



Corcel

 20th January 2021

Blue-sky battery metals exploration & flexible grid solutions are a compelling play on the decarbonisation of the global economy

Corcel is the old Regency Mines, a company probably best known for its vast PNG nickel laterite project Mambare which, on its own, was once valued at £40 million. It has been a bit quiet over recent years as the company has gone through a substantial restructuring since the previous Chairman was rather unceremoniously voted out by shareholders. The decks have now been cleared ready for a period of substantial growth. With James Parsons now at the helm and the 12 month "legacy clean up" phase behind them, investors can look forwards to the creation of a highly relevant vehicle.

■ Positioned to really benefit from expected price hike in battery metals

The transition to a low carbon world has begun in earnest. Storage is needed for renewable energy to be a viable and stable source of energy, and hence the growing clamour for batteries and battery metals where a supply crunch is expected in the mid-2020s onwards with big structural price hikes.

■ Mambare poised to be a DSO nickel supplier to the large Chinese market

A Mining Lease could be awarded in 4-6 months allowing a DSO operation, funded by a JV partner. Together with Wowo Gap, another big PNG nickel project that is coming to Corcel, this could create some M&A action.

■ Big opportunities as the UK switches to flexible power generation

Corcel is investing in energy storage/renewable projects to provide critical services to the UK grid as it transitions from coal/nuclear generated power to renewables. The initial 100MW energy storage at Burwell, Cambridge is strongly backed by a major pipeline of projects that are under review.

■ Peer comparisons & industry metrics suggest an initial 141% upside

Our highly conservative valuation begins to show the potential. We initiate coverage of Corcel with a target price of 3.19p and **Conviction buy** stance.

Table: Financial overview. Source: Company accounts & Align Research

Year to end June	2019A	2020A	2021E	2022E
Revenue (£'000)	-	-	-	-
PTP (£'000)	(2,608)	(1,482)	(1,080)	(1,730)
EPS (p)	(26)	(2)	(0.72)	(0.59)

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

Target price – 3.19p



Key data

EPIC	CRCL
Share price	1.325p
52 week high/low	3.35p – 0.725p
Listing	AIM
Shares in issue	292m
Market Cap	£3.87m
Sector	Mining

12 month share price chart



Analyst details

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IMPORTANT: Corcel is a research client of Align Research. Align Research holds an interest in the shares of CRCL. For full disclaimer information please refer to the last page of this document.

Business overview

Corcel Operations

Corcel PLC - an established AIM-listed resources company with a growth strategy focused on exploring for battery metals and flexible grid solutions. The company is seeking to use energy generation and storage to support corporate overheads as well as finance the further development of its blue-sky battery metal mining opportunities.

- **Mambare Nickel/Cobalt Deposit** – The company has a 41% interest in this project in SE Papua New Guinea (PNG) which lies 90km NE of Port Moresby. Mambare is one of the world's largest laterite deposits and has seen a substantial amount of exploration effort. **Even so, just 3% of the main target has been drill tested, creating very substantial upside potential.** Currently, an application for a Mining Lease and Environment Permit are underway which will allow for a planned direct shipping ore (DSO) operation.

- **Wowo Gap Nickel/Cobalt Deposit** – Also in PNG and providing obvious synergies with Mambare, is the Wowo Gap deposit where a DSO operation has also been contemplated in the past. **Corcel has a A\$4.7 million senior debt position in ASX-listed Resource Mining Corporation, the 100% owner of the Wowo Gap Nickel Project, and it looks as though this project is likely to come the company's way.** The board sees the opportunity to create a significant regional nickel player with these two large scale projects.

- **Dempster Vanadium Project** – Corcel has a 50% interest in this vanadium project that is located in the Yukon in Canada. This project has more than 20km of potential strike where the target is vanadium black shale deposits which are similar to projects being developed in Nevada. **Recent exploration has been highly encouraging and looks like it will generate accessible drill targets for 2021.**

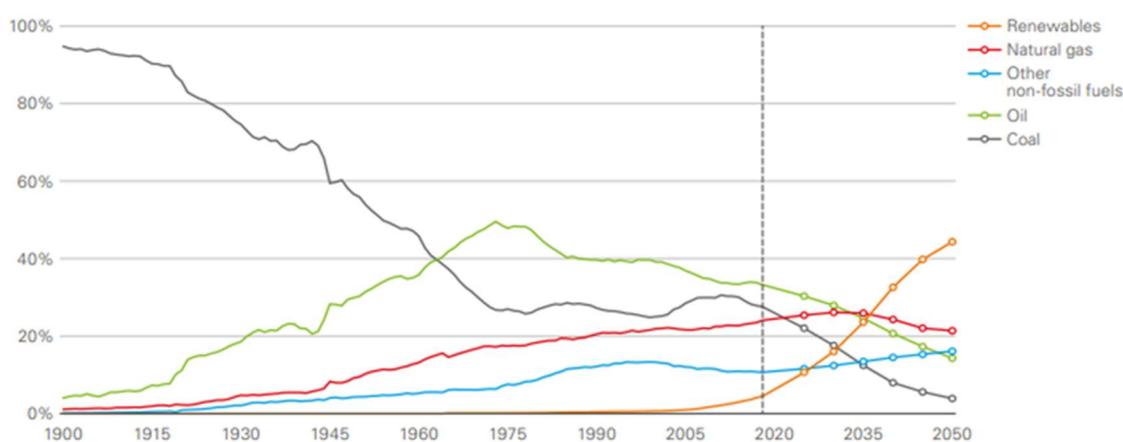
- **Flexible grid solutions (FGS)** – The company is a developer of UK based energy storage and flexible power generation projects. As the energy mix in the UK transitions from base load generation provided by coal and nuclear power generation to become largely reliant on renewables, there are significant opportunities. Such investments neatly fit in with the UK's Net Zero 2050 initiative which concerns greenhouse gas emissions and increasing pressure on the UK grid. **Corcel has a 100% interest in the Burwell Battery Storage and Solar Project - a 100MW (50MW of energy storage and 50MW of solar) project in Cambridgeshire which the team are rapidly moving to a shovel ready status.**



Burwell substation, location of the company's first FGS project. Source: Company

Climate change and energy transition

Climate change is considered to be the major environmental challenge facing the world. The Paris Agreement was designed to control and reduce greenhouse gas emissions and became the centre piece of the 21st Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC), which took place in Paris in December 2015. The event was a watershed moment in the way in which the world interacts with the earth's atmosphere. But it really represented just the first step in a long process designed to hold countries accountable for their emissions of any CO₂, methane, and other greenhouse gases. Today CO₂ emissions are rapidly becoming a significant liability for any emitter.



Low carbon transition – shares of primary energy in BP's rapid scenario.

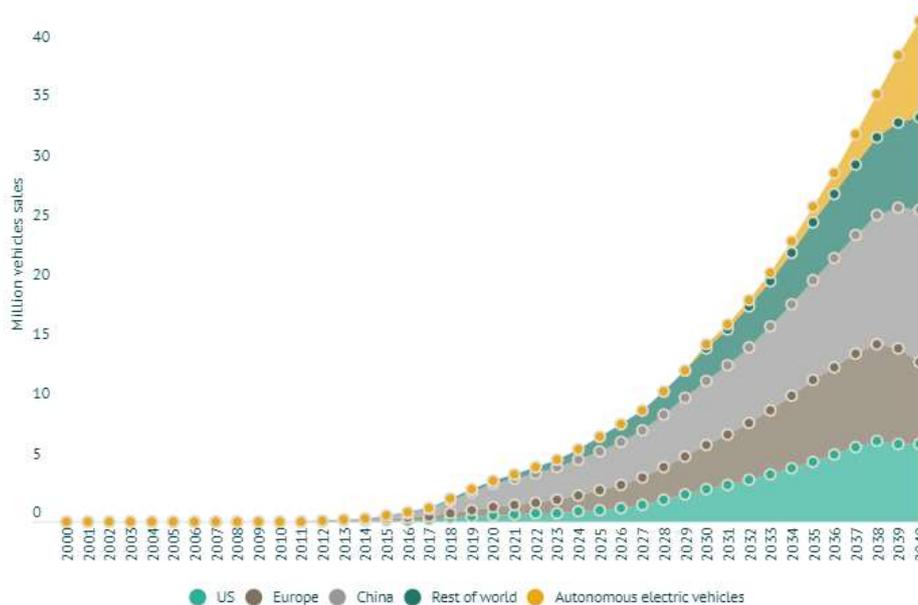
Source: BP Energy Outlook 2020

The transition to a low carbon world has begun in earnest. Renewable energy is set to play an increasingly important role in meeting the planet's energy needs. **The Energy Research & Consultancy group Wood Mackenzie reckon that by 2032, renewables will overtake conventional power sources, making them the world's fast-growing energy source.** The electrification of transport, homes and industry will require substantial investment into electricity generation for decades. Technological advances mean that the cost of developing renewables has been falling significantly, resulting in renewables like wind and solar becoming cheaper sources of electricity than those generated by fossil fuels in most parts of the world. But to be a viable and stable source of energy, they need storage.

The switch to renewables and changing demand habits is rapidly resulting in energy storage being seen as the next major frontier in electrification. Battery storage can effectively integrate high shares of solar and wind renewables in power systems around the world. Storage batteries offer a viable solution for storing intermittent energy supplies associated with renewable energy and so it is little surprise to see that the global energy storage market is growing fast. Wood Mac believes that in 2018 the market expanded to record levels with 147% year-on-year growth in GWh terms. In the next four years it expects to see growth in all directions as storage markets balloon. By 2024, the forecast is that the global market will increase to a sizeable 44GWh.

Battery metals

Mass electric vehicle (EV) adoption is now becoming a real possibility. Range, cost competitiveness and availability of charging stations might continue to be the biggest hurdles to EV adoption, but matters are changing rapidly. Governments around the world are ushering in regulations that favour EV use, led by the UK government which is now set to ban the sale of new petrol and diesel cars by 2030 in its plan to accelerate the switch to EVs.



Electric vehicle sales forecast to 2040. Source: Wood Mackenzie

In 2020, Tesla sold close on 500,000 EVs and the increase in EV demand seems to have re-ignited investors' interest in battery metals. Big changes to EV economics, along with technical innovations, are serving to disrupt the metals markets. **Critical battery metals include lithium, nickel, cobalt and vanadium & where there are now increasing concerns that a supply crunch from the mid-2020s onwards across all these four key metals will cause upward pressure on prices.** Below we investigate the three battery metals in which Corcel currently has an involvement.

Nickel

Nickel is seen as one of the critical metals for use in batteries as its inclusion facilitates the necessary energy density. Importantly, nickel also comes at a much lower relative cost than other effective battery metals. In the past, the use of batteries was confined to consumer electronic products, but the rapid rise in EVs, which require much larger batteries, has focused increasing attention on nickel. **Industry analysts forecast a significant increase in global nickel consumption for batteries in both the EV and energy storage markets.**

Moving forward, it does increasingly seem that the prospects for nickel will be driven by EVs which look set to remodel demand. Concerns about pollution and environmental benefits are creating a dramatic increase in the adoption of EVs globally. Rapidly rising demand has also been fuelled by green legislation being embraced by many countries including the UK, India, Germany, France, Norway and China. **Morgan Stanley believes that by 2050, four out of every five cars sold will be a battery-electric vehicle.** Already, recognition of nickel's importance as a battery metal in EVs and energy storage applications, along with increased demand in China, has led to a sharp positive price movement. Electric vehicle manufacturers are now acquiring upstream deposits and offtakes.

Cobalt

There is no doubt that cobalt is a vital component of lithium-ion batteries in EVs which allow the structural integrity of the battery cathodes to be maintained. Cobalt's role is to provide high energy density for batteries and give them a longer life span. In addition, the metal also improves the thermal stability of a battery, thus improving its safety. It is cobalt's high energy density that allows batteries to be energy dense and lightweight.

Cobalt is the key to battery stability and so far, no viable alternative exists. The metal is also used in smart phones and laptop batteries as well as EV where each vehicle requires 6-12kg of the material. In all, around 50% of cobalt produced around the world is used for rechargeable batteries. Cobalt is a by-product of copper and nickel mining, which serves to make it harder to obtain.

For all the above reasons, Cobalt is essential for EV manufacturers and recently Tesla agreed to buy 6,000tpa from Glencore. A report by researcher Benchmark Mineral Intelligence published in November 2020 forecast that the battery industry will need a further 100,000t of cobalt by 2025. **The researcher reckons that in 2020, 57% of the world's cobalt demand will come from the battery sector but see that rising to 72% over the next five years.**

Vanadium

Demand for vanadium looks as though it could rise substantially due to the advancement of vanadium redox flow battery (VRFB) technology. In a nutshell, VRFBs store energy in liquid vanadium electrolyte (which makes up to 80% of the VRFB) that never degrades. **This looks like being the ultimate green energy storage system as the hardware can be recycled whilst the vanadium can be used repeatedly.**

VRFBs are fast being heralded as the most sustainable and advanced technology available for large scale energy storage for electricity generated by solar and wind. These redox flow batteries can discharge and recharge 20,000 times with little performance loss. In fact, VRFBs do seem to offer the potential to give rise to a true revolution in power grids and brand-new applications based on sustainable energy storage. The real key to the full-scale commercialisation of this green energy storage technology looks as though it really hinges on having a sustainable supply of vanadium.

For these sorts of reasons, the World Bank in a 2019 report on battery metals reckoned that vanadium would be one of the top five minerals and expected that there will be a significant increase in demand by 2050 on the back of a forecast 500% increase in demand for battery metals. This is all to meet the mushrooming demand for clean energy technologies.

Background

Corcel plc is the old Regency Mines plc which was founded in 2004 and listed in London in 2005. On flotation, Regency had a number of option agreements over exploration licences applications in Australia. Soon after listing, Regency acquired the Mt Ida iron ore project, north-west of Kalgoorlie in Western Australia, which formed the basis of the AIM-quoted Red Rock Resources when it was spun-off in 2005.

In 2006, the company acquired a 75% interest in the 584km² nickel/cobalt exploration interest covering the Mambare Plateau in Papua New Guinea, which it subsequently increased to 100%. The decline in the nickel price in 2008 led to management to move the focus of its the exploration effort to nickel sulphide opportunities in Western Australia which had lower processing costs and substantially lower capex costs than nickel laterite projects. In 2009, the company acquired nickel sulphide tenements in Western Australia.

One of the keys to unlocking the value at Mambare has always been to have access to an economic beneficiation technology. The company's search led to a 50:50 joint venture being agreed in 2009 with Direct Nickel, a company which had the requisite nickel treatment technology. The joint venture company has a 100% interest in Mambare along with a licence to use DNI's technology. In 2012, the maiden JORC-compliant Mineral Resource Estimate for Mambare was announced together the successful operation of Direct Nickel's pilot plant.

Over the years, the company has been involved in Australian exploration interests in the Fraser Range, onshore oil interest in the UK near Gatwick Airport (Horse Hill Developments - HDDL), a US onshore West Virginia shallow-oil project, the Motzfeldt Multi-Element Project in Greenland and the Rosa metallurgical coal mine in Alabama, USA amongst others.

In 2017, the interests in the HDDL were sold, netting the company a clear profit of around £1.80 million. These funds were invested in the then newly launched Battery and Storage Technologies Division. Since then, Corcel acquired a 50% interest in the Dempster North American vanadium project in early 2019.

A strategic review in 2019 resulted in the company being refocused around mineral interests in nickel and vanadium alongside existing business in UK energy storage development. The interests in metallurgical coal and natural gas were held as non-core assets for future realisation.

In December 2019, the company's energy storage business seemed to come of age with the execution of an MOU with Ion Ventures with a view to partnering up with the company to identify commercially attractive projects, securing funding and moving to cash flow. Straight after this move there was news that James Parsons had joined the board and there was a 1-for-100 consolidation to make the stock more attractive to investors.

The name was changed in August 2020 to Corcel as part of a larger rebranding effort, which better reflected the company's strategy to develop its businesses across the battery metals exploration and flexible grid solutions space.

Operations

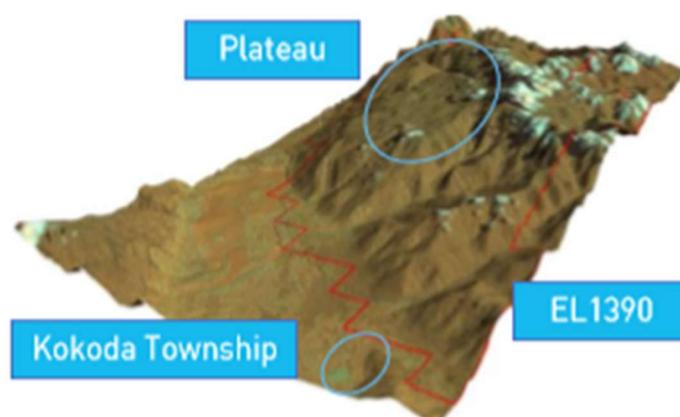
Corcel has a clear growth strategy focused on battery metals exploration and flexible grid solutions. The company is seeking to use energy generation and storage to support corporate overheads as well as finance the further development of its blue-sky battery metal mining opportunities.

Battery Metals Exploration

Corcel identifies, evaluates and develops mineral exploration projects in critical battery metals at a number of projects around the world. The forecast rapid increase in demand for batteries for EVs etc. is pointing towards a looming supply crunch for metals such as nickel, cobalt and vanadium. The company has worked hard to position itself in these key battery metals ahead of these expected structural price rises.

Mambare Nickel/Cobalt Project (41%)

The Mambare Plateau in Papua New Guinea represents one of the world's largest laterite nickel/cobalt deposits. The project is located 90 kilometres inland north-east of Port Moresby, near the village of Kokoda. This joint venture company has a 100% interest in licence EL1390 which covers 256km², with a nickel-cobalt laterite deposit in eastern PNG, adjacent to the Kokoda Trail. Mambare is 100% owned by Oro Nickel which is a joint venture between Corcel 41% and Battery Metals Pty Ltd 59%. The project is licenced to use Direct Nickel's revolutionary nickel laterite treatment process.



Mambare nickel laterite project. Source: Company

On the Mambare Plateau, the weathered ultramafic bedrock has formed significant layers of nickel and cobalt bearing lateritic and saprolitic material which are overlain by volcanic ash up to six metres in thickness. Laterites are rich in iron and aluminium and are a rusty-red colour due to the high iron oxide content and are caused by tropical weathering. Saprolites are also chemically weathered rocks but form a lower zone and represent deep weathering of the bedrock surface.

Exploration

Mambare was explored in the 1960s with fairly good results. Between 1960-71, there were a total of five exploration phases conducted by different operators totalling 240 auger holes, 56 test pits and one costean (a small pit through the superficial deposits down to solid rock). In 1999, Anaconda Nickel Ltd carried out data compilation of the previous work over 158km² of Mambare plateau.

In 2006, Regency acquired a 75% interest on a 584km² exploration licence from a private entity for £45,000. Regency went on to commence the first phase drilling programme on 100 metre centres at the southern end of the licence area. A total of more than forty drill holes were completed by hydraulic auger drill and wacker drill.

The period 2008-09 saw Regency gain a 100% interest in Mambare and successfully conclude the first phase of the exploration and drilling programme, producing 4,000 metres of drill core from 335 drill holes. One of the keys to unlocking the value within Mambare has always been access to mineral processing technology which was both economical and provided decent levels of recovery. To achieve this, the company entered into a 50:50 joint venture agreement with Direct Nickel Pty Ltd (DNI).

The DNI process is designed to process nickel laterites and has been tested at a pilot plant stage in Perth. The process is sustainable and cost effective using nitric acid, with 95% being recycled. As well as having low operating costs, capital expenditure is also low by industry standards. The Mambare project is licensed to use DNI's revolutionary nickel laterite treatment process up to a production capacity of 40,000tpa.

The then joint venture partners were committed to the development Mambare as well as piloting and applying DNI's advanced nickel-cobalt extraction technology. In 2010-11, the second phase of the exploration and drilling programme began which comprised of 220 holes for a total of 4,000 metres. Also during this period, an exploration licence application was filed to explore the region for geothermal targets, in order to meet the potential power requirements of the project. The team believe that the combination of green geothermal energy and a world-class nickel laterite project coupled with DNI's technology could result in the potential project operating in the lowest quartile of world nickel production cash costs.

JORC-compliant resource

The extensive drilling programme allowed the joint venture partners to announce a JORC-compliant Indicated and Inferred Mineral Resource Estimate (MRE) in 2012 of 162.5Mt @ 0.94% nickel and 0.09% cobalt giving 1.53Mt of contained nickel at a 0.60% nickel cut-off grade, which was announced in April/May 2012. This included 47Mt @ 1.23% nickel at a 1% cut-off grade.

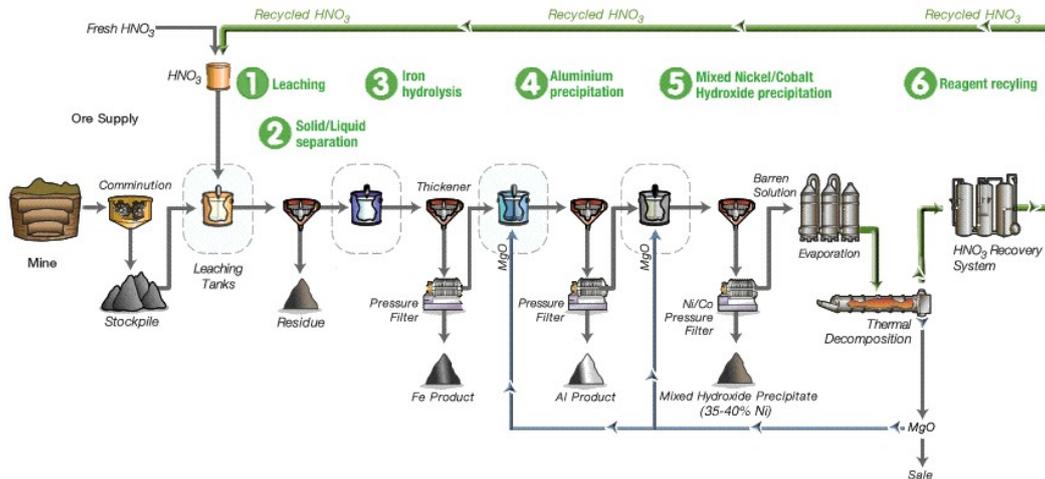
	Mt	Nickel %	Cobalt %
Indicated	3.3	1.00%	0.07%
Inferred	159.2	0.94%	0.09%
Total	162.5	0.94%	0.09%
Contained metal (Kt)		1,528	146.25

JORC-compliant MRE for Mambare Nickel/Cobalt Project June 2012. Source: Company

In all, there has been 477 core holes (average 16.3m depth) 297 auger holes, 45 wacker holes, 61 test pits and 1 costean drilled and dug over the years. In addition, there has been extensive ground mag, ground penetrating radar, airborne mag & radiometrics analysis, along with a satellite topography survey. **The resource at Mambare could be far, far larger than this MRE outline as it was calculated over the flank of the plateau which includes just 2km² of the 80km² of the plateau, 3% of the main target (which has been drilled tested).**

Direct Nickel production technology

In the past the company’s joint venture partner at Mambare was Direct Nickel. Now the joint venture partner is Battery Metals Pty Limited (BMA) which is the second largest shareholder in Direct Nickel and has a proven DNi Process™ for extracting valuable minerals from laterites. The DNi Process™ is protected by registered patents and has been demonstrated to have both low opex and capex. The key to the process is the use of nitric acid as the leaching agent.



Simplified schematic diagram of the Direct Nickel Process. Source: Direct Nickel

The DNi Process™ is an atmospheric hydrometallurgical route designed to treat all types of nickel laterite ores, in a single flow sheet to produce a number of final saleable products. Direct Nickel believes that the DNi Process™ is the only process available which can treat the whole limonite/saprolite profile (from 90% limonite to 100% saprolite) enabling maximum recovery. Limonite refers to a type of laterites (also known as oxide type) which are highly enriched in iron due to very strong leaching of magnesium and silica.



Direct Nickel’s pilot plant. Source: www.chemicals-technology.com & Direct Nickel

The technology seems to have some clear advantages over the alternative methods which largely rely on some type of high-pressure acid leach. These methods all seem to have high capital and operating costs which are due to high temperatures, high pressures and/or the large consumption of reagents. By comparison, DNI's technology uses commercially available components, with no applied pressure, mildly elevated temperatures, recycles 95% of the reagents and offers a far lower cost alternative.

Amended joint venture agreement

Progress has not been as swift as hoped due to a period of poor nickel prices. In April 2020, the Mambare partners amended the JV agreement to help drive forward future activities. As a result, Corcel now has a revised 41% interest project with BMA holding the remaining 59% in Oro Nickel that has a 100% interest in Mambare. Should a mining lease be awarded over the Mambare project, to be recommended by the relevant PNG government agency by November 2021, then BMA's interest will increase to 65% and Corcel's holding would drop to 35%. The revised agreement required Corcel to pay BMA US\$50,000 in cash along with issuing 4,909,610 new ordinary shares and 4,909,610 warrants (exercisable at 1.245p per share).

Direct Shipping Ore

Oro Nickel is currently progressing a plan to upgrade the existing exploration licence to a Mining Lease based on a direct shipping ore (DSO) operation. This DSO operation would be a simple operation which purely consists of excavating and exporting raw ore, so would not involve any processing plant, chemicals, pipeline or tailings.

The amended JV agreement provided a big incentive for BMA to progress the award of a Mining Lease for Mambare. In early 2020, Corcel reported that a 230km line cutting exercise had been completed and that a ground penetrating radar (GPR) exploration programme was underway that was targeting 200km of surveys. At that time, it was reported that the Environmental Permit application had been submitted, the Exploration Lease renewal process was underway and also that the Mining Lease application material was being finalised. All of this work was in preparation for the commencement of a DSO operation at Mambare which would allow Corcel to benefit from the strongly growing demand for battery metals.

In the end, the application to renew the EL1390 Exploration Licences, encompassing the project, was submitted to the PNG authorities in March 2019 and is expected to be renewed by June 2021. In July 2020, Corcel was able to announce the result of a Warden's Hearing for Mambare, which represents an important milestone in the process of applying for a mining licence to conduct a DSO operation over a portion of this vast nickel-cobalt project.

Wowo Gap Nickel/cobalt deposit

Wowo Gap is located at the south-eastern end of the Papuan Ultramafic Belt, a complex of peridotite, pyroxenite and gabbro that forms the prominent east-west trending Didana Range. The project hosts 125Mt @ 1.06% nickel and 0.07% cobalt Indicated Resource Estimate (JORC 2004) within the laterite profile based on drilling along the 12-kilometre strike length. The project lies roughly 160km east of Port Moresby.

Corcel has a A\$4.7 million senior debt position in Resource Mining Corporation (ASX-RMI) which owns a 100% interest in the Wowo Gap Nickel Project and is focused on resource development at the project's main tenement EL1165 which consists of 28 Sub Blocks totalling 94.4km².

At Wowo Gap, the nickel mineralisation is associated with a laterite weathering profile which has developed over the underlying ultramafic geology. This has served to create an enrichment of nickel, cobalt, iron, chromium, magnesium and magnesite. Here the complete lateritic profile has been preserved, with partial truncation associated with recent drainage systems. The depth of lateritic weathering varies according to rock type and the degree that the rocks have been broken down into fragments. The lateritic profile is typically 10-15m thick, and more than 20m in some places.

Over the years this project has attracted a lot of interest. Exploration at the project dates back to the 1950s and has consisted of multiple drilling programmes, including diamond drilling, wacker holes and ground penetrating radar activities.

In 2008, RMI completed a Scoping Study that indicated that the development of this project would cost US\$626 – 860 million. The study was undertaken by process and metallurgical engineering company Simulus whom chose the production of a mixed hydroxide precipitate via heap leaching as being the most favourable out of nine possible options. An independent valuation of the project in 2009 showed a preferred valuation of A\$168 million which was determined using peer comparisons with other similar lateritic nickel/cobalt projects, mainly in PNG, nearby Caledonia and Australia.

In 2010, an extensive drilling programme commenced to define the lateritic nickel resources at a drill hole spacing of 200m x 200m along the 12km strike of the project to determine an MRE (JORC 2004), although this has not been independently verified on behalf of Corcel and is not in accordance with JORC 2012. Following on from that in 2014, RMI announced a DSO Exploration Target of 40 - 60Mt at 1.6 -1.8% nickel.

	Mt	Nickel %	Cobalt %
Indicated	72	1.03%	0.07%
Inferred	53	1.09%	0.06%
Total	125	1.06%	0.07%
Contained metal (Kt)		1,325	83

Wowo Gap MRE (JORC 2004) dated 2011. Source: Company

In April 2020, Corcel acquired A\$1.7 million of debt in RMI for £178,096 cash and 13.3 million shares (at 5p per share) which represented a 62% discount to the face value of the debt). Plus, there was a 6-month option to acquire the balance of A\$3.05 million of debt for A\$640,000 cash and 23.7 million new ordinary shares in the company. In November 2020, this was followed by Corcel executing the option and acquiring the remaining outstanding A\$3.05 million debt. As a result of these moves, Chinese-owned Sinom Group became a 12.69% shareholder in Corcel.

Wowo Gap lies 150km SE of Mambare and is a similar deposit with a higher grade and there are clear synergies. Discussions are ongoing with RMI to explore potential PNG consolidation with the possibility of creating a significant regional nickel player. **In the end this deal could result in Corcel becoming a leading PNG exploration company with very significant scale in the region.**

Dempster Vanadium Project (Yukon, Canada)

The Dempster Vanadium Project is located in Yukon, Canada and lies some 65km north of the Eagle River Lodge. There is excellent infrastructure access with the whole project lying within easy access of the Dempster highway. In all, the project includes 196 claims over an area of 40.96km². Corcel has a 50% interest which was acquired in January 2019 for C\$450,000, in a deal which saw the company basically acquiring this interest for shares.

The project covers a mineralised trend which has over 20km of potential strike. The primary exploration target is vanadium in black shales which are termed Vanadium-rich Black Shale, or BSV deposits, which represent regional scale contact between two distinct sedimentary formations. In these types of deposits, the BSV horizon lies at the bottom of the upper formation and at the base of the BSV horizon is a discrete layer of metal-bearing, organic-rich black shale.

BSV deposits are suitable for low-cost mining/processing and at the moment similar sorts of plays are being developed in Nevada, US, by Cellcube, Prophecy and First Vanadium. Work in the past at Dempster has focused on the nickel potential and largely ignored the vanadium. A chance discovery led to geochemical sampling followed by the drilling of 7 diamond drill holes for 720.9m in 2006 which showed that then BSV horizon was broadly continuous within the property with minor offsets to vertical faults.

Hole no	From m	Interval¹	V₂O₅² %	Comments
DV-01	62.63 95.96	3.67 1.77	0.40 0.15	Missed NiMo target
DV-02	32.18	5.32	0.47	Short hole stopped short of target horizon
DV-03	77.73	12.42	0.07	
DV-04	-	-	-	Lost hole
DV05	66.30	4.20	0.26	
DV-06	79.79 114.56	1.25 4.38	0.54 0.22	
DV-07	33.56	4.19	0.53	

¹ all intersections open up and down hole so the V₂O₅ intervals are potentially wider than reported

² vanadium ppm converted to V₂O₅ by a factor of 1.7852

Dempster Vanadium Property – drill intersection reported by Southampton Ventures. Source: Company announcement (Mark Fekete and Marty Huber, 2020, Exploration Proposal 2020)

The work on the Dempster Vanadium project conducted to date, as outlined in a report by Breakaway Exploration Management Inc., has confirmed that the shales underlying the property contain significant vanadium over broad stratigraphic intervals. The best results include 0.39% V₂O₅ over 75.9m, 0.32% V₂O₅ over 38.2m and 0.39% V₂O₅ over 90.16m. These intersections are comparable to grades and thicknesses for similar deposits currently being explored both in Canada and the United States and do really demonstrate the potential to host an economic deposit of vanadium.

Region	Company	Prospect	Hole no	From m	Interval m	Weighted average V ₂ O ₅ %	Reference
NE Yukon	DVY196	Dempster	DV07-10	12.34	90.16	0.39	Fekete & Huber 2019
Nevada	First Vanadium	Carlin	RCC18-46	0.00	73.15	0.60	First Vanadium, 2019
Nevada	Prophecy	Gibellini	GIVC-5	2.13	23.17	0.32	Orbock, 2017
Nevada	Cell-Cube	Bisconi-McKay	BMK 05-02	7.01	98.15	0.53	Ullmer, 2016
Nevada	Victory	Iron Point	VM-26i	5.00	37.00	0.55	Victory. 2019
Northwest Territories	Vanadium North	Val	na	na	52.50	0.42	Regency, 2019

Dempster Vanadium Property – comparison with similar projects. Source: Company announcement (Mark Fekete and Marty Huber, 2020, Exploration Proposal 2020)

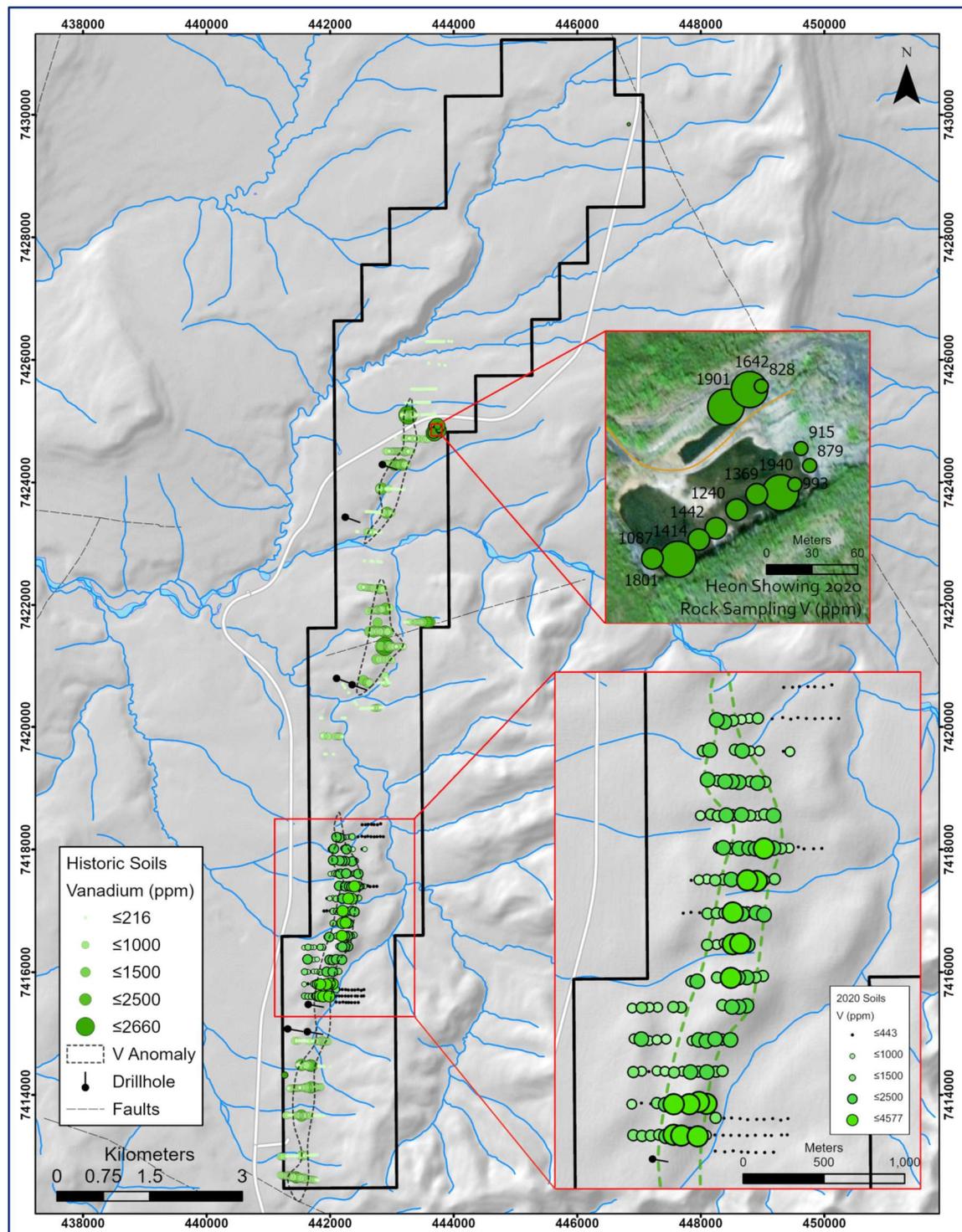
Recent exploration

The summer 2020 exploration programme was planned to increase the understanding of the geology at the site and included soil geochemical surveys to define drill targets for 2021. Some of the work on this project is planned to be undertaken in collaboration with a PhD candidate from McGill University which will seek information collected on metal enrichment, which is expected to improve the overall black shale geological model.

Delays at the labs meant that the results from the 2020 exploration programme were not announced until January 2021. In all, some 14 rock and 179 soil samples were collected during this work programme. **The rock samples yielded anomalous vanadium values in the 0.12 - 0.35% V₂O₅ range, with 13 out of the 14 also returning anomalous zinc and silver values.** Soil samples returned vanadium values up to 0.82% V₂O₅ with 18 samples equal or better than 0.40% V₂O₅. All this is shown in the map overleaf.

This latest rock sampling around the Héon indicated the presence and grade of the Canol Formation and has convincingly demonstrated that soil geochemistry is an effective tool to trace the vanadium bearing Canol black shales. It is noticeable that grades are higher than earlier reported drill core samples, which can be put down to the weathered rock being relatively metal-enriched. In addition, these latest results seem to show that Canol outcrops on surface further west than is shown on the government's geological maps.

These are excellent results, which indicated the presence and grade of the Canol Formation. Planning for the 2021 exploration programme is underway and it is expected that the team will have multiple accessible targets for near term drilling. Work will also involve extending the soil geochemistry and gaining a five-year operating licence for more advanced exploration, with the goal of targeting an initial NI 43-101 resource.



Soil and rock chip sampling results from the Dempster Vanadium Project. Source: Company

Flexible Grid Solutions

Corcel is also establishing itself as a developer of UK based energy storage and flexible power generation projects. There are impressive opportunities arising in providing flexible grid solutions (FGS) in the UK as the energy mix transitions from base load generation provided by coal and nuclear power generation to become largely reliant on renewables. The company is seeking to invest in projects and infrastructure required to provide critical services to the UK grid to flexible power generation and storage to smooth grid volatility and maintain system stability.

Such investments neatly fit in with the UK's Net Zero 2050 initiative which concerns greenhouse gas emissions and increasing pressure on the UK grid. Moving ahead, flexible energy production and storage capacity is vital to balance growing renewable power generation.

The board plans that such investments in renewables energy generation and energy storage projects will become a cash cow that will not only help to pay the company's overheads but also provide internally generated funds that can further finance and develop the blue-sky battery mining ambitions.

Strategic partnership

Corcel has a strategic partnership with ion Ventures Ltd, an investor in and also a developer of energy storage and flexibility assets. Ion's business model involves originating and developing energy storage projects as well as advising international energy developers. Following the financial close for individual projects, ion generates earnings through yield from its carried interest and management fees earned by having a continuing role as project manager and operator of assets. The ideal project is one with a good quick grid connection and a decent lease on the site.

With its strategy of focusing on opportunities in the transition to a low carbon world, the team at ion is seeking to develop a large asset base and provide solutions that maximise the returns. Nowadays, this company prefers taking equity stakes in projects rather than fees. In this way ion is seeking to establish a long stream of growing and reliable earnings stretching many years into the future. Basically, ion is acting as a technical consultant to Corcel and sharing its impressive project pipeline of energy storage and distributed energy projects in the UK with the company.

Burwell Battery Storage and Solar Project

Corcel's flagship FGS project is the 100%-owned Burwell Project, a 100MW (50MW of energy storage and 50MW of solar) project which is located outside of the town of Burwell in Cambridgeshire. The company has the core ingredients, such as the grid connection already in place and is finalising now the land lease and planning consent. The grid connection is a 100MW 132KkV connection available at the substation at Burwell and there are multiple expansion options including solar and storage.

The Burwell Energy Storage project is expected to begin operations in 2022, and intends to enter the capacity market in 2025, providing a fixed and guaranteed source of revenue over an initial 15-year period. This project is designed to be a virtual power platform with the aim of delivering 100% renewable energy through real-time connectivity between energy source, storage flexibility provided by batteries and demand response with an offtake from Limejump Ltd (a subsidiary of Shell New Energy Ventures). **Once constructed, the Burwell project will be a very sizeable part of the energy network in the Cambridge area and will generate significant cash flows for Corcel.**

In December 2020, investors learnt that Burwell's project economic review had been completed with positive results. This review was based on current revenue projections provided by Limejump along with current capital cost estimates which thoroughly demonstrated that the 50MW battery storage project at Burwell is highly robust from an economic standpoint. On the back of this favourable analysis, the project is expected to move to shovel ready status in early 2021 and then the focus will be on the financial close. The project is expected to be funded through a Special Purpose Vehicle (SPV) structure. At the same time, Corcel has acquired the remaining 50% interest in Weirs Drove Development Limited (WDD) and hence become the 100% owner of the Burwell Project for £90,000.

Corcel's FGS Pipeline

Already, the company has a pipeline of energy production and storage projects in development or under review for sanction that include gas peaker plants (natural gas burning power plants which only run when there is high demand for electricity), flexible energy storage, combined heat & power systems and solar projects.

Such energy storage projects can provide electricity potentially to something like thirty markets. Options including power arbitrage where the batteries are filled up at 6am when power is free and then some two and a half hours later the power is sold for £120 per MW when people are up and about and demand is higher.

It is more than likely that Burwell will provide a blueprint for further deals in the sector with the company having the ability to take available opportunities, with some going into electricity generation and others being monetised. With the target of developing 4-5 such FGS projects a year, it is clear that this rapidly growing division is set to create a growing stream of long-term reliable earnings which can be used to fuel the company's battery metal ambitions. Moving ahead, this means that at Corcel, investors will not have the normal concerns about small cap exploration plays with their regular fund-raising exercises that cause significant dilution and poisoned relationships with long term shareholders.

Strategy for growth

Corcel has been trading water for the last couple of years as the company has gone through a substantial restructuring since the last Chairman was voted out by shareholders. News flow has been a bit disappointing as restructuring does not really generate regular upbeat RNS announcements, as difficult decisions are made, good projects retained and flawed ones exited. However, the good news is that this process has been completed and the impairments seem to have all been taken on the chin. At the tail end of this process, as the decks had been substantially cleared for a period of sustained and solid growth, James Parsons arrived as the new Executive Chairman. So, investors can expect to see value being generated by key value inflexion points being triggered, as well as the prospect of M&A action to create a far larger FGS entity relatively quickly.

The company has been sitting on a stake in the Mambare Nickel Cobalt Project since time in memoriam. **In the period 2007 – 2011, the company under its old guise of Regency Mines drilled it out and established an initial resource which attracted a £40 million valuation.** Since then, nickel prices have waxed and waned but recently have moved up strongly and are now sitting close to the \$18,000/t level on the back of the burgeoning battery metals story. This fits in very well with Corcel's corporate strategy of picking up such blue-sky battery metals resources ahead of an expected structural price hikes in battery metals. Given the positive developments in the wider battery metals space it is high time that the stock market took a good look again at the large Mambare nickel/cobalt project. **This could well lead to the historic £40m valuation number being brought back into investors' awareness and focus.**

Despite Direct Nickel being subsumed by its debt holders, the Mambare project still has the rights to the DNI process. The board still believes that the DNI process may be an ideal processing route for lateritic nickel with an attraction that an initial plant could be put up for US\$10s – 100s million compared to more than US\$1.5 billion for a High-Pressure Acid Leach plant (HPAL). In more recent years there has been a growing interest in a relatively low-cost starter project here with a DSO operation shipping nickel ore to China and competing with the likes of Indonesia and the Philippines, which would provide the prospect of early cash flow. The potential for a larger DNI style plant to follow remains after the DSO operation is up and running successfully.

The big inflexion point to this happening is the granting of a Mining Lease which may well come to pass in the next 4-6 months. The Mining Lease is progressing well, but obviously COVID-19 has not helped speed this process. A successful Warden's Hearing has taken place, which saw the local community sign off on the Company's plans, but the JV partners are still waiting for the relevant Environmental Permits. It is much, much bigger news to be granted a 20-year Mining Lease than the normal 2-year Exploration Licence extension, as it will open the door to begin unlocking the value at Mambare for everyone to see and likely attract the interest of larger nickel entities. There is no shortage of supply here as the plateau has yet to be fully or even partially drilled out. For DSO 1% nickel looks ideal although the higher the grade the better. But 1% compares favourably with the nickel ore from the Philippines and Indonesia at 1-1.5%. At the same time there are clear synergies with Corcel's second nickel project at Wowo Gap and we should watch this space to see how the Company potentially integrates and co-develops the two nickel-cobalt assets.

The recent GPR work at Mambare was designed to determine the location for the DSO operation for the Mining Lease. This development is likely to require US\$25 – 30 million of capex and at that stage, Corcel would either be looking to bring in larger players for a JV or consider a complete disposal. Currently, the company owns 41% of the project, but given a perceived inability of BMA to fund the asset through to production, it would seem logical that the entire asset is vended into Corcel to allow meaningful development. **Chinese investor Sinom has been happy to accept Corcel's paper as demonstrated by the 2020 debt deal and has now emerged as a highly supportive 12% plus shareholder and such backing speaks volumes for being a potential source of both offtake agreements and future funding.**

There is an obvious plan in progress to explore synergies with or indeed perhaps acquire the Wowo Gap nickel-cobalt asset. Corcel could do an RTO but it is also possible that the RMI management will trade the asset in forgiveness of their fairly sizeable debt and hang onto the shell for another venture. Corcel does not technically own the asset at the time of writing, but after some time now appear just one step away. The degree to which Wowo Gap and Mambare are combined depends on a host of factors. **However, putting them together as a combined PNG project would make Corcel a big player in PNG and likely ease relations with the government.** There is no doubt that the synergies are pretty big here with the opportunity to cherry pick the best bits for DSO at each deposit, potentially exporting using the same logistical streams and using revenues from one to further develop the other. In the end Corcel looks like it will acquire this quite second large nickel cobalt play for a song, and indeed a fraction of what has been spent on the project to date; some £8m.

Dempster was drilled in the mid-2000s by a nickel explorer and the vanadium potential looked interesting, even though that was not the main target. It was a cheap and cheerful investment for Regency, but undoubtedly has the key blue-sky upside with the growing clamour for vanadium for use in redox flow batteries where there is no alternative to using vanadium. The summer 2020 exploration efforts look like they were successful in helping to design a drill programme to build an initial resource. The team did not go into the traditional area as they were looking for possible extensions of the orebody and so drill targeting is likely to be adjacent to the previously drilled areas. The great thing about BSV is that the processing should be relatively simple, which makes the deposit more likely to be economic and ultimately to enter production.

The first stab at FGS was the inherited Southport project where FGS spent significant time and efforts, but was unable to agree on commercial terms with the landowner and so ultimately walked away. Burwell is a completely different kettle of fish, a brownfield site on farmland where the lease is ready to execute and the team is quite advanced on the planning efforts. The company has moved swiftly to own a 100% interest so that they can now bring in partners for the 50MW of energy storage and 50MW of solar. At Burwell planning is expected in the spring followed by financial close and ultimately construction. Capex is planned to be funded using two SPVs, one for the energy storage site and another for the solar, which will be a low-risk type of financing with each coming in at around £20 million with a 50:50 debt equity split.

Solar projects used to be all the rage. Developers have been doing them for years across the UK and so nearly all the easy land has now been snapped up, leaving only more challenging project sites. FGS may do a tie up with solar people as such sites are obviously becoming increasingly rare and FGS appears to have the basics in order. The problem is that a 50MW solar site needs c.200+ acres, whilst you can get a 50MW battery storage project into a couple of acres at most. Batteries do look like the future, with the chance to buy energy on the cheap (when there is excess power around) to smooth out the highs and lows of energy markets. Peaker plants also have had a lot of interest and substantial investment over recent years, but batteries appear to be starting to steal their focus. Battery storage is such a hot sector, that at this stage, FGS will likely have the option to flip the Burwell project or co-develop it as it sees fit. First revenue from this project after construction could come in the middle of 2022, but first value realisation from a team with consummate deal making expertise could be much sooner than that.

As a listed company, Corcel sees its niche in FSG being in the middle ground sitting between smaller often cash-poor developers and larger funds and institutions with large minimum ticket sizes. Smaller developers are guys running around hustling and selling dreams but who can only take projects so far as they largely lack access to capital. Then there are the institutional players such as pension funds for whom these projects are too small and who wish to write checks starting in the £100m+ range. All of this creates a dynamic niche for Corcel and FGS where they believe 4-5 projects per year could be developed. In addition to single projects, the team is seeking bolt on acquisitions which could dramatically increase the scale of the FSG division quite rapidly. As an example, over recent years a lot of EIS money has gone into peaker plants and solar projects, and much of this is now looking for an exit and the FGS management team ought to be able to pick and choose from such opportunities. Going forward, the FSG pipeline will be looked after quietly out of sight of investors and disclosures will be made when projects have been diligenced and largely locked-in. Battery metals exploration and FSG projects look as though they will provide a series of key inflexion points over the coming 18 months, which should see Corcel comfortably re-rated.

Financials & current trading

Recent years have seen the company expanding its interest in mineral exploration projects for battery metals as well as adopting a twin strategy of UK based energy generation and storage. These projects all continue to be at a pre-revenue stage, with losses incurred from historic exploration write-offs and administrative expenses.

Y/E 30 June £'000s	2016A	2017A	2018A	2019A	2020A
Revenue	25	113	-	-	-
Pre-tax profit/loss	(1,966)	(534)	(1,550)	(2,608)	(1,482)
Net profit/loss	(1,966)	(534)	(1,550)	(2,608)	(1,482)

Corcel five-year trading history. Source: Company accounts

2020 results

The twelve months ended 30th June 2020 was a period which saw a transformation of the company, with the overhaul of its corporate strategy, fresh capital structure and a new look board following a December 2019 relaunch. Key expenditure included exploration expenses of £0.205 million (reflecting increased activity at Mambare), net finance costs of £0.247 million and a slightly higher administrative cost of £0.838 million. Corcel incurred a loss of £1.482 million. Basic and diluted earnings per share came out at 2p.

Recent developments

In December 2020, Corcel was able to announce an update to its Burwell battery storage and solar project which included news of the completion of its project economic review and the buyout of the other 50% shareholders. Following a positive project economic review, the company has sanctioned the project to proceed to shovel ready status and thereafter financial close. The news was that the company was also securing the 100MW 132kV UK Power Networks grid connection offer by paying the associated deposit. At the same time, it was announced that Corcel was to buy out the remaining 50% interest in Weirs Drove Development Limited and hence become the 100% owner of the Burwell Project for £90,000 of cash and shares, most of which was not payable until financial close.

January 2021 saw the company announce results from the 2020 exploration programme at the Dempster Vanadium Project. In all some 14 rock and 179 soil samples were collected during this work programme. The rock samples yielded anomalous vanadium values in the 0.12 - 0.35% V₂O₅ range, with the most of them returning anomalous zinc and silver values. Soil samples returned vanadium values up to 0.82% V₂O₅, with 18 samples equal or better than 0.40% V₂O₅. These were seen to be good results which indicated the presence and grade of the Canol Formation. Planning for the 2021 exploration programme is underway and it is expected that the team will have multiple accessible targets for near-term drilling.

Risks

Geological risks

There are a series of technical risk factors concerning the amount of understanding of the geology of the project areas, the mineralisation being targeted and the distribution and magnitude of the indicators that have been identified in exploration work.

Political risk

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

Commodity price risks

Metal and electricity prices are highly cyclical and changes in these prices could have a negative or positive impact on the valuation of the company's projects and sales revenue.

Exchange rate risks

Movements in the value of currencies will have an effect on the company's accounts on translation from US dollars, Canadian dollars and PNG Kina into sterling. Fluctuations in the value of such currencies against the pound may have an effect on the valuation Corcel is awarded by the UK stock market.

Future funds

The market for raising funds for small cap companies look to have had improved from the worse conditions a couple of years ago. However, the global spread of the COVID-19 infection has meant that equity markets have become extremely difficult. Even ahead of the arrival of this pandemic, some fund raisings in the small cap mining and energy sector have seen share prices being undermined by incoming investors demanding substantial discounts to provide the necessary capital.

Board of Directors

James Parsons – Executive Chairman

James has more than 20 years' experience in the fields of strategy, management, finance and corporate development in the energy industry across Europe, South America and Central America.

He was formerly the Chief Executive Officer at Sound Energy plc since 2012. James started his career with the Royal Dutch Shell group in 1994 and spent 12 years with Shell working in Brazil, the Dominican Republic, Scandinavia, the Netherlands and London.

Leading up to 2006 (when he left Shell to join Inter Pipeline Fund), James held various positions in Shell's exploration and production business, latterly as Vice President Finance – New Business. He is a qualified accountant and has a BA Honours in Business Economics.

James is also the Non-Executive Chairman of Echo Energy plc, Non-Executive Director at Coro Energy plc and Executive Chairman at Ascent Resources plc.

Scott Kaintz – CEO

Scott joined Corcel Plc in 2011 in a Corporate Finance role before becoming an Executive Director. Previously he worked in corporate finance and investment funds in London, focusing on capital raising efforts and debt equity investments.

Originally, he was US Air Force Officer and has a degree in Russian and an MBA from London Business School and Columbia Business School.

Ewen Ainsworth – Non-Executive Director

Ian has over 30 years' experience in variety of senior and board-level roles in the natural resource sector, most recently as Finance Director for Gulf Keystone Petroleum Limited. He is a Non-Executive at Ascent Resources Plc, CEO of Discovery Energy Limited which is an advisory consultancy and investment company. Ian is a qualified chartered management accountant with degree in Economics and Geography.

Forecasts

We initiate coverage of Corcel with forecasts for the financial years ending 30th June 2021 and 2022. In 2021, after £0.2 million of exploration expenses, £0.8 million of administration expenses and £0.1 million of finance costs, the pre-tax loss is forecast to be £1.08 million. After the restructuring of the past years and asset write downs, no impairments are expected for a while. With no tax paid, the loss for the year is forecast at £1.08 million, with a loss attributable to equity holders of the parent of £1.075 million and a loss per share of 0.72p.

In 2022, it is thought that the Mambare Nickel Cobalt Project could be awarded a Mining Lease which would allow the planning of the DSO to begin in earnest. We should also see the construction of the Burwell battery storage project where first revenues are expected to come following the year-end. Exploration expenses are anticipated to increase to £0.5 million as a result of drilling at the Dempster Vanadium Project and some initial work on Wowo Gap. We expect £1.0 million of administration expenses from an expanded operation plus £0.25 million of finance costs. The pre-tax loss is forecast to total £1.73 million. With no tax paid, a loss per share of 0.59p is expected.

Year End 30 June (£'000s)	FY 2019a	FY 2020a	FY 2021e	FY 2022e
Gain on sale of financial instruments as FVTPL	38	-	-	-
Exploration expenses	(69)	(205)	(200)	(500)
Impairment of investments in joint ventures	(1,503)	-	-	-
Impairment of goodwill	-	(106)	-	-
Impairment of right-to-use asset	-	(41)	-	-
Impairment of loans and receivables	(26)	(37)	-	-
Administration expenses	(653)	(838)	(800)	(1,000)
Foreign currency loss	(43)	(26)	-	-
Other income	26	21	20	20
Finance costs, net	(377)	(247)	(100)	(250)
Share of loss of associates and joint ventures	(1)	(3)	-	-
Loss for the year before income tax	(2,608)	(1,482)	(1,080)	(1,730)
Taxation	-	-	-	-
Loss for the year	(2,608)	(1,482)	(1,080)	(1,730)
Loss attributable to:				
Equity holders of the Parent	(2,587)	(1,477)	(1,075)	(1,720)
Non-controlling interest	(21)	(5)	(5)	(10)
	(2,608)	(1,482)	(1,080)	(1,730)
Earnings per share attributable to owners of the Parent:				
Basic (p)	(26)	(2)	(0.72)	(0.59)
Weighted average number	9,767,280	75,338,810	148,283,308	291,621,614
Total shares plus options and warrants	22,064,613	250,749,674	348,460,693	348,460,693

Source: Company/Align Research

Valuation

Our intention is to generate a valuation which makes sense in today's equity market in order to determine a meaningful and robust target price for the stock. Corcel seems to have missed out on the uplift in valuations enjoyed by **base and precious metal resources plays in 2020 and today sits at quite a derisory valuation. All of this is surprising considering that the company has/or probably will have two large-scale undeveloped nickel projects just as forecasts for nickel demand are being escalated on the back of the large-scale penetration of EVs.**

In addition, we are also seeking to place a valuation on the vanadium play and the rapidly developing FGS interests. There is a lot of value here that we believe isn't reflected in the share price and below we look at these assets in turn.

Mambare Nickel/Cobalt Project

Mambare has the potential to be a large-scale nickel laterite project on a worldwide basis. In seeking to place a valuation of this project we have looked at two peer comparisons. Clean TeQ Holdings (ASX:CLQ) and Horizonte Minerals (LSE:HZM) are in the midst of moving their nickel projects in Australia and Brazil prospectively towards production.

Clean TeQ is blessed with having the backing of billionaire mining investor Robert Friedland. It owns the Sunrise Nickel/Cobalt/Scandium Project in New South Wales and is also a leader in metals recovery and industrial water treatment through its proprietary Clean-iX continuous ion exchange technology. The Clean TeQ Sunrise Project is one of the largest and most cobalt-rich nickel laterite deposits in the world and is now development-ready, with all key permits and approvals already in place. On top of that, Sunrise also represents one of the largest and highest-grade scandium deposits globally.

The Definitive Feasibility Study (DFS) on Sunrise was completed in June 2018 and demonstrated the global importance of this project as a sustainable, long-life, low-cost source of high purity cobalt and nickel sulphates for the battery revolution. The post-tax NAV came out at NPV(8) US\$1.392 billion, with a post-tax IRR of 19.1% based on a long-term production rate of 18,520tpa nickel and 3,450tpa cobalt. The latest MRE shows a total of 922kt nickel and 162kt (Measured, Indicated and Inferred categories) at a 0% cobalt cut-off grade. The EV/t came out at £127.33.

Company	Share price	Market Capitalisation £m	EV £ million	Nickel Resource kt	EV/t £
Clean TeQ Holdings (ASX: CLQ)	A\$0.35	139.7	117.4	922	127.33
Horizonte Minerals (LSE: HZM)	8.9p	131.2	117.6	3,234	36.36
Average					81.85

Nickel laterite exploration/development companies. Source: Align Research

Horizonte Minerals has two tier 1 nickel projects in Brazil, both 100% owned. The flagship project Araguaia has been through a Feasibility Study and Stage 2 (expansion case) had an estimated IRR of 30.7% and NPV of US\$1.2 billion for a 29,000tpa nickel to stainless market project and represents a construction ready project.

Project number 2 is Vermelho which is at the Prefeasibility Study (PFS) stage. This showed an estimated IRR of 26.3% and NPV of US\$1.7 billion for 24,000tpa nickel contained in sulphate for the EV battery market. These studies were both undertaken using a \$16,400/t nickel price. Araguaia's resources total 132.257Mt (Measured, Indicated and Inferred) at an average of 1.27% nickel and 0.06% cobalt for 1,679kt Ni and 7,752t cobalt. The larger Vermelho project's resources (Measure, Indicated and Inferred) all add up to 148.8Mt at 1.05% nickel and 0.05% cobalt for 1,555kt Ni and 78.7kt cobalt.

The EV/t for Horizonte came out at £36.36, a lot less than that awarded to Clean TeQ, showing the sort of rating that is achievable in this sector as interest becomes focused on the paradigm shift away from fossil fuels. Friedland's backing and Clean TeQ's powerful proprietary ion exchange extraction and purification technology do look as though they have positioned the company to become one of the largest and lowest cost suppliers of key cathode raw materials to the lithium-ion battery market – nickel sulphate and cobalt sulphate. Although both Horizonte projects lie comfortably within the lowest quartile of the global product cost curve, its rating is lower.

	Mt	Nickel %	Cobalt %
Indicated	3.3	1.00%	0.07%
Inferred	159.2	0.94%	0.09%
Total	162.5	0.94%	0.09%
Contained metal (Kt)		1,528	146.25

JORC-compliant MRE for Mambare Nickel/Cobalt Project June 2012. Source: Company

On just a small corner of the deposit, Mambare has 1,528Kt of contained nickel and 146kt of cobalt. The presently outlined JORC resource is purely a function of exploration effort and available funding. **So, the true scale of the resource at Mambare could be very substantially larger. To be highly conservative, considering all this, we have chosen to risk the average peer EV/tonne figure of £81.85/t by 90% which results in a value of £8.18 per tonne.** This suggests a valuation of £12.50 million for Mambare, or £5.12 million for Corcel's 41% stake which has been carried forward into our SOTP calculation.

Wowo Gap Nickel Cobalt Project

In the fullness of time, it does look possible that Corcel will end up with a 100% interest in the Wowo Gap Nickel Cobalt Project following forgiveness of the RMI debt and a swap for the WoWo project rights. We have assumed this in our attempt to place an interest on this business interest. This will represent a big coup given the price which has been paid. Along with the company not yet really owning the project, Wowo Gap is at a slightly earlier stage of development (although something like £8 million has been spent here over time) than Mambare. So we have chosen to use the EV/t figure ascertained for Mambare of £8.18/t then further risk it to the tune of 70%. This results in a value of £2.45/t, which applied to the 1,325kt of contained nickel suggests a valuation of £3.24 million.

	Mt	Nickel %	Cobalt %
Indicated	72	1.03%	0.07%
Inferred	53	1.09%	0.06%
Total	125	1.06%	0.07%
Contained metal (Kt)		1,325	83

Wowo Gap MRE (JORC 2004) dated 2011. Source: Company

Dempster Vanadium Project

Over recent years it has become clear that the global energy transition is happening faster than the models predicted. Given this, it is little surprise that Canadian vanadium juniors have been attempting position themselves to benefit from the vanadium-based energy storage chain by providing future supplies of this metal which has been deemed to be on the critical list by the US administration.

Corcel has a 50% interest which was acquired in January 2019 for C\$450,000. The best results from Dempster include 0.39% V₂O₅ over 75.9m, 0.32% V₂O₅ over 38.2m and 0.39% V₂O₅ over 90.16m. These intersections are comparable to grades and thicknesses for similar deposits currently being explored in North America and demonstrate potential to host an economic deposit of vanadium.

Since acquisition of this interest, vanadium plays have benefitted and there are now some quite chunky valuations given the excitement surrounding vanadium redox flow batteries. We can see some close parallels with Vanadium Energy (TSX-V:VEC) and its Huzyk Creek Property in Manitoba. Like Dempster, the vanadium potential was discovered by chance when testing for other metals (copper and zinc mineralisation for VEC). A broad vanadium zone was encountered at the Huzyk Creek Property from a single drill hole (NIM19 – 2017). Subsequent drilling in winter 2019 saw 13.77m (from 300.03m to 313.8m) at 0.18% V₂O₅ including 9.74m at 0.22% V₂O₅ (HZ-19-1) and 14.05m (from 153.95m to 168m) at 0.11% V₂O₅ (HZ-19-2). With the shares trading at C\$0.08, Vanadium Energy has a market capitalisation of £1.95 million and an Enterprise Value of £2.08 million.

Based on this peer analysis, we believe that the Dempster Vanadium Project is worth at least £2.0 million, with Corcel's 50% stake worth £1.0 million. We believe that such a valuation is innately conservative as drilling at Dempster by the previous operator has resulted in better grade and widths which were recorded in mineralisation that was a lot shallower than that encountered by Vanadium Energy.

The peer group comparison does show the sort of rating awarded to companies as they push their vanadium projects up the valuation curve through defining a NI 43-101 resource. Vanadiumcorp Resources (TSX-V:VMX) has an NI 43-101 for its Lac Dore Vanadium MRE (2020) of 2.97 billion pounds of V_2O_5 in 300Mt and at a share price of C\$0.1 has an EV of £17.7 million.

Flexible Grid Solutions

The move into renewable energy and battery storage begun a couple of years ago with the establishment of the EsTeq business, subsequently renamed to FGS. Management is keeping its project pipeline under wraps so as not to jeopardise future deals. But investors can be assured that there is a lot going on to put together a sequence of robust projects. The relationship with ion Ventures looks as though it can provide an enviable deal flow of projects that have been heavily qualified by a team of technical experts.

At this time, we have solely valued the FGS business on the Burwell project and then just the 50MW battery storage operation with no value for the 50MW solar development or the associated grid connection. The truth is that lots of battery storage projects built in the UK are a bit on the small side, Burwell at 50MW is set to provide a pretty large amount of power to trade and so FGS should have little problem in attracting the attention of the major aggregators, who will all want to trade its capacity. Capex, opex and cash flow from such projects are well-known and so the risk profile is fairly low. This is a hot area where capital can be attracted quite easily. The excitement in the sector used to be surrounding peaker plants which basically go on and only jump into action when electricity prices are high. But now astute investors are moving onto batteries, which allows much more nuanced and advanced trading techniques and strategies. This all means that Corcel should have little difficulty in moving the project to financial close.

An industry rule of thumb is that once battery storage projects are shovel ready, they are seen to be worth £20,000 – 50,000 per MW. “Shovel ready” means the lease, grid connection and planning are in place. These sort of operations have had a cracking time of late and cashflow from these projects, rather than generating something like £48,000 per MW broadly assumed, over recent months have been making c.£120,000 per MW, largely due to the market in Dynamic Containment. Such wild west conditions are unlikely to go on forever but could provide a flavour of what to expect over the next few years as batteries are so important in smoothing out the volatility from renewable power generation. For that reason, it does seem appropriate to use a figure towards the upper end of the range mentioned above. Therefore we have chosen to use a value of £40,000 per MW.

On that basis the 50MW at Burwell could value this project at £2.00 million and that is probably what it could be sold for if management decided to flip it. At the current stage conservatively risking that figure by 50%, as Burwell is not yet fully shovel ready, suggests that this project is worth £1.0 million, a figure which goes into our SOTP table. Once planning comes in, this valuation would move up to £2.0 million and potentially beyond.

If the project is retained, then Corcel could gain a carried free interest in this project as a long-term investment which is thought to be of the order 2-8%. This stake is highly variable and depends on the deal that is struck with other SPV investors on exactly how the fee and carry are structured. It does not seem to be in the company's plans to raise equity to own a larger stake in such projects, but there are a variety of potential scenarios. SPV investors will be putting in the initial capex of £20 million (50% debt, 50% equity) which would include £2 million of upfront development fees to FGS and ultimately Corcel. Estimated cash flow of £50-60,000/MW per year for 50MW in the initial years would suggest gross revenue in the order of £3.3 million - £5.6 million per annum over a 25-year period. This is just the start, with 4-5 such projects being targeted per annum, some being flipped and other retained.

Total

Our SOTP valuation totals £9.93 million. Based on the number of shares currently in issue (291,621,614) the per share valuation would come out at 3.41p. On a fully diluted basis, we have adjusted the number of shares by ignoring the warrants that are well under water as they are exercisable at 25p and 60p. This leaves a total of 351,344,819. Adding the funds that would result from options being exercised of £1.28 million gives a total of £11.21 million. This equates to 3.19p, which we have chosen to use as our target price.

Asset	£ million
Mambare	5.12
Wowo Gap	3.24
Dempster Vanadium Project	1.00
FSG	1.00
Debt	(0.73)
Cash	0.30
Sub-total	9.93
Per share	
Based on the number of shares in issue (291,621,614)	3.41p
Fully diluted basis	
Funds coming from options being exercised ¹	1.28
Total	11.21
Based on the number of shares on a fully diluted basis (351,344,819)	3.19p

Sum-of-the-parts valuation. Source: Align Research

Conclusion

Corcel provides a really compelling way in which to play the push to clean power through the company's on-trend combination of impressive blue sky battery metal exploration plays and down to earth highly cash generative FGS projects. A couple of years ago, the company established the Esteq business which has basically been rebranded FSG. The original idea was to ape the Friedland model out of Australia which saw a bumper valuation being placed on Clean TeQ for an outfit that had a foot in both camps – battery metals exploration and technology. It has to be said that there is a lot of logic to add such a second prong to the corporate strategy of a junior explorer.

Big mining projects involve risk and massive upside potential from 100s of millions to billions of dollars being spent. In contrast, FSG provides lower returns but much less risk. **In addition, FSG only has a 6-24 month timeframe to get into production, whilst mining projects can take a decade or longer from early exploration to a producing mine.** Developing a business such as FGS does sit well with battery metals exploration as it allows the management to keep their finger on the pulse of the industry and to truly understand where batteries are going and what the banks are prepared to fund.

Upcoming news flow looks highly compelling and should allow the spotlight to firmly shine on Corcel. At Mambare the results of GPR processing are expected in Q1 2021 with the Mining Lease outcome potentially coming as early as Q2 2021. During this period, the market is expected to be given a taster of the deal with RMI concerning Wowo Gap where the team will be looking to capture the obvious synergies towards creating a larger PNG nickel-cobalt player. Plus, there is planning and the financial close at Burwell to come probably in Q1 2021 as well as an ongoing expansion of the FGS pipeline. That is not to mention M&A or a potential early transaction involving Burwell. This is not just a one-off year as 4-5 deals in the FGS business per annum now look clearly on the cards along with a likely expansion of the battery metal exploration portfolio. So, investors will not be short of news going forward.

Corcel is now a very clean entity with little downside in our view. Truth is that James Parsons has arrived on the scene at the right time when nothing at the company is being valued with any semblance of reality relative to their peers. The stage is now set for him to work his magic. Corcel is highly relevant to investors as one of the major trends affecting the world in the first half of 21st century is the move to decarbonisation of the global economy.

The lowly battery, which once was perhaps most known for powering kids; toys or your torch, are now shaping up to become huge industrial plays that will change the world. There is no doubt that the Company has a seriously on-trend portfolio. Wowo Gap was picked up for buttons and the team can leverage it as there is big demand for both nickel and cobalt going forward. In parallel, the FSG division is being carefully crafted to become the cash cow to fund corporate overheads and further value creation in this ever so hot battery metals space.

We look forward to being given the chance to update our valuation going forward as the obvious key value inflexion points get ticked off. **We initial coverage of Corcel with a Conviction Buy stance and a share price target of 3.19p.**

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