

# A NEW FORCE IN RUTILE

UNLOCKING A GLOBALLY SIGNIFICANT RUTILE PROVINCE



FEBRUARY 2020 ABN: 71 120 833 427 | ASX: SVM



# Sovereign Metals – A New Rutile Province Discovered

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## Discovery of a new province hosting a genuinely scarce commodity



# MULTIPLE RUTILE PROSPECTS

Four advanced rutile prospects plus multiple targets encompassing two discrete styles of rutile mineralisation



2020 – A COMPANY DEFINING YEAR

Targeting maiden
JORC rutile resource
and initial technical
studies for 2020



#### HUGE EXPLORATION UPSIDE

Huge exploration upside and scale potential across Sovereign's ground



# STRONG MARKET FUNDAMENTALS

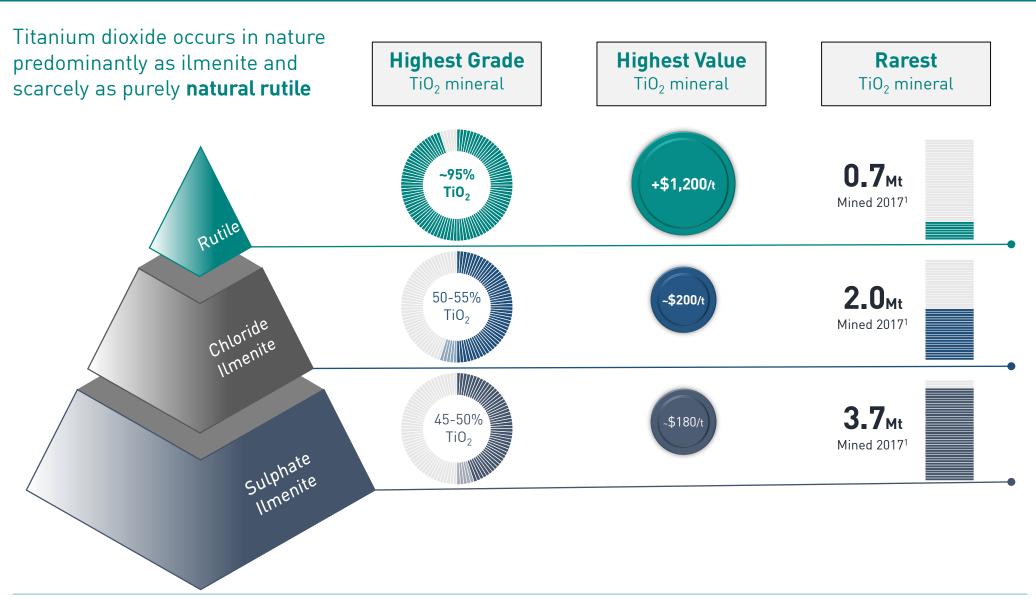
Highly robust market fundamentals – commodity in structural deficit



# INFRASTRUCTURE IN PLACE

Operation-ready infrastructure in place to connect to global rutile markets

## Rutile - Rarest, Highest Grade & Value Titanium Mineral

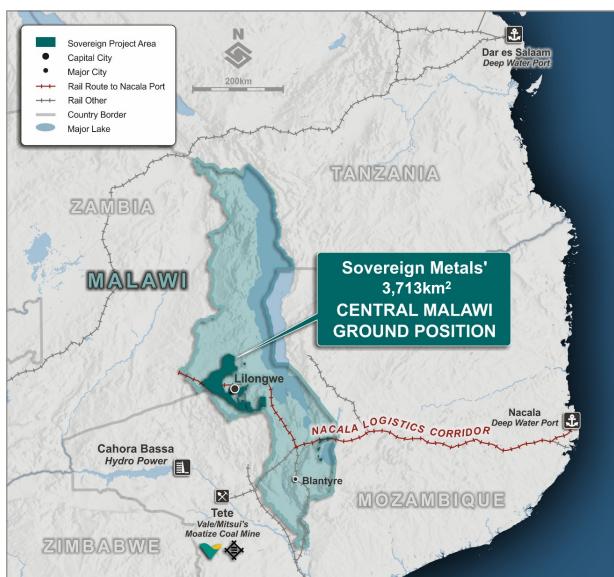


<sup>1.</sup> Sulphate ilmenite includes sulphate slag production; chloride ilmenite includes chloride slag production; synthetic rutile and upgraded chloride slag ("UGS") not included Source: TZMI

## Malawi – Open for Business

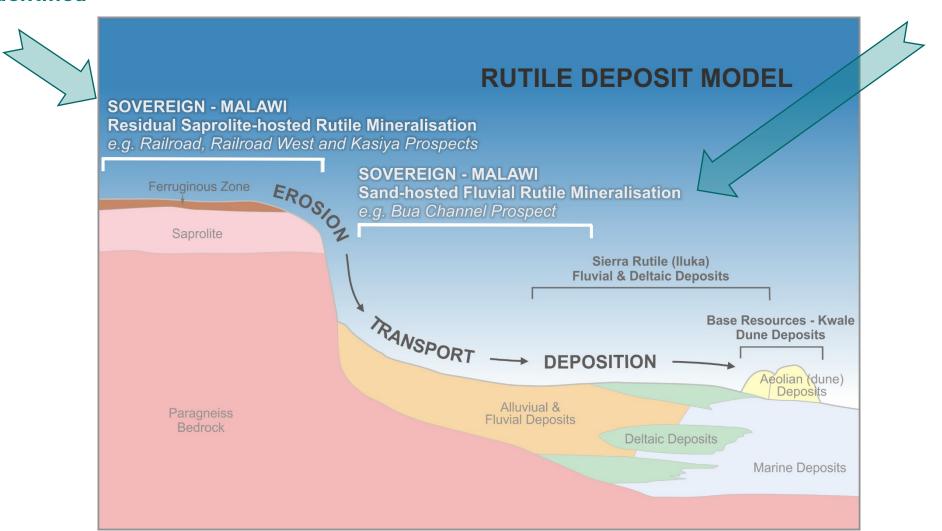
- A stable, transparent jurisdiction
- Increasingly attracting international investment
- Significant potential and appetite for mining
- Excellent operating infrastructure in place





# A Rutile Province - Double the Opportunity

Two discrete styles of rutile mineralisation discovered with multiple high-grade prospects identified



# Two Distinct Rutile Mineralisation Styles

## Targeting substantial rutile resources to support long life, large scale rutile operations

#### **Saprolite-Hosted Rutile Prospects**

#### KASIYA, RAILROAD, RAILROAD WEST AND OTHER LOCATIONS





#### **Sand-Hosted Rutile Prospect**

#### **BUA CHANNEL**





# Multiple Highly Prospective Rutile Zones Discovered



## Saprolite-Hosted Rutile Prospects

## **Kasiya Prospect**

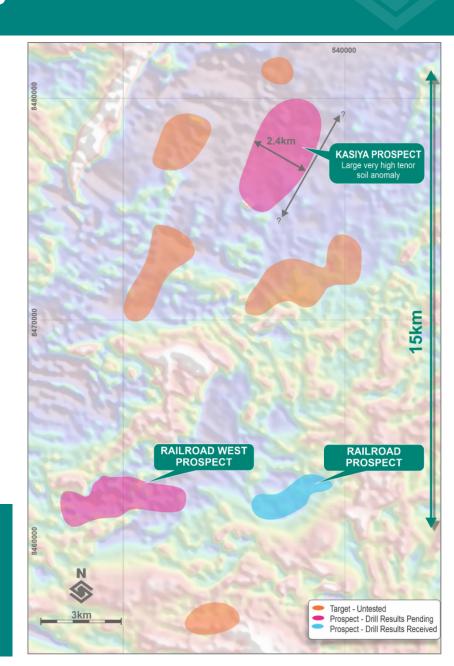
- Very large soil anomaly with very high observed rutile content
- Shallow drilling underway results pending on first batch
- Strong indication of scale potential- regional proximity to Railroad and Railroad West

## Railroad and Railroad West

- Mineralised footprint at Railroad is at least 1.6km long, 300m-500m wide
- Drilling results confirm rutile mineralisation occurs over large areas

### **KEY RESULTS**

- 13m @ 1.08% including 6m @ 1.25% rutile
- 8m @ 0.92% including 5m @ 1.06% rutile
- 5m @ 1.16% rutile
- 7m @ 0.86% rutile

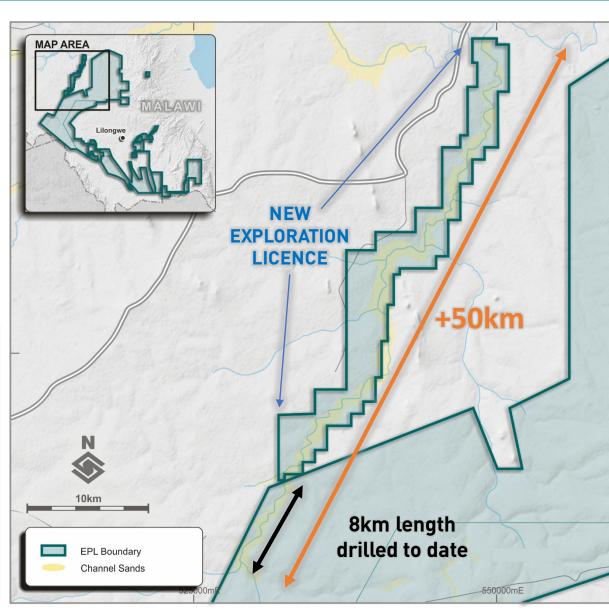


## **Sand-hosted Placer Rutile**

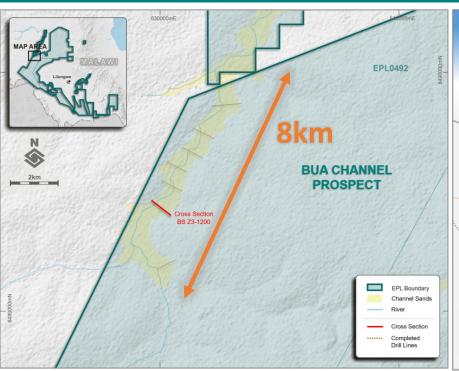
## **Bua Channel Prospect**

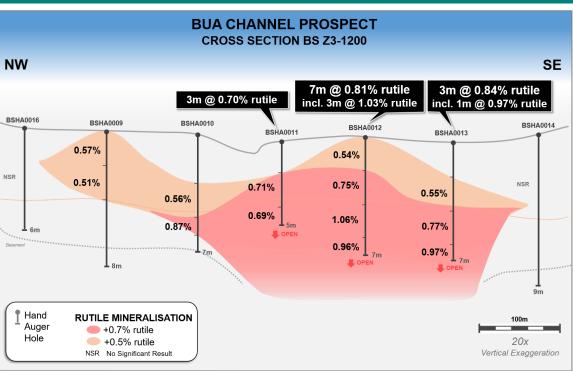
- Vast Channel
  - 50km in length (8km drilled to date)
  - 300m to 700m wide
- Highest grade rutile zones remain open at depth
- New exploration licence just granted





## **Bua Channel Prospect**





#### **KEY RESULTS**

- 7m @ 0.81% rutile, 1.0% ilmenite & 0.11% zircon (from surface) Inc. 3m @ 1.03% rutile (from 4m)
- 5m @ 0.72 % rutile, 0.9% ilmenite & 0.09% zircon (from 2m) Inc. 1m @ 0.97% rutile (from 6m)
- 5m @ 0.64% rutile, 0.9% ilmenite & 0.10% zircon (from surface) Inc. 3m @ 0.70% rutile (from 2m)

- Potential additional 40km of mineralised channel in new exploration licence
- Exploration activities commencing on new exploration licence
- Substantial number of drill results pending

# Operation-Ready Infrastructure

## Infrastructure in place to connect Sovereign to global rutile markets



Established rail network direct to Nacala Port



Paved roads surrounding project locations



Grid power becoming available across license areas



Established labour pool and other industrial services



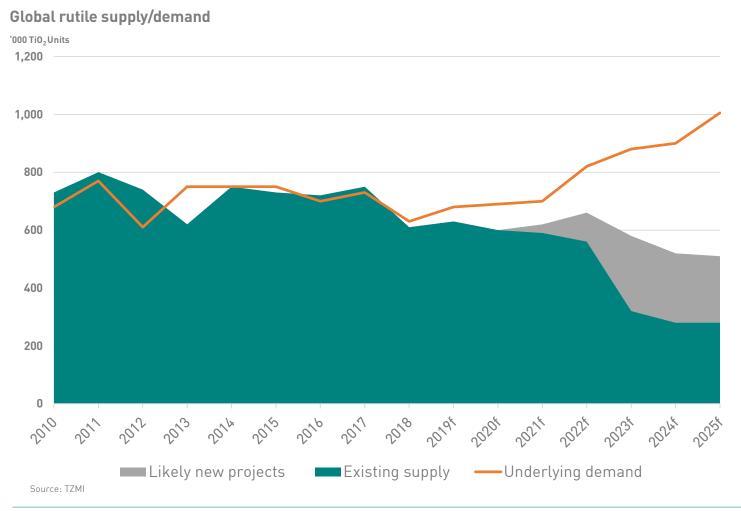
Plentiful water sources for operations





## Rutile - A Genuinely Scarce Commodity

## No high-grade rutile discoveries in over a decade... until now



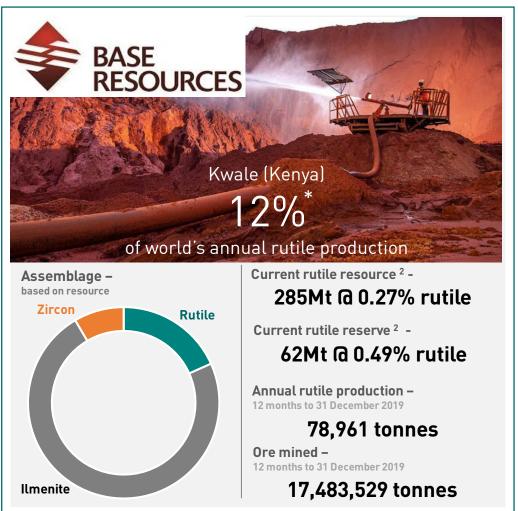
# SUBSTANTIAL MARKET SPACE FOR A NEW RUTILE PRODUCER

- Global supply of rutile in structural deficit
- Mature mines with declining grades
- General lack of new rutile-rich deposits to fill the gap

## Rutile's Scarcity Means Limited Comparable Projects

Two projects with the most similarities make up over 32%\* of global rutile production



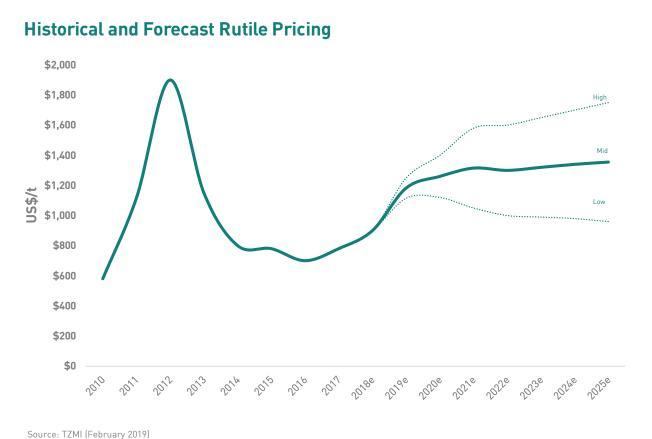


- 1. Resource and Reserve as at 31 December 2018.
- 2. Resource and Reserve as at 30 June 2019.
- 3. 70% of Ore Reserves relate to the Sembehun expansion project.

<sup>\*</sup> Sovereign's estimate based on Iluka Resources Limited and Base Resources Limited's reported 2019 production calculated against TZMI's forecasted 2019 production (680,000 tonnes). All information sourced from Company Reports.

# Very Strong Rutile Market Fundamentals





"Iluka was fully sold in the first half, with sales constrained by production volumes."



"Tight market conditions from the ongoing constraints on global supply .....high-grade chloride feedstocks (including rutile) resulted in further price gains...."



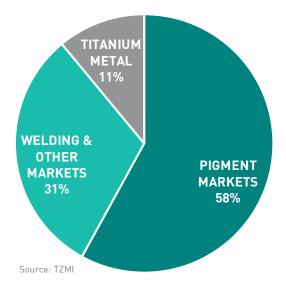
Supply tightness driving price upwards - very strong short, medium and long-term outlook

## Premium Rutile Product For All End Markets

## Initial metallurgical results show highly favourable, premium rutile product specification

- √ 96% TiO₂
- ✓ No critical impurities
- ✓ Standout chemical parameters
- ✓ Highly favourable grain size distribution
- ✓ d50 of 123µm comparable to leading market products
- ✓ Suitable for all major natural rutile end-use markets

#### **Natural End Users of Rutile**



#### Comparison of Sovereign's Rutile Specifications to Leading Global Producers

	Leading Global Producers						
Constituent		Malawi Rutile (Sovereign)	Sierra Rutile (Iluka)	RBM (Rio Tinto)	Kwale (Base Resources)	Namakwa Sands (Tronox)	
TiO <sub>2</sub>	%	96.0	96.29	93.30	96.18	94.50	
ZrO <sub>2</sub> +HfO <sub>2</sub>	%	0.14	0.78	1.30	0.72	1.10	
SiO <sub>2</sub>	%	1.29	0.62	2.00	0.94	2.00	
Fe <sub>2</sub> O <sub>3</sub>	%	0.97	0.38	0.70	1.25	0.8	
Al <sub>2</sub> O <sub>3</sub>	%	0.33	0.31	0.90	0.23	0.6	
Cr <sub>2</sub> O <sub>3</sub>	%	0.046	0.19	0.11	0.17	0.14	
V <sub>2</sub> O <sub>5</sub>	%	0.50	0.58	0.40	0.52	0.33	
Nb <sub>2</sub> O <sub>5</sub>	%	0.25	0.15	0.30	-	0.04	
P <sub>2</sub> O <sub>5</sub>	%	0.036	0.01	0.03	0	0.02	
Mn0	%	<0.01	0.01	-	0.03	0.4	
MgO	%	0.01	<0.01	-	0.1	0.01	
Ca0	%	0.02	0.01	-	0.04	0.04	
SO <sub>3</sub> /S	%	0.048	<0.01	<0.05	-	0.01	
Sn	%	0.005	-	-	-	-	
U+Th	ppm	30	26	100	-	-	

"Iluka" is Iluka Resources Limited; "Rio Tinto" is Rio Tinto plc; "Base Resources" is Base Resources Limited; "Tronox" is Tronox Holdings plc. "-" is not disclosed. Sources: RBM data from World Titanium Resources Ltd TZMI Conference Presentation November 2011 (Updated January 2012); Sierra Rutile, Kwale and Namakwa Sands data from BGR Assessment Manual titled "Heavy Minerals of Economic Importance" 2010.

#### Comparison of Sovereign's Rutile d50 to Leading Global Producers

Constituent	Malawi Rutile (Sovereign)	RBM (Rio Tinto)	Namakwa Sands (Tronox)
d50	123 µm	124 <b>µm</b>	124 <b>μm</b>

"Rio Tinto" is Rio Tinto plc; "Tronox" is Tronox Holdings plc. Source: BGR Assessment Manual titled "Heavy Minerals of Economic Importance" 2010

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# 2020 - A Company Defining Year

## **Ongoing work programs**

Laboratory processing of 2019 and 2020 drill samples

Commence drilling on several new saprolite-hosted prospects

Additional air-core drilling to extend known rutile mineralisation at depth and along strike

Mining and tailings studies in advance of future Scoping Studies

Further metallurgical test-work on prospects which may develop into Mineral Resource(s).





## **Corporate Information**

## Management team with a proven track record of success

IAN MIDDLEMAS
Chairman

Mr Middlemas was a Senior Group Executive for Normandy Mining for more than ten years, which was Australia's largest gold miner before merging with Newmont Mining. He is currently Chairman of Salt Lake Potash, Berkeley Energia, Prairie Mining & a number of other listed resource companies.

Mr Middlemas was also previously Chairman of Papillon Resources Limited and Mantra Resources Limited.

JULIAN STEPHENS Managing Director Dr Stephens is a Geologist with over 20 years experience in mineral exploration across many commodity types, and has spent 14 years working on minerals projects in Malawi.

Dr Stephens identified, secured and led the team that discovered rutile and graphite mineralisation across Sovereign's large ground position in Malawi.

**BEN STOIKOVICH** *Project Consultant* 

Mr Stoikovich is a Mining Engineer with 25 years experience in mine operations and mineral project development and finance. He has extensive experience in Africa having previously worked for Lonmin and Standard Bank. Mr Stoikovich is based in London. He commenced his career with BHP Billiton.

#### **SAM CORDIN**

Business Development Manager Mr Cordin is an experienced Chartered Accountant who commenced his career at a large international accounting firm and has since been involved with a number of ASX and AIM listed exploration and development companies operating in the resources sector, including most recently Salt Lake Potash Limited.

**ANDRIES KRUGER** *Country Manager* 

Mr Kruger is a Geologist with over 20 years experience in mineral exploration.

Mr Kruger has spent 10 years working on major Malawian minerals projects for ASX listed companies, directing all in-country activities relating to project development.

#### **CAPITAL STRUCTURE**

Shares on Issue <sup>1</sup>	382,287,561
Unlisted Options (\$0.10 to \$0.18)	37,525,000
Un-Diluted Market Capitalisation @A\$0.011 <sup>1,2</sup>	A\$42.0 m
Cash <sup>1,3</sup>	~A\$3.7 m

- Share on issue, market capitalisation and cash all updated to represent the placement announced 29 January 2020
- 2. Closing price 29 January 2020
- 3. Cash is calculated based on the 31 December 2019 closing balance (\$1.7) plus the gross placement (\$2.0m).



## **DISCLAIMERS & DISCLOSURES**

#### **AUTHORISATION STATEMENT**

This presentation has been approved and authorised for release by the Company's Managing Director, Dr Julian Stephens.

#### **DISCLAIMER NOTICE**

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#### FORWARD LOOKING STATEMENT

This release may include forward-looking statements, which may be identified by words such as "expects", "anticipates", "pelieves", "projects", "plans", and similar expressions. These forward-looking statements are based on Sovereign's expectations and beliefs concerning future events. Forward looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Sovereign, which could cause actual results to differ materially from such statements. There can be no assurance that forward-looking statements will prove to be correct. Sovereign makes no undertaking to subsequently update or revise the forward-looking statements made in this release, to reflect the circumstances or events after the date of that release.

#### COMPETENT PERSONS STATEMENT

The information in this presentation that relate to Exploration Results (Rutile) and QEMSCAN results are extracted from announcements on 7 November 2018, 24 January 2019, 24 June 2019, 7 August 2019, 23 September, 6 November 2019, 16 January 2020 and 3 February 2020. These announcements are available to view on www.sovereignmetals.com.au. The information in the original announcements that related to Exploration Results were based on, and fairly represents, information compiled by Dr Julian Stephens, a Competent Person who is a member of the Australasian Institute of Geoscientists (AIG). Dr Stephens is the Managing Director of Sovereign Metals Limited and a holder of shares, options and performance rights in Sovereign Metals Limited. Dr Stephens has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken, 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'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

The information in this presentation that relates to Metallurgical Testwork Results (Rutile) is extracted from an announcement dated 24 June 2019. This announcement is available to view on www.sovereignmetals.com.au. The information in the original ASX Announcements that related to Metallurgical Testwork Results was based on, and fairly represents, information compiled by ompiled by Mr Gavin Diener, a Competent Person who is a member of the AuslMM. Mr Diener is the Chief Operating Officer of TZMI, an independent mineral sands consulting company and is not a holder of any equity type in Sovereign Metals Limited. Mr Diener has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken, 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'. The Company confirms that it is not aware of any new information or data that materially affects the information including in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.





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