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Thor Mining PLC
21 July 2020

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# THOR MINING PLC

## HIGH GRADE URANIUM FIELD SAMPLING RESULTS
## US URANIUM / VANADIUM PROJECT

The directors of Thor Mining Plc ("Thor" or the "Company") (AIM, ASX: THR) are pleased to advise high grade uranium and vanadium assay results from Colorado mineral claims held by American Vanadium Pty Ltd (AVU).

AVU holds interests in uranium and vanadium focussed projects in Colorado and Utah in the United States of America. The Company announced on 1 June 2020 an option agreement to acquire AVU, subject to satisfaction of due diligence requirements.

These final high-grade uranium assays are from 13 outstanding samples deemed too radioactive for the original laboratory.

**Highlights:**

- The 13 assay results averaged **0.706% $U_3O_8$ and 1.36% $V_2O_5$.**
- Four samples assayed **1.0% $U_3O_8$** or greater with a best uranium assay of **1.25% $U_3O_8$**
- Three samples assayed over **2% $V_2O_5$** with a best vanadium assay of **3.47% $V_2O_5$**
- Samples previously tested and reported were also assayed in the Hazen laboratory with results slightly above, but broadly confirming the earlier report.

***Mick Billing, Executive Chairman of Thor Mining, commented:***
"*The samples collected have been shown to host very high grade uranium and vanadium mineralisation, which is considered typical of historical production performance in the Uravan Mineral Belt.*"

"*Work associated with due diligence for the acquisition of the projects is nearing completion, and while we are past the due diligence period estimated, we have maintained an active dialogue with the project vendors & hope to be able to complete this process shortly.*"

The field component of the due diligence program undertaken by the company's Colorado based team has included sampling of accessible mineralisation in multiple locations across the mining claim area. Mineralisation predominantly occurs in the Salt Wash geological unit (shaded orange) where most sample locations occur. A combination of in situ outcrop samples and historic mine dump samples were sampled.

Sampling was not conducted at the Vanadium King site in Utah as the mineralised Salt Wash formation does not outcrop in the project area and there has been no mining disturbance.

Results presented in this announcement (Table A) are from the outstanding 13 samples previously described (www.thormining.com/sites/thormining/media/pdf/asx-announcements/20200708-us-uranium.vanadium-sampling-assays.pdf) which due to higher radioactivity required a specialist laboratory.

Due to variance in the results of the two laboratories, Huffman Hazen, and ALS Global, the results of samples assayed in both laboratories are also provided (Table B).

Table A: Uranium Sample Results

| Prospect | Sample No. | Easting | Northing | Sample Type | % $U_3O_8$ | % $V_2O_5$ | Comments |
|---|---|---|---|---|---|---|---|
| Ground Hog | WR-001 | 687927 | 4223836 | Outcrop | 0.52 | 1.63 | chip sample from outcrop |
| Rim Rock | WR-003 | 687660 | 4225839 | Adit wall | 0.89 | 1.68 | chip sample from outcrop |
| Rim Rock | WR-004 | 687660 | 4225839 | Grab | **1.00** | **1.165** | ore spillage |
| Wedding Bell | WR-005 | 687333 | 4224766 | Grab | 0.44 | 0.339 | dump sample |
| Wedding Bell | WR-006 | 687202 | 4224797 | Grab | 0.24 | 0.602 | loose sample from historic test pit |
| Lark Mines | WR-009 | 691031 | 4226911 | Dump | 0.24 | 0.219 | dump sample |
| Lark Mines | WR-010 | 690763 | 4226921 | Dump | **1.17** | **1.70** | dump sample |
| Lark Mines | WR-011 | 690468 | 4226608 | Dump | **0.39** | **1.099** | dump sample |
| Diana Mine | WR-012 | 690142 | 4225830 | Dump | **1.11** | **2.08** | dump sample |
| Babe Ruth | WR-014 | 689732 | 4225603 | Dump | 0.34 | 2.35 | dump sample |
| unnamed | WR-015 | 688347 | 4225808 | Grab | **0.91** | **0.542** | ore spillage |
| Rim Rock | WR-016 | 687627 | 4225392 | Dump | **1.25** | **0.867** | dump sample |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Jack Knife | WR-020 | 687081 | 4223998 | Pit Wall | **0.68** | **3.47** | chip sample |

Table B: Vanadium Sample Results, including comparison with previously reported

| **Prospect** | **Sample No.** | **Easting** | **Northing** | **Sample Type** | **Hazen Assays (Current)** | | **ALS Assays (Previous)** | | **Comments** |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | **% $U_3O_8$** | **% $V_2O_5$** | **% $U_3O_8$** | **% $V_2O_5$** | |
| Ground Hog | WR-002 | 688030 | 4223849 | Outcrop | **0.09** | **0.998** | **0.061** | **0.965** | chip sample from outcrop |
| Big Bull | WR-007 | 692453 | 4226633 | Dump | 0.10 | 0.667 | 0.099 | 0.648 | dump sample |
| Big Bull | WR-008 | 692468 | 4226632 | Outcrop | 0.05 | 0.314 | 0.031 | 0.296 | chip sample from outcrop |
| Babe Ruth | WR-013 | 689730 | 4225628 | Outcrop | 0.01 | 0.931 | 0.008 | 0.880 | chip sample from outcrop |
| Rim Rock | WR-017 | 687660 | 4225839 | Adit wall | **0.14** | **1.90** | **0.112** | **1.792** | chip sample from Vanadium rich wall exposure |
| Rim Rock | WR-018 | 687731 | 4225668 | Outcrop | **0.05** | **2.14** | **0.015** | **2.000** | chip sample from Vanadium rich wall exposure |
| Jack Knife | WR-019 | 687108 | 4224016 | Pit Wall | **0.02** | **1.077** | **0.012** | **1.054** | chip sample from Vanadium rich wall exposure |
| Ground Hog | WR-021 | 687921 | 4223833 | Outcrop | 0.09 | 0.454 | >0.006 | 0.434 | chip sample from Vanadium rich wall exposure |

## PROJECT ACQUISITION

On June 1st 2020 the Company advised it had acquired an exclusive option to acquire 100% of the shares in American Vanadium Pty Ltd, a private Australian company, which in turn owns 100% each of the shares in Colorado company Standard Minerals INC (Standard), and Utah company Cisco Minerals INC (Cisco).

A processing plant which has historically taken ore from the region on a toll treatment basis is located near Blanding, within relatively close proximity to the claims held by these companies. Thor have not had contact with the operators of this plant to date, however this may represent a potential low cost entry into production.

### Colorado Claims

Standard holds 199 contiguous Bureau of Land Management (BLM) claims in south west Colorado, and within the Uravan Mineral Belt. The claims include the Wedding Bell and Radium Mountain groups of mines which are reported to have operated during the first world war and again in the second half of the 20th century (*USGS Professional paper 300*[a]).

[a] https://pubs.er.usgs.gov/publication/pp300

The Uravan Mineral Belt and adjacent uranium-vanadium mining districts of the Colorado Plateau are reported to have produced, over the past 100 years, in excess of 85million lbs U3O8 and over 660 million lbs of V2O5[2] from the Salt Wash sandstone formation of the Plateau. The average production grades from the Uravan Mineral Belt from the 1940's to January 1979 are reported be 0.25% U3O8 and 1.29% V2O5 (Thamm. et al., 1981[b]) Average vanadium to uranium ratios are reported to vary from 0.5 : 1 to 40 : 1.

[b] www.osti.gov/servlets/purl/6512174

### Utah Claims

Cisco holds 100 BLM claims in south east Utah approximately 40km north of the town of Moab. There is reporting of significant uranium and vanadium mineralised body(ies) from drilling activities by Hunt Oil, Mineral Division, in 1980 and 1981, reported by Terra Ventures (TSX-V: TAS) in a report dated May 21 2007.

https://www.thormining.com/sites/thormining/media/miscellaneous/terra-ventures-20070521.pdf

*Thor Mining wishes to reiterate that the Hunt Oil estimate 1980 - 81 does not comply with either the JORC or NI 43-101 guidelines for mineral resource reporting and is therefore not a valid resource estimate. The Hunt Oil estimate does however provide substantial indication of widespread uranium - vanadium mineralisation in the Cisco mineral claims in a similar geological setting to multiple deposits elsewhere in the region including the previously mined Colorado mineral claims included in this acquisition.*

The review team visited the site to assess access issues associated with potential drilling campaigns. The area has good local infrastructure and is at the northern margin of the historic uranium mining area of Thompson Yellow Cat mining district.

Available data to date of the Vanadium King (Utah) historical drilling suggest that the drilling programs focussed upon mineralisation in the Brushy Basin Member of the Jurassic Morrison Formation. Thor's local consultants have suggested that the deeper and normally higher grade Salt

Wash Member may remain substantially untested. Historical mining of the nearby Thompson Creek group of mines have historically produced high grade ore from the Salt Wash Member - a likely focus for future work by Thor.

The information contained within this announcement is deemed to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014. Upon the publication of this announcement, this inside information is now considered to be in the public domain.

**Enquiries:**


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**Competent Person's Report**

*The information in this report that relates to exploration results is based on information compiled by Richard Bradey, who holds a BSc in applied geology and an MSc in natural resource management and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Bradey is an employee of Thor Mining PLC. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Richard Bradey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

Updates on the Company's activities are regularly posted on Thor's website www.thormining.com, which includes a facility to register to receive these updates by email, and on the Company's twitter page @ThorMining.

**About Thor Mining PLC**

*Thor Mining PLC (AIM, ASX: THR) is a resources company quoted on the AIM Market of the London Stock Exchange and on ASX in Australia.*

*Thor holds 100% of the advanced Molyhil tungsten project in the Northern Territory of Australia, for which an updated feasibility study in August 2018[1] suggested attractive returns.*

*Adjacent Molyhil, at Bonya, Thor holds a 40% interest in deposits of tungsten, copper, and vanadium, including Inferred Resource estimates for the White Violet and Samarkand tungsten deposits and the Bonya copper deposit[2].*

*Thor also holds 100% of the Pilot Mountain tungsten project in Nevada USA which has a JORC 2012 Indicated and Inferred Resources Estimate[3] on 2 of the 4 known deposits. The US Department of the Interior has confirmed that tungsten, the primary resource mineral at Pilot Mountain, has been included in the final list of Critical Minerals 2018.*

*Thor holds a 25% interest Australian copper development company EnviroCopper Limited (with rights to increase its interest to 30%). EnviroCopper Limited holds:*

- *rights to earn up to a 75% interest in the mineral rights and claims over the resource[4] on the portion of the historic Kapunda copper mine in South Australia considered recoverable by way of in situ recovery; and*
- *rights to earn up to 75% of the Moonta copper project, also in South Australia comprising the northern portion of exploration licence EL5984 and includes a resource estimate[5] for several deposits considered recoverable by way of in situ recovery.*

Notes

[1] Refer ASX and AIM announcement of 23 August 2018

[2] Refer ASX and AIM announcements of 26 November 2018 and 29 January 2020

[3] Refer AIM announcement of 13 December 2018 and ASX announcement of 14 December 2018

[4] Refer AIM announcement of 10 February 2018 and ASX announcement of 12 February 2018

[5] Refer ASX and AIM announcement of 15 August 2019

## JORC Code, 2012 Edition - Table 1 report template

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

| | | |
|---|---|---|
| *Sampling techniques* | · *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as* | · Samples comprised a combination of rock chips from in-situ exposures and grab samples from historic mine dumps.<br>· The samples are not |

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| | *limiting the broad meaning of sampling.*<br>· *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>· *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>· *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.* | considered representative but rather indicative.<br>· Mineralisation is characterised by the presence of yellow carnotite allowing sampling to be guided by visual mineral identification in addition to handheld scintillometer readings. |
| *Drilling techniques* | · *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).* | · Not applicable |
| *Drill sample recovery* | · *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>· *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>· *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | · Not applicable |
| *Logging* | · *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*<br>· *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>· *The total length and percentage of the relevant intersections logged.* | · Samples and source exposures were qualitatively logged. |
| *Sub-sampling techniques and sample preparation* | · *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>· *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>· *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>· *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>· *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*<br>· *Whether sample sizes are appropriate to the grain size of the material being sampled.* | · Samples weighed between 1 and 2kg<br>· There was no screening or splitting and no QAQC<br>· The samples are considered adequate to provide indication of presence of mineralisation rather than to quantify it. |
| *Quality of assay data and laboratory tests* | · *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>· *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*<br>· *Nature of quality control procedures adopted* | · The analytical technique comprised an initial four acid digest with ICP-AES determination. The laboratory technique is considered total.<br>· Internal laboratory control procedures involve duplicate assaying of randomly |

| | | |
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| | *(eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.* | selected assay pulps as well as internal laboratory standards. |
| *Verification of sampling and assaying* | · *The verification of significant intersections by either independent or alternative company personnel.*<br>· *The use of twinned holes.*<br>· *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>· *Discuss any adjustment to assay data.* | · Sample results are consistent with field observations.<br>· No holes have been drilled or twinned.<br>· Primary data was recorded using field note books and GPS digital memory.<br>· $V_2O_5$ grades are reported - these are determined by multiplying the raw vanadium assays by 1.7852. |
| *Location of data points* | · *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*<br>· *Specification of the grid system used.*<br>· *Quality and adequacy of topographic control.* | · A hand held GPS has been used to determine locations.<br>· The grid system is NAD83 zone 12.<br>· Topographic control is adequate. |
| *Data spacing and distribution* | · *Data spacing for reporting of Exploration Results.*<br>· *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*<br>· *Whether sample compositing has been applied.* | · Data spacing and location is random. It is not adequate for resource estimation.<br>· This data will not be used to estimate a resource.<br>· There has been no sample compositing |
| *Orientation of data in relation to geological structure* | · *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>· *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | · Not applicable. |
| *Sample security* | · *The measures taken to ensure sample security.* | · Samples remained in the custody of the supervising geologist from collection through to delivery to the assay laboratory |
| *Audits or reviews* | · *The results of any audits or reviews of sampling techniques and data.* | · No audits undertaken. |

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

| | | |
|---|---|---|
| *Mineral tenement and land tenure status* | · *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*<br>· *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | · The sampled locations fall within the registered mining claims of US Vanadium Pty Ltd and subsidiaries.<br>· The tenements are in good standing and no known impediments exist. |
| *Exploration done by other parties* | · *Acknowledgment and appraisal of exploration by other parties.* | · No other party's exploration data has been referenced. |

| | | |
|---|---|---|
| *Geology* | · *Deposit type, geological setting and style of mineralisation.* | · The geological setting comprises sandstone hosted uranium vanadium mineralisation. |
| *Drill hole Information* | · *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*<br>o *easting and northing of the drill hole collar*<br>o *elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collar*<br>o *dip and azimuth of the hole*<br>o *down hole length and interception depth*<br>o *hole length.*<br>· *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.* | · Sample data is provided in the text as table 1. |
| *Data aggregation methods* | · *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*<br>· *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*<br>· *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | · None used |
| *Relationship between mineralisation widths and intercept lengths* | · *These relationships are particularly important in the reporting of Exploration Results.*<br>· *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>· *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').* | · Not applicable |
| *Diagrams* | · *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.* | · Figures and Tables provided in the text. |
| *Balanced reporting* | · *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | · All available results have been provided. |
| *Other substantive exploration data* | · *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | · No other data to report |
| *Further work* | · *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* | · While further work is likely to be planned, the results of this due diligence |

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| | · *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | program provided no assistance to the targeting of future drilling. |



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