



# Developing a low capex, high margin potash project in Morocco

Corporate Presentation – May 2022

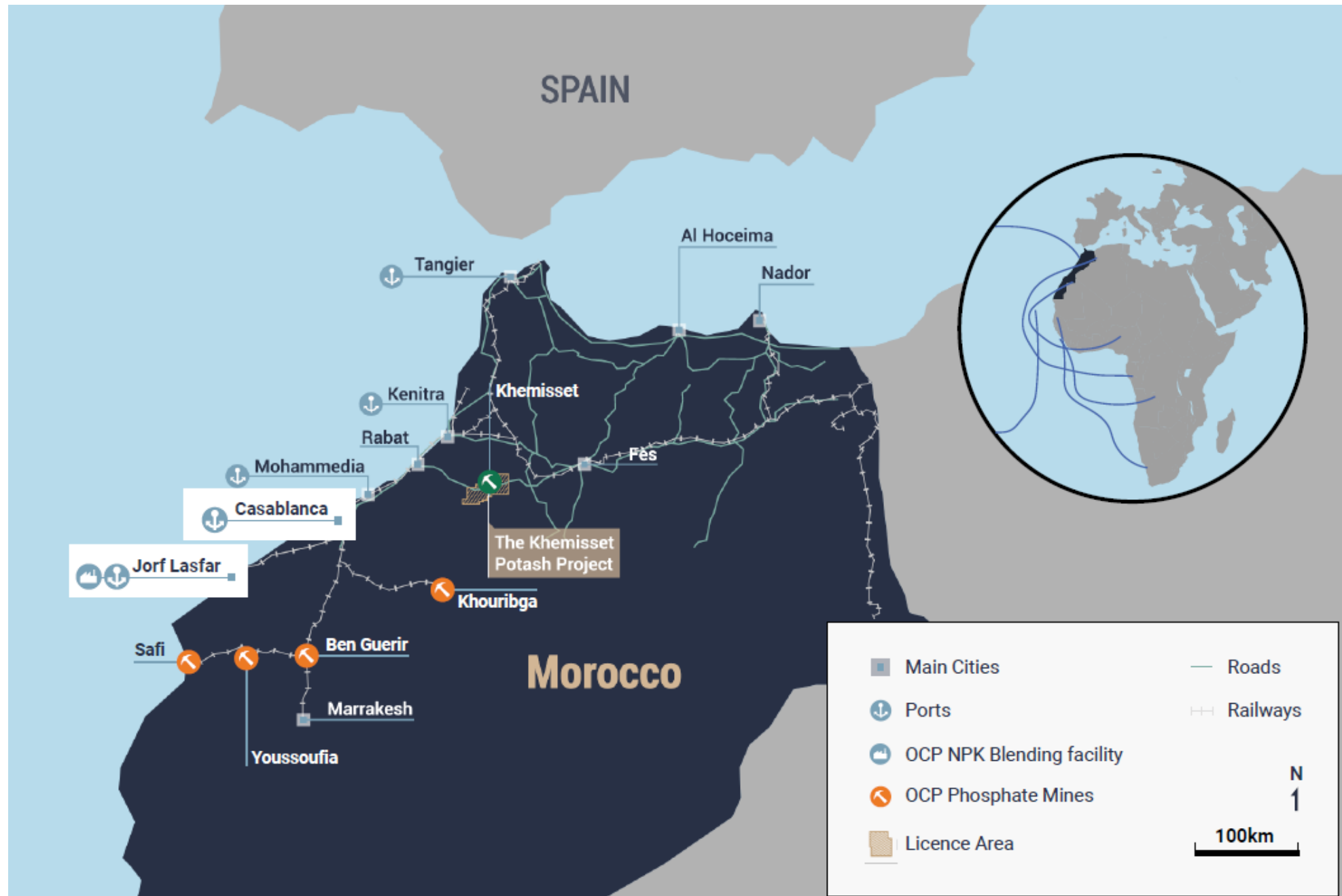


# INVESTMENT HIGHLIGHTS

<p><b>US\$1.4bn</b> After Tax NPV<sub>8</sub> at 2020 prices</p> 	<p><b>Potash:</b> Long-term demand growth Medium term supply security</p> 	<p><b>Lowest Quartile</b> Cost Base</p> 	<p><b>Technical expertise</b> Experts in building and running underground potash mines</p> 
<p><b>Highest Standards</b> ESG Compliance</p> 	<p><b>Supportive Jurisdiction</b> Morocco attractive for mining and foreign investment</p> 	<p><b>19 Year Mine Life</b> With opportunity to expand to &gt; 30 years</p> 	<p><b>Contribution to Morocco</b> 2,385 jobs created and US\$4b+ total investment over LoM</p> 



# KHEMISSSET POTASH PROJECT

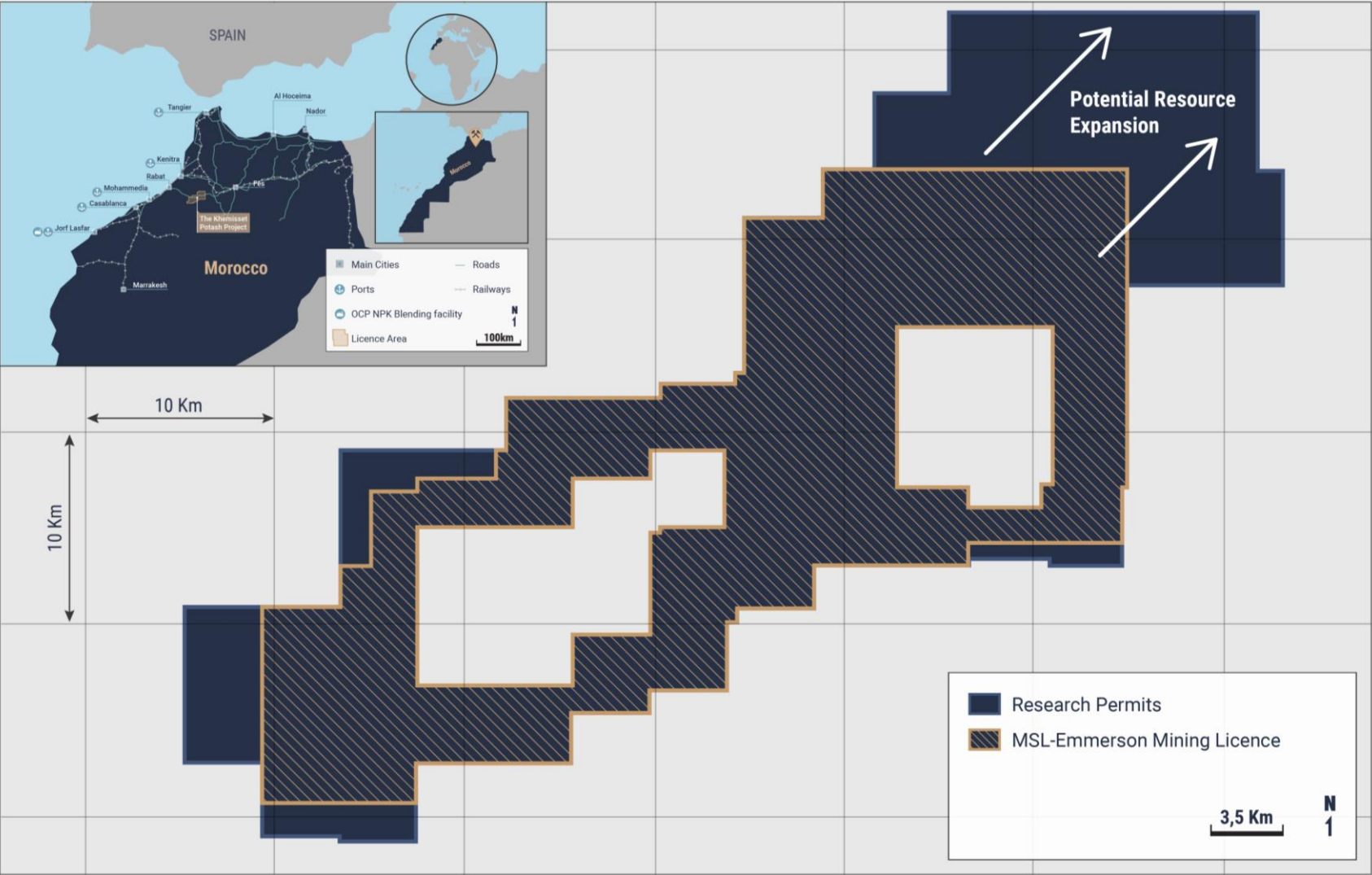


## KHEMISSSET PROJECT – KEY METRICS

	<b>2020 Feasibility Study</b>	
Mine life	19 years	
Extraction rate	6.0 million tonnes	
Average Annual MOP production	735k tonnes	
Average Salt Production	1.0 million tonnes	
AISC FOB Casablanca (\$/tonne)	US\$158t	
Upfront CAPEX	US\$411m	
	<b>Original 2020 MOP prices</b>	<b>Restated at US\$800/t</b>
MOP price per tonne	US\$412/t	US\$800/t
Payback	2.4 years	1.2 years
Average annual EBITDA LOM	\$294m	US\$672m
EBITDA Margin	61%	78%
Post Tax Cash Flow	US\$4.4bn	US\$10.1bn
After-tax NPV 8%	US\$1.4bn	US\$3.9b
After-tax IRR	40.6%	85%



# RESERVES AND RESOURCES



Resource Classification	Thickness (m)	K20 (%)	Tonnage (Mt)
Indicated	2.64	9.36	375.2
Inferred	2.05	8.96	161.8
<b>Total</b>	<b>2.46</b>	<b>9.24</b>	<b>537.0</b>

Reserve Classification	K20 (%)	Tonnage (Mt)
Probable	9.06	80.5
Inventory	8.03	15.4
Unclassified	6.07	13.3
<b>Total</b>	<b>8.55</b>	<b>109.2</b>



# WHAT IS POTASH

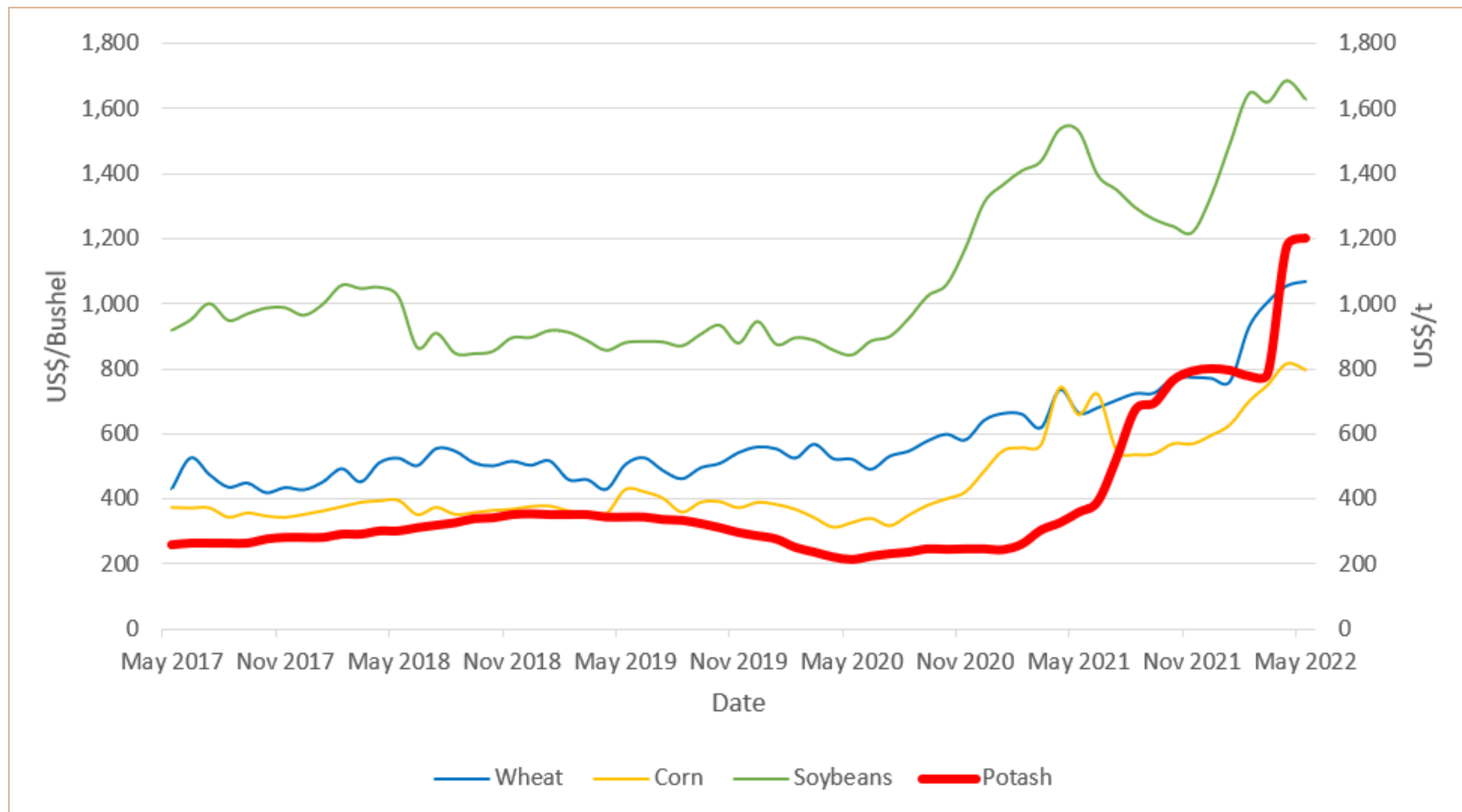
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**Potash (MOP) is a fertiliser used to increase crop yields and improve the quality of plants**

- There are three key plant macronutrients: potassium (K), nitrogen (N) and phosphate (P).
- MOP is the most important K fertiliser product in the world, accounts for c 95% of global demand.
- Potash-based fertiliser is proven to:
  - Improve crop quality
  - Increase uptake of nitrogen
  - Increase efficiency of water use
  - Strengthen against disease
  - Resistance to high temperatures
- There is no substitute for potash, and MOP remains the cheapest and most important source of potassium for agricultural purposes.



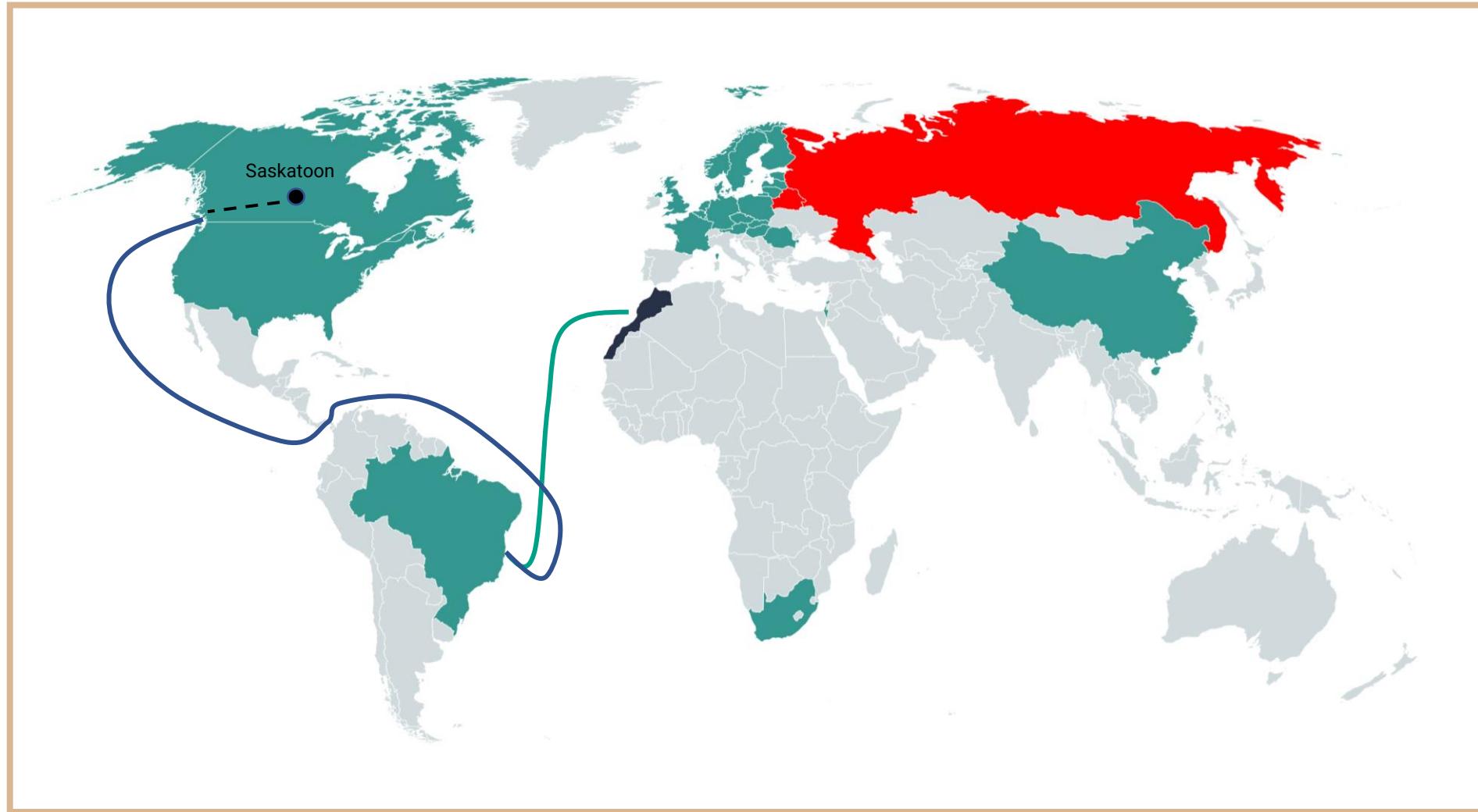
## POTASH PRICES



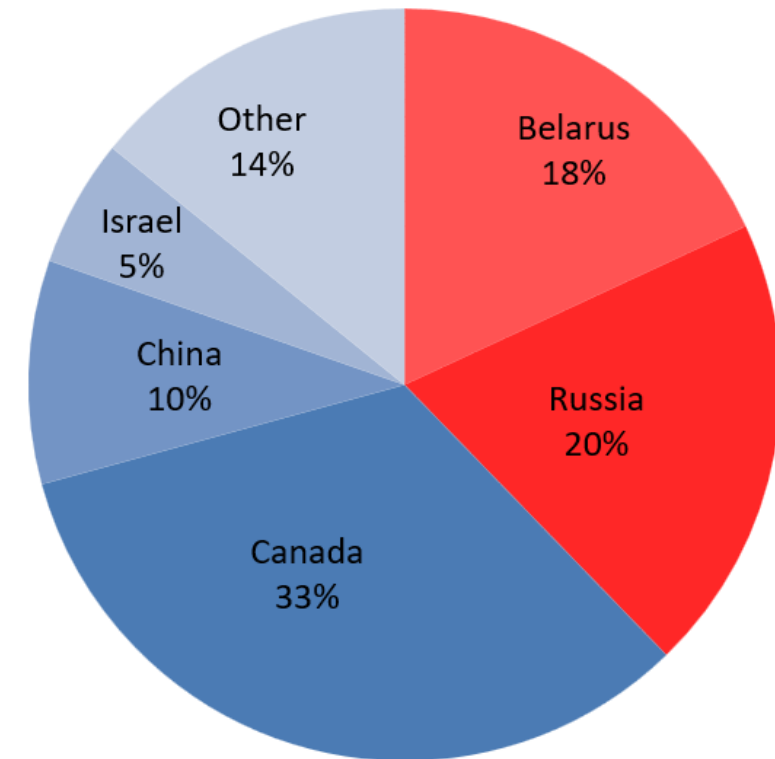


## GLOBAL POTASH PRODUCTION

2021 global MOP production was 72Mt of which 27Mt (38%) was from Russia and Belarus

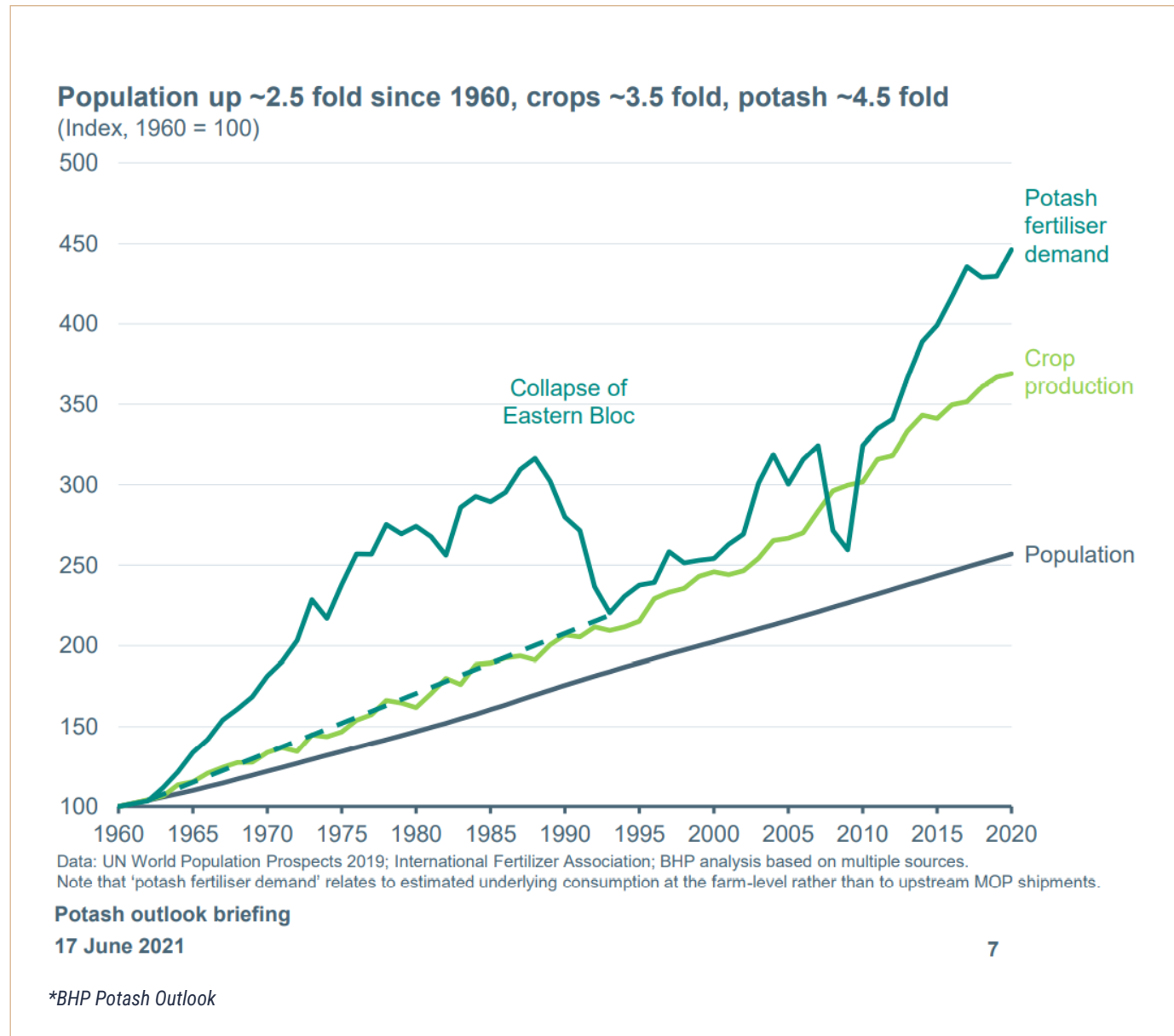


Global MOP production 2021:





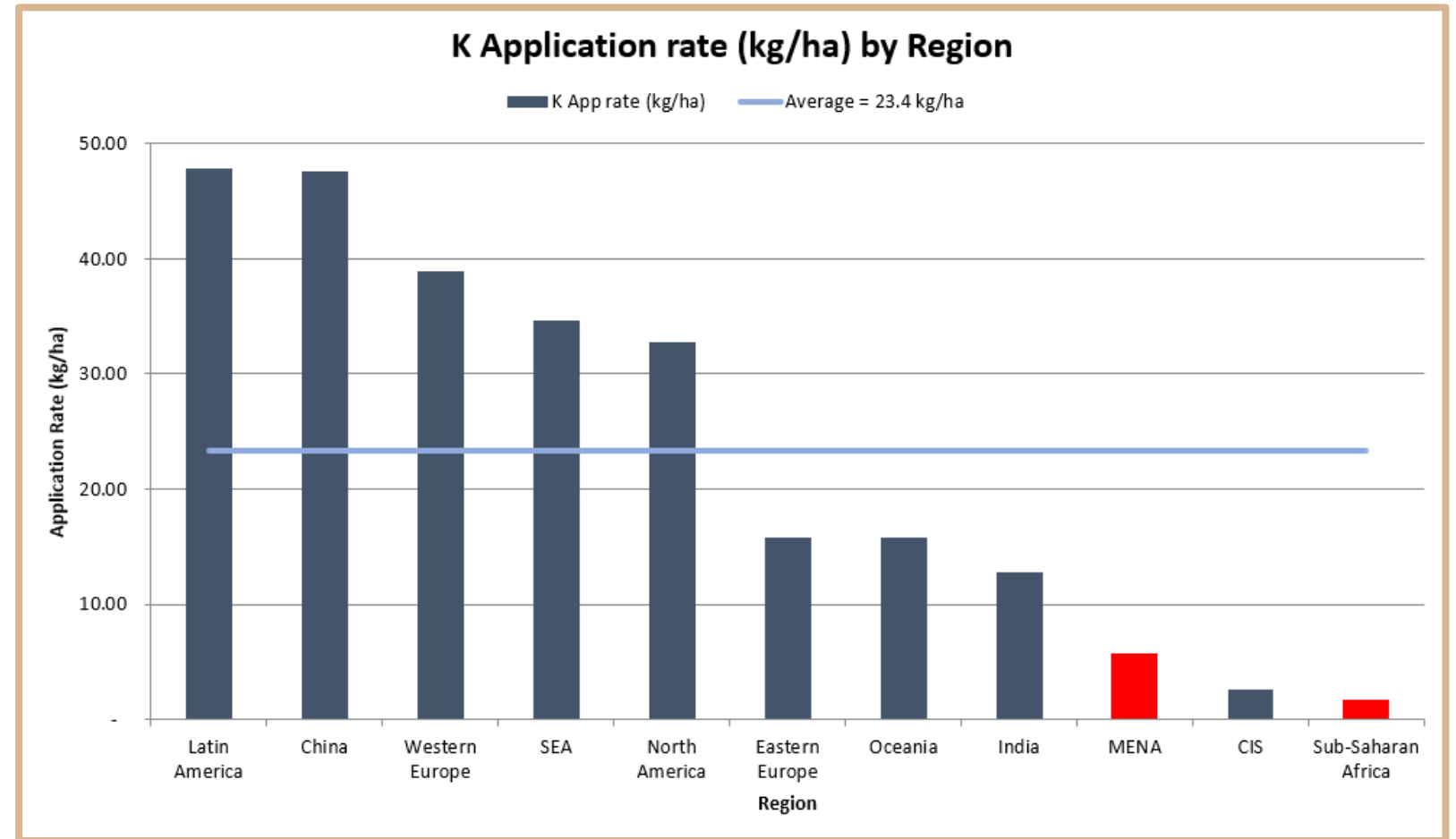
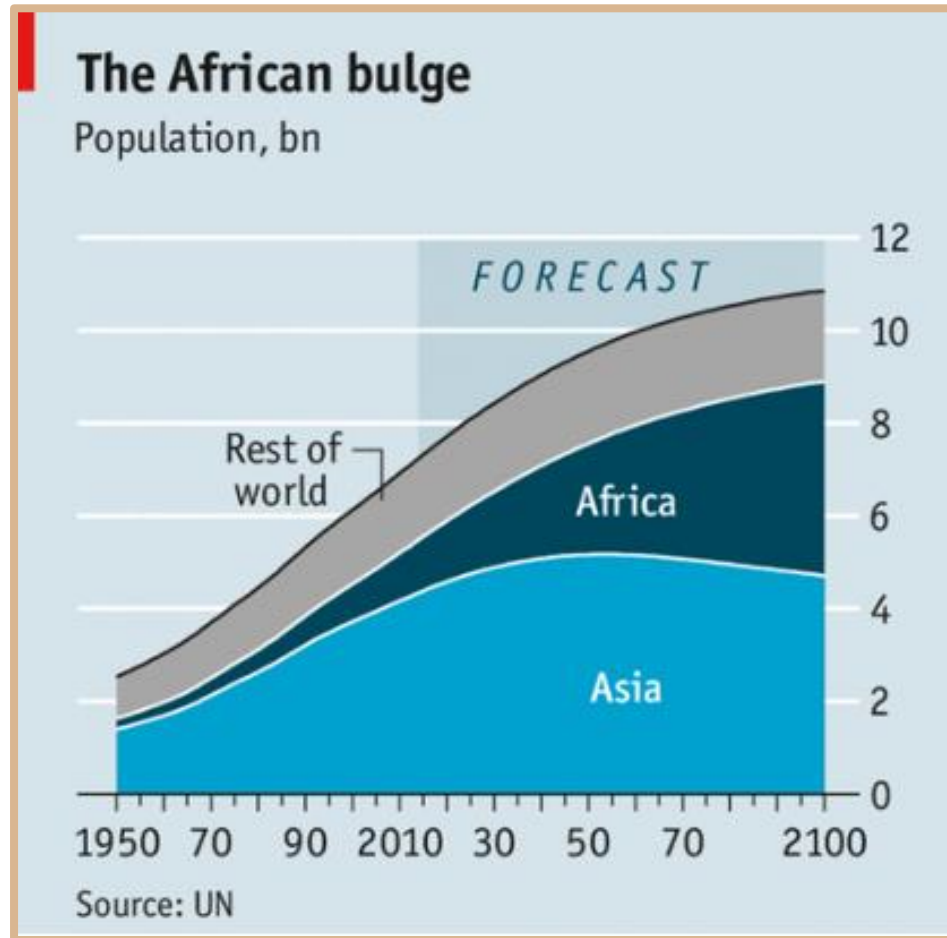
## POPULATION + INTENSITY OF USE = DEMAND INCREASE (2Mtpa)



- Underlying population growth increases demand for crop production and therefore fertiliser demand.
  - An increase for fertiliser demand of 2Mtpa
  - Since 1993, CAGR:
    - Potash fertiliser 2.7%.
    - Crop production 2.1%
    - Population growth 1.2%
  - Fertiliser demand increase outpaces population growth and crop production.



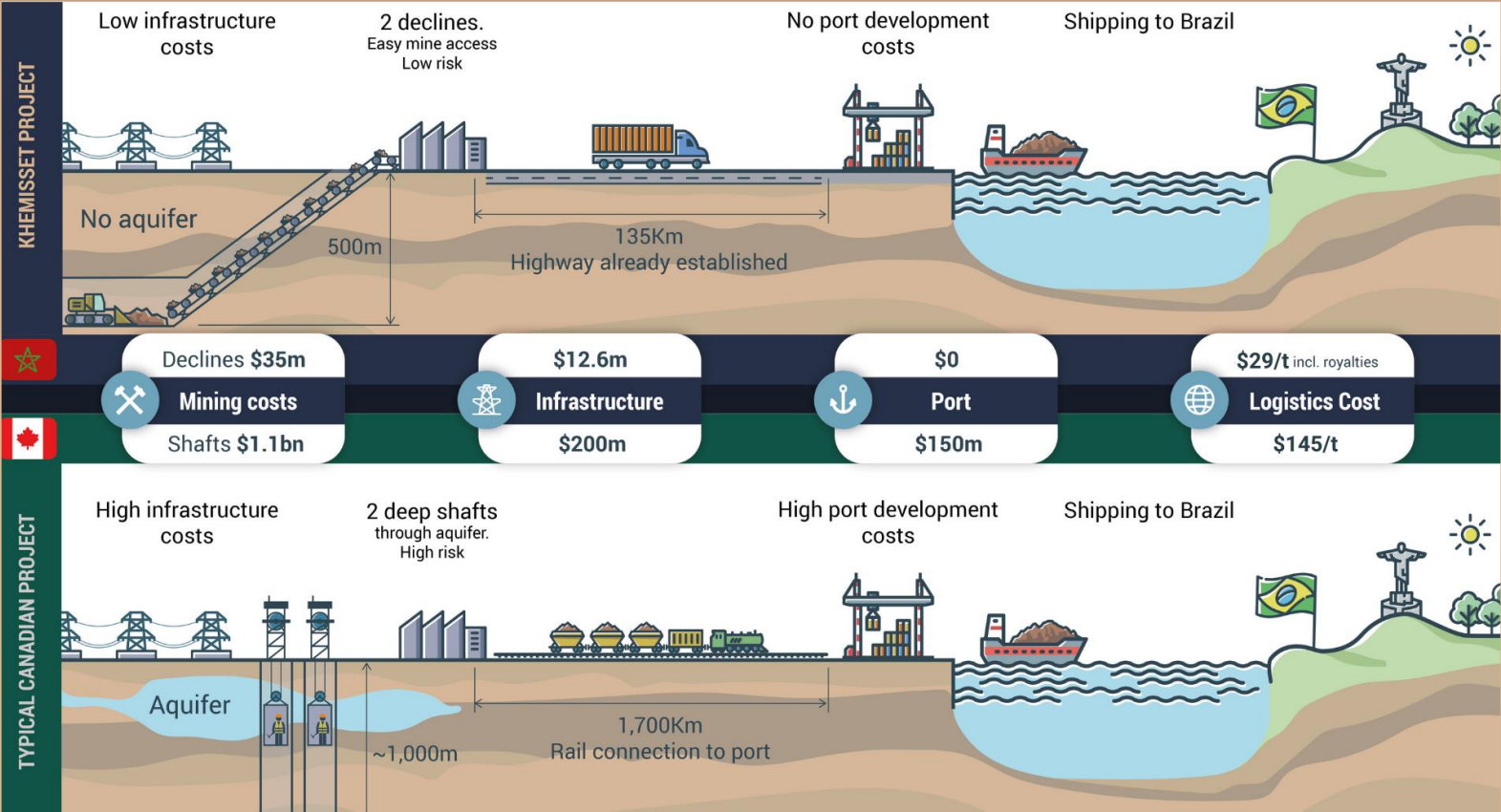
## THE AFRICA CHALLENGE



Africa will account for the majority of global population growth, but uses very little fertiliser on its cultivated land



# THE GEOLOGY AND LOCATION ARE UNIQUE ADVANTAGES

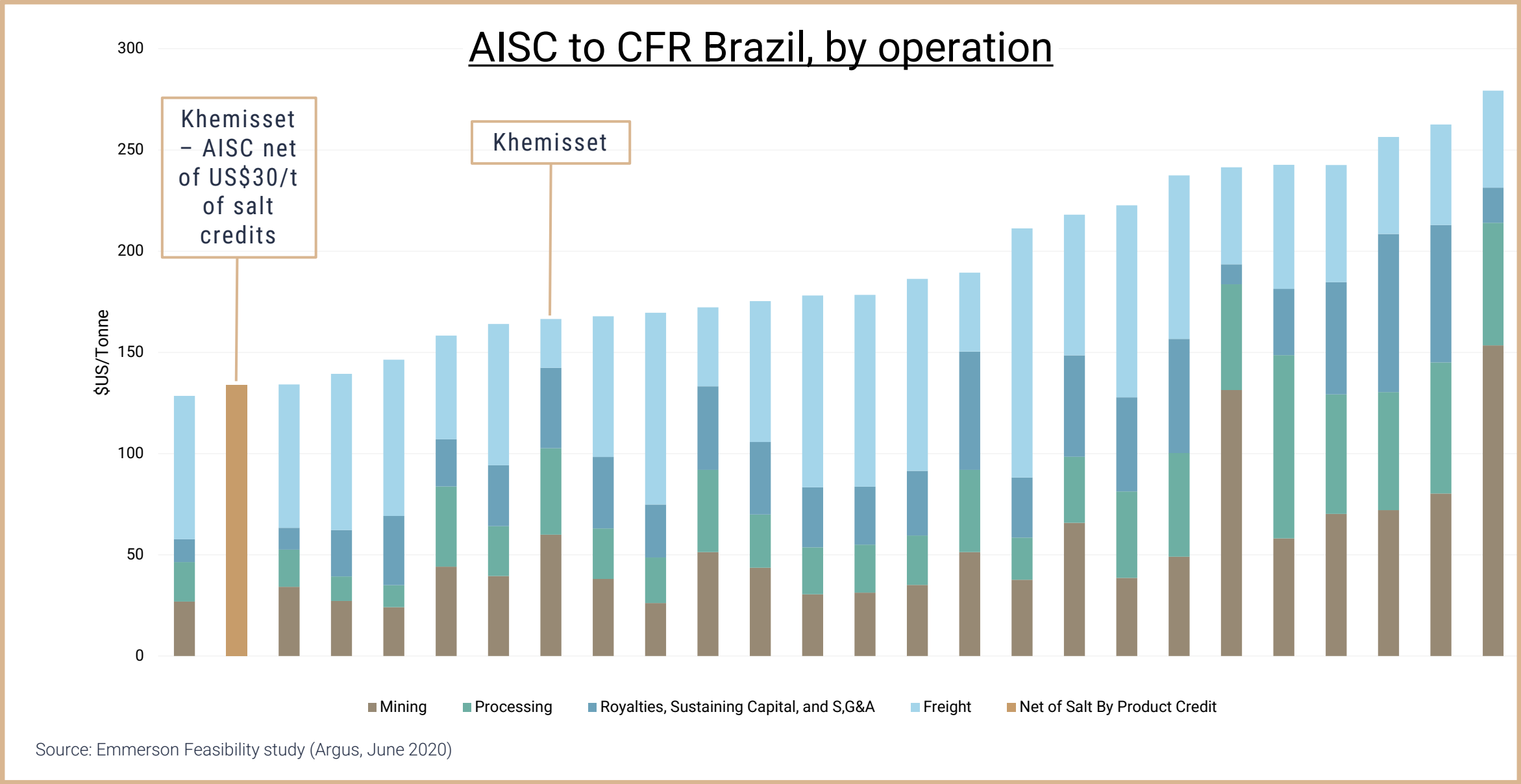


	Khemisset Project	BHP Jansent Project (Canada)
Total CAPEX	\$411m	\$5.5b
Construction Time	2 years to completion	6 years + 2 years ramp up
Location	185km from Port of Casablanca	2000km from Vancouver
AISC	\$158/tonne	\$115/t
Total Transportation Cost	\$29/t	\$145/t
Transport to Port	\$14/t	\$45/t
Shipping	\$15/t	\$70/t





# LOWEST QUARTILE COSTS



## SIGNIFICANT EQUITY UPSIDE FROM NET ASSET VALUE

Emmerson trading well below comparator group for junior potash mines:

	Market Cap USD	Flagship Project	Country	NPV8 USD	Market Cap as % of NPV
<b>Emmerson</b>	<b>102m</b>	<b>Khemisset</b>	<b>Morocco</b>	<b>1,400m</b>	<b>7%</b>
<b>Western Resources</b>	59m	Milestone	Canada	154m	38%
<b>Gensource Potash</b>	100m	Tugaske	Canada	268m	37%
<b>Danakali</b>	64m	Colluli	Eritrea, Ethiopia	242m*	26%
<b>Highfield</b>	268m	Muga	Spain	1,985m	14%
<b>Kore Potash</b>	58m	Kola	Republic of Congo	1,452m**	4%

\* NPV10 = 242m (Phase 1), 439m (Phase 1 & 2) [Danakali's numbers for 50% share of JV]

\*\* NPV10



# NATIONAL ECONOMIC CONTRIBUTION

**US\$4bn+**

Total in-country expenditure over life of mine



**US\$2.5bn**

Total OPEX over life of mine



**95%**

of total OPEX can flow through Moroccan companies, boosting local and national economy



**US\$1.6bn**

of total tax revenue to Morocco over life of the project



2,485 jobs created in Khemisset region (90% sourced from local area)



All aspects of the project to the highest standards set by the World Bank



Education and training to form a keystone of Emmerson's legacy





# Appendices



# EMMERSON PLC

Market Cap: US\$117m



Shareholder	Number of Ordinary Shares	Percentage of Issued Ordinary Shares
Hargreaves Lansdown Nominees Limited Clients	114,213,533	12.48%
Jarvis Investment Management Nominees Limited Clients	104,201,974	11.39%
Interactive Investor Services Nominees Limited Clients	61,505,928	6.72%
GSM	48,484,848	5.30%
Robert Wrixon	44,233,411	4.83%
Heshin Kim	34,941,511	3.82%
HSDL Nominees Limited Clients	32,406,909	3.54%
Lawshare Nominees Limited – AJ Bell Clients	28,894,257	3.16%
Above is the list of key shareholders as at 31 <sup>st</sup> December 2021 which hold more than 3% in the Company		
% of shares not in public hands – 8.20%		
There are nil shares held in treasury		



## BOARD AND CFO

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**Graham Clarke – CEO.** Highly experienced potash mining executive. During a career spanning 35+ years, Graham has gained extensive experience managing large multi-disciplinary teams for underground fertiliser mines.



**Jim Wynn – CFO.** Experienced finance professional and chartered accountant with significant corporate experience, particularly in the resource sector. He has held senior management positions for a number of resource companies.



**James Kelly – Non-Executive Chairman.** A corporate finance, strategy and capital allocation expert with over 20 years experience in the mining and natural resource industry.



**Dr. Robert Wrixon – Executive Director.** Founder of Moroccan Salts, Rob has 18 years' commercial experience in mining. He is a Director and founding partner of a natural resource PE group and holds a PhD in mineral engineering from the University of California, Berkeley.



**Hayden Locke – Director.** Mining executive with ~15 years' experience in mining, private equity and investment banking.



**Rupert Joy – Non-Executive Director.** In a diplomatic career of more than 25 years, Rupert served at diplomatic missions in Yemen, Saudi Arabia, Iraq, Uzbekistan & Morocco. He has over seven years' experience as a diplomat in Morocco, as Deputy Head of Mission at the British Embassy from 2000-03 and as EU Ambassador & Head of the EU Delegation from 2013-17.





# MANAGEMENT TEAM CREDENTIALS

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## **Charles Vaughan (Chief Commercial Officer)**

- Charles spend over ten years working in the City with a focus on raising capital for companies developing natural resources projects, mainly from London based institutional investors.

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## **Lahcen Alloubane (General Manager)**

- A Moroccan national with a Masters of Business Administration and over 10 years' experience in the mining sector including with Moroccan based tin developer Kasbah Resources.

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## **Haitam Ennadif (Engineering Manager)**

- A Moroccan national and passionate senior metallurgist with 12 years experience within the mining sector in roles including Mineral Processing Project Manager with Managem, Process Plant Project Manager with Fluorspar and Development Manager with SSAB across Morocco and North Africa.

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## **Phil Cleggett (Head of Corporate Development)**

- A BCom qualified accountant with 12 years' experience in mining and investment banking. Prior to his role at Emmerson PLC, he was Manager of Corporate Development & Strategy at ASX listed Potash developer Highfield Resources.

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## **Luke Jarvis (Sales & Marketing Manager)**

- A market strategy specialist with over 30 years of experience in senior roles leading to bankable off-take agreements, strategic partnerships and structured finance arrangements for new entrants in the resource sector with organisations such as Salt Lake Potash, Helm Chemicals, Nutrien Inc and Sirius Minerals. Also consulted for organisations such as BHP, ICL, Circum Minerals, Peak Minerals and Highfield Resources.

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## **Jakub Zmuda (Project Manager)**

- Holder of an MEng in Geology awarded from the Academy of Metallurgy and Mining in Krakow, Jakub has 20 years experience within the mining sector in roles from Geologist to Project Manager.

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## **Josh Mitchell (Project Control Manager)**

- An BA qualified project delivery expert with close to 15 years experience in the development and implementation of project execution strategy on capital projects with values of up to \$4.2B within the mining sector.

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## **Matt Wilmot (Technical Services Manager)**

- A BEng qualified mining professional with over 20 years of experience within the development and operation of coal & potash mines. A member of the Association of Camborne School of Mines (ACSM) and one of few holders of a Mine Surveyors certificate awarded from the UK HSE Mining Qualifications Board.

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## **Enrique Sanz (Project Geologist)**

- A geologist with 20 years' experience in industrial minerals, primarily evaporite minerals. Formerly project geologist for worldwide exploration with Rio Tinto PLC. Extensive experience in Khemisset Basin and other Triassic – Liassic salt basins of Morocco. Enrique holds a PhD in evaporites.



## ONGOING SITE WORKS TO SUPPORT BASIC ENGINEERING



### Deep Drilling (Decline Alignment) Campaign

The drilling campaign of 200m (DA-1), 400m (DA-2), 1,200m (DA-4), 2,000m (DA-6) & 3,200m (DA-9) has now been completed. Therefore, the first stage of the Geotechnical / Geological drilling campaign for decline alignment has been finished.



### Surface / Shallow Geological Investigations

This program has finished. The campaign included 20 shallow drillholes with SPT (Standard Penetration Test) and detailed sampling for testing program: 17 CPT (Cone Penetration Test) and Electrical Resistivity Tomography survey for analysis of surface geology.



### Core Logging, Testing & Storing

Local to the site, there is a well managed and maintained core store where each sample is taken for logging, testing and storing. This is an ongoing operation and the value added to the project at this facility is immeasurable.



# MISSION STATEMENT

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We will strive to “always do the right thing and always do it in the right way”

R

## Respect

We respect our environment, our stakeholders and each other.

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I

## Integrity

We act with integrity and lead by example.

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G

## Goals

We set challenging goals and embrace innovation and change to achieve them

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H

## Health & Safety

The health, safety and well being of our team and all those engaged on the project is non-negotiable.

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T

## Team

We work together as a team to achieve the best results possible





