



24 November 2022

## Strategic Earn-In on Molyhil Tungsten Project adds depth and value to Investigator's critical and precious metals portfolio

### Key points:

- Investigator enters into an Earn-In JV to acquire up to 80% of the advanced Molyhil Tungsten Project in Northern Territory, adding depth to portfolio
- Molyhil hosts a Mineral Resource Estimate reported by Thor Mining in 2021 of:
  - 4.38Mt @ 0.27% WO<sub>3</sub> and 0.10% Mo for 11.8kt WO<sub>3</sub> and 4.4kt Mo (JORC 2012)
- Strategic opportunity with identified exploration potential, resource upgrade and recovery improvements
- Molyhil DFS reported by Thor Mining in 2018:
  - Simple open pit mining, superior metallurgical recoveries, with stated NPV of \$101M
  - Aspects of DFS require revalidation and upgrade
- The three-stage agreement includes an initial expenditure commitment of \$1M over 18 months to earn a 25% interest in Molyhil and associated tenements, and acquire Thor's 40% interest in the adjacent Bonya tenement (40:60 JV with Arafura)
- Adjacent Bonya tenement hosts copper and tungsten Mineral Resource Estimates (reported by Thor Mining) and significant exploration potential
- Molyhil Tungsten Project awarded "Major Project" status by NT Government
- Potential project funding opportunities include:
  - Northern Australia Infrastructure Fund (NAIF)
  - Federal Critical Minerals and High-Tech Metals Activation Fund
  - NT Local Jobs Fund
- Tungsten is classified as a Critical Mineral, with price increase by 50% in last 12 months
- Investigator's management have previous operating history in both tungsten and the NT
- Subject to approvals and rig availability, confirmatory resource drilling and associated work anticipated to commence in early 2023.

**Investigator Resources Limited (ASX: IVR, “Investigator” or the “Company”)** is pleased to announce that it has entered into a staged agreement with Thor Mining PLC (ASX & AIM:THR) to acquire up to 80% of permitted Molyhil Tungsten Project in Northern Territory through a 3-Stage Earn-In to Joint Venture Agreement.

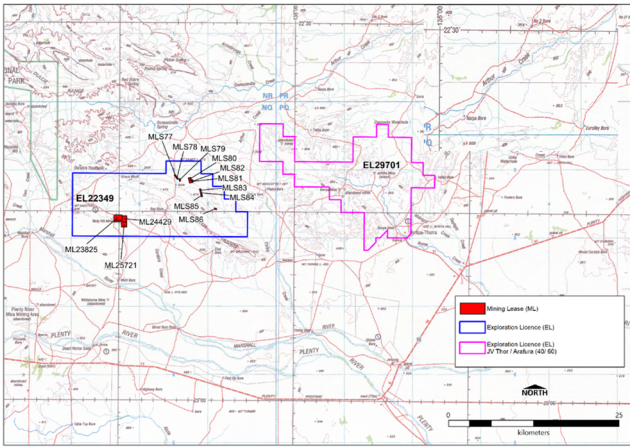
Investigator’s Managing Director, Andrew McIlwain commented:

***“Whilst our key focus and priority remains on driving forward Investigator’s 100% owned Paris Silver Project - Australia’s highest-grade undeveloped silver project – we have continued to look value adding opportunities to diversify through acquisition of an advanced project and leverage off our experience and skillset.***

***“The opportunity to earn-in to Molyhil is seen as one where we can utilise our skills and experience across key areas such as stakeholder engagement, resource definition, and project finance and development. Personally, I ran the Los Santos Tungsten Mine in Spain for a number of years, which was divested into TSX listed Almonty Industries and sat on their board as a founding Director. I have also had 15 years of NT exposure as Chair of Emmerson Resources.***

***“Through our comprehensive due diligence analysis, we believe that value can be added to the Molyhil Project with a re-evaluation of the existing resource, revision of the proposed processing route and recasting the project execution model. With the staged approach, it is anticipated that, if deemed feasible, a commitment to development would be made early in the third and final stage of the agreement. We expect that there are a number of potential financing facilities that would be available to support the advancement of this project.***

***“Demand has seen the tungsten price rise over 50% in the past year. Tungsten is an essential industrial metal unique in its hardness and utilised in aerospace, steel hardening, cutting and drilling, armour plate, electronics and jewellery. As a rare and valuable industrial metal, it can be seen as a complimentary metal to our prime commodity focus, silver”.***



**Figure 1:** Molyhil and Bonya tenements

The Molyhil Tungsten Project is located approximately 230km northeast of Alice Springs, just off the Plenty Highway.

Comprising two tenement packages – Molyhil and Bonya – the Molyhil Project has been subject to a number of prior mining activities.

Exploration programs, sometimes supported by NT Government cofunding have advanced the project to completion of a DFS in 2018.

## Summary of Heads of Agreement Terms:

- 3-Stage Earn-In to Joint Venture with Thor Mining
  - Stage 1:
    - Payment to Thor of \$100,000 on execution of Heads of Agreement documentation;
    - Expenditure of \$1M over 18 months (includes \$100k HoA fee above) to earn a 25% interest in the Molyhil Tungsten Project and associated tenements, and all of Molyhil's 40% interest in the adjacent Bonya tenement (EL29107 in JV with Arafura (ASX:ARU));
    - If expenditure of \$1.0M is not met within 18 months, balance to be paid to Thor; and
    - On formation of the Joint Venture (25:75 IVR:THR) IVR to issue Thor \$250,000 in IVR shares (at the higher of 15-day VWAP or \$0.05).
  - Stage 2:
    - Expenditure of a further \$2M over 3 years to earn a further 26% interest in the Molyhil Project and associated tenements (51:49 IVR:THR).
  - Stage 3:
    - Expenditure of a further \$5M over 3 years to earn a further 29% interest in the Molyhil Project and associated tenements (80:20 IVR:THR);
    - On formation of the 80:20 Joint Venture IVR to issue Thor \$250,000 in IVR shares (at the higher of 15-day VWAP or \$0.05); and
    - On formation of the 80:20 Joint Venture Thor can elect to fund on a pro-rata basis or dilute. If diluted below 10%, Thor's interest will revert to an NSR.

## Molyhil Project Details

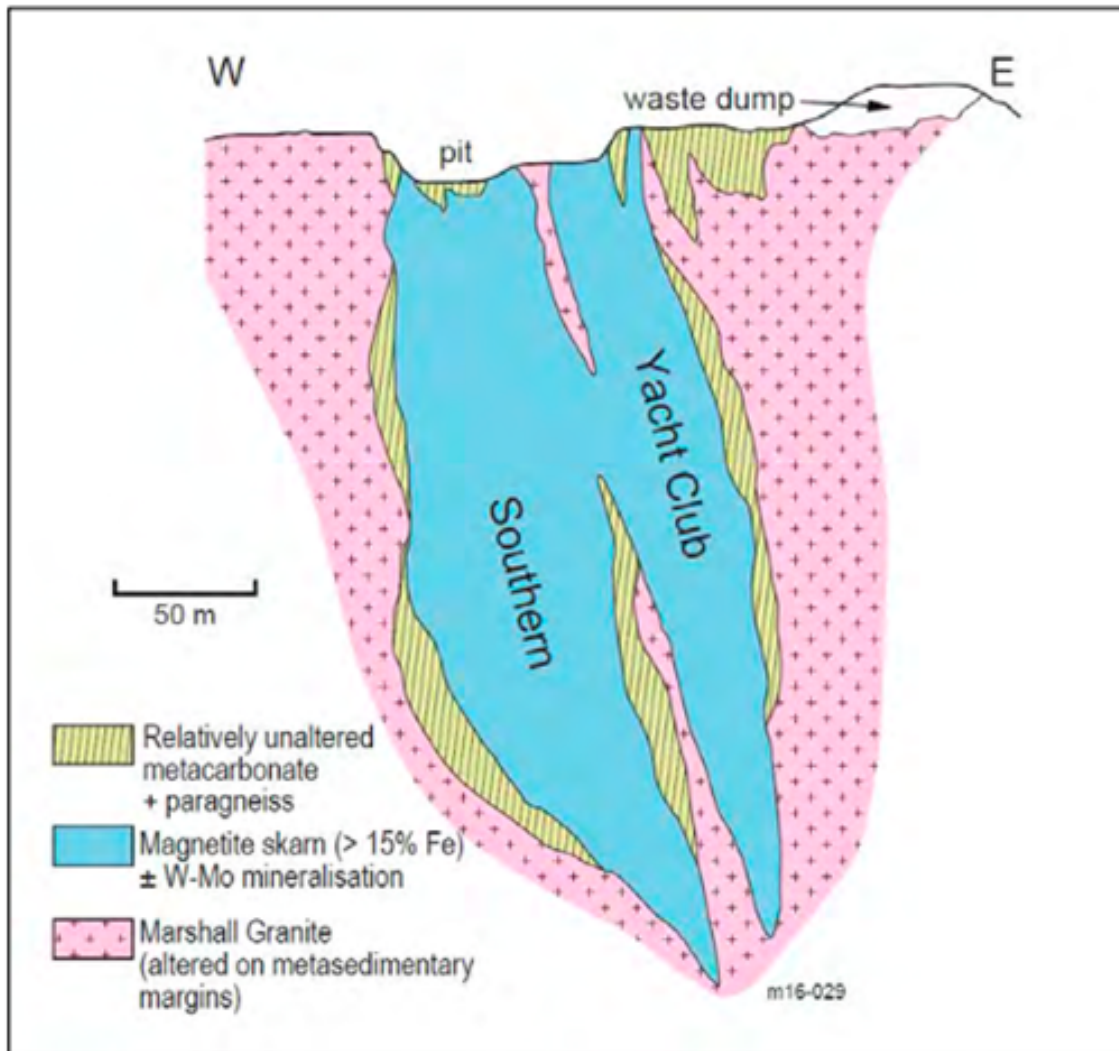
The Molyhil Project is a tungsten/molybdenite deposit hosted within a magnetite skarn and is located approximately 220km northeast of Alice Springs in the Northern Territory, Australia, and accessed via the Plenty Highway.

The deposit was first discovered in 1973 by a prospector within layered calc silicate rocks, with 20t of scheelite reported as extracted. Petrocarb Exploration NL (Petrocarb) acquired the leases in 1978 and upgraded the mining and processing plant at the site and commenced mining in addition to undertaking a major drilling program in 1981. Production records in this period were incomplete, however estimations of approximately 900,000t of ore and waste was extracted from the pit at Molyhil. Mining ceased in 1982 when Chinese mining supply flooded the world scheelite market. The deposit passed through the hands of a number of explorers during the 1980's and 1990's until 2004 when Hallmark Consolidated purchased the Molyhil tenements. In 2005 the Molyhil tenements were vended into Thor Mining PLC who have undertaken a number of resource estimations and additional engineering and metallurgical work, culminating in the release of a 2018 Definitive Feasibility Study. Most recent work by Thor has included an additional round of resource estimation at Molyhil (2021) and a co-funded exploration program with the Northern Territory Geological Survey in 2021 targeting potential extensions of Molyhil at depth.

The Molyhil deposit comprises two north-south trending magnetite skarn lodes dipping approximately 65 degrees east and plunging 70 degrees to the south. Thor have delineated the lodes to the order of 150m N-S, 20-50m E-W and to a depth of approximately 300m below surface. The skarn bodies are interpreted to have formed by contact metamorphism of Deep Bore metasediments as a result of the intrusion of the Marshall Granite approximately 1720Ma<sup>1</sup>.

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1 - Thor ASX 23 August 2018 - DFS Study Molyhil Project



**Figure 2 - Geological interpretation of the Molyhil Deposit geology (Thor Mining)**

Thor as part of their 2018 Definitive Feasibility Study utilised a resource estimate produced by Runge Pincock Minarco based on drilling results up until 2011 as presented below (JORC 2012 compliant).

Classification	Resource '000 Tonnes	WO <sub>3</sub>		Mo		Fe
		Grade %	Tonnes	Grade %	Tonnes	Grade %
Indicated	3,820	0.29	10,900	0.13	4,970	18.8
Inferred	890	0.25	2,200	0.14	1,250	15.2
<b>Total</b>	<b>4,710</b>	<b>0.28</b>	<b>13,100</b>	<b>0.13</b>	<b>6,220</b>	<b>18.1</b>

Note; - Based on 0.1% combined Mo + WO<sub>3</sub> Cut-off and above 200mRL only.

Note; - Minor rounding errors may occur in compiled totals.

**Figure 3: 2014 Molyhil mineral resource estimate (used for Thor Molyhil 2018 Definitive Feasibility Study) as reported by Thor to ASX 30 January 2014 (JORC2012).**

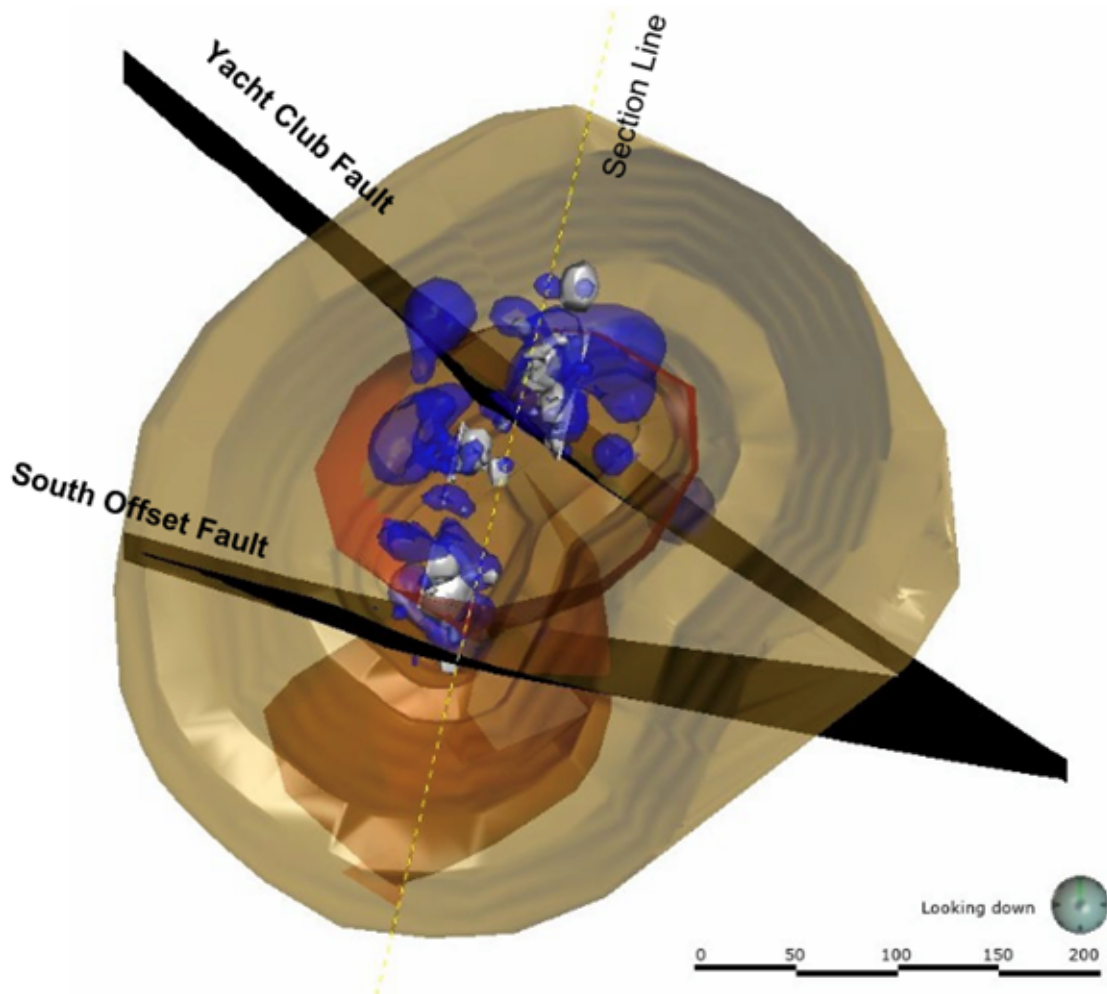
A number of additional resource estimations were completed by Thor in the period 2018 – 2020, with the most recent ASX released resource estimate (JORC2012) released by Thor to the ASX on 8 April 2021 as per the below table:

Classification	'000 Tonnes	WO <sub>3</sub>		Mo		Cu		Fe
		Grade %	Tonnes	Grade %	Tonnes	Grade %	Tonnes	Grade %
Measured	464	0.28	1,300	0.13	600	0.06	280	19.12
Indicated	2,932	0.27	7,920	0.09	2,630	0.05	1,470	18.48
Inferred	990	0.26	2,580	0.12	1,170	0.03	300	14.93
<b>Total</b>	<b>4,386</b>	<b>0.27</b>	<b>11,800</b>	<b>0.10</b>	<b>4,400</b>	<b>0.05</b>	<b>2,190</b>	<b>17.75</b>

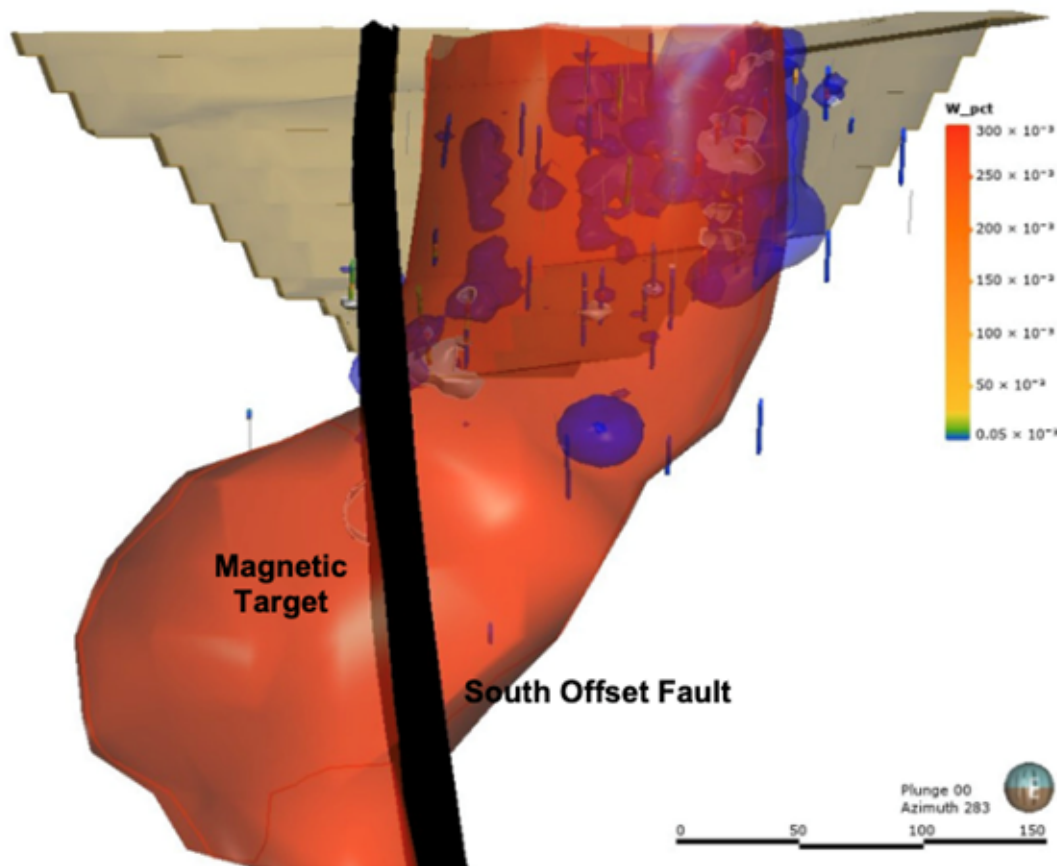
**Note:**

- Figures are rounded to reflect appropriate level of confidence. Apparent differences may occur due to rounding.
- Cut-off of 0.07% WO<sub>3</sub>
- 100% owned by Thor Mining Plc
- To satisfy the criteria of reasonable prospects for eventual economic extraction, the Mineral Resources have been reported down to 200 mRL which defines material that could be potentially extracted using open pit mining methods.

**Figure 4:** 2021 Molyhil mineral resource estimate as reported by Thor to ASX 8 April 2021 (JORC2012).



**Figure 5:** Plan view of Molyhil Deposit with conceptual pit shell. 0.3% WO<sub>3</sub> isosurface in blue, 0.15% Mo isosurface in silver. Modelled 3D magnetics in pale red. (Thor ASX release 8 April 2021 - Molyhil Resource Estimate)



**Figure 6:** Molyhil Deposit long section looking to west. 0.3% WO<sub>3</sub> isosurface shown in blue, the 0.15% Mo isosurface shown in silver. Modelled 3D magnetics in transparent red. Magnetic target tested with three diamond drillholes by Thor in 2021. (Thor ASX release 8 April 2021 - Molyhil Resource Estimate)

### Thor Molyhil DFS

The following the publishing of an open cut Ore Reserve Statement in January of 2018, Thor released their Definitive Feasibility Study to the ASX on the 23 August, 2018 with the following key components:

Classification	Reserve '000 Tonnes	WO <sub>3</sub>		Mo	
		Grade %	Tonnes	Grade %	Tonnes
<b>Probable</b>	<b>3,500</b>	<b>0.29</b>	<b>10,200</b>	<b>0.12</b>	<b>4,300</b>
<b>Total</b>	<b>3,500</b>	<b>0.29</b>	<b>10,200</b>	<b>0.12</b>	<b>4,300</b>

**Figure 7:** Molyhil 2018 Ore Reserve Statement (Thor ASX release 15 January 2018)

Project NPV (@5%) post tax & royalties	A\$101 million	All Equity Case
Project IRR post tax & royalties	59%	All Equity Case
Project finance requirement	US\$43million	
Project Capex	A\$69 million	
Break even tungsten price	US\$230/mtu	
Life of Mine C1 Cash Cost	US\$90/mtu	
Life of Mine EBITDA	A\$239 million	
Payback from 1 <sup>st</sup> production	< 18 months	
Project Life	7 years	
Average feed grade	0.29% WO <sub>3</sub>	0.48% WO <sub>3</sub> after ore sorting
	0.12% Mo	0.20% Mo after ore sorting
<b>Operating throughput</b>		
Crushing & Sorting	531,000 tpa	
Milling/Flotation etc	324,000 tpa	After ore sorting
Annual Production Average	125,000 mtu *	Approximately 1.2% of global market
		* 1mtu = 10Kg of contained WO <sub>3</sub>

### Project sensitivities

The financial outcomes for Molyhil fluctuate with various input sensitivities, as follows:

		NPV A\$M	IRR %
Base Case		A\$100.8	58.9%
Revenue	+10%	A\$122.2	71.3%
	-10%	A\$79.3	46.7%
Scheelite Recovery	75%	A\$79.1	46.7%
Operating Costs	-10%	A\$110.4	63.4%
	+10%	A\$91.29	54.4%
Discount Rate variation	8%	A\$86.0	58.9%
	10%	A\$77.4	58.9%

Figure 8: Molyhil 2018 DFS key project metrics as released by Thor to ASX

### Investigator Resources Opportunity Assessment

As part of Investigator's review of the Molyhil project it has taken into account changing market opportunities including significant critical minerals demand from markets outside of the current Chinese supply options. This includes development of the Australian Critical Minerals Strategy (<https://www.industry.gov.au/publications/australias-global-resources-strategy>), in addition to United States of America Critical Minerals Strategy aimed at supporting domestic critical mineral supply, including coordination with international partners and allies. (<https://www.iea.org/policies/15533-critical-minerals-and-materials-us-department-of-energys-strategy-to-support-domestic-critical-mineral-and-material-supply-chains>).



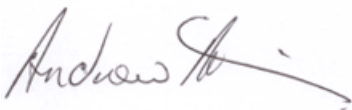
With Molyhil having been awarded Major Project status in the Northern Territory, there is further opportunity for Investigator to progress the project, with additional potential funding opportunities in the future such as the Northern Australia Infrastructure Fund (NAIF) in addition to potential Federal Critical Minerals and High-Tech Metals Activation Funding, NT Local Jobs Fund and opportunities in the form of potential offtake agreements.

With Investigator's Managing Director having had previous experience in the tungsten industry, and utilisation of a number of consultants with relevant market and technical experience, the project was identified as having opportunity for value add by Investigator, whilst also meeting with the company's objective of providing additional risk diversification outside of being a pure silver exploration play.

Internal reviews of the project by Investigator have identified a number of opportunities to add value to the project and will encompass the following aspects within the initial 18 month earn in period:

1. Mineral Resource Estimate verification and review aimed at building on existing knowledge and identified additional opportunities identified during initial project review.
2. Process metallurgical review and enhancement incorporating additional mineralogical and metallurgical studies in an effort to further enhance the project.
3. Geotechnical drilling in order to maximise potential strip ratio and mine plan opportunities.
4. Review of additional exploration opportunities.
5. On additional opportunities such as NAIF.

**For and on behalf of the board.**



**Andrew McIlwain**  
*Managing Director*

### **For more information:**

**Andrew McIlwain**  
*Managing Director*  
Investigator Resources Ltd  
+ 61 (0) 8 7325 2222

**Peter Taylor**  
*Media & Investor Relations*  
NWR Communications  
+ 61 (0) 412 036 231

[amcilwain@investres.com.au](mailto:amcilwain@investres.com.au)[peter@nwrcommunications.com.au](mailto:peter@nwrcommunications.com.au)**About Investigator Resources**

Investigator Resources Limited (ASX: IVR) is a metals explorer with a focus on the opportunities for silver-lead, copper-gold and other metal discoveries. Investors are encouraged to stay up to date with Investigator's news and announcements by registering their interest here: <https://investres.com.au/enews-updates/>

**Capital Structure (as at 30 June 2022)**

Shares on issue	1,332,313,657
Unlisted Options	28,000,000
Performance Rights	5,000,000
Top 20 shareholders	31.1%
Total number of shareholders	5,556

**Directors & Management**

<b>Dr Richard Hillis</b>	Non-Exec. Chairman
<b>Mr Andrew Mcllwain</b>	Managing Director
<b>Mr Andrew Shearer</b>	Non-Exec. Director
<b>Ms Anita Addorisio</b>	CFO & Company Secretary

**References:**

No new information is presented in this ASX release relating to the Molyhil Project.

All references to Molyhil Mineral Resource Estimates, Ore Reserves, prior Definitive Feasibility Studies have been extracted from relevant ASX releases by Thor Mining PLC and have not been modified. Competent Persons for all ASX releases below are referenced in the relevant releases:

- ASX 15 January 2018 THR: Clarification of Upgraded Ore Reserve and Extended Minelife Molyhil Tungsten Project.
- ASX 23 August 2018 THR: Upgraded Feasibility Study, Molyhil
- ASX 8 April 2021 THR: Molyhil Project Mineral Resource Estimate Updated