# Technical Report on the Tony M Project, Utah, USA Report for NI 43-101

# **Consolidated Uranium Inc.**

SLR Project No: 138.20125.00001 October 15, 2021 SLR®



#### Technical Report on the Tony M Project, Utah, USA

SLR Project No: 138.20125.00001

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#### **FINAL**

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# 1.0 SUMMARY

#### 1.1 Executive Summary

SLR Consulting Ltd (SLR) was retained by Consolidated Uranium Inc. (CUR) to prepare an independent Technical Report on the Tony M Uranium Project (the Property or the Project), located in Garfield County, Utah, USA. The Property was the site of underground mining as recently as 2008. The scope of this Technical Report includes descriptions of the general setting, geology, project history, exploration activities and results, methodology, quality assurance/quality control, interpretations, drilling programs, and metallurgy, as well as the interpretations, conclusions, and recommendations of the qualified person (QP). The Property is situated in parts of Sections 4, 8, 9, 16, and 17, Township 35 South Range 11 East (T35S R11 E) Salt Lake Meridian (SLM) Garfield County, Utah USA. SLR understands that the purpose of this Technical Report is to provide an updated technical summary of the Property in support of securities exchange reporting and CUR's intended acquisition of the Property from EFR Henry Mountains LLC, an affiliate of Energy Fuels Inc. (Energy Fuels) and recommend additional work to further advance the Project. CUR has not completed exploration or development work on the Project, thus this Technical Report, which conforms to National Instrument 43-101 — Standards of Disclosure for Mineral Projects (NI 43-101), describes the historical work completed at the Project and recommends additional work to further advance the Project.

CUR is a Toronto-based exploration company (TSXV: CUR) focused on acquiring and developing uranium properties around the globe. On July 14, 2021, CUR entered into an agreement to acquire a 100% interest in the Property from an affiliate of Energy Fuels (NYSE: UUUU) (the Acquisition). The Acquisition is reported to be completed late Q3 or early Q4 2021.

In connection with the completion of the Acquisition, CUR will enter a toll milling agreement with an affiliate of Energy Fuels pursuant to which Energy Fuels will toll-mill economic mineralization mined from the Project at the White Mesa Mill near Blanding, Utah USA, subject to payment by CUR of a toll-milling fee and certain other terms and conditions.

#### 1.1.1 Conclusions

SLR offers the following conclusions.

#### 1.1.1.1 Geology and Mineral Resources

- The Tony M and Southwest deposits (the Deposits) are of the Colorado Plateau sandstone hosted uranium type.
- The Property has been the site of considerable mining and exploration, including the drilling and logging of approximately 2,000 rotary holes and 57 core holes, of which 1,060 rotary holes were used to prepare the historical 2012 Mineral Resource estimates.
  - o In the opinion of the QP, the drill hole databases for the Deposits are appropriate and acceptable for future Mineral Resource estimation.
- Several historical Mineral Resource estimates have been previously carried out on the Deposits.
   SLR, as the former Roscoe Postle Associates Inc. (RPA) and Scott Wilson RPA, has prepared previous Technical Reports on the Property as of June 27, 2012, March 19, 2009, and September 9, 2006, in compliance with NI 43-101. These estimates are historical in nature and should not be



relied upon. CUR is not intending on treating the historical estimates as current Mineral Resource estimates.

- o In June 2012 RPA, now SLR, reported Indicated Mineral Resources for the Tony M and Southwest Deposits as totalling, 1.03 million tons (Mst) at 0.24% U<sub>3</sub>O<sub>8</sub>, containing 4.83 million pounds (Mlb) U<sub>3</sub>O<sub>8</sub>, and 0.66 Mst at 0.25% U<sub>3</sub>O<sub>8</sub> containing 3.30 Mlb U<sub>3</sub>O<sub>8</sub>, respectively. Inferred Mineral Resources for the Tony M and Southwest Deposits total, 0.67 Mst at 0.17% U<sub>3</sub>O<sub>8</sub> containing 2.22 Mlb U<sub>3</sub>O<sub>8</sub>, and 0.24 Mst at 0.14% U<sub>3</sub>O<sub>8</sub> containing 0.68 Mlb U<sub>3</sub>O<sub>8</sub>, respectively.
- The 2012 Mineral Resource estimates are historical in nature and should not be relied upon.
   CUR is not intending on treating the historical estimates as current Mineral Resource estimates. Further work recommended by the QP, as outlined in Section 26 of this Technical Report, should be completed to classify the mineralization as a current Mineral Resource.
- Significant historical uranium production has occurred at the Property in two phases. Between September 1979 and April 1984 Plateau Resources Ltd. (Plateau) produced a total of approximately 136,318 tons at an average grade of 0.128% U<sub>3</sub>O<sub>8</sub> for348,058 lb U<sub>3</sub>O<sub>8</sub> and between September 2007 to December 2008 Denison Mines Corp. (Denison) produced 90,025 tons at an average grade of 0.165 % U<sub>3</sub>O<sub>8</sub> for 297,465 lb U<sub>3</sub>O<sub>8</sub>.
- No Mineral Reserves have been estimated for the Property.

#### 1.1.1.2 Risks

In the QP's opinion, there are no significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information presented in this Technical Report, and the data provided to SLR by CUR and Energy Fuels and is believed to be reasonably representative of the Property geology and uranium mineralization.

#### 1.1.2 Recommendations

SLR offers the following recommendations.

#### 1.1.2.1 Geology and Mineral Resources

SLR recommends the following two-phase program for updating the historical resource estimates:

#### 1.1.2.1.1 Phase 1: Confirmation Drilling Program

- Conduct a 10 to 20 rotary drill hole confirmation exploration program across the Property to: 1) validate historical equilibrium analysis, 2) verify historic reported uranium grades, and 3) update classification of Inferred Mineral Resources to Indicated. Average depth per hole is estimated to be approximately 570 ft. Drill hole placement should be conducted by a CUR geologist with a particular focus on the Southwest deposit.
  - To save costs on equilibrium analysis SLR recommends utilizing Prompt Fission Neutron (PFN)
    drill hole geophysical logging as an alternative to collecting core for equilibrium analysis. PFN
    logging has proven to be a reliable methodology for equilibrium analysis and has a strong
    performance record on similar uranium deposits in the USA.



SLR estimates the cost of the Phase 1 work will range from US\$570,000 to US\$1,140,000 (estimated costs per drill foot US\$100, includes equilibrium analysis costs using PFN tool).

#### 1.1.2.1.2 Phase 2: Preliminary Economic Analysis and Updated Resource Estimate

- 1. Following completion of the Phase 1 confirmation drilling program, revisit and update Mineral Resource estimates for the Property using a similar approach to the GT contour methodology and/or block modeling approach using updated processing and operating costs and recoveries.
  - This work will include depleting resources from historical production records.
- 2. Carry out a PEA of re-opening the Tony M mine in conjunction with Item 1.

SLR estimates the cost of this work to be US\$60,000 for the updated Mineral Resource estimate and approximately US\$150,000 for the PEA for a total of approximately US\$210,000 for Phase 2

# 1.2 Technical Summary

#### 1.2.1 Property Description and Location

The Property is located in eastern Garfield County, Utah, USA, 17 miles (mi) north of Bullfrog Basin Marina on Lake Powell, approximately 40 air miles south of the town of Hanksville, Utah, three miles west of Utah State Highway 276, and approximately five miles north of Ticaboo, Utah.

The Property will consist of the southern portion of Energy Fuels' Henry Mountains Complex, which is comprised of the Deposits and currently inactive Tony M mine.

#### 1.2.2 Land Tenure

The Property consists of one Utah State Mineral Lease for Section 16 T35S R11E SLM, and 74 unpatented Federal lode mining claims situated in Sections 4, 5, 8, 9, 17, 20 and 21, Township 35 South, Range 11 East. The latter consist of 25 B.F., 5 Bull, 19 Star, 17 TIC and 8 Ticaboo claims (including fractional claims). The claims and Utah State Lease comprise one contiguous property located in the northern half of T35S R11E SLM and extends into the southern half of T34S R11E SLM. The Utah State Section 16 includes 638.54 acres, and the 74 unpatented lode mining claims consist of approximately 1,378 acres. The surface rights covering the mining claims are owned by the United States (U.S.) Federal government and administered by the U.S. Bureau of Land Management (BLM), while the surface estate over the Utah State Lease is owned and managed by the State of Utah. Surface access is granted via Ticaboo claims #1, #5, and #6 which are owned by UCOLO Exploration Corp (UCOLO).

All the Property holdings are reported to be in good standing.

#### 1.2.3 History

During World War I, vanadium was mined from small deposits outcropping in Salt Wash exposures on the eastern and southern flanks of the Henry Mountains. In the 1940s and 1950s, interest increased in both vanadium and uranium, and numerous small mines developed along the exposed Salt Wash outcrops.

Prior to 2005, all exploration, mine development, and related activities for the two historical properties (Tony M and Bullfrog) were conducted independently by several companies. Many historic activities on the Bullfrog and Tony M properties are therefore discussed separately, except where correlations and comparisons are made. SLR notes that historically the Bullfrog Property consisted of the Southwest,



Copper Bench, and Indian Bench deposits, only the Southwest deposit lies within the current Property boundaries.

In the late 1960s, Gulf Minerals (Gulf) acquired a significant land position southwest of the Henry Mountains Complex and drilled approximately 70 holes with little apparent success. In 1970 and 1971, Rioamex Corporation (Rioamex) conducted a 40 hole drilling program in an east-west zone extending across the southern portion of the Bullfrog Property and the northern portion of the former Tony M property. Some of these holes intercepted significant uranium mineralization.

The history of exploration and development of the Bullfrog Property and former Tony M property evolved independently from the mid-1970s until early 2005. The Bullfrog Property was initially explored by Exxon Minerals Company (Exxon), while the former Tony M property was explored and developed by Plateau, a subsidiary of Consumers Power Company (Consumers) of Michigan.

In 1982, Atlas Minerals Corporation (Atlas) acquired the Bullfrog Property from Exxon, subsequently returning it to Exxon in 1991. The Bullfrog Property was then sold by Exxon to Energy Fuels Nuclear Inc. (EFNI) in 1992. In 1997, International Uranium Corp. (IUC) became the owner of the Bullfrog Property as part of an acquisition in which IUC acquired all of EFNI's assets.

Plateau commenced exploration east of Shootaring Canyon in 1974 and drilled the first holes west of the canyon on the former Tony M property in early 1977. Development of the Tony M decline and mine began on September 1, 1978. Under Plateau, the Shootaring Canyon Uranium Processing Facility (Ticaboo Mill) was developed approximately four miles south of the Tony M mine portals. Operational testing commenced at the Ticaboo Mill on April 13, 1982, with the mill declared ready for operation on June 1, 1982. Following extensive underground development, the Tony M mine was put on care and maintenance in mid-1984 as a result of the cancellation of Consumers' dual Midland, Michigan, nuclear plants. Plateau's Tony M mine uranium production had been committed to the Midland plants.

Ownership of the former Tony M property was transferred from Plateau to Nuclear Fuels Services, Inc. (NFS) mid-1990. During its tenure, NFS conducted annual assessment work including drilling and logging of approximately 39 rotary holes. U.S. Energy Corporation (USEC) acquired ownership of the former Tony M property in 1994, subsequently abandoning it in the late 1990s.

In February 2005, the State of Utah offered the Utah State Mineral Lease covering Section 16 T35S R11E, SLM, for auction. Both the portal of the Tony M mine and the southern portion of the Tony M deposit are located on this State section. IUC was the successful bidder, and the State of Utah leased Section 16 to IUC. Subsequently, IUC entered into an agreement to acquire the TIC unpatented lode claims located between Section 16 and the Bullfrog Property claims.

On December 1, 2006, IUC combined its operations with those of Denison Mines Inc. (DMI) acquiring all issued and outstanding shares of DMI, and subsequently amending its name to Denison Mines Corp. (Denison). In February 2007, Denison acquired the former Plateau Tony M Property, bringing it under common ownership with the Bullfrog Property and renaming the properties the Henry Mountain Complex.

In 2007, the Ticaboo Mill was purchased by Uranium One Inc. from USEC.

In June 2012, Energy Fuels acquired 100% of the Henry Mountains Complex through the acquisition of Denison and its affiliates' U.S. Mining Division.



On July 14, 2021, CUR entered into an agreement with respect to the Acquisition, which is reported to be completed late Q3 or early Q4 2021. The remaining deposits (Copper Bench and Indian Bench) that occur to the north as part of the historic Bullfrog Property will remain under Energy Fuels ownership.

The former Tony M mine was designed as a random room and pillar operation with pillar extraction by a retreat system. The pillars are 136 ft by 136 ft and form a conventional room and pillar pattern.

The White Mesa Mill is located six miles south of Blanding in southeastern Utah. Its construction by EFNI was based on the anticipated reopening of many small low grade mines on the Colorado Plateau. The White Mesa Mill was designed to treat 2,000 short tons per day (stpd) but has operated at rates in excess of the 2,000 stpd design rate. Construction of the White Mesa Mill commenced in June 1979 and was completed in May 1980. The White Mesa Mill has been modified to treat higher grade ores from the Arizona Strip, in addition to the common Colorado Plateau ores. Processing of Arizona Strip ores is typically at a lower rate of throughput than for the Colorado Plateau ores. The basic mill process is a sulphuric acid leach with solvent extraction recovery of uranium and vanadium.

Since 1980, the White Mesa Mill has operated intermittently in a series of campaigns to process ores from the Arizona Strip as well as from a few higher grade mines of the Colorado Plateau. Overall, the White Mesa Mill has produced approximately 30 Mlb  $U_3O_8$  and 33 Mlb  $V_2O_5$ .

In connection with the completion of the Acquisition, CUR will enter a toll milling agreement with an affiliate of Energy Fuels pursuant to which Energy Fuels will toll-mill economic mineralization mined from the Project at the White Mesa Mill, subject to payment by CUR of a toll-milling fee and certain other terms and conditions.

The Tony M mine is accessed via a double entry system with two parallel declines spaced 50 ft apart on centres. The portals of the two 9 ft high by 12 ft wide main haulage ways are located on the northwesterly side of Shootaring Canyon near the south centre of Section 16 T35S R11E SLM with a sill elevation of approximately 4,546 feet above sea level (FASL). The declines follow a minus three percent grade (i.e., 3 ft/100 ft) along a trend of N22°W, and generally follow the long axis of the mineralized trend, extending approximately 10,200 ft from the portal. The declines intersected the natural water table approximately 5,300 ft from the portal.

Plateau developed over 18 mi of underground workings in the Tony M mine. In 1984, dewatering was suspended, and the Tony M mine was allowed to flood. When USEC abandoned the Tony M mine in the late 1990s, the portals were closed, and the ventilation shafts capped as part of mine closure and reclamation activities.

When Denison operated the Tony M mine from 2007 to 2008, several surface facilities were constructed, including a power generation station, compressor station, fuel storage facilities, maintenance building, offices, and dry facilities. An evaporation pond which was originally constructed when the Tony M mine was in operation in the 1980s, and which was used for storage and evaporation of mine water, was reconstructed by Denison to allow for dewatering of the Tony M mine.

Denison placed the Tony M mine on temporary closure status at the end of November 2008 and dewatering activities ceased. The former Tony M property is being maintained in a state ready to resume operations as market conditions warrant.

#### 1.2.4 Geology and Mineralization

The Deposits are classified as sandstone hosted uranium deposits. Sandstone-type uranium deposits typically occur in fine to coarse grained sediments deposited in a continental fluvial environment. The



uranium may be derived from a weathered rock containing anomalously high concentrations of uranium, leached from the sandstone itself or an adjacent stratigraphic unit. It is then transported in oxygenated groundwater until it is precipitated from solution under reducing conditions at an oxidation-reduction interface. The reducing conditions may be caused by such reducing agents in the sandstone as carbonaceous material, sulphides, hydrocarbons, hydrogen sulphide, or brines.

Uranium mineralization on the Property is hosted by favorable sandstone horizons in the lowermost portion of the Salt Wash Member of the Jurassic age Morrison Formation, where detrital organic debris is present. Mineralization primarily consists of coffinite, with minor uraninite, which usually occurs in close association with vanadium mineralization. Uranium mineralization occurs as intergranular disseminations, as well as coatings and/or cement on and between sand grains and organic debris. Vanadium occurs as montroseite (hydrous vanadium oxide) and vanadium chlorite in primary mineralized zones located below the water table (i.e., the northernmost portion of the Tony M deposit).

The vanadium content of the Henry Mountains Basin deposits is relatively low compared to many other Salt Wash hosted deposits on the Colorado Plateau. Furthermore, the Henry Mountains Basin deposits occur in broad alluvial sand accumulations, rather than in major sandstone channels as is typical of the Uravan Mineral Belt deposits of western Colorado. The Henry Mountains Basin deposits do, however, have the same general characteristic geochemistry of the Uravan deposits, and are therefore classified as Salt Wash type deposits.

At the Tony M mine, the main mineralized horizons appear as laterally discontinuous, horizontal bands of dark material separated vertically by lighter zones lacking uranium but enriched in vanadium. On a small scale (inches to feet), the dark material often exhibits lithologic control, following cross-bed laminae or closely associated with, though not concentrated directly within, pockets of detrital organic debris.

#### 1.2.5 Exploration Status

Energy Fuels, Denison, and its predecessor IUC, have carried out no work on the Property. Since 2008 the former Tony M property has been on care and maintenance.

#### 1.2.6 Mineral Resources

Several historical Mineral Resource estimates have been previously carried out on the Deposits. These estimates are considered historical in nature and should not be relied upon. CUR is not intending on treating the historical estimates as current Mineral Resource estimates.

SLR, as the former RPA and Scott Wilson RPA, has prepared previous Technical Reports on the Property as of June 27, 2012, March 19, 2009, and September 9, 2006, in compliance with NI 43-101.

In June 2012 RPA, now SLR, reported Indicated Mineral Resources for the Deposits as totalling, 1.03 Mst at 0.24%  $U_3O_8$ , containing 4.83 Mlb  $U_3O_8$ , and 0.66 Mst at 0.25%  $U_3O_8$  containing 3.30 Mlb  $U_3O_8$ , respectively. Inferred Mineral Resources for the Deposits total, 0.67 Mst at 0.17%  $U_3O_8$  containing 2.22 Mlb  $U_3O_8$ , and 0.24 Mst at 0.14%  $U_3O_8$  containing 0.68 Mlb  $U_3O_8$ , respectively. The 2012 Mineral Resource estimates are historical in nature and should not be relied upon. CUR is not intending on treating the historical estimates as current Mineral Resource estimates. Further work recommended by the QP, as outlined in Section 26 of this Technical Report, should be completed to classify the mineralization as a current Mineral Resource.



# 1.2.7 Mineral Reserves

There are no Mineral Reserves reported for the Property.



#### 2.0 INTRODUCTION

SLR Consulting Ltd (SLR) was retained by Consolidated Uranium Inc. (CUR) to prepare an independent Technical Report on the Tony M Project (the Property or the Project), located in Utah, USA. The Property was the site of underground mining as recently as 2008. The scope of this Technical Report includes descriptions of the general setting, geology, project history, exploration activities and results, methodology, quality assurance/quality control, interpretations, drilling programs, and metallurgy, as well as the interpretations, conclusions, and recommendations of the qualified person (QP). The Property is situated in parts of Sections 4, 8, 9, 16, and 17, Township 35 South Range 11 East (T35S R11 E) Salt Lake Meridian (SLM) Garfield County, Utah USA. SLR understands that the purpose of this Technical Report is to provide an updated technical summary of the Property in support of securities exchange reporting and CUR's intended acquisition of the Property from EFR Henry Mountains LLC, an affiliate of Energy Fuels Inc. (Energy Fuels) and recommend additional work to further advance the Project. CUR has not completed exploration or development work on the Project, thus this Technical Report, which conforms to National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101), describes the historical work completed at the Project and recommends additional work to further advance the Project.

CUR is a Toronto-based exploration company (TSXV: CUR) focused on acquiring and developing uranium properties around the globe. On July 14, 2021, CUR entered into an agreement to acquire a 100% interest in the Property from an affiliate of Energy Fuels (NYSE: UUUU) (the Acquisition). The Acquisition is reported to be completed late Q3 or early Q4 2021.

In connection with the completion of the Acquisition, CUR will enter a toll milling agreement with an affiliate of Energy Fuels pursuant to which Energy Fuels will toll-mill economic mineralization mined from the Project at the White Mesa Mill, subject to payment by CUR of a toll-milling fee and certain other terms and conditions.

#### 2.1 Sources of Information

This Technical Report was prepared by Mark B. Mathisen, C.P.G., SLR Principal Geologist, who is a Qualified Person in accordance with NI 43-101.

SLR, as the former Roscoe Postle Associates Inc (RPA) and Scott Wilson RPA, has prepared previous Technical Reports on the Property as of June 27, 2012, March 19, 2009, and September 9, 2006.

Mr. Mathisen visited the Property under care and maintenance on July 7, 2021.

Discussions were held with the following Energy Fuels and CUR personnel:

- Daniel Kapostasy, P.G., Chief Geologist Conventional Mining, Energy Fuels Resources (USA) Inc.
- Ted Wilton, P.G., C.P.G, MAIG, Consulting Geologist, Consolidated Uranium Inc.
- Philip Williams, CFA, President and CEO, Consolidated Uranium Inc.

Mr. Mathisen is responsible for all sections of this Technical Report and is independent for the purposes of NI 43-101.

The documentation reviewed, and other sources of information, are listed at the end of this Technical Report in Section 27 References.



# 2.2 List of Abbreviations

Units of measurement used in this Technical Report conform to the metric system. All currency in this Technical Report is US dollars (US\$) unless otherwise noted.

μ	micron	kVA	kilovolt-amperes
μg	microgram	kW	kilowatt
а	annum	kWh	kilowatt-hour
Α	ampere	L	litre
bbl	barrels	lb	pound
Btu	British thermal units	L/s	litres per second
°C	degree Celsius	m	metre
C\$	Canadian dollars	M	mega (million); molar
cal	calorie	m <sup>2</sup>	square metre
cfm	cubic feet per minute	m <sup>3</sup>	cubic metre
cm	centimetre	MASL	metres above sea level
cm <sup>2</sup>	square centimetre	m³/h	cubic metres per hour
d	day	mi	mile
dia	diameter	min	minute
dmt	dry metric tonne	μm	micrometre
dwt	dead-weight ton	mm	millimetre
°F	degree Fahrenheit	mph	miles per hour
ft	foot	MVA	megavolt-amperes
ft <sup>2</sup>	square foot	MW	megawatt
ft <sup>3</sup>	cubic foot	MWh	megawatt-hour
ft/s	foot per second	OZ	Troy ounce (31.1035g)
g	gram	oz/st, opt	ounce per short ton
G	giga (billion)	ppb	part per billion
Gal	Imperial gallon	ppm	part per million
g/L	gram per litre	psia	pound per square inch absolute
Gpm	Imperial gallons per minute	psig	pound per square inch gauge
g/t	gram per tonne	RL	relative elevation
gr/ft³	grain per cubic foot	S	second
gr/m³	grain per cubic metre	st	short ton
ha	hectare	stpa	short ton per year
hp	horsepower	stpd	short ton per day



hr	hour	t	metric tonne
Hz	hertz	tpa	metric tonne per year
in.	inch	tpd	metric tonne per day
in <sup>2</sup>	square inch	US\$	United States dollar
J	joule	Usg	United States gallon
k	kilo (thousand)	Usgpm	US gallon per minute
kcal	kilocalorie	V	volt
kg	kilogram	W	watt
km	kilometre	wmt	wet metric tonne
$\mathrm{km^2}$	square kilometre	wt%	weight percent
km/h	kilometre per hour	yd³	cubic yard
kPa	kilopascal	yr	year



# 3.0 RELIANCE ON OTHER EXPERTS

This Technical Report has been prepared by SLR for CUR. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to SLR at the time of preparation of this Technical Report.
- Assumptions, conditions, and qualifications as set forth in this Technical Report.

For the purpose of this Technical Report, SLR has relied on an opinion by Parr Brown, Gee and Loveless dated June 10, 2021, entitled "Title Report Tony M Property Garfield County, Utah" (Parr Brown, Gee and Loveless, 2021), and this opinion is relied on in Section 4 and the Summary of this Technical Report. SLR has not researched Property title or mineral rights for the Property and expresses no opinion as to the ownership status of the Property.

Except for the purposes legislated under provincial securities laws, any use of this Technical Report by any third party is at that party's sole risk.

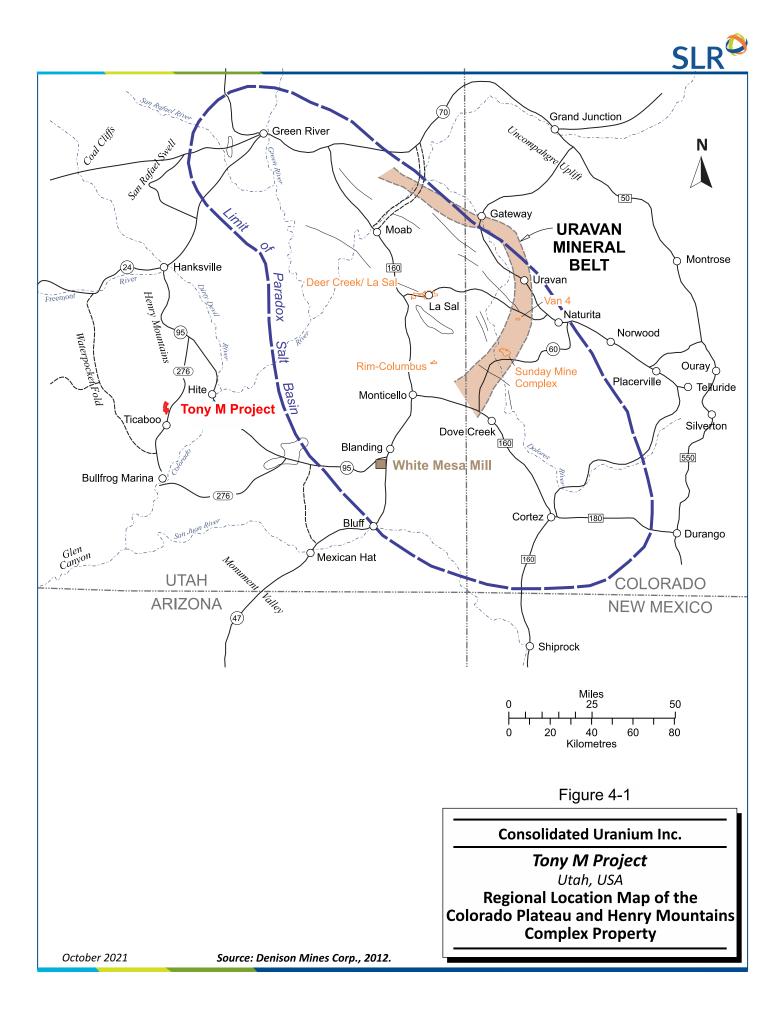


# 4.0 PROPERTY DESCRIPTION AND LOCATION

#### 4.1 Location

The Property is located in eastern Garfield County, Utah, USA, 17 mi north of Bullfrog Basin Marina on Lake Powell and approximately 40 air mi south of the town of Hanksville, Utah and three miles west of Utah State Highway 276 and approximately five miles north of Ticaboo, Utah (Figure 4-1).

The current Energy Fuels Henry Mountains Complex consists of the currently inactive Tony M mine and deposit, collectively known as the former Tony M property, and the Southwest, Copper Bench, and Indian Bench deposits, collectively known as the Bullfrog Property. The Property, which will consist of the former Tony M property and the Southwest deposit, will be located in the southwest portion of the current Henry Mountains Complex, while the combined Copper Bench–Indian Bench uranium deposits, which will remain under Energy Fuels ownership, are located in the eastern and northern portions of the Henry Mountains Complex, respectively.





#### 4.2 Land Tenure

The Property consists of the underground mining project hosting the Tony M and Southwest deposits (the Deposits) and associated mineral extraction facilities.

The Property consists of one Utah State Mineral Lease for Section 16 T35S R11E SLM, and 74 unpatented Federal lode mining claims situated in Sections 4, 5, 8, 9, 17, 20 and 21, Township 35 South, Range 11 East. The latter consist of 25 B.F., 5 Bull, 19 Star, 17 TIC and 8 Ticaboo claims (including fractions). The claims and Utah State Lease comprise one contiguous property located in the northern half of T35S R11E SLM and extends into the southern half of T34S R11E SLM. The Utah State Section 16 includes 638.54 acres, and the 74 unpatented lode mining claims consist of approximately 1,378 acres (Table 4-1). The surface rights covering the mining claims are owned by the United States (U.S.) Federal government and administered by the U.S. Bureau of Land Management (BLM), while the surface estate over the Utah State Lease is owned and managed by the State of Utah. Surface access is granted via Ticaboo claims #1, #5, and #6 which are owned by UCOLO Exploration Corp (UCOLO) (Energy Fuels, 2020).

All the Property holdings are reported to be in good standing.

Figure 4-2 presents the Property boundary, deposit outlines, and the Tony M mine limits, while Figure 4-3 presents the Property land tenure claims.

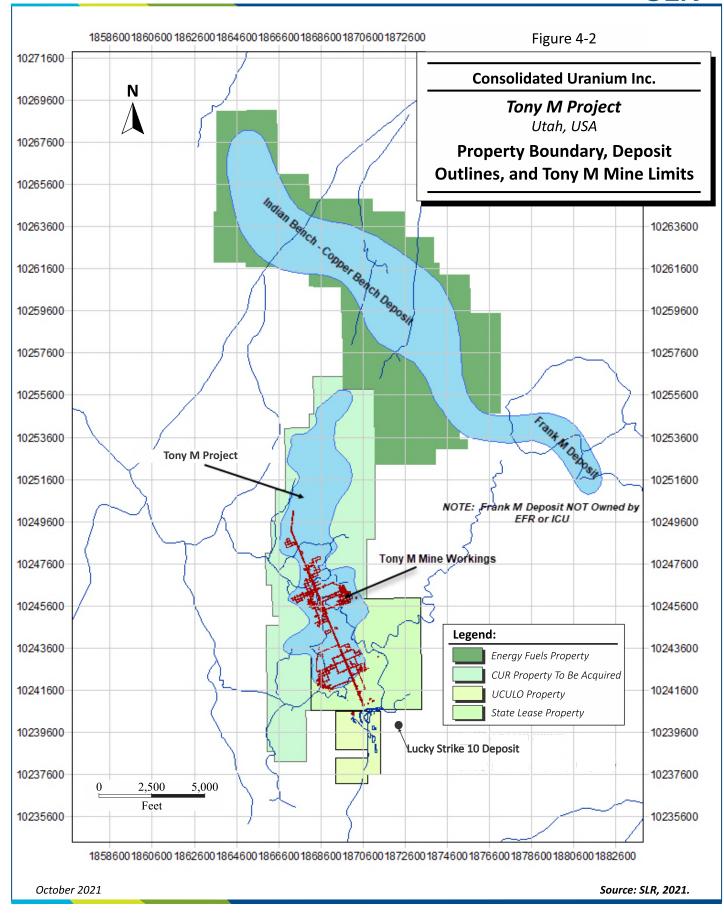
As stated in the July 15, 2021 press release, CUR and Energy Fuels announced that CUR entered into a definitive asset purchase agreement with certain wholly-owned subsidiaries of Energy Fuels (the EF Parties) whereby CUR will acquire a portfolio of conventional uranium projects located in Utah and Colorado (the Projects) from the EF Parties (the Transaction).

Pursuant to the purchase agreement, CUR will acquire from the EF Parties 100% of the Tony M, Daneros, and Rim mines in Utah, as well as the Sage Plain property and eight DOE Leases in Colorado.

In connection with the closing of the Transaction, the companies have also agreed to enter into toll-milling and operating agreements with respect to the Projects. This positions CUR as a potential near-term US uranium producer, subject to an improvement in uranium market conditions and/or CUR entering into acceptable uranium supply agreements.

Closing of the Transaction is subject to satisfaction of certain closing conditions including, among other things, CUR receiving approval of the TSX Venture Exchange. CUR has indicated to SLR it expects the Transaction to be completed in late Q3 or early Q4 2021.







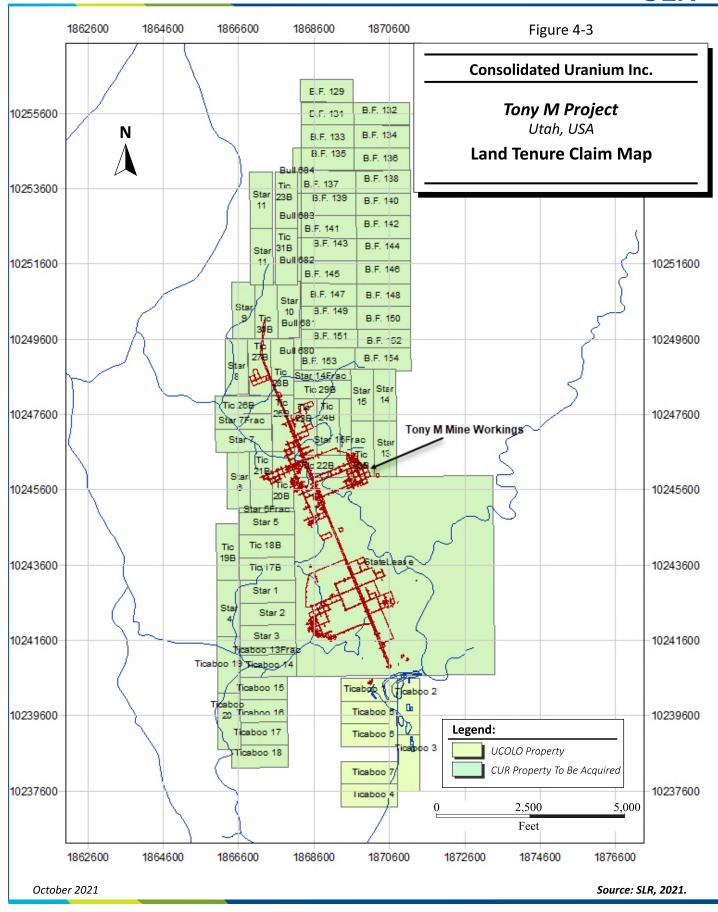




Table 4-1: 2020 to 2021 Assessment Year to Hold Unpatented Mining Claims
Consolidated Uranium Inc. – Tony M Project

Owner <sup>1</sup>	Deposit	Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	Area (ft²)	Acres	Anniversary Date (DD-MM-YY)	In Good Standing To (DD-MM-YY)
Consolidated Uranium Inc.	Southwest	B.F. 131	NW	4-35S-11E	UMC 18275	835,623.9	19.2	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 132	N2	4-35S-11E	UMC 18276	887,591.6	20.4	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 133	NW	4-35S-11E	UMC 18277	840,511.8	19.3	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 134	N2	4-35S-11E	UMC 18278	881,245.2	20.2	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 135	NW	4-35S-11E	UMC 18279	839,423.8	19.3	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 136	N2	4-35S-11E	UMC 18280	877,421.0	20.1	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 137	W2	4-35S-11E	UMC 18281	858,161.7	19.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 138	ALL	4-35S-11E	UMC 18282	866,990.0	19.9	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 139	SW	4-35S-11E	UMC 18283	863,887.9	19.8	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 140	S2	4-35S-11E	UMC 18284	875,831.8	20.1	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 141	SW	4-35S-11E	UMC 18285	870,789.7	20.0	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 142	S2	4-35S-11E	UMC 18286	870,181.0	20.0	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 143	SW	4-35S-11E	UMC 18287	881,051.1	20.2	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 144	S2	4-35S-11E	UMC 18288	862,691.4	19.8	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 145	SW	4-35S-11E	UMC 18289	884,776.7	20.3	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 146	S2	4-35S-11E	UMC 18290	858,423.3	19.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 147	NW	9-35S-11E	UMC 18291	888,169.5	20.4	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 148	N2	9-35S-11E	UMC 18292	855,705.7	19.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	B.F. 149	NW	9-35S-11E	UMC 18293	904,775.9	20.8	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	B.F. 150	N2	9-35S-11E	UMC 18294	864,518.2	19.8	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	B.F. 151	NW	9-35S-11E	UMC 18295	887,125.4	20.4	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	B.F. 153	NW	9-35S-11E	UMC 18297	900,000.0	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	BULL 680	NE	8-35S-11E	UMC 18562	262,666.0	6.0	1-Sep-20	31-Aug-21



Owner <sup>1</sup>	Deposit	Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	Area (ft²)	Acres	Anniversary Date (DD-MM-YY)	In Good Standing To (DD-MM-YY)
Consolidated Uranium Inc.	Tony M	BULL 681	NE	8-35S-11E	UMC 18563	321,520.7	7.4	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	BULL 682	SW	4-35S-11E	UMC 18564	261,238.8	6.0	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	BULL 683	SW	4-35S-11E	UMC 18565	259,175.0	5.9	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	BULL 684	W2 E2	4-35S-11E	UMC 18566	262,434.8	6.0	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #17B	E2	17-35S-11E	UMC 367967	896,946.9	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #18B	NE	17-35S-11E	UMC 367968	901,561.8	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #19B	E2	17-35S-11E	UMC 367969	896,982.2	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #20B	SE	8-35S-11E	UMC 367970	897,898.1	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #21B	SE&NE	8-35S-11E	UMC 367971	897,004.5	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #22B	SW	9-35S-11E	UMC 367972	883,802.9	20.3	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	TIC #23B	SW	9-35S-11E	UMC 367973	897,939.8	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #24B	SW	9-35S-11E	UMC 367974	899,249.5	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #25B	SE	8-35S-11E	UMC 367975	895,484.1	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #26B	SE	8-35S-11E	UMC 367976	889,174.1	20.4	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #27B	E2	8-35S-11E	UMC 367977	918,141.3	21.1	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #28B	E2	8-35S-11E	UMC 367978	901,531.7	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #29B	W2	9-35S-11E	UMC 367979	716,138.3	16.4	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #30B	NE	8-35S-11E	UMC 367980	900,354.7	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	TIC #31B	SE	5-35S-11E	UMC 367981	900,008.5	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	TIC #32B	E2	5-35S-11E	UMC 367982	900,008.6	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	TIC #33B	SW	9-35S-11E	UMC 367983	910,397.1	20.9	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	B.F. 154	N2	9-35S-11E	UMC 374742	897,560.4	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 1	SE	17-35S-11E	UMC 374753	897,934.3	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 2	SE	17-35S-11E	UMC 374754	898,260.8	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 3	SE	17-35S-11E	UMC 374755	896,786.6	20.6	1-Sep-20	31-Aug-21



Owner¹	Deposit	Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	Area (ft²)	Acres	Anniversary Date (DD-MM-YY)	In Good Standing To (DD-MM-YY)
Consolidated Uranium Inc.	Tony M	Star 4	SE	17-35S-11E	UMC 374756	906,692.1	20.8	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 5	NE	17-35S-11E	UMC 374757	900,320.5	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 5 Fraction	NE	17-35S-11E	UMC 374758	299,117.0	6.9	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 6	SE	8-35S-11E	UMC 374759	898,806.3	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 7	SE	8-35S-11E	UMC 374760	896,717.2	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 7 Fraction	SE	8-35S-11E	UMC 374761	599,000.7	13.8	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 8	E2	8-35S-11E	UMC 374762	895,332.3	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 9	NE	8-35S-11E	UMC 374763	898,501.0	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 10	NE	8-35S-11E	UMC 374764	873,286.6	20.0	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Southwest	Star 11	SE	5-35S-11E	UMC 374765	900,112.4	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 12	SE	5-35S-11E	UMC 374766	900,261.7	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 13	<b>S2</b>	9-35S-11E	UMC 374767	893,621.6	20.5	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 14	SW	9-35S-11E	UMC 374768	823,113.7	18.9	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 15	SW	9-35S-11E	UMC 374769	830,779.4	19.1	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 15 Fraction	SW	9-35S-11E	UMC 374770	597,801.2	13.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	B.F. 129	SW	33-34S-11E	UMC 376066	842,227.1	19.3	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Star 14 Fraction	W2	9-35S-11E	UMC 381970	449,696.5	10.3	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Ticaboo 13 Fraction	SE	17-35S-11E	UMC 385550	268,198.5	6.2	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Ticaboo 14	SE	17-35S-11E	UMC 385551	900,572.6	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Ticaboo 15	SE	20-35S-11E	UMC 385552	899,027.3	20.6	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Ticaboo 16	NE	20-35S-11E	UMC 385553	901,500.6	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Ticaboo 17	NE	20-35S-11E	UMC 385554	900,163.2	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Ticaboo 18	NE	20-35S-11E	UMC 385555	900,752.4	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Ticaboo 19	NE	20-35S-11E	UMC 385556	899,576.8	20.7	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	Ticaboo 20	NE	20-35S-11E	UMC 385557	899,415.3	20.6	1-Sep-20	31-Aug-21



Owner <sup>1</sup>	Deposit	Claim Name	¼ Sec	Sec-Twp-Rng	BLM Serial No	Area (ft²)	Acres	Anniversary Date (DD-MM-YY)	In Good Standing To (DD-MM-YY)
Consolidated Uranium Inc.	Tony M	B.F. 152	N2	9-35S-11E	UMC 394949	839,735.9	19.3	1-Sep-20	31-Aug-21
Consolidated Uranium Inc.	Tony M	STATE SECTION		16-35S-11E		27,810,356.2	638.4	1-Apr-05	1-Apr-25
UCOLO Exploration Corp.	Tony M	Ticaboo 1	NW	21-35S-11E	UMC 371504	900,007.9	20.7	1-Sep-20	31-Aug-21
UCOLO Exploration Corp.	Tony M	Ticaboo 2	NW	21-35S-11E	UMC 371505	900,007.9	20.7	1-Sep-20	31-Aug-21
UCOLO Exploration Corp.	Tony M	Ticaboo 5	NW	21-35S-11E	UMC 371913	900,007.8	20.7	1-Sep-20	31-Aug-21

#### Note:

1. Pending completion of the Acquisition in late Q3 or early Q4 2021.



#### 4.3 Surface Access

Surface access to the Property is granted via a surface owner agreement originally entered between Jim Butt and Denison Mines (USA) Corporation. The agreement is for a period of 25 years, from March 14, 2008, and provides access across the Ticaboo #1, #5 and #6 claims listed in Table 4-1. Jim Butt's interest in the surface agreement was transferred to UCOLO, and Denison Mines (USA) Corporation's interest in the surface agreement was transferred to Energy Fuels Resources (USA) Inc., which interest will be subsequently transferred to CUR Henry Mountains Uranium, LLC upon closing of the Acquisition.

# 4.4 Royalties

All the Property holdings are reported to be in good standing (Parsons, Behle and Latimer, 2021, and Parr Brown, Gee and Loveless, 2021). The annual mining claim holding costs for the Property for 2021 will be \$12,850 plus an annual advance royalty payment for the Utah State Lease.

The Utah State Lease carries an annual rental cost of \$640, plus an escalating annual advance minimum royalty based on the uranium spot price (State of Utah, 2005). For 2020 the annual advance minimum royalty totalled \$94,365.15. Since RPA's 2012 Technical Report, the Utah State Lease was renewed in 2015 for an additional 10 year term, which can be extended. Additional changes in the renewed lease include a reduction in the annual advanced royalty payments and crediting the advanced royalty against the production royalty for the year in which it is paid plus any amount paid in the five prior years. The uranium royalty on the Utah State Lease is 8% of gross value less certain deductions (fee for the converter, Energy Fuels used 0.30 b 0.30. The vanadium royalty on the Utah State Lease is 4% of gross value less certain deductions.

There is no royalty burden for the 74 claims (B.F., Bull, Star, Ticaboo) that comprise the Property, as well as for the UCOLO Ticaboo claims. All unpatented mining claims are subject to an annual federal mining claim maintenance fee of \$165 per claim. The 17 TIC claims are subject to an annual advance minimum royalty. The uranium production royalty burden is 4% yellowcake gross value less taxes and certain other deductions. The vanadium production royalty burden is 2% gross value less certain deductions.

# 4.5 Environmental Liabilities, Permits, and other Risks

SLR is not aware of any environmental liabilities on the Property. Energy Fuels also indicated that there are no outstanding environmental liabilities for the Property. Following the completion of the Acquisition CUR will begin the process of acquiring the permits required to conduct additional work on the Property.

SLR is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the proposed work program on the Property.

#### 4.5.1 Project Permitting

The Tony M mine is located on BLM and State of Utah managed land in Garfield County, Utah. The Tony M mine was originally permitted and developed by Plateau Resources Ltd. (Plateau) in conjunction with the nearby Shootaring Mill. The Tony M mine was reclaimed in 2004 but was then purchased by Denison Mines Corp. (Denison) and re-permitted in 2007 for Phase 1 Operations in which mining would be out of the existing portal. Major permits for the operation included an approved Plan of Operations and Finding of No Significant Impact (FONSI) from the BLM, a Large Mine permit with the Utah Division of Oil, Gas and Mining (DOGM), and an approved ground water discharge permit with the Utah Division of Water Quality (DWQ). A reclamation bond of \$708,537 is in place.



The Tony M mine was re-opened by Denison in late 2007 and was re-commissioned and put into production. The Tony M mine was later closed and placed on care and maintenance in November 2008.

If CUR decides to re-open the Tony M mine in the future, the primary drift will be extended to the northeast. This will require the permitting of additional ventilation shafts, and greater water evaporation capacity. Because all site power will be diesel generated, an Air Permit (Approval Order) will be required from the Utah Department of Environmental Quality, Division of Air Quality.



# 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

# 5.1 Accessibility

The Property is located in a relatively remote area of Utah, and the infrastructure is limited. The town of Ticaboo, Utah, is located approximately five miles south of the Property. The next closest community is Hanksville, Utah, a small town of a few hundred people, located approximately 40 mi north of the Property.

Road access to the Property is via paved highway, Highway 276, running between Hanksville and Bullfrog Basin Marina, Utah. An unimproved gravel road maintained by Garfield County extends west from Highway 276, passes by the portal of the Tony M mine, and extends northerly across the Property, the northern end of which is intersected by another county road. A network of unimproved, unpaved exploration roads provide access over the Property except in areas of rugged terrain. The Bullfrog Basin Marina airstrip is located approximately 15 mi south of the Property.

#### 5.2 Climate

The climate is distinctly arid, with an average annual precipitation of approximately 8 in., including approximately 12 in. of snow. Local records indicate the temperature ranges from a minimum of -10°F to a maximum of 110°F. Vegetation consists primarily of small plants including some of the major varieties of blackbrush, sagebrush, and rabbit brush. A few small junipers are also present.

Exploration and mining operations can run year round.

#### **5.3** Local Resources

During operation of the Tony M mine, electricity was generated locally, as is the case for Ticaboo. Skilled labour can be recruited from the region, which has a tradition of uranium mining. Materials and supplies can be transported to the Property via truck approximately 275 mi from Salt Lake City, and 190 mi from Grand Junction, Colorado. The distance to the Energy Fuels White Mesa Uranium-Vanadium Processing Facility near Blanding, Utah, is 117 mi.

#### 5.4 Infrastructure

The Tony M mine is accessed via a double entry system with two parallel declines spaced 50 ft apart on centres. The portals of the two 9 ft high by 12 ft wide main haulage ways are located on the northwesterly side of Shootaring Canyon near the south centre of Section 16 T35S R11E SLM with a sill elevation of approximately 4,546 feet above sea level (FASL). The declines follow a minus three percent grade (i.e., 3 ft/100 ft) along a trend of N22°W, and generally follow the long axis of the mineralized trend, extending approximately 10,200 ft from the portal. The declines intersected the natural water table approximately 5,300 ft from the portal.

Plateau developed over 18 mi of underground workings in the Tony M mine. In 1984, dewatering was suspended, and the Tony M mine was allowed to flood. When U.S. Energy Corporation (USEC) abandoned the Tony M mine in the late 1990s, the portals were closed, and the ventilation shafts capped as part of mine closure and reclamation activities.



By early 2007, work on reactivating the Tony M mine was carried out by Denison, and surface and underground rehabilitation and repairs were conducted. Surface facilities to support mining activities were constructed, including administration and maintenance facilities, site power and communications, and an evaporation pond for evaporation of water from the underground workings. Worker housing was established in the town of Ticaboo, Utah.

In addition to providing mining infrastructure, the Tony M mine was expected to provide access to the contiguous undeveloped Southwest deposit. Energy Fuels planned to develop a 3,500 ft extension of the main Tony M drift to the Southwest property and a 600 ft deep shaft to hoist mineralized material from the Southwest deposit to the surface.

Denison placed the Tony M mine on temporary closure status at the end of November 2008 and dewatering activities ceased. The former Tony M property is being maintained in a state ready to resume operations as market conditions warrant. All Energy Fuels housing and property in Ticaboo have been sold. At the time of temporary closure, the Tony M mine was producing approximately 400 stpd, with a plan to increase daily tonnage to 600 stpd. The Tony M mine is being maintained in a state ready to resume operations when uranium prices improve. Energy Fuels mine supervisory staff have been retained to maintain the Tony M mine in a ready state.

When Denison operated the Tony M mine from 2007 to 2008, several surface facilities were constructed, including a power generation station, compressor station, fuel storage facilities, maintenance building, offices, and dry facilities. An evaporation pond which was originally constructed when the Tony M mine was in operation in the 1980s, and which was used for storage and evaporation of mine water, was reconstructed by Denison to allow for dewatering of the Tony M mine. Since 2008 the former Tony M property has been on care and maintenance.

# 5.5 Physiography

The Property is located on the lower southern flank of Mt. Hillers (10,723 FASL), and to the west and northwest of Mount Ellsworth and Mt. Holmes (7,930 FASL). The land surface slopes south southwesterly from these mountains to Lake Powell, which has an average elevation of approximately 3,700 FASL.

Relief over the Property is approximately 800 ft. The elevation on the Property ranges from 4,550 FASL at the portal of the Tony M mine, near the southern end of the Property, to 6,800 FASL over the northern end of the Property. The terrain is typical canyon lands topography, with some areas deeply dissected by gullies and headwalls of canyons, and the rest consisting of gently undulating gravel benches covering the northern part of the Property. The terrain in several parts of the Property is particularly rugged and inaccessible, which is the primary reason for the irregular pattern of surface drill holes in parts of the Property.

The Henry Mountains and surrounding structural basin is a rugged, dry, and sparsely settled region of the Colorado Plateaus province. Landforms in the Henry Mountains region are dramatic and varied, including deep canyons, hogback ridges (locally known as reefs), dunes, badlands, mesas, mountains, and pediments around their base.

Vegetation is sparse due to the aridity, however, several floral zones are recognized, and their distribution reflects climatic factors controlled largely by altitude. SLR notes that subdivisions of the zones are controlled principally by geologic factors, thus, there are variations in the type and extent of plant associations depending on factors such as depth to ground water and soil character, including texture, permeability, and salt content.



Wildlife in the Henry Mountains region is not abundant, either in individuals or species. Lizards are numerous throughout the plateau, with the most common being swifts, horned lizards, zebra tailed lizards, and collared lizards. Mammalian life is dominated by rabbits, mostly jacks, and various rodents, including chipmunks, kangaroo rats, and packrats, with few coyotes and grey foxes. Mule deer are fairly numerous in the region, while only a few mountain lions live on the northern three mountains. Mountain sheep formerly ranged on Mount Ellen and throughout the canyons, however, had already become scarce pre-1914. Similarly, antelope were abundant in the desert prior to 1920 but are no longer present in the area.

There are no perennial streams in the vicinity of the Henry Mountains Complex area, however there are ephemeral streams all of which flow in response to snow melt and rainfall. None of the streams in the Henry Mountains are large enough for trout. Flood plain deposits along the stream valleys record several periods of arroyo cutting that alternated with periods of alluviation. In the western portion of the Henry Mountains Complex area, primary surface waters flow from a series of seeps and springs at the base of the Tununk shale, which is located above the Morrison Formation (Figure 7-4). The major regional water source is provided by wells developed in the Jurassic-Triassic Navajo sandstone aquifer. The Navajo Sandstone is located at a depth of approximately 1,800 ft in the Property area, placing it approximately 1,000 ft below the Salt Wash uraniferous zones.



# 6.0 HISTORY

# **6.1** Prior Ownership

During World War I, vanadium was mined from small deposits outcropping in Salt Wash exposures on the eastern and southern flanks of the Henry Mountains. In the 1940s and 1950s, interest increased in both vanadium and uranium, and numerous small mines developed along the exposed Salt Wash outcrops.

Prior to 2005, all exploration, mine development, and related activities for the two historical properties (Tony M and Bullfrog) were conducted independently. Many historic activities on the Bullfrog and Tony M properties are therefore discussed separately, except where correlations and comparisons are made.

In the late 1960s, Gulf Minerals (Gulf) acquired a significant land position southwest of the Henry Mountains Complex and drilled approximately 70 holes with little apparent success. In 1970 and 1971, Rioamex Corporation (Rioamex) conducted a 40 hole drilling program in an east-west zone extending across the southern portion of the Bullfrog Property and the northern portion of the former Tony M property. Some of these holes intercepted significant uranium mineralization.

The history of exploration and development of the Bullfrog Property and former Tony M property evolved independently from the mid-1970s until early 2005. The Bullfrog Property was initially explored by Exxon Minerals Company (Exxon), while the former Tony M property was explored and developed by Plateau, a subsidiary of Consumers Power Company (Consumers) of Michigan.

In 1982, Atlas Minerals Corporation (Atlas) acquired the Bullfrog Property from Exxon, subsequently returning it to Exxon in 1991. The Bullfrog Property was then sold by Exxon to Energy Fuels Nuclear Inc. (EFNI) in 1992. In 1997, International Uranium Corp. (IUC) became the owner of the Bullfrog Property as part of an acquisition in which IUC acquired all of EFNI's assets.

Plateau commenced exploration east of Shootaring Canyon in 1974 and drilled the first holes west of the canyon on the former Tony M property in early 1977. Development of the Tony M decline and mine began on September 1, 1978. Under Plateau the Shootaring Canyon Uranium Processing Facility (Ticaboo Mill) was developed approximately four miles south of the Tony M mine portals. Operational testing commenced at the Ticaboo Mill on April 13, 1982, with the mill declared ready for operation on June 1, 1982. Following extensive underground development, the Tony M mine was put on care and maintenance in mid-1984 as a result of the cancellation of Consumers' dual Midland, Michigan, nuclear plants. Plateau's Tony M mine uranium production had been committed to the Midland plants.

Ownership of the former Tony M property was transferred from Plateau to Nuclear Fuels Services, Inc. (NFS) mid-1990. During its tenure, NFS conducted various investigations including delineation drilling and geologic analysis of the former Tony M property. The report documenting "Geologic analysis of the uranium and vanadium ore reserves in the Tony M Orebody" was prepared for NFS by Nuclear Assurance Corporation (NAC, 1989). Drilling by NFS on the former Tony M property, consisting of 39 rotary holes, was targeted to delineate zones of high grade uranium mineralization. In addition, with the cooperation of NFS, BP Exploration Inc. drilled one stratigraphic core hole (91-8-14c) on the northern former Tony M property in 1991 (Robinson & McCabe, 1997).

In 1994, USEC of Riverton, Wyoming, then owner of the Ticaboo Mill (which it had acquired from Plateau) entered into an agreement to acquire the Tony M mine and Frank M deposit from NFS. USEC held the mineral properties until the late 1990s when it abandoned them because of the continued low uranium market prices. During this period USEC also conducted a program to close the Tony M mine and reclaim



disturbed surface areas, which included backfilling the portals and capping the mine ventilation holes. The buildings and structures were removed, and the terrain was reclaimed and recultivated

In February 2005, the State of Utah offered the Utah State Mineral Lease covering Section 16 T35S R11E, SLM, for auction. Both the portal of the Tony M mine and the southern portion of the Tony M deposit are located on this State section. IUC was the successful bidder, and the State of Utah leased Section 16 to IUC. Subsequently, IUC entered into an agreement to acquire the TIC unpatented mineral claims located between Section 16 and the Bullfrog Property claims.

On December 1, 2006, IUC combined its operations with those of Denison Mines Inc. (DMI) acquiring all issued and outstanding shares of DMI, and subsequently amending its name to Denison Mines Corp. (Denison). In February 2007, Denison acquired the former Plateau Tony M Property, bringing it under common ownership with the Bullfrog Property and renaming the properties the Henry Mountain Complex.

In 2007, the Ticaboo Mill was purchased by Uranium One Inc. from USEC.

In June 2012, Energy Fuels acquired 100% of the Henry Mountains Complex through the acquisition of Denison and its affiliates' U.S. Mining Division.

On July 14, 2021, CUR entered into an agreement with respect to the Acquisition, which is reported to be completed late Q3 or early Q4 2021. The remaining deposits (Copper Bench and Indian Bench) that occur to the north as part of the historic Bullfrog Property will remain under Energy Fuels ownership.

#### 6.2 Exploration and Development History

Surface drilling using conventional (open hole) rotary tricone technology, together with radiometric gamma logging, were the primary exploration methods used to identify and delineate uranium on the Property historically.

In February 1977, drilling commenced on the former Tony M property and adjacent areas, with Plateau reportedly drilling more than 2,000 rotary drill holes totaling approximately 1,000,000 ft. Over 1,200 holes were drilled on the former Tony M property. Following the discovery of the Tony M deposit in 1977, Plateau developed the former Tony M property from September 1977 to May 1984, at which time mining activities were suspended. By January 31, 1983, over 18 mi of underground workings were developed at the former Tony M property, and a total of approximately 237,000 tons of mineralized material was extracted with an average grade of 0.121% U<sub>3</sub>O<sub>8</sub> containing approximately 573,500 lb U<sub>3</sub>O<sub>8</sub>. The underground workings at the former Tony M property are accessed via two parallel declines extending approximately 10,200 ft into the Tony M deposit. The underground workings were allowed to flood after mining activities were suspended in 1984. The southern portion of the underground workings remain dry, as they are located above the static water table.

Exxon commenced drilling on the Bullfrog Property in 1977, at the time of sale to Atlas in July 1982, Exxon had drilled 1,782 holes. From July 1982 to July 1983, Atlas completed 112 drill holes delineating the Southwest and Copper Bench deposits on approximately 100 ft centers. After July 1983, Atlas completed an additional 49 core hole drilling program over the Bullfrog Property, as well as a 133 rotary drill hole program to delineate the Indian Bench deposit on approximately 200 ft centers. In total, 2,232 drill holes were completed on the Bullfrog Property.

The Southwest and Copper Bench deposits were delineated by drilling on approximately 125 ft centers. The Indian Bench deposit was delineated by drilling on approximately 200 ft centers. In some areas, the rugged terrain made access difficult, resulting in an irregular drill pattern. Records indicate that 81 core



holes were drilled in the Southwest, Copper Bench, and Indian Bench deposits, while 25 core holes were drilled in the vicinity of the Tony M deposit. The core holes provided samples of the mineralized zone for chemical and amenability testing.

IUC acquired the Bullfrog Property, through its acquisition of EFNI in 1997. In February 2007, Denison acquired the former Tony M property bringing it under common ownership with the Bullfrog Property. Following rehabilitation work at the former Tony M property and re-establishment of surface facilities in 2006, Denison received the necessary operational permits for the reopening of the Tony M underground workings and commenced mining activities in September 2007. Denison's work included a long-hole drilling program to identify and delineate mineralization within about 100 ft of the underground workings. In November 2008, Denison announced that mining activities at the former Tony M property would be suspended due to unfavorable uranium and economic market conditions. During its September 2007 to December 2008 reactivation, cleanup, and mining activities, Denison extracted 162,384 tons of mineralized material at radiometric grade of 0.131% U<sub>3</sub>O<sub>8</sub> containing 429,112 lb U<sub>3</sub>O<sub>8</sub> from within existing workings and previously stockpiled material. This material was trucked to the White Mesa Mill for processing.

From its 2009 evaluation of the two properties, Denison determined that the Deposits comprise a continuous zone, with uranium mineralization correlating between the two properties.

In June 2012, Energy Fuels acquired all of Denison's uranium properties in the United States, including the Henry Mountains Complex. Since acquiring the Henry Mountain Complex, Energy Fuels has not carried out any further exploration work nor conducted any further mine development at the Tony M mine.

#### **6.2.1** Tony M Property History

Exploration drilling in the Shootaring Canyon area was initiated by Plateau during the mid-1970s in the vicinity of small mine workings and outcropping uranium mineralization east of the canyon. In February 1977, drilling commenced on what become the Tony M mine. Subsequently, Plateau drilled more than 2,000 rotary drill holes totalling approximately 1,000,000 ft. Over 1,200 holes were drilled on the former Tony M property.

Development of the Tony M mine commenced in June 1977, and by September 1977, the mine portals were complete and underground development of the twin haulage ways was initiated. By mid-1984, when work on the Tony M mine was suspended, approximately 18 mi of underground workings had been developed including two parallel 10,200 ft long declines trending N22°W developed from the west wall of Shootaring Canyon.

During development of the Tony M mine, Plateau also conducted an intensive mine geology program to collect detailed information on the occurrence of uranium, including its thickness, grade, and lateral extent. This was done through geological mapping, together with face and rib scanning, as well as with handheld radiometric scanners, and gamma probing of short up and down holes extending to approximately eight feet. Probing (geophysical logging) was also completed using long hole drilling to test target zones up to approximately 150 ft from the mine openings. The results of this program were recorded on a systematic set of cross-sections through the Tony M mine developed at a scale of 10 ft to the inch.

Denison, and its predecessor, IUC, carried out no physical work on the former Tony M property, apart from a review of available data and critical evaluation, until the end of 2005, when certain activities including underground reconnaissance and permitting were initiated. A Notice of Intent to Conduct Exploration, E/017/044, was issued by the Utah Division of Oil, Gas and Mining, Department of Natural



Resources on December 2, 2005. In addition, IUC filed a Notice of Intent to Conduct Mineral Exploration with the U.S. BLM, UTU-80017, on March 6, 2006. A notice of exploration activities was sent to the Utah State Institutional and Trust Land Administration, the owner of Section 16, on September 7, 2005.

With receipt of all permits in September 2007, Denison commenced underground work in the Tony M mine as described in Section 6 of this Technical Report. This work included a long hole drilling program to discover and delineate mineralization within approximately 100 ft of the underground workings.

Energy Fuels carried out no work on the former Tony M property from the time of acquisition in June 2012 to July 2021.

#### 6.2.2 Bullfrog Property History

SLR notes that historically the Bullfrog Property consisted of the Southwest, Copper Bench, and Indian Bench deposits, only the Southwest deposit lies within the Property boundaries.

Exxon conducted reconnaissance in the Bullfrog Property area in 1974 and 1975, staking its first claims in 1975 and 1976. A first phase drilling program in 1977 resulted in the discovery of what became the Southwest deposit. Additional claims were subsequently staked, and drilling was continued, first by Exxon's Exploration Group, and then by its Pre-Development Group. Several uranium and vanadium zones were discovered in the Southwest and Copper Bench areas, and mineralization exhibiting potential economic grade was also discovered in the Indian Bench area. With the declining uranium markets of the early 1980s, Exxon prepared a prefeasibility report and then discontinued development of the Bullfrog Property. Subsequently, Exxon offered the Bullfrog Property to Atlas in January 1982.

Atlas entered into an agreement to purchase the Bullfrog Property from Exxon in July 1982. From July 1982 to July 1983, Atlas completed 112 drill holes delineating the Southwest and Copper Bench deposits on approximately 100 ft centres. In August 1983, Atlas commissioned Pincock, Allen and Holt, Inc. (PAH), to conduct a feasibility study for the development of the Southwest and Copper Bench deposits. From July 1983 to March 1984, Atlas completed a core drilling program throughout the Bullfrog Property, as well as a rotary drill hole program to delineate the Indian Bench deposit. In November 1983, Atlas renamed the Bullfrog deposits the Edward R. Farley Jr. Deposit, this name is no longer in use.

In 1990 Atlas contemplated the sale of the Bullfrog Property, and during that year, Mine Reserves Associates, Inc. (MRA) Tucson, Arizona, was retained to prepare mineral inventory and mineable reserve estimates for the Indian Bench deposit and incorporate the results into a project-wide reserve base. Steve Milne of Milne and Associates (Milne), a principal engineer for the PAH study, was engaged in November 1990 to update the PAH feasibility study and to complete an optimization study on selected mining/milling scenarios. The completed Milne study was submitted to Atlas in December 1990. At the conclusion, Atlas continued to hold the Bullfrog Property until 1991, at which time it was returned to Exxon.

In late 1992, EFNI, acting through its subsidiary Energy Fuels Exploration Company, purchased the Bullfrog Property from Exxon. Following EFNI's acquisition of the Bullfrog Property, EFNI conducted a geologic review and internal economic analysis of the Bullfrog Property. In 1997, IUC became the owner of the Bullfrog Property as part of an acquisition in which IUC acquired all of EFNI's assets.

#### **6.3** Historical Mineral Resources

Several historical Mineral Resource estimates have been previously carried out on the Deposits.

SLR, as the former RPA and Scott Wilson RPA, has prepared previous Technical Reports on the Property as of June 27, 2012, March 19, 2009, and September 9, 2006, 2006 in compliance with NI 43-101. These



estimates are historical in nature and should not be relied upon. CUR is not treating the historical estimates as current Mineral Resource estimates.

In June 2012 RPA, now SLR, (Roscoe, Underhill, and Pool, 2012) reported Indicated Mineral Resources for the Deposits as totalling, 1.03 million tons (Mst) at 0.24% U<sub>3</sub>O<sub>8</sub>, containing 4.83 million pounds (Mlb) U<sub>3</sub>O<sub>8</sub>, and 0.66 Mst at 0.25% U<sub>3</sub>O<sub>8</sub> containing 3.30 Mlb U<sub>3</sub>O<sub>8</sub>, respectively. Inferred Mineral Resources for the Deposits total, 0.67 Mst at 0.17% U<sub>3</sub>O<sub>8</sub> containing 2.22 Mlb U<sub>3</sub>O<sub>8</sub>, and 0.24 Mst at 0.14% U<sub>3</sub>O<sub>8</sub> containing 0.68 Mlb U<sub>3</sub>O<sub>8</sub>, respectively. Mineral Resources classified as Indicated and Inferred categories were based on a cut-off grade of 0.10% eU<sub>3</sub>O<sub>8</sub> over a minimum thickness of two feet and minimum GT (grade times thickness product) of 0.2 ft.% eU<sub>3</sub>O<sub>8</sub> for the Deposits. A total of 177,000 undiluted tons at 0.182% U<sub>3</sub>O<sub>8</sub> (645,500 lbs U<sub>3</sub>O<sub>8</sub>) from past production was deducted from the final Tony M Indicated Mineral Resource.

The 2012 Mineral Resource estimates are historical in nature and should not be relied upon. CUR is not intending on treating the historical estimates as current Mineral Resource estimates. Further work recommended by the QP, as outlined in Section 26 of this Technical Report, should be completed to classify the mineralization as a current Mineral Resource.

Mineralization within the Deposits is hosted in sandstone horizons containing detrital organic debris, occurring as thin layers related to the stratigraphic units. The Deposits extend for approximately 2.5 mi along a north-south trend and has a maximum width of approximately 3,000 ft and occurs in the lowermost 35 ft to 62 ft of the Salt Wash Member sandstone.

#### **6.4** Past Production

#### 6.4.1 Historical Production from the Tony M Mine

The Tony M mine was originally developed by Plateau to provide a nuclear fuel supply to its parent company Consumers. Exploration drilling on the former Tony M property began in 1976. After confirming the presence of uranium mineralization averaging  $0.15\%~U_3O_8$ , underground development began in September 1977.

Prior to its shutdown on August 18, 1982, by Plateau, a total of approximately 27,267 lb  $U_3O_8$  were recovered from Tony M ore (Plateau, 1982 Annual Report). A portion of the stockpile of uranium bearing material from the Tony M mine was trucked to the Ticaboo Mill, the details, however, were not available to SLR.

The former Tony M property was developed from 1977 to 1983 with a double entry system including two parallel declines spaced 50 ft apart. The declines measure 9 ft by 12 ft in cross section, have crosscuts on 50 ft centers, a minus 3% grade, serve as the primary fresh air intake, and are 10,200 ft in length. By January 31, 1983, over 18 mi of underground workings had been developed at the Tony M mine. The underground workings were allowed to flood after mining activities were suspended in 1984. The southern portion of the underground workings remained dry, as they are located above the static water table.

Access to the individual mining areas is through 8 ft by 10 ft laterals driven at right angles to the mine entries. The laterals also provide access for long-hole drilling and detailed information for mine planning and stope development. The former Tony M mine was designed as a random room and pillar operation with pillar extraction by a retreat system. The pillars are 136 ft by 136 ft and form a conventional room and pillar pattern. Plateau completed a total of 90,000 linear feet of room development, outlining as pillars a major part of the known potential ore. During the period April 1982 to December 1982, a test stope covering an area 260 ft by 260 ft was mined in the southeastern portion of the Tony M deposit in



Denison's Mining Blocks E and P, producing approximately 22,500 tons at 0.134% U<sub>3</sub>O<sub>8</sub> with no apparent problems (Plateau Annual Report, January 26, 1983).

Mining equipment consisted of slushers and rubber tired, five-ton to ten-ton capacity load-haul-dump (LHD) units. A 36 in. wire rope conveyor was planned for installation in 1985 to transport ore and waste up the decline to storage bins outside the portal of the mine, however this was not realized. Exhaust ventilation was provided by five bored ventilation shafts, six feet in diameter, each with a 75 hp exhaust fan mounted at the shaft collar.

Plateau operated the Tony M mine from September 1, 1978, until April 1984. Denison operated the mine from September 2007 to November 2008. A portion of the Denison production was from the Tony M mine, while some was from previously mined stockpiled material.

Production history for the Tony M mine is summarized in Table 6-1.

Table 6-1: Historical Production at Tony M Consolidated Uranium Inc. – Tony M Project

Operator	Period of Operation	Tons Produced (tons)	Average Grade (% U₃O₃)	Contained Metal (lb U₃O8)
Plateau	Sept. 1979 to April 1984	237,000	0.121	574,500
Denison	Sept. 2007 to Dec. 2008	162,384¹	0.131 (equivalent)	429,112

#### Notes:

1. Includes 72,359 tons at 0.91% eU<sub>3</sub>O<sub>8</sub> (131,647 lb e U<sub>3</sub>O<sub>8</sub>) from stockpiled material.

During development of the Tony M mine by Plateau, water inflows in the order of 100 gpm were pumped to the surface for disposal in an evaporation pond. Estimates of inflow to the Southwest area, if developed, indicate that simultaneous maximum inflows should not exceed 126 gpm.

#### 6.4.2 Recent Mining

By early 2007, work on reactivating the Tony M mine was carried out by Denison, and surface and underground rehabilitation and repairs were conducted. The Environmental Assessment for the BLM Plan of Operations was approved in September 2007, prior to that time, limited site work was conducted under an exploration permit, which allowed for reopening of the mine portals and assessing mine conditions.

Surface facilities to support mine operations were constructed, including administration and maintenance facilities, site power and communications, and an evaporation pond for disposal of mine water. Worker housing was established in the town of Ticaboo, Utah.

As rehabilitation work advanced in the Tony M mine, ventilation was re-established. The water level in the Tony M mine had risen to historic pre-mine levels, and upon reaching the flooded workings, mine dewatering was also initiated. During the rehabilitation work, limited amounts of cleanup ore were removed. As areas of the Tony M mine were made ready for mining, production increased steadily.

Denison commenced dewatering of the Tony M mine in December 2007 when the static water level stood at approximately 4,405 FASL. Dewatering continued at an average rate of 125 gpm during operation, and by February 2009 the water level in the mine stood at approximately 4,350 FASL.

From November 2007 to December 2008, a total of 162,384 tons at 0.131% equivalent  $U_3O_8$  (eU<sub>3</sub>O<sub>8</sub>) containing 429,112 lb eU<sub>3</sub>O<sub>8</sub> were trucked to the White Mesa Mill at Blanding, Utah, for processing. Of



this material, 90,025 tons at 0.165% eU<sub>3</sub>O<sub>8</sub> (297,465 lb eU<sub>3</sub>O<sub>8</sub>) were extracted by Denison from the Tony M mine and 72,359 tons at 0.091% eU<sub>3</sub>O<sub>8</sub> (131,647 lb eU<sub>3</sub>O<sub>8</sub>) from stockpiled material mined by previous operators.

## 6.5 Vanadium Studies

### 6.5.1 Historic Vanadium Production

The  $V_2O_5/U_3O_8$  ratio for the vanadium-uranium deposits of the Henry Mountains is routinely reported as 5:1 based on U.S. Atomic Energy Commission production records of 18,300 tons for the period 1956 to 1965. Focusing only on the South Henry Mountains mining district (also known as the Little Rockies), the  $V_2O_5/U_3O_8$  ratio is markedly lower at 1.8:1. This value is also based on production records for the period 1956 to 1965, comprising approximately 6,900 tons produced from several small mines all located within a few miles of the Tony M mine portal (Doelling, 1967).

Various evaluations of the vanadium content in both the Southwest and Tony M deposits have been conducted. The results for the Southwest deposits are based solely on 18 samples from the 15 core holes drilled by Exxon and Atlas. Evaluations for the Tony M deposit are based on composite samples from 55,234 tons of mineralized muck produced from the Tony M deposit and sampled at the mine portal, as well as samples from 11 core holes, and extensive muck and chip sampling from the underground workings.

Determining the concentration of vanadium in a deposit is much more costly and time consuming than making the equivalent determination for uranium. While indirect determinations of the uranium content may be efficiently made at low cost using gamma logging, chemical analysis is the only way to determine vanadium content.

SLR's review of sample data indicates that there is a clear tendency for higher grade uranium to be associated with higher grade vanadium, however, the relationship is somewhat erratic and high grade uranium samples frequently have low concentrations of vanadium.

### 6.5.2 Former Tony M Property Vanadium Sampling Program

In 2011, SLR, as RPA, used information from Denison's files for the Tony M deposit for review of vanadium to uranium grade ratios. Throughout the period of development of the Tony M mine, Plateau conducted several sampling programs to estimate the vanadium content in the Tony M deposit. The programs included sampling and analyzing drill core, underground muck and rock chips, and a longer term program to assay composite samples collected at the Tony M mine portal as material was trucked from the mine.

Based on a review of monthly production reports for October 1982 through August 1983, in addition to January 1984, together with analyses of uranium and vanadium of composite samples, SLR found that 55,234 tons of muck produced from the central portion of the Tony M mine (Blocks B, E, F, and S) had an average of 0.222% V<sub>2</sub>O<sub>5</sub> and 0.133% chemU<sub>3</sub>O<sub>8</sub> with a weighted V<sub>2</sub>O<sub>5</sub>/U<sub>3</sub>O<sub>8</sub> ratio of 1.66:1. This included 31,049 tons (56%) of the muck produced in nine months from Block B averaging 0.256% V<sub>2</sub>O<sub>5</sub> with a weighted V<sub>2</sub>O<sub>5</sub>/U<sub>3</sub>O<sub>8</sub> ratio of 1.59:1. The balance of 24,185 tons was produced from blocks E, F, and S.

SLR did not have information to identify whether the samples originated from the Lower Lower (LL) or the Upper Lower (UL) units of the Lower Salt Wash interval.

The QP is of the opinion that the  $V_2O_5/U_3O_8$  ratio of 1.66:1 for the composite bulk samples collected over the period October 1982 to January 1984 from 55,234 tons of rock mined is representative for the areas



sampled. Furthermore, this average of 1.66:1 is the most reliable estimate of the  $V_2O_5/U_3O_8$  ratio for the Tony M deposit. SLR agrees with the Energy Fuels, Denison, and EFNI historical findings that vanadium is not presently technically and economically recoverable from the Tony M deposit.

## 6.5.3 Bullfrog Property – Vanadium

As indicated previously, the only sample analyses available to provide an indication of the content of vanadium on the historic Bullfrog Property (Southwest, Copper Bench-Indian Bench deposits) are from core drilling. In November 1983, Atlas (Rajala, 1983, see Section 9 of this Technical Report) analyzed a composite sample based on 104 (from 16 drill holes) core intervals. The composite sample indicated a  $V_2O_5/U_3O_8$  ratio of 1.1:1 for the Southwest deposit. The ratio is based on an average uranium grade of 0.35%  $U_3O_8$ .

Milne (1990) provides a summary of the results of an analysis of  $V_2O_5/U_3O_8$  ratios prepared by Atlas based on 15 samples from the Southwest deposit (Table 6-2). The average  $V_2O_5/U_3O_8$  ratio ranged from 1.313:1 to 3.078:1 for the three levels, UL, Middle Lower (ML), and LL, and averaging 2.450:1. Milne used the results presented in Table 6-2 to estimate the grade and amount of vanadium in the Southwest deposit. SLR did not have access to the initial data from which Table 6-2 was developed.

Table 6-2: Southwest Deposit V<sub>2</sub>O<sub>5</sub>: U<sub>3</sub>O<sub>8</sub> Ratios by Atlas Consolidated Uranium Inc. – Tony M Project

Deposit	Zone	V <sub>2</sub> O <sub>5</sub> /U <sub>3</sub> O <sub>8</sub>	Variance	Std. Dev.	# Samples
	U	3.078 : 1	20.935	4.576	11
Southwest Deposit	М	1.530 : 1	0.000	0.000	1
	L	1.313 : 1	0.343	1.585	3
Weighted Average		2.450 : 1			Total: 15

In 1991, EFNI (EFNI, 1991) conducted an evaluation of composite mineral zones from the 18 samples taken from 32 core holes drilled on the Southwest deposit. This included a review of the Atlas results in Table 6-2. Following the review, EFNI observed that the results in Table 6-2 were based on an erroneous comparison of raw data. Therefore, EFNI rejected the inference of Atlas' report that the average  $V_2O_5/U_3O_8$  ratio for the Southwest deposit was approximately 3:1.

EFNI's analysis (EFNI, 1991) indicated a  $V_2O_5/U_3O_8$  ratio for the Southwest deposit of 1.6:1.0 at a thickness of one foot of 0.10% eU<sub>3</sub>O<sub>8</sub> cut-off; and a ratio of 1.29:1.0 at a 0.80 %-ft grade x thickness (GT) cut-off (Table 6-3).



Table 6-3: Southwest Deposit  $-V_2O_5/U_3O_8$  Ratios by EFNI  $U_3O_8$  GT Cut-Off = 0.80 ft.% Consolidated Uranium Inc. – Tony M Project

Deposit	Zone	V <sub>2</sub> O <sub>5</sub> :U <sub>3</sub> O <sub>8</sub>	Number of Intercepts
Southwest Deposit	U	1.59 : 1	9
	M	1.25 : 1	6
	L	0.85 : 1	3
Weighted Average		1.29 : 1	Total: 18

Source: EFNI, 1991

Based on these results, EFNI (1991) concluded that it was uneconomic to recover vanadium from the Southwest deposit. EFNI also observed that the  $V_2O_5/U_3O_8$  ratio was highly variable from deposit to deposit, zone to zone, and intercept to intercept. In its 1991 report EFNI stated that "most important that many of the very good vanadium intercepts do not contain mineable uranium values".

EFNI's observations on the variability of vanadium concentration within the uranium bearing zones are consistent with the findings of Northrop and Goldhaber (1990) discussed in Section 7.3 (Mineralization) of this Technical Report. In addition, the ratios found in EFNI analyses are somewhat similar to the ratios determined by Rajala (1983) for composite samples for the Southwest as discussed previously.

The QP is of the opinion that, based on the information available, the EFNI (1991) findings are the most relevant and provide a reliable estimate of the  $V_2O_5/U_3O_8$  relationship in the Southwest deposit. SLR agrees with the Energy Fuels, Denison and EFNI historical findings that vanadium is not presently technically and economically recoverable from the Deposits.

### 6.6 White Mesa Mill

## 6.6.1 General

The White Mesa Mill is located six miles south of Blanding in southeastern Utah. Its construction by EFNI was based on the anticipated reopening of many small low grade mines on the Colorado Plateau. The White Mesa Mill was designed to treat 2,000 stpd but has periodically operated at rates in excess of the 2,000 stpd design rate. Construction of the White Mesa Mill commenced in June 1979 and was completed in May 1980. The White Mesa Mill has been modified to treat higher grade ores from the Arizona Strip, in addition to the common Colorado Plateau ores. Processing of Arizona Strip ores is typically at a lower rate of throughput than for the Colorado Plateau ores. The basic mill process is a sulphuric acid leach with solvent extraction recovery of uranium and vanadium.

Since 1980, the White Mesa Mill has operated intermittently in a series of campaigns to process ores from the Arizona Strip as well as from a few higher grade mines of the Colorado Plateau. Overall, the White Mesa Mill has produced approximately 30 Mlb  $U_3O_8$  and 33 Mlb  $V_2O_5$ .

## 6.6.2 Crushing, Grinding and Leaching

Historically, run-of-mine ore was reduced to minus 28 mesh in a six foot by 18 ft diameter semi-autogenous grinding (SAG) mill. Leaching of the ore was accomplished in two stages: a pre-leach and a hot acid leach. The first, or pre-leach, circuit, consisting of two mechanically agitated tanks, utilizes pregnant (high grade) strong acid solution from the countercurrent decantation (CCD) circuit which serves



both to initiate the leaching process and to neutralize excess acid. The pre-leach circuit discharges to a 125 ft thickener where the underflow solids are pumped to the second stage leach and the overflow solution is pumped to clarification, filtration, and solvent extraction circuits.

A hot strong acid leach is used in the second stage leach unit, which consists of seven mechanically agitated tanks having a retention time of 24 hours. Free acid is controlled at 70 g/L and the temperature is maintained at 75°C.

Leached pulp is washed and thickened in the CCD circuit, which consists of eight high capacity thickeners. Underflow from the final thickener at 50% solids is discharged to the tailings area. Overflow from the first thickener (pregnant solution) is returned to the pre-leach tanks.

### 6.6.3 Solvent Extraction

The solvent extraction circuit consists of four extraction stages in which uranium in pregnant solution is transferred to the organic phase, a mixture consisting of 2.5% amine, 2.5% isodecanol, and 95% kerosene. Loaded organic is pumped to six stages of stripping by a 1.5 molar sodium chloride solution, followed by a continuous ammonia precipitation circuit. Precipitated uranium is settled, thickened, centrifuged, and dried at 1,200°F. The final product at approximately 95%  $U_3O_8$  is packed into 55 gallon drums for shipment.



## 7.0 GEOLOGICAL SETTING AND MINERALIZATION

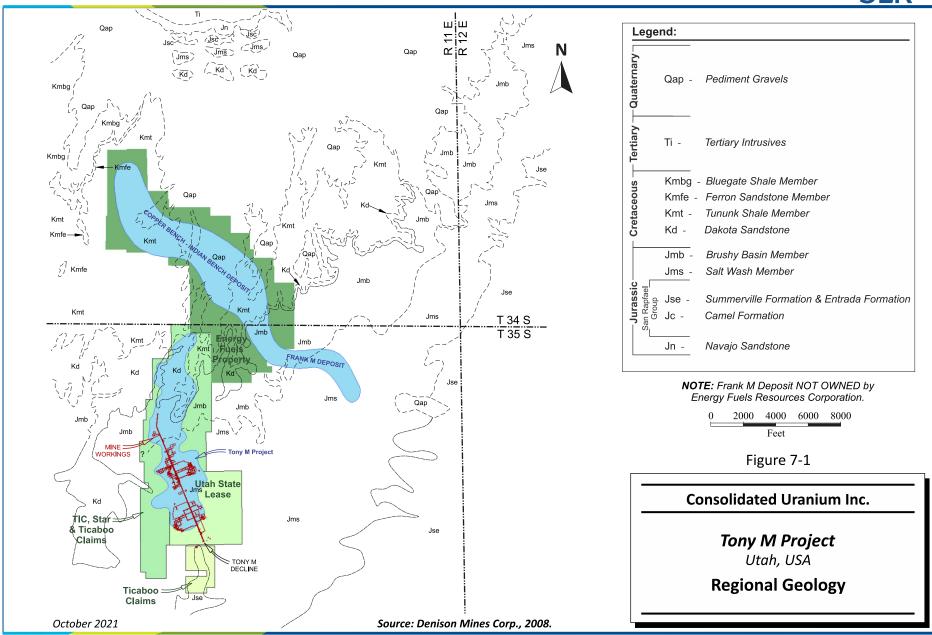
## 7.1 Regional Geology

The Deposits occur within the Salt Wash Member of the Morrison Formation, located within the Colorado Plateau (Figure 7-1). The dominant feature of the geologic history of the Colorado Plateau has been its comparative structural stability since the close of the Precambrian time. During much of the Paleozoic and Mesozoic eras, the Colorado Plateau was a stable shelf without major geosynclinal areas of deposition, except during the Pennsylvanian period when several thousand feet of black shales and evaporates accumulated in the Paradox Basin of southwestern Colorado and adjacent Utah.

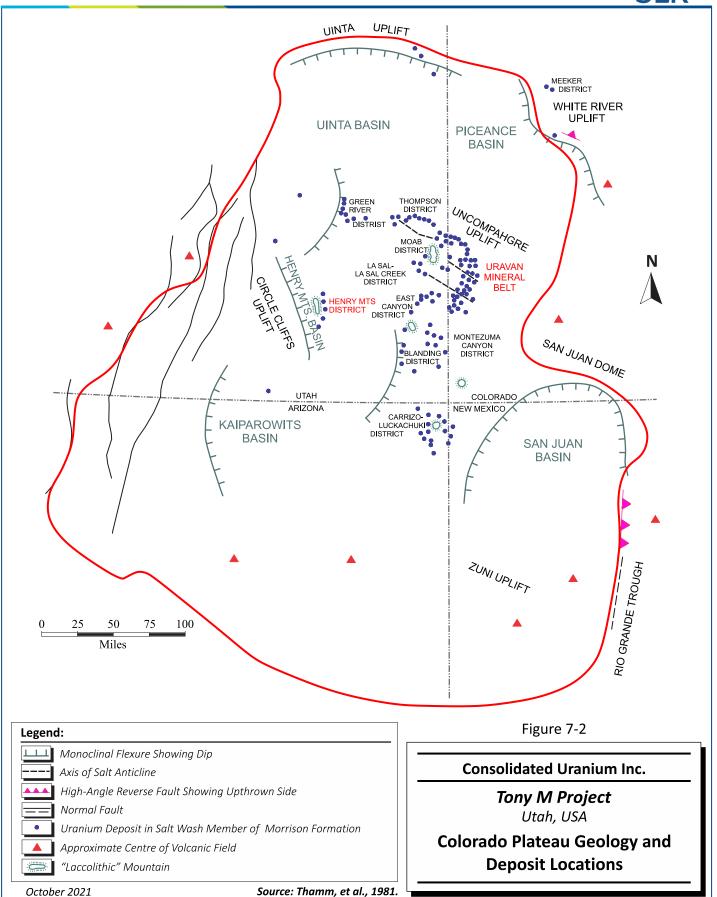
Folding and faulting of the basement during the Laramide orogeny of Late Cretaceous and Early Tertiary periods produced the major structural features of the Colorado Plateau. Compared to the adjacent areas, however, it affected the plateau only slightly. The nearly horizontal strata were gently flexed, producing the uplifts and basins depicted in Figure 7-2.

Early Paleogene fluvial and lacustrine sedimentation within the deeper parts of local basins was followed in the mid-Paleogene by laccolithic intrusion and extensive volcanism. Intrusions of diorite and monzonite porphyry penetrated the sediments at several sites to form the laccolithic mountains of the central Colorado Plateau. Dikes and sills of similar composition were intruded along the eastern edge of the plateau, probably during the Miocene epoch. Faulting along the south and west margins of the Colorado Plateau was followed by epirogenic uplift and northeastward tilting and by continuing erosion which has shaped the present landforms.











### 7.1.1 Morrison Formation

The Morrison Formation, host to the uranium-vanadium deposits in the Henry Mountains Basin, is a complex fluvial deposit of Late Jurassic age that occupies an area of approximately 600,000 square miles, including parts of 13 western states and small portions of three Canadian provinces, far to the north and east of the boundary of the Colorado Plateau. According to radiometric dating, the Morrison Formation dates from 156.3 Ma  $\pm$  2 Ma at its base to 146.8 Ma  $\pm$  1 Ma at the top which places it in the earliest Kimmeridgian, and early Tithonian stages of the late Jurassic. The Morrison Formation is subdivided into several members, the occurrence of which are varied across the geographic extent of the Morrison Formation. In the Henry Mountains region, the Morrison Formation is comprised of three members (in ascending order), the Tidwell member, the Salt Wash Member, and the Brushy Basin Member.

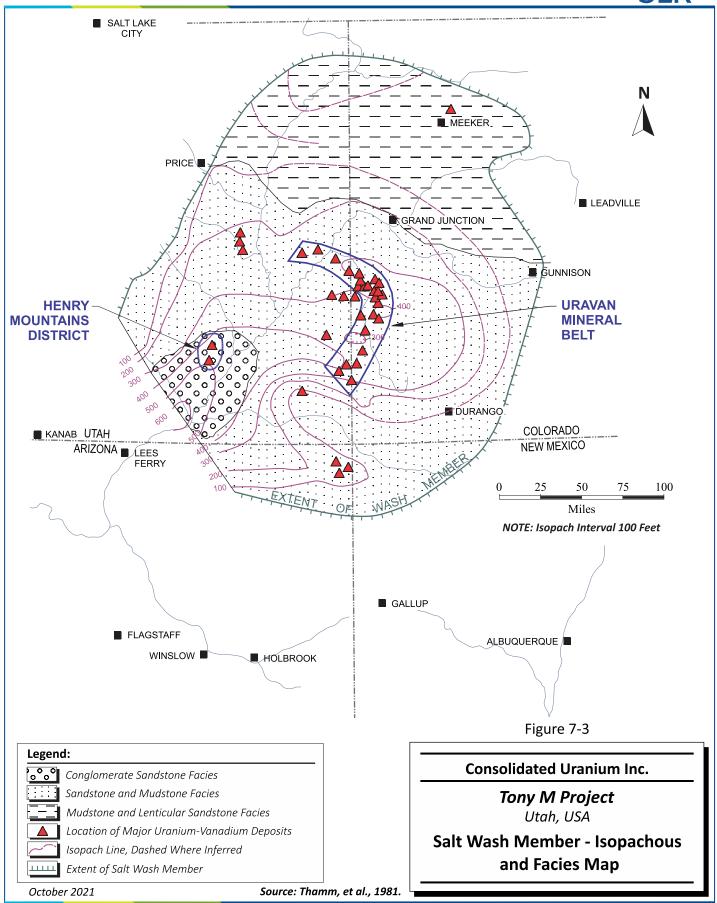
Most uranium production in Colorado and Utah is from the Salt Wash Member and the conformably overlying Brushy Basin Member. In some parts of the district, uranium has been reported in the Tidwell Member, which underlies the Salt Wash Member,

### 7.1.1.1 Salt Wash Member

The Salt Wash Member of the Morrison Formation is subdivided into three major facies, as presented in Figure 7-3, an isopach and facies map of the Salt Wash. Uranium-vanadium deposits have been found in each of the three facies, however the majority of mineralization has been mined from the interbedded sandstone and mudstone facies. In outcrop, the Salt Wash is exposed as one or more massive, ledge-forming sandstones, the number varying from one district to another. Closer to the source areas, as in Arizona, the Salt Wash is predominantly a massive sandstone or conglomeratic sandstone broken only by a few, thin interbeds of siltstone or clay. Farther from the source areas, as in the area of the Uravan Mineral Belt, three or more discontinuous sandstone ledges are common, generally interbedded with approximately equal amounts of thick, laterally persistent siltstones or mudstones.

The sandstones of the Salt Wash have been classified as modified or impure quartzite, ranging from orthoquartzite to feldspathic or tuffaceous orthoquartzite. Carbonate cement is a relatively common component in the Salt Wash. The sandy strata of the Salt Wash Member contains many mineable concentrations of uranium throughout the Henry Mountain Basin, most of which are relatively small. However, all of the Henry Mountains deposits, including the Tony M, Southwest, Copper Bench, Indian Bench, and Frank M, together with adjoining deposits, constitute the largest concentration of Salt Wash-hosted uranium deposits on the Colorado Plateau.







## 7.2 Local and Property Geology

The Morrison Formation is a complex fluvial deposit of Late Jurassic age. In outcrop, the Salt Wash is exposed as one or more massive, ledge-forming sandstones, generally interbedded with laterally persistent siltstones or mudstones. The lower Salt Wash is approximately 150 ft thick in the project area, thinning and becoming less sandy northward from the project area. Sandstones comprise 80% of the sequence, with the remainder comprised of siltstones and mudstones. Significant uranium mineralization occurs only in this lower unit.

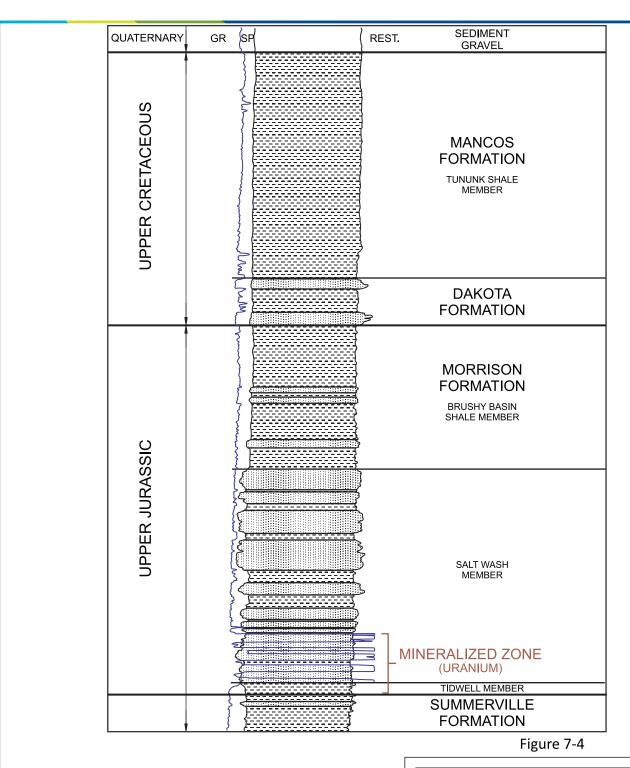
The Property is situated in the southeastern flank of the Henry Mountains Basin, a subprovince of the Colorado Plateau physiographic province. The Henry Mountains Basin is an elongate north-south trending doubly plunging syncline in the form of a closed basin, flanked by the Monument Uplift to the southeast, Circle Cliffs Uplift to the southwest, and the San Rafael Swell to the north (Figure 7-2). The regional and local geology of the Henry Mountains Basin vanadium-uranium deposits has been the subject of intensive research by staff of the U.S. Geological Survey (USGS) as well as other workers, referenced below. The following descriptions follow Northrop and Goldhaber (1990).

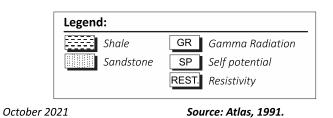
The Property is located south of Mt. Hillers (10,723 FASL) and northwest of Mount Ellsworth and Mt. Holmes (7,930 FASL). Figure 7-4, Figure 7-5, and Figure 7-6 present geologic maps and stratigraphic sections of the project area. Exposed rocks in the project area are Jurassic and Cretaceous in age. Host rocks for the Deposits are Upper Jurassic sandstones of the Salt Wash Member of the Morrison Formation. In addition, a minor portion (i.e., a few percent) of the Tony M deposit uranium mineralization occurs in the uppermost section of the underlying Tidwell Member (PAH, 1985).

## 7.2.1 Structural Geology

The structural geology of the project area reflects a gentle westward dip off the Monument Uplift, toward the axis of the Henry Mountains Basin, except where the strata have been influenced by the adjacent Mt. Hillers and Mt. Ellsworth intrusive igneous bodies. Figure 7-7 presents a structural contour map of the Henry Mountains area. As a result, dips in the vicinity of the Tony M deposit are characterized by a gentle dip from two degrees to five degrees to the west. Dips in the vicinity of the Southwest deposit vary from one degree to two degrees to the west and northwest.





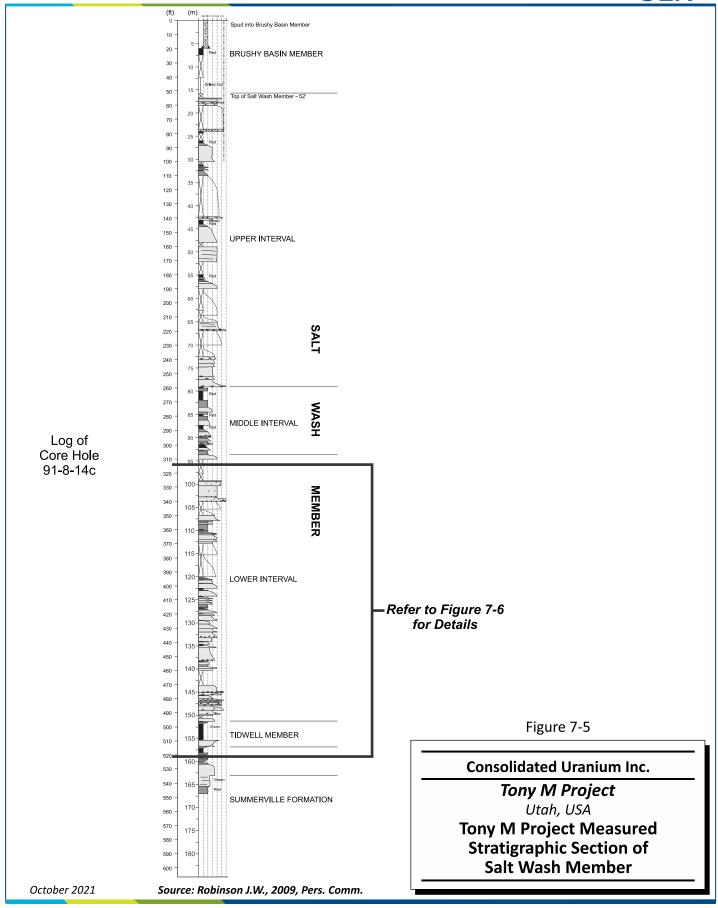


**Consolidated Uranium Inc.** 

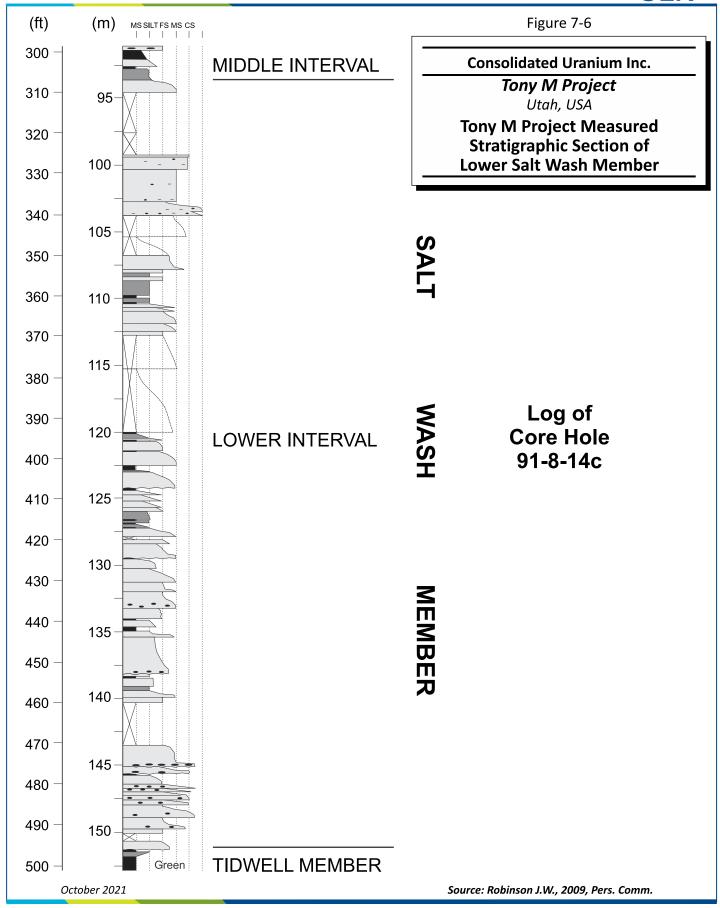
**Tony M Project** Utah, USA

**Tony M Project Representative Stratigraphic Section** 

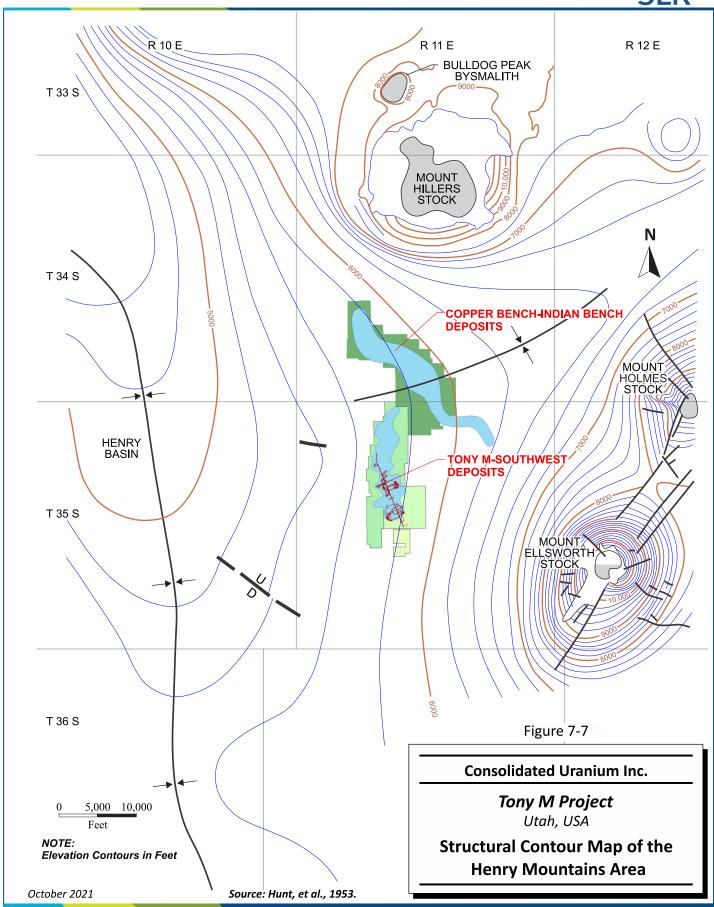














## 7.2.1.1 Faults and Jointing

No faults were observed during underground development of the Tony M mine workings.

Plateau personnel mapped fractures and joints using aerial photos in the vicinity of the Tony M mine as well as through underground mapping in the mine. Joint spacing averages approximately 1.5 ft but varies significantly from area to area. Observations of joints in outcrop and underground indicate that they are confined to, or are well developed in, sandstone units with little or no development in mudstone or shale units. Both the strike and dip of individual joints remain relatively constant, with normal variations of less than to 5°to 10°.

The results indicate that the joint pattern in the vicinity of the Tony M mine is characterized by vertical to steeply dipping joints with a northwesterly strike. A second northeasterly striking vertical to steeply dipping set is weakly developed, both in terms of the frequency of occurrence, which is less than 10% of total joints, and the degree of continuity. Within the southern part of the Tony M mine, nearly all joints strike between N30°W and N70°W and 50% of the joints strike between N45°W and N55°W. Within the northern third of the Tony M mine, the predominant strike of the joints moves clockwise, with most joints striking between N18°W and N25°W.

SLR has no information on jointing in the Southwest deposit. The pattern of joint development in the vicinity of the Tony M mine is similar to the regional pattern in the southern Henry Mountains (Underhill et al., 1983).

### 7.2.1.2 Host Sandstones

In the southern part of the Henry Mountains Basin, the Salt Wash Member ranges from 400 ft to 510 ft thick. In the northern portion of the Tony M deposit, core hole 91-8-14c intersected 444 ft of the Salt Wash Member. The lower Salt Wash sandstones are finer grained, while the upper Salt Wash sandstones consist of coarser grained clastic rocks. The lower Salt Wash is approximately 150 ft thick in the Property area, thinning and becoming less sandy northward from the project area. Sandstones comprise 80% of the sequence, with the remainder comprised of siltstones and mudstones. Significant uranium mineralization occurs only in the lower unit of the Salt Wash Member. Figure 7-4 presents a representative stratigraphic section from the Property.

The Tony M deposit is hosted in the lowermost 35 ft to 40 ft of the Salt Wash, while mineralization in the Southwest deposit reaches 60 ft above the base of the Salt Wash Member base. The sand sequence hosting the Tony M deposit is also the host for the Southwest deposit.

The lower 100 ft of the Salt Wash Member have been subdivided into an upper and a lower unit, and each of these subunits, in turn, have been subdivided into UL, ML, and LL horizons. The Deposits occur in the LL, ML, and UL mineralized horizons of the lower 40 ft thick sand unit, and each of these horizons is 10 ft to 15 ft thick. The analysis of the mineralization, however, indicates that a high percentage of the mineralization occurs within two units designated in this Technical Report as the LL and UL units, with the ML unit included in the UL unit.

### 7.2.1.3 Petrographic Description

The framework minerals of the Salt Wash sandstones for the Deposits are predominantly quartz, (70% to 79% of the rock) with minor, variable amounts of feldspar (ranging from 1% to 14% and averaging 4%). Rock fragments average approximately 7%, however, range from 1% to 60%. Accessory minerals form



approximately 2% or less of the rock. The sandstones are classified as modified or impure quartzite, ranging from orthoquartzite to feldspathic orthoquartzite.

In and near the Tony M mine, the Salt Wash sandstones are cemented by carbonate and silica and/or clay minerals that average approximately 17% of the total volume of the samples studied. Calcite is the most common carbonate mineral. In the mineralized zones, the proportion of clay minerals increases while the amount of carbonate decreases. The carbonate in the mineralized zone is also marked by the presence of dolomite.

Organic carbon commonly occurs in the concentration of 0.1 weight percent (wt.%) to 0.2 wt.% but may be up to 1 wt.% or higher in some zones. The predominant type of organic matter is coalified detrital plant debris together with trace amounts (<1%) of unstructured organic matter. This detrital debris occurs as individual elongate fragments a few tens of micrometres to approximately five millimetres length. Silicified logs, carbonized organic debris, and pyrite are locally abundant in the uranium-vanadium bearing zone.

Quartz overgrowths in amounts ranging from 1% to 12% are present with the highest concentrations associated directly with the mineralized zone(s).

## 7.3 Mineralization

Uranium mineralization on the Property is hosted by favorable sandstone horizons in the lowermost portion of the Salt Wash Member of the Jurassic age Morrison Formation, where detrital organic debris is present. Mineralization primarily consists of coffinite, with minor uraninite, which usually occurs in close association with vanadium mineralization. Mineralization occurs as intergranular disseminations, as well as coatings and/or cement on and between sand grains and organic debris. Vanadium occurs as montroseite (hydrous vanadium oxide) and vanadium chlorite in primary mineralized zones located below the water table (i.e., the northernmost portion of the Tony M deposit).

The vanadium content of the Henry Mountains Basin deposits is relatively low compared to many other Salt Wash hosted deposits on the Colorado Plateau. Furthermore, the Henry Mountains Basin deposits occur in broad alluvial sand accumulations, rather than in major sandstone channels as is typical of the Uravan Mineral Belt deposits of western Colorado. The Henry Mountains Basin deposits do, however, have the same general characteristic geochemistry of the Uravan deposits, and are therefore classified as Salt Wash type deposits.

The Deposits occur within an arcuate zone over a north-south length of approximately 15,000 ft and a width ranging from 1,000 ft to 3,000 ft.

Mineralization occurs in a series of three individual stratiform layers included within a 30 ft to 62 ft thick sandstone interval. Mineralization in the Tony M deposit occurs over three stratigraphic zones of the lower Salt Wash Member of the Morrison Formation, with a minor mineralized zone in the underlying Tidwell Member included in the lower zone.

The Deposits occur in the lowermost 35 ft to 62 ft of the Salt Wash Member sandstone. Mineralization within the UL unit is offset to the east as compared to mineralization in the LL unit.

Mineralization comprising the mineralized interval of the Deposits has an average thickness of three feet to six feet, depending on assumptions regarding GT cut-off and dilution. Inspection of logs by SLR, as RPA, in 2012, indicated that the thickness of uranium mineralization in individual drill holes only occasionally exceeds 12 ft.



## 7.4 Uranium and Vanadium Mineralogy

At the Tony M mine, the main mineralized horizons appear as laterally discontinuous, horizontal bands of dark material separated vertically by lighter zones lacking uranium but enriched in vanadium. On a small scale (inches to feet), the dark material often exhibits lithologic control, following cross-bed laminae or closely associated with, though not concentrated directly within, pockets of detrital organic debris.

The uranium-vanadium mineralization of the Henry Mountains Basin area is similar to the mineralization observed elsewhere in other parts of the Colorado Plateau. It occurs as intragranular disseminations within the fluvial sand facies of the Salt Wash Member, and forms coatings on sand grains and coatings and impregnations of organic associated masses. A significant portion of the uranium occurs in a very fine grained phase whose mineralogy is best defined with the aid of an electron microscope.

Extensive research by Northrop and Goldhaber (1990) and associates indicates that the Henry Mountains Basin deposits were formed at the interface of an underlying brine with overlying oxygenated flowing groundwaters carrying uranium and vanadium in solution. Reduction and subsequent deposition of the mineralization were enhanced where the interface occurred within sandstones containing carbonaceous debris. The multiple mineralized horizons developed at favorable intervals as the brine surface migrated upwards. Geochemical studies indicate the uranium and vanadium were leached either from the Salt Wash sandstone or the overlying Brushy Basin Member. Northrop and Goldhaber (1990) also established that the relationship between the uranium and vanadium mineralization in the Tony M and nearby Frank M deposits was not a simple one. Vanadium enrichment in the mineralized intervals occurred over a thicker interval than uranium. Northrop and Goldhaber (1990) found that while uranium and vanadium often reached their maximum concentration at the top of each uranium-bearing horizon, the vertical distribution of vanadium was frequently distinct from uranium.

Extensive scanning electron microscope, microprobe, autoradiography, X-ray, and other studies indicate that coffinite ( $USiO_2$ ) is the dominant primary uranium mineral in the mineralized horizons, with uraninite ( $UO_2$ ) occurring in only trace amounts. In the higher grade mineralized horizons (U > 0.5%), large masses of coffinite form interstitial cement (Northrop and Goldhaber, 1990).

Vanadium occurs as montroseite (hydrous vanadium oxide (V, Fe)O(OH)) and vanadium chlorite in primary mineralized zones located below the water table (i.e., the northern portion of the Tony M deposit). Montroseite is the only vanadium oxide mineral identified in this interval. An unusual vanadium bearing chlorite or interlayered vanadium bearing chlorite-smectite is the only authigenic clay mineral(s) recognized. The grain size and sorting characteristics of detrital quartz grains vary within the host rocks, while cross-bed lamainae with coarser grains and better sorting are invariably more highly mineralized (Wanty et al., 1990).

Above the water table to the south, vanadium chlorite is absent, while montroseite and a suite of secondary uranium-vanadium minerals are present. These include tyuyamunite ( $Ca(UO_2)_2V_2O_85-8H_2O$ ), metatyuyamunite ( $Ca(UO_2)_2V_2O_83H_2O$ ), rauvite ( $Ca(UO_2)_2V^{+5}_{10}O_{28}-16H_2O$ ), and carnotite ( $K_2(UO_2)_2V_2O_8-3H_2O$ ) all of which have been identified in samples from the southern portion of the Tony M deposit. Carnotite is a secondary hydrous potassium-vanadium-uranium mineral, while the other three are similar minerals with calcium replacing potassium. The later minerals occur above the water table in the zone that has been subjected to near surface secondary oxidation. Approximately 40% of the southern portion of the Tony M deposit is located in this zone, with the remainder, together with the Southwest deposit, located in the reduced zone below the water table.



Other ore-stage minerals identified in the USGS study include pyrite (0% to 3.3%), quartz overgrowths (0% to 17%), dolomite, and calcite (Wanty et al., 1990). The quartz overgrowths are often visible to the naked eye within the Tony M mine. While dolomite is associated with the mineralized zones, the abundance of calcite decreases in highly mineralized zones. This is thought to occur because calcite postdates the deposition of vanadium bearing chlorite and other ore-stage minerals that preferentially fill the pores of the mineralized zone.

No significant differences between cores, or within cores, have been identified for the sandstone framework mineralogy. Significant mineralogic differences, however, exist in the authigenic pore-filling material. These vary in abundance and type vertically within cores, in association with mineralized intervals (Northrop and Goldhaber, 1990).

The age of the Deposits is 115 million years, indicating that the mineralization formed shortly after deposition of the Brush Basin Member of the Morrison Formation (Ludwig, 1986, in Wanty et al., 1990).

## 7.5 Chemical Analysis of Mineralized Samples from the Property

Atlas conducted a metallurgical testing program on a series of composites prepared from core samples from Exxon drilling (Rajala, 1983). The results of this program are discussed in Section 13 of this Technical Report. The drill core was from the Bullfrog Property and did not include results from the 40 hole core drilling program conducted by Atlas from July 1983 to March 1984.

Samples from each deposit were combined to give representative composites. Each composite consisted of 0.5 ft drill core intervals combined in such a manner as to give a composite head analysis exceeding 0.2% U<sub>3</sub>O<sub>8</sub>. The Southwest composite samples contained 104 core intervals from 16 drill holes. The results of the analyses for uranium, vanadium, and calcium carbonate are compared with the values calculated based on the weighted value of each of the individual core samples included in the composite. Results of the analysis for Southwest deposit are presented in Table 7-1.

Table 7-2 presents the concentration of several minor elements occurring in the composites.

Table 7-1: Comparison of Composite Head Analyses with Calculated Head Analyses
Consolidated Uranium Inc. – Tony M Project

Composite Area	% U₃O <sub>8</sub>	% V <sub>2</sub> O <sub>5</sub>	V <sub>2</sub> O <sub>5</sub> /U <sub>3</sub> O <sub>8</sub>	% CaCO₃
Southwest	0.348	0.59	1.70	5.4
Southwest <sup>1</sup>	0.385	0.63	1.64	6.3

### Note:

1. Calculated Head Analyses Based on Sample Weighting

Table 7-2: Presence of Various Elements in Composite Samples of the Tony M Project

Consolidated Uranium Inc. – Tony M Project

Composite Area	% Cu	% Zn	% Pb	% Mo	% Zr	% As	Ag	Au
Southwest (%)	0.004	0.005	0.003	0.02	0.08	0.23	0.01	nil
Tony M (ppm) <sup>1</sup>	72	210	130	150	N.A.	132	N.A.	N.A.
Tony M (ppm) <sup>2</sup>	20	300	500	30	100	N.D.	N.D.	N.D.



#### Notes:

- 1. 300 lb to 400 lb sample collected by Jim Crock, USGS, from 145E/1015N + 14 ft on south rib of Tony M mine and analyzed in USGS laboratory using ICAP-AES.
- 2. Sample collected by F. Peterson, USGS from the same site in Tony M mine and analyzed in USGS laboratory using alternative semi-quantitative methods.
- 3. N.D.: Not detected.

The results provide confirmation of the chemical parameters of the Deposits.

The average concentration of CaCO<sub>3</sub> is a consideration for processing cost and ranges from 5.4% to 11.1% in the Southwest deposit. In its evaluation of mineral zones from 39 core holes from the Bullfrog Property, EFNI found that the carbonate content of the composites averaged 9.2% CaCO<sub>3</sub> at the 0.80 ft.% GT cutoff (EFNI, 1991). Table 7-2 indicates the presence of elevated concentrations of molybdenum and arsenic.

Plateau analyzed composite samples from monthly production from the Tony M mine over the period November 1982 to April 1983 and found that the 31,996 tons of ore had an average  $CaCO_3$  content of 6.22%, with an average  $U_3O_8$  grade of 0.159%. Much of the production for the 1982 to 1983 period came from the southern portion of Block B, while the balance was produced from Blocks E, F, and S.

Plateau also analyzed 13 uranium bearing zones from 10 core holes distributed over the Tony M deposit and found the CaCO<sub>3</sub> content ranged from 2.8% to a high of 18.5%, however, with the exception of a second high value of 17.4%, all of the other zones contain 7.6% CaCO<sub>3</sub> or less. If the two high values are excluded, the average CaCO<sub>3</sub> content decreases to 5.2%. The high carbonate zones are associated either with the relatively carbonate rich zone which lies within a few feet above the Tidwell contact, or with relatively thin (e.g., 0.5 ft to two feet) carbonate rich zones which occur higher up in the Salt Wash sandstones (Underhill, 1983).

The QP agrees with the observation by Northrop and Goldhaber (1990) that the character of the mineralized zones, which contain significant concentrations of vanadium chlorite and other pore filling minerals, effectively blocked the deposition of large amounts of carbonate and therefore the mineralized zones usually have a carbonate content that is less than the non-mineralized Salt Wash sandstone.

Geochemical analyses are available for both mineralized and unmineralized intervals of the sandstone, for minor element constituents in the Tony M and adjacent areas (Northrop and Goldhaber, 1990). The only major increase observed is for vanadium for which the average concentration increased from 13 ppm to 3,004 ppm (results for uranium were not provided). The other minor elements (Cr, Co, Cu, and Ni) increased from three to almost twelve times over the values for unmineralized sandstone, which range from 4 ppm to 8 ppm.

Molybdenum concentrations above detection levels were found to occur only proximal to mineralized horizons, and generally each mineralized horizon has an associated zone of molybdenum enrichment. Vanadium and chromium enrichment in the mineralized intervals occurs over a thicker interval than uranium and/or molybdenum.

The QP agrees that sample results indicate that the  $CaCO_3$  content in the Tony M deposit is in the range of 6.2% to 7.3%, while the average in the Southwest deposit is in the range from 5.4% to 9.2%. The results for the Southwest deposit suggest that the  $CaCO_3$  content increases with GT cut-off.



## 8.0 DEPOSIT TYPES

The Deposits are classified as sandstone hosted - uranium deposits. Sandstone-type uranium deposits typically occur in fine to coarse grained sediments deposited in a continental fluvial environment. The uranium may be derived from a weathered rock containing anomalously high concentrations of uranium, leached from the sandstone itself or an adjacent stratigraphic unit. It is then transported in oxygenated water until it is precipitated from solution under reducing conditions at an oxidation-reduction interface. The reducing conditions may be caused by such reducing agents in the sandstone as carbonaceous material, sulphides, hydrocarbons, hydrogen sulphide, or brines.

There are three major types of sandstone hosted uranium deposits: tabular vanadium-uranium Salt Wash types of the Colorado Plateau, uraniferous humate deposits of the Grants Mineral Belt, New Mexico area, and the roll-front type deposits of South Texas and Wyoming. The differences between the Salt Wash deposits and other sandstone type uranium deposits are significant. Some of the distinctive differences are as follows:

- The Deposits are dominantly vanadium, with accessory uranium.
- One of the mineralized phases is a vanadium-bearing clay mineral.
- The Deposits are commonly associated with detrital plant trash, but not redistributed humic material.
- The Deposits are entirely within reduced sandstone, without adjacent tongues of oxidized sandstone.

The vanadium content of the Henry Mountains Basin deposits is relatively low compared to many Uravan deposits. Furthermore, the Henry Mountains Basin deposits occur in broad alluvial sand accumulations, rather than in major sandstone channels as is typical of the Uravan deposits of Colorado. The Henry Mountains Basin deposits do, however, have the characteristic geochemistry of the Uravan deposits and are therefore classified as Salt Wash type deposits.

Sandstone-type uranium deposits typically occur in fine to coarse grained sediments deposited in a continental fluvial environment. The uranium is either derived from a weathered rock containing anomalously high concentrations of uranium or leached from the sandstone itself or an adjacent stratigraphic unit. It is then transported in oxygenated water until it is precipitated from solution under reducing conditions at an oxidation-reduction front. The reducing conditions may be caused by such reducing agents in the sandstone as carbonaceous material, sulphides, hydrocarbons, hydrogen sulphide, or brines.



# 9.0 EXPLORATION

No exploration work has been completed on the Property since 2009. A summary of the historical exploration programs completed by previous owners is presented in Section 6 of this Technical Report.



## 10.0 DRILLING

A summary of the historical drill programs completed by previous owners is presented below.

## **10.1** Drilling by Previous Owners

### **10.1.1 Rotary Drilling**

In February 1977, drilling commenced in what was to become the Tony M mine. Subsequently, Plateau reportedly drilled more than 2,000 rotary drill holes totalling approximately 1,000,000 ft, with over 1,200 holes were drilled on the Property. The balance of the drilling was completed on the adjacent properties in the area not part of the Acquisition. The holes were drilled using rotary tricone technology with a nominal hole diameter of 5.1 in. The rugged terrain over much of the former Tony M property made drilling access difficult or impossible, resulting in an irregular drill pattern.

Exxon commenced drilling on the Bullfrog Property in 1977, and at the time of sale to Atlas in July 1982, Exxon had drilled 1,782 holes. From July 1982 to July 1983, Atlas completed 112 drill holes delineating the Southwest and Copper Bench deposits on approximately 100 ft centres. After July 1983, Atlas completed an additional 49 core hole drilling program over the Bullfrog Property, as well as a 133 rotary drill hole program.

A total of 2,232 drill holes were completed on the Bullfrog property (Schafer, 1991):

Exxon 1,782 holes (80%)

Atlas 450 holes (20%)

Total 2,232 holes (100%)

Most of the drilling completed on the Southwest deposit, and adjacent properties to the north were conducted by rotary drilling using a tricone bit with a nominal diameter of 5.1 in. The Southwest deposit is delineated by drilling on approximately 100 ft centers, while properties to the north used a drill hole spacing ranging from 100 ft to 200 ft. In some areas, the rugged terrain made access difficult, resulting in an irregular drill pattern.

The mineralization on the Property is approximately horizontal, and all of the drilling was vertical. Deviation surveys were conducted on most drill holes in the Southwest deposit, providing an indication of how far the holes have drifted from vertical. The vertical holes provide a reliable estimate of the thickness of the Deposits.

SLR, as RPA, inspected the gamma logs for the Tony M Project drilling. SLR notes that logging records indicate that several drilling contractors were used, including Energy Drilling Co., McPherson Drilling Co., Pomco Drilling Co., Southwest Drilling Co., Kachina Drilling Co., Beeman Drilling Co., and Petty Drilling Co.



## 10.1.2 Core Drilling

Records indicate that a total of 32 core holes were drilled in the Southwest deposit while 25 core holes were drilled in the vicinity of the Tony M deposit (Table 10-1).

Table 10-1: Core Drilling on the Tony M Project
Consolidated Uranium Inc. – Tony M Project

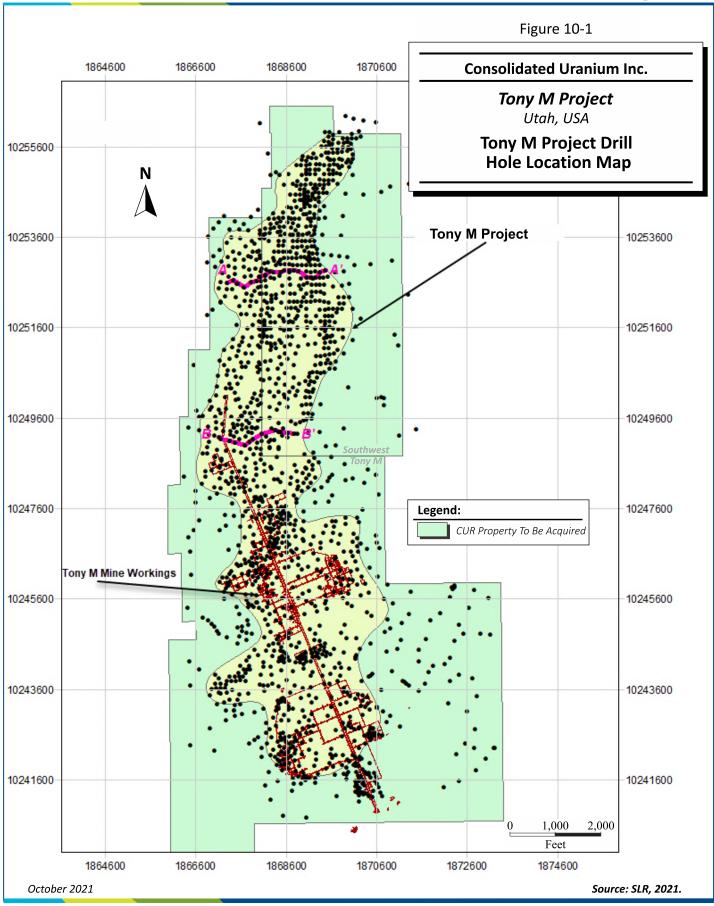
Deposit	Exxon-Atlas	Plateau	NFS/BP Exploration	Total
Southwest	32	-	-	32
Tony M	-	24	-	24
Tony M	-	-	1	1
Total	32	24	1	57

Drilling on the former Tony M property includes 24 core holes completed by Plateau and one core hole completed by NFS/BP Exploration Inc. Of the 25 holes, only 11 are located within the mineralized area comprising the Tony M deposit. The core holes provided samples of the mineralized zone for chemical and amenability testing, as well as flow sheet design for the Ticaboo Mill. The samples were also used to determine geologic and engineering properties of the mineralized zone. SLR was not provided access to historic drill core for the Tony M deposit. Location of the drilling exclusive to the Property is presented in Figure 10-1.

Energy Fuels, Denison, and IUC carried out no additional surface drilling or exploration on the Property since the last historical Mineral Resource estimate was completed in 2012.

The QP is not aware of any drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of the results. In the QP's opinion, until the validation and confirmation work recommended in Section 26 of this Technical Report is conducted, the drillhole database is not to be considered current. SLR notes, however, that it is considered adequate for the purposes of this Technical Report, being the basis for the recommended work plan.







## 11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

Information regarding the work undertaken by previous owners is summarized below.

## 11.1 Sampling Method and Approach

The original downhole gamma logging of surface holes was completed for the Southwest deposit by Century Geophysical Corp. (Century) and Professional Logging Services, Inc. (PLS) under contract to Exxon. Atlas also contracted Century for this service. Standard logging suites included radiometric gamma, resistivity, and self-potential measurements, supplemented by neutron-neutron surveys for dry holes. Deviation surveys were conducted for most of the holes. Century used its CompuLog system consisting of truck-mounted radiometric logging equipment, including a digital computer. The natural gamma (counts per second (cps)), self-potential (millivolts), and resistance (ohms) were recorded at 1/10<sup>th</sup> ft increments on magnetic tape and then processed by computer to graphically reproducible form. The data was transferred from the tape to computer for use in resource estimation.

Assays of samples from core drilling were collected by company geologists and submitted to various commercial laboratories for analysis. Exxon used Core Labs, Albuquerque, for at least some of this analytical work. Results of these analyses were compared to  $eU_3O_8$  values from gamma logs to evaluate radiometric equilibrium, logging tool performance, and validity of gamma logging.

Atlas (Rajala, 1983) prepared composite samples from Southwest deposit core recovered by Exxon for metallurgical testing. The chemical analyses of the samples are described in Section 7.5 of this Technical Report. The results of the test program are provided in the Rajala (1983) report and are discussed in Section 13 of this Technical Report. Testing completed included leach amenability studies, settling, and filtration tests. Rajala (1983) did not indicate where the analytical and test work was performed, however, at the date of that report, Atlas had its own laboratories at its Moab, Utah, uranium/vanadium processing plant, and SLR is of the opinion that the analyses were conducted there.

For the Tony M deposit, the same suite of logging surveys and procedures as employed by Exxon and Atlas was conducted on a majority of the holes. Most of the holes were logged by Century under contract to Plateau. Plateau also used PLS to log a small portion of the holes drilled in the mid-1980s. Deviation surveys were conducted for many of the holes. Holes drilled in the southern half of the Tony M deposit intersect rocks that are above the water table and were therefore dry. Neither self-potential nor resistance logs are available for these holes. Neutron-neutron logging was conducted in some holes in this area providing information on rock characteristics. Assays of samples from core drilling were collected by company geologists and submitted for analysis to Skyline Labs, Hazen Research Inc. (Hazen), and Minerals Assay Laboratory, in addition to other commercial laboratories.

The initial logging by Century was completed using analog equipment. In 1978, Century's CompuLog digital system replaced the analog equipment. At the time Plateau conducted a series of comparative tests logging selected core holes with both types of equipment as described in LaPoint (1978). The results were discussed with Century personnel and analyzed to assure that the CompuLog system provided equivalent or higher quality logs than the analog system.

It was concluded that the CompuLog system provided a more accurate determination of uranium in the relatively thin, high grade mineralized zones occurring in the Tony M deposit. The CompuLog results were found to be consistently 10% to 20% less than equivalent analog logs, however, the results were found to agree more closely with the results of chemical analyses of core from the logged holes.



Plateau contracted Hazen for metallurgical and analytical testing of samples from the Tony M deposit. This information was used to design the processing circuit for the Ticaboo Mill, which was constructed approximately four miles south of the portal of the Tony M mine. The results of this analytical work were not available to SLR.

No drilling, logging, or core sampling was conducted by Energy Fuels or Denison and its predecessor IUC on the Property.

Historical Mineral Resource estimates for the Property are based on the %eU<sub>3</sub>O<sub>8</sub> gamma log conversion values used to identify the mineralized zone, its thickness, and calculate an average grade.

No adjustment to reflect radiometric disequilibrium in the Deposits was made. The gamma log values were used to identify the mineralized zone and its thickness, and to calculate average grade.

Confirmation assays of chemical  $\%U_3O_8$  were completed on drill core samples for comparison and calibration with  $\%eU_3O_8$  values from gamma logging. As outlined in LaPoint (1978), Plateau had developed written procedures for the analysis of core to define such factors as carbonate content, and gamma probe versus chemical uranium content. LaPoint (1978) included a flow chart of procedures and describes handling and description of core before splitting, splitting procedure, assaying, evaluation of results, follow-up including duplicate check analyses, minor element analyses, and final storage of the core.

As discussed in the subsequent subsections, Plateau conducted a systematic program of analysis at independent commercial laboratories to confirm the reliability of results from its own analytical laboratory. Bhatt (1983) reports that for 2,354 analyses of radiometric and chemical uranium performed by the Plateau laboratory, 1,118 check analyses were performed on samples at independent commercial laboratories.

SLR is of the opinion that historical work on the Property was conducted using industry practice that was standard at the time.

## 11.2 Sample Preparation and Analysis

The following is a description of the method used for preparing the composites as reported by Rajala (1983). Each of the composites consisted of 0.5 ft drill core intervals combined in such a manner as to give a composite head analysis exceeding  $0.2~\%U_3O_8$ . Only one half of the full core was available for composite preparation. The Southwest composite samples contained 104 core intervals. When possible, the composites were prepared using equal weights from each interval, however, since the sample weights were small (e.g., approximately 50 g) for some of the intervals, the total weight of the composites were limited. Each minus 10 mesh interval was blended on a rolling mat prior to splitting out the appropriate weight for the composite.

The composites were stored in cylindrical containers and then placed on a set of rolls for at least eight hours to achieve complete blending of the intervals. The blended samples were placed on a rolling mat and flattened with a spatula. A head sample, along with 500 g test samples, was split out by random cuts of the primary samples. The head samples were pulverized to minus 100 mesh for chemical analysis.

Every interval was analyzed for  $U_3O_8$ ,  $V_2O_5$ , and  $CaCO_3$ . The initial  $U_3O_8$  analyses were performed fluorometrically, with samples greater than  $0.02~\text{MU}_3O_8$  being rerun volumetrically. The Atlas fluorometric laboratory also performed the initial  $V_2O_5$  analyses and the Atlas ore lots laboratory repeated  $V_2O_5$  assays on samples that assayed greater than  $0.2~\text{MV}_2O_5$ . Most  $CaCO_3$  analyses were run only once in the Atlas ore lots laboratory.



Composite samples were analyzed volumetrically for both  $U_3O_8$  and  $V_2O_5$ . Table 7-1 presents a comparison of the composite head analyses with the calculated head analyses.

Procedures followed by Exxon, Atlas, and Plateau, together with contractors Century and PLS, were well documented and at the time followed best practices and standards of companies participating in uranium exploration and development. Onsite collection of the downhole gamma data and onsite data conversion limit the possibility of sample contamination or tampering.

## 11.3 Status of Chemical Equilibrium of Uranium

### 11.3.1 Southwest Deposit

Exxon conducted analyses of samples from core drilling between 1978 to 1980 in the Southwest deposit, using results from Core Labs. Exxon found that the radioactive disequilibrium of potentially economic grade intercepts in cores, measured as the ratio of chemical  $U_3O_8$  to log radiometric equivalent ( $eU_3O_8$ ), varied from 0.80 to 1.35 and averaged 1.06, close to the equilibrium value of 1.0. Milne (1990) reported that, while the Atlas investigation of samples from core from an additional 40 drill holes was incomplete at the time, Atlas had identified no significant disequilibrium problem.

SLR did not have access to the results of the Atlas study referenced by Milne (1990).

## 11.3.2 Tony M Deposit

Plateau conducted an extensive investigation of the state of chemical disequilibrium of uranium in the Tony M deposit. Plateau became aware of this issue during initial development of the Tony M mine, as the uranium mineralization first encountered in developing the southern portion of the Tony M deposit is located above the water table. The mineralization is oxidized, and the state of disequilibrium is both quite variable and locally unfavorable, with much of the muck mined being low grade. At the time, the uranium market price was increasing and moving towards its 1980 peak of over \$43/lb  $U_3O_8$  and the mine cut-off grade was  $0.04~\%eU_3O_8$ .

For several months during this period, Plateau leased a spectrometer from Princeton Gamma-Tech (PGT) that measured the concentration of uranium by detecting Protactinium, the first decay product of <sup>238</sup>U, thus eliminating the uncertainty of disequilibrium. The PGT spectrometer, together with a nitrogen cooled germanium crystal, was installed at the portal of the Tony M mine where it was used to scan and determine the uranium content of every buggy of muck exiting the mine. Use of the PGT unit was discontinued as Plateau developed alternative methods of grade control through sampling and chemical analysis.

The most comprehensive analysis of disequilibrium of uranium in the Tony M deposit was completed by Bhatt (1983) using the results from 2,354 composite samples collected from buggies coming from the Tony M mine over the period 1980 to 1982. Based on sampling records, Bhatt divided the analytical results according to various areas of origin in the Tony M mine. This provided the basis to estimate the relative state of disequilibrium for uranium in different areas of the Tony M deposit. A summary of Bhatt's results is given in Table 11-1.

Bhatt reports that the analyses of closed can uranium and chemical uranium were performed at the Plateau laboratory at the Ticaboo Mill. Bhatt also reports that many independent check analyses were sent to commercial laboratories as a quality assurance practice.



Table 11-1: Tony M Mine Grade and Factor Analyses (All Data) Average (Arithmetic Mean)

Consolidated Uranium Inc. – Tony M Project

Mine Block (Plateau Mine Blocks)	Average Probe (%eU <sub>3</sub> O <sub>8</sub> )	Average Closed Can Radiometric (%eU <sub>3</sub> O <sub>8</sub> )	Average Chemical (%chemU3O8)	Disequilibrium Ratio: (Chem/CC)	Total Number of Composite Samples: 1980 to1982 <sup>1</sup>
В	0.104	0.117	0.114	0.98	426
S	0.090	0.116	0.129	1.11	323
E	0.086	0.103	0.113	1.09	504
F	0.113	0.133	0.141	1.06	262
L	0.080	0.097	0.109	1.13	114
Q	0.094	0.105	0.064	0.61	21
Н	0.044	0.055	0.072	1.31	60
1	0.035	0.041	0.048	1.17	53
Mine Average	0.092	0.109	0.116	1.06	1,763
Protore <sup>2</sup>	0.047	0.065	0.058	0.89	265

Source: Bhatt, 1983

### Note:

- 1. The Tony M mine production for 1980 to 1982 was 189,332 tons at an average grade of 0.096 %eU<sub>3</sub>O<sub>8</sub> and 0.119 %chemU<sub>3</sub>O<sub>8</sub>.
- 2. Protore was designated muck with a grade >0.04 %eU<sub>3</sub>O<sub>8</sub> and <0.06 %eU<sub>3</sub>O<sub>8</sub>.

Based on the analysis, Bhatt (1983) concluded the following:

- The state of disequilibrium varies from location to location within the Tony M deposit.
- With the exception of one small area in the southern portion of the Tony M deposit, the equilibrium factor is positive.
- Low grade material with less than 0.06 %U<sub>3</sub>O<sub>8</sub> is depleted in uranium.
- Higher grade material containing more than 0.06 %U₃O₃ is enriched in uranium.

Bhatt (1983) also concluded that the overall weighted equilibrium factor of chemical to radiometric uranium grade (at a GT cut-off of 0.28 ft%) for the Tony M deposit was approximately 1.06. The disequilibrium factor for the Tony M deposit is similar to the factor of 1.06 determined by Exxon for the Southwest deposit.

In the QP's opinion, the historical sample preparation, analysis, and security procedures at the Property were adequate for use in the estimation of historical Mineral Resources. The QP also opines that, based on the information available, the original gamma log data and subsequent conversion to  $\%eU_3O_8$  values are reliable but slightly conservative estimates of the uranium  $U_3O_8$  grade. Furthermore, there is no evidence that radiometric disequilibrium would be expected to negatively affect the historical uranium resource estimates of the Deposits. The QP is also of the opinion that the disequilibrium should be taken into consideration when mining is conducted in the Tony M mine in areas above the static water table.



## 12.0 DATA VERIFICATION

As no recent exploration program has been conducted on the Property, there is no current data to be verified.

In preparing this Technical Report, the QP conducted audits of historic records to assure that the grade, thickness, elevation, and location of uranium mineralization used in preparing the historical 2012 Mineral Resource estimate correspond to mineralization indicated by the original gamma logs of drill holes on the Property. The QP reviewed the available information to verify the reliability of the %eU<sub>3</sub>O<sub>8</sub> grade as determined by downhole gamma logging.

The QP also conducted a review of Energy Fuels' and Plateau's historic production records for the Tony M mine to determine how many tons of uranium bearing material, and at what average grade, were produced from the Tony M mine.

Based on its review of the grade and thickness of uranium mineralization indicated in the original gamma logs for the Property, and comparisons with the computer-generated GT composites, the QP is of the opinion that the original gamma log data and subsequent conversion to eU<sub>3</sub>O<sub>8</sub> values are reliable for the Deposits.

Plateau and Exxon both conducted programs to investigate the state of chemical equilibrium of uranium in the Deposits, respectively, and to verify the reliability of the  $eU_3O_8$  grade as determined by downhole gamma logging. This was completed by comparing the results of chemical analysis of drill core, closed can radiometric analysis of the core samples, and downhole gamma logs for the core intervals in question. Plateau also conducted a much more extensive sampling program from 189,332 tons of mine production, equal to approximately 80% of total production, of mineralized material extracted from the Tony M mine. Analyses of these samples were used to establish the relationship between the chemical and radiometric uranium grade within most areas of the Tony M deposit (Bhatt, 1983).

While the QP reviewed the detailed results of this verification program as described in Bhatt (1983), the QP did not have access to the original analyses for this investigation.

The results of both the core analysis program for the Southwest deposit and Plateau's Tony M mine production sampling program indicate that while the state of chemical equilibrium does vary from zone to zone in the Deposits, taken overall, the gamma log estimates of grade are slightly conservative and underestimated. Atlas reportedly conducted a program of analysis of core samples, with similar results. The QP did not have access to any of the data from Atlas's investigation.

Furthermore, the QP reviewed the chemical analyses of core from diamond drill holes from the Southwest deposit (discussed in Section 11 of this Technical Report) and the results of the Tony M mine muck sampling program. Based on this review, the QP is of the opinion that the gamma logging estimates of grade for the Deposits are slightly conservative and underestimate the average  $U_3O_8$  grade by up to 6%, as well as some portions of the southern Tony M deposit by as much as 6% to 31%, and it may overestimate an area in the southeast Tony M deposit by approximately 40%. The QP also agrees with Bhatt's conclusion that mineralized material with a grade of <0.06 % $U_3O_8$  has a chemical uranium content that is lower than the radiometric uranium content and is in a negative state of disequilibrium.

The QP did not verify any chemical analyses for the Southwest deposit as no core samples were available.

After Tony M mine production was terminated in mid-1984, Plateau reported that the Tony M ore stockpile consisted of 237,441 tons at an average chemical grade of 0.121  $\%U_3O_8$  (PAH, 1985). In addition, by January 31, 1984, Plateau had surveyed a low-grade stockpile of 71,600 tons at an average grade of



 $0.054~\%U_3O_8$  which Plateau classified as protore. Plateau defined protore as material with an average chemical uranium grade >0.04  $\%U_3O_8$  and <0.06  $\%U_3O_8$ .

In conducting its review, the QP found that Plateau's historic records of extraction of mineralized material from the Tony M mine may appear to be contradictory. In the QP's opinion, however, the historic production records provide a reliable estimate of mine production when placed in context with the then current spot market price of uranium, Plateau's understanding of the change in chemical disequilibrium of mineralized material with grade, and the revision to a higher cut-off grade from  $0.04~\text{MU}_3O_8$  to  $0.06~\text{MU}_3O_8$  by Plateau in August 1981.

No information was available to the QP identifying the current location(s) of the stockpiled material produced from the Tony M mine.

The QP is of the opinion that historical database verification procedures for the Property comply with industry standards and best practices and are adequate for the purposes of future Mineral Resource estimation updates.



## 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

A summary of the historical mineral processing and metallurgical testing is presented below. The historical test work was not verified by the QP and is not being treated as current or relevant by the QP nor CUR. It is presented only as background historical information.

The following information is extracted from the 2012 Technical Report (Roscoe, et al., 2012) and included for reference. No additional metallurgical testing has been completed on the Property since being placed on care and maintenance in 2008.

Drill core from the Bullfrog Property was tested by Atlas in 1983 to determine metallurgical parameters (Rajala, 1983). Amenability results for a strong acid leach indicated overall recoveries of 99  $\%U_3O_8$  and 90  $\%V_2O_5$ . Additional testing of a mild acid leach and an alkaline leach gave recoveries of 97  $\%U_3O_8$  and 40  $\%V_2O_5$  for both. Acid consumption for the strong acid leach was 350 lb/ton.

In 1982, the Shootaring Canyon mill processed approximately 27,000 tons of mineralized material from the Tony M mine, however, further details were not available for SLR's review. It was noted that US Nuclear Regulatory Commission (NRC) report lists a recovery of 90% for the milling operation. SLR was not provided this NRC report for review as part of this Technical Report.

From November 2007 to December 2008, a total of 162,384 tons at 0.131 %U $_3$ O $_8$  containing 429,112 lb U $_3$ O $_8$  was trucked to the White Mesa Mill at Blanding, Utah, for processing. Of this material, 90,025 tons at 0.165 %U $_3$ O $_8$  (297,465 lb U $_3$ O $_8$ ) was extracted by Denison from the Tony M mine and 72,359 tons at 0.091%U $_3$ O $_8$  (131,647 lb U $_3$ O $_8$ ) came from stockpiled material mined by previous operators. The White Mesa Mill is described in Section 17 of this Technical Report Recovery Methods.



# **14.0 MINERAL RESOURCE ESTIMATE**

There are no current Mineral Resources reported for the Property.



# **15.0 MINERAL RESERVE ESTIMATE**

There are no Mineral Reserves reported for the Property.



# **16.0 MINING METHODS**

Not applicable.



# **17.0 RECOVERY METHODS**

Not applicable.



# **18.0 PROJECT INFRASTRUCTURE**

Not applicable.



# 19.0 MARKET STUDIES AND CONTRACTS



# 20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT



# **21.0 CAPITAL AND OPERATING COSTS**



# **22.0 ECONOMIC ANALYSIS**



#### 23.0 ADJACENT PROPERTIES

The information contained in this section has not been independently verified by the QP and this information is not necessarily indicative of the mineralization on the Property.

Figure 4-2 presents the location of the adjacent properties relative to the Property.

#### 23.1 Copper Bench – Indian Bench Deposit

The Copper Bench – Indian Bench uranium-vanadium deposit was discovered by Exxon during drilling started on the Bullfrog Property in mid-1977. The Copper Bench-Indian Bench deposit along with the Southwest deposit formed the historic Bullfrog Property. The Copper Bench-Indian Bench deposit trends northwesterly across the southern portion of the T34S R11E SLM.

Host rocks for the Copper Bench-Indian Bench uranium-vanadium deposits are Upper Jurassic sandstones of the Salt Wash Member of the Morrison Formation. The Copper Bench-Indian Bench deposit extends northwesterly over a length of approximately 15,000 ft and a width of 1,000 ft to 2,500 ft approximately 1.5 miles northeast of the Property.

Mineral Resources of the Copper Bench-Indian Bench deposit were estimated by Energy Fuels in 2012 using the contour method and audited by RPA in the 2012 Technical Report (Roscoe, et al., 2012). Energy Fuels has reviewed these estimates which now form part of its Mineral Resource portfolio.

The Mineral Resources classified as Indicated and Inferred categories at a cut-off grade of  $0.20 \text{ }\%\text{eU}_3\text{O}_8$  over a minimum thickness of four feet and minimum GT of  $0.8 \text{ }\text{ft }\%\text{eU}_3\text{O}_8$ . Total Indicated Resources are 0.71 Mst at an average grade of  $0.32 \text{ }\%\text{eU}_3\text{O}_8$  containing  $4.6 \text{ }\text{Mlb }\text{eU}_3\text{O}_8$ . Additional Inferred Resources total 0.75 Mst at an average grade of  $0.36 \text{ }\%\text{eU}_3\text{O}_8$  containing  $5.3 \text{ }\text{Mlb }\text{eU}_3\text{O}_8$ .

#### 23.2 Frank M Deposit

The Frank M vanadium-uranium deposit was discovered by Plateau during drilling in mid-1977. The Frank M deposit is located in Section 2 and 3 of Township 35 South, Range 11 East S.L.M. The Frank M deposit is located approximately 2.5 miles northeast of the Tony M deposit and is a southeasterly continuation of the Copper Bench deposit.

The host for the Frank M deposit is the fluvial sandstone of the Salt Wash Member of the Jurassic Morrison Formation. The mineralized zone occurs between 60 ft and 100 ft above the base of the Salt Wash Member. The zone dips between three and five degrees to the northwest, which is generally conformable to the inclination of the sandstone beds hosting the Frank M deposit.

The Frank M deposit is approximately 7,000 ft long and is commonly between 1,500 ft and 2,000 ft wide. The mineralized zone is located at a depth of 200 ft below the ground surface in the east and over 500 ft below the ground surface to the west. The average drilling depth in the area is approximately 400 ft. Nearly the entire Frank M deposit occurs above the static water table, which only intersects the mineralized horizon in the vicinity of the northwesterly limit of the Frank M property.

In 1981, Plateau retained Geostat Inc. to estimate resources for the Frank M deposit using geostatistical methods (Plateau, 1981). The kriged historic estimate at a cut-off of four feet of  $0.07\%~U_3O_8$  includes inplace resources of 1.49 Mst at an average radiometric grade of  $0.117~\%U_3O_8$  (Plateau, 1981). SLR notes that this Mineral Resource estimate for the Frank M deposit was not prepared to CIM (2014) definition standard, has not been reviewed by SLR, and is provided for informational purposes only.



Anfield Energy, which acquired the Frank M deposit from Uranium One Inc. on September 1, 2015, is the current owner of the Frank M property.

#### 23.3 Lucky Strike 10 Deposit

The Lucky Strike 10 deposit is located on the southeast rim of Shootaring Canyon approximately 1,400 ft southeast of the Tony M mine portal. The Lucky Strike 10 deposit is a southeasterly extension of the Tony M mineralized trend and is located above the water table. Plateau records report a historic polygonal Mineral Resource estimate of approximately 67,234 tons including 114,410 pounds at a radiometric grade of  $0.084\%~U_3O_8$  at a GT cut-off of 0.28~ft%. Plateau records indicate that 22,381 tons at a chemical grade of  $0.04~\%U_3O_8$  were mined from the Lucky Strike 10 deposit during the 1976 to 1978 period (Gupta, 1983).

This Mineral Resource estimate for the Lucky Strike 10 deposit is historic in nature, and relevant as it indicated the presence of uranium mineralization in the area, however the historic Mineral Resource estimate was not prepared to CIM (2014) definition standards and should not be relied upon. SLR has not reviewed this Mineral Resource estimate and it is provided for informational purposes only.



# 24.0 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.



#### 25.0 INTERPRETATION AND CONCLUSIONS

SLR offers the following conclusions.

#### 25.1 Geology and Mineral Resources

- The Deposits are of the Colorado Plateau sandstone hosted uranium type.
- The Property has been the site of considerable mining and exploration, including the drilling and logging of approximately 2,000 rotary holes and 57 core holes, of which 1,060 rotary holes were used to prepare the historical 2012 Mineral Resource estimates.
  - o In the opinion of the QP, the drill hole databases for the Deposits are appropriate and acceptable for future Mineral Resource estimation.
- Several historical Mineral Resource estimates have been previously carried out on the Deposits.
   SLR, as the former RPA and Scott Wilson RPA, has prepared previous Technical Reports on the Property as of June 27, 2012, March 19, 2009, and September 9, 2006, in compliance with NI 43-101. These estimates are historical in nature and should not be relied upon. CUR is not intending on treating the historical estimates as current Mineral Resource estimates.
  - o In June 2012 RPA, now SLR, reported Indicated Mineral Resources for the Tony M and Southwest Deposits as totalling, 1.03 Mst at 0.24% U<sub>3</sub>O<sub>8</sub>, containing 4.83 Mlb U<sub>3</sub>O<sub>8</sub>, and 0.66 Mst at 0.25% U<sub>3</sub>O<sub>8</sub> containing 3.30 Mlb U<sub>3</sub>O<sub>8</sub>, respectively. Inferred Mineral Resources for the Tony M and Southwest Deposits total, 0.67 Mst at 0.17% U<sub>3</sub>O<sub>8</sub> containing 2.22 Mlb U<sub>3</sub>O<sub>8</sub>, and 0.24 Mst at 0.14% U<sub>3</sub>O<sub>8</sub> containing 0.68 Mlb U<sub>3</sub>O<sub>8</sub>, respectively.
  - The 2012 Mineral Resource estimates are historical in nature and should not be relied upon. CUR is not intending on treating the historical estimates as current Mineral Resource estimates. Further work recommended by the QP, as outlined in Section 26 of this Technical Report, should be completed to classify the mineralization as a current Mineral Resource.
- Significant historical uranium production has occurred at the Property in two phases. Between September 1979 and April 1984 Plateau produced a total of approximately 136,318 tons at an average grade of 0.128% U<sub>3</sub>O<sub>8</sub> for348,058 lb U<sub>3</sub>O<sub>8</sub> and between September 2007 to December 2008 Denison produced 90,025 tons at an average grade of 0.165 % U<sub>3</sub>O<sub>8</sub> for 297,465 lb U<sub>3</sub>O<sub>8</sub>.
- No Mineral Reserves have been estimated for the Property.

#### **25.2** Risks

In the QP's opinion, there are no significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information presented in this Technical Report, and the data provided to SLR by CUR and Energy Fuels and is believed to be reasonably representative of the Property geology and uranium mineralization.



#### 26.0 RECOMMENDATIONS

SLR offers the following recommendations.

#### **26.1** Geology and Mineral Resources

SLR recommends the following two-phase program for updating the historical resource estimates:

#### 26.1.1 Phase 1: Confirmation Drilling Program

- 1. Conduct a 10 to 20 rotary drill hole confirmation exploration program across the Property to: 1) validate historical equilibrium analysis, 2) verify historic reported uranium grades, and 3) update classification of Inferred Mineral Resources to Indicated. Average depth per hole is estimated to be approximately 570 ft. Drill hole placement should be conducted by a CUR geologist with a particular focus on the Southwest deposit.
  - To save costs on equilibrium analysis SLR recommends utilizing Prompt Fission Neutron (PFN)
    drill hole geophysical logging as an alternative to collecting core for equilibrium analysis. PFN
    logging has proven to be a reliable methodology for equilibrium analysis and has a strong
    performance record on similar uranium deposits in the USA.

SLR estimates the cost of the Phase 1 work will range from US\$570,000 to US\$1,140,000 (estimated costs per drill foot US\$100, includes equilibrium analysis costs using PFN tool).

#### 26.1.2 Phase 2: Preliminary Economic Analysis and Updated Resource Estimate

- 1. Following completion of the Phase 1 confirmation drilling program, revisit and update Mineral Resource estimates for the Property using a similar approach to the GT contour methodology and/or block modeling approach using updated processing and operating costs and recoveries.
  - This work will include depleting resources from historical production records.
- 2. Carry out a PEA of re-opening the Tony M mine in conjunction with Item 1.

SLR estimates the cost of this work to be US\$60,000 for the updated Mineral Resource estimate and approximately US\$150,000 for the PEA for a total of approximately US\$210,000 for Phase 2.



#### **27.0 REFERENCES**

- Agnerian, H., and Roscoe, W.E., 2003, The Contour Method of Estimating Mineral Resources, Roscoe Pestle Associates, Inc. paper, 9 pp.
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#### 28.0 DATE AND SIGNATURE PAGE

This report titled "Technical Report on the Tony M Project, Utah, USA" with an effective date of June 30, 2021, was prepared and signed by the following author.

(Signed & Sealed) Mark B. Mathisen

Dated at Lakewood, CO October 15, 2021 Mark B. Mathisen, C.P.G. Principal Geologist



### 29.0 CERTIFICATE OF QUALIFIED PERSON

#### 29.1 Mark B. Mathisen

I, Mark B. Mathisen, C.P.G., as an author of this report entitled "Technical Report on the Tony M Project, Utah, USA" with an effective date of June 30, 2021 (the Technical Report), prepared for Consolidated Uranium Inc. (CUR), do hereby certify that:

- 1. I am a Principal Geologist with SLR International Corporation, of Suite 100, 1658 Cole Boulevard, Lakewood, CO, USA 80401.
- 2. I am a graduate of Colorado School of Mines in 1984 with a B.Sc. degree in Geophysical Engineering.
- 3. I am a Registered Professional Geologist in the State of Wyoming (No. PG-2821), a Certified Professional Geologist with the American Institute of Professional Geologists (No. CPG-11648), and a Registered Member of SME (RM #04156896). I have worked as a geologist for a total of 23 years since my graduation. My relevant experience for the purpose of the Technical Report is:
  - Mineral Resource estimation and preparation of NI 43-101 Technical Reports.
  - Director, Project Resources, with Denison Mines Corp., responsible for resource evaluation and reporting for uranium projects in the USA, Canada, Africa, and Mongolia.
  - Project Geologist with Energy Fuels Nuclear, Inc., responsible for planning and direction of field
    activities and project development for an in situ leach uranium project in the USA. Cost analysis
    software development.
  - Design and direction of geophysical programs for US and international base metal and gold exploration joint venture programs.
- 4. I have read the definition of "Qualified Person" set out in National Instrument 43-101 *Standards for Disclosure for Mineral Projects* (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 5. I visited the Tony M Project on July 7, 2021.
- 6. I am responsible for all sections and overall preparation of the Technical Report.
- 7. I am independent of CUR, Energy Fuels (the Vendor) and the Property as per TSXV Appendix 3F and applying the test set out in Section 1.5 of NI 43-101.
- 8. I have been involved previously with the Property from 2009 to 2012 when serving as Director of Project Resources with Denison Mines. Since the Property was acquired by Energy Fuels Resources (USA) in 2012 I have had no involvement with the Property that is the subject of the Technical Report.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.



10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 15<sup>th</sup> day of October 2021,

(Signed & Sealed) Mark B. Mathisen

Mark B. Mathisen, C.P.G.

