

17 November 2018

Charts on Friday's Close

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Looking for new stories, and a big run for a potash stock

There is still nothing in the broader market to give us much confidence, with the Dow Jones continuing to serve up volatility that unsettles other markets. Nevertheless, we are starting to see new stories coming through as the optimists are still searching for ways to make money. It continues to be a market for special situations with no friendly trends to comfort us.

Oil, which has been the best source of profits in the market over the past year or two, has now taken a backward step. Fears of slower global demand have caused the longest losing streak in the oil price since 1984.

Potash is not a well-known commodity

As stock market investors, many of us are familiar with commodities such as gold, copper, coal, iron ore and other base metals. The frequency with which analysts are asked to assess these projects ensures that there is a strong level of intuition in their skill bases. However, when it comes to fertiliser products such as potash and phosphates, it always seems that I have to go back to square one to re-educate myself when a company peddling one of these projects comes through the door. The same for investors - they lack familiarity - and they can easily be misguided. With that in mind, I will attempt to give you a reasonable assessment of a junior potash hopeful - Davenport Resources (DAV).

Davenport Resources has a potash tiger by the tail

Davenport IPO'd in January 2017, raising \$5.1m to pursue the South Harz potash project in Germany. Unfortunately the original subscribers at 20¢ have been under water ever since, with the shares trading down from the initial high to a recent low of 6¢. However, with the announcement this week of total 3.4 Bt at 10.5% K₂O in the Inferred JORC category, the shares surged to hit 12.5¢ on Friday. Maybe the market is starting to appreciate the merits.

At first glance, the shares seem to offer exceptionally good value, being capitalised at only \$9m based on a share price of 12.5¢, with cash of about \$1.7m. Why is it so cheap? Let's look at the project first.

South Hartz covers historical potash mines in a region that once employed 45,000 mine workers back in the days of the communist East Germany (GDR). With reunification in the early 1990s, most of the mines were closed and 15-20,000 miners lost their jobs. The government went to sell off the mines but the pricing was unrealistically high, so they sat on the shelf until DAV successfully bid Euro1.3m, completing the acquisition in early 2018. Interestingly, the licences have perpetual title, there are no royalties and no annual rental payments. You could say this removes any pressure for DAV to act quickly.

During the 20 year period from 1960, these leases were tested by 120 holes to depths in the order of 1,000m, providing very valuable information that would cost US\$150-\$200m to conduct today. Drill spacing on the **Ebeleben** project is mostly 1,000-1,500m, typically

acceptable for this type of project to calculate inferred resources. UK-based consultants, Micon International Co Ltd, has taken the historical data, converting the communist numbers to JORC status to come up with a 560 Mt resource with 324 Mt of this being the preferred sylvinitic mineral at the healthy grade of 15.6% K₂O. This is up to 23m thick, making the geometry very efficient for underground continuous mining, with development able to be excavated within the ore. There is no history of flooding and the harder than normal sulphate mineralisation should result in good ground conditions. The gently dipping orebody means that it will be like mining a flat structure. Only 40-45% is likely to be extracted due to the need to leave pillars. The next step is to drill up to four more holes to enable an upgrade to the Indicated category.

Elsewhere on the licences is the **Muhlhausen** project which has a non-JORC resource of 1.1 Bt, containing 800 Mt of sylvinitic. Last week it announced an Inferred Resource of 1.7 Bt at 9.7% K₂O at a third location, the **Nohra-Elende Sub Area**, including 101 Mt at 14.2% sylvinitic. The average thickness is 26m, and the orebody starts at 447m depth. A pilot operation was undertaken to the north of this area in the late 1980s, where the Kehmstedt solution mine is now producing muriate of potash (MOP) from carnallite at a rate of approximately 110,000 tpa.

DAV presented a table of five companies with potash projects. The average attributable EV for potash resources is US\$2.02/tonne of K₂O. DAV's figure is only US\$0.04, much lower than Danakali and Highfield at US\$1.91 and US\$1.89 respectively. Again, why are the shares so cheap? Is it because of;

a) concerns about management? Having spent an hour with the Managing Director, Chris Gilchrist, I'm satisfied that he knows the business. Originally from Lanark in the south of Scotland, Chris is an engineer who has had almost 40 years of experience with large companies that include 12 years running diamond mines for De Beers. From there he moved on to run the Cleveland potash mine in the UK, operating at a depth of 1,300m, beneath the North Sea. He subsequently formed a potash mining consultancy business and has had exposure to many potash mines and projects in recent years. So, he appears to be the right man for the job, but maybe he needs a bigger team around him.

b) the promoters and tight shareholdings? There is nothing out of the ordinary with the entrepreneurs behind the stock but the tight register, with 75% of the shares in three groups, could be a problem. Turnover is very low and it is hard to get stock, but the liquidity argument cuts both ways. The share price is vulnerable to spike on even modest buying (as we saw last week). If you can't get set there is not much incentive to get behind the stock. Maybe there needs to be a liquidity event such as a raising at the lower levels to address this concern.

Stepping back to look at the big picture, we see four challenges to the project advancing;

- 1) dimension - it is such a big project one wonders how such a small company like Davenport can manage to develop it on its own. It really has a tiger by the tail. Is a project this size suitable for a penny dreadful company? Would it be better suited to an unlisted company with long term shareholders?
- 2) finance - potash projects are notoriously expensive to develop. Where can a junior company raise hundreds of millions of dollars with a balance sheet to satisfy banks?
- 3) time frame - being deep mines at 1,000m depth, the development time frame is lengthy even once the financing has been arranged. First production for these projects would be 5-10 years away. Who can wait that long? I don't know many punters in the junior end of the market who would wait 5-10 months, let alone years.
- 4) social, governmental and environmental approvals - we can no longer assume projects will go ahead just because they make economic sense.

They are the challenges, but let's look at the positives;

- 1) experienced management
- 2) strong geological and resource certainty from historical work
- 3) safe jurisdiction, geopolitically
- 4) availability of advanced technical and engineering skills
- 5) good proximity to markets in Europe

When the stock market is as depressed as it has been in recent months it is difficult to see the catalyst for a much stronger share price in the short term, so patience will be needed above and beyond what is normally needed for such long term projects. The best way to view Davenport at the moment is to see it as a very low cost entry point with only upside from these levels.

Australia seems better endowed with brine deposits of potash, in WA. Development of these projects involved a different set of considerations when compared to hard rock underground deposits. On the one hand they can appear simple but you need huge evaporation ponds and it can be a long time before you get a saleable product. My consideration of these projects can wait for another day.

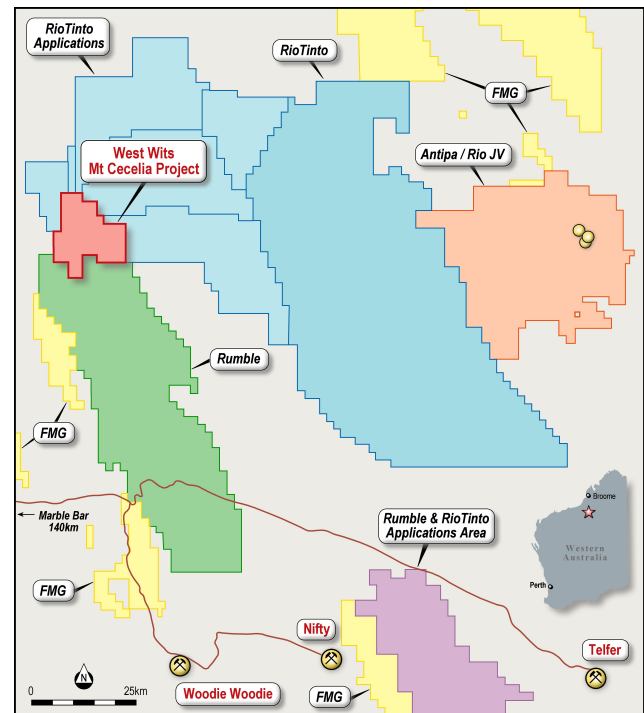
RIO's Pilbara copper mystery could be a win for WWI

Speculators love intrigue and mystery, and RIO is providing them with rumours of something big in the Paterson province of the East Pilbara. RIO has assembled a 40-50 person camp, it has lodged an application to build an airstrip, which could cost \$10m, and it has pegged over 10,000 km² between Port Hedland and Broome. Copper is the commodity that seems to be generating the excitement but RIO is not saying much. There has been increased interest in Antipa, which has a JV with RIO in the area, and Sipa, but look at the tenement map below, showing that RIO has applied for ground on three sides of a tenement application held by West Wits (WWI). Interesting.

West Wits (WWI) went chasing the Pilbara gold play a year ago with a deal on this block, but as it turned out the excitement for that play fizzled out only a few weeks later. The only winners out of the deal so far seem to be the brokers to the deal and these guys seem to have been consistent sellers of late. Maybe they have sold too soon.

There has been no work done on the WWI ground over the last year as the application has been going through the Native Title process, but there are no competing applications to worry about. It could be a lucky example of being in the right place at the right time for WWI, but time will tell.

Diagram 1. Map of Leases Around WWI Application



Disclosure: Interests associated with the author own shares and options in WWI. Capital raising fees have been earned.

Expanding uses for graphene point to a strong growth curve on many fronts

During the week First Graphene announced excellent success with the addition of graphene in polymer linings for mining equipment that protect these expensive capital items from wear and tear. The linings will last much longer and mining companies will save money both on labour and materials. These linings are now being installed in the machinery of some of the world's largest mining companies. If all goes according to plan in 2019, FGR could be selling initially several tonnes p.a. of graphene to the sector, increasing to many more tonnes p.a. as the equipment is adopted around the globe. It is a product vertical that wasn't even on the radar 12 months ago. It just goes to show that the potential uses of graphene are limited only by your imagination.

What is noteworthy is that there is no graphene company in the world today that is selling these volumes, that we know of. Most companies are selling only grams or kilograms, being constrained by factors such as plant capacity, quality-control and economics of production methodology. First Graphene has overcome all of these hurdles with the release of its PureGRAPH range, in preparation for a strong growth curve in 2019.

Elsewhere in the graphene business we are witnessing a rising tide of interest and applications. The following commentary has been taken from an email I received during the week; not my words, but interesting.

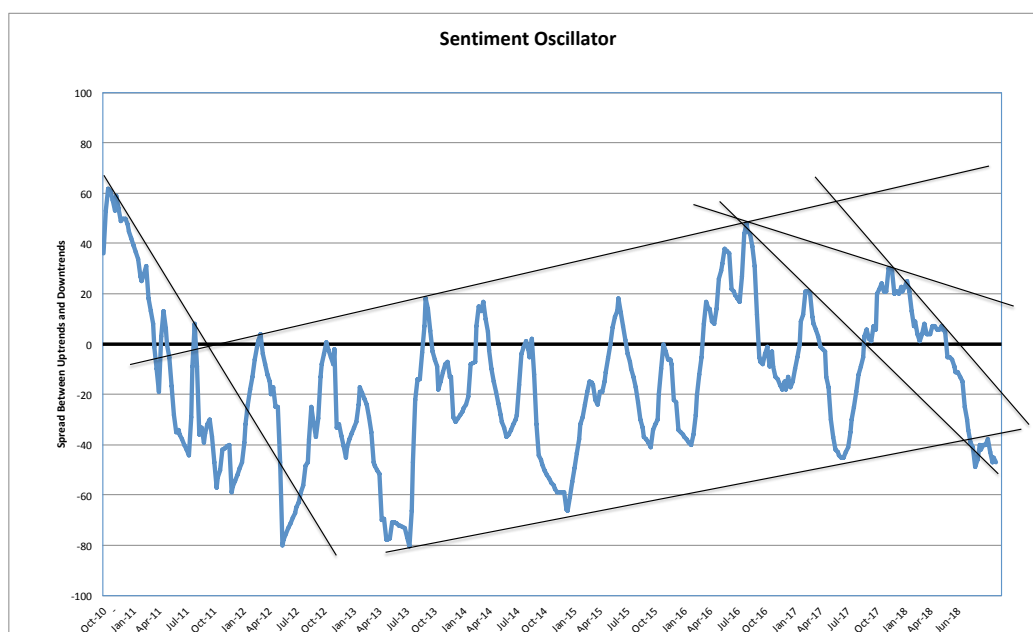
Earlier this year, London-based sportswear brand [Vollebak](#) released a \$695 jacket that capitalises on the material's incredible ability to retain heat. "Graphene's an arms race between the U.S., Europe, and Asia," says Steve Tidball, who founded the company with his twin brother, Nick. The production run of about 1,000 pieces sold out in less than three days.

Growth will be driven by much bigger players than niche sportswear startups. Although bendable tablets and fast-charging car batteries won't arrive until at least a year, more incremental innovations are coming. Huawei Technologies Co.'s Mate 20x series marks the first time graphene has been used in a smartphone. Mackenzie fly

rods have integrated the material for a better bend in its fishing poles, while tennis gear manufacturer Head has released a line of graphene rackets for truer serves. The fall collection of Prada SpA's sporty Linea Rossa includes jackets that use nylon and graphene to help regulate body temperature. Ray-Ban is already using it in sunglasses.

That's just the beginning, says Bamidele Ali, chief commercial officer of XG Sciences Inc., a Lansing, Mich., company that supplies the graphene found in noise-dampening products scheduled to appear under the hoods of Ford Mustangs and F-150 pickups in late 2018.

Disclosure: The author is a non-executive chairman of First Graphene and interests associated with the author own shares and options. Capital raising fees have been earned.



Sentiment






































Oscillator: There was a slight worsening of sentiment with 15% (14%) of the charts in uptrend and 62% (59%) in

Detailed Chart Comments












NB. Only the bold comments have been updated. Comments in grey type are from previous weeks and will be less relevant. Please note that this list is a cross section of the market. It IS NOT a list of recommendations.

Indices	Code	Trend Comment	
All Ordinaries	XAO	falling again	
Metals and Mining	XMM	falling again	
Energy	XEJ	falling again	
Stocks	Code	Trend Comment (updated comments in bold)	Main Interest
Adriatic Resources	ADT	uptrend	zinc
Aeon Metals	AML	downtrend confirmed	copper + cobalt
Alacer Gold	AQG	testing downtrend	gold – production
Alkane Resources	ALK	sideways at lows	gold, zirconia










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Acacia Resources	AJC		Sideways at the bottom	coal
Alchemy Resources	ALY		base forming	nickel, cobalt
Alicanto Minerals	AQI		strong rally, then crunched down	gold exploration
Allegiance Coal	AHQ		holding LT uptrend	coal
Alliance Resources	AGS		resting on support line	gold exploration
Altech Chemicals	ATC		down	industrial minerals - synthetic sapphire
Anova Metals	AWV		new low on poor production report	gold
Apollo Consolidated	AOP		holding support line	gold exploration
Archer Exploration	AXE		breach of support	magnesite, graphite
Argent Minerals	ARD		down	silver
Aurelia Metals	AMI		could be topping out here	gold + base metals
AusTin	ANW		heading towards long term support line	tin, cobalt
Australian Bauxite	ABX		sideways	bauxite
Australian Potash	APC		testing downtrend	potash
Australian Mines	AUZ		strong rally	cobalt/nickel
Australian Vanadium	AVL		downtrend confirmed	vanadium
Bounty Coal	B2Y		down	coal
BHP	BHP		still in steep downtrend	diversified
Base Resources	BSE		down	mineral sands
Bathurst Resources	BRL		slump	coal
Battery Minerals	BAT		sideways at lows	graphite
BBX Minerals	BBX		secondary downtrend	gold
Beach Energy	BPT		breached uptrend	oil and gas
Beadell Resources	BDR		secondary downtrend	gold
Bellevue Gold	BGL		return to strong uptrend - placement	gold
Berkeley Energia	BKY		collapse - Spanish media	uranium
Blackstone Minerals	BSX		back to lows	gold, cobalt
Breaker Resources	BRB		rising	gold
Broken Hill Prospect.	BPL		down	minerals sands, cobalt
Buru Energy	BRU		down	oil
Cardinal Resources	CDV		breaching downtrend	gold exploration
Cassini Resources	CZI		breached downtrend	nickel/Cu expl.
Celsius Resources	CLA		falling again	copper/cobalt
Chalice Gold	CHN		sideways	gold
Cobalt Blue	COB		free fall on study results	cobalt
Comet Resources	CRL		breached downtrend, but correction down	graphite
Crusader Resources	CAS		suspended	gold
Dacian Gold	DCN		continuing down	gold
Danakali	DNK		breached uptrend	potash
Davenport Resources	DAV		steep rise	potash
Doray Minerals	DRM		sideways - merger	gold
Eden Innovations	EDE		new uptrend being tested	carbon nanotubes in concrete
Egan Street Resources	EGA		new low	gold
Emerald Resource	EMR		broad downtrend	gold









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Evolution Mining	EVN		higher	gold
Exore Resources	ERX		new company	gold exploration
FAR	FAR		crunched down on dud oil well	oil/gas
First Graphene	FGR		rising again	graphene
Frontier Diamonds	FDX		breached downtrend	diamonds
Fortescue Metals	FMG		rallied out of steepest, but still in LT downtrend	iron ore
Galaxy Resources	GXY		strong rally	lithium
Galilee Energy	GLL		turned down	oil and gas, CBM
Gascoyne Resources	GCY		collapse	gold
Gold Road	GOR		breached uptrend	gold exploration
Golden Rim	GMR		new low	gold exploration
Graphex Mining	GPX		rally then retracement	graphite
Heron Resources	HRR		sideways	zinc
Highfield Resources	HFR		rallied to meet resistance line	potash
Highlands Pacific	HIG		down	nickel, cobalt
Hillgrove Resources	HGO		sideways	copper
Hipo Resources	HIP		down	battery metals
Iluka Resources	ILU		down heavily	mineral sands
Image Resources	IMA		downtrend	mineral sands
Independence Group	IGO		back in downtrend	gold, nickel
ioneer (was Global Geoscience)	INR		down	lithium
Jervois Mining	JVR		heavy fall	nickel/cobalt
Jindalee Resources	JRL		downtrend commenced	lithium
Karoon Gas	KAR		new low	gas
Kasbah Resources	KAS		still in downtrend	tin
Kibaran Resources	KNL		weaker	graphite
Kin Mining	KIN		heavy fall	gold
Legend Mining	LEG		down	exploration
Lepidico	LPD		continuing down	lithium
Lithium Australia	LIT		continuing downtrend	lithium
Lucapa Diamond	LOM		continuing downtrend	diamonds
Lynas Corp.	LYC		steeply higher	rare earths
Macphersons Res.	MRP		still down	gold/silver
Mako Gold	MKG		down	gold
Marmota	MEU		sideways	gold exploration
MetalsX	MLX		down again	tin, nickel
Metro Mining	MMI		down	bauxite
Mincor Resources	MCR		sideways	gold
Myanmar Minerals	MYL		starting down again	zinc
MZI Resources	MZI		downtrend still	mineral sands
Nelson Resources	NES		down	gold exploration
Neometals	NMT		down	lithium
Northern Cobalt	N27		down again	cobalt
Northern Minerals	NTU		new low	REE

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Northern Star Res.	NST		still strong	gold
NTM Gold	NTM		testing downtrend	gold
Oceana Gold	OGC		rising again	gold
Oklo Resources	OKU		down	gold expl.
OreCorp	ORR		breached downtrend	gold development
Orinoco Gold	OGX		down	gold development
Orocobre	ORE		strong rally	lithium
Oz Minerals	OZL		testing downtrend	copper
Pacific American Coal	PAK		down	coal
Pantoro	PNR		down	gold
Panoramic Res	PAN		downtrend again	gold , nickel
Peel Mining	PEX		breached downtrend on drill intercept	copper
Peninsula Energy	PEN		downtrend again	uranium
Perseus Mining	PRU		improving within a downtrend	gold
Pilbara Minerals	PLS		down	lithium/tantalum
PNX Metals	PNX		lower	gold, silver, zinc
Polarex	PXX		still down	polymetallic
Prodigy Gold	PRX		down	gold exploration
Real Energy	RLE		rallying	gas
Red5	RED		down	gold
Red River Resources	RVR		down	zinc
Regis Resources	RRL		rising	gold
Resolute Mining	RSG		testing downtrend	gold
RIO	RIO		down	diversified
Salt Lake Potash	SO4		re-entering downtrend	potash
Saracen Minerals	SAR		up	gold
St Barbara	SBM		up	gold
Sandfire Resources	SFR		strong rally	copper
Santana Minerals	SMI		new low	silver
Santos	STO		back to highs	oil/gas
Sheffield Resources	SFX		testing uptrend	mineral sands
St George Mining	SGQ		starting uptrend	nickel
Sipa Resources	SRI		sideways	general exploration - Ni,Cu, Co, Au
Stanmore Coal	SMR		new high	coal
Sundance Energy	SEA		testing downtrend	oil/gas
Syrah Resources	SYR		new low	graphite
Talga Resources	TLG		down	graphite
Tanami Gold	TAM		slump	gold
Technology Metals	TMT		short term down	vanadium
Tiger Realm	TIG		down	coal
Triton Minerals	TON		down	graphite
Troy Resources	TRY		down	gold
Tyranna Resources	TYX		back in downtrend	gold exploration
Vango Mining	VAN		correcting	gold

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Vector Resources	VEC		down again	gold
Venturex	VXR		testing downtrend	zinc
Vimy Resources	VMY		down	uranium
Volt Resources	VRC		sideways	graphite
West African Resources	WAF		down	gold
Westwits	WWI		down	gold
Western Areas	WSA		down	nickel
Whitehaven Coal	WHC		down	coal
Totals	15%	22	Uptrend	
	62%	88	Downtrend	
		143	Total	

Guides to Chart Interpretations

- Charts usually go pass from one trend (up or down) into the other via a period of indecision and uncertainty during which the trend can either recover or change. This period is signified by the orange colour. The orange represent both the greatest risk and greatest reward possibilities.
- Once a chart is in confirmed up or downtrends it is not uncommon for 10-20% of that trend to have already transpired.
- There are trends within trends. The focus of this chart review is the immediate trend that affects the sentiment i.e. it can be a downtrend within a long-term uptrend.
- Not every chart warrants a new comment every week. The new comments are in bold type. Grey type comments may be dated.
- Individual charts provide a single view. It is valuable to look at charts of other companies in similar commodities, and the overall sentiment is also very valuable. Not many stocks can swim against the tide.
- We periodically add or delete charts, some times for obscure reasons. If a chart consistent gives poor signals or is very erratic, we may delete it. Sometimes we add a chart because we want to see what all the fuss is about. We do have a preference for charting stocks that we cover in our research as well.
- Errors and omissions may occur from time to time, especially in fast moving markets.

Amber Lights in Tables: Just a reminder if when the amber light is used in the table – it is when the charts are ambiguous or when there is a change of trend taking place. If a chart is breaching a downtrend it can either be a positive sign or a trap. Only once it has done more work can it be confirmed as a new uptrend. Maybe it is a new uptrend (or conversely a new downtrend); the risk takers can decide to jump on board early (or sell). They will maximise their profits (or minimise their losses if indeed it is the start of the new uptrend (downtrend). More risk-averse investors should wait a little longer, being prepared to give up some of the gains in return for greater certainty.

Weightings of Sectors Represented in the Company Charts

Sector	No. of Companies	Weighting	
Gold	39	27.3%	
Gold Exploration	14	9.8%	
Graphite	9	6.3%	
Coal	8	5.6%	
Oil/Gas	8	5.6%	
Lithium	8	5.6%	
Copper	6	4.2%	
Mineral Sands	6	4.2%	
Nickel	7	4.9%	
Cobalt	5	3.5%	
Zinc	5	3.5%	
Potash/Phosphate	5	3.5%	
Silver	3	2.1%	
Tin	3	2.1%	
Uranium	3	2.1%	
Rare Earths	2	1.4%	

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Bauxite	2	1.4%	
Diamonds	2	1.4%	
Iron Ore	1	0.7%	
Other	7		
Total	143		

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