Denison Reports Results From Waterbury PEA, Including Base Case Pre-Tax NPV of $177M and IRR of +39.1%

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ISR MINING METHOD ESTIMATED TO PRODUCE USD$12.23 PER LB U_3O_8 OPERATING COSTS J ZONE DEPOS
RENAMED TTHE HELDETH TU?E? ("THT") DEPOSIT

TORONTO, Nov. 17, 2020 - Denison Mines Corp. ("Denison" or the "Company") (TSX: DML) (NYSE American: DNN) i
announce the successful completion of an independent Preliminary Economic Assessment ("PEA") for the Waterbury L
Property ("Waterbury") evaluating the potential use of the in-situ recovery ("ISR") mining method at the Tthe Heldeth Tu
below, formerly named J Zone) deposit (the "Project") with associated processing at Denison's 22.5% owned McClean
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The PEA was prepared by Engcomp Engineering & Computing Professionals ("Engcomp") of Saskatoon and demonstr
economics for a small-scale Athabasca Basin ISR uranium mining project – including low initial capital costs, low
costs and globally competitive all-in costs, as follows:

Mine life	~ 6 years (Avg. ~1.6 million lbs U_3O_8 per year)
Projected mine production (1)	9.7 million lbs U_3O_8 (177,664 tonnes at 2.49%)
Average cash operating costs	USD$12.23 ($16.27) per lb U_3O_8
Initial capital costs (2)	$112 million
Base case pre-tax IRR (3)	39.1%
Base case pre-tax $NPV_{8\%}$ (3)	$177 million
Base case price assumption	UxC spot price(4) (Avg. USD$53.59 per lb U_3O_8)
Operating profit margin (5)	77% at USD$53.59 per lb U_3O_8
All-in cost (6)	USD$24.93 ($33.16) per lb U_3O_8

(1) See Deposit, Geology & Projected Mine Plan section below for additional information regarding projected mine production. Scheduled tonnes and grade do not represent an estimate of mineral reserves.

(2) Initial capital costs exclude $20.1 million of estimated pre-construction Project evaluation and development costs.

(3) NPV and IRR are calculated to the start of pre-production activities for the THT operation.

(4) Spot price forecast is based on "Composite Midpoint" scenario from UxC's Q3'2020 Uranium Market Outlook ("UMO") for the years 2028 to 2033, and is stated in constant (not-inflated) dollars.

(5) Operating profit margin is calculated as uranium revenue less operating costs, divided by uranium revenue. Operating costs exclude all royalties, surcharges and income taxes.

(6) All-in cost is estimated on a pre-tax basis and includes all project operating costs and capital costs, excluding project evaluation and development costs, divided by the estimated number of finished pounds U_3O_8 produced.

Denison is also pleased to announce the re-naming of the J Zone deposit to the "Tthe Heldeth Tu?e?" ("THT") deposit

pronounced "Tey Hel-deth Tway". The Ya'thi Néné Land and Resource Office ("YNLR"), working together with Denison the Conceptual Mining Study ("Concept Study") prepared by Denison for the J Zone deposit prior to initiation of the PE release dated July 28, 2020). The YNLR provided valuable early feedback related to the Project's next steps, and recor the use of a Dené name for the deposit that would recognize and respect the connection of the Athabasca Denesu??in land where the deposit is located.

This press release constitutes a "designated news release" for the purposes of the Company's prospectus supplement November 13, 2020 to its short form base shelf prospectus dated April 2, 2020.

David Cates, President and CEO of Denison, commented:

"The Waterbury PEA further demonstrates the potential for the ISR mining method to change Canada's global competit the uranium mining sector – without requiring the discovery and development of massive-scale uranium mines. selection of the ISR mining method for the Tthe Heldeth Tu?e? deposit has transformed our expectations for the Projec generating robust preliminary financial results with comparatively modest upfront capital costs and positioning the Proje Denison's second ISR amenable development asset with a cost profile that is highly competitive amongst undeveloped mining assets globally."

David Bronkhorst, VP Operations of Denison further added:

"Denison's technical team successfully modelled the application of the ISR mining method to the Tthe Heldeth Tu?e? d internal concept study and the preliminary results have now been validated with the completion of an independent NI 4 compliant PEA. Denison's plan for the Project includes a 'freeze wall' design adapted from the 'freeze dome' outlined fo Phoenix deposit in the Wheeler River Pre-Feasibility Study ('Wheeler PFS'). The freeze wall design allows for the conta smaller area and a significant reduction in up front capital costs, as compared to the 'freeze dome'. Additionally, the free expected to offer environmental advantages by providing containment of the ISR mining operation from the depth of the deposit all the way to surface. With the positive results of the freeze wall design demonstrated in the Waterbury PEA, D also evaluating the potential benefits of a freeze wall (rather than freeze dome) for use at Wheeler River's Phoenix dep

Waterbury is owned by the Waterbury Lake Uranium Limited Partnership ("WLULP"), of which Denison Waterbury Corp wholly-owned subsidiary of Denison) owns 66.90% and Korea Waterbury Lake Uranium Limited Partnership ("KWULP" 33.10%. KWULP is comprised of a consortium of investors, in which Korea Hydro & Nuclear Power ("KHNP") holds a m position. KHNP is headquartered in Gyeongju, South Korea and is the country's largest electrical power generation com operating 24 nuclear power reactors and supplying approximately one-quarter of the country's electricity. KHNP is also shareholder in Denison.

The PEA is prepared on a Project (100% ownership) and pre-tax basis, as each of the partners to the WLULP are subj different tax and other obligations. After-tax results attributable to Denison's ownership interest are provided below und heading "Indicative Denison Post-Tax Results". All amounts are in Canadian dollars unless otherwise noted.

The PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be conside same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viab

Preliminary Economic Assessment Highlights

- Selection of ISR mining method potentially unlocks the value of the THT deposit: Following the release of the Wh 2018 and subsequent studies aimed at increasing confidence in the ISR mining method for the Phoenix deposit, i achievement of "proof of concept" (see Denison's news release dated June 4, 2020), Denison evaluated the appli ISR mining method on the THT deposit. Similar to Phoenix, the THT deposit is an unconformity-related uranium d where the mineralization is interpreted to be situated in permeable ground – expected to allow a mining so travel within the mineralized zone. Additionally, the basement rock located below the mineralized zone is interpre highly impermeable and is expected to allow for containment of the mining solution beneath the deposit.

- Freeze Wall design expected to reduce technical risk and upfront capital costs: Full hydraulic containment of the during mining activities has been planned for the Project with the installation of a freeze wall from surface to the b rocks underlying the THT deposit– effectively creating containment 360 degrees around the deposit. This makes use of established ground-freezing technology and conventional diamond drilling to create a physical perir the deposit – containing the mining solution used in the ISR mining process and protecting the surroundin environment to minimize environmental impacts of the Project. Several additional containment methodologies we as part of the Concept Study – including the freeze dome design outlined in the Wheeler PFS. Results of t Study showed that the freeze wall design offered considerably lower technical risk, equal or greater environmenta a smaller environmental footprint, sustainability benefits associated with the utilization of drilling techniques condu employment, and improved economic results with significantly lower initial capital costs.

- Existing regional infrastructure offers significant benefit: The Waterbury Lake property is located approximately 15 from Denison's 22.5% owned McClean Lake uranium mill, in the infrastructure rich eastern portion of the Athabas region. The PEA assumes the McClean Lake uranium mill will be used to process the Uranium Bearing Solution (recovered from the ISR wellfield and the nearby Points North Landing ("Points North") facilities will be used for accommodations and other support services. Taken together, this existing regional infrastructure results in a sign reduction in the initial capital costs and operating costs estimated in the PEA.

- Potential to be one of the most environmentally responsible mining operations in the world: The combination of th method with a high-grade uranium deposit in the Athabasca Basin region has the potential to result in one of the environmentally protective mining operations in the world – owing to the small foot print of the operation ar surface disturbances, as well as the fact that there are no tailings expected to be generated and no site water dis planned. The modelled operation also has access to the Provincial power grid and is not expected to rely on dies for primary power on site. Additionally, the freeze wall design provides for the physical isolation of the ISR mining from the surrounding environment, which alleviates the primary environmental concern of conventional ISR minin and facilitates a controlled restoration process once mining has been completed.

THT ISR Operation – Summary

The THT ISR operation is estimated to produce total mine production of 9.7 million pounds U_3O_8 (177,664 tonnes at 2.4 over an approximate six year mine-life with final processing occurring at Denison's 22.5% owned McClean Lake mill. Th includes an indicative timeline with pre-production activities beginning in 2025, and with first production estimated in 20

Table 1 – Waterbury PEA Financial Results (100% Basis)	
Base case pre-tax $NPV_{8\%}$ (1)	$177 million
Base case pre-tax IRR (1)	39.1%
Base case pre-tax payback period (2)	~22 months
Initial capital costs (3)	$112 million
Average annual mine production(4)	~1.6 million lbs U_3O_8
Mine life	~6 years
Exchange rate (5) (US$:CAD$)	1:1.33
Discount rate	8.00%

(1) NPV and IRR are calculated to the start of pre-production activities for the Project.

(2) Payback period is stated as number of months to pay-back from the start of uranium production.

(3) Initial capital costs exclude $20.1 million of estimated pre-construction Project evaluation and development costs.

(4) Scheduled tonnes and grade do not represent an estimate of mineral reserves. See Deposit, Geology & Mine plan section below for additional information regarding projected mine production.

(5) Exchange rate applied on uranium sales.

Table 2 – THT Operating Cost per Pound U_3O_8		
	CAD$	USD$
Mining / Wellfield	5.73	4.31
Milling / Processing	8.07	6.07
Transport to converter	0.53	0.40
Site support and administration	1.94	1.46
Total Operating Costs per pound U_3O_8	$16.27	$12.23

Table 3 – THT Capital Costs ($ million) (1)			
	Initial	Sustaining	Total
Wellfield	49.6	24.4	74.0
Milling (McClean Lake modifications)	1.1	-	1.1
Surface facilities	2.1	-	2.1
Utilities	0.7	-	0.7
Electrical	5.0	-	5.0
Civil & earthworks	5.8	0.4	6.2
Offsite infrastructure	7.5	-	7.5
Decommissioning	-	19.4	19.4
Construction Indirect	14.0	-	14.0
Subtotal	85.8	44.2	130.0
Contingency	25.8	5.8	31.6
Total Capital Costs (100%)	111.6	50.0	161.6

(1) Initial capital costs exclude $20.1 million of estimated pre-construction Project evaluation and development costs.

The PEA has been completed in accordance with NI 43-101, Canadian Institute of Mining, Milling and Petroleum (CIM) and best practices, as well as other standards such as the AACE Cost Estimation Standards. The PEA is a preliminary the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. M resources are not mineral reserves and do not have demonstrated economic viability.

The technical report supporting the PEA results included in this news release will be filed on SEDAR within 45 days of t Estimated capital and operating costs are summarized above, with details provided throughout the balance of this news Initial capital costs reflect the estimated cost of building the proposed ISR mining operation and exclude future project e and development costs that must be incurred prior to construction. These costs should be considered when assessing advancing the project to a development decision in the future.

Price Assumptions & Sensitivities

The base-case economic analysis assumes uranium sales will be made from time to time throughout production at UxC forecasted annual "Composite Midpoint" spot price from the Q3'2020 Uranium Market Outlook ("UMO"), which is stated constant (non-inflated) 2020 dollars and ranges from ~USD$49 per lb U_3O_8 to USD$57 per lb U_3O_8 during the approxim estimated life of the THT operation (assumed for pricing purposes to be from 2028 to 2033). The average base case se USD$53.59 per lb U_3O_8.

Given the estimated all-in costs of USD$24.93 per lb U_3O_8, the Project is projected to be able to generate positive econ at uranium selling prices in the range of recent market conditions, while also offering excellent leverage to a rising uran outlined below:

Table 4 – Sensitivity of Waterbury to Uranium Pricing Scenarios (100% Basis)			
	Low Case	Base case	High Case
Uranium price	USD$35 per lb U_3O_8	UxC spot price (3)	USD$65 per lb U_3O_8
Pre-tax $NPV_{8\%}$ (1)	$38 million	$ 177 million	$ 265 million
Pre-tax IRR (1)	17.4%	39.1%	50.0%
Pre-tax payback period (2)	~33 months	~22 months	~18 months

(1) NPV and IRR are calculated to the start of pre-production activities for the Project.

(2) Payback period is stated as number of months to pay-back from the start of uranium production.

(3) Spot price forecast is based on "Composite Midpoint" scenario from UxC's Q3'2020 Uranium Market Outlook ("UMO") for the years 2028 to 2033 and is stated in constant (not-inflated) dollars.

ISR Mining Method Transforms Potential for Smaller Scale Unconformity Hosted Deposits

The ISR mining method currently accounts for over 50% of the world's uranium production – with most of the pro coming from the low-cost mining operations in Kazakhstan. The mining method involves pumping a mining solution (lixi through a suitable orebody via a series of injection wells drilled from surface. As the lixiviant travels through the host ro dissolves or leaches the uranium into the mining solution, producing a UBS, which is then pumped back to surface via r wells. Once on surface, the UBS is transported (either by pipeline or trucks) to a surface processing plant for the chemi separation / removal of the uranium, and reconditioning of the lixiviant for reinjection into the orebody and further mining

Notably, the ISR mining method does not involve the mechanical excavation or milling (e.g. crushing and grinding) of th bearing host rock. Additionally, as the leaching process occurs underground, as the lixiviant travels through the host ro little waste produced by the ISR mining process – including no generation of conventional tailings requiring long storage. Taken together, the capital cost profile of ISR mining is typically a fraction of a conventional uranium mine &#8 would require a shaft, decline, or open pit to access the orebody, as well as a processing plant capable of accepting the leaching in vessels on surface, and neutralizing any associated waste for long-term storage.

Similarly, the ISR mining process relies primarily on the flow of the mining solution through the network of injection and wells, which involves a support system of pumps and piping, but does not require heavy equipment, is generally not en intensive, and does not require miners to work underground or in close proximity to the uranium orebody, which is adva from a safety and radiation protection standpoint. These factors, amongst others, contribute to ISR mining operations ty having lower operating cost profiles in comparison to conventional uranium mines.

While the ISR mining method is not currently being used in Canada for uranium mining, unconformity-related uranium d the Athabasca Basin, including the THT deposit and the Phoenix deposit, have all the attributes necessary to be a succ operation, as outlined below:

1. Mineralization that is situated in permeable ground, allowing the mining solution to travel from the injection well th orebody and ultimately back to surface via a recovery well;

2. Mineralization that is readily dissolvable by the mining solution; and

3. Mineralization that is within a setting which allows for containment of the mining solution – such that the m can be recovered without contaminating the environment or being diluted by natural ground water.

The geological features found in the THT deposit are similar to those of Wheeler River's Phoenix deposit, offering amen ISR mining – including the position of the deposit at the unconformity, anticipated permeability of the mineralized the impermeability of the underlying basement rock.

The results of the PEA for the THT deposit demonstrate that even smaller-scale uranium deposits in the Athabasca Bas with access to an existing processing plant, have the potential to become globally competitive as a result of the unique advantages associated with the ISR mining method.

As ISR mining is a novel mining method for the Athabasca Basin, there is risk that the Company may not be able to con operations as outlined in the PEA and/or that the costs could be materially different than estimated.

Deposit, Geology & Projected Mine Plan

Waterbury is host to two uranium deposits, THT and Huskie, with estimated mineral resources listed in the table below.

Table 5 – Waterbury Mineral resource Statement (1), (2) (100% Basis, 0.1% grade cut-off)

Deposit	Deposit Zone	Category	Tonnage (kt)	Grade (%U_3O_8)	Contained Metal (x1,000 lbs. U_3O_8)
Tthe Heldeth Tu?e?	East pod (3)	Indicated	164	3.2	11,580
	West pod (3)	Indicated	128	0.4	1,230
	Total	Indicated	291	2.0	12,810
Huskie	Total	Inferred	268	0.96	5,687

(1) Numbers may not add due to rounding.

(2) For further details, see the Company's report entitled "Technical Report with an Updated Mineral Resource Estimate for the Waterbury Lake Property, Northern Saskatchewan, Canada – Mineral Resource Estimate", as filed on SEDAR and available on the Company's website. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

(3) For presentation purposes for this press release, the THT mineral resource estimate presented in this table has been divided into the East and West pods, to illustrate each zone's estimated size and the potential applicability of mining methods, and is not intended to replace or amend the mineral resource estimate in the technical report referred to in note (2) above.

The PEA has been prepared to evaluate the technical and economic viability of extracting the Indicated mineral resourc estimated for the THT deposit, and excludes the Inferred mineral resources estimated for the Huskie deposit. The geolo of the Huskie deposit differs from the THT deposit – in that it is hosted entirely in the basement rocks underlying Athabasca sandstone, and accordingly is not expected to be sufficiently permeable to be amenable to development wit mining method.

As discussed above, the THT deposit is expected to be amenable to ISR mining owing to its position at the contact of th rocks and the overlying Athabasca Sandstone, where permeability is increased. The THT deposit is hosted in an east-w with the underlying basement consisting of metasediments bounded by orthogneiss to the north and south. The metase 90 to 120 metres thick and include a 20 metre thick graphitic pelitic gneiss.

There are two defined mineralized pods that make up the THT deposit – the West pod and the East pod. The Ea contains over 90% of the Indicated mineral resources and angled drilling from land is expected to allow for ISR wells an associated freeze wall to reach the THT deposit East pod without constructing a berm or peninsula into the surrounding Figure 1). Accordingly, the PEA considers the recovery of the East pod only. A portion of the East pod is expected to be

as a result of the installation of the freeze wall, rendering approximately 206,000 lbs U_3O_8 unrecoverable. The balance pod is assumed to be recoverable based on an 85% mining recovery rate, resulting in total projected mine production o lbs of U_3O_8, as shown in Table 6 below. Projections of scheduled tonnes and grade do not represent an estimate of mi reserves.

Table 6 - Tthe Heldeth Tu?e? Projected Mine Production (100% Basis, 0.0% grade cut-off)

Tthe Heldeth Tu?e? Deposit Area	Tonnage(1) (kt)	Grade(1) (%U_3O_8)	Contained Metal(1) (x1,000 lbs. U_3O_8)	Sterilized Metal(1) (x1,000 lbs. U_3O_8)	Projected Mine Production(2) (x1,000 lbs. U_3O_8)
West Pod	226	0.27	1,347	n/a	0
East Pod	212	2.49	11,634	206	9,713

(1) Tonnage, Grade, Contained Metal and Sterilized Metal presented at a 0% grade cut off to reflect ISR mining method.

(2) ISR Mine Projected Production uses the application of an 85% ISR mining recovery factor with a 0% mineral resource grade cut-off.

The THT deposit is extremely well defined by 268 drill holes intersecting uranium mineralization over a combined east-w length of up to 700 metres and a maximum north-south lateral width of 70 metres. The mineralization thickness varies f 19.5 metres and the mineralization is found within several metres of the unconformity at depths of 195 to 230 metres. T deposit has been drilled, on average, at 10 metre by 25 metre spacings across the deposit and in some cases a more c spacing has been applied. The genesis and structural complexity of the deposit are well understood. There are no outly elements of the deposit requiring further drill testing.

Importantly, during the PEA process, additional work was undertaken to obtain permeability data for the THT deposit. P values collected from core samples from within the mineralized zone were reviewed by a team of independent experts w concluded that adequate hydraulic conductivity values, necessary to support economical ISR production rates, could be through a combination of engineering controls (e.g. well spacing) and utilization of permeability enhancement technique Additional hydrogeologic testing and characterization of the THT deposit will be required to validate these assumptions studies.

THT Freeze Wall Design

In conventional ISR operations, containment of the mining solution is typically achieved by natural impermeable boundi the geological strata and/or by creating a natural drawdown (via pumping) of the water table towards the ore zone. At th deposit, there is a natural impermeable layer below the deposit, in the form of a competent package of basement rocks deposit is otherwise hydraulically connected to the vast regional groundwater system in the overlying sandstone format defines the Athabasca Basin. An artificial freeze wall is planned to isolate the ISR wellfield from the surrounding enviro contain the mining solution within the mineralized zone.

The freeze wall is expected to be established by drilling a series of vertical or angled drill holes from surface. Once the been completed, it will be cased with a dual-layered pipe that will allow for the circulation of a low-temperature brine sol holes, which is designed to remove heat from the ground and result in the freezing of the natural groundwater in the vic freeze hole. The frozen ground will expand out from each freeze hole and merge together with the frozen ground assoc an adjacent freeze hole, establishing an impermeable frozen wall that will surround the perimeter of the deposit from su depth. The freeze holes will also be keyed into the basement rock below the deposit to effectively create an in-ground b for the ISR mining to take place within.

The freeze wall design is comprised of 92 holes planned at 7 metre spacing to a target depth of 200 metres, which will below the unconformity elevation into the basement rock. This represents a total of 28,766 metres of drilling, which is a be completed using commonly used diamond drilling methods conducive to local employment. This drilling method and a much lower technical risk profile than the horizontal drilling required as part of the freeze dome design included in the PFS, as both diamond drilling and the associated ground freezing in vertical or angled drill holes, are well established th the world and are already in use in the existing mining operations in the Athabasca Basin region. The PEA assumes tha 12 months, after installing the necessary freeze holes, for the ground freezing process to advance to a sufficient point t the desired level of containment.

Several other containment options were investigated as part of the Concept Study, including the freeze dome design ou

Wheeler PFS. The installation of a freeze wall showed significant advantages in comparison to a freeze dome, with a m technical risk profile and equal or greater environmental protection, as well as a smaller environmental footprint, and gr potential for community benefits. Denison is evaluating a potential adaptation to the ground freezing containment desig River to take advantage of the potential benefits of a freeze wall design similar to the proposed design for the THT depo

See Figure 1 for proposed THT Wellfield and Freeze Wall Containment Configuration

ISR Wellfield Design

Conventional ISR roll-front uranium deposits are typically spread out over several square kilometres of area, owing to th nature of the deposits. An ISR uranium mining operation in the United States or Kazakhstan will typically have uranium the range of 0.03 - 0.30% U_3O_8. Accordingly, the low-grade nature of these deposits, combined with well spacing, reag consumption, surface piping and pumping distribution systems, all contribute to create economic thresholds which impa viability of some deposits.

In the case of the THT east pod, the ore is confined to a relatively small area (300 metres x 70 metres) and has demon to be readily leachable in laboratory testing. The average grade of mineralization in the east pod (approximately 2.49% also several times higher than a typical low-grade ISR operation.

The wellfield design included in the PEA uses 184 wells at 7 metre spacing arranged in a 5-spot pattern, with four injec around one recovery well. The wells will be drilled from surface within the freeze wall and angled out to penetrate the m zone at depth with a roughly 7 metre spacing. The maximum drilling angle is limited to 45 degrees to reduce the techni drilling and well installation.

Eight monitoring wells will be installed outside of the freeze wall to detect and remediate any excursion of lixiviant from zone, which is considered unlikely due to the containment of the freeze wall.

Table 7 – Summary THT ISR Wellfield Wells		
	Number of Wells	Drill Metres
Recovery Wells	66	20,637
Injection Wells	118	36,896
Monitoring Wells	8	1,750
Total	192	59,283

See Figure 1 for proposed THT Wellfield and Freeze Wall Containment Configuration

Metallurgy, Lixiviant Supply & Processing of UBS

Production of the lixiviant mix and final mineral processing of the UBS expected to be recovered from the THT deposit i to occur at the nearby McClean Lake mill. The mill is owned by the McClean Lake Joint Venture ("MLJV") of which Ora Inc. holds a 70% interest, Denison Mines Inc. (a wholly-owned subsidiary of Denison) holds a 22.5% interest, and OUR Co., Ltd. holds a 7.5% interest. The mill is currently processing material from the Cigar Lake mine under a toll milling ag (up to 18 million lbs U_3O_8 per year); however, it has approximately 6 million lbs U_3O_8 per year in additional licenced pro capacity, with a total licensed capacity of up to 24 million lbs U_3O_8 per year. The PEA assumes a recovery rate of 98.5% processing of UBS from the THT deposit at the McClean Lake mill.

The lixiviant mix needed at the THT site is anticipated to be a low-ph (acidic) solution, which is capable of being genera existing acid plant at the McClean Lake mill and transported by trucks and specifically designed transport containers to by road (45 kilometres one way). The trucks would then complete their return loop to the McClean Lake mill transportin from the wellfield back to the McClean Lake mill for final processing.

Historical metallurgical testing of mineralized core recovered from the THT deposit and surrounding deposits was used to estimate lixiviant and UBS characteristics. In comparison to ores milled at the McClean Lake mill, mineralization from the THT deposit contains significantly fewer contaminants of concern, which further confirms the ability of the McClean Lake mill to refine the UBS into a high-quality yellowcake product with minimal waste streams. A metallurgical test program was developed for the purpose of the Waterbury PEA and was completed in 2020 to further support the selected production rate with a UBS uranium concentration of 7 grams per litre ("g/l").

The lixiviant mix has been estimated to require 100 g/l of acid to be injected in the deposit with free acid concentration r the resulting UBS of 80 g/l. This effectively results in an acid consumption rate of 20 g/l to mine the THT deposit with IS recovered from the THT wellfield would be inserted directly into the McClean Lake mill's leaching process stream to allo remaining acid in the UBS to be used to leach co-milled ores from Cigar Lake or other sources. Based on this process, McClean Lake mill is expected to require minimal modifications to accommodate the UBS from the THT deposit. Expec modifications have been costed and are included in the Project economics.

While the PEA assumes the use of the McClean Lake mill, the actual use of the McClean Lake mill's acid generation an processing capabilities will require the negotiation of a toll milling agreement. The PEA approximates the anticipated co the McClean Lake mill facilities, based on precedent agreements, but no such terms have been negotiated and/or agre owners of the MLJV.

Site Infrastructure

Infrastructure requirements for the THT site are minimal, due to its proximity to the existing Mc Clean Lake mill and the Landing facility. Given the assumed use of the McClean Lake mill, the THT ISR operation is expected to essentially ope wellfield site with minimal local infrastructure. Coupled with the assumed ability to lodge the workforce at the nearby Po Landing facilities, project construction risk and capital costs associated with reaching first production are significantly re PEA includes the following key site infrastructure elements:

- Thirteen-kilometre site power line and associated fixturing connected to the Provincial power grid;
- 1.5 kilometre extension of the existing access road to the adjacent Roughrider property;
- Site operations centre including offices, water and sewage;
- Supplies warehousing and fuel storage facilities;
- Emergency / back-up power generators;
- Wash bay, scanning facilities for trucks transporting UBS to McClean Lake; and
- UBS, lixiviant & drilling waste pads

Construction activities required to install the wellfield and associated equipment for mining the THT deposit is relatively a technical standpoint and is expected to involve limited risk to capital costs.

See Figure 2 for Proposed THT Site Layout

See Figure 3 for THT Deposit Regional Location Map

See Figure 4 for Proposed THT Site Location Map

Production Schedule

Once commenced, construction is expected to occur over approximately 2.5 years with the critical path to production be establishing the freeze wall. Mine production is expected to begin part way through the first calendar year after construc completed with approximately 840,000 lbs of U_3O_8 mill production expected in year one. In years two through five, mill ramps up to a steady-state annual production level of 2.1 million lbs U_3O_8 per year, with total U_3O_8 finished produced e be 9.6 million lbs over an approximate six-year period.

Table 8 – Tthe Heldeth Tu?e? East Pod Deposit Overall Projected Production(1)							
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Mined tonnes	15,599	38,994	38,994	38,994	38,994	6,089	177,664
Grade	2.49%	2.49%	2.49%	2.49%	2.49%	2.49%	2.49%
Mine production (millions lbs U_3O_8)	0.853	2.132	2.132	2.132	2.132	0.333	9.713
Finished goods (millions lbs U_3O_8) (2)	0.840	2.100	2.100	2.100	2.100	0.328	9.567

(1) Numbers may not add due to rounding.

(2) Reflects 98.5% recovery rate assumed for processing of UBS from THT deposit at the McClean Lake mill. Projections of scheduled tonnes and grade do not represent an estimate of mineral reserves.

Indicative Denison Post-Tax Results

The PEA is prepared on a pre-tax and 100% ownership basis, as each partner to the WLULP is subject to different tax and other obligations. Denison has completed an indicative post-tax assessment that reflects its ownership interest in the WLULP (66.90%), the impact of expected toll mill fees recovered from its 22.5% interest in the MLJV, and the benefit of Denison's applicable existing tax shelter balances.

Net Saskatchewan sales royalties consist of the resource surcharge (3%), and the basic uranium royalty (5%), which is partially offset by the resource credit (0.75%). These amounts are included in the pre-tax NPV calculations throughout the PEA; however, they are excluded from the U_3O_8 operating cost per pound metrics, as they vary with the value of assumed uranium sales. The profit from operations is subject to an additional Provincial uranium profit royalty, which is treated as an income tax, and allows for the use of certain tax shelter balances.

Denison's post-tax indicative results for the THT project are summarized below and are based on the prevailing Federal and Provincial taxation regulations in place at the time of the PEA as well as Denison's 66.90% ownership of the property as of the end of November 2020.

Table 9 – Denison Indicative Post-Tax Results (66.90% ownership)	
Initial capital costs – Denison Share (1)	$75 million
Base case post-tax IRR (2)	30.4%
Base case post-tax $NPV_{8\%}$ (2)	$72 million
Base case post-tax payback period (3)	~ 23 months
High case post-tax IRR (2)	38.9%
High case post-tax $NPV_{8\%}$ (2)	$109 million
High case post-tax payback period (3)	~19 months
Low case post-tax IRR (2)	13.5%
Low case post-tax $NPV_{8\%}$ (2)	$14 million
Low case post-tax payback period (1)	~34 months

(1) Initial capital cost excludes estimated pre-construction Project evaluation and development costs

(2) NPV and IRR are calculated to the start of pre-production activities for the THT operation.

(3) Payback period is stated as number of months to pay-back from the start of uranium production.

The PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

Development Outlook

The results of the PEA demonstrate the potential for robust project economics – highlighting the potential for the ISR mining method to unlock considerable value in the THT deposit, despite its relatively small resource size. The future initiation of a PFS is supported by the PEA conclusions and will be required to further de-risk the application of the IRS mining method at the THT deposit. The timing of a future PFS for the THT deposit is expected to be dependent on receipt of the requisite partnership approvals and Denison's future efforts to advance and further de-risk the ISR mining method for the Phoenix deposit at the Company's flagship Wheeler River property.

Denison is the industry leader in advancing the use of the low-cost ISR mining method amongst the high-grade uranium deposits of the Athabasca Basin. The PEA for the THT deposit demonstrates the potential for Denison to convert its existing project portfolio (including an extensive exploration portfolio) into a portfolio of low-cost development assets that would supplement the Company's flagship Wheeler River project and uniquely position the Company to offer nuclear utility customers uranium from a diverse portfolio of supply sources in future years.

About Denison

Denison is a uranium exploration and development company with interests focused in the Athabasca Basin region of northern Saskatchewan, Canada. The Company's flagship project is the 90% owned Wheeler River Uranium Project, which is the largest undeveloped uranium project in the infrastructure rich eastern portion of

the Athabasca Basin region of northern Saskatchewan. Denison's interests in Saskatchewan also include a 22.5% ownership interest in the MLJV, which includes several uranium deposits and the McClean Lake uranium mill, which is contracted to process the ore from the Cigar Lake mine under a toll milling agreement, plus a 25.17% interest in the Midwest deposits and a 66.90% interest in the THT and Huskie deposits on the Waterbury Lake property. The Midwest, THT and Huskie deposits are located within 20 kilometres of the McClean Lake mill. In addition, Denison has an extensive portfolio of exploration projects in the Athabasca Basin region.

Denison is engaged in mine decommissioning and environmental services through its Closed Mines group, which manages Denison's Elliot Lake reclamation projects and provides post-closure mine and maintenance services to industry and government clients.

Denison is also the manager of Uranium Participation Corp., a publicly traded company listed on the TSX under the symbol 'U', which invests in uranium oxide in concentrates and uranium hexafluoride.

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Qualified Persons

The technical information contained in this release has been reviewed and approved by Mr. David Bronkhorst, P.Eng, Denison's Vice President, Operations, who is a Qualified Person in accordance with the requirements of NI 43-101.

The Mineral Resource Estimates contained in this release have been reviewed and approved by Mr. Andy Yackulic, Denison's Director, Exploration, who is a Qualified Person in accordance with the requirements of NI 43-101.

Gordon Graham, VP mining of Engcomp, is an independent qualified person in accordance with the requirements of 43-101 and has reviewed and approved the summary of the PEA contained in this news release.

Data Verification

For a description of the data verification, assay procedures and the quality assurance program and quality control measures applied by Denison, please see Denison's Annual Information Form dated March 13, 2020 filed under the Company's profile on SEDAR at www.sedar.com

The Mineral Resource estimates presented in the PEA were independently reviewed and audited for the Tthe Heldeth Tu?e? (J Zone) Deposit and for the Husky Deposit as described in "Technical Report with an Updated Mineral Resource Estimate for the Waterbury Lake Property, Northern Saskatchewan, Canada – Mineral Resource Estimate", dated December 21, 2018 as filed on SEDAR and available on the Company's website.

Further information about the PEA referenced in this news release, including information in respect of data verification, key assumptions, parameters, risks and other factors, can be found in the technical report for Waterbury that the Company intends to file on SEDAR and on the Company's website within 45 days from the date of this news release.

Cautionary Statement Regarding Forward-Looking Statements

Certain information contained in this news release constitutes 'forward-looking information', within the meaning of the applicable United States and Canadian legislation concerning the business, operations and financial performance and condition of Denison.

Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "plans", "expects", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "believes", or the negatives and / or variations of such words and phrases, or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur", "be achieved" or "has the potential to". In particular, this press release contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in the PEA, including future development methods and plans, market prices, costs and capital expenditures; the Company's current plans with respect to the development of the Project; the results of, and estimates, assumptions and projections provided in, the Wheeler PFS; the Company's current intentions to evaluate the potential benefits of a freeze wall for use at the Wheeler River Phoenix deposit; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development in accordance with the PEA; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. Statements relating to "mineral resources" are deemed to be forward-looking information, as they involve the implied assessment that, based on certain estimates and assumptions, the mineral resources described can be profitably produced in the future.

Forward looking statements are based on the opinions and estimates of management as of the date such statements are made, and they are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Denison to be materially different from those expressed or implied by such forward-looking statements. For example, further studies, including a PFS, may not be undertaken if the results of the PEA are not maintained after further testing; Denison may decide or otherwise be required to discontinue the related work if it is unable to maintain or otherwise secure the necessary resources (such as testing facilities, capital funding, regulatory approvals, etc.) or operations are otherwise affected by COVID-19 and its potentially far-reaching impacts. Denison believes that the expectations reflected in this forward-looking information are reasonable but no assurance can be given that these expectations will prove to be accurate and results may differ materially from those anticipated in this forward-looking information. For a discussion in respect of risks and other factors that could influence forward-looking events, please refer to the factors discussed in Denison's Annual Information Form dated March 13, 2020 or subsequent quarterly financial reports under the heading 'Risk Factors'. These factors are not, and should not be construed as being exhaustive.

Accordingly, readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this news release is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of the date of this news release. Denison does not undertake any obligation to publicly update or revise any forward-looking information after the date of this news release to conform such information to actual results or to changes in Denison's expectations except as otherwise required by applicable legislation.

Cautionary Note to United States Investors Concerning Estimates of Measured, Indicated and Inferred Mineral Resources and Probable Mineral Reserves: This press release may use the terms 'measured', 'indicated' and 'inferred' mineral resources. United States investors are advised that while such terms have been prepared in accordance with the definition standards on mineral reserves of the Canadian Institute of Mining, Metallurgy and Petroleum referred to in Canadian National Instrument 43-101 Mineral Disclosure Standards ('NI 43-101') and are recognized and required by Canadian regulations, these terms are not defined under Industry Guide 7 under the United States Securities Act and, until recently, have not been permitted to be used in reports and registration statements filed with the United States Securities and Exchange Commission ('SEC'). 'Inferred mineral resources' have a great amount of uncertainty as to their existence, and as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimates of inferred mineral resources may not form the basis of feasibility or other economic studies. United States investors are cautioned not to assume that all or any part of measured or indicated mineral resources will ever be converted into mineral reserves. United States investors are also cautioned not to assume that all or any part of an inferred mineral resource exists, or is economically or legally mineable. In addition, the terms "mineral reserve", "proven mineral reserve" and "probable mineral reserve" for the purposes of NI 43-101 differ from the definitions and allowable usage in Industry Guide 7. Effective February 2019, the SEC adopted amendments to its disclosure rules to modernize the mineral property disclosure requirements for issuers whose securities are registered with the SEC under the Exchange Act and as a result, the SEC now recognizes estimates of "measured mineral resources", "indicated mineral resources" and "inferred mineral resources". In addition, the SEC has amended its definitions of "proven mineral reserves" and "probable mineral reserves" to be "substantially similar" to the corresponding definitions under the CIM Standards, as required under NI 43-101. However, information regarding mineral resources or mineral reserves in Denison's disclosure may not be comparable to similar information made public by United States companies.

Figure 1 Proposed Tthe Heldeth Tu?e? Wellfield and Freeze Wall Containment Configuration

Figure 2 Proposed Tthe Heldeth Tu?e? Site Layout

Figure 3 Tthe Heldeth Tu?e? Deposit (Waterbury Lake) Regional Location Map

Figure 4 Proposed Tthe Heldeth Tu?e? Site Location Map

View original content to download
multimedia:http://www.prnewswire.com/news-releases/denison-reports-results-from-waterbury-pea-including-base-case

SOURCE Denison Mines Corp.

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