

12 January 2022
 2022年1月12日

PYX Commences Production and Sales of Rutile
PYX启动金红石的生产与销售

HIGHLIGHTS
亮点

- **PYX begins sales activity of natural rutile from its Mandiri deposit as a by-product, having maximised its production capacity at its Mineral Separation Plant to 24ktpa in November 2021**

PYX启动了Mandiri矿床副产品天然金红石的销售活动。此前，2021年11月Mandiri选矿厂产能已实现年产2.4万吨的峰值水平。
- **Robust market fundamentals for rutile, an unrefined high-grade titanium dioxide feedstock, where demand is expected to exceed global supply**

金红石拥有强劲的市场基本面，它是一种非精炼的高品位二氧化钛原料，其需求预计将超过全球供应量。
- **Production and sales of additional by-products – ilmenite and leucoxene - to follow in 2022**

2022年将新增副产品钛铁矿和白钛石的生产与销售。

PYX Resources Ltd (PYX or the Company) (NSX: PYX | LSE: PYX), is pleased to announce that it has started production and sales activity of natural rutile from its Mandiri deposit in Central Kalimantan, Indonesia, as a by-product of its primary zircon production operation.

PYX Resources Ltd (PYX或公司) (NSX: PYX | LSE: PYX)欣然宣布公司已启动位于印度尼西亚中加里曼丹省Mandiri矿床天然金红石的生产与销售活动，金红石是其首要的锆石生产作业的副产品。

PYX’s Chairman and Chief Executive Officer Oliver Hasler, said: “PYX has hit the ground running in 2022 having kicked off the production of rutile; this is an integral part of our growth strategy, which assists us in expanding the range of products available to our increasingly diverse customers worldwide. Like zircon, the rutile market is fast-growing, given its increased usage in the high-tech and automotive markets. Consequently, our timing to build PYX’s Heavy Mineral Sands production capacity and global profile comes at an opportune time for the company.”

PYX董事长兼首席执行官何力先生 (Oliver Hasler) 表示: “在启动金红石生产后，PYX准备在2022年快速发展；这是我们增长战略不可分割的一部分，有助于我们扩大产品类别，向全球日益多元化的客户提供我们的产品。金红石市场与锆石类似也在快速增长，这是因为金红石在高科技和汽车市场的应用越来越多。因此，我们在建设PYX重砂矿物产能以及增强全球影响力是恰逢其时。”

PYX initially focused on producing and selling premium zircon but in November 2021, the Company announced that it had increased capacity at its Mandiri Mineral Separation Plant (MSP) to 24,000 tpa, which enabled the addition of titanium dioxide minerals to its sales profile as part of its five-year plan. Accordingly, the Company has now commenced production and sales activity of rutile to customers in Indonesia with other by-products, leucoxene and ilmenite, to follow.

PYX最初是专注于生产和销售高端锆石的公司，但2021年11月，公司宣布将其Mandiri选矿厂产

12 January 2022
2022年1月12日

能提高至年产24,000吨，将二氧化钛矿石加入销售行列，这也是公司五年计划的一部分。相应地，公司开始向印度尼西亚客户生产和销售金红石，后续还会增加白钛石和钛铁矿等其他副产品。

Rutile (TiO₂) is used in the manufacture of titanium dioxide, which is increasingly used in many industries such as construction, automotive, packaging, and electronics for titanium oxide. Given its growing demand from different industries, the rutile market size is forecast to reach \$4.1 billion by 2025, after growing at a CAGR of 4.8% during 2020-2025¹. Notably, the Australian Government identified rutile and ilmenite as critical minerals considered vital for the economic well-being of the world's major and emerging economies, yet whose supply may be at risk.²

金红石 (TiO₂) 是制造二氧化钛的矿物原料，在建筑、汽车、包装和电子等许多使用二氧化钛的行业，金红石的应用越来越多。鉴于不同行业对金红石的需求扩大，到2025年，金红石市场规模预计将达到41亿美元，2020-2025年的年均复合增长率为4.8%。值得注意的是，澳大利亚政府将金红石和钛铁矿认定是对全球主要和新兴经济体经济福祉至关重要的矿物，但金红石和钛铁矿的供应岌岌可危。

Rutile maintains one of the highest refractive indices at visible wavelengths of all known crystals, combined with its substantial double refraction and high dispersion, it is commonly manufactured for certain optical elements, especially polarization optics, for longer visible and infrared wavelengths up to about 4.5 micrometers (μm).

金红石仍然是所有已知晶体中可见波长折射率最高的矿石之一，再加上具有较高的双折射率和高分散性，金红石通常用于生产特定的光学元件，尤其是偏振光学，适用于更长的可见波长和红外波长，最长约4.5微米(μm)。

Titanium dioxide is a deep coloured, dark mineral, which transforms into a white opaque powder when processed. This dusty white powder is utilised all over the globe, the pigment is a key component in the manufacture of paint, plastic, paper, and fibre. Titanium dioxide is a non-toxic whitener, which also provides UV and chemical resistance. The mineral is used in an abundance of different end of applications, including house and car paints, plastic pipes and packaging, laminates, inks, clothing, sunscreen, toothpaste, and make-up.

二氧化钛是深色的矿物，经加工会转化成白色的不透明粉末。该灰白色粉末的使用遍及全球，作为颜料是生产涂料、塑料、纸张和化纤等关键材料。二氧化钛是无毒增白剂，还具有防护紫外线和耐化学品性质。该矿物还广泛被用于许多不同的用途，包括家用和汽车涂料、塑料管和包装、层压材料、印刷油墨、服装、防晒霜、牙膏和化妆品。

Titanium minerals are also vital in producing titanium metal. Titanium metal is chemically impervious, has a high melting point, low conductivity and has the highest strength to weight ratio of all metals. It is utilised across various applications including defence, aeronautics, medical implants, sporting goods and componentry in the offshore mining and petrochemicals industries.

钛矿物还是生产钛金属的关键材料。钛金属具有化学防渗性能，熔点高、导电率低，在所有金属中强度重量比最高，广泛被应用于国防、航空航天、医疗植入、体育用品及海底采矿和石化行业组件等多个行业。

Welding is another significant market of high-grade titanium feedstocks, used in the manufacture of

¹ Industry ARC Research Rutile Market – Forecast (2022 - 2027) <https://bit.ly/3K3gVwL>
Industry ARC Research 金红石市场 – 预测 (2022 – 2027年) <https://bit.ly/3K3gVwL>

² Australian Government, Australian Critical Minerals Prospectus 2021 <https://bit.ly/3qfYInX>
2021年澳大利亚关键矿物原料说明书，澳大利亚政府 <https://bit.ly/3qfYInX>

12 January 2022
2022年1月12日

welding flux wire cord, as utilised in the steel construction and ship building industries. Titanium minerals are favoured for their durability, strength, and exceptional chemical resistance abilities.

焊接是高品质钛原料的另一个重要用途市场，用于生产钢结构和船舶建造行业使用的药芯焊丝。钛矿物因其耐用、强度高和出色的耐化学性而受到青睐。

A modest, though fast-growing factor of titanium demand is in the nanomaterials sector. Numerous unique properties of titanium are taken advantage of in applications such as dye-sensitised solar cells, water purification, cancer treatment and noise absorption.

纳米材料行业对钛的需求不算高，但增速较快。钛的众多独特性能被用在染料敏化太阳能电池、水净化、癌症治疗及吸音等领域。



金红石

*** ENDS ***

*** 结尾 ***

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This announcement is authorised for release by Oliver B. Hasler, Chairman and Chief Executive Officer.

本公告由董事长兼首席执行官何力先生（Oliver B. Hasler）授权发布。

12 January 2022
2022年1月12日

About PYX Resources

PYX Resources Limited (NSX: PYX | LSE: PYX) is a producer of premium zircon dual listed on the National Stock Exchange of Australia and on the Main Market of the London Stock Exchange. PYX's key deposits, Mandiri and Tisma, are large-scale, near-surface open pit deposits both located in the alluvium-rich region of Central Kalimantan, Indonesia. PYX, whose Mandiri deposit has been in production since 2015, is the 2nd largest zircon producing mining company globally by zircon resources. Determined to mine responsibly and invest in the wider communities where it operates, PYX is committed to fully developing its Mandiri and Tisma deposits, with the vision to consolidate the mineral sands resources in Kalimantan and explore and acquire mineral sands assets in Asia and beyond.

PYX Resources Limited (NSX: PYX | LSE: PYX)是在澳大利亚国家证券交易所和伦敦证券交易所主板双重上市的高品位锆石生产商。PYX的主要矿床Mandiri和Tisma是大型浅层露天矿作业矿床，均位于印度尼西亚中加里曼丹省富含冲积层沉积物地区。PYX旗下的Mandiri矿床于2015年投产，当前PYX已经成为拥有全球第二大锆石资源量的矿砂生产上市公司。公司决心进行负责任开采并投资更广泛的社区，PYX Resources致力于在充分开发Mandiri和Tisma矿床的同时，着眼于整合加里曼丹地区的矿砂资源及勘查和收购亚洲及其他地区的矿砂资产。

CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

前瞻性信息注意事项

This NSX Announcement contains forward-looking statements and forward-looking information within the meaning of applicable Australian securities laws, which are based on expectations, estimates and projections as of the date of this NSX Announcement.

本NSX公告包含符合适用于澳大利亚证券法定义的、根据截至本NSX公告发布日的相关预期、估算和预测得出的前瞻性声明与前瞻性信息。

This forward-looking information includes, or may be based upon, without limitation, estimates, forecasts and statements as to management's expectations with respect to, among other things, the timing and amount of funding required to execute the Company's exploration, development and business plans, capital and exploration expenditures, the effect on the Company of any changes to existing legislation or policy, government regulation of mining operations, the length of time required to obtain permits, certifications and approvals, the success of exploration, development and mining activities, the geology of the Company's properties, environmental risks, the availability of labour, the focus of the Company in the future, demand and market outlook for precious metals and the prices thereof, progress in development of mineral properties, the Company's ability to raise funding privately or on a public market in the future, the Company's future growth, results of operations, performance, and business prospects and opportunities. Wherever possible, words such as "anticipate", "believe", "expect", "intend", "may" and similar expressions have been used to identify such forward-looking information.

前瞻性信息包含或可能基于但不限于管理团队对公司执行勘查、开发与业务计划所需资金的时机与数目，资本和勘查支出，现有法律或政策、开采作业相关政府监管条例，获取许可证、认证和批准所需时间的变更对公司产生的影响，勘查、开发和开采作业的成功，公司物业的地质状况，环境风险，人力储备情况，公司未来重点，贵金属需求和市场前景以及价格，矿产资源的开发进度、公司未来在公开和私募市场融资的能力，公司未来发展、运营结果、表

12 January 2022
2022年1月12日

现与业务前景及机遇的估算、预测和声明。我们已尽可能使用“期望”、“相信”、“预计”、“意图”、“可”和类似表达来识别前瞻性信息。

Forward-looking information is based on the opinions and estimates of management at the date the information is given, and on information available to management at such time. Forward looking information involves significant risks, uncertainties, assumptions and other factors that could cause actual results, performance or achievements to differ materially from the results discussed or implied in the forward-looking information. These factors, including, but not limited to, fluctuations in currency markets, fluctuations in commodity prices, the ability of the Company to access sufficient capital on favourable terms or at all, changes in national and local government legislation, taxation, controls, regulations, political or economic developments in Indonesia and Australia or other countries in which the Company does business or may carry on business in the future, operational or technical difficulties in connection with exploration or development activities, employee relations, the speculative nature of mineral exploration and development, obtaining necessary licenses and permits, diminishing quantities and grades of mineral reserves, contests over title to properties, especially title to undeveloped properties, the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drill results and other geological data, environmental hazards, industrial accidents, unusual or unexpected formations, pressures, cave-ins and flooding, limitations of insurance coverage and the possibility of project cost overruns or unanticipated costs and expenses, and should be considered carefully. Many of these uncertainties and contingencies can affect the Company’s actual results and could cause actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, the Company. Prospective investors should not place undue reliance on any forward-looking information.

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Although the forward-looking information contained in this NSX Announcement is based upon what management believes, or believed at the time, to be reasonable assumptions, the Company cannot assure prospective purchasers that actual results will be consistent with such forward-looking information, as there may be other factors that cause results not to be as anticipated, estimated or intended, and neither the Company nor any other person assumes responsibility for the accuracy and completeness of any such forward-looking information. The Company does not undertake, and assumes no obligation, to update or revise any such forward-looking statements or forward-looking information contained herein to reflect new events or circumstances, except as may be required by law.

12 January 2022
2022年1月12日

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No stock exchange, regulation services provider, securities commission or other regulatory authority has approved or disapproved the information contained in this NSX Announcement.

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Compliance Statement

合规声明

The Mandiri mineral sands deposit hosts a 6 Mt Inferred JORC Resource of zircon. The Company originally announced this resource in its Prospectus released on 20 February 2020 and confirms that it is not aware of any new information or data that materially affects the information included in the Prospectus. All material assumptions and technical parameters disclosed in the Prospectus that underpin the estimates continue to apply and have not materially changed.

Mandiri 矿砂矿拥有 600 万吨符合 JORC 标准的锆推断资源量。公司已在 2020 年 2 月 20 日披露的《招股说明书》中声明了该资源量数据，同时确认公司认为不存在将对《招股说明书》所含信息造成重大影响的任何新信息或数据。《招股说明书》披露的支持估算结果的所有重大假设与技术参数继续适用，不存在重大变动。

The Tisma mineral sands deposit hosts a 4.5 Mt Inferred JORC Resource of zircon. The Company originally announced this resource in its Announcement “PYX Resources Limited Agrees to Acquire Tisma Development (HK) Limited, a World-Class, Fully Licensed Mineral Sands Deposit” on NSX on 13 January 2021 and confirms that it is not aware of any new information or data that materially affects the information included in the Announcement. All material assumptions and technical parameters disclosed in the Announcement that underpin the estimates continue to apply and have not materially changed.

Tisma 矿砂矿含有 450 万吨符合 JORC 标准的锆推断资源量。公司已在 2021 年 1 月 13 日发表的名为《PYX Resources Limited 同意收购 Acquire Tisma Development (HK) Limited ——一家证照齐全的世界级矿砂矿》的公告中披露了该资源量数据，同时确认公司认为不存在将对公告所含信息造成重大影响的任何新信息或数据。公告披露的支持估算结果的所有重大假设与技术参数继续适用，不存在重大变动。

Together the Mandiri mineral sands deposit and Tisma mineral sands deposit total 10.5 Mt of contained zircon resource.

Mandiri 矿砂矿和 Tisma 矿砂矿的含锆石资源量共计 1,005 万吨。

12 January 2022
2022年1月12日