ALIGN
RESEARCH

Emmerson

22nd November 2018

Development of a low capex, high margin potash project in an outstanding location to provide fertiliser to help feed the world

Emmerson first listed on the LSE in February 2017 as an investment company. In June 2018, the company was re-admitted following the RTO of Moroccan Salts Ltd which is developing the Khemisset Potash Project near Rabat in northern Morocco, a country where fertiliser giant OCP requires significant potash feedstock. Khemisset has a large JORC resource of Muriate of Potash (MOP), which is the most widely used and cheapest source of potassium.

Big agriculture investment drivers pushing up the MOP price

The UN believes that the world will need to produce 70% more food by 2050, not just to meet the needs of its fast-growing population but also for a burgeoning middle class that is seeking a higher protein diet. Fertilisers led by MOP are seen to be vital in improving the efficiency of farming.

Large JORC resource potash project + significant exploration potential

Progress at Khemisset is being accelerated. The recently announced Scoping Study outlined a project with a post-tax NPV(10) of US$795 million and a IRR of 29.8% over a 20 year mine life based on MOP at a flat US$360/t. Using Argus Media forecast prices would see this NPV(10) rise to US$1.14 billion. More than 80,000m of historic drilling exists allowing feasibility study costs and timelines to be substantially reduced. Metallurgical tests could now allow the project to go straight into the BFS, with production beginning as early as 2022.

Management targeting a low capex development – rare in potash

Management has extensive potash development experience, previously with ASX listed Highfield Resources, and believes Khemisset has the potential to be a low capital cost development which is very rare in potash and should allow the economics to work regardless of potash price.

Risked conservative NPV suggests potential upside of 290%

Our conservative valuation illustrates the clear potential. We update our coverage with an increased target price of 13.48p and **Conviction buy** stance.

Table: Financial overview

Year to end Dec	2017A'	2017A²	2018E	2019E
Revenue (£'000)	-	-	-	-
PTP (£'000)	(200)	(207)	(2,000)	(2,400)
EPS (p)	(1.21)	(0.43)	(0.53)	(0.38)

' 13 months ended 31 March 2017 ² 9 months ended 31 December 2017

This investment may not be suitable for your personal circumstances. If you are in any doubt as to its suitability you should seek professional advice. This note does not constitute advice and your capital is at risk. This is a marketing communication and cannot be considered independent research.

CONVICTION BUY – Price Target 13.48p

EMMERSON PLC

Key data

EPIC	EML
Share price	3.45p
52 week high/low	4.90p/2.03p
Listing	LSE
Shares in issue	626.13m
Market Cap	£20m
Sector	Mining

12 month share price chart

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IMPORTANT: Emmerson (EML) is a research client of Align Research. For full disclaimer information please refer to the last page of this document.

Business overview

Emmerson Operations

Emmerson Plc is a mineral development company with a Standard Listing on the London Stock Exchange which is focused on creating value from Muriate of Potash (MOP) assets in Morocco.

• **Khemisset Potash Project** – Upon re-listing Emmerson had a 100% interest in 40 tenements which cover 576km², with the company having the objective of Khemisset becoming a significant MOP crop nutrient source. An additional 15 research permits adjoining Khemisset having recently been granted, taking the total project area to 815km². **The project has a relatively shallow deposit for potash and already boasts a large JORC compliant resource of 311.4Mt at 10.2% K2O following a total of 80,000 metres of drilling.** The company is targeting a minimum 20-year life of mine, producing at a rate of 750,000 – 1,000,000 tpa.

Agricultural Investment Drivers

Global megatrends are permanently reshaping agribusiness and providing compelling drivers for investment. These trends concern: demographic shift, accelerating urbanisation and resource scarcity. There is no doubt that feeding a world population of 9.1 billion people, which the United Nations (UN) has forecast for 2050, will be a huge challenge. This forecast implies a 34% increase in the current world population, but already millions of people around the world are starving.

This is not just a story about a growing global population, but also of the fast expanding middle class which, between 2015 and 2030, is forecast by the UN to rise by 76%. The increased spending power of the middle classes is leading to higher calorie diets and increasing yield demand from soils. **The end result is that the UN believes that the world will need to produce 70% more food by 2050**.

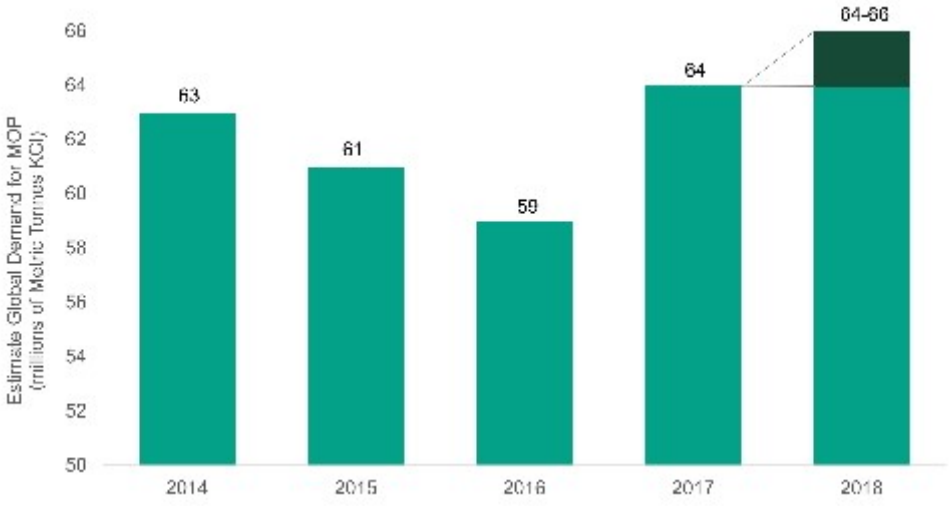
At the same time, the UN reckons that arable land available per capita will fall by 15% by 2050. All these factors mean that major productivity increases in agriculture are essential. Moving ahead, fertilisers are going to become more and more important for farmers to grow crops more efficiently in order to feed the world's rapidly growing population. In reality, this can only be achieved through the significant use of nitrogen phosphate potassium (NPK) fertilisers.

Muriate of Potash

NPK fertilisers contain these three macronutrients that all crops need. Potassium (potash) acts to improve colour size and sugar formation. In addition, potassium aids water transfer, makes crops drought resistant, as well as improving frost resistance. There are two primary sources of potassium, which are Muriate of Potash (MOP) and Sulphate of Potash (SOP). The mostly commonly used potash fertiliser is MOP which chemically is KCl and accounts for something like 95% of the world's potash production.

The minimum saleable grade for standard MOP for agricultural uses is 60% K2O, which is called K60. MOP is the cheapest and most important source of potassium for agriculture, so there is no risk of substitution. Looking at delivery to NW Europe prices, K60 is currently priced at US$335/t compared to SOP (K2O) at more than US$500/t.

Demand for MOP has now reached record levels as farmers realise the benefits of using MOP to improve yield and which actually represents just a small amount of the overall cost of farming. In 2018, the major fertiliser producers are predicting that demand could rise to anywhere between 64.5 – 67.5Mt.



Record demand for MOP. Source: Argus FMB, Nutrien, Mosaic Co, IFA

The MOP price tends to follow metals price but lags a little behind. The price is cyclical like metals, with MOP hitting a peak of around US$1,000/t in 2008/09, followed by a decline taking the FOB Vancouver price down to US$220 in 2016. Over the past 12 months the price of MOP has been steadily increasing.

In February 2018, Bernstein Research forecast a significant rebound in the global potash market and which now looks as though it is happening. The global MOP market appears to be heating up as in late-August 2018, Indian potash importer IPL agreed a contract with Belarus at US$290/t, which represents an annual increase of US$50/t, or 21%. The Chinese annual contract agreement in September 2018, was 26% higher at US$290/t (CFR China).

Africa

There is a huge unrealised market for fertiliser in Africa which remains the most under-fertilised continent in the world. Africa uses less than 25kg of fertiliser per hectare (kg/ha) which is way below the level of usage in the US, Europe, China and India which use more than 100kg/ha. In all, there are 600 million arable hectares in Africa plus the continent also has 60% of the world's uncultivated arable land. There is a potentially vast market on the doorstep of an African MOP producer.

In Africa, this all adds up to create a big driver for fertiliser demand, albeit starting from a very low base. The giant Moroccan fertiliser producer OCP Group is pursuing an aggressive African NPK strategy and has launched initiatives to boost agriculture on the continent and help African countries reach their food safety goals. OCP has doubled its NPK sales over the past three years, taking its total production to 1.4Mt. **That represents a growth rate of 30% CAGR, which is thought to be the sort of growth in demand for fertiliser that is being seen across the African continent.**

Morocco

The Kingdom of Morocco is located in NW Africa and is the ancestral home of the Berber people. The country has a population in excess of 35 million and covers an area of 710,000km², which is almost three times the size of the UK. The capital is Rabat, but the largest city is Casablanca.

The country has a constitutional monarchy and an elected parliament, which was previously a French protectorate. The current king Mohammed VI became monarch in 1999 and has initiated political and economic changes. The Arab Spring in 2010 provided pressure for reform which led to the introduction of a new constitution and more powers for parliament.

Morocco location. Source: Company presentation

King Mohammed VI wants to attract foreign investment to develop the country's mineral wealth and so has ensured that there is the necessary transparency and pro-mining regulation required to attract such funds. Morocco is thought to host around 75% of the world's phosphate reserves, which is a bigger export earner. Most of the country's metal mining is in the hands of ONA Group, through its mining holding company MANAGEM which has interests in cobalt, zinc, lead, copper, silver, gold and fluoride.

Foreign mining companies in operation are rather thin on the ground, represented by tin miner Kasbah Resources (ASX:KAS), Maya Gold and Silver Inc (TSX:MYA) and diamond explorer Metalex Venture (TSX-V:MTX). Recent years have seen SDX Energy (AIM:SDX) and Sound Energy (AIM:SOU) become involved in hydrocarbon projects in the country.

Morocco is very stable and fairly easy to do business in, but still definitely Africa. **The country has a favourable fiscal regime, with nominal royalties of less than 0.1%, a 5-year tax holiday for new mining projects and a 50% reduction in corporate income tax for exported products.**

Importantly, Morocco was voted the number one overall jurisdiction for mining in Africa in the Mining Journal Risk Report 2018. In this report, Morocco was actually ranked as being less of an investment risk than countries like Italy, South Africa, Poland and Brazil and almost considered to have the same level of investment risk as Portugal and Japan. On top of that, the country was deemed to have the highest opportunity index in Africa plus the best infrastructure in Africa.

Background

The company was incorporated in March 2016 in the Isle of Man under the name Emmerson Plc. In February 2017, Emmerson was admitted to the standard listing segment of the Official List of the London Stock Exchange. The IPO was accompanied by a placing at 3p per share which raised £913,000. On admission, the company had a market capitalisation of £1.45 million at 3p per share and had adopted an investment policy focused on acquiring one or more target companies. The focus of attention was the resources sectors in SE Asia, Africa and the Middle East.

In October 2017, Emmerson announced a binding agreement with Moroccan Salts Limited (MSL) to acquire a 100% interest for £10 million through the issue of 333.33 million shares at 3p each. Such a deal constituted a reverse takeover (RTO) under the Listing Rules and so the shares were suspended pending an application by the company to have the enlarged ordinary share capital admitted to the Official List.

MSL was set up by a private natural resources incubator fund based in Hong Kong called Starboard Global Ventures, where Director Dr Robert Wrixon is a Principal. Starboard Global take early stage projects and incubate them, bring in a management team and then list these vehicles. Over a 4-5-year period Starboard Global has pieced together the licences which cover the Khemisset Basin and then brought in Hayden Locke and Phil Clegett from potash mine developer Highfields Resources to run the business.

MSL is the holding company of a group of Moroccan companies which are developing the Khemisset Potash project which is located near Rabat in northern Morocco. A Competent Persons Report (CPR) completed by SRK, which formed part of the RTO document, clearly set out the potential for a long life, low capital cost and high margin potash mine in Morocco.

In June 2018, Emmerson was re-admitted to the London Stock Exchange following a significantly over-subscribed placing which raised £6 million at 3p per share. The re-admission followed the acquisition of the Khemisset Potash Project where there was an accelerated pathway targeting the development of a low-capex, high margin mine, with a Scoping Study expected to be completed by the end of Q1 2019.

At the time of re-admission, the company welcomed Hayden Locke (CEO) and Rob Wrixon (COO) to the board, two directors who have extensive experience of both the potash market and international capital markets. The board was further strengthened in July 2018 with the appointment of mining industry veteran Mark Connelly to become Chairman. Mark Connelly has enjoyed a successful career in the resources industry as CEO, MD and Chairman, including development and building multiple mines in Africa.

Operations

Emmerson is focused on its 100% interest in the Khemisset Potash Project in Morocco. This is a large resource with strong growth potential where the objective is to become a significant MOP crop nutrient source.

Khemisset Potash Project

The project lies 80 kilometres east of Rabat and covers an area which is 60km by 20km in the Khemisset Basin which lies adjacent to the city of Khemisset (population: 132,000). The remainder of the licence area is sparely populated and used for subsidence farming.

Location of the Khemisset Potash Project in Morocco. Source: Company

No potash mining has taken place at Khemisset. However, there has been a long history of exploration in this large sedimentary basin which includes substantial historic drilling campaigns.

Stratum	Logging Code	Sub-Unit	Thickness (m)	Description
Upper Clay Formation	UCU		20-170	Red-brown sandy mudstone with traces of anhydrite, gypsum & marl
Upper Salt Formation	USU		50-650	Bedded halite, gypsum, anhydrite, dolostone and silicicalstic mudstone, sub-economic potash occurrences
Basalt Formation	BST		30-100	Basalt lavas with local lenses of claystone, limestone and evaporite
Lower Salt Formation	LSU	L2.2 L2.1 L1	Up to 190	Massive banded salt with principle economic potash layer (sylvite and carnalite) Black chaotic massive banded salt with potash inclusions Red-brown mudstone salt interbedded with red beds.
Lower Clay Formation	LCU		Over 250	Red-brown shale with traces of gypsum and halite.

In the centre of the Khemisset Basin, the Late Triassic to Early Liassic Strata can be subdivided into five formations. Source: CPR June 2018

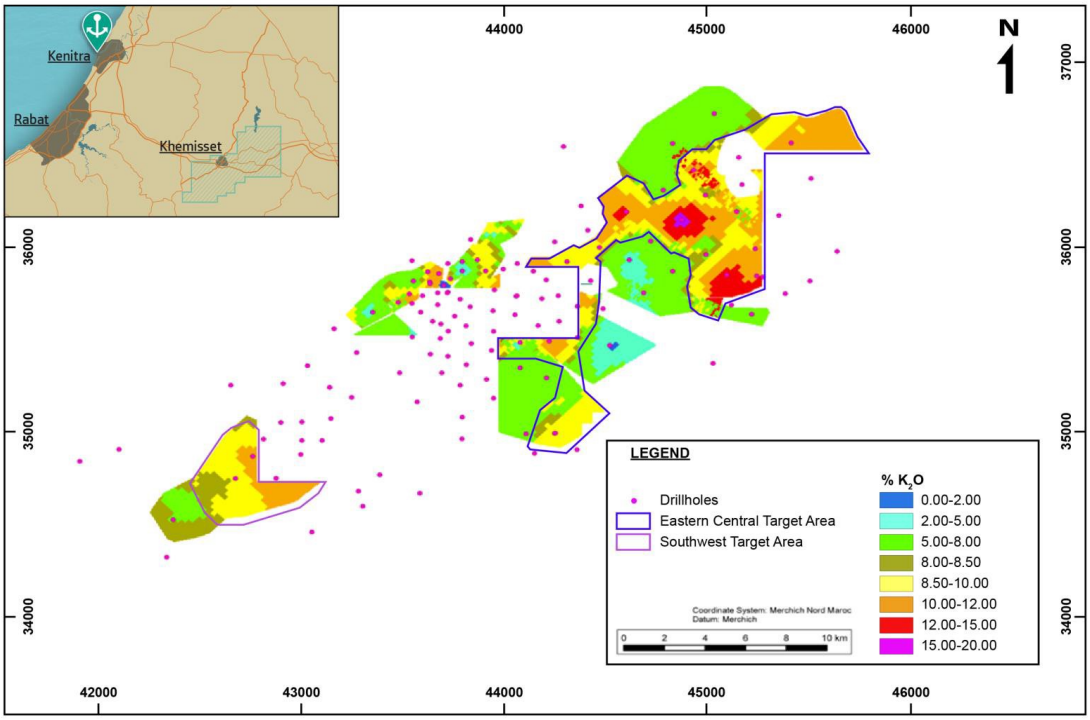
Past exploration in the Khemisset Basin includes regional geophysical surveys, 2D seismic surveys, topographical surveys and drilling. In the 1950s and 1960s, a total of 133 drill holes

were drilled. In 1974, a Preliminary Feasibility Study (PFS) was completed by Parsons Engineering for the Moroccan government which showed that the project was technically and economically viable. In essence, it was a different project to that which Emmerson is considering, but it is encouraging that the project was seen to be viable at much lower potash prices.

JORC Resource

MSL completed a verification drilling programme of three drill holes in 2016, which were drilled within 300 metres of existing drill holes. One hole was drilled in each of the North, Central and NE deposits. Following MSL's work, a total of 136 holes have been drilled at the project for 80,000 metres, which represents a lot more drilling than usually undertaken at mining projects and certainly for potash projects.

In the CPR, SRK outlined a grade varying between 5-20% K2O for an average of 10.2%. The potash is a reasonable thickness ranging from a minimum of 1.5 metres to between 4-5 metres, with an average in the north of 2.5 metres. **Consultants SRK believed that the historical drilling and the recent drilling was of sufficient quality to support the declaration of a JORC-compliant Inferred Mineral Resource of 311.4Mt at 10.2 % K2O.**



Classification	Deposit	Tonnage (Mt)	K2O (%)	Thickness (m)
Inferred	East Central	235.2	10.3	2.3
Inferred	Southwest	58.2	9.5	2.6
Total		**311.4**	**10.2**	**2.4**

JORC resource at Khemisset. Source: Company

Potassium in place in the Khemisset Basin is estimated to equate to billions of tonnes of which 500 – 900Mt is economic and 300Mt mineable with a 600Mt exploration target.

Mining plans

Khemisset represents a large resource with strong growth potential. The company is not looking at a large project by potash standards, but one with a production rate of 750,000 – 1,000,000 tpa and a minimum 20-year life of mine. A project of this size would allow a company like Emmerson to successfully finance it and put it into production under its own steam. Obviously, this is subject to the conclusions of the current Scoping Study.

The management team heading up Emmerson has spent 4-5 years in developing potassium projects and has made an in-depth study of the whole potash industry. Having analysed the economics of potash global projects, they have realised that the overriding considerations are the capital cost to production and location relative to end markets. **For a number of reasons this project has the potential to be low capex with high margins, and so does not need to be a 3-4M tpa production project to justify the capex.**

Low capex potential

The project has the potential to be a low capex development, which is very rare in the potash mining industry. This is due to the resource being shallow and having no unconstrained aquifers present which both allow for inexpensive decline access coupled with the lower cost benefits of conventional mining and processing. In addition, good infrastructure is available, so the company does not have to finance the building of a railway and a port, as is the case with some potash projects in Canada.

As far as potash mines go, Khemisset represents a relatively shallow deposit starting from 450 metres below the surface. Importantly, there is no unconstrained aquifer sitting above the orebody. This makes the deposit quite a rarity and makes mining a lot easier and access a lot cheaper. By and large, potash mines have huge capex costs due to the cost of accessing the mineralisation. The presence of an aquifer would mean that a ground freezing exercise would be required before sinking a shaft. A much cheaper solution is access via a decline, which is a roadway heading down to orebody which could not be used in instances where an aquifer is present above the orebody.

Company	Depth - metres	Access required	Capex - US$m
Highfield Resources	350	2 declines	22
Kore Potash	300	2 shafts	175
Passport Potash	380	2 shafts	327
Average Saskatchewan	1,000	2 shafts	1,700
BHP	1,000	2 shafts	2,500

The cost of decline or shaft access at various projects. Source: Company

Potash is a bulk commodity and so good available infrastructure is also necessary to keep the capex low. Infrastructure in Morocco is impressive and seen to be on a par with European countries like Spain. Power and water are also available. There are electrical substations and high voltage power lines nearby the project and there are no issues in connecting to grid power. The established infrastructure also includes a network of toll roads and deep-water ports within close distance of Khemisset. Khemisset is located in northern Morocco 90km from the capital Rabat. The project also lies within 90km of the planned bulk port of Kenitra Atlantique which is currently under-construction and expected to be in operation before the building of the mine begins. In addition, there are two other ports: Mohammedia and Casablanca. Mohammedia lies 140km away and has available capacity for the project, whilst Casablanca is a much larger port which has enormous capacity.

High margin potential

The location of Khemisset provides the potential for the project to generate high margins over the life of the mine. The high margin potential stems from the expectation that the project will involve conventional underground mining with power, labour and transport costs likely to be low. Also essential is the location close to export ports and local customers as well as close proximity to premium price end markets such as Brazil, Western Europe, and Eastern North America.

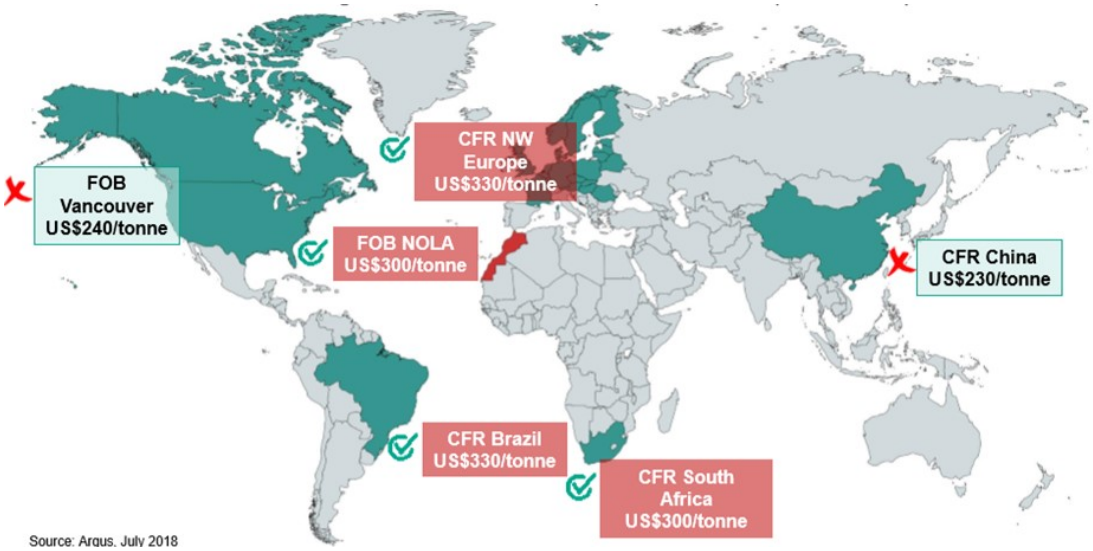
There is a large domestic market. On the coast, OCP operates a vast NPK blending facility at Jorf Lasfar which is 300km away by rail. This facility represents a big export plant where US$8 billion has been spent on building an NPK mega-plant from which OCP is focused on supplying the African market. Potassium could be trucked to Jorf Lasfar at $30/t, but by rail the costs would be under $15/t. Currently, it is understood that OCP sources its MOP from far-flung locations including Canada, Belarus, and Russia.

It does seem that OCP might represents a big part of the Emmerson story going forward. OCP is strategically vertically integrated and makes an annual EBITDA of $1.5 billion and $1 billion of profits from manufacturing fertilisers. Out of the NPK constituents of the fertiliser, OCP has control of the P (as Morocco hosts around 75% of the world's phosphate reserves) and has a guaranteed supply of N through a deal with Abu Dhabi. However, OCP has little control over its supply of K (potassium), which is where Khemisset could fit in quite neatly.

By and large, rail costs normally represent something like 20% of trucking costs for the same distance. There is little point in the company spending €200 - 250 million on building a spur line when the product can be trucked at a reasonable price to either the port of Kenitra or Mohammedia, using local contract trucking.

High potential netbacks

It has to be pointed out that looking at Khemisset's potential operating costs, the mine gate price might be expensive compared to existing potash producers. This assumption is due to the grade and thickness of the mineralisation both being middle of the road. However, this negative will clearly be more than compensated by the low logistics and royalty costs as a result of its location, but also due to Khemisset's location relative to its customers and the high price that those natural customers pay. It is worth noting that, for Canadian producers, which represent around 33% of global supply, more than 70% of their operating cost, delivered to customer, is in royalties, transport and logistics. For the Russians and Belarussians, who also represent around 33% of global supply, this figure is around 60% of total cost delivered to customer.



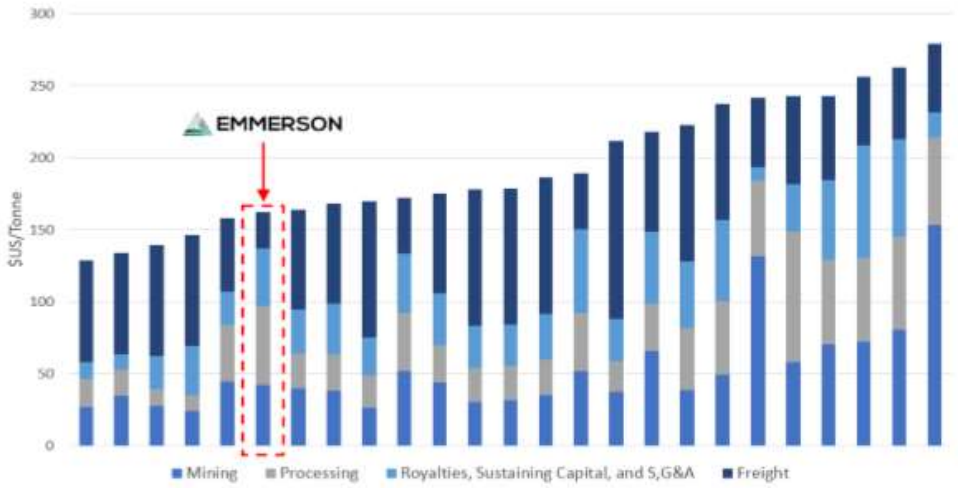
Premium netback compared to its peers due to location. Source: Argus July 2018.

The plan at Khemisset is to export potash to Brazil, NW Europe, South Africa and NOLA (New Orleans – Louisiana to supply the central cornbelt). Brazil currently pays the highest price for potash, with China and Vancouver paying the lowest price. This strategy will allow Emmerson the chance of enjoying premium netbacks compared to its peers.

Scoping Study

The Scoping Study was announced in late-November 2018 and confirmed the potential for a low capex, high margin potash mine. This study was managed by global independent mining and engineering consultant, Golder Associates with designs and estimates prepared in line with Australian Institute of Mining and Metallurgy (AusIMM) guidelines.

The Scoping Study determined a post tax NPV(10) of US$795 million and a IRR of 29.8% over a 20 year mine life, based on the assumption of a flat real price of US$360/tonne CFR Brazil price. However, it was pointed out that using forecast prices from independent market consultants Argus Media would see this NPV(10) rise to US$1.14 billion.



Industry all-in-sustaining delivered cost curve to CFR Brazil. Source: Company

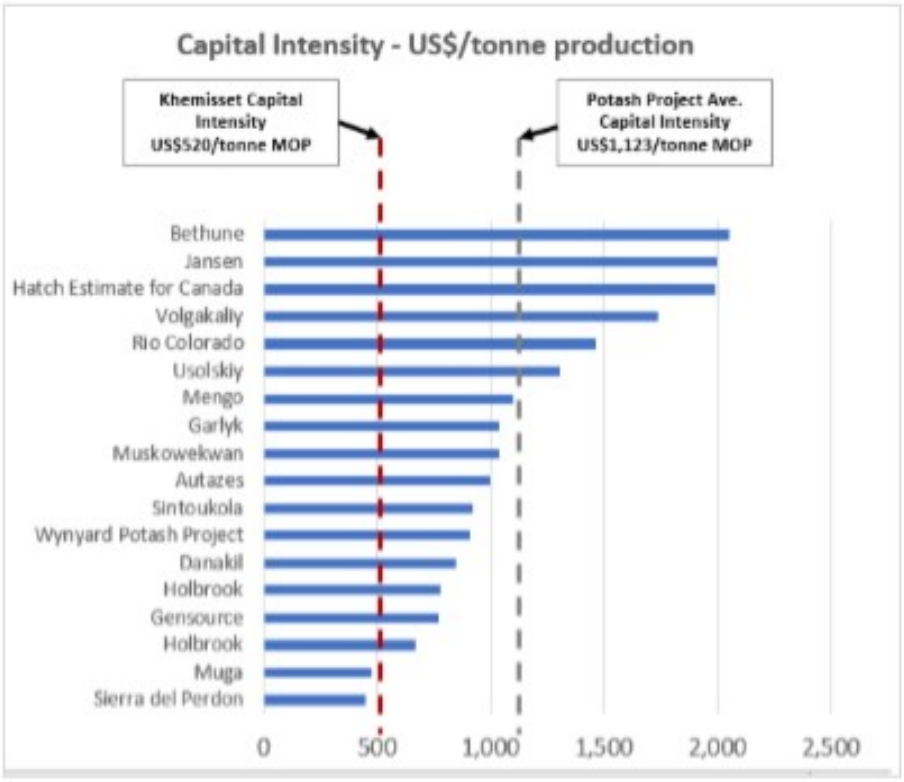
This study highlighted bottom quartile projected all-in sustaining delivered cost to all Emmerson's target markets including Brazil, NW Europe, Morocco and South Africa. There was also top quartile projected cash margins based on analysis conducted by Argus FMB,

with average steady-state post tax cash margins of 50% at current potash prices and average steady state EBITDA margins of nearly 64% at current potash prices.

Robust cashflow generation at a broad range of potash price assumptions was demonstrated with average, steady state, post-tax cashflow of US$184 million per annum assuming a flat, real, potash price of US$360/tonne CFR Brazil and a less than 3.25 year capital payback period.

The initial mine life was 20 years with significant potential to increase from existing in-situ resource (outside of Inferred Mineral Resource Estimate) and ongoing exploration in North East Khemisset. Over this period, it was assumed that 6Mtpa run of mine ore delivering nearly 800,000 tonnes of K60 MOP per annum on average over the life of mine.

The Scoping Study determined total pre-production capital cost US$405 million including US$90 million of contingency. This highlighted bottom quartile capital intensity per tonne of product produced, less than half of global peer average capital intensity.



Pre-production capital intensity for potash projects globally. Source: Company

Good comparison

Emmerson is seen to compare favourably to its lowest capex peers in the market. Hayden Locke (CEO) previously worked at Highfield Resources which is developing its Muga and Sierra del Perdon projects in Spain. This is a very similar project to Khemisset for four main reasons: depth, access to mineralisation, location to ports and infrastructure.

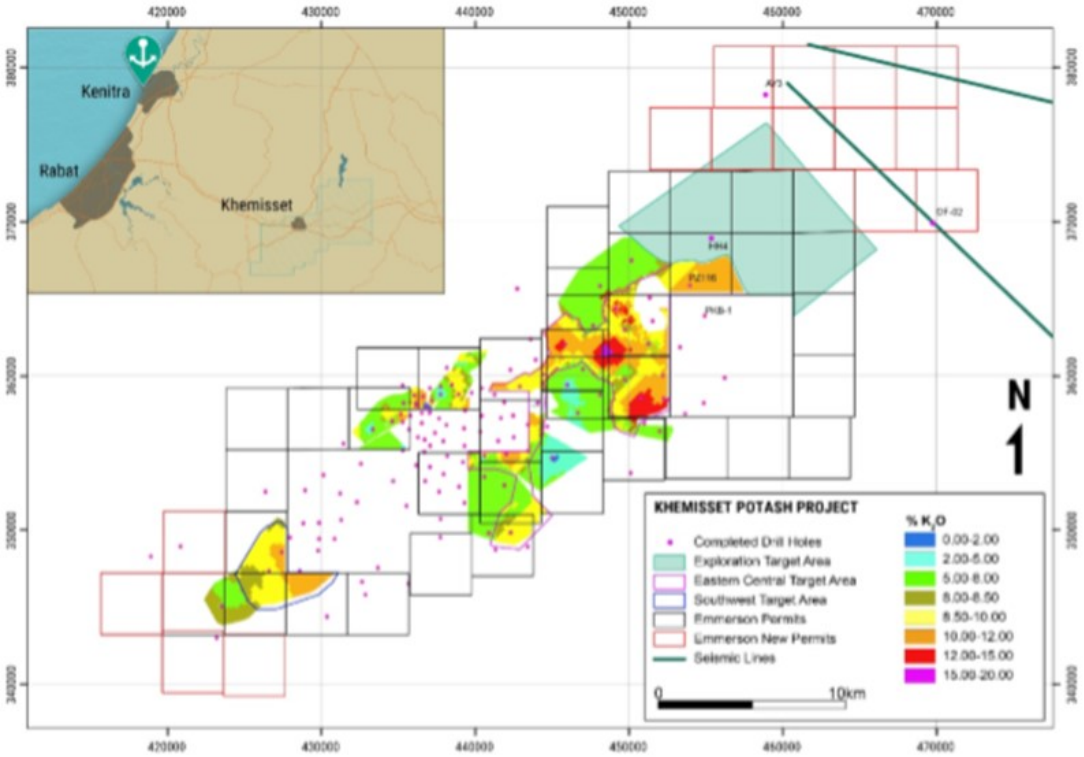
	Emmerson	**Highfield Resources**
JORC Mineral Resource/Reserves	Khemisset: 311.4Mt	Muga: 253Mt Sierra del Perdon: 82Mt
Grade	10.2% K2O	Muga: 11.5% K2O Sierra del Perdon: 10.6% K2O
Capital cost to production	US$406m	US$382m
Capital intensity	US$520.4/t	US$570/t
Infrastructure in place	✓	✓
Location	Morocco premium netbacks potash consumption growing rapidly	Spain premium netbacks potash consuming location
Distance from port	Kenitra Atlantique – 90km	Pasajes – 150km
Depth	Shallow from 450m	Shallow from 400m
No aquifer present	✓	✓

Khemisset compared to the Highfield's project. Source: Company

Highfield's project is slightly larger at 1.1Mtpa for 30 years with capex of US$382 million but is the lowest capital cost of all global potash development projects by a mile. Its capital intensity at US$570/t is less than half of the competition. These look like attributes that Khemisset could successfully emulate.

New Exploration Target

In August 2018, Emmerson was granted 15 additional research permits adjoining the Khemisset project. These new permits cover an area of 239km² taking the total project area to 815km². **Shortly afterwards, the team identified an exploration target covering an area of 87km², which ranges in size from 264Mt to 616Mt.**



Prospect	Seam thickness range (m)	Area (Ha)	Tonnage range (Mt)	Grade range (K20 %)
Exploration Target	1.5 – 3.5	8,675	264 - 616	5.0 – 14.0

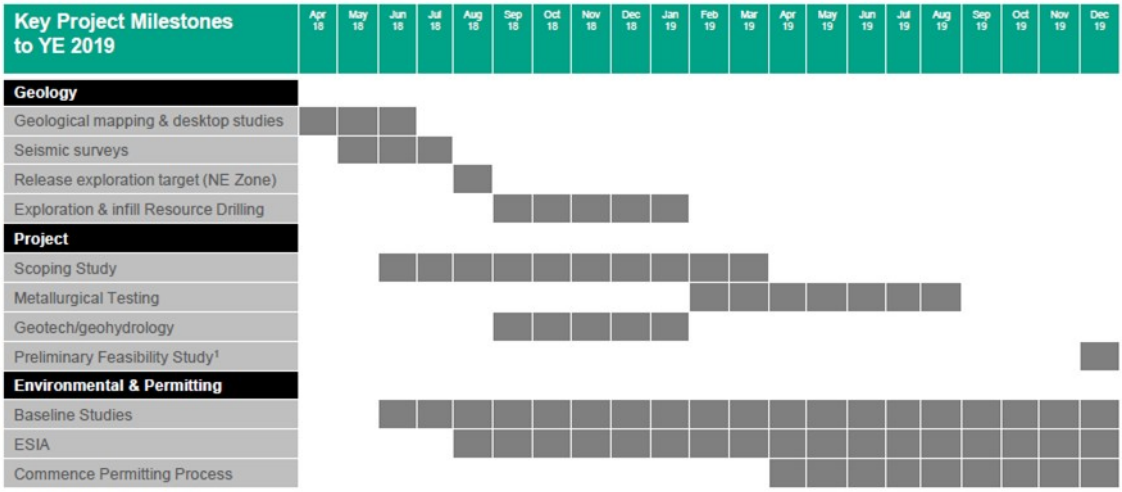
Exploration target at Khemisset. Source: Company

At the upper end of this scale, this exploration target could more than double the current JORC-compliant Inferred Mineral Resource. The plan is to test this exploration target in H2 2019.

Strategy for growth

Khemisset is a development stage project where there is a well-planned strategy which could add substantial value. The Scoping Study outlined a project with very robust economics. It should be pointed out there is relatively low technical risk here as both the underground mining method and the processing method are well-understood.

Following the completion of the Scoping Study well ahead of the expected delivery in Q1 2019, the next stage on the path is expected to lead to a Pre-Feasibility Study (PFS) and Bankable Feasibility Study (BFS) which in total is most likely to be a 18-24 month process. The company looks set on going into the PFS in early 2019. Such a timescale suggests that the mining decision could be taken to allow production potentially to begin as early as 2022. The Scoping Study demonstrated the technical viability, showing that from a technical standpoint the project stacks up plus a clear determination of the value of the project.



Khemisset Project indicative schedule. Source: Company

The drilling programme began in November 2018 and has been designed to move JORC-compliant resources from the Inferred category to the Indicated and Measured categories. In all, a total of 10-12 holes are planned to be drilled for a total of approximately 10,000 metres. This drilling program has been designed to confirm historical data and allow increased confidence to be gained in the resource, as well as providing core samples to use in bankable metallurgical testing which is likely to be carried out in early 2019.

If the results from these metallurgical tests are good, it could mean that the company skips the Pre-Feasibility Study and goes straight onto a Bankable Feasibility Study thus accelerating the project. The key is to gain a good idea about the flow sheet for the processing plant. The proposed comprehensive metallurgical tests will allow the testing of the proposed flow sheet from end to end. There are basically two likely processing routes, which are convention flotation or crystalisation. Conventional flotation has low capex and low opex but, generally, lower recoveries. Crystalisation works on the basis that salt disperses well in water and then the conditions are altered to allow the minerals to crystalise out of solution preferentially, which has a good recovery, but with higher capex and opex. The likelihood is that Emmerson will use a combination of both processing methods to address the areas of risk in the ore at Khemisset.

Management is increasingly pushing its indicative schedule and following the early completion of the Scoping Study, the PFS/BFS could actually start in early 2019, even after

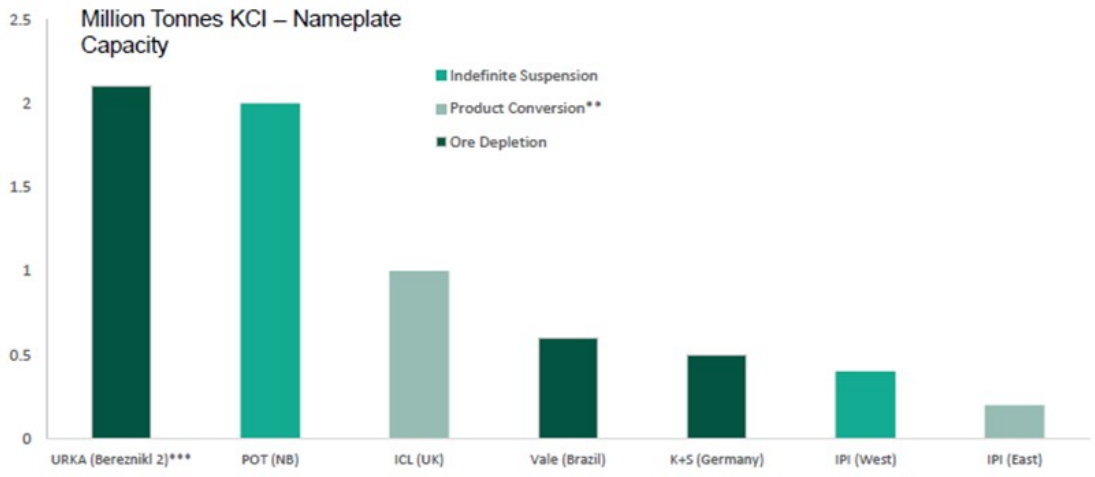
allowing for a three-month tender and appointment process. Traditionally, the big cost in the PFS is the expense necessary to drill the orebody to the required density to define resources and reserves.

At Khemisset that drilling work will already have been completed as by this stage there will have been a total of around 146 holes, equating to more than 90,000 metres of drilling. It has to be pointed out that Highfield had arranged committed BFS project finance debt with just 36 drill holes on a similar sized project. If the company was able to leapfrog the PFS and move straight onto the BFS, allowing 12 months for this study to be completed, this would suggest the BFS would be finalised in mid-2020. At that stage mobilisation at the mine site could begin, with production commencing in 2022.

There looks to be a good flow of news developing to us and which should increasingly bring Emmerson to the attention of investors. The results of exploration and infill drilling will provide near term value drivers together with the on-going environmental and permitting studies. These are to be followed in quite short order by further value adding milestones being passed and now following the completion of the Scoping Study, most notably there will be the results of metallurgical testing and the PFS/BFS.

The Scoping Study also highlighted the key risks that will need to be addressed in the PFS/BFS. Truth is that the Scoping Study was very detailed and was much more advanced than required which means that the workload for the PFS has been lessened. Whilst the PFS is underway in early 2019, it is likely that the company will be able to announce a number of strategic alliances with local port operators as well as gas and electricity suppliers, along with signing up offtake partners.

Overall in the PFS and the BFS, we would expect to see lower operating costs. The Scoping Study used 30% contingency (whereas 15-20% seems to be most commonly used by others at this stage) because the team wanted to thoroughly stress test the numbers and make sure that the economics of the Khemisset were robust enough even at low potash prices. The further studies moving ahead will serve to revise all the various input costs and this process of refining the numbers is most likely to make the project look better.



Announced potash mine closures (2016 – 2020). Source Company

It is important to note that the development of Khemisset is being played out against a background of forecast rising demand for MOP, while at the same time potash supply is becoming tighter as around 7Mt of capacity is expected to be closed by 2020. The spotlight seems to be increasing focused on global mega trends and the need to feed the world's rapidly growing population. As the cheapest source of potassium, it is not surprising that MOP is experiencing a consistent increase in demand annually. MOP prices are enjoying a resurgence but are still some way off previous levels. It does look as though Emmerson could be developing Khemisset with impressive timing, which will allow substantial value to be added consistently over the next few years.

Financials & current trading

Emmerson was set up as a shell company in March 2016, looking to making an acquisition in the resources sector. Results announced to date reflect administration costs ahead of announcing the RTO.

£'000	13 months to 31 March 2017	9 months to 31 December 2017
Revenue	-	-
Pre-tax profit (loss)	(200)	(207)
Net profit/(loss)	(200)	(207)

Emmerson's two-year trading history. Source: Company accounts

2017 results

Financial results for the nine months ended 31st December 2017, showed a pre-tax loss of £0.207 million purely due to administration costs. This equated to a loss per share of 0.43p.

2018 interim results

Results for the six months ended 30th June 2018, revealed a pre-tax loss of £1.441 million after £0.540 million of administration costs, £0.157 million of financing costs and £0.698 million which represented the share-based payment on the reverse acquisition. The loss per share came out at 0.44p.

Recent developments

In October 2018, Emmerson provided the market with news on both the cost estimates for the logistics solution and the electrical/gas supply. The first of these announcements revealed that there was a significant capital cost savings for the project which is all due to its proximity to excellent infrastructure. This announcement pointed out that the total budgeted cost for construction of the required access to transport the product to the port via the A2 toll road came in at around just US$1.3 million, including a 30% contingency. This figure represents something like a 99%+ or a US$130 million estimated capital cost saving compared to estimates for similar work package for average Canadian potash mine development.

The total budgeted cost for construction of connection to existing electrical infrastructure was US$5.7 million, including a 30% contingency. At the time the board commented that discussions with largest gas provider in Morocco confirmed the company's expectation that onsite gas (LPG) storage facility can be constructed at supplier's expense, with zero capex required by Emmerson.

November 2018 saw announcements concerning the commencement of drilling at Khemisset, port upgrade costs and the Scoping Study. The drilling programme, which is being undertaken by Drillon, consists of 10-12 holes with the twin objectives of not only upgrading the current JORC compliant Inferred resource to the higher confidence Indicated and Measured categories, but also providing samples to complete a comprehensive metallurgical test work programme. The drilling programme is expected to be ongoing for at least six months.

The preliminary design and cost estimates for the port upgrade were estimated to be US$7.5 million, which includes a 30% contingency. This announcement highlighted the fact that there is an estimate capital cost saving of approximately 95% for capex cost for port upgrade, or more than US$190 million, relative to the cost of a recently constructed potash handling facility in Canada.

These announcements all provided input for the Scoping Study which was announced on 20th November 2018.

Risks

Geological risks

There are a series of risk factors concerning the amount of understanding of the geology of the project areas, the mineralisation being targeted and its distribution.

Political risk

There are political risks involved in companies operating in Morocco. The mining industry is arguably the most susceptible sector of the market to political risk largely due to its importance to the host county's economy.

MOP pricing risks

MOP prices look to be highly cyclical and follow the metals and mining market. Changes in the MOP price could have a negative or positive impact on the valuation of the company's projects and revenue from the sales of metals. Over the past ten years, the price of MOP has been volatile, trading in the range of US$1,000 (2008/09 peak) to US$220 (2016 low FOB Vancouver) per tonne and currently trades around the US$360 CFR Brazil.

Exchange rate risks

Movements in the value of currencies will have an effect on the company's accounts from the translation of sales of MOP internationally in US dollars and locally in Moroccan dirham, and costs in the local currency into sterling. Fluctuations in the value of these currencies against the pound may have an effect on the valuation that Emmerson is awarded by the UK stock market.

Future funds

The market for raising funds for small cap companies may have improved from the worse conditions two years ago, however the equity market does continue to be difficult, especially for resources companies. Some recent fund raisings in the resources sector have seen share prices being undermined by incoming investors demanding substantial discounts to provide the necessary capital.

Board of Directors

Mark Connolly – Chairman

Mark is an internationally experienced financial and commercial executive with thirty years' experience in the financing and development of mining projects. He has worked with a number of multinational companies and across multiple jurisdictions including Africa, Europe, Australia and the Americas. Most recently he served as MD and CEO of Papillon Resources Limited that was sold in 2014 for nearly US$600 million.

Hayden Locke – Executive Director & CEO

Hayden is an experienced mining executive with 15 years' experience in mining, private equity and investment banking. Most recently he was Head of Corporate and Technical Services (Geology, Mining and Processing) at ASX listed potash developer Highfield Resources. Prior to this, Hayden was Head of Corporate for ASX listed Papillon Resources which was sold to B2Gold in 2014. Hayden studied engineering, commerce and geology.

Dr Robert Wrixon - Executive Director

Robert led Moroccan Salts Limited since its inception in 2013. Rob has 18 years' commercial experience in mining including five years with Xstrata in various strategy roles, and as MD and CEO of ASX listed Manhattan Corporation Limited and Haranga Resources Limited. He is a Director and founding partner of Starboard Global, a natural resource Private Equity group based in Hong Kong and holds a PhD in Mineral Engineering from the University of California, Berkeley.

Edward McDermott - Non-Executive Director

Edward is a former investment banker with 15 years' experience in the management and financing of small companies. Currently a Non-Executive Director of AIM listed companies Fishing Republic Plc and FastForward Innovations Ltd. He has previously served as a Director of AIM listed Stellar Resources Plc and Noricum Gold Ltd. He is part of the corporate finance team at Optiva Securities Limited, which was formerly the company's corporate broker.

Management

Phil Clegett – Head of Corporate Development

Phil is a qualified accountant with 10 years' experience in mining and investment banking. Most recently, he was the Manager of Corporate Strategy at ASX-listed potash developer Highfield Resources.

Mohamed Ouabid – Project Geologist

Mohamed is a geologist and a Moroccan national with over 15 years' experience in a variety of commodities including potash. He previously worked for ASX-listed Kasbah Resources as well as a number of Moroccan mining entities including MANAGEM.

Enrique Sanz PhD – Consultant Geologist

Enrique is a geologist with 20 years' experience in industrial minerals, primarily evaporite minerals. He was formerly Project Geologist for worldwide exploration for Rio Tinto. Enrique has extensive experience in the Khemisset Basin and other Triassic-Liassic salt basins in Morocco.

Said Hamdioui – Advisor

Said is a Moroccan national and PhD electrical engineer and is Chair Professor at Delft University of Technology in the Netherlands. He has been involved with the Khemisset Project since 2014, focusing on local stakeholder engagement and management.

Forecasts

We initiate coverage of Emmerson with forecasts for the financial years ending 31st December 2018 and 2019. This covers the period when the Scoping Study for the Khemisset project was completed, and work begins on the PFS/BFS.

For 2018 we expect there to be exploration and evaluation expenses of £1.65 million, which is based on the cost of drilling 10-12 additional holes, along with a number of elements of the Scoping Study and £400,000 of administration costs. This is expected to result in a pre-tax loss of £2.0 million and a loss per share of 0.53p.

For 2019 we estimate that exploration and evaluation expenses will increase to £1.95 million due to the cost of completing the Scoping Study, the metallurgical test work and commencement of the PFS/BFS, with slightly higher administration costs. This is forecast to lead to a pre-tax loss of £2.40 million. The loss per share is expected to fall to 0.38p per share, due an increased number of shares which we see resulting from an anticipated placing in Q3 2019 to ensure that the PFS/BFS is fully funded.

Year End 31 December (£'000s)	**FY2017'a**	**FY 2017²a**	**FY 2018e**	**FY 2019e**
Administration fees and other expenses	(200)	(207)	(400)	(500)
Exploration & evaluation expenditure	-	-	(1,650)	(1,950)
Operating loss	(200)	(207)	(2,050)	(2,450)
Finance revenue	-	-	50	50
Finance expense	-	-	-	-
Loss before tax	(200)	(207)	(2,000)	(2,400)
Income tax	-	-	-	-
Other comprehensive (loss)/income	-	-	-	-
(Loss)/gain on exchange	-	-	-	-
Loss for the year and total comprehensive loss for the year	(200)	(207)	(2,000)	(2,400)
Basic and diluted loss per share (p)	(1.21)	(0.43)	(0.53)	(0.38)
Weighted average number of shares	16,505,162	48,183,344	380,701,970	635,721,426
Total shares plus options, performance shares and performance rights	49,233,343	49,233,343	680,020,717	730,020,717

' 13 months ended 31 March 2017
² 9 months ended 31 December 2017

Source: Company/Align Research

Valuation

Following the announcement of the Scoping Study, we have revised our financial model. The Khemisset Potash Project is at the developmental stage, but it can already be seen that this enormous basin could contain billions of tonnes of potassium in place. Of this total, 500 – 900Mt may be economic, with 300Mt being mineable, plus a 600Mt exploration target. We are seeking to place a valuation on the project ahead of the latest round of drilling and the Scoping Study being completed, which will give us an opportunity to amend our analysis. We have chosen to adopt a fairly conservative approach which is based on a 50% extraction ratio of the current JORC-complaint Inferred Resource.

Our financial model covered the currently forecasted twenty years mine life and is based largely on information contained in the Scoping Study backed up with data from the CPR, presentations, announcements and discussions with management.

Timing – We assume that production will commence in 2022, with the ramp up to full production being achieved by the end of the first year of production in 2023.

MOP price - We have assumed that production is sold to the domestic market in Morocco and also exported to NW Europe and Brazil in equal proportions. The average price received in these markets was assumed to flat price per tonne of MOP of US$360 CFR which was used in our analysis. The outlook for MOP is good and so we believe our flat price is likely to be on the cautious side.

Operating metrics – Run-of-mine (ROM) production is assumed to be 6Mtpa, with plant recovery of 83.6% providing total annual production of 800,000tpa for 20 year life of mine.

Operating costs – The operating costs used in our financial model were largely based on those outlined in the Scoping Study.

Operating Cost Item	US$/t ROM	US$/t MOP
Mining	5.5	42.1
Processing	7.2	55.1
Other site operating costs	0.7	5.0
Administration	0.4	3.2
Total cash cost to mine gate	**13.8**	**105.4**
Trucking to the Port of Mohammedia	1.3	10.0
Sustaining capital	4.2	32.2
All-in-Sustaining Cash Cost (FOB Mohamedia)	**19.3**	**147.6**
Freight to Brazil	2.5	15.0
All-in-Sustaining Cash Cost to Brazil	**21.8**	**162.6**

Summary of steady state operating costs from the Scoping Study. Source: Company

Capital expenditure – The capital expenditure costs used in our financial model were largely based on those outlined in the Scoping Study and are shown in the table overleaf.

We have assumed that the capex is funded by project finance on a similar basis to what Highfield Resources organised for its potash project. **That was 60% leverage, so 60% debt/40% equity with below 5% for all costs including a 2% arrangement fee. Interest rates have increased since then and so we have used a 6% figure over the current life of the project.**

Capital Cost Item	US$ million
Mining	123.0
Processing plant	138.0
Surface infrastructure	40.2
Total	301.2
EPCM	14.3
Contingency (30%)	90.4
Total Pre-Production Capital Cost	**405.9**
Capital intensity (US$/tonne product)	520.4

Summary of capital costs from the Scoping Study. Source: Company

Royalty and taxes - Morocco has a favourable fiscal regime, with nominal royalties of less than 0.1%. The country has a 5-year tax holiday for new mining projects and a 17.5% corporate tax rate on exported product 50% as had been assumed in the DCF model in the Scoping Study.

We have ensured that our financial model was fairly conservative. Based on the above-mentioned assumptions a Net Present Value for the project was determined at discount rates of 10% and 12%. The DCF valuations that we have determined are seen to be lower than those that the company determined using the technical outputs of the Scoping Study, this is due to us adopting and more conservative approach and incorporating the funding of the capital expenditure in our analysis. **In order remain conservative, we selected to use the NPV(12) figure of US$453.33 million (£351.42 million).**

Discount rate	10%	12%
NPV US$ million	582.01	453.33
NPV £ million	451.17	351.42

Net Present Value for Khemisset Potash Project. Source: Align Research

At the current stage of development following the completion of the Scoping Study, ahead of the PFS/BFS, we have chosen to further de-risk the valuation to derive a figure which we believe is highly conservative and credible.

Using a 12% discount rate already de-risks the valuation but the project has been further de-risked to the tune of 75%, by just taking 25% of this NPV(12) valuation or £87.86 million through to our SOTP calculation.

A peer comparison with Highfield Resources makes for interesting reading. Highfield's Muga, Vipasca, Pintano, Izaga and Sierra del Perdón potash projects are located in the Ebro potash producing basin in Northern Spain, covering a project area of more than 550km².

	Highfield Resources (ASX:HFR)	Emmerson (LSE:EML)
Share price	A$0.685	3.5p
Market capitalisation £m	128.9	21.0
Enterprise value £m	94.5	17.2

Peer comparisons. Source: Align Research

Highfield completed a Definitive Feasibility Study for its flagship Muga project in March 2015, which was optimised in November 2015 to enhance operational efficiencies, sales and marketing activities and the life of mine. The mine design optimisation work at Muga has been continuing and is leading to a revised capex estimate with the permitting process for the mine expected to be concluded in 2018. The construction timeline and key milestones for Muga suggest that this project, provided the permit is granted this year, could be in production by the end of 2020, which is probably that company's internal goal.

Highfield is obviously at a more advanced stage of development than Emmerson. However, Emmerson has a big benefit in not having to undertake the drilling for feasibility studies, as that work has already been undertaken. This means that the company can accelerate the timeline and in the whole scheme of things will only be marginally behind Highfield. The read across from Highfield Resources does suggest that our valuation for Khemisset is reasonable based the current valuation awarded to HFR by the equity market.

The total valuation for the company came out at £91.66 million, which equates to 14.64p per share based on the current number of shares in issue (626,132,385) and 13.48p on a fully diluted basis (680,020,717).

Sum-of-the-parts valuation

	Valuation £ million
Khemisset (risked)	87.86
Cash	3.80
Debt	-
Total	**91.66**
Per share (626,132,385)	**14.64p**
On a fully diluted basis (680,020,717)	**13.48p**

Source: Align Research

Conclusion

We believe that the Emmerson investment case is highly compelling. Not only has the Khemisset Potash Project the potential to be a low capex operation, but even based on current lacklustre potash prices, the project could receive impressive netbacks from sales both locally in Morocco and from exports to NW Europe and Brazil. It could be the best location in the world given not only the access to multiple world markets but also the local markets. It is a very robust project and can be strongly profitable even at the current potash price, which is a far better position than most of the industry.

Arguably, given Khemisset's strategic location and relatively low capex the project is expected to be very competitive compared its peers and developers. Khemisset can be profitable at US$240/t and highly profitable at US$360/t. By and large the majority of competitors need US$500/t and so at this sort of level of prices there is no incentive for competitors to get into production. Due to its favorable location (royalties and transport costs) Emmerson has something like a US$100/t advantage over the Canadian producers at a price of US$300/t, which represents an enormous benefit.

At the same time there is a strategic buyer for Emmerson, as mentioned earlier on. OCP has firm supplies of N and P to blend to create NPK fertilisers but does not have control over the K (potassium/potash) which it currently imports from Russia and the Dead Sea (Arab Potash in Jordan and Israel Chemicals). The more you look at this situation, the more obvious it becomes that the Khemisset Potash Project could be the missing piece in the jigsaw for OCP.

It will be interesting to see how this story plays out as management mastermind not just the adding of value at Khemisset but also using improved IR to get the message out. All this could be sufficient to propel the equity market valuation significantly higher as the company moves the project through the PFS/BFS stages. We look forward to being given the chance to revisit our valuation as the many of the uncertainties become better understood.

There is no doubting that Emmerson has a large JORC-compliant resource at Khemisset which means that already the exploration risk has been mitigated. There is tremendous potential for the development of a low capex, high margin project to be developed at the same time as the potash price seems to be moving higher. Management has a well-defined strategy to build a mid-tier multi-nutrient fertiliser company and Khemisset looks to represent a solid foundation from which to achieve this goal. **We have updated our coverage of Emmerson with a Conviction Buy stance and an increased target price of 13.48p.**

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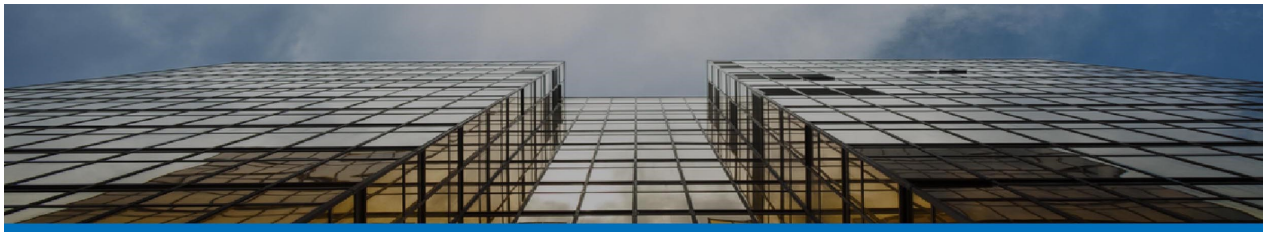

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