



**AIM/ASX: THR**  
**OTCQB: THORF**



**July 2021**

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*The information in this report that relates to exploration results and exploration targets is based on information compiled by Nicole Galloway Warland, who holds a BSc in applied geology (Hons) and who is a Member of The Australian Institute of Geoscientists. Ms Galloway Warland is an employee of Thor Mining PLC. She has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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'. Nicole Galloway Warland consents to the inclusion in the report of the matters based on her formation in the form and context in which it appears.*



# CORPORATE SNAPSHOT

## CAPITAL STRUCTURE

AIM/ASX Code	THR
OTCQB Code	THORF
Market Cap	US\$18.0M
Cash (Jun 30 2021)	US\$1.1M
Debt	NIL
Directors Interest	3.5%

## SHARE PRICE PERFORMANCE (LSE)



# INVESTMENT HIGHLIGHTS

## Diverse Portfolio

### **Copper – Australia (Three Projects)**

- Technical Feasibility Stage
- Direct & Indirect Interest in >400,000t Cu
- Resource Extension Potential

### **Uranium and Vanadium - USA**

- Brownfields Exploration

### **Gold - Australia**

- Greenfields Exploration

### **Tungsten (Australia & USA)**

- Feasibility Study Stage

## Fully Funded 2021 Program

### **Copper - Australia**

- Technical Feasibility Stage
- Resource Expansion Potential
- Drilling in Progress

### **Uranium and Vanadium - USA**

- Drilling Adjacent High Grade Historical Production
- Drilling Scheduled Q3 2021

### **Gold - Australia**

- Maiden Drilling Program – Q3 2021

### **Tungsten - Australia**

- Feasibility Enhancements

# BOARD & MANAGEMENT



**Mick Billing**  
**Chairman**

## **Accounting**

Career includes experience in company management, company secretarial, senior commercial, and CFO roles across the spectrum of mining exploration, production, & project evaluation, including lengthy periods with Bougainville Copper Ltd and WMC Resources Ltd.



**Nicole Galloway Warland**  
**Managing Director**

## **Geologist**

More than 25 years in mining & exploration in Australia, Eastern Europe & South America. Experience spans from grass roots exploration to project evaluation to open cut & underground mining with a commodity focus of gold, copper/gold, nickel, uranium & lithium.



**Mark McGeough**  
**Non-Executive Director**

## **Geologist**

An experienced geologist who has explored for gold, IOCG copper-gold, silver-lead-zinc and uranium. Involved in the discovery of the White Dam gold deposit in South Australia and the Theseus uranium deposit in WA. Career includes Chinova Resources, Toro Energy, Xstrata Copper, Mount Isa Mines and AGIP Australia, &. was also the Manager of the SA Geological Survey.



**Mark Potter**  
**Non-Executive Director**

## **Finance**

Director and Chief Investment Officer of Metal Tiger Plc (AIM:MTR), and is the Founder and a Partner of Sita Capital Partners LLP. He is also Non-Executive Chairman of Artemis Resources (ASX: ARV), a Pilbara gold mining and exploration company.



**Ray Ridge**  
**CFO**  
**Joint Company Secretary**

## **Accounting**

A chartered accountant with over 20 years accounting and commercial management experience. Roles include Senior Audit Manager with Arthur Andersen, Divisional CFO with Elders Ltd, and GM Commercial & Operations at engineering and construction company Parsons Brinckerhoff.



# COPPER IN SOUTH AUSTRALIA

## LOCATION

- Alford East – JV Farm-in earning 80% direct interest
- EnviroCopper Limited (ECL) – Thor hold 30% Equity Interest
  - Kapunda – ECL earning a 75% interest
  - Alford West – ECL earning a 75% interest

## GEOLOGY

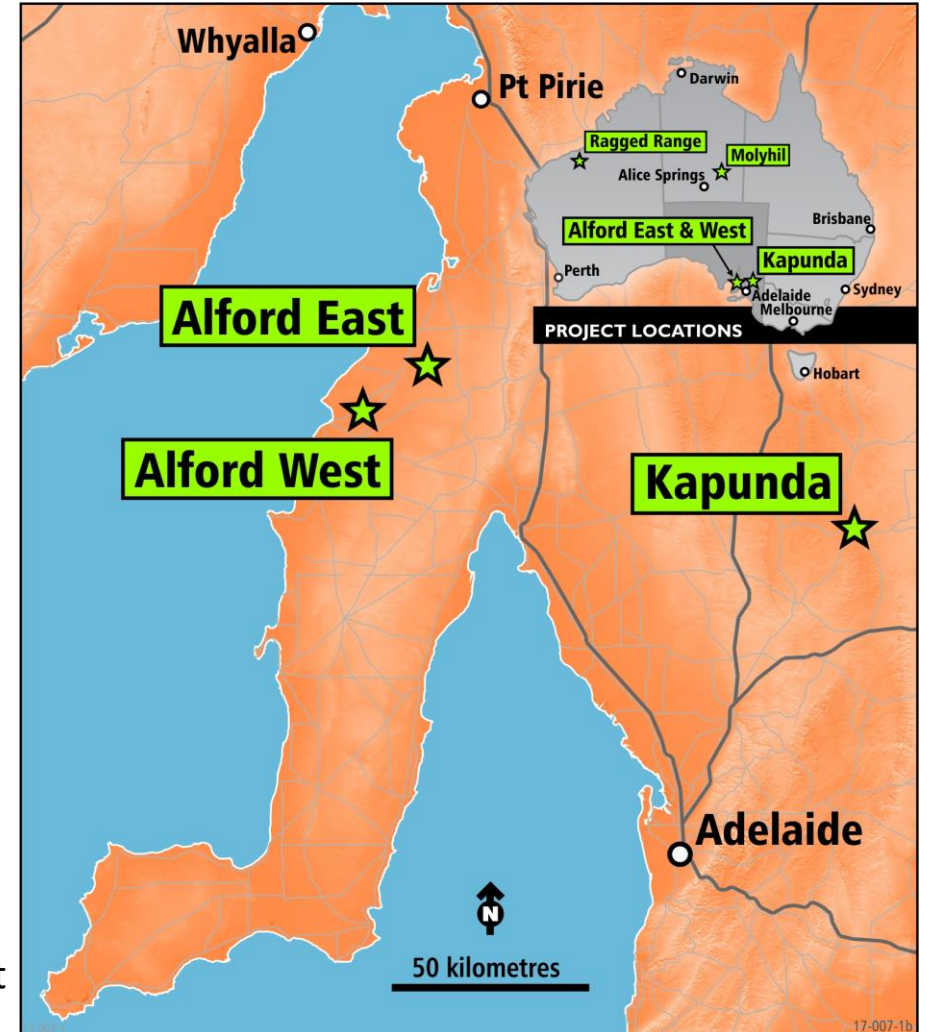
- Substantial near surface oxidised copper mineralisation, transitioning at depth to readily leachable chalcocite then primary chalcopyrite
- Leachable gold also present

## INFRASTRUCTURE

- Located adjacent to mains electricity & sealed highways. Nearby towns should provide workforce on daily commute basis

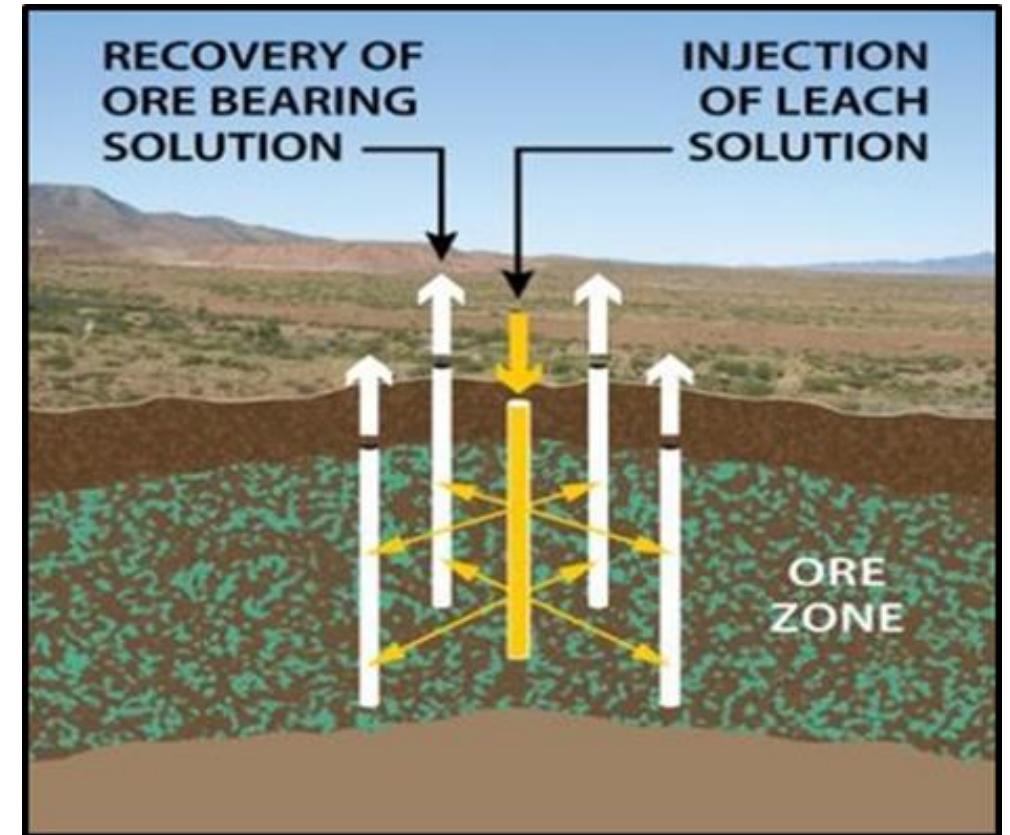
## OBJECTIVE

- Low-Cost production of copper (with some gold credits) using low impact recovery techniques



# IN-SITU RECOVERY (ISR)

- Large copper-gold oxide resources constrained within structural corridor
- Low cost / low environmental impact metal production
- A chemical process rather than a high-cost mining operation (No large pit / no crushing or grinding / no waste dumps etc)
- Substantial Australian government & research body funding grant to fund technical feasibility
- ISR techniques have been utilised commercially in South Australia for >15 years – We have the expertise locally
- Proof of Concept established for Kapunda
- Minerals are conducive to leaching – confirmed
- Both Copper and Gold recovered in Leach test work
- Ground conditions allow the flow of leaching fluid through the orebody – confirmed via field testing





# ALFORD EAST COPPER-GOLD – THOR EARNING 80%

## LOCATION

- Approx 150km north-west of Adelaide, South Australia
- Adjacent EnviroCopper Ltd Alford West project

## GEOLOGY

- Substantial near surface oxidised copper mineralisation, transitioning at readily leachable chalcocite then primary chalcopyrite
- Leachable gold also present

## HISTORY

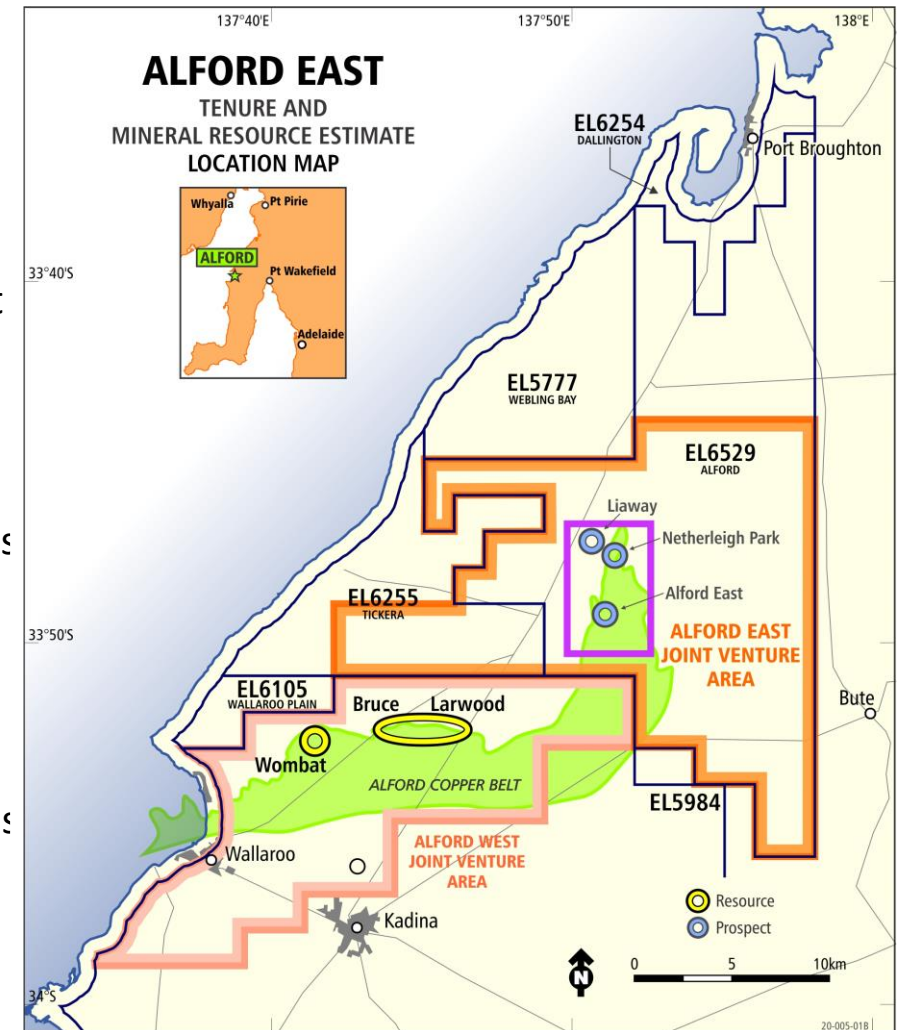
- Substantial drilling history chasing IOCG targets unveiling oxide mineralisation several decades
- Multiple intersections of probable ISR amenable mineralisation  
(ASX:THR 23 November 2020)

## INFRASTRUCTURE

- Located adjacent to mains electricity & sealed highways. Nearby towns provide workforce on daily commute basis

## INFERRED MINERAL RESOURCE ESTIMATION

- 177,000t of contained Copper and 71,500oz of contained gold





# ALFORD EAST COPPER-GOLD – Inferred Mineral Resource

- Inferred Mineral Resource Estimated based solely on historic drilling
- Significant Growth Potential – along strike and at depth
- Diamond Drilling program to increase this resource in progress.

## Inferred Mineral Resource Estimate for the Alford East Project –

22<sup>nd</sup> January 2021 – 0.05% Cu cut-off (oxide material only) (ASX Jan 27 2021)

Prospect	Tonnes (Mt)	Cu %	Au g/t	Contained Cu (t)	Contained Au (oz)
Alford East	85.3	0.12	0.021	104,000	57,000
Netherleigh Park	31.3	0.19	0.008	61,000	8,000
Liaway	40.3	0.18	0.011	73,000	14,500
<b>Total</b>	<b>125.6</b>	<b>0.14</b>	<b>0.018</b>	<b>177,000</b>	<b>71,500</b>

⚡ Thor Mining PLC to acquire 80% interest in the Alford East Project

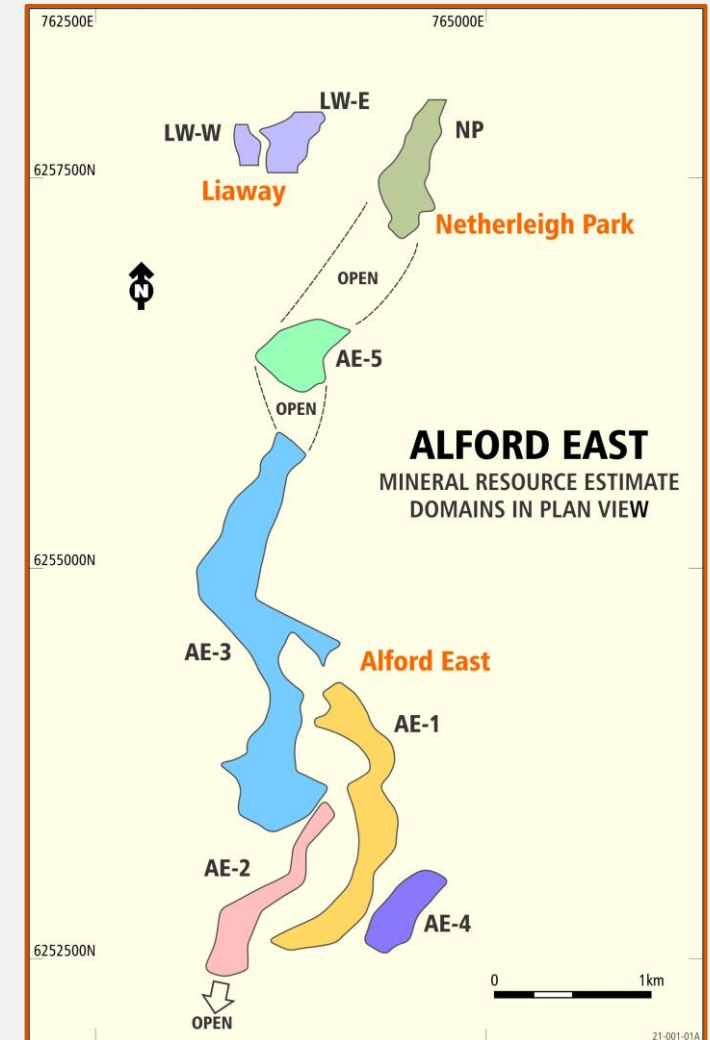
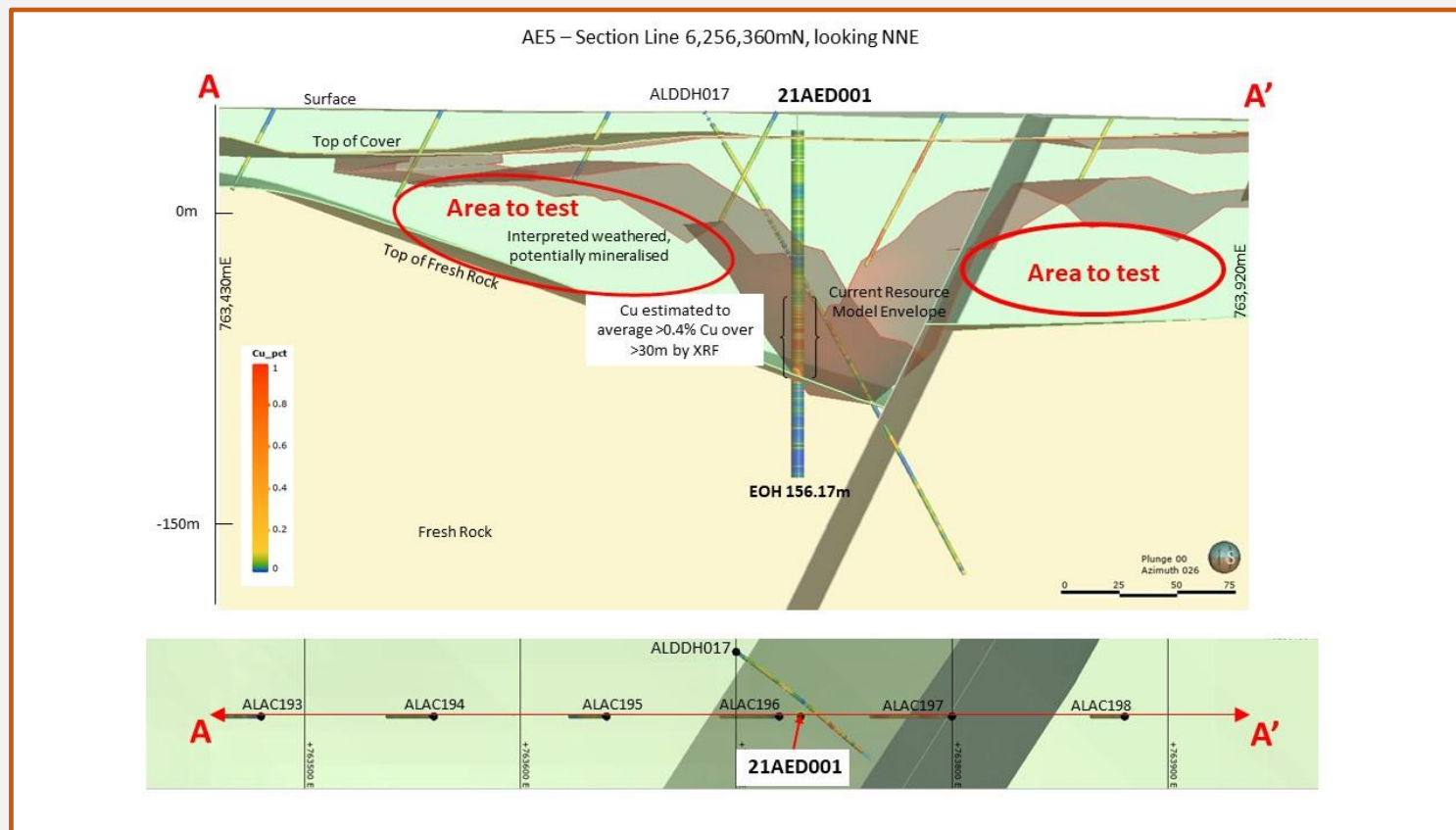
⚡ All figures are rounded to reflect appropriate levels of confidence. Apparent differences may occur due to rounding.

⚡ The Company is not aware of any information or data which would materially affect this previously announced resource estimate, and all assumptions and technical parameters relevant to the estimate remain unchanged.



# ALFORD EAST COPPER-GOLD – Growth Potential

- Inferred Mineral Resource Estimated based solely on historic drilling
- Significant Growth Potential – along strike and at depth
- **Diamond Drilling Commenced June 2021**





# ENVIROCOPPER LTD – THOR INTEREST 30%

## LOCATION

- Kapunda - 90km north of city of Adelaide
- Alford West - 150km north-west of Adelaide

## GEOLOGY

- Substantial near surface oxidised copper mineralisation, transitioning at depth to leachable chalcocite then primary chalcopyrite
- Leachable gold also present

## HISTORY

- Kapunda - Birth of Australian Copper Mining History
- Both areas mined extensively during the latter half of the 19th Century

## INFRASTRUCTURE

- Located adjacent to mains electricity & sealed highways. Nearby towns should provide workforce on daily commute basis

## RESOURCE

- Kapunda - Inferred Resource of 47.4Mt for 119,000t Cu suitable for ISR (ASX 12 Feb 2018)
- Alford West - Inferred Resource of 66.1Mt for 114,000t Cu suitable for ISR (ASX 15 Aug 2019)
- Significant Resource Upside



Kapunda Historic Workings

# ENVIRO COPPER RESOURCES & EXPLORATION TARGETS

## GROWING COPPER RESOURCES – ALSO WITH GOLD POTENTIAL

### KAPUNDA COPPER RESOURCE ESTIMATE (12 FEB 2018)

MINERALISATION	RESOURCE		COPPER	
	CLASSIFICATION	MT	GRADE %	CU METAL (T)
Copper Oxide	Inferred	30.3	0.24	73,000
Secondary Copper Sulphide	Inferred	17.1	0.27	46,000
SUB TOTAL		47.4	0.25	119,000

### ALFORD WEST COPPER RESOURCE ESTIMATE (15 AUG 2019)

RESOURCE CLASSIFICATION	DEPOSIT	TONNES (MT)	CU (%)	CU (METAL T)	AU (G/T)	AU (OZ)
Inferred	Wombat	46.5	0.17	80,000		
	Bruce	11.8	0.19	22,000		
	Larwood	7.8	0.15	12,000	0.04	10,000
TOTAL		66.1	0.17	114,000		

- Thor Mining PLC is acquiring up to a 22.5% equity in these resources
- The Company is not aware of any information or data which would materially affect these previously announced resource estimates, and all assumptions and technical parameters relevant to the estimate remain unchanged

## GOLD POTENTIAL

- Substantial evidence of gold in ~1/3 of historical drilling
- EnviroCopper can extract gold concurrently with copper at Kapunda

### ALFORD WEST EXPLORATION TARGET\* (7 MARCH 2019)

CATEGORY	TONNAGE (MT)		% CU	
	FROM	TO	FROM	TO
Category 1	80	120	0.18	0.23
Category 2	38	45	0.18	0.23
Category 3	120	145	0.18	0.23

\*Exploration Targets are conceptual in nature and there has been insufficient exploration to define a Mineral Resource under the JORC Code and it is uncertain if further exploration will result in the determination of a Mineral Resource.



# RAGGED RANGE GOLD – 100% THOR

## LOCATION

- Pilbara Region Western Australia
- Located in Area of Proven Gold Production and Resource Potential

## GEOLOGY

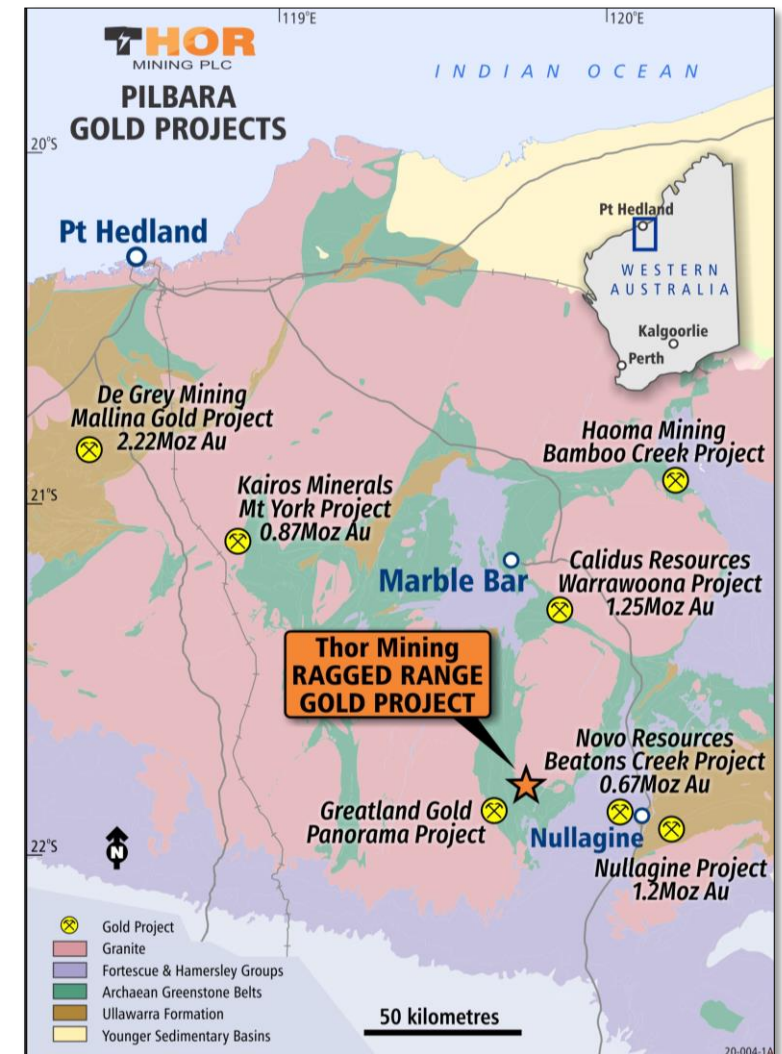
- East Pilbara Granite-Greenstone Terrane, Archean Pilbara Craton
- Proximity to large scale gold deposits in similar geological setting
- Prospective host rocks – Warrawoona Group
- Favourable structural setting - thrust faulted mafic/ultramafic contact

## HISTORY

- Three stream sediment and rock chip programs completed
  - Consistent gold in pan and **assays up to 2.2g/t Au** (ASX:THR 1 December 2020)
- Airborne Magnetic survey
- Nickel Gossan – approx. 1.5km strike length x 100m width

## PROGRAM

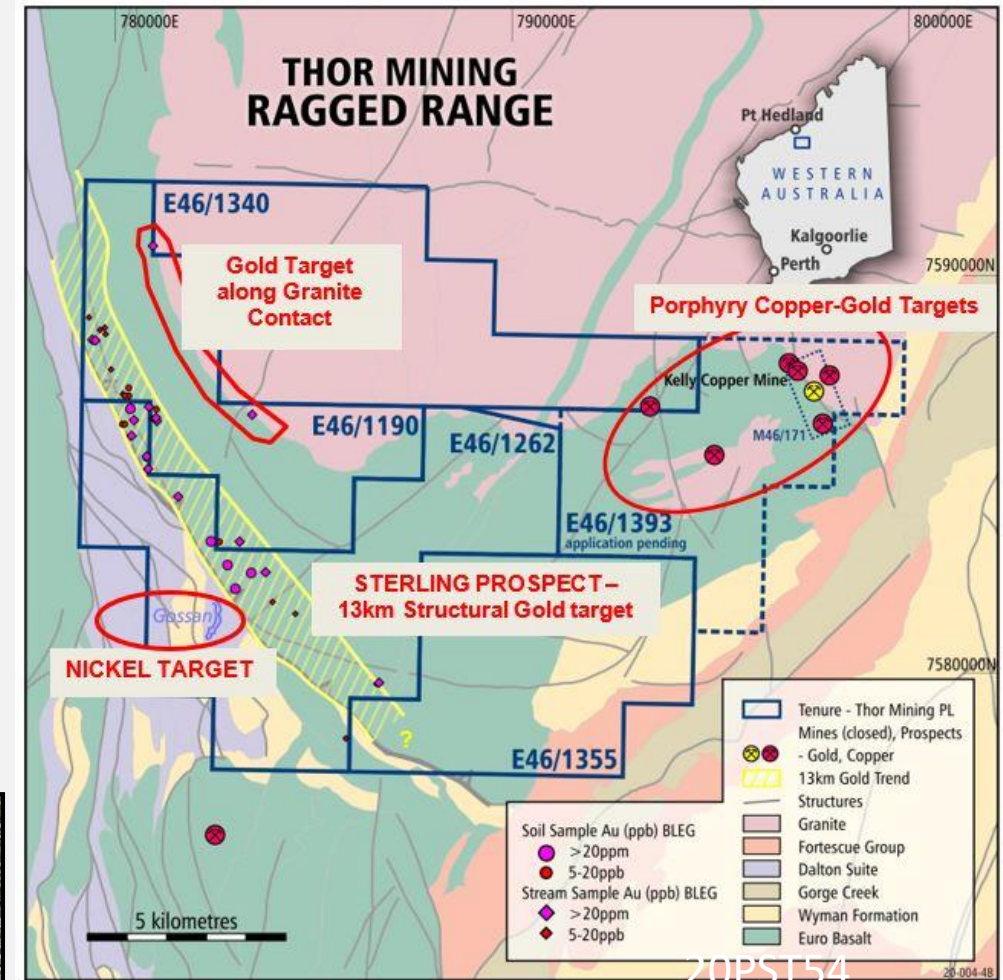
- Four chemical/magnetic targets warranting immediate follow up
- Soil, stream and Rock chip sampling programs with geological mapping
- Drilling scheduled Q3 2021



# RAGGED RANGE - GOLD STRIKE POTENTIAL

## 13 KILOMETRES OF STRIKE POTENTIAL

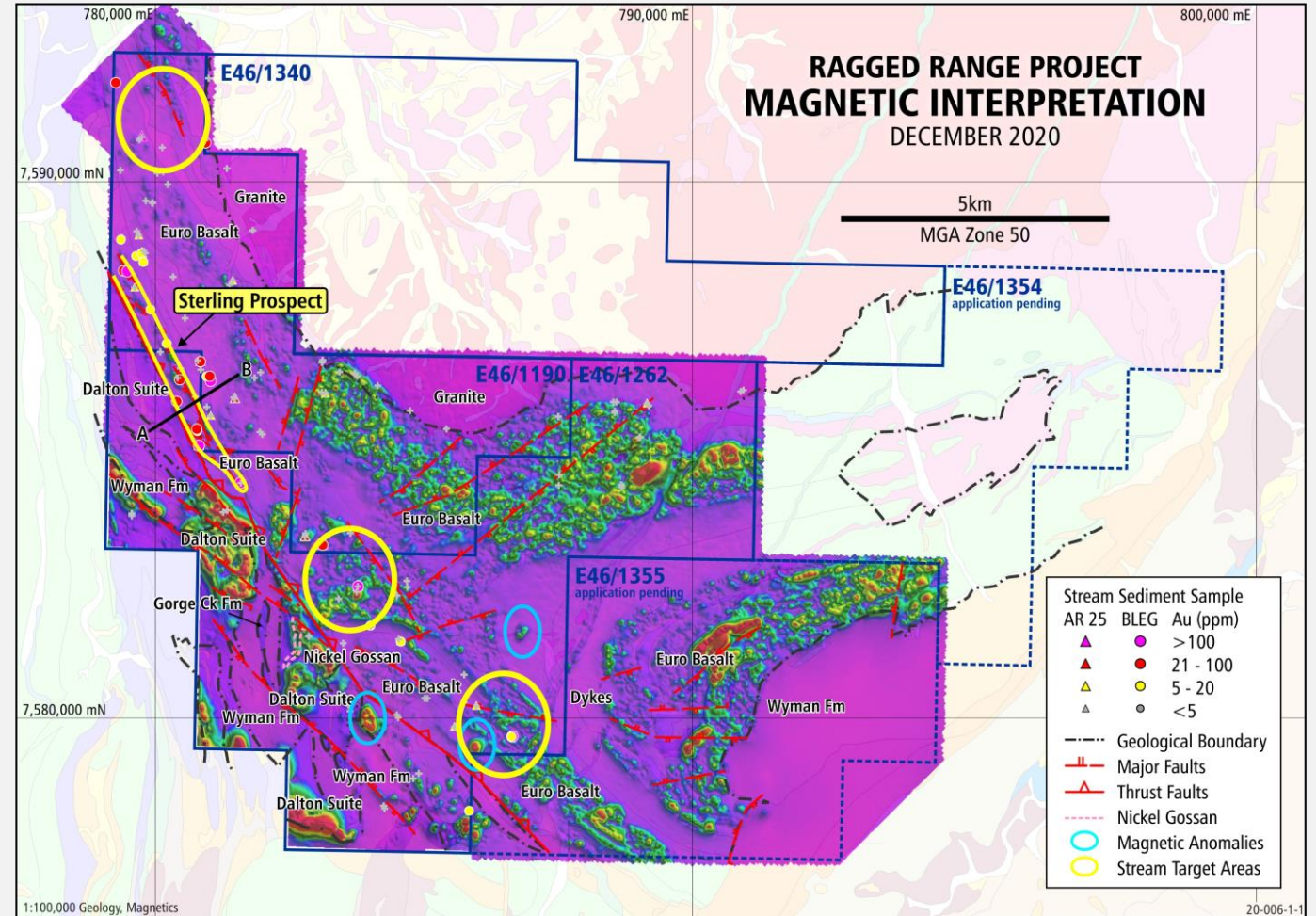
- High tenor stream sediment samples draining SW-NE from interpreted Ultramafic /Mafic thrust faulted contact
- Anomalous Gold reported in pan, in BLEG samples and - 2mm samples, assayed by aqua regia –up to **2.2g/t Au** (20PST51) (ASX:THR 1 December 2020)
- Strong suggestion that structurally hosted gold extends along the 13-kilometer contact zone- gold corridor
- Anomalous results also reported from close to the Archean granite contact and in NE area of the tenement
- Recent acquisition area host some historical small-scale Au & Cu mines
- 100% control of greenstone belt - Kelly greenstone belt (KGB)





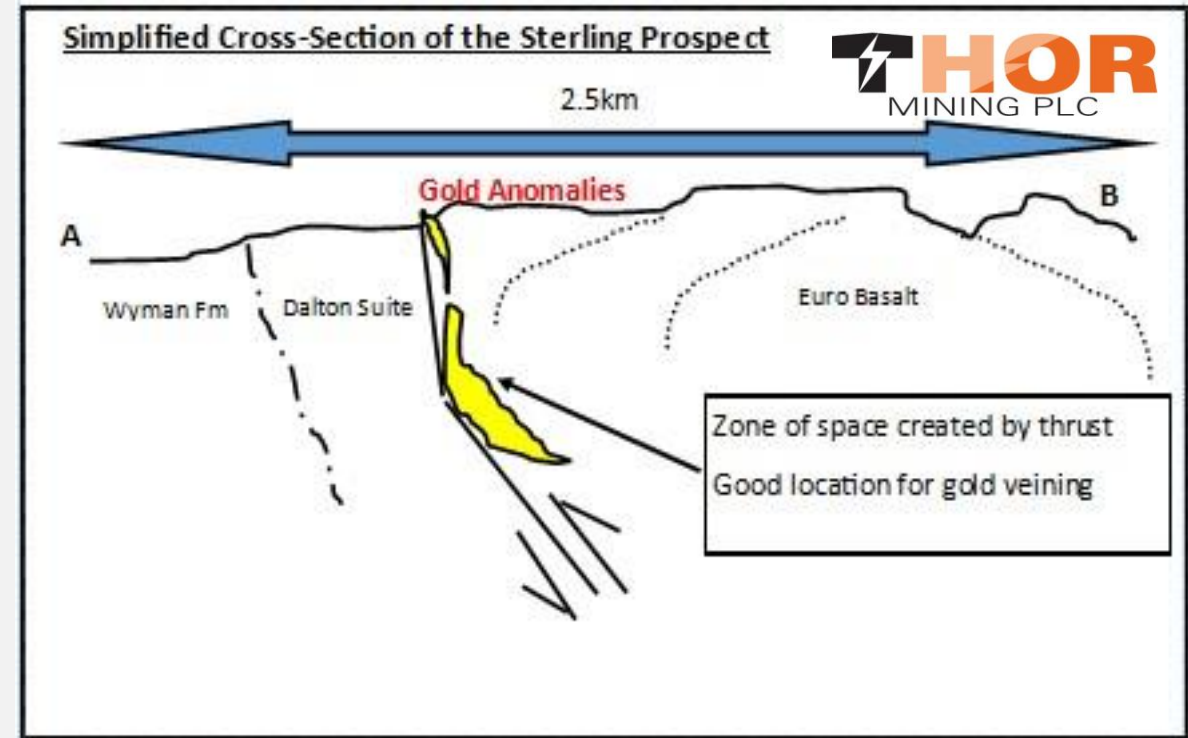
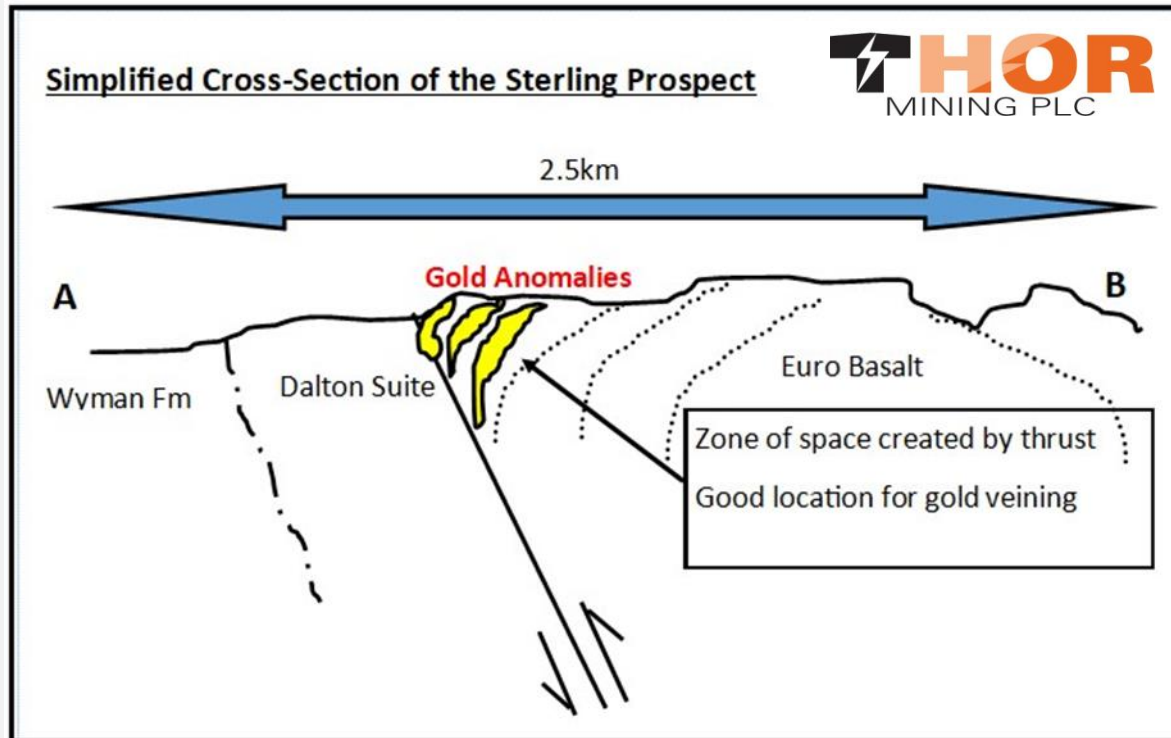
# RAGGED RANGE - MAGNETIC/RADIOMETRIC SURVEY

- Close spaced airborne magnetics survey was flown by MAGSPEC Airborne Surveys Pty Ltd over E46/1190, E46/1262 & E46/1355 (ASX:THR 6 October 2020)
- High resolution airborne magnetics data defines structural contacts and lithological boundaries prospective for gold mineralisation
- Anomalous stream sediment gold assays clearly relate to the structural contact of the Euro Basalt and ultra mafic Dalton Suite, along the 13km gold trend
- Open folding to NE of contact, tight, faulted folding to SW
- Geological Model – Local analogue to Warrawoona Gold Project, Calidus Resources  
*MRE: 43.7Mt @ 1.06 g/t Au g/t for 1.5 M oz (Calidus Website)*



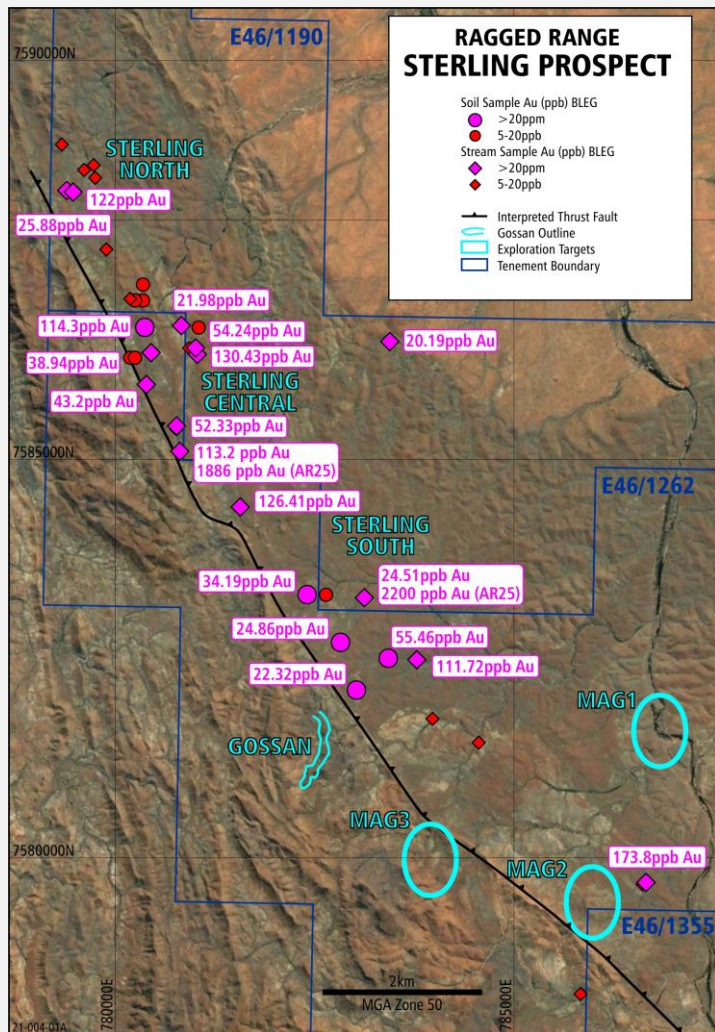
ASVI (Analytic signal of the vertical integral) image over geology

# RAGGED RANGE - SIMPLIFIED GOLD MODELS





# RAGGED RANGE - Next Steps



- Soil Sampling Program #5 due to commence – define drill locations.
- Successful WA Government (DMIRS) co-funded drilling grant - \$160,000
- RC drilling program to commence Q3 2021





# US URANIUM & VANADIUM – 100%

## LOCATION

- Located SE Utah & SW Colorado USA – Uravan Mineral Belt
- 400km south-west of city of Denver

## GEOLOGY

- Sandstone filled paleochannels hosting uranium & vanadium
- Field sampling returned high grade uranium (up to **1.25%  $U_3O_8$** ) and vanadium (up to **3.4%  $V_2O_5$** )  
(ASX:THR 21 July 2020)

## HISTORY

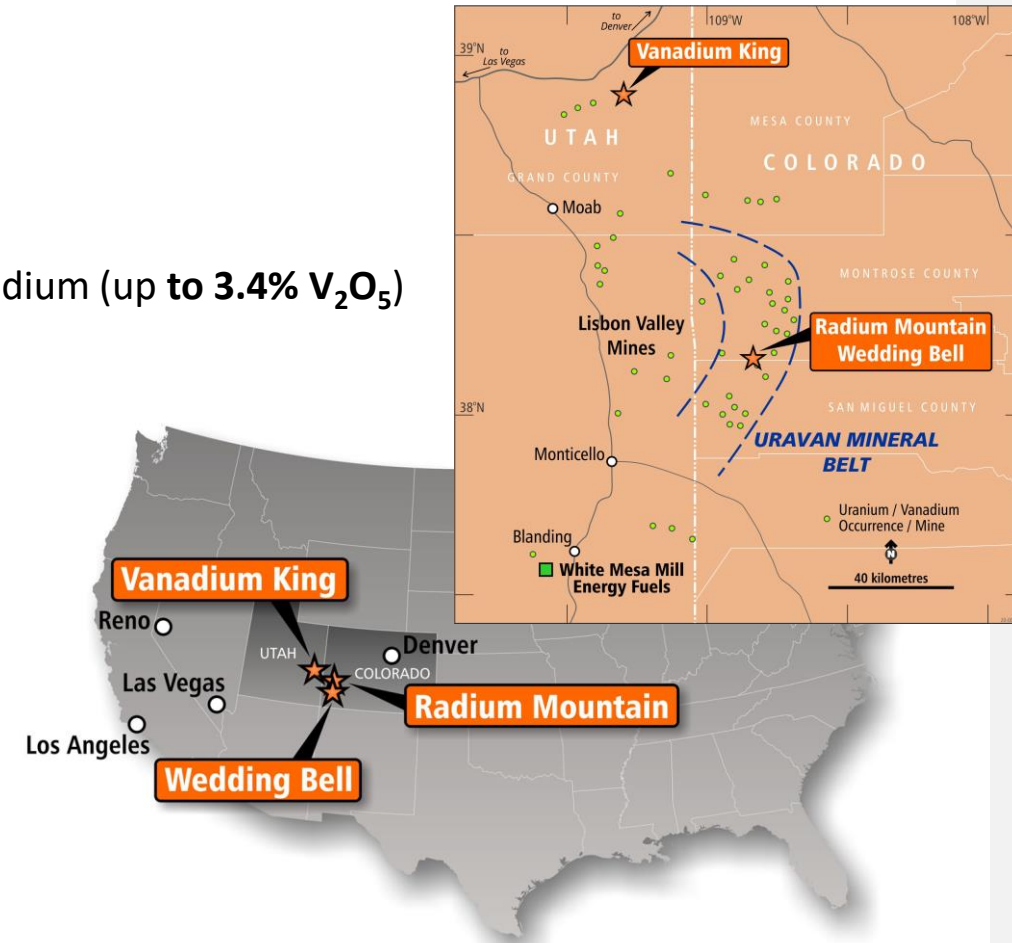
- Colorado claims extensively mined, mainly for uranium through 20th century - historical high-grade uranium & vanadium production
- Utah claims drilled to resource estimate standards of the 1980's, with substantial mineralisation reported

## INFRASTRUCTURE

- Nearby processing plant with available capacity has historically taken ore for toll treatment

## RESOURCE

- Drilling scheduled

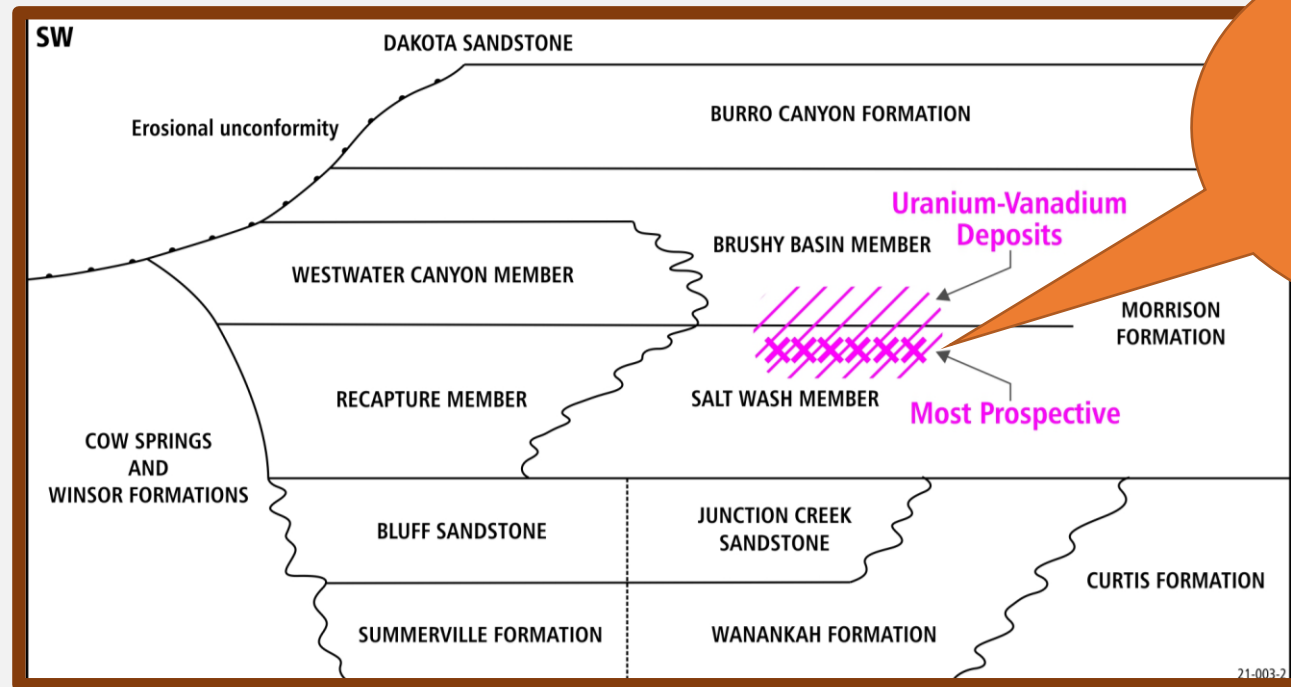




# Wedding Bell Historical Mines Geological Model

## GEOLOGICAL MODEL

- “Saltwash Type” sandstone hosted uranium –vanadium deposits
- Sandstone filled paleochannels (braided streams in the Jurassic period)
- Deposits hosted in the Morrison Formation with the upper Salt Wash Member the most prospective.
- Tabular stratabound mineralisation is persistent and predictable both laterally and along channels (over kilometres)
- Vanadium to Uranium ratio averages 5:1 in the Wedding Bell/Groundhog Project area



Drilling  
targeting  
prospective  
upper  
sandstone units

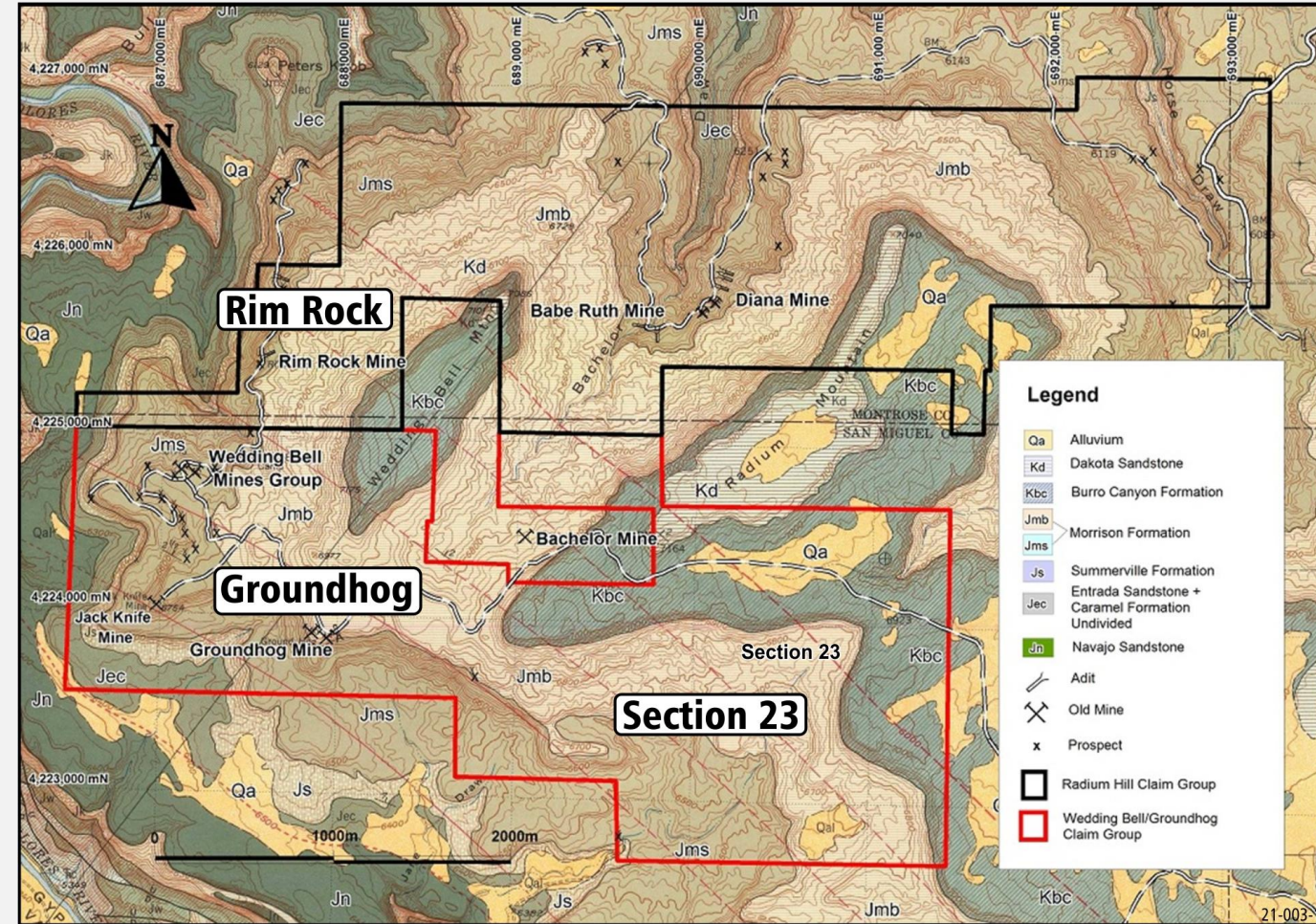
*Simple Stratigraphy of the Uravan Mineral Belt showing the prospective Morrison Formation.*



# Wedding Bell – Next Steps

## NEXT STEPS

- Drilling Permitting in Progress
- Drilling to target high grade uranium and vanadium mineralisation along strike at 3 area:
  - Rim Rock
  - Groundhog, and
  - Section 23
- Section 23 has previously not been tested





# MOLYHIL TUNGSTEN PROJECT– 100%

## LOCATION

- Northern Territory, Australia – 320km east of Alice Springs

## GEOLOGY

- Two adjacent magnetite skarn bodies with economic mineralization of
- scheelite and molybdenite

## HISTORY

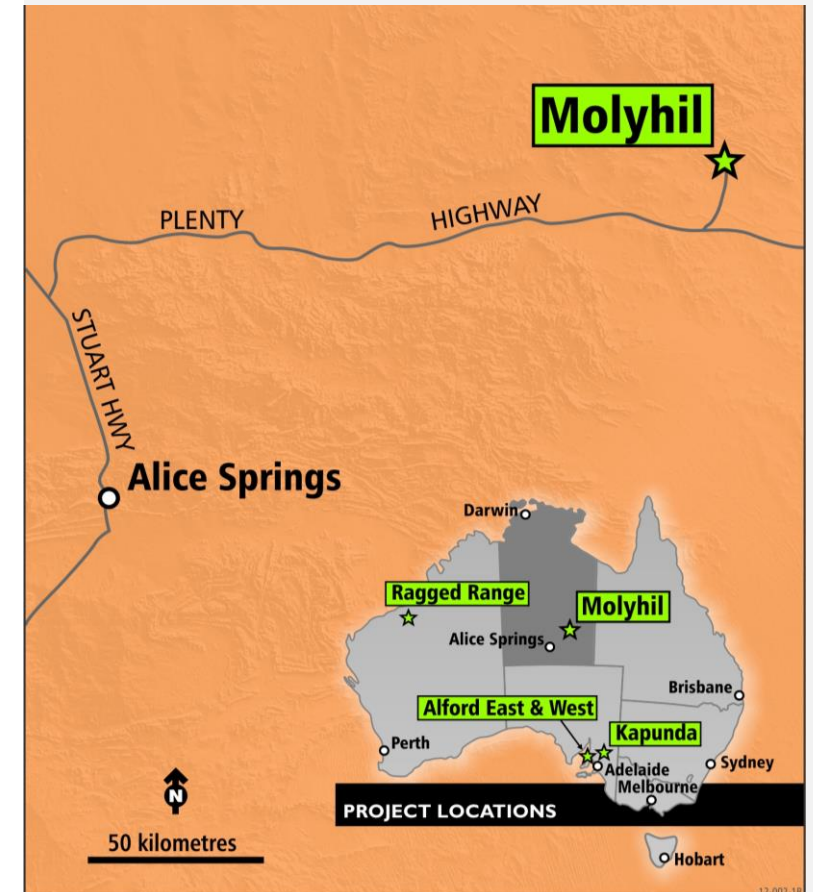
- High grade resource suitable for open pit development
- Extensive metallurgical testwork with validated flowsheet to produce saleable concentrates

## PERMITTING STATUS

- Fully permitted for development

## MINE LIFE

- Substantial resources at depth below modelled pit shell + outcropping Bonya tungsten deposits nearby



# MOLYHIL HIGH GRADE RESOURCE

## HIGH GRADE RESOURCE

- Molyhil is one of the higher-grade open pit tungsten projects in the Western World

## SIGNIFICANT MOLYBDENUM CREDITS

- Improves tungsten equivalent resource grade by ~50%

## ORE SORT – PRE-CONCENTRATION

- Improves Mill feed grade by 64%

## RESOURCE AT DEPTH BELOW RESERVE

- 3D Resource Modelling and review of depth potential underway

## Summary of Molyhil Mineral Resource Estimate (Reported 8 April 2021)

RESOURCE	WO <sub>3</sub>			Mo		Cu		Fe
	Mt	Grade %	tonnes	Grade %	tonnes	Grade %	Tonnes	Grade %
Measured	0.46	0.28	1,300	0.13	600	0.06	280	19.12
Indicated	2.93	0.27	7,920	0.09	2,630	0.05	1,470	18.48
Inferred	0.99	0.26	2,580	0.12	1,170	0.03	300	14.93
Total	4.38	0.27	11,800	0.14	4,400	0.05	2,190	17.75

- Thor Mining PLC holds 100% equity in this resource
- The Company is not aware of any information or data which would materially affect this previously announced resource estimate, and all assumptions and technical parameters relevant to the estimate remain unchanged

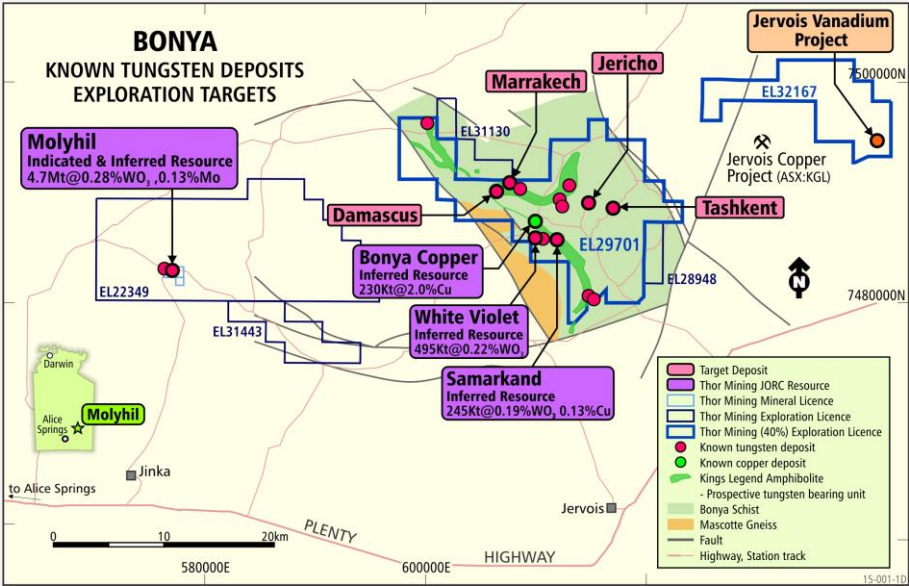
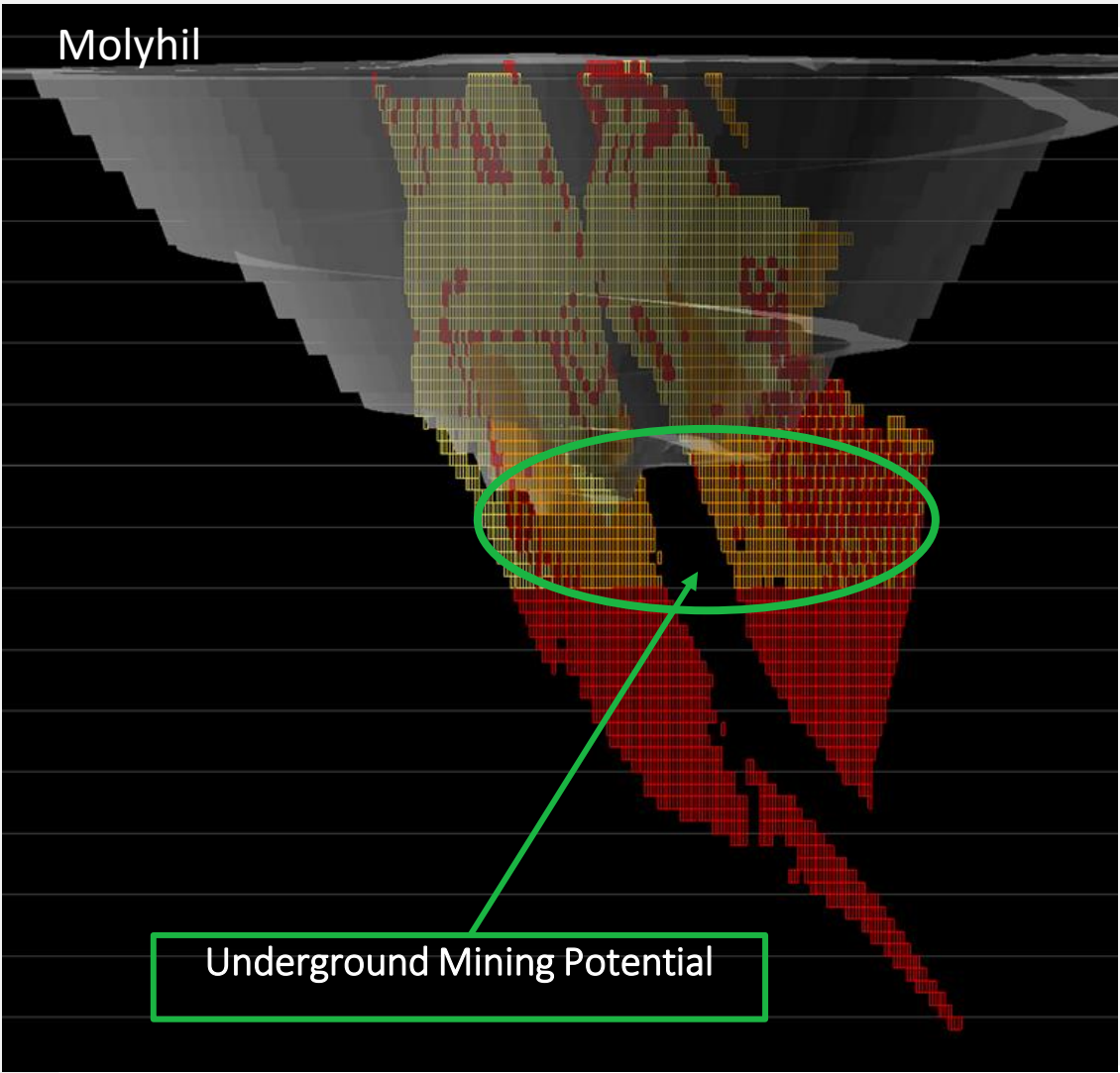
## Commodity Price Recovery \*

- Tungsten up 42% since June 2020
- Moly up 146% since June 2020

\*Argus Metals



# MOLYHIL UNDERGROUND & BONYA SATELLITE DEPOSITS



BONYA TUNGSTEN RESOURCE ESTIMATES - 29<sup>th</sup> Jan 2020

	Oxidation	Tonnes		WO <sub>3</sub>		Cu	
		'000	%	Tonnes	%	Tonnes	
Inferred	Oxide	50	0.26	120	0.14	60	
	Fresh	690	0.21	1,410	0.08	550	
Total		740	0.21	1,530	0.09	610	

BONYA COPPER RESOURCE ESTIMATE (26<sup>th</sup> NOV 2018)

Resource	Tonnes '000	Grade %	Tonnes
Inferred	230	2.0	4,600

Thor Mining PLC holds 40% equity in these resource.

The Company is not aware of any information or data which would materially affect these previously announced resource estimates, and all assumptions and technical parameters relevant to the estimate remain unchanged.

# PILOT MOUNTAIN – 100% THOR

## LOCATION

- Located IN Nevada, USA
- 250km south-east of Reno

## GEOLOGY

- Tungsten-copper-zinc-silver skarn style mineralization at four primary locations
  - Desert Scheelite, garnet, gunmetal & Good hope deposits

## HISTORY

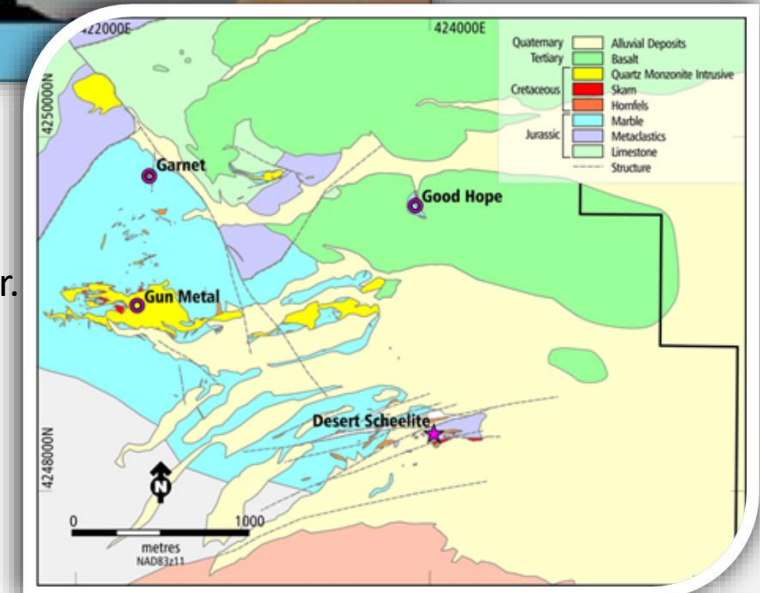
- Explored by Union Carbide Corp – late 1970's – early 1980's
- Four deposits drilled to resource standard of the time
- Subsequent Thor drilling delivered Mineral Resource estimate (JORC ) on two deposits
- Metallurgical Testwork to PFS Standard

## INFRASTRUCTURE

- Located within close proximity to mains & sealed highway. Ample nearby ground water.
- Proximity to towns for workforce daily commute

## RESOURCE

- Inferred & Indicated Mineral Resource Estimate (2018)
  - 12.53Mt for 34,290 contained tonnes of  $WO_3$
- Largest Tungsten Resource in the USA





# PILOT MOUNTAIN RESOURCE ESTIMATE

The largest Reported Tungsten Resource in USA

## Pilot Mountain Resource Estimate (Reported 13 December 2018)

		Resource	WO3		Ag		Cu		Zn	
		Mt	Grade %	Contained Metal (t)	Grade %	Contained Metal (t)	Grade %	Contained Metal (t)	Grade %	Contained Metal (t)
Garnet	Indicated		-	-						
	Inferred	1.83	0.36	6,590						
	Sub Total	1.83	0.36	6,590						
Desert Scheelite	Indicated	9.01	0.26	23,400	20.73	187	0.15	13,200	0.41	37,100
	Inferred	1.69	0.25	4,300	12.24	21	0.16	2,800	0.19	3,200
	Sub Total	10.70	0.26	27,700	19.38	207	0.15	16,000	0.38	40,300
Summary	Indicated	9.01	0.26	23,400	<div>🔧 Thor Mining PLC holds 100% equity in this resource</div> <div>🔧 All figures are rounded to reflect appropriate levels of confidence. Apparent differences may occur due to rounding.</div> <div>🔧 The Company is not aware of any information or data which would materially affect this previously announced resource estimate, and all assumptions and technical parameters relevant to the estimate remain unchanged.</div> <div>🔧 Garnet Resource reported 22 May 2017</div>					
	Inferred	3.53	0.31	10,890						
Pilot Mountain Total		12.53	0.27	34,290						

“Tungsten Classified as a Critical Commodity by US Dept of the Interior”

“No domestic primary Tungsten production in USA”

# NEXT STEP EXPLORATION/DEVELOPMENT ACTIVITIES

**Fully Funded - Focussed on copper resources, plus gold & uranium discoveries....**

## **Alford-East Copper Project, South Australia**

- Drilling for process test samples & to extend Resource – in Progress

## **Kapunda Copper-Gold Project, South Australia (EnviroCopper Ltd – Government Funded Program)**

- Wellfield Testing - Final Stage Technical Feasibility - commencing ~Q3 2021

## **Ragged Range Gold (+copper) Project located in the Pilbara Craton Western Australia**

- Soil sampling and geological mapping
- RC Drilling - commencing Q3 2021

## **Wedding Bell-Uranium & Vanadium Project, Colorado USA**

- RC Drilling – scheduled



# CONTACT DETAILS

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