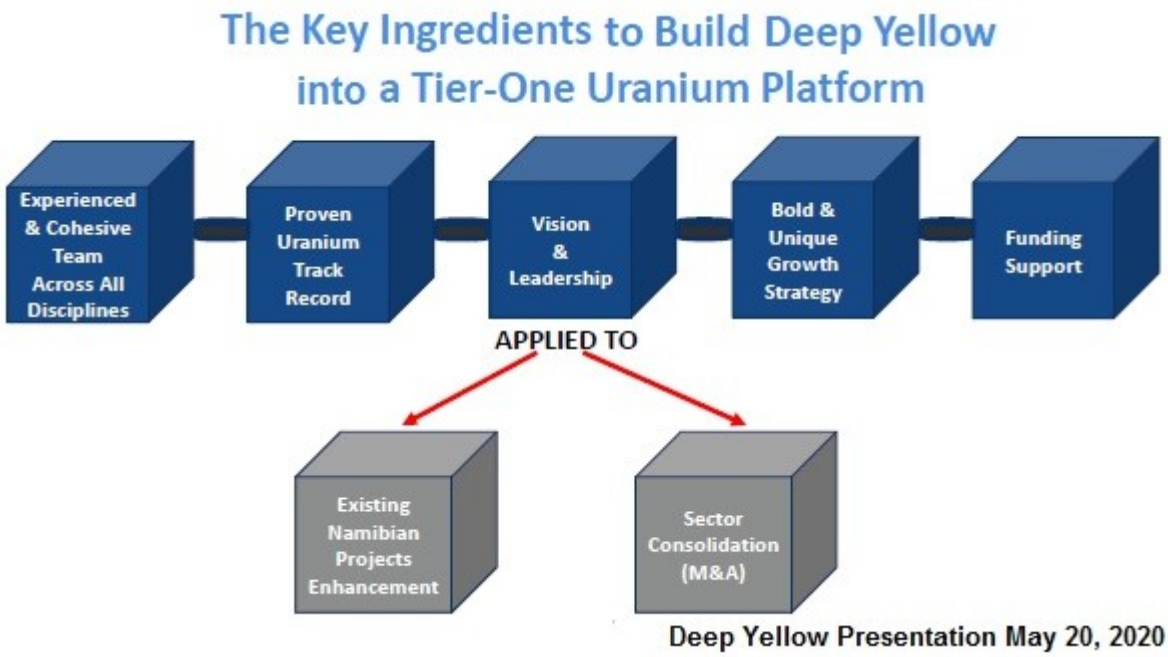
The cost of exploration in Namibia is low. The shallow depth of Namibia's palaeochannel calcrete-hosted uranium deposits is conducive to low-cost RC drilling. Metallurgical test work was anticipated to require diamond core sample material; however, comparative test work between RC and diamond drilling samples showed future work could be carried out using RC samples only, a significant cost savings. In addition, the location is primarily desert terrain, allowing for drilling large areas easily and rapidly.

Corporate Strategy

Confident in the impending up-cycle in uranium, management embarked on a **Dual Pillar growth strategy** consisting of both organic and inorganic growth initiatives. Organically, management is focused on exploring and developing Deep Yellow's existing **portfolio of Namibian projects** (Reptile, Nova JV and Yellow Dune) from exploration to production. The company's primary focus in on **advancing the Reptile Project** through continued exploration with the resource having been increased and/or upgraded three times within the last few years. The latest **drilling program at the Nova JV** (Barking Gecko on EPL 3669) intersected very promising uranium mineralization in a large (4km long and 1km wide) anomalous zone, which wraps around a prominent domal feature. The best intersection was a 24-meter zone averaged 297ppm eU_3O_8 and a maximum grade of 736ppm was obtained over 1 meter.

The **second pillar** of management's growth plan is to **diversify the company's uranium portfolio** by **pursuing acquisitions/mergers** in order to create a multi-jurisdictional portfolio of low-cost uranium projects. When utilities look to enter into an off-take primary supply contract with a producer, one of the many aspects considered is to ensure a secure and reliable supply of uranium is the ability to fulfill the contract. In the eyes of utility buyers, being a multi-jurisdictional uranium producer mitigates operational, geographic and political risks.

Through organic and inorganic growth initiatives, **management's goal** is to **build a multi-project, low cost, Tier 1 uranium producer with the capacity to deliver 5-10 million lbs. of uranium annually**.



Management

Utility buyers (and investors) look for assurance that management can effectively execute its strategy. Deep Yellow has a **leadership team with a proven track record** that has delivered in the

past. Most significantly, under CEO John Borshoff, Paladin Energy acquired the Langer Heinrich Project from Aztec Resources in 2002 and within four years, commenced uranium mining operations in 2006. Paladin also acquired Kayelekera in Malawi (initially through a joint venture and later purchasing the entire project outright) and brought this mine into production in 2010. Moreover, most of Deep Yellow's management team worked together at Paladin. Uranium mining projects face a multifaceted array of economic, environmental, regulatory, technical and geopolitical issues. In order to be successful, the **management team** of a junior uranium mining company **needs the technical, regulatory, financing and geopolitical experience** to navigate the necessary steps of exploration, environmental studies, metallurgical process design, mining lease application, permitting, mine construction and final fine-tuning of the process.

Equity Milestone

In June 2018, the company's shares began trading on the OTCQB Venture Market, and within months, was **uplisted to the OTCQX Best Market**. Now, DYLLF is Depository Trust Company (DTC) eligible. The OTCQX listing should expand awareness of the company among US investors, both retail and institutional. The company's primary listing continues to be the Australian Stock Exchange (ASX) under the symbol DYL. The company is also listed on the Namibian Stock Exchange (DYL) and the Frankfurt Exchange under the symbol JMI.

OVERVIEW OF URANIUM MARKET

Uranium is a unique mineral, critical both for the generation of **11% of global electricity production** and for military purposes (nuclear weapons and as fuel for nuclear reactors used to power naval vessels). Via nuclear reactors, uranium can generate large amounts of **low-cost electricity**.

Nuclear energy is reliable and sustainable; moreover, it is **one of the lowest sources of carbon emissions per megawatt hour** (MWh). As a low-carbon energy technology, electricity generated by nuclear power plants is an excellent substitution for fossil fuel-based electricity in order to achieve the targets set forth by the INDCs (Intended Nationally Determined Contribution) of the Paris Climate Agreement's signatories. The use of nuclear power is listed in the national climate strategies of 10 countries, namely, Argentina, China, India, Iran, Japan, Belarus, United Arab Emirates, Jordan, Niger and Turkey.

Since 2015, **global demand for uranium has been growing steadily at a 3.6% CAGR**. Even though there have been reactor closures, particularly in Germany, 42 nuclear reactors having been added to grid over the past six years. The current outlook for uranium demand is for low-single digit growth and a declining primary supply from existing mines. Current uranium prices are low and below the average cost of production.

The **supply deficit** has not been resolved yet by a sufficient increase in prices to incentivize new production, since the gap has been filled by secondary supply, mainly from inventory drawdowns and underfeeding. Simplistically, t**he undersupply from miners of the last few years has been provided predominately by the overproduction of uranium in prior years and underfeeding**.

The uranium industry is setting up for a classic commodity **supply-demand imbalance** with global demand growing and annual primary supply from currently operating mines (139 million pounds) below annual uranium consumption [**DEMAND**] by 440 global nuclear utilities[ii] (**175.7 million pounds U_3O_8** or 67,800 tU) in 2019.[iii] Primary production of uranium [**SUPPLY**] was significantly less at **139.5 million pounds** U_3O_8 (or 53,656 tU)[iv]. Prior to the COVID-19 pandemic, 2020 primary production was expected to be around 139.3 million pounds U_3O_8 (or 53,600 tU).[v] Given the COVID-

related mine shutdowns, we estimate that primary production will only be in the 99-110 million pound U_30_8 (45,000- 50,000 tU) range.

BRIEF HISTORY OF URANIUM'STHREE CYCLES

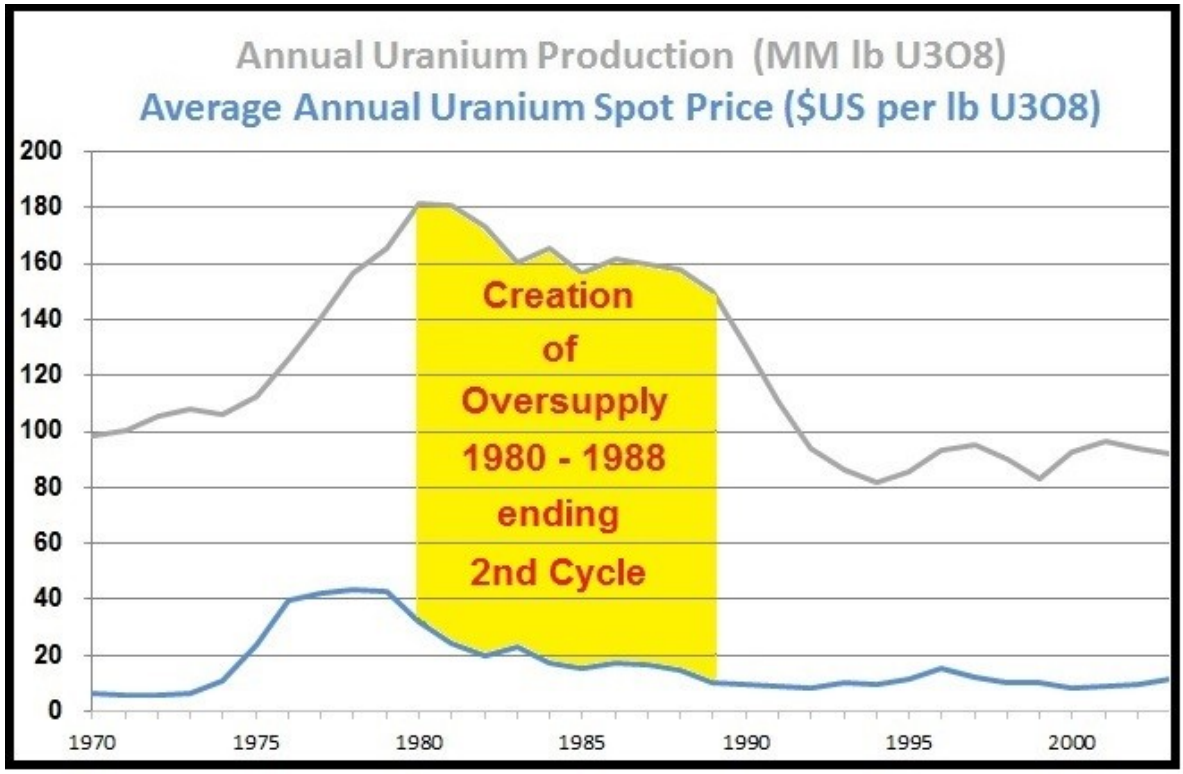
The uranium industry's relatively brief 75-year history has exhibited an account of **three boom-bust cycles**. All cycles began with a steep increase in uranium prices that reflected panic buying as industry buyers of uranium stockpiled material for future anticipated demand. The price of uranium then hovered for a brief time (from months to a few years) at high levels before steadily declining as supply came on line, supply which was developed from the influx of capital that was attracted by the initial perceived supply shortage.

The **first uranium boom** was **stimulated by the nuclear arms race** at the beginning of the Cold War between the U.S. and the USSR. The price of uranium increased from $7.14 per pound U_30_8 in 1948 to $12.35 per pound in 1953,[vi] after which prices began to slowly and steadily erode as supply increased despite the passage of the Atomic Energy Act of 1954. By 1972, price of uranium had declined to below $6 per pound U_30_8.

Author's note: The uranium prices in this report are actual prices, which are appropriate in financial research reports. Since many mining industry reports are geared towards decision-makers at mining companies, historical prices are often in constant US dollars (adjusted for inflation), which are applicable when assessing exploration, production and other costs associated with mining projects. For reference, the constant dollar prices in 1948, 1953 and 1972 in the paragraph above are $45, $75 and $34, respectively.

The catalyst for the **second uranium boom** was the **OPEC-induced 1973 oil shock**, which inspired the expansion of nuclear energy as an alternative electricity source. Many thought that nuclear energy was going to become the dominant generator of electrical power in the United States and around the world. Vast amounts of capital investment flowed into the industry, and the **price of uranium increased to over $40 per pound U_30_8 by 1976 and remaining there until 1979**, until the Three Mile Island incident (in March 1979) precipitated an initial decline to below $20 by 1982. 1983 exhibited a brief bounce to the mid-$20 area. Thereafter, uranium prices declined steadily into 1993 (with a small dip and bounce associated with Chernobyl incident in April 1986). Despite the **price decline from 1978 until 1993**, global uranium supply steadily increased from 1975 to 1980, peaking at over 180 MM lbs. U_30_8 (69,000 tU) annually and holding above 172 MM lbs. U_30_8 (66,500 tU) in 1981 and 1982.[vii] Thereafter, mine production hovered in the 165-to-162 MM lbs. U_30_8 range (63,600-to-60,200 tU) through 1988.[viii] Despite rising uranium requirements by nuclear utilities, this **high level of production between 1980 and 1988) created an oversupply condition** that pressured uranium prices down to $7.02 per pound U_30_8 in 1993 and remained essentially range bound between $7 and $10 from 1994 until 2003 (with a minor bounce/rally in 1996 to $13).

Author's note: In an effort to determine how much oversupply is created during a particular uranium cycle, certain rubrics were defined and decided upon. Simplistically, analyzing demand (nuclear utility requirements) versus supply (primary production) was fruitless due to two major attributes acting contrary to the analysis: demand almost always is rising and secondary supply enters the marketplace with amazing opaque fluidity. Therefore, the dominant principle employed to determine the **period when the creation of oversupply begins** is exhibited in the marketplace **when the price of uranium begins to falter**. The **period of oversupply ends** when, in reaction to low prices, a certain amount of **production capacity (which has become uneconomical to mine) is mothballed** and **uranium prices have bottomed**. The zones highlighted in yellow indicate the period in which oversupply is created, but not the amount that is sidelined into secondary supply.



Source: Author's work

The **third uranium boom** was in a nascent stage when uranium prices broke above $14 per pound U_30_8 in 2003. The primary catalyst was **the acceleration of China's plan to construct more nuclear plants** at a time when few, if any, new nuclear plants were being planned in the United States and other Western countries. China viewed an expanding nuclear power program as an essential part of their country's **modernization effort** to meet the nation's growing energy needs, to assuage the country's air pollution problems and to raise the standard of living to Western levels.

In the early 2000's, coal was China's main energy source, providing almost 70% of the country's electricity. Not only did this situation cause major environmental problems, but the shipments of coal to thermal power plants were an overwhelmingly heavy burden to the transportation system. Most of China's coal reserves are in the north and northwest, while the coal-fired power plants are predominately in the eastern half of the country. This massive logistical problem required almost half the nation's rail capacity be devoted to coal shipments. At times, the capacity constraints were responsible for severe electrical power shortages, causing some industries to operate at half capacity. China was overly-dependent on coal as an energy source.

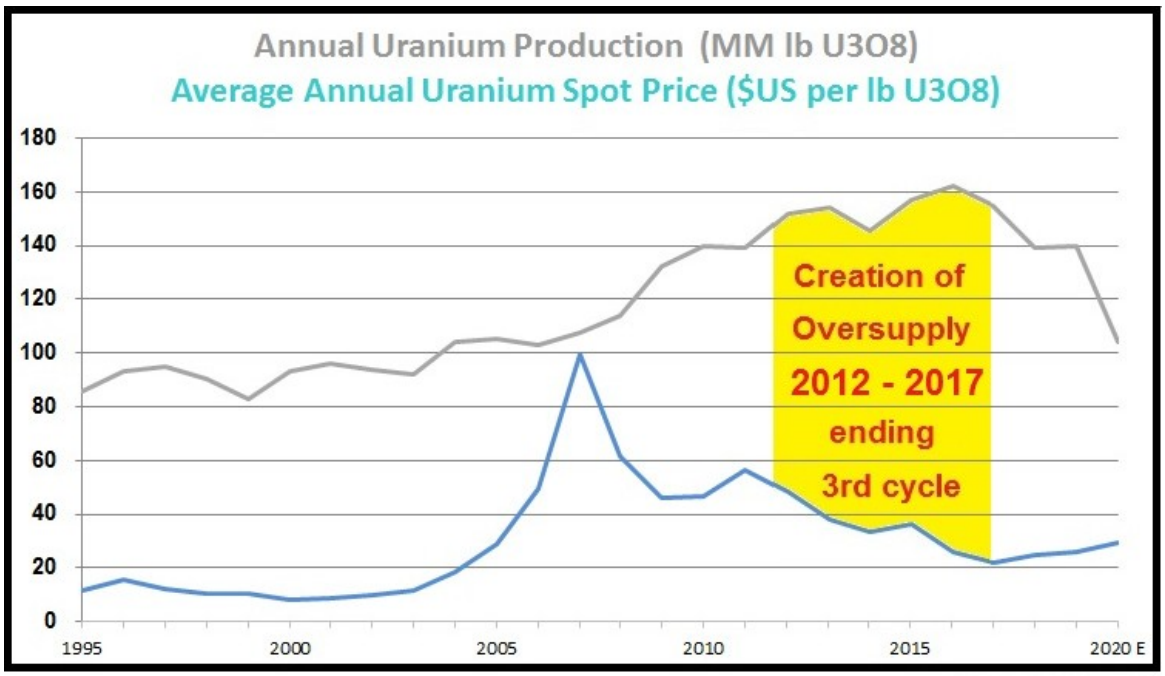
China's economic and social policies are developed through the framework of Five-Year Plans, which was inaugurated by the First Five-Year Plan that covered the years of 1953-1957. The development of nuclear technology for power plants became a priority in the Sixth Five-Year Plan (1981-85), which lead to the construction of **three nuclear power plants in the mid-1980's** (two located at Daya Bay and another at Quinshan) with the subsequent start of commercial operations in the mid-1990's. China's Tenth Economic Plan (2001-2005) called for an additional eight new nuclear power plants to be constructed. **Construction of seven reactors began in in the late-1990's**[ix] and when the fifth of the seven reactors came on-line in **mid-2003**, **the spot price of uranium broke out above $11** per pound U_30_8 and thereafter continued to rise steady.

The Eleventh Five-Year Plan (2006-2010) set a goal that 4% of the electricity generated in China be from nuclear power, up from the 2.4% in 2004. Accordingly, China planned to gear up nuclear capacity to 40 GW by 2020 through the construction of at least 30 new nuclear plants in addition to the nine in operation and two under construction at the time. Stimulated by this incremental demand,

particularly since China began to rely heavily on imported uranium, **the price of uranium extended its rally $40.75 per pound U_30_8 in March 2006.**

The catalysts for a uranium price spike manifested in 2006. On April 6, 2006, Cameco's **McArthur River uranium mine** experienced a **catastrophic flooding event**, and production ceased at the world's largest producing uranium mine, which accounted for 18.5 million pounds U_30_8 in 2014[x] (or 17.8% global uranium production at the time). Knowing that the unforeseen flooding of the McArthur River mine would draw slow-moving utility buyers to secure additional uranium in face of this supply disruption (especially at a time when inventories at utilities were historically low levels), financial players moved quickly to acquire uranium in the spot market, boosting the price up to $55 by September. Then, on October 24, 2006, news hit that a **severe flooding event** had occurred at the **Cigar Lake mine,** Cameco's unfinished uranium mine that was slated to start producing roughly seven million pounds U_30_8 in 2008 (with output expected to rise to about 18 million pounds by 2010). Then, utility buyers started to stockpile material. This perfect storm of utility panic buying **ultimately drove the spot price to $136 per pound U_30_8 in June 2007**.

After the panic buying, **the price of uranium corrected to the mid-$40 range** as great deal of new uranium supply came online, primarily from Kazakhstan, which became the world's leading producer in 2009 with roughly 28% of global production. Primary uranium production increased from 107.3 MM lbs. U_30_8 (41,282 tU) in 2007 to139.5 MM lbs. (53,671 tU) in 2010. Though still below world uranium requirements of 169.5 MM lbs. (65,180 tU), spot prices of triuranium octoxide (U_30_8) had just **rallied above $72 in January 2011**.



Source: Author's work

In **March 2011**, a **tsunami-related accident** occurred at the **Fukushima Dai-Ichi nuclear facility in Japan**. The accident raised concerns over the safety of nuclear power plants. Immediately, China announced a moratorium on nuclear projects as the country's nuclear safety practices were reviewed. Japan began shutting down its nuclear reactors for safety reviews, and by June 2012, not one of its 48 reactors was in operation. Germany quickly shut down eight of its 17 nuclear power units. The construction of new reactors was halted pending safety reviews.

Uranium stocks, from major producers to junior exploration companies, sold off sharply after the Fukushima accident as the demand for uranium waned. Initially, spot U_30_8 prices declined to the $51-to-$52 range, held that level for about a year before dropping below $50 lb. U_30_8 **in mid-2012**, indicative that a **period of oversupply had begun**. Ultimately, the price of U_30_8 reached $18 in

November 2016 as demand for uranium from Japan, Germany and Switzerland weakened significantly.

Author's note: In the third cycle, the time when the price of uranium began to falter is believed to be when prices began to decline in mid-2011 when the perceived future long-term demand from nuclear utilities would be fundamentally impacted by the Fukushima accident. The 2007 price spike was induced by the extraordinary happenstance of two mine floods occurring within months of each other, after which the price of uranium stabilized in the mid-$40 area until increasing demand drove pricing into the $60-$70 range in late-2010-early-2011 timeframe.

During the third cycle, uranium (and the uranium stocks) rallied exponentially with the commodity and major companies performing relatively in tandem, while junior mining companies coming on line as producers fared better.

Investment	Category	Bottom Dec. 2000	Pre-Flooding Mar. 2006	Spike Peak June 2007	Bottom to Pre-Flood	Pre-Flood to Peak	Bottom to Peak
U3O8	Commodity	$7.10	$38.63	$136.00	444%	252%	1815%
Cameco	Major producer	$2.52	$36.00	$46.75	1328%	30%	1755%
Denison Mines	Prior Jr. mining co.	$0.26	$6.41	$14.54	2414%	127%	5602%
Paladin Energy	Jr.-to-producing co.	$0.01	$2.60	$10.25	25900%	294%	102400%

Source: Analyst's work

THE FOURTH URANIUM CYCLE

The **fourth uranium cycle is in its embryonic stage**.

- It appears that **the spot price of U_3O_8 bottomed** in November 2016 at $18 per pound.
- At least 53.4 million pounds U_3O_8 of **uneconomical production capacity has been mothballed**.
- Global **nuclear reactor uranium requirements are increasing** at a low, but consistent low-single digit growth rate.
- Pre-COVID-19 **uranium production** was expected to be flat; **post-COVID-19 will be down dramatically in 2020**.
- **Major mines** (Kazatomprom and Cameco) have decided to **purchase secondary supply in the spot market** to help fulfill their contractual delivery obligations.
    - Consequently, **secondary supply is shrinking** due to the inventory drawdowns.
- Given increasing uranium demand, reduced production and diminishing availability of secondary supply, the procurement process of nuclear utilities under traditional long-term contracts will become very challenging unless the price of uranium rises to a level that incentivizes the financing of new uranium projects.

SIGNIFICANT PRIMARY SUPPLY REDUCTIONS

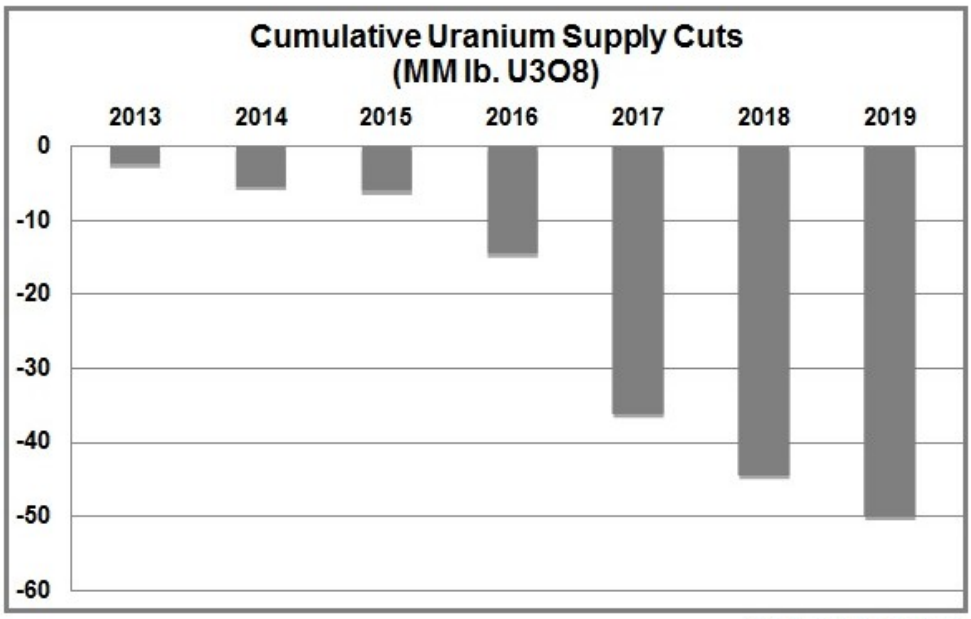
In June 2013, spot uranium prices declined to below $40 per pound. Managements of uranium mining companies were compelled to make major decisions on whether to curtail production by placing certain mines on care and maintenance. As uranium prices continued to erode, ultimately to $18 in November 2016, the **uranium mining industry rationalized capacity** by canceling developmental projects, closing producing mines and reducing production capacity at other mines. **Over 53 million pounds U_3O_8 of capacity have been mothballed since 2013**.

In the table below, the vast majority of the mines placed on care and maintenance (aka on standby) are listed. Several of the mines were just gearing up production between 2011 and 2013 when uranium prices dipped below $50 lb. U_30_8 on their way to $30 in 2014. In such cases, the capacity reduction in the table reflects the average peak production of those mines (not nameplate capacity).

Year	Idled Mines	Majority Equity Owner	Secondary Equity Owner	Owner Today	Location	Capacity Reduction (tU/year)	Capacity Reduction (MMlb U3O8/yr)
2013	Trekkopje	Areva	100%	Orano	Namibia	251	0.7
2013	Alta Mesa	Mesteña Uranium	100%	Energy Fuels	Texas	235	0.6
2013	Daneros	Energy Fuels	100%	Energy Fuels	Utah	238	0.6
2013	Honeymoon	Uranium One	100%	Boss Resources	Australia	151	0.4
2014	Kayelekera	Paladin Energy	Malawi	Lotus Resources	Malawi	1,154	3.0
2015	Azelik	CNNC	Niger	CNNC	Niger	258	0.7
2016	Cooke	Sibanye Gold	100%	Sibanye-Stillwater	South Africa	47	0.1
2016	Rabbit Lake (Eagle Point)	Cameco	100%	Cameco	Saskatchewan	1,621	4.2
2016	Crow Butte	Cameco	100%	Cameco	Nebraska	769	2.0
2016	Smith Ranch-Highland	Cameco	100%	Cameco	Wyoming	815	2.1
2017	Kazatomprom (-10%)	Kazatomprom	N/A	Kazatomprom	Kazakhstan	1,000	2.6
2017	McArthur River	Cameco	69.8%	Orano fka Areva	Saskatchewan	7,355	19.1
2018	Kazatomprom (-20%)	Kazatomprom	N/A	Kazatomprom	Kazakhstan	600	1.6
2018	Nichols Ranch	Energy Fuels	100%	Energy Fuels	Wyoming	129	0.3
2018	Langer Heinrich	Paladin Energy	CNNC	Paladin Energy	Namibia	2,098	5.5
2018	Willow Creek	Uranium One	100%	Uranium One	Wyoming	362	0.9
2019	SOMAÏR	Areva	ONAREM	Orano	Niger	2,140	5.6
2020	COMINAK	Orano fka Areva	ONAREM	Orano	Niger	1,322	3.4
					TOTAL	20,546	53.4

Source: Author's work

Since February 2016, mining uranium has been uneconomical except for **low-cost ISR** (*In Situ* Recovery) **operations** (primarily in the Republic of **Kazakhstan**),[xi] at Australia's **Olympic Dam** (where uranium is a low-cost by-product of copper mining) and for mining operations that have entered into long-term supply contract with utilities at prices above production costs. **Currently, the spot price of U_30_8 is below the marginal cost of production of most of the world's producing mines**.



Source: Author's work

Significant production curtailment decisions have been made by many uranium producers. **Two very large producers** of uranium (**Cameco** and **Kazatomprom**) invoked supply discipline and signaled through their supply reductions (and through their **spot market purchases to fulfill their contract commitments**) that uranium mining is uneconomical at current prices. In addition, their actions accelerated the process of reducing global inventories.

Between April 24, 2016 and November 8, 2017, **Cameco** (TSX: CCO; NYSE: CCJ) closed four uranium mines (Rabbit Lake – Eagle Point, Crow Butte, Smith Ranch- Highland and McArthur River) due to low uranium prices as a result of the state of oversupply in the uranium market. Combined these mines are capable of producing approximately 27.5 million pounds U_30_8 (10,560 tU) annually.

In 2019, Kazakhstan produced 59.3 million pounds U_30_8 (22,808 tU) or 24% of global uranium production. On January 10, 2017, **Kazatomprom** (LSE: KAP, FRA: 0ZQ) , the national uranium operator of the Republic of Kazakhstan, announced planned uranium production in the Republic of Kazakhstan would be reduced by approximately 10% due to low uranium prices. Then, in December 2017, the company **announced that planned uranium production for the Republic of Kazakhstan would be reduced by 20% over three years** (2018-2020) on a flex down basis. Effectively, planned Kazatomprom Group production was expected to be reduced to 50.2 million pounds U_30_8 (22,775 tU) in 2020[xii]. Subsequently, in late August 2020, planned Group production was reduced further to 42.4 million pounds U_30_8 (19,250 tU) as a result of the COVID-19 shutdown of mining operations.

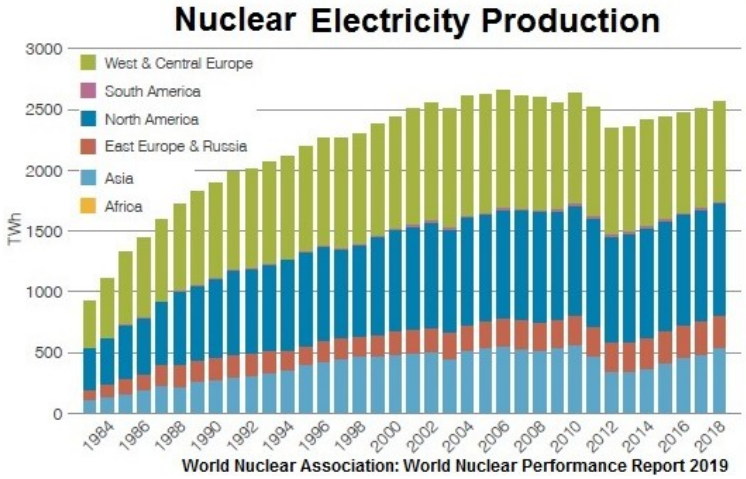
There are conscious efforts on behalf of the managements of Cameco and Kazatomprom not to produce excess supply into an oversupplied market. To quote from Cameco's second quarter 2020 MD&A (Management's Discussion and Analysis, “we will not produce from our tier-one assets to sell into an oversupplied spot market. We will not produce from these assets unless we can commit our tier-one pounds under long-term contracts that provide an acceptable rate of return for our owners.” Importantly, Cameco does not intend to build up inventory that would create an overhang on the market.

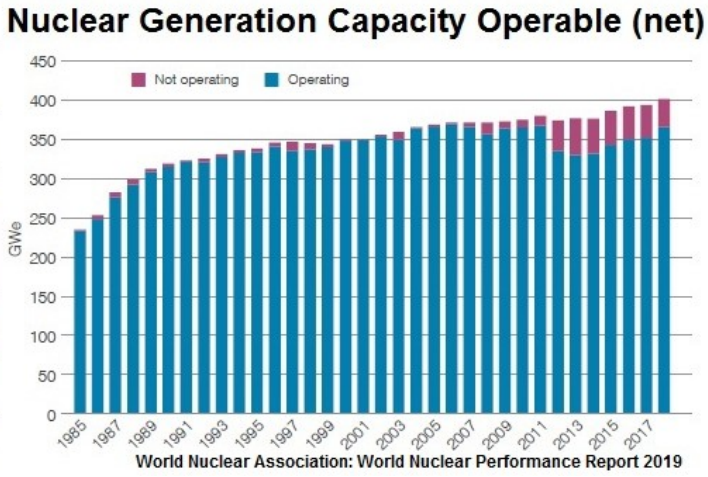
It should be noted, however, that new mines have initiated production which has partially counter-balanced these mine closures.[xiii] From 2016 (the peak year), **uranium production has only declined 22.7 million pounds** U_30_8 (8,700 tU) from 162.2 million pounds U_30_8 (62,379 tU) in 2016 to 139.5 million pounds U_30_8 (53,656 tU) in 2019. **During this same period, mothballed production totals 44.0 million pounds** U_30_8 (16,936 tU)

Furthermore, the creation of **uranium funds** (Yellow Cake plc and Uranium Participation Corp.) is **further reducing usable inventories by sequestering uranium material** from the nuclear utility market.

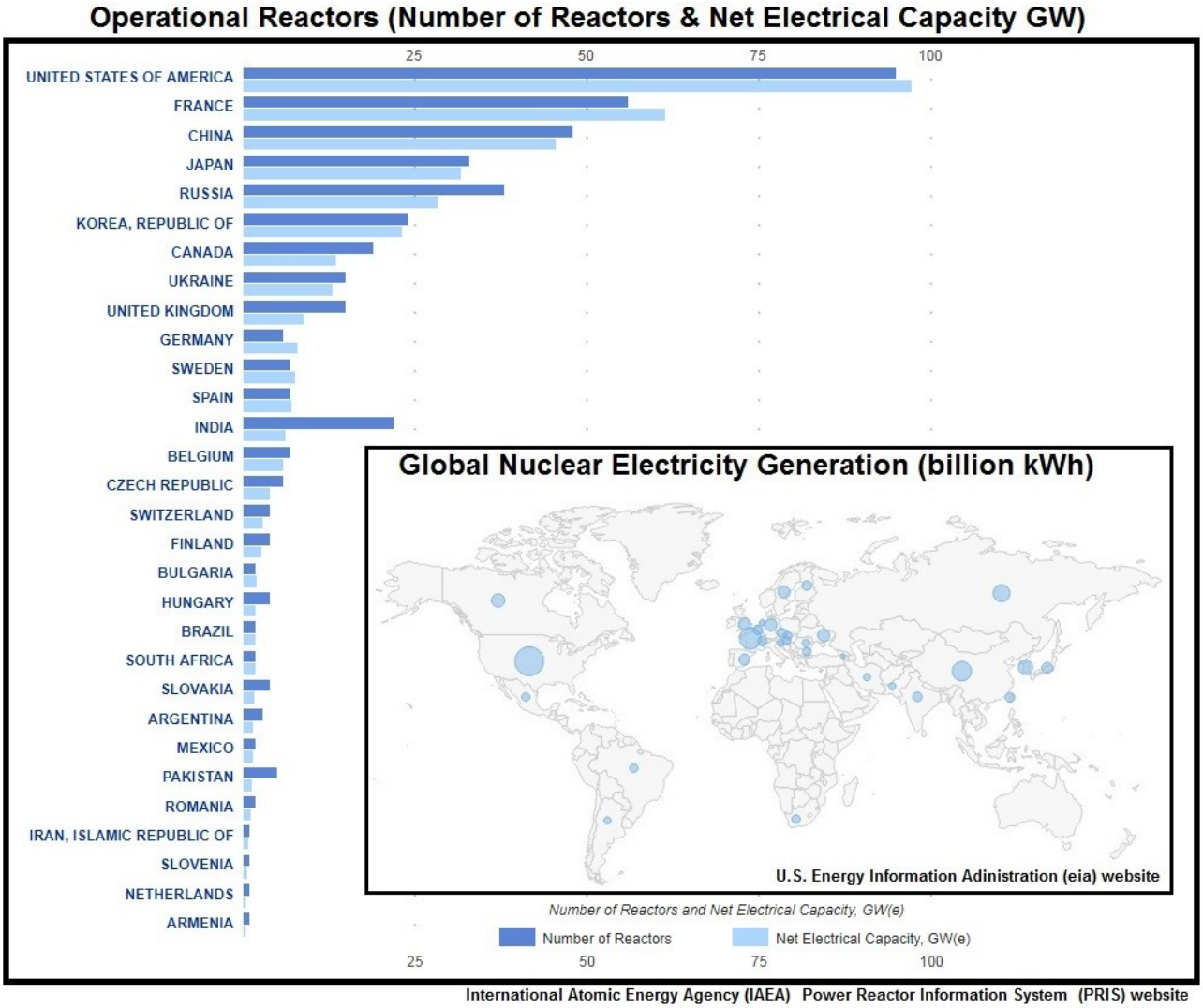
URANIUM DEMAND

The major consumer of uranium is the fleet of nuclear power reactors that generate over 10% (some sources cite 11%) of global electricity production, specifically in the United States, China, France, Russia, Korea, India, Ukraine, the U.K., Canada and Germany. According to World Nuclear Association, as of August 2020, there are **442 nuclear power reactors** in operation globally, **53 nuclear reactors under construction**[xiv] and another **108 being planned**.[xv]





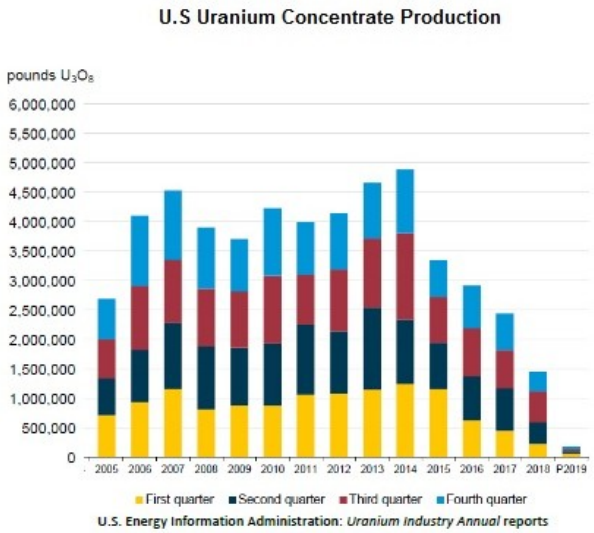
Over the last five years (2015-2019), **global uranium demand has been growing steadily** and is now above pre-Fukushima levels. The growing demand for uranium is a consequence of 42 nuclear reactors having been added to grid over the past six years albeit mitigated by the retirement of some reactors and also phase-out policies in Germany and elsewhere.

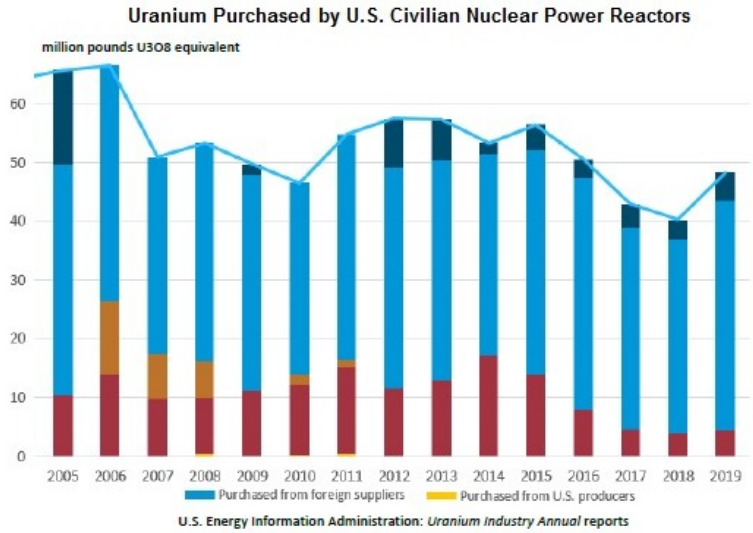


Over the next five years, global nuclear reactor uranium requirements are expected to grow in the 0.5%-to-2.5% range. Demand for uranium is expected to continue to increase since nuclear

powered generators are fulfilling the need for competitively-priced, low-carbon electricity production that stem from appeals to mitigate climate change. The global nuclear power plant fleet is growing with many under construction or in various phases of being planned.

In the **United States**, there are **95 licensed nuclear power plants** that generate approximately 20% of the nation's electricity.[xvi] Most of the uranium required by U.S. nuclear reactors is imported. In 2019, the country's nuclear reactors purchased approximately 48.3 million pounds, of which 39.2 million pounds was purchased from foreign suppliers.[xvii] **U.S. nuclear reactors consumed** (fuel assemblies loaded) **43.2 million pounds of U_30_8 equivalent**.[xviii] Despite being the country with the most number of nuclear power reactors and being the largest consumer of uranium fuel, the United States has an insignificant share of global uranium production, which has declined from 4,891,332 pounds in 2014 to only 173,875 pounds of uranium concentrate (U_30_8) in 2019.[xix] This factor weighs heavily on two issues that are impeding the decision process of uranium buyers at US utilities from entering multiyear contracts at the current time, namely the ultimate consequences from the Section 232 investigation and the Presidential Nuclear Fuel Working Group tasked to revitalize the domestic uranium mining industry.





China is the fastest growing market for nuclear power reactors, followed by India and Russia. President, Xi Jinping desires to reduce China's reliance on coal by increasing the country's nuclear power capacity. In 2019, nuclear power generated 4.9% of China's total electricity, up from 4.2% in 2018[xx] and 1.3% in 2003.[xxi] According to the China Nuclear Energy Association, China plans to build six to eight nuclear reactors annually between 2020 and 2025, raising total capacity from 48.8 GW in May 2020 to 70 GW by year-end 2025.[xxii] Currently, **China has 11 reactors under construction**[xxiii] and another 42 planned.[xxiv] As a signatory of the 2016 Paris Agreement, China has committed to the goal of having 20% of the nation's energy derived from non-fossil fuels.

India has 22 nuclear reactors currently in operation with **seven reactors under construction** (another 14 are planned) and is building up strategic reserves to support them. Due to rapidly growing need for reliable electricity and the international pressure to reduce air pollution and greenhouse gases, India has ambitious plans for nuclear energy deployment plans. The Government of India stated in March 2018 that nuclear capacity is likely to expand to approximately 22.5 GW by 2031. The WNA reference scenario expects India's total capacity to grow from 6.2 GW in 2020 (with 22 reactors currently in operation) [xxv] to 18 GW by 2030.

Other countries are advancing nuclear power programs with aggressive plans. **Russia has four reactors under construction**[xxvi] and 24 planned. A recent update of Russia's energy strategy indicates that 19%-to-21% that country's electricity will be generated by nuclear power in 2035.[xxvii]

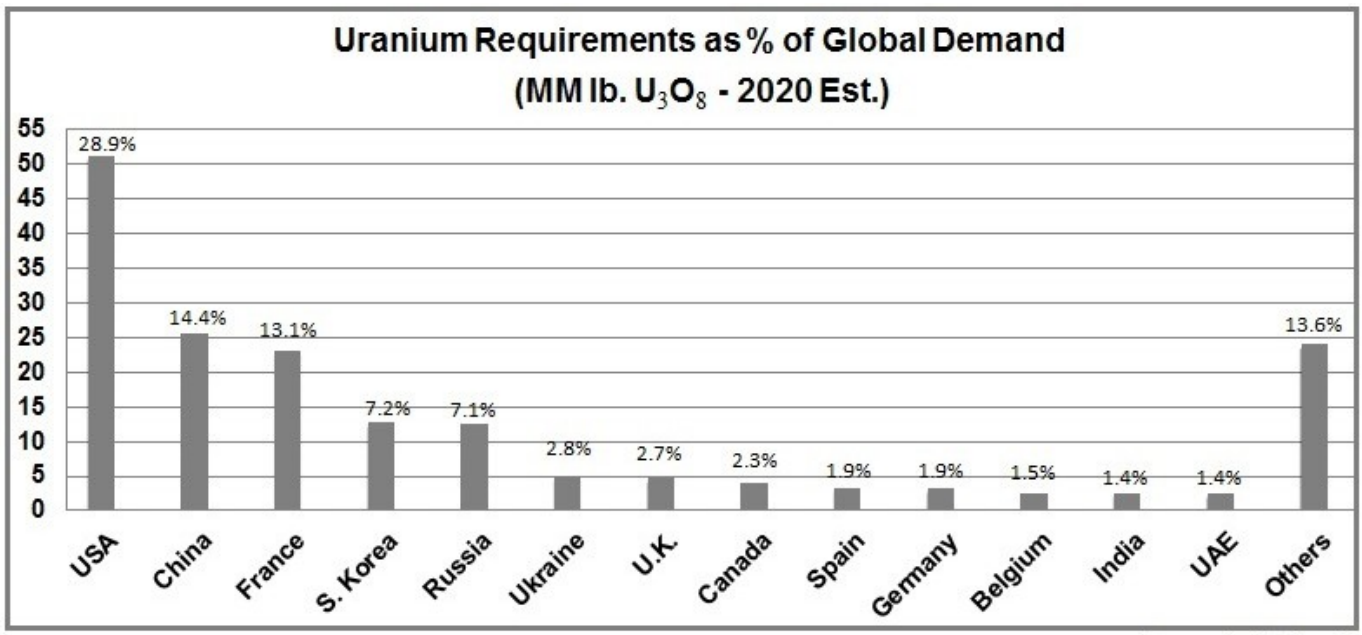
Also, the **Republic of Korea has four reactors under construction**.[xxviii] Currently, the **UAE has four reactors under construction**.

In **Japan**, after an initial shutdown of nuclear facilities related to the March 2011 accident at Fukushima, the amount of electricity generated from nuclear reactors has steadily increased as idled reactors were restarted and new reactors have been constructed. The first two reactors restarted in August and October 2015. To date, nine reactors have been restarted with another **two under construction**, all of which are pressurized water reactors (PWRs).

Since 2016, 47 new reactors in 11 countries have come online, including two newcomer countries (UAE and Belarus). Also, there is reactor construction in Turkey (one) and Bangladesh (two). The strong pipeline of new nuclear projects in Asia, the Middle East and Africa are more than offsetting the closures in Germany and elsewhere.

On the flip side, the use of nuclear power in some developed countries is declining, particularly in Europe where renewable energy policies stimulated a remarkable roll-out of renewable energy resources, particularly in wind and solar.

In **Germany**, nuclear plants are being decommissioned due to government public policy (and public opinion) being opposed to nuclear power. In 2010, 17 nuclear reactors generated 25% of Germany's electricity (133 TWh). Today, seven reactors provide 76 TWh annually or 12% of Germany's electrical consumption.[xxix] Germany is in the process of shutting down its remaining six nuclear power units. As a result of these governmental energy policies, which provided incentives to promote the construction of renewable energy facilities, Germany has the highest retail prices in Europe due to over half of price for domestic electricity being comprised of taxes and surcharges to fund both short-term and long-term subsidies.



Source: Analyst work

In **France**, 56 nuclear reactors provide roughly 75% of the nation's electricity power needs. This high percentage is due to an energy independence policy instituted in reaction to the oil shock of 1973 ignited by OPEC's imposition of an oil embargo against the U.S. Today, electricity generated from nuclear reactors comprises 72% of France's electricity generation mix and hydroelectric power plants account for 18%. Consequently, the country has both very low generation costs and an extremely low level of carbon dioxide emissions per capita. Furthermore, due to its low cost of generation, France is the world's largest net exporter of electricity (€3+ billion per year) primarily to Spain, Italy, the UK, Switzerland and Germany. However, back in 2014, the renewable movement impacted

governmental legislation with the *Energy Transition for Green Growth* bill, which imposed a 50% target by 2025 for nuclear energy's contribution to the nation's electricity supply. In 2019, the target date was modified and extended to 2035.[xxx]

URANIUM SUPPLY

The supply side of uranium fuel for reactors is complex. **Primary uranium supply** is generated through the production from mines.

Secondary supply consists of all other material (other than primary production) that can be sourced to satisfy the fuel requirements of nuclear reactors. There is a broad array of sources of secondary supply, including, commercial and governmental inventories, underfeeding, carry trades, reprocessed spent fuel, down-blended, highly-enriched weapons-grade uranium etc. **Inventories** exist at mines, at utilities and in government stockpiles (predominately by China). While the size of commercial inventories cannot be estimated with precision, some producers and utilities periodically provide inventory information in filings and press releases. Also, inventory can become contaminated such that it can no longer be processed to meet commercial specifications for manufacturing nuclear fuel. **Underfeeding** refers to when some of the remaining uranium in the tails (the waste stream) of the uranium enrichment process is extracted to provide additional enriched material than would have been produced under normal circumstances. **Carry trades** involve financial traders that enter the market in order to arbitrage between the spot price and the long-term contract price; their goal is to purchase uranium at low prices in the spot market in order to sell it for delivery at higher prices. Even **fuel assemblies** from shutdown nuclear reactors (particularly in Japan, Taiwan, Germany and the U.S.) are sources of secondary supply.

Wild cards that can affect supply include the idling/expansion of production capacity at mines, buying/selling of sequestered material held in funds, drawdowns/expansion of the U.S. Department of Defense's stockpile and the potential establishment of a Uranium Reserve by the U.S. Department of Energy.

Top 10 Uranium Mines in 2019

Mine	Country	Main owner(s)	Type	2019 Production (tonnes U)	2019 Production (MM lb. U3O8)	% of World Production
Cigar Lake	Canada	Cameco/Orano	Underground	6,924	18.00	12.9%
Husab	Namibia	Swakop Uranium (CGN)	Open pit	3,400	8.84	6.3%
Olympic Dam	Australia	BHP Billiton	By-product	3,364	8.75	6.3%
Moinjum & Tortkuduk	Kazakhstan	Orano/Kazatomprom	ISL	3,252	8.45	6.1%
Inkai, sites 1-3	Kazakhstan	Kazatomprom/Cameco	ISL	3,209	8.34	6.0%
Budenovskoye 2	Kazakhstan	Uranium One/Kazatomprom	ISL	2,600	6.76	4.8%
Rössing	Namibia	Rio Tinto	Open pit	2,076	5.40	3.9%
SOMAIR	Niger	Orano	Open pit	1,912	4.97	3.6%
Central Mynkuduk	Kazakhstan	Kazatomprom	ISL	1,964	5.11	3.7%
South Inkai (Block 4)	Kazakhstan	Uranium One/Kazatomprom	ISL	1,601	4.16	3.0%
		Total Production of Top Ten Mines		**30,302**	**78.78**	**56.5%**
		Total Global Production		**53,656**	**139.49**	**100.0%**

Image Source: Analyst's work

Primary uranium supply

Uranium is mined in roughly 14 countries, but **78% of world production comes from five countries**: Kazakhstan (42.5%), Canada (12.9%), Australia (12.3%) and Namibia (10.2%). **Over 56% of world production is derived from the top 10 mines**. And in 2019, the **top 10 uranium**

companies produced 89.1% of the world's uranium production. Lastly, state-owned mining companies (which can be influenced by their own national priorities) produce over half of uranium primary supply.

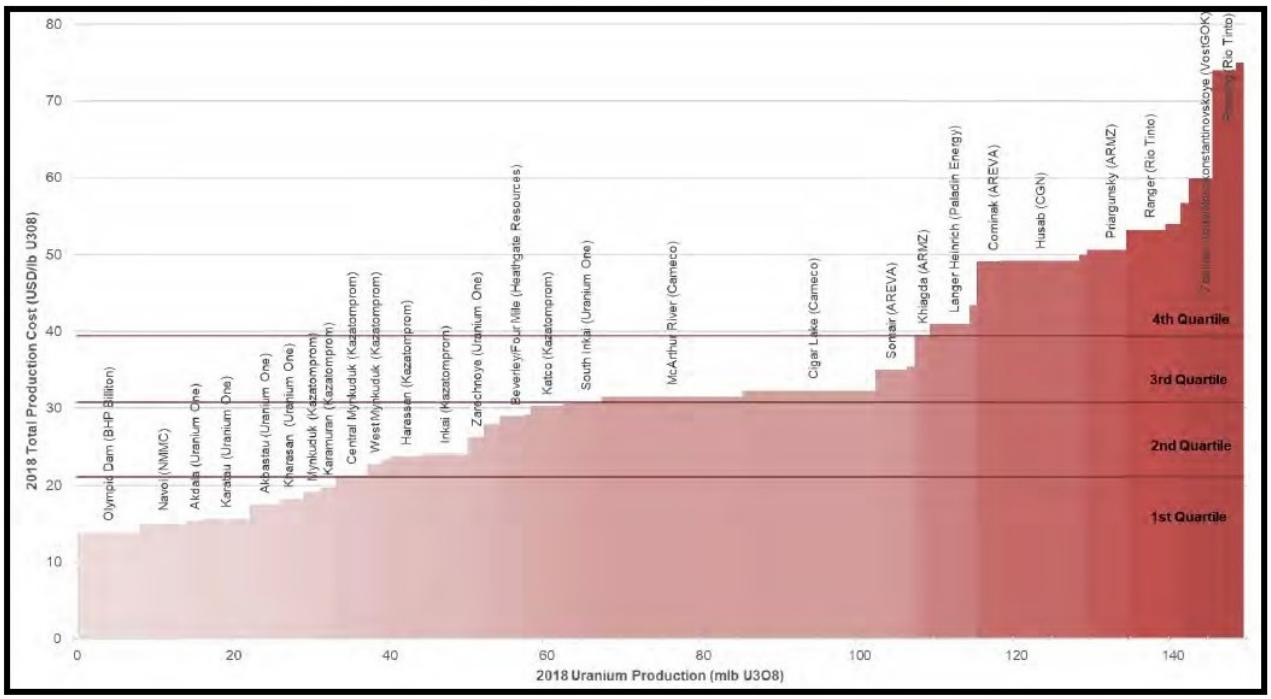
Top Ten Uranium Producing Companies in 2019

Company	Ticker	2019 Production (tonnes U)	2019 Production (MM lb. U3O8)	% of World Production	Comments
Kazatomprom	LSE: KAZ	12,229	31.79	22.8%	ISL operations
CGN/CNNC	State-owned	7,832	20.36	14.6%	China-owned entities
Orano	45.2% state-owned	5,809	15.10	10.8%	French company
Cameco	TSE: CCO & NYSE: CCL	4,754	12.36	8.9%	Largest publicly-traded U company
Uranium One	State-owned	4,624	12.02	8.6%	Acquired by ROSATOM in 2013
BHP Billiton	NYSE: BBL	3,364	8.75	6.3%	Uranium is by-product of copper mine
ARMZ Uranium	State-owned	2,904	7.55	5.4%	Owned by ROSATOM
Navoi Mining	State-owned	2,404	6.25	4.5%	Uzbek company (Uzbekistan)
Energy Asia Ltd (BVI)	Consortium	2,122	5.52	4.0%	Consortium of Japanese utilities
General Atomics/Quasar	Private company	1,764	4.59	3.3%	HQ in San Diego
SOPaMin	State-owned	1,032	2.68	1.9%	Société du Patrimoine des Mines du Niger
Rio Tinto plc	NYSE: RIO	1,016	2.64	1.9%	Sold Rössing mine to CNUC in 2019
VostGOK	State-owned	801	2.08	1.5%	Ukrainian company
Total Production of Top Ten Companies		**47,806**	**131.69**	**89.1%**	
Total Global Production		**53,656**	**139.49**	**100.0%**	

Source: Analyst's work

The production mix (by country and mines) has changed over the last 30 years. In 1990, underground mines produced 55% of the world's uranium; in 2019, ISR mines accounted for 57% of global production, [xxxi] up from 16% in 2000. [xxxii] ISR mining has been increasing share due to its ability to effectively extract uranium from low-grade ores and its lower cost method of operation (relative to conventional mining methods). The development of ISR uranium mining in Kazakhstan was rapid due to the country's large sandstone-type uranium deposits, which were amenable to ISL mining techniques.
ISR mining is also conducted in Uzbekistan, Australia, Canada, China, Russia and the U.S.

Global Uranium Production Cost Curve



U.S. Department of Commerce Section 232 Testimony January 2018

In order to better convey the cost distribution of the world's uranium mines, the **Cost Curve** above illustrates the cost structure of mines across the uranium industry as of 2018. The image is displayed in almost uranium company presentation, in one form or another. The global uranium production cost curve visually conveys that, after the **lowest cost mine** (**Olympic Dam** where uranium is a by-product of copper mining), **it appears that ALL the remaining mining operations with a total production cost below $30 are ISR operations.**

After the ISR mines, the next two mines are Cameco's McArthur River and Cigar Lake, both large underground mines. It is also easily discernible that the **production costs of the remaining existing uranium mines exceed current spot price**.

Currently, nuclear utilities have approximately between 2½ -to-3 years of inventory under contract. When uranium demand from fuel buyers at utilities rises above the capacity of low-cost ISR producers and available sources of secondary supply, utilities will be pressured to enter new contracts priced at an acceptable rate of return of higher-cost mines. A number of contracts expire in 2021. **The Cost Curve quickly escalates from $30 to $48 a pound U_3O_8**. The average return on capital for the mining industry is 11.26%.[xxxiii] In order for new uranium projects to develop into production, a long lead time of 6-to-10 years is necessary to obtain financing, exploration, reserve estimations, a preliminary economic assessment (PEA), environmental studies, a feasibility study**,** approvals and permits in order to finally construct, commission and ramp-up operations. It appears that a U_3O_8 price in at least the mid-$50 range is necessary to incentivize some of the new primary sources of supply.

COVID-19 PRIMARY SUPPLY DISRUPTIONS

The COVID-19 pandemic resulted in primary supply disruptions at several of the world's largest uranium mining operations. The **suspension of production at several major producers** stimulated a wave of buying pressure in the spot market, driving the price from $23.90 on March 16th to $34.20 on May 26, 2020. **The supply concerns driven by the COVID-19 pandemic have acted as a catalyst**. Both utilities and producers are being forced to decide whether the supply gap will be filled by drawing down discretionary inventories or by purchasing uranium in the spot market. In either case, the pandemic has made the supply gap more recognizable.

Prior to the COVID-19 pandemic, 2020 primary production was expected to be around 139 MM lbs. U_3O_8 (53,600 tU). However, due to the threat posed by the COVID-19 pandemic, starting on March 23, 2020, Cameco announced that it was temporarily suspending production at the **Cigar Lake** mine (12.9% of annual global production). This was quickly followed **Namibia** halting all mining activity, requiring China National Nuclear Corp. (CNNC) to discontinue normal mining operations at the **Rössing** mine (4.2% of annual global production) and China Guangdong Nuclear Power (CGN) to suspend production at the **Husab mine** (6.9% of annual global production). Then, on April 7th, **Kazakhstan** ordered the closing of mining operations, including Kazatomprom's (41% of annual global production). Australia's **Ranger mine** (2.2% of annual global production) has also been negatively affected, but the government of the Northern Territory has progressive, flexible response to the pandemic.

COVID-19 Related Uranium Production Suspensions

Suspension Date	Mine	Owner	Co-Owner	Location	Capacity Reduction (tU/year)	Capacity (MM lb U3O8/yr)
March 23, 2020	Cigar Lake	Cameco	Orano	Saskatchewan	6,924	18.0
March 26, 2020	Rössing	CNNC	CGN	Namibia	2,076	5.4
March 28, 2020	Husab	CNNC	CGN	Namibia	3,400	10.0
April 7 2020	Kazakistan	Kazatomprom	Others	Kazakhstan	22,694	59.0
				TOTAL	**35,094**	**92.4**

Source: Author's work

Since the transactional market for uranium is relatively opaque, mixed reports have been received about the rally of U_30_8 to the $32-$34 range. Cameco and Kazatomprom were buyers in the spot market to cover their contractual commitments to utilities. Others speculate that some utilities, fearing supply disruptions, have bought in the spot market to secure additional supply. Obviously, traders are more active when volatility increases. UxC reported that both March and April 2020 achieved record high numbers of spot transactions.[xxxiv]

Currently, **Kazakhstan** continues to being negatively affected by the COVID-19 pandemic with a second lockdown instituted on July 6th. In the late-August 2020 1H conference call, Kazatomprom's management "indicated that the longer the disruption continues, the greater the likelihood the production impact could extend beyond 2020 to 2021 in Kazakhstan." The development process of ISR well-fields requires drilling during the summer and early Fall in order to acidify them.

Uranium producers have had to drawdown existing inventories and/or utilize the spot market to fulfill their contract obligations with utilities. In the 1H conference call, **Kazatomprom** stated that it will continue purchasing in the spot market in order to meet deliveries, which was obvious from the company's updated guidance of selling the same amount of U_30_8 as prior guidance (15,500 –16,500 tU) while **cutting planned production by 3,500 tU** Cameco too has been relying on spot market purchases to meet its delivery commitments, purchasing 19.3 million pounds through August.[xxxv]

Since UxC reported that the volume of **long-term contracting** during the first half of 2020 declined about 37% YOY,[xxxvi] it appeared that most utilities were (and are still) on the sidelines awaiting clarity on a variety of issues, including the effects of the pandemic, the uncertainty surrounding that status of the Russian Suspension Agreement and the definitive resolution to the Presidential Nuclear Fuel Working Group impasse. In the late-August 2020 1H conference call, Kazatomprom's management confirmed that nuclear utilities continue to delay entering into long-term contracts due to a multitude of overhanging issues. Kazatomprom's management believes that nuclear utilities will begin negotiations for long-term contracts in the fall. It should be remembered that the WNA Symposium was cancelled this year and replaced with a virtual eForum. This event provided a setting for nuclear fuel buyers from utilities to meet with primary supply sellers for the purpose of starting negotiations for new contracts. The cancellation of face-to-face meetings could delay contracting decisions.

On June 22, 2020, **Namibia** began to ease its lockdown. In its 2Q conference call, **Cameco announced plans to restart the Cigar Lake mine in the beginning of September**. Initial production is projected to begin approximately 2 weeks thereafter. However, it can be stated that **the COVID-19 pandemic has accelerated the timeline to the tipping point** when the under-supply situation existing under current level of uranium mining capacity is fully exposed.

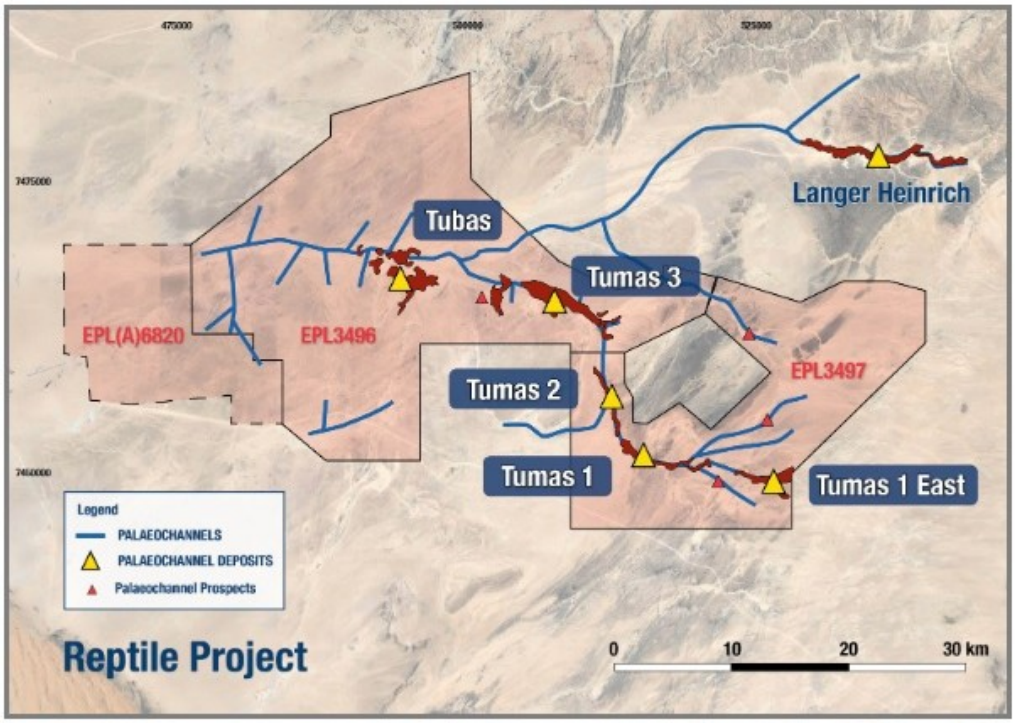
REPTILE PROJECT

Located in the Erongo Region of western of Namibia, Deep Yellow's **Reptile Project** is held by Deep Yellow's wholly owned subsidiary Reptile Uranium Namibia (Pty) Ltd (RUN). The Reptile Project consists of two EPLs (3496 and 3497), which encompass approximately 67,193 and 28,751 hectares, respectively (or **959.4 square kilometers** in total). The EPLs were initially granted by the Namibian Ministry of Mines and Energy on June 6, 2006 and most recently renewed for a 2-year term in August 2019. Both EPLs are **100% owned** by RUN. An EPL application for 6820, a 20,530-hectare size increase, was submitted in August 2017 and is pending.

Geology

The tenements contain an extensive sub-surface **palaeochannel network** containing calcrete[xxxvii] formations, which is a highly prospective environment for uranium, particularly in Namibia, but also in parts of northern Africa and Australia. Palaeochannels are remnants of inactive river channels, and when conditions were suitable, mobilized uranium mineralization was deposited by groundwater into the calcrete (carbonate-cemented sandstones and conglomerates) formations of these ancient river channels. The most common uranium mineralization found in calcrete-type deposits is carnotite, a radioactive, yellow uranium/vanadium mineral.

In Namibia, palaeochannel calcrete-hosted uranium deposits have been discovered and successfully mined at Langer Heinrich and extracted from trial mining at Trekkopje. In the map below, the **blue lines** denote the palaeochannel network within the Reptile Project.



Source: Deep Yellow website

Palaeochannel calcrete-hosted uranium deposits tend to be very shallow deposits. The ore usually can be mined with conventional open pit methods (drilling, blasting, loading and hauling). Relatively, the mining process would not be an overly complicated process, and Namibia's infrastructure could easily accommodate the necessary transportation and power requirements. The deposits at Tumas 1, 2 and 3 are close in proximity to each other, providing the **opportunity for a centralized mill facility**.

In addition, at a later date, the company intends to pursue a second type of uranium mineralization at the Reptile Project described as **basement/alaskite**. Usually referred to as uraniferous leucogranites, alaskite (a local term) dyke-like formations were formed by molten granite intruding into sedimentary rock. It is postulated elevated uranium grades occur when high-grade metamorphism causes a partial melting of basement rocks, which enhances the transportation and enrichment of uranium ore, such as at Rössing South.

Alaskite Alley, a north-south trending zone of occurrences of uraniferous leucogranite, currently supports two mines (Rössing and Husab), where the primary mineralization of the ore bodies is usually found in sheets of uranium-rich, granite-hosted alaskite (pegmatitic alkali-leucogranite). Rössing and Husab are almost due north of the Reptile Project, and Alaskite Alley **appears to cut through the western part of Deep Yellow's EPL 3496** tenement, in which Deep Yellow has discovered three small uranium deposits (Ongolo, MS7 and INCA). This prospective area has been relatively unexplored and currently is not a priority undertaking; however, it does represent a potentially substantial opportunity to discover additional uranium resources within EPL3496.

Tumas-Tubas

Six palaeochannel-calcrete uranium deposit areas are being advanced under the Reptile Project: Tumas 1, Tumas 1 East, Tumas 2, Tumas 3, Tubas and Tubas Red Sands, of which **Tumas 3** is currently the most significant. The most recent **total Measured and Indicated Resource** at Tumas 1, 2 and 3 deposits, along with Tubas Red Sand deposit, is 41.3 million lbs. at 292ppm (0.0292%) eU_30_8.

Tumas 1, Tumas 2 and Tumas 3

Management has narrowed the focus to the higher-grade Tumas 1, 2 and 3 deposits, which were the subjects of the Scoping Study completed in December 2019 and are the topic of the ongoing Pre-Feasibility Study, which is expected to be completed by December 2020.

The total **Measured and Indicated Resources at Tumas 1, 2 and 3** is **37.2 million lbs. at 337ppm (0.0337%) eU_30_8** at a 200ppm cut off, which is sufficient for the completion of a Pre-Feasibility Study.

Tumas 1, Tumas 2 and Tumas 3
Estimated Measured & Indicated Resources

Deposit	Category	Cut-off (ppm)	Tonnes (MM)	U3O8 (ppm)	U3O8 (t)	U3O8 (Mlb)	Resource Measured	Categories Indicated
CALCRETE MINERALIZATION								
Tumas 1 & 2 Deposits	Measured	200	10.8	383	4,100	9.1	9.1	-
Tumas 1 & 2 Deposits	Indicated	200	5.5	333	1,800	4.0	-	4.0
Tumas 3 Deposits	Indicated	200	34.9	313	10,900	24.1	-	24.1
Total of Tumas 1, 2 and 3		**200**	**51.2**	**337**	**16,800**	**37.2**	**9.1**	**28.1**

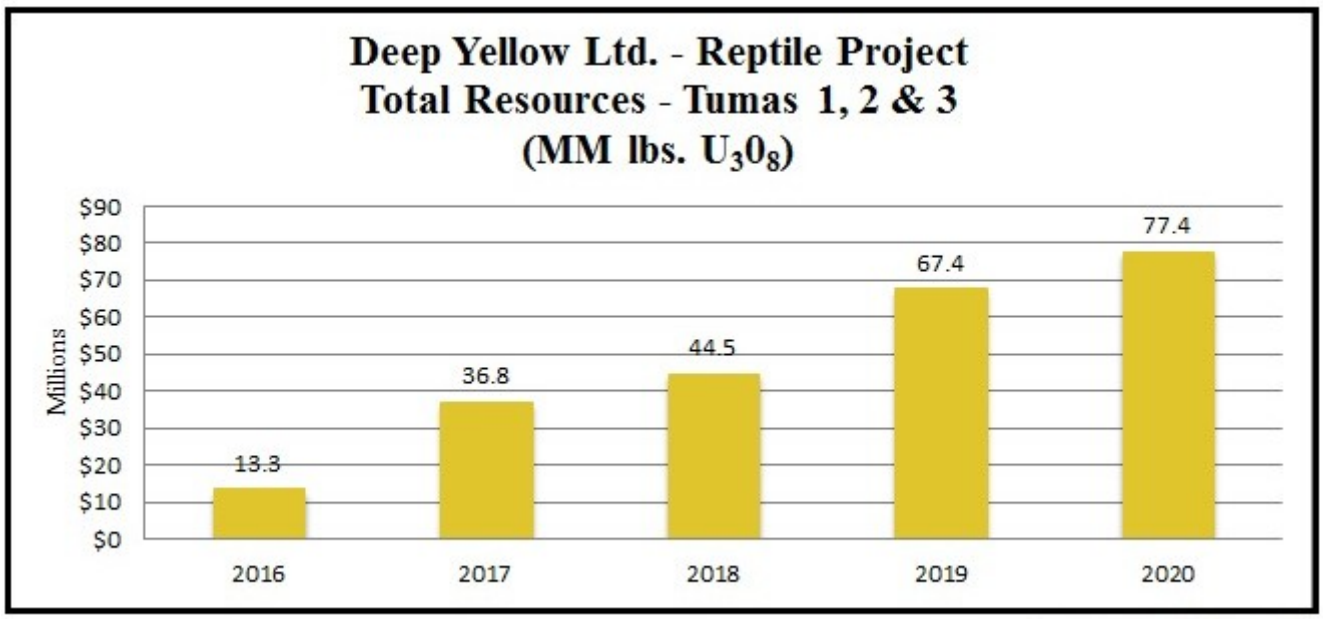
Deep Yellow Press Release July 14, 2020 & analyst's work

The latest infill drilling campaign (a 246-hole RC drilling program, which was completed in March 2020) led to an **upgrade of the Tumas 3 deposit's resource estimate** to an **Indicated Resource of 24.1 million lbs. at 313ppm (0.0313%) eU_30_8** and an Inferred Resource of 12.7 million lbs. at 358ppm (0.0358%) **eU_30_8** at a 200ppm cut off.

Overall, the Tumas resource base has been upgraded in quality from the estimated Measured & Indicated resources of 13.0 million lbs. U_30_8 in October 2016 (when the current management took charge) to 37.2 million lbs. U_30_8 today.

The updated Mineral Resource Estimate of May 2020 determined that the uranium mineralization at the Tumas 3 deposit has a **strike length of approximately 4.9km**. The **width ranges from 700 meters to 1,500 meters**, and the maximum depth extends to 45 meters. Within the area of infill drilling in the central zone of the Tumas 3 deposit (a 2.6km strike length), the **thickness of the seam-like horizon varies from 1 meter to 18 meters**, and occurs at a **depth from 2 meters to 25 meters**.

The Tumas palaeochannel system continues to be highly prospective and is management's major focus within the Reptile Project, along with the channel's continuation to the Tubas deposit and beyond to the west. Through exploration activities and drilling campaigns, the estimated **total resources** (Measured, Indicated and Inferred) at **the Tumas 1, 2 and 3 deposits have increased 482% from 13.3 million lbs. U_30_8 in 2016** (when the current management took charge) **to 77.6 million lbs. U_30_8 today**. If one includes the Tubas deposit, the estimated total resources in the Tumas and Tubas calcrete and sand deposits is 96.2 million lbs. U_30_8 at 292ppm.



Source: Analyst's work

Reptile Project Drilling Programs

In a little over three years since the company acquired the Reptile Project, management has delivered a remarkable increase in the project's estimated resources through **aggressive drilling campaigns** targeting the palaeochannel-calcrete deposits. An outline of the drilling programs follows.

- March – July 2017: 10,545-meter infill RC drilling program (400 holes)
  - **Discovered Tumas 3 deposit** (added Inferred Resource of 23.5 million lbs. U_30_8).
- February – June 2018: 10,765-meter RC drilling programs (363 holes) targeting east and west of the Tumas 3 deposit
  - Increased Tumas 3 Inferred resource estimate to 31.2 million lbs. U_30_8.
- July – August 2018: 2,171 meter RC drilling program (148 holes) of exploratory drilling north of the Tumas 1 deposit
- September – October 2018: 2,173-meter exploratory RC drilling program (180 holes) east of the Tumas 1 deposit
  - **Identified multiple tributaries** of Tumas 1 East confirming that the complex palaeochannel system contains channels and tributaries
- October – November 2018: 1,927-meter infill RC drilling program (156 holes) east of the Tumas 1 deposit
  - Produced maiden Tumas 3 Inferred resource estimate of 18.5 million lbs. U_30_8.

- November– December 2018: 2,499-meter infill resource RC drilling program (81 holes) at Tumas 3 West
    - Increased Tumas 3 Inferred resource estimate to 33.1 million lbs. U_30_8.
- March – April 2019: 1,951-meter infill RC drilling program (211 holes) on deposit east of Tumas 1
    - Outlined shallow (2-15 meters below surface) 3 km channel of continuous calcrete uranium mineralization ranging from 100-to-600 meters in width
- March – April 2019: 1,313-meter preliminary test RC drilling program (47 holes) targeting the central zone of the Tumas 3 deposit
    - Identified 1.6 km of continuous calcrete uranium mineralization ranging from 200-to-400 meters in width and up to 11 meters thick
- July – August 2019: 895-meter exploration and infill RC drilling program (118 holes) targeting Tumas 1 East
    - Increased Inferred resource estimate to 24.8 million lbs. U_30_8.
- July – December 2019: 3,938-meter exploration RC drilling program (147 holes) targeting Tubas Red Sand and Tubas Calcrete areas
    - Identified three areas for in-fill resource drilling
- August – October 2019: 3,214-meter infill RC drilling program (144 holes) targeting the Tumas 3 East, West and Central areas
- October 2019 – March 2020: **diamond drilling campaign** obtained suitable mineralized material **for metallurgical work**
- January – March 2020: 5,154-meter infill RC drilling program (246 holes) targeting the Tumas 3 deposit
    - **Converted 24.1 million lbs. of Inferred resource to Indicated category**

Scoping Study and Pre-Feasibility Study

Begun in September 2019, a Scoping Study (SS) on the Tumas deposits was completed in December 2019. Shortly thereafter, the Board commissioned a Pre-Feasibility Study (PFS) in January 2020. Initial metallurgical test work using samples from Reverse Circulation drilling were positive confirming assumptions made in the SS and follow-up metallurgical testing on diamond core samples confirmed these findings, which have been announced indicating that the process design being developed is expected to have operating costs below US$30/lb. **Management expects the PFS to be completed in December of 2020**.

Prospectivity of Tumas 1, Tumas 2 and Tumas 3

To-date, Deep Yellow has identified 125 km of the Tumas-Tubas palaeochannel system, of which **50 km of the channels having yet to be adequately tested**. Based upon the deep experience of the area, management believes that future exploration of those 50 km should augment the estimated resource by an additional 30-to-60 million lbs. U_30_8.

Other Reptile Project Calcrete Resources (Tubas and Tubas Red Sands)

Other calcrete deposits have been discovered on the EPLs that comprise the Reptile Project, namely the Tubas Red Sand, Tubas and Aussinanis deposits. Sufficient drilling has supported JORC-compliant resource estimates that are included in the table below.

Reptile Project - Uranium Calcrete Deposits
Measured, Indicated and Inferred Resources

Deposit	Category	Cut-off (ppm)	Tonnes (MM)	U3O8 (ppm)	U3O8 (t)	U3O8 (Mlb)	Resource Measured	Categories Indicated	(Mlb U3O8) Inferred
CALCRETE MINERALIZATION									
Tumas 3 Deposits	Indicated	200	34.9	313	10,900	24.1	-	24.1	-
Tumas 3 Deposits	Inferred	200	16.1	358	5,500	12.7	-	-	12.7
Sub-total Tumas 3		**200**	**51.0**	**328**	**16,400**	**36.8**	**0.0**	**24.1**	**12.7**
Tumas 1 & 2 Deposits	Measured	200	10.8	383	4,100	9.1	9.1	-	-
Tumas 1 & 2 Deposits	Indicated	200	5.5	333	1,800	4.0	-	4.0	-
Tumas 1 & 2 Deposits	Inferred	200	40.9	304	12,400	27.5	-	-	27.5
Sub-total of Tumas 1 and 2		**200**	**57.2**	**322**	**18,300**	**40.6**	**9.1**	**4.0**	**27.5**
Sub-total of Tumas 1, 2 and 3		**200**	**108.2**	**324**	**34,700**	**77.4**	**9.1**	**28.1**	**40.2**
Tubas Sand Deposit	Indicated	100	10.0	187	1,900	4.1	-	4.1	-
Tubas Sand Deposit	Inferred	100	24.0	163	3,900	8.6	-	-	8.6
Sub-total Tubas Red Sand Project		**100**	**34.0**	**170**	**5,800**	**12.7**	**0.0**	**4.1**	**8.6**
Tubas Calcrete Deposit	Inferred	100	7.4	374	2,800	6.1	0.0	0.0	6.1
Total for overall Tumas-Tubas			**149.6**	**292**	**43,300**	**96.2**	**9.1**	**32.2**	**54.9**
Aussinanis Deposit	Indicated	150	5.6	222	1,200	2.7	-	2.7	-
Aussinanis Deposit	Inferred	150	29.0	240	7,000	15.3	-	-	15.3
Sub-total Aussinanis Project		**150**	**34.6**	**237**	**8,200**	**18.0**	**0.0**	**2.7**	**15.3**
Calcrete Projects Total			**184.2**	**281**	**51,500**	**114.2**	**9.1**	**34.9**	**70.2**

Deep Yellow Press Release July 14, 2020 and analyst's work

Reptile Project - Alaskite Resources (Ongolo, MS7 and Inca)

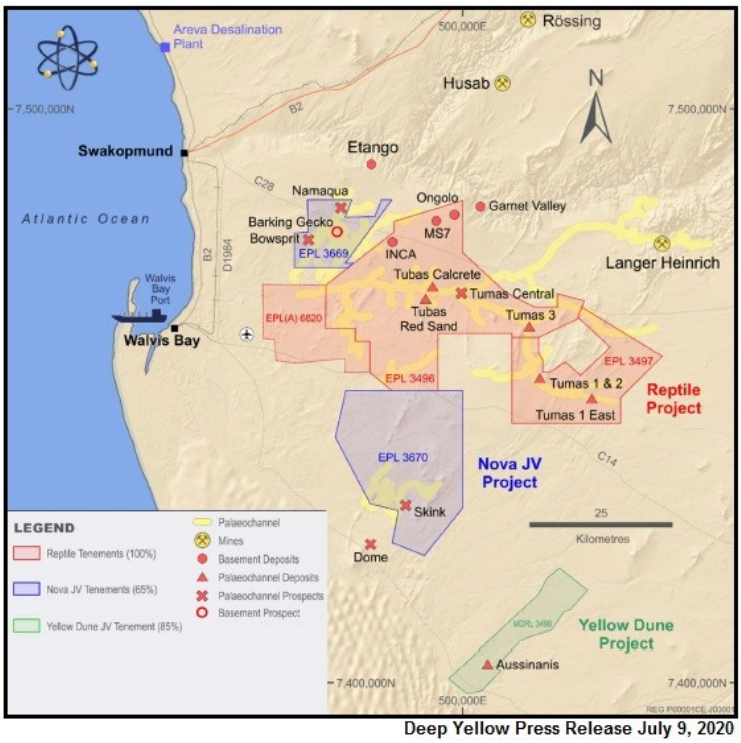
The second type of uranium mineralization (**basement/alaskite deposits**) is present at the Reptile Project's EPL 3496. Though relatively unexplored, **three deposits** have been identified: Inca, Ongolo and MS7, which have a combined Measured, Indicated and Inferred Resource of 45.1 million lbs. U_30_8 at 420ppm (0.0420%) eU_30_8 at a 250ppm cut off. Additional investigations are required to determine the full extent of the mineralization identified to date as potential exists to further increase the uranium resources associated with these basement targets.

Deposit	Category	Cut-off (ppm)	Tonnes (MM)	U3O8 (ppm)	U3O8 (t)	U3O8 (Mlb)	Resource Measured	Categories Indicated	(Mlb U3O8) Inferred
ALASKITE MINERALIZATION									
INCA Deposit	Indicated	250	7.0	470	3,300	7.2	-	7.2	-
INCA Deposit	Inferred	250	5.4	520	2,800	6.2	-	-	6.2
Ongolo Deposit	Measured	250	7.7	395	3,000	6.7	6.7	-	-
Ongolo Deposit	Indicated	250	9.5	372	3,500	7.8	-	7.8	-
Ongolo Deposit	Inferred	250	12.4	387	4,800	10.6	-	-	10.6
MS7 Deposit	Measured	250	4.4	441	2,000	4.3	4.3	-	-
MS7 Deposit	Indicated	250	1.0	433	400	1.0	-	1.0	-
MS7 Deposit	Inferred	250	1.3	449	600	1.3	-	-	1.3
Omahola Project Total			**48.7**	**420**	**20,400**	**45.1**	**11.0**	**16.0**	**18.1**

Deep Yellow Press Release July 14, 2020 & analyst's work

NOVA JOINT VENTURE (65% owned by Deep Yellow, reducing to 39.5% following JOGMEC earn-in)

Located in the Erongo Region of western of Namibia, the **NOVA JV** consists of two EPL tenements (**3669** and **3670**), which encompass approximately 7,967.8 and 47,714.8 hectares, respectively (or **556.8 square kilometers** in total). The EPLs were initially granted by the Namibian Ministry of Mines and Energy on November 21, 2006 and most recently renewed for a 2-year term until March 30, 2022.



Deep Yellow Press Release July 9, 2020

In late-March 2017, Deep Yellow and Japan Oil, Gas and Metal National Corporation (JOGMEC) finalized a joint venture agreement regarding the NOVA Joint Venture (or NOVA JV). For the sum of **AUD$4.5 million** devoted to the exploration and development at the NOVA JV Project over a period of four years, **JOGMEC** would **earn-in a 39.5% interest** in the project. JOGMEC is a Japanese governmental agency designed to promote the exploration and development of secure and stable supplies of natural resources (primarily oil, gas and mining resources) for Japan. At the time of the agreement, Deep Yellow (through Reptile Mineral Resources and Exploration Pty Ltd) held a 65% interest; Toro Energy Limited (through Nova Energy Africa Pty Ltd) owned 25% and Sixzone Investments Pty Ltd (a Namibian group) held 10%.

NOVA JV Project

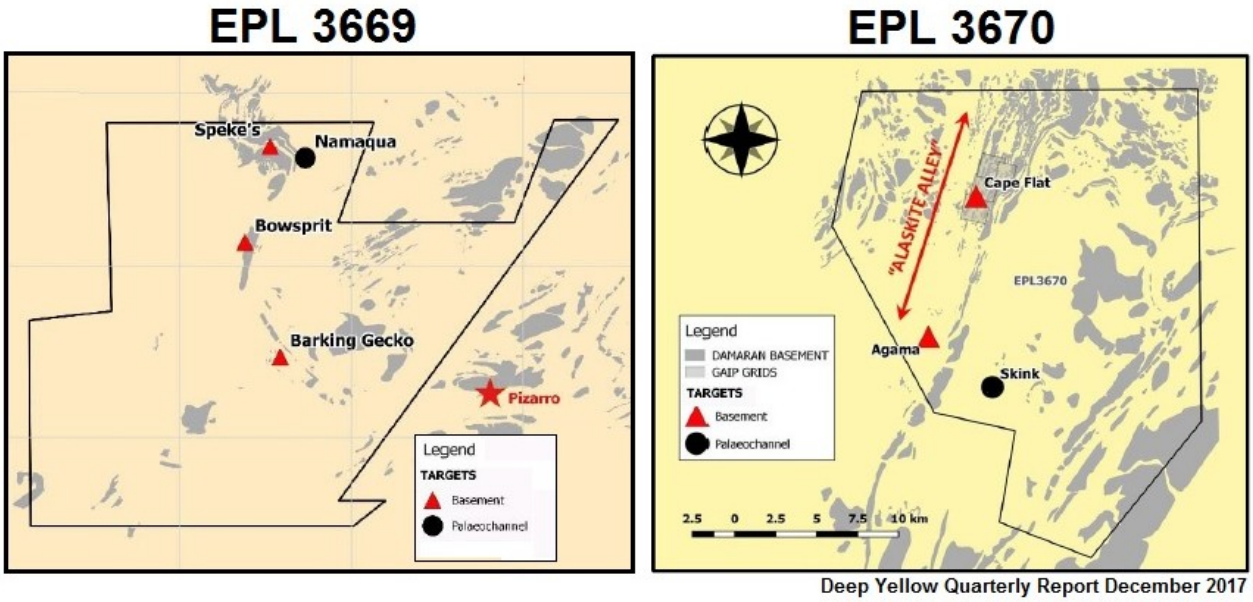
Deep Yellow LIMITED **39.5%**

JOGMEC **39.5%**

TORO ENERGY LIMITED **15%**

With the latest exploration campaign that began in April 2020, **JOGMEC satisfied its obligation** during the earn-in period and **now holds a 39.5% interest** in the NOVA JV Project. **Deep Yellow now owns 39.5% (and remains manager)**, Toro Energy Limited (ASX: TOE) holds 15% and

Sixzone 6.0%. Going forward, the parties of the JV will be required to contribute toward exploration expenditures on a pro-rata basis.



Deep Yellow Quarterly Report December 2017

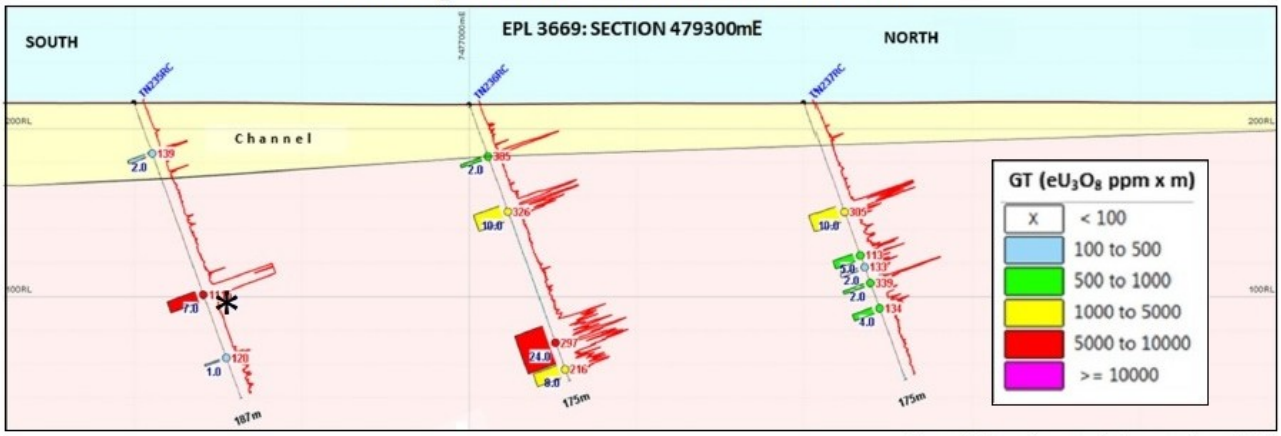
Since the NOVA JV Project was formed in November 2016, JOGMEC has funded an AUD$4.5 million exploration program to earn-in a 39.5% interest in the JV. Exploration work is focused on both basement-related alaskite and palaeochannel/calcrete associated uranium targets. An outline of the exploration and drilling programs follows.

- Nov. 2016 – Dec. 2016: Initiate work on EPL 2669 & EPL 2670
  - reinterpreted previously flown VTEM survey
  - acquired satellite imagery with 1.5 meter spatial resolution covering JV area
- May - August 2017: Carried out geophysical ground survey to delineate mineralized targets
  - May – June: gradient array induced polarization survey over 15km helped differentiate high priority basement alaskite targets
  - geological mapping and geophysical work (PDIP, ground radiometric, EM and magnetic surveys) helped further define drill target locations
  - identified 10 targets in 4 areas prospective for alaskite-type mineralization in basement rocks
- Sept. – Dec. 2017: **7,490 meter** scout (first pass) drilling program (88 holes 82 RC & 6 DC)
  - discovered calcrete-type mineralization (3 holes averaged 200ppm) in newly identified palaeochannel at Namaqua Prospect (formerly Speke's East) on EPL 2669
  - EPL 3669 - narrow uranium mineralization was intersected at basement targets skarn-type lithologies at Speke's and Bowsprit and in alaskites at Barking Gecko
  - EPL 3670 - identified a promising zone of basement targets at Cape Flat
- April – May 2018: **7,053 line km** of high-resolution airborne radiometric and magnetic
- October – Dec. 2018: **4,874 meter** RC drilling program (122 holes)
  - encountered low-grade palaeochannel calcrete-hosted mineralization at Namaqua (75ppm peak), Bowsprit (<100ppm) and Day Gecko (320ppm peak)
  - encountered narrow uranium mineralization in basement rocks at Iguana Prospect
- Jan. – March 2019: **1,404 meter** short RC drilling program (18 holes)
  - narrow nature of mineralized vein system confirmed at Iguana
- August – October 2019: **3,472 meter** RC drilling program (60 holes) on EPL 3669
  - encountered uranium mineralization in palaeochannels at Namaqua Prospect and at basement targets at **Barking Gecko** (**over 300ppm in 2 holes**)
- Nov. - Dec. 2019: **3,009 meter** RC drilling program (153 holes) on EPL 3670
  - encountered palaeochannel calcrete-hosted mineralization (130ppm) at STD 24 target

- delineated a **prospective 4km long by 1km wide alaskite** (leucogranite) at Barking Gecko on EPL 3669

- Jan. – May: geological mapping in order to determine the orientation of alaskite dykes
- April - July 2020: Follow-up **2,000 meter** RC drilling program focusing on Barking Gecko on EPL 3669

Barking Gecko - Drill Cross Sections



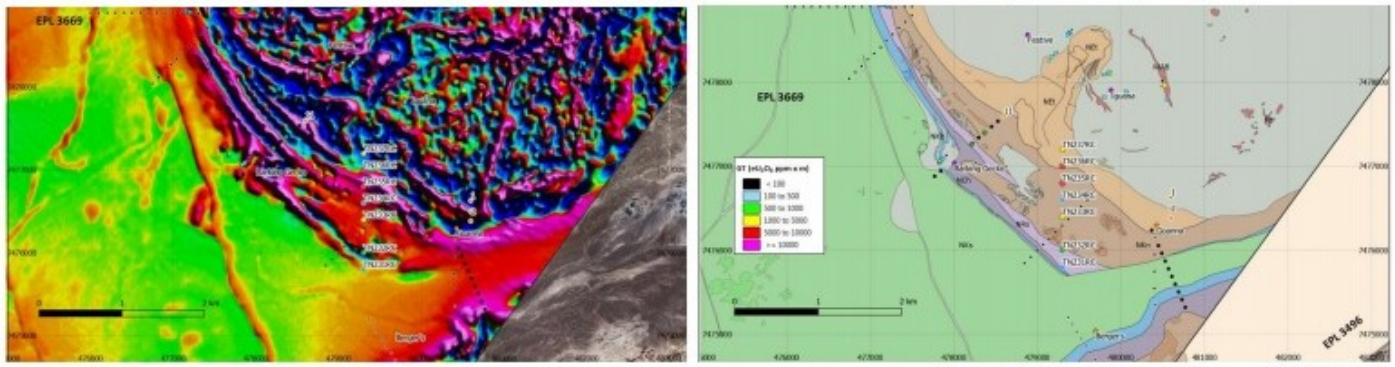
Deep Yellow Quarterly Report June 2020

On June 12, 2020, a RC drilling campaign commenced at Barking Gecko in Section 479,300mE. After 1,237 meters of the program were completed, on July 9th, Deep Yellow provided the results of seven holes that tested the area. Not only did all seven holes intersect mineralization, but also the grades and thicknesses improved to the north. The best intersection was recorded in TN236RC, in which a **24-meter zone averaged 297ppm** eU_3O_8 and a **maximum grade of 736ppm** eU_3O_8 was obtained over 1 meter.

Technical Significance of Barking Gecko

- After encountering narrow, 1-to-2-meter mineralized intersections during the 2019 campaigns, the 2020 drilling program at Barking Gecko revealed the **presence of thicker uranium intersections** (7-to-24-meters)
- The wide 200-meter drill spacing of the seven holes leaves the mineralization **open laterally and at depth**
- The **zone of anomalous interest** in the Barking Gecko area is large, approximately **4km long and 1km wide**, which wraps around a prominent domal feature (Barking Gecko)
  - The prospective area was indicated by a zone of easterly trending, remnant magnetism revealed by 3D inversion of high resolution airborne magnetic data
- The intersected mineralization corresponds to steeply south-dipping alaskite dykes
- Management believes that the emerging drilling results indicate that a large, basement-related mineralized system is present around this highly prospective area

3D Inversion of Airborne Magnetic Data | **Geological Map**



Deep Yellow Press Release July 9, 2020

VALUATION

As a junior uranium company, Deep Yellow cannot be valued on a revenue, earnings or cash flow basis. The goal of management's Dual Pillar strategy is to increase shareholders' value through the development of the company's existing EPLs in Namibia (organic growth), along with continued exploration to increase the project's estimated resources, and by pursuing acquisitions and/or mergers in order to create a multi-jurisdictional portfolio of low-cost uranium projects.

More sophisticated methodologies based on market capitalization-to-reserves, average value per tonne, per-pound costs or cash profit margins per pound produced also are not germane. However, once the Pre-Feasibility Study on the Reptile Project is completed, we will be able to utilize a resource valuation methodology where we can calculate a per share value of attributable resources. In the meantime, an alternative valuation technique based on book value is an appropriate alternative, especially in comparison to junior uranium companies that share similar attributes to Deep Yellow's.

Book value of a **junior uranium development company** represents the equity capital that has been raised to acquire the minerals rights on properties and to conduct exploration and development programs. An amalgamation of this information is encapsulated within the raised capital total, including the quality of the properties (both in terms of mineral potential and political stability), exploration results from drilling programs and the steps of development process that management has initiated /completed (Scoping Study, Pre-Feasibility Study, Metallurgical Test Work, Environmental Impact Statement, Baseline Studies and Definitive Feasibility Study). Therefore, book value captures the complex valuation of the company's base uranium resource value by relatively sophisticated investors, many with expert knowledge of junior uranium companies in the development phase. Hence, we find the use of book value is a valid and appropriate metric by which to determine a junior uranium company's valuation.

Industry Comparables	**% Chg YTD**	**Ticker**	**Exch.**	**Uranium Project Country**	**Principal Uranium Project**	**Phase**	**Mkt Cap Local Curr. ($ mil.)**	**Price/ Book**
Deep Yellow Ltd	-2.9%	DYLLF	OTCQX	Namibia	Reptile	PFS	44.7	1.19
Deep Yellow Ltd	-19.0%	DYL	ASX	Namibia	Reptile	PFS	57.6	1.19
URANIUM DEVELOPMENT COMPANIES								
Azarga Uranium Corp.	5.0%	AZZ	TSX	USA	Centenial	PEA	41.9	0.84
Berkeley Energia Ltd	268.2%	BKY	ASX	Spain	Salamanca	DFS	208.2	2.85
Denison Mines Corp	27.1%	DML	TSX	Canada	Phoenix	PFS	425.7	2.00
Fission Uranium Corp.	57.9%	FCU	TSX	Canada	Triple R	PFS	219.6	0.68
Global Atomic Corp	52.1%	GLO	TSX	Niger	Dasa	PEA	110.7	2.03
GoviEx Uranium Inc.	-12.5%	GXU	TSXV	Niger	Madaouela	PFS	66.4	0.93
Laramide Resources Ltd	43.6%	LAM	TSX	Australia	Westmoreland	PEA	46.3	0.61
NexGen Energy Ltd.	55.7%	NXE	TSX	Canada	Arrow	PFS	979.6	6.05
UEX Corp.	31.0%	UEX	TSX	Canada	Various	PEA	77.3	4.75
Industry Mean	**58.7%**						**241.7**	**2.30**
S&P 500 Index	4.9%	^SPX:US	NYSE	N/A	N/A	N/A	N/M	3.96

Broadly speaking, the public uranium companies can be grouped into three segments: producers, development companies and exploration companies. Producers are actively mining and generating revenues. Exploration companies are prospecting and/or drilling to establish mineral resources. In between these two segments are the development companies that already have established resources and are advancing through the process to bring a mine in operation, generally from the point of initiating a Pre-Feasibility Study to the actual construction of a mine. The comparable companies to Deep Yellow fall into this category.

Further, the comparable companies have been narrowed through quantitative factors, particularly those with a market capitalization over $30 million and trading above $0.10 per share. This process captures a range of well-funded junior uranium development companies, which are listed in the table above. Currently, the P/B valuation range of these comparable companies is between 0.61 and 6.05. With the expectation that Deep Yellow's stock will attain a second quartile P/B ratio of 4.2, our **comparable analysis valuation price target is US$0.68**.

INSIDER AND INSTITUTIONAL OWNERSHIP

Insiders hold approximately 10.9% of the shares outstanding. Of the largest insider holders, John Borshoff (CEO) owns 9,842,040 shares (4.0% of the shares outstanding), Gillian Swaby (Executive Director) hold 6,271,093 shares (2.6%) and Eduard Becker (Head of Exploration) owned 2,659,564 shares (1.1%).

Institutional investors own 25.8 of the shares outstanding of Deep Yellow. Sprott Inc. is the beneficial owner of 25,715,898 shares representing 10.50% of the shares outstanding. Due to a Strategic Alliance Deed signed on May 4, 2017, as long as Sprott holds a minimum of 10% equity in Deep Yellow, Sprott "retains the rights … to bid to place or find subscribers for future financial raisings." Collines Investments Limited holds 19,680,292 shares (8.0%) and Paradice Investment Management Pty Ltd. owns 17,741,935 shares (7.2%).

RISKS

- A nuclear reactor accident traditionally has dramatically and negatively affected the demand for uranium as power plants are shut down for inspections and governments re-evaluate the safety of nuclear energy.
- As with almost all junior resource exploration companies, Deep Yellow does not generate sufficient cash flow to adequately fund its exploration and developmental activities and is in need of additional capital to continue pursuing management's strategy. However, the company has effectively funded its operations and initiatives to date. In fact, the company's balance sheet and working capital is healthy with over $14 million in terms of both cash and working capital.
- Shares outstanding increased significantly in fiscal 2017 (+29.4%) and fiscal 2018 (+52.8%) as equity financings have funded the company's exploration activities and general corporate expenses. During fiscal 2019 shares outstanding increased only 5.2%, but in fiscal 2020, we estimate that shares increased over 11%.
- As with any mineral company, the price of the targeted mineral is beyond management's control, in Deep Yellow's case, the price of uranium. However, current fundamentals indicate that that a supply deficit and the projected increase in the number of nuclear power plants should drive the price of uranium above $50 per pound, creating an environment for new uranium mines to be developed.

BALANCE SHEET

Deep Yellow Limited

(in $AUD except ordinary share data)	2016	2017	2018	2019	2Q 2020
Period ending	6/30/2016	6/30/2017	6/30/2018	6/30/2019	12/31/2019
ASSETS					
Cash and cash equivalents	1,579,488	14,959,841	10,690,253	14,975,063	14,120,931
Accounts receivable	71,619	443,115	444,464	461,989	499,661
Other current assets	98,897	185,149	224,066	255,707	188,467
Total Current Assets	**1,750,004**	**15,588,105**	**11,358,783**	**15,692,759**	**14,809,059**
Right-of-use assets	-	-	-	-	691,153
Property, plant and equipment	442,607	547,797	579,858	592,797	668,314
Capitalized exploration & eval. expenditures	49,039,393	28,181,518	29,279,061	31,831,939	33,346,694
TOTAL ASSETS	**51,232,004**	**44,317,420**	**41,217,702**	**48,117,495**	**49,515,220**
Trade and other payables	289,148	612,925	332,781	509,661	178,992
Interest bearing liabilities	-	-	-	-	98,335
Provisions	-	-	98,980	118,514	95,621
Total Current Liabilities	**289,148**	**612,925**	**431,761**	**628,175**	**372,948**
Interest bearing liabilities	-	-	-	-	604,617
Non-Current Liabilities	**0**	**0**	**0**	**0**	**604,617**
TOTAL LIABILITIES	**289,148**	**612,925**	**431,761**	**628,175**	**977,565**
SHAREHOLDERS' EQUITY					
Issued equity	222,055,441	239,065,259	238,722,162	247,264,524	249,680,693
Accumulated losses	(161,726,145)	(189,770,518)	(192,326,868)	(196,141,196)	(198,258,298)
Employee equity benefits reserve	10,442,849	10,774,425	11,086,143	12,140,341	12,653,473
Foreign currency translation reserve	(19,829,289)	(16,364,671)	(16,695,496)	(15,774,349)	(15,538,213)
Total Stockholders' Equity	**50,942,856**	**43,704,495**	**40,785,941**	**47,489,320**	**48,537,655**
TOTAL LIABILITIES & STOCKHOLDERS' EQ.	**51,232,004**	**44,317,420**	**41,217,702**	**48,117,495**	**49,515,220**
Ordinary shares outstanding	107,216,125	185,047,376	194,802,027	237,711,355	245,052,016

PROJECTED INCOME STATEMENTS

Deep Yellow Limited

Income Statement (in $AUD, except share out. data)	2016 6/30/2016	2017 6/30/2017	2018 6/30/2018	2019 6/30/2019	2020 E 6/30/2020
Interest and other income	75,211	44,612	264,501	225,332	212,475
Revenue from contracts with customers	52,615	267,417	150,178	119,315	99,756
Total Revenues	**127,826**	**312,029**	**414,679**	**344,647**	**312,231**
Depreciation & amortisation expenses	(31,442)	(37,928	(77,069	(92,911	(233,146)
Marketing expenses	(17,105)	(38,759	(139,021)	(142,177)	(268,678)
Occupancy expenses	(87,424)	(97,302	(138,361)	(209,486)	(89,725)
Administrative expenses	(896,772)	(1,319,259)	(1,716,409	(2,068,920	(2,048,190
Employee expenses	(729,382)	(1,410,784)	(887,869)	(1,626,841)	(1,864,931
Impairm't of cap. explor. & eval. exp.	(121,938)	(25,452,370)	(12,300)	(18,640	0
Expenses	**(1,884,063)**	**(28,356,402)**	**(2,971,029)**	**(4,158,975)**	**(4,504,670)**
Loss Before Other Income	**(1,756,237)**	**(28,044,373)**	**(2,556,350)**	**(3,814,328)**	**(4,192,439)**
Interest (expense)	-	-	-		(14,261)
Income tax (expense)	(359)	-	-		-
Total Other Income (Expenses)	**(359)**	**0**	**0**	**0**	**(14,261)**
Net Loss	**(1,756,596)**	**(28,044,373)**	**(2,556,350)**	**(3,814,328**	**(4,206,700**
Other comprehensive income					
Fgn. curr. translation gain (loss)	(5,392,798)	3,464,618	(330,825)	921,147	386,136
Total comp. gain (loss), net of tax	**(7,149,394)**	**(24,579,755)**	**(2,887,175)**	**(2,893,181**	**(3,820,564**
Basic and diluted loss per ord. share	**(0.0182)**	**(0.2251**	**(0.0134)**	**(0.0190)**	**(0.0175**
Wgted. Avg. Ord. Shares Out. - diluted	96,265,870	124,574,555	190,372,205	200,315,114	240,142,786

Deep Yellow Limited

Income Statement (in $AUD, except share out. data)	1H 2019 12/31/2018	2H 2019 6/30/2019	2019 6/30/2019	1H 2020 12/31/2019	2H 2020 E 6/30/2020	2020 E 6/30/2020
Interest and other income	148,549	76,783	225,332	140,073	72,402	212,475
Revenue from contracts with customers	62,139	57,176	119,315	51,756	48,000	99,756
Total Revenues	**210,688**	**133,959**	**344,647**	**191,829**	**120,402**	**312,231**
Depreciation & amortisation expenses	(45,096)	(47,815	(92,911	(118,146)	(115,000)	(233,146
Marketing expenses	(97,399)	(44,778	(142,177)	(143,678)	(125,000)	(268,678
Occupancy expenses	(100,402)	(109,084)	(209,486)	(44,725)	(45,000	(89,725
Administrative expenses	(1,051,627)	(1,017,293)	(2,068,920)	(1,048,190)	(1,000,000	(2,048,190)
Employee expenses	(633,197)	(993,644)	(1,626,841)	(939,931)	(925,000)	(1,864,931)
Impairm't of cap. explor. & eval. exp.	(2,507)	(16,133)	(18,640	0	0	0
Expenses	**(1,930,228)**	**(2,228,747)**	**(4,158,975)**	**(2,294,670)**	**(2,210,000)**	**(4,504,670)**
Loss Before Other Income	**(1,719,540)**	**(2,094,788)**	**(3,814,328)**	**(2,102,841)**	**(2,089,598)**	**(4,192,439)**
Interest (expense)	-	-		(14,261)	-	(14,261)
Income tax (expense)	-	-				-
Total Other Income (Expenses)	**0**	**0**	**0**	**(14,261)**	**0**	**(14,261)**
Net Loss	**(1,719,540)**	**(2,094,788)**	**(3,814,328)**	**(2,117,102**	**(2,089,598**	**(4,206,700**
Other comprehensive income						
Fgn. curr. translation gain (loss)	129,637	791,510	921,147	236,136	150,000	386,136
Total comp. gain (loss), net of tax	**(1,589,903)**	**(1,303,278)**	**(2,893,181)**	**(1,880,966**	**(1,939,598**	**(3,820,564**
Basic and diluted loss per ord. share	**(0.0089)**	**(0.0101)**	**(0.0190**	**(0.0090)**	**(0.0085)**	**(0.0175)**
Wgted. Avg. Ord. Shares Out. - diluted	193,206,742	207,423,486	200,315,114	235,233,556	245,052,016	240,142,786

HISTORICAL STOCK PRICE



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