Pentagon sets its sights on African rare earth supply

• In efforts to establish fresh supply links, the US Department of Defense has held talks with Malawi’s Mkango Resource and other rare earth miners in a bid to secure strategic minerals and diversify reserves outside of China.

• “We are looking for any source of supply outside China. We want diversity. We don’t want a single-source producer,” Jason Nie, a material engineer with the Pentagon’s Defense Logistics Agency, said on the sidelines of the Argus U.S. Specialty Metals conference in Chicago.

• While routine DLA talks with potential suppliers form part of its due diligence, the steps do not necessarily result in purchase agreements. However, the inquiries show that the Pentagon is increasingly focused on diversifying supplies of critical minerals.

• For the current 2019 fiscal year, the DLA expects to buy rare earths on the open market (up to a maximum 416t), lithium ion battery precursors (0.02t) and tin (40t), among other strategic minerals, according to a government report.

• Potential restrictions on Chinese rare earth exports are causing US miners to stir as prices begin to rise after being burned in the 2011 price collapse.

• “Unfortunately for us, they haven’t actually followed through,” Blue Line Corp CEO Jon Blumenthal said, referencing rising prices when China limited exports. Producers were discouraged by stiff competition from China, which sells the raw material below the cost, he said. It’s only when “there’s a crisis that people really look at it. This is really when the subject matter comes up.”

• The U.S. highlighted the urgency of securing the nation’s access to rare earths, with Commerce Secretary Wilbur Ross promising “unprecedented action” at a time when China, dominates global output, is reviewing proposals for export controls amid an escalating trade war between the two biggest economies.

• Reorganising the US supply chain is reliant on coordinated investment and development of raw material metals and alloys capacity outside of China. However, the impact becomes more significant if the ban extended to value-add rare earth fabricated products such as magnets or motors.

• Blue Line has entered into a joint venture with Lynas Corp. to build a plant in Hondo, Texas, that would be the only large producer of separated medium and heavy rare earths products outside of China. The project will help “close a critical supply chain gap” for U.S. manufacturers that use the mineral, Lynas CEO Amanda Lacaze said.

• Lynas (LYC AU), the largest producer outside of China, has been in talks with Blue Line long before the Asian nation was said to be gearing up to weaponize rare earths in its trade war with the U.S. The mineral just didn’t get much attention until President Xi Jinping’s visit to a Chinese plant that fueled speculation Beijing could potentially threaten shipments to other countries again, Blumenthal said.

• The bottom line is these projects will take several years to come online, reflecting the reality that efforts to build rare earth processing plants in the United States are still in the early stages.

• A US Commerce Department report published yesterday includes 61 specific recommendations - including low-interest loans and a buy American provision for defense companies - to increase U.S. rare earths supply. It also called for closer cooperation with U.S. allies, which dovetails with DLA’s outreach to miners in Africa and elsewhere.
<table>
<thead>
<tr>
<th>Stock</th>
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**Economics**

IMF warned of a potential downgrade to global growth outlook amid the US/China trade conflict in the report published ahead of the weekend’s meeting of finance ministers from the Group of 20 in Japan.

- The fund estimates the recently imposed tariffs by two countries would cut global growth by 0.3pp next year.
- When earlier tariffs are counted in, the IMF estimates a total of 0.5% hit to growth.

US – A meeting between US and Mexican officials ended with little signs of progress regarding potential tariffs.

- “Immigration discussions at the White House with representatives of Mexico have ended for the day. Progress is being made, but not nearly enough!” Trump tweeted on Wednesday.
- Negotiations are expected to resume today.

ECB – European equities are trading higher this morning on expectations the ECB will announce more stimulus during the press conference today.

- The meeting comes at the time when the RBA cut rates, the US Fed indicated an openness to ease if necessary and increasing speculation that the BoJ may add stimulus.
- The euro is up slightly against the US$ this morning trading around 1.1240.

Germany – Factory orders posted a marginal gain in April with an increase in overseas orders more than compensating for weaker domestic demand.

- Factory Orders (%mom/yoy): 0.3/-5.3 v 0.8/-5.9 in March and 0.0/-5.9 forecast.

India – The central bank cut the benchmark rate by 25bp to 5.75% marking a third drop since the start of the year.

- The rate cut was widely expected and came amid slowing economic growth rate.
- The economy grew 6.8% in the year ending Mar/19 which was a five-year low.

Mexico – The peso continued its descend against the US$ as major credit rating agencies cut their estimates yesterday.

- Fitch downgraded the nation’s sovereign debt rating to BBB from BBB+ citing high debt levels at state oil company Pemex and trade tensions.
- Moody’s have also lowered its outlook on the A3 rating to negative.
- The peso weakened as much as 1.3% after the news were released.

**Currencies**

US$1.1227/eur vs 1.1262/eur yesterday  Yen 108.20/$ vs 108.11/$  SAR 14.927/$ vs 14.757/$  $1.268/GBP vs 1.270/GBP  0.697/AUD vs 0.700/AUD  CNY 6.914/$ vs 6.908/$

**Commodity News**

**Precious metals:**

Gold US$1,334/oz vs US$1,334/oz yesterday  
Gold ETFs 71.5moz vs US$71.5moz yesterday  
Platinum US$808/oz vs US$826/oz yesterday  
Palladium US$1,340/oz vs US$1,339/oz yesterday

Base metals:
Copper US$ 5,810/t vs US$5,897/t yesterday
Aluminium US$ 1,766/t vs US$1,790/t yesterday
Nickel US$ 11,730/t vs US$11,855/t yesterday
Zinc US$ 2,495/t vs US$2,480/t yesterday
Lead US$ 1,871/t vs US$1,852/t yesterday
Tin US$ 19,175/t vs US$19,120/t yesterday

Energy:
Oil US$60.8/bbl vs US$61.5/bbl yesterday
Natural Gas US$2.372/mmbtu vs US$2.409/mmbtu yesterday
Uranium US$24.35/lb vs US$24.00/lb yesterday

Bulk:
Iron ore 62% Fe spot (cfr Tianjin) US$95.9/t vs US$95.6/t
Chinese steel rebar 25mm US$604.8/t vs US$604.2/t
Thermal coal (1st year forward cif ARA) US$64.3/t vs US$65.0/t
Coking coal futures Dalian Exchange US$197.1/t vs US$197.3/t

Other:
Cobalt LME 3m US$32,000/t vs US$32,000/t
NdPr Rare Earth Oxide (China) US$49,897/t vs US$49,940/t
Lithium carbonate 99% (China) US$9,618/t vs US$9,626/t
Ferro Vanadium 80% FOB (China) US$35.7/kg vs US$35.6/kg
Antimony Trioxide 99.5% EU (China) US$5.8/kg vs US$5.8/kg
Tungsten APT European US$260-270/mtu vs US$270-280/mtu

Battery News
When air pollution is up, Renault's electric car prices go down in real-time on this Romanian billboard

- A recently launched Renault campaign in Bucharest, Romania ties the price of the Zoe electric car to air pollution levels in the city. When pollution levels are higher, the cost of the car drops, all displayed in real-time on a massive digital billboard.
- Dubbed “The DisCO2unt Billboard,” the large digital display was connected to a sensor that measured real-time pollution levels. That sensor, along with others located in high-traffic areas around Bucharest, came up with a live air pollution average for the city.
- The Renault Zoe’s price was updated every six minutes based on that air pollution average. Customers could claim that price online before going to the dealership.
- Bucharest is one of the most congested and most polluted cities in Europe. The campaign was created by Bucharest-based ad agency Publicis Romania, which told Ad Age it aimed to target those Romanians who think electric car prices are too high.

Company News
Altus Strategies* (ALS LN) 4.7p, Mkt Cap £8.3m – Exploration targets identified at the prospective DJ & SBK gold project

- The team identified drilling and trenching targets at Djelimangara (56km², DJ) and Sebessounkoto Sud (29km², SBK) gold licenses.
The area is located 2km east of the Group’s Korali Sud license hosting the Diba gold project and c.20km SE of the multi-million ounce Sadiola gold mine in western Mali.

Targets hosted within a 5.5km long strike often match areas of hard rock artisanal gold workings with some extending over 150m and individual shafts reaching 40m in depth.

Targets have been identified using reinterpretation of available historic data including geochemical, lithological and geophysical studies.

Additionaly, some 34,000m of drilling has been completed on DJ & SBK in the past including c.3,000m of diamond drilling and c.6,000m of RC drilling.

Details on three priority targets are provided below with proposed exploration programme to be funded by a partner as part of a potential JV or similar arrangement:

- The Soa Prospect includes 2.0km long geochemical anomaly with artisanal workings. The plan is for 1,000m of trenching and up to 15 drill holes to 100m depth (1,500m in total).
- The Souroukoto Prospect hosts 2.3km long geochemical anomaly with artisanal workings and coincident high-chargeability zone. The plan is for 1,000m of trenching and up to 20 drill holes to 100m depth (2,000m).
- The Manankoto Prospect includes 0.9km long geochemical anomaly from termite mound sampling and artisanal workings along 500m of strike. Historical drilling returned 3.71g/t over 8m. The plan is for 1,000m of trenching and up to 10 drill holes to 100m depth (1,000m).

*SP Angel acts as nomad and broker to Altus Strategies

Bluejay Mining* (JAY LN) 8.24p, Mkt Cap £70.4m – Pre-feasibility study submitted to Greenland authorities

- Bluejay Mining reports that it has submitted its pre-feasibility study (PFS) on the Dundas mineral sands ilmenite project to the Greenland Government's Mineral Licence and Safety Authority.
- “The PFS forms the most important cornerstone in the application for an exploitation permit for Dundas. Its completion allows the Greenlandic authorities to understand the proposed development including site layout and mining technique, as well as the economic consequences that come from exploitation of the ilmenite-bearing sand within the licence area”
- Commenting on the submission, CEO, Roderick McIlree, said that it “marks the completion of the final module necessary to make an exploitation application and we expect to make this as soon as regulatory comments have been responded to.”
- Without elaborating on the detail, he went on to say that “The conclusions drawn from this study indicate positive economic outcomes and low environmental impact, with strong social benefits”

**Conclusion:** The submission of the PFS to Greenland’s authorities is an important step in the permitting process for the Dundas project. We look forward to the details of the study in due course

*An SP Angel mining analyst has visited the Dundas, Itelak ilmenite sands project in Greenland.

*SP Angel act as nomad to Bluejay Mining.

IronRidge Resources* (IRR LN) 15.7p, Mkt Cap £48.8m – JV signature at Zaranou Gold project

**BUY - Target Price 52p**

SEE LINK FOR IRONRIDGE RESOURCES PDF NOTE

- African-focused minerals explorer announce successful completion of due diligence over the Zaranou Gold Project with the Joint Venture Agreement with GeoServices Côte d'Ivoire SA and Atlas Resources SARL now unconditional.
- As part of the due diligence, IronRidge secured high-resolution WorldView 2 and WorldView 3 satellite imagery over the Zaranou project, which clearly defines the extent of artisanal workings on the ground, as well as differentiates between ‘hard rock’ artisanal and alluvial workings. This helps defines the approximate extent of higher-priority in-situ ‘primary’ mineralisation within the more defined ‘hard rock’ artisanal workings including pits, adits and shafts.
- The broader target footprint, with coincident mapped shear zone, historic gold occurrences and current alluvial workings has been defined over an approximate 40km by 4km area, stretching between Yakasse and Zaranou towns.
- Gold mineralisation has been registered at multiple artisanal washing sites along the 16km striking corridor, with both fine and coarse gold evidence.
- IronRidge also report initial fieldwork has commenced, including mapping and channel sampling of hard-rock-artisanal workings to better understand mineralised structures, grade and width.
- In parallel, the Company is reviewing the potential to complete an airborne magnetics survey over the license area to assist in litho-structural interpretation and targeting.
- The joint venture gives IronRidge the option to acquire up to 100% of the project through staged earn-in arrangements and expenditure to Feasibility Study, subject to each company retaining an aggregate net smelter royalty of 2.5%, of which 50% may be acquired for US$4m.
- The company has secured access rights to twelve licences and applications prospective for gold and lithium covering a total of 3,584km² for gold and 1,172km² for lithium within Côte d'Ivoire, West Africa.

**Conclusion:** SP Angel look forward to seeing preliminary results from fieldwork at Zaranou and understanding future development under the new JV agreement.

*SP Angel act as nomad and broker to IronRidge Resources*

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**Rambler Metals & Mining** (RMM LN) 2.20p, mkt cap £28.5m – Second consecutive record annual throughput in 2018

- Rambler Metals has announced an operating loss of US$17.2m for 2018 (2017 loss – US$7.4m). The company reports a net loss before tax of US$18.4m (2017 loss – US$5.4m).
- Tax charges of US$1.7m (2017 tax credit of US$1.3m) result in a loss for the year of US$20.0m (2017 loss - US$4.1m).
- Saleable copper production from the Ming mine/Nugget Pond concentrator in Newfoundland increased by 6% to 4,187 tonnes with gold output rising by 25% to 4,189oz however, despite achieving the “highest annual throughput on record [for the second consecutive year] … Copper prices diminished materially during the year dropping from US$3.26/lb on January 1st 2018 to US$2.71/lb on December 31st 2018" resulting a decline in revenues to US$29.7m (2017 - US$30.3m).
- Following the March 2019 fundraising, and open-offer in April, the company reports that the “Current cash balance is US$2.8 million at date of release” – 5th June.
- The company has previously released its production guidance for 2019 which envisages milling 400-450,000t of ore at grades of between 1.3-1.5% copper and 0.7-0.9g/t gold in order to produce saleable copper of between 5-6,000t and 5-7,000oz of gold.
- If this guidance is achieved, would result in 2019 copper production increasing by 19-43% and gold output rising by between 19-67% compared with 2018 as a result of the combination of higher throughput rates, and feed grades of both copper and gold.
- A number of operational improvements, including the completion of the surface ventilation project, have “resulted in better ore blending opportunities for the mill feed, which has positively impacted both throughput and metal recoveries. Additionally, the processing operations group continues to de-bottleneck the copper concentrator plant processing circuit to accommodate the increased production from the mine”.
- Outlining future objectives, which build on the recent improvements, President and CEO, Andre Booyzen, explained that “Given the productivity improvements in the mine operation, which has provided access to better grade material in both the Lower Footwall Zone and the Ming Massive Sulfide deposits, and the positive outlook on long term copper price forecasts, we are now turning our attention to increasing the overall feed grade delivered to the plant and returning the Company to positive cash flows.”
- Additional work is the evaluation of the potential to further increase mine production and processing throughput “to about 2,000mtpd” and continuing exploration of the up and down-dip extent of the mineralisation “to increase near-mine resource and reserves” and “to continue the surface exploration diamond drilling program aimed to double the current plunge length of the known massive sulphide and Lower Footwall Zone (“LFZ”) mineralization”.

**Conclusion:** Weaker copper prices during 2018 offset the benefits of increased production and operational improvements. A second consecutive record year for ore treatment, in conjunction with the de-bottlenecking and...
closer matching of processing capacity to mine production, provides a platform for evaluation of a further expansion of throughput to around 2000tpd.

*SP Angel act as Nomad and broker to Rambler Metals & Mining

Rio Tinto (RIO LN) 4522.5p, Mkt cap £76.78bn – Winu exploration project update

- Rio Tinto has released an update to the Australian Exchange on its copper/gold discovery at Winu in the Paterson Province of W Australia.
- Although the “results continue to be encouraging, the exploration project is still at an early stage and drilling to date does not allow sufficient understanding of the mineralised body to assess the potential size or quality of the mineralisation nor to enable estimation of a Mineral Resource”
- The company describes an active exploration programme with 180 people on site and “provides additional data on the intercepts for the eleven diamond drill holes reflecting drilling to the end of 2018.”
- The company also takes the opportunity to update some of the previously reported drill-hole assays which have “changed as a result of quality control and assurance activities.”
- Among the results in today’s announcement are:
  - A 104m wide intersection averaging 0.80% copper, 0.33g/t gold and 4.47g/t silver from a depth of 70m in hole RC17PAW001; and
  - A 71m wide intersection averaging 1.02% copper, 0.49g/t gold and 5.14g/t silver from a depth of 77m in hole RC18WIN003; and
  - A 439m wide intersection averaging 0.42% copper, 0.32g/t gold and 2.45g/t silver from a depth of 140m in hole WINU0003; and
  - A 683m wide intersection averaging 0.48% copper, 0.33g/t gold and 3.17g/t silver from a depth of 60m in hole WINU0006; and
  - A 499m wide intersection averaging 0.40% copper, 0.20g/t gold and 2.33g/t silver from a depth of 276m in hole WINU0011; and

**Conclusion**: Although the exploration at Winu is still in its early stages, wide intersections of mineralisation have prompted Rio Tinto to commit significant exploration resources to progress the project. We look forward to further news as the work proceeds

Thor Mining* (THR LN) 0.775p, Mkt Cap £6.3m – Molyhil bulk sampling

- Thor Mining reports assay results from one of two 85mm diameter diamond drill holes drilled to obtain sample material for the preparation of concentrate samples for potential off-takers from its Molyhil tungsten-molybdenum project in the Northern Territory, Australia.
- The drilling tested from the down plunge portion of the Yacht Club Lode at Molyhil. The second hole will be “kept in storage. The holes will not contribute to the mineral resource estimate”.
- Hole 19RC002 intersected 92.6m at an average grade of 1.0% tungsten trioxide, 0.16% molybdenum and 0.13% copper from surface. The intersection includes “2.2 metres of unmineralized granite from 11.5m”.
- Executive Chairman, Mick Billing, welcomed the “confirmation of extensive high-grade scheelite mineralisation along with expected grades of molybdenum”. He went on to confirm that although the intersection of copper at “potentially economic levels” was welcome, there were no plans “amend the resource estimates for Molyhil, or the current DFS on the strength of this new copper perspective, and as such Thor ascribes no additional value for any potential copper revenues at this time”.
- The sample concentrates should enable potential customers to establish the suitability of Molyhil material for their downstream requirements as well as assessing the presence of any possible penalty elements which might impact the commercial terms.

**Conclusion**: In our view, being able to supply representative samples of scheelite and molybdenite concentrates to potential customers will be an important step in establishing the credentials of the Molyhil project.

*SP Angel act as joint broker to Thor Mining

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