



BUSINESSNEWS

Junior Miners

SPECIAL REPORT

Copper resurgence benefits juniors

High-quality copper prospects are becoming harder to find, but juniors are poised for the challenge.



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BILL Beament's decision to leave his role at the helm of one of Australia's biggest goldminers to join a copper explorer came as a shock to many in the mining sector.

The Northern Star Resources chairman of nearly 14 years – who steered the company towards its \$16 billion merger with Saracen Mineral Holdings in February – will join the board of Venturex Resources as an executive director in July.

That deal involves a \$37.3 million investment from Mr Beament to Venturex, which owns two copper-zinc projects in Western Australia.

Venturex plans to capitalise on growing demand for copper and other base metals required for everyday appliances like televisions, cars and refrigerators, as well as larger infrastructure developments.

In the main, however, the recent uptick in demand has been driven by the renewables market, with copper used in electric vehicle batteries and wind turbines, among other clean energy products.

In 2020, revenue from Australia's copper exports grew to a record \$10.4 billion, up from \$10.2 billion in the previous year.

And this year, the price of copper exceeded a near-decade high of \$US4 per pound (about \$US9,500 per tonne).



Sandfire Resources' DeGrussa operations in WA. Photo: Sandfire Resources

A global push for clean energy has also benefitted Australian graphite, lithium and rare earths companies, while boosting demand for other metals such as cobalt, nickel and silver.

In the case of copper, however, the industry faces a significant challenge.

"The issue we're seeing at the moment is there aren't a great deal of quality copper projects out there, which is part of the problem the majors are facing," Argonaut research analyst George Ross told *Business News*.

He said the lack of high-quality copper prospects was prevalent in Australia and, to an extent, globally.

The result was that some of the major producers would leave exploration up to the juniors and form joint ventures once projects were proved up.

Such an example is Perth-based Antipa Minerals, which has separate farm-in agreements in place with Rio Tinto, Newcrest Mining and IGO.

The Rio deal involves Antipa's Citadel copper-gold project, in WA's Paterson province in the East Pilbara.

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PROMINENT COPPER PLAYERS

COMPANY	PROJECT	LOCATION	STATUS
BHP	Olympic Dam	South Australia	Production
	Escondinda	Chile	Production
	Pampa Norte	Chile	Production
	Antamina	Peru	Production
Glencore Australia	Mount Isa	Queensland	Production
OZ Minerals	West Musgrave	Western Australia	Development
	Prominent Hill	South Australia	Production
	Carrapeetana	South Australia	Production
Rio Tinto	Winu	Western Australia	Development
	Oyu Tolgoi	Mongolia	Production
	Kennecott	US	Production
Sandfire Resources	DeGrussa	WA	Production
	Cobar	NSW	Development
	Temora	NSW	Development
	Motheo	Botswana	Development
	Black Butte	US	Development

Rio began exploring the project in 2015 and, after finding copper-gold mineralisation at its nearby Winu operations in 2019, proceeded with the next stage of the Antipa farm-in by investing a further \$11 million in the Citadel project for a 51 per cent stake.

Later that month, Antipa confirmed Rio would spend a further \$14 million exploring Citadel within the next three to five years.

More recently, Rio signed a deal with potash play Agrimin’s exploration subsidiary, Tali Resources, which owns copper-gold tenements in WA.

Rio could earn a 75 per cent stake across the tenements if it spent close to \$60 million on exploration.

Meanwhile, prominent producers including Sandfire Resources, which runs the DeGrussa operations in WA, have begun a search for high-quality prospects overseas.

Sandfire gained the T3 (Motheo) copper-silver mine in Botswana through its acquisition of MOD Resources in 2019.

It is developing the proposed 10-year operation through its Tshukuda Metals subsidiary.

Motheo is expected to boost Sandfire’s overall copper production capacity by an initial 3.2 million tonnes per annum, ahead of a planned expansion to 5.2mtpa.

Managing director Karl Simich recently said Motheo was one of the few significant new copper mines under development.

Mr Ross said Sandfire’s case was a good example of the difficulty companies were facing in exploring for copper at home.

However, he noted several hotspots worth revisiting.

Recent discoveries in the Paterson province, for example, have fuelled strong interest in the area from other majors such as Fortescue Metals Group, IGO, Newcrest Mining, and Rio Tinto.

The region is also rich in gold mineralisation, for which copper is often a byproduct.

Nickel producer IGO began searching for copper-cobalt deposits in Paterson in late 2018 through an agreement with explorer Encounter

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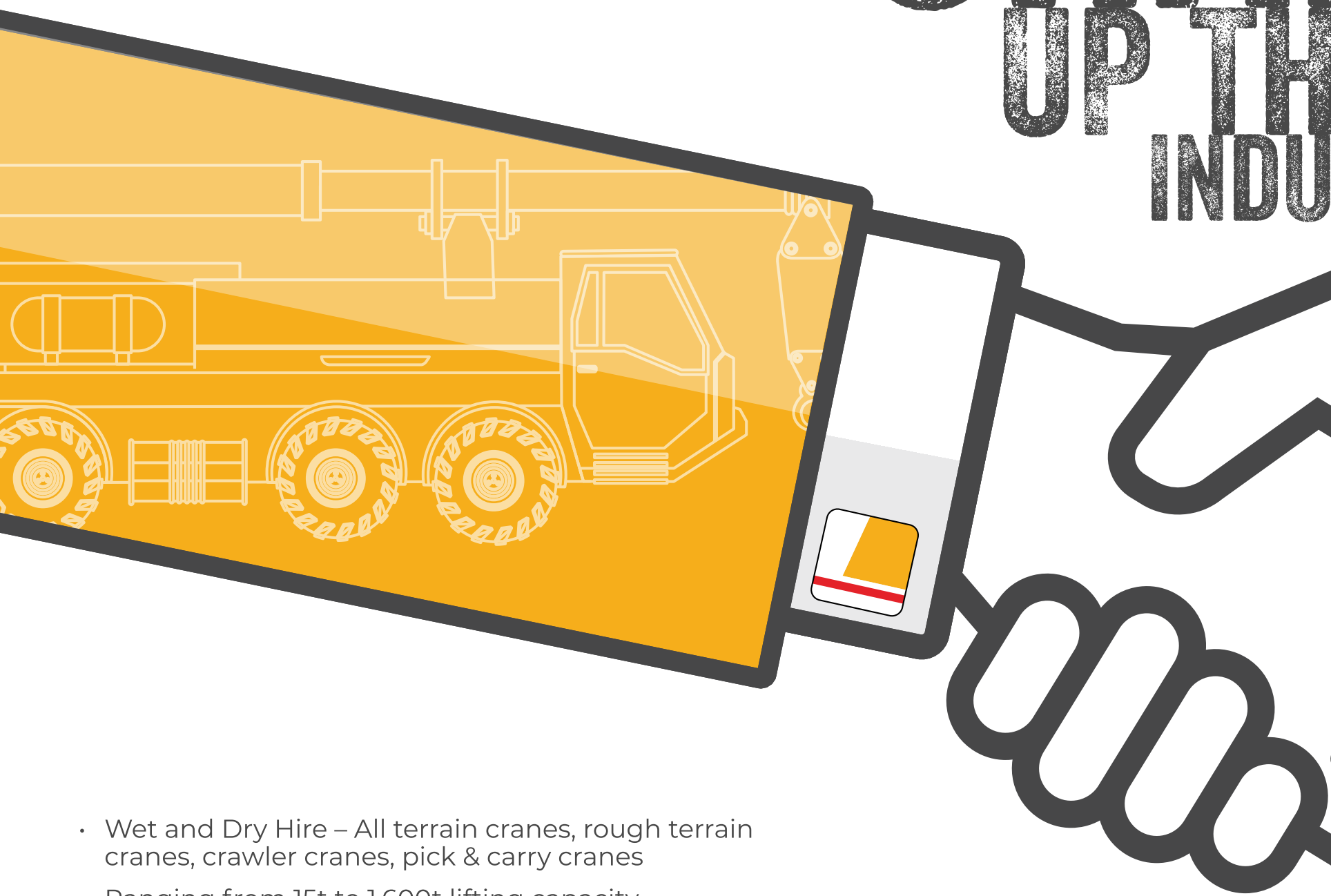
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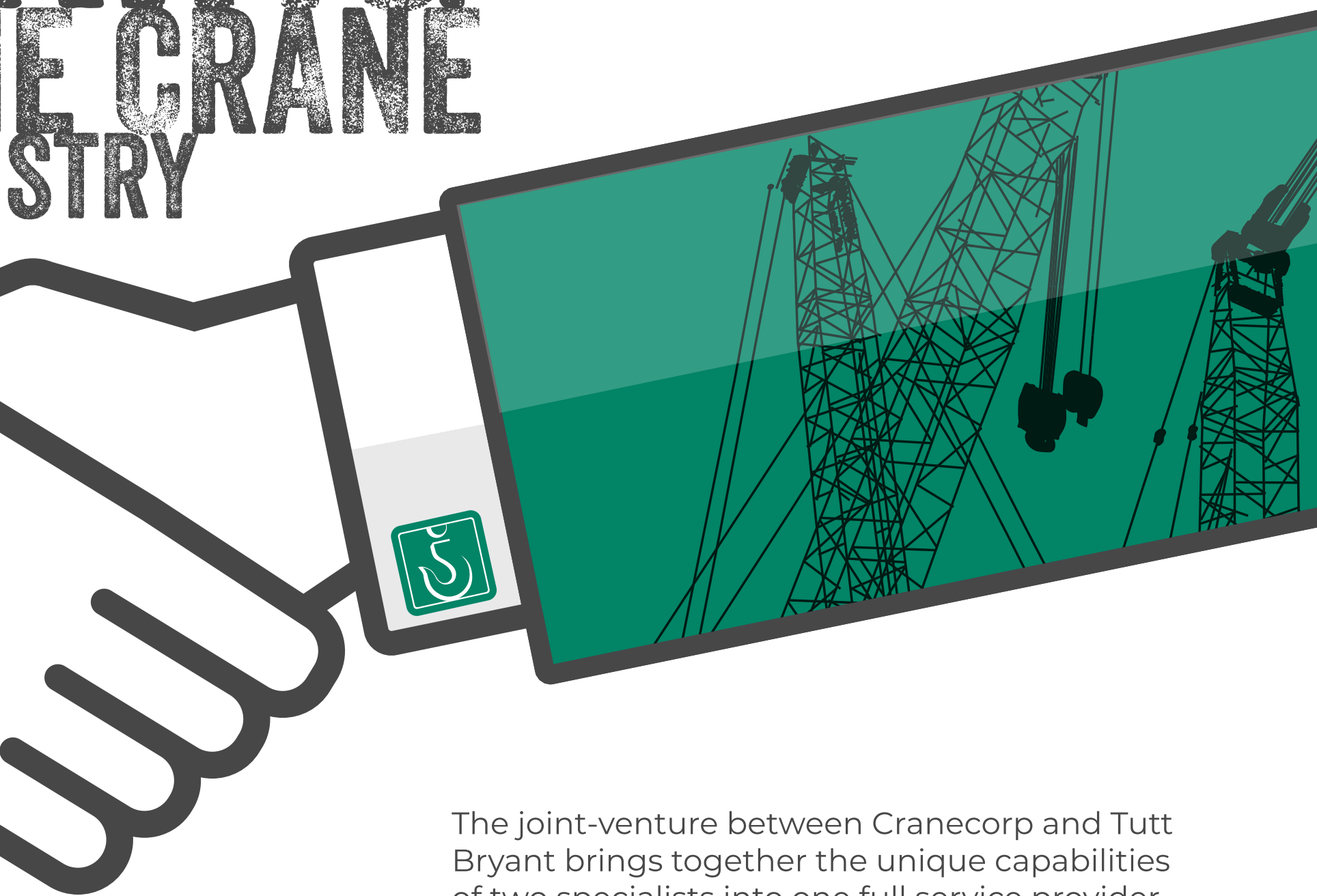
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JOINT-VENTURE

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Resources, which owns several prospects in WA and the Northern Territory.

Under that arrangement, IGO could sole-fund \$15 million in exploration to earn a 70 per cent JV interest in Encounter's Yeneena project.

Encounter previously had arrangements in place over its Aileron and West Arunta projects with Victoria's Newcrest Mining, however, the goldminer recently withdrew from both JVs.

Meanwhile, Rio and iron ore giant Fortescue have committed to copper-gold JVs with Perth-based Carawine Resources.

Fortescue could spend \$6 million on exploration to earn a 51 per cent stake in Carawine's Eider tenement, which forms part of the junior's larger Paterson project, while Rio could spend \$5.5 million for a 70 per cent stake in Carawine's West Paterson tenements.

Juniors Artemis Resources, De Grey Mining, Sipa Resources, and St George Mining are also active in the region.

Mr Ross said companies had rushed to the underexplored Paterson province after Rio made its 503mt Winu discovery.

He said a similar situation was unfolding in the NT's Barkly region, where BHP and other majors were revisiting the area which, after historical exploration, was now viewed to be highly prospective for copper mineralisation.

In one instance, BHP has backed Encounter's Elliot project, for which it could earn up to a 75 per cent JV interest if it spent \$22 million on exploration within 10 years.

Mr Ross said juniors were also pursuing large, bulk-tonnage operations overseas.

Cases include WA and NSW companies Hot Chili and Xanadu Mines, which are focused on developing copper projects in Chile and Mongolia, respectively.

"Something all those companies have in common is that they're after ... fairly modest-grade resources that, perhaps in the past, have not been as attractive but are becoming increasingly more attractive because mining methods have changed," Mr Ross said.

He said part of the issue for explorers was that most surface copper mineralisation had already been identified.

Though, mining methods like 'block caving' were helping juniors efficiently



Neil Marston says it's a good time for explorers. Photo: David Henry

“Some people are predicting the copper price in the next 12 months will break all-time records - Neil Marston

complete underground mining at a lower cost.

"In some cases, you can still find copper mineralisation sticking out of the ground, but it's becoming less and less frequent," Mr Ross said.

"[Explorers] are relying on testing deposits that are underneath cover, and that cover might be tens of metres or up to 300 metres.

"They take on a lot of risk ... because it costs so much money to drill through the cover to get what may or may not be mineralised."

He said it had taken a while for the industry to find undercover exploration palatable.

"The reason things have changed a bit is that the outlook for copper is very strong, with the EV economy moving forward," Mr Ross told *Business News*.

"Hopefully, that drives more exploration and discovery."

Neil Marston, managing director of Bryah Resources, said copper juniors were finding it easy to raise funding for exploration.

The business raised close to \$3 million in 2020, which was largely directed towards exploring Bryah's namesake project, Bryah Basin.

It sits close to Sandfire's DeGrussa mine, which currently yields a high-grade of about 4 per cent copper while the nearby Monty satellite deposit runs close to 6 per cent, based on the company's latest quarterly results.

Mr Marston said Bryah was exploring for copper mineralisation modelled on those deposits, with Sandfire a potential JV partner if it made a discovery.

"It's a very good time for us to be out there exploring for copper prospects," Mr Marston told *Business News*.

"Companies are finding it quite easy to go to the market and raise money.

"We've done a couple of capital raisings in the past 12 months and on every occasion, we could've raised three or four times the amount we wanted to."

Bryah is also focused on developing its manganese asset alongside joint venture partner OM Holdings, which recently raised its stake to 30 per cent.

The project caught the interest of contractor Primero Group and investment firm AMCI in November last year, which together offered to pay \$5 million for the asset.

The offer was withdrawn in February, with Bryah noting some conditions weren't met.

Mr Marston said Bryah would continue to pursue both its manganese and copper strategies.

Though, he agreed a lack of quality copper prospects was an issue for the industry, noting grades were declining globally and many operations were running well under 1 per cent.

"The challenge is with the growing demand for copper," he said.

"In the past 12 months, there was about 30 million tonnes of new copper production required [to meet demand].

"That's expected to grow close to 45mtpa by 2040."

Mr Marston said there was an urgent need for new copper projects to meet growing global demand, which has been increasing by about 700,000t each year.

"We need copper wires for almost everything in our modern lives," he said.

"The growing demand for copper is what's driving the price up, and the expectation is that we're in bit of a supercycle going forward.

"Some people are predicting the copper price in the next 12 months will break all-time records.

"That's very encouraging for copper explorers and producers in Australia."



UON: An overnight success twenty years in the making

Twenty-three years after starting business as a two-man operation, UON has recently received the Business News RISE WA Business of the Year for 2020. The company is well-known for its integrated approach to water infrastructure, powering mine sites, manufacturing and maintenance. The companies' core business is the delivery of complete solutions that connect people, data and technology in one simple process. These solutions are designed and engineered in-house to suit harsh Western Australian conditions, all managed by a sophisticated merging of hardware and software.

While many of the products are locally manufactured in the Malaga facility, based on proprietary and even patented designs, the offering extends far beyond offering products for purchase. UON's offer includes data monitoring, remote access, training, site works, construction, maintenance, monitoring, labour-hire and all manner of on-going 24/7 supports.

UON is backed by Sydney-based Macquarie Bank, which invests in innovative businesses across the globe. Macquarie became an investor in December 2019, acquiring a minority shareholding alongside the founder, Mark Keogh.

Robe Valley: A case study in large water infrastructure

UON has recently won a large water management project with Rio Tinto at Robe Valley, located approximately 140 km southwest of Karratha in the Pilbara. UON was engaged as the head contractor for the design, supply and construction works for the supply and installation of infrastructure such as:

- Bulk earthworks & civil
- Transfer pump stations

- Transfer water storage tanks
- Turkeys nests water supply infrastructure
- Potable water infrastructure
- Controls and communications
- Above & below ground HDPE pipeline, valves & manifolds
- Electrical cables, optic fibre, conduits and terminations
- Diesel drive pump trailers
- 28 dewatering trailer and skid packages

During these projects, UON achieved several key successes, such as the partnership with the local traditional landowners and being recognized for achieving one million-man hours LTI free.

The easy first step to decarbonising mining

The Robe Valley project exemplifies how UON can save on fuel, cost and carbon emissions. Even without delivering its state-of-the-art hybrid solution, UON is still able to deliver considerable savings. It's part of a company-wide mission to reduce fossil fuel usage on all sites by 30% within five years.

To this end, UON has spent many years in intensive R&D, developing fuel-efficient equipment for the mining environment and beyond. UON has a host of new solutions coming to the market in the near term which is a testament to the R&D team at UON.

Executive Director Kenny Keogh says, "People often don't know how efficient our solutions are, and the overall service offering we provide. UON has engineered safety and reliability in all of our products. We have focused on building quality long-lasting products for the harshest environment. A cheap but inefficient solution can have a far larger financial and environmental cost

than what UON offers. We focus on the overall costs to our clients, not just the initial upfront cost. That's because we want to be in long-term partnerships with them and deliver bottom-line benefits."

The UON SMART philosophy

The centrepiece of this repositioning has been the UON SMART™ design philosophy. This is a Scaleable, Modular, Automated, Renewable and Temperature-controlled approach, standardised across everything UON does.

This approach:

- Manages clients' people, data and technology requirements into one simple system;
- Improves delivery times and costs by standardising equipment and building to stock;
- Delivers a modular process that ties in site work and support services on-going;
- Educates clients' staff through training in safe usage;
- Ensures that generators are nameplate rated to work fuel-efficiently in 40-50°;
- Connects efficient generators to hybrid energy and water distribution solutions; and,
- Gathers data constantly via remote monitoring.

Delivering end-to-end means delivering construction

Having an end-to-end process inevitably leads to integrating site works and construction. It has taken UON 20 years to be a truly vertically integrated company. UON regularly delivers these works from a tailored power station to a water infrastructure project and everything in between.

UON has recently been awarded major infrastructure projects requiring the design, supply, manufacture, install, commission and maintain extensive construction works to be delivered in conjunction with local procurement and works with traditional landowners. The company is currently delivering:

- Dewatering projects
- Water infrastructure projects
- (BOO) power stations
- Water supply projects
- Major earthworks
- Civil packages
- Electoral powerlines
- Cut-backs project
- Major piping
- Tailings projects

Energy for every future

In a time of uncertainty, UON continues to help clients anticipate their challenges by seeing the bigger picture. Executive Director Kenny Keogh says, "The business has seen controlled growth in WA over the last few years. Fortunately, we've been able to diversify the business into multiple revenue streams while still focusing the business on our smart solutions. The business has reinvested heavily back into systems and people. This is now allowing the business to reach its full potential."

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Photo: Attila Csaszar

Gold prospects lead WA listings

Gold sector listings are pumping millions of dollars into WA's mining industry.



Jordan Murray
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WESTERN Australia's gold players appear primed for another bumper year, with at least nine goldminers or explorers from the sector hitting the ASX boards in the first four months of 2021.

That activity follows a stellar 2020 for gold during which the price per ounce hit an all-time high of \$US2,067 in August.

Several major WA-based gold players successfully listed last year, including De Grey Mining, which has raised hundreds of millions of dollars to fuel its exploration efforts in the Pilbara, and Miramar Resources, which holds projects in the Eastern Goldfields and Murchison regions.

While the price of gold has since slid back to about \$US1,700/oz as of March, global uncertainty amid the COVID-19 pandemic has kept the price of the commodity at a five-year high.

That's led an array of prospective WA-based miners to rattle the tin in 2021, with Torrens Mining, Australian Gold and Copper, Oz Aurum, Auric Mining and Medallion Metals securing \$64 million in capital between them in

the first three months of the calendar year.

The first to list was Torrens Mining, which debuted in early January after raising \$10 million through its IPO.

That would have given the company an indicative market capitalisation of \$25 million (its market capitalisation has since fluctuated between \$18 million and \$32 million).

Led by Stephen Shedden, founder of Gindalbie Metals, Oroya Mining and Argentina Mining, Torrens owns the Mt Piper gold project in Victoria and has a farm-in deal with Coda Minerals to explore its Elizabeth Creek copper-cobalt project in South Australia.

The company is also in possession of a copper-gold project in Papua New Guinea and is awaiting an exploration licence for the project.

Torrens has since sold 19 per cent of its stake in the Elizabeth Creek project to Coda Minerals for \$6.6 million, with the option for Coda Minerals to purchase a further 5 per cent stake for \$1.5 million.

In Victoria, Torrens has also secured two additional tenements at its Mt

Piper site with an expectation it will be granted a third tenement.

Further afield is Australian Gold and Copper, which is exploring and developing three gold assets throughout the Lachlan Fold Belt in NSW.

AGC listed in January after demerging from Nedlands-based Magmatic Resources that same month.

Magmatic Resources specialises in the exploration of gold, copper and other base metals, primarily in NSW's interior and WA's Goldfields-Esperance region.

It holds a 30 per cent stake in AGC as present.

AGC's share price has remained relatively stable since listing, with market capitalisation ranging from a low of \$14.5 million to a high of \$20.4 million. It listed with an indicative market capitalisation of between \$17 million and \$20 million.

Closer to home, Medallion Metals debuted on the ASX earlier this month, raising \$12.5 million through its IPO in a major boost for its proposed \$85 million copper-gold project in Ravensthorpe.

JUNIOR MINERS

That project, which is expected to produce up to 79,000oz in its third year of production, was acquired by Silver Lake Resources in 2012 following a merger with Phillips River Mining.

The project was subsequently sold to Medallion Metals in 2015.

Funds raised are intended to further a drilling program at the Ravensthorpe project and its nearby Jerdacuttup base metals project.

Medallion Metals listed with an indicative market capitalisation of \$42 million, reaching as high as \$48 million at the close of its first day of trading.

Other explorers to have benefitted in recent months include Auric Mining, which owns two advanced gold projects in Munda Gold and Jeffreys Finds, near the abandoned townsite of Widgiemooltha in the Goldfields-Esperance region.

Auric informed the market earlier this month that it had found encouraging results that supported the expansion of its resource at the Munda Gold project.

In addition to those two sites, the company also holds an exploration licence for the nearby Spargoville project, which is home to several gold prospects believed to be either partially or wholly untested.

While Auric had sought \$7 million through its IPO, with an indicative market capitalisation of about \$21 million, its market cap has fluctuated from a high of \$16 million to a low of \$13 million since listing in February.

Similarly, OzAurum has sat between \$29 million and \$18 million, despite an indicative market capitalisation of \$31 million during its IPO.

OzAurum listed on the ASX in February and owns the Mulgabbie and Patricia projects in the Norseman-Wiluna Greenstone Belt, which is nearby to the Super Pit.

More gold players are lining up to list throughout April, with Icen Gold,

WA-based junior mining ASX IPOs - ranked by date of listing on ASX

Company	Date of listing	Industries	Capital raised during IPO (\$m)	Share price at IPO	Share price at close of first day of trading	Variance (\$/%)
Torrens Mining	Jan-06	Gold, Copper and Cobalt	10	\$0.20	\$0.30	\$0.10 (+50%)
Australian Gold and Copper	Jan-18	Gold and Copper	10	\$0.20	\$0.21	\$0.01 (+5%)
Oz Aurum	Feb-08	Gold	12	\$0.25	\$0.21	\$0.04 (-16%)
Auric Mining	Feb-12	Gold	7	\$0.25	\$0.19	\$0.06 (-24%)
Firebird Metals	Mar-18	Manganese	5.5	\$0.20	\$0.59	\$0.39 (+195%)
Medallion Metals	Mar-22	Gold	25	\$0.25	\$0.27	\$0.02 (+8%)
Icen Gold	Apr-07	Gold	20	\$0.20	N/A	N/A
TechGen Metals	Apr-13	Gold and Copper	6	\$0.20	N/A	N/A
Black Canyon	Apr-15	Base Metals	5	\$0.20	N/A	N/A
Australasian Gold	Apr-28	Gold	6	\$0.20	N/A	N/A
Juno Minerals	TBA	Iron	20	\$0.25	N/A	N/A
Peregrine Gold	TBA	Gold	2.5	\$0.20	N/A	N/A

Source: ASX

TechGen Metals, and Australasian Gold collectively seeking \$32 million in funding before the end of next month.

The largest of these IPOs is also the next to list, with Icen Gold targeting its ASX debut for April 7.

Icen owns the 14 Mile Well project, which comprises one mining lease, five exploration licences, and 155 prospecting licences near Laverton.

The company intends to use \$20 million raised from its IPO to further its exploration program, through consolidating its holdings through additional tenements or purchasing them from third parties.

Meanwhile, TechGen Metals, which is expected to list on April 13, is seeking \$6 million to further exploration efforts at three gold prospects: Yilgarn Craton, Paterson Orogen and Ashburton Basin.

That would give TechGen an indicative market capitalisation of between \$9.5 million and \$10.5 million.

Australasian Gold will hit the boards

on April 28 after raising up to \$6 million by the end of March.

The company, which owns two projects in Queensland and one in WA, will focus on exploring its Queensland tenements immediately after listing.

Its WA asset, located in the Pilbara near Northern Star Resources' Paulsens Gold Mine, will be explored once Australasian is granted a tenement application.

Its market capitalisation after listing is expected to be between \$10 million and \$11.5 million.

Iron IPOs

While WA's ASX offerings have been drawn predominately from the gold sector, players from the iron ore, base metals, and manganese sectors have also made a splash in the first three months of 2021.

Firebird Metals, which raised \$5.5 million through its IPO and listed with an indicative market capitalisation of \$10.9 million, was the only WA-based,

non-gold miner to list on the ASX so far this year.

Arising from a demerger from Firefly Resources, Firebird counts its Oakover manganese project, located in the Pilbara region, as its core asset.

Its market capitalisation has fluctuated between \$29 million and \$36.5 million since listing.

Further down the track, Black Canyon, which is expected to list by April 15, will be using the \$5 million it's seeking to further develop its Carawine and Lofty Range projects.

Its prospectus flags an indicative market capitalisation of between \$8.1 million and \$8.7 million.

Juno Minerals, which holds two iron ore development projects in the Yilgarn region, and Peregrine Gold, which holds a gold project in the Pilbara, are due to the list at a yet-to-be determined date.

They are seeking \$20 million and \$2.5 million thorough their IPOs, respectively.

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