Monday, July 24, 2017

HALLGARTEN & COMPANY

Corporate Action

Christopher Ecclestone
cecclestone@hallgartenco.com

Karnalyte Resources (TSX: KRN)
Strategy: NEUTRAL

Key Metrics

Price (CAD)	$	0.64
12-Month Target Price (CAD)	$	0.74
Upside to Target		16%
High-low (12 mth)	$0.56 - $2.38	
Market Cap (CAD mn)	$	17.59
Shares Outstanding (millions)		27.5
Fully Diluted Shares O/S (millions)		29.4

Karnalyte Resources

What a Schemozzle

- \+ The only things this company has going for it are a reasonable cash balance ($15mn at the end of March quarter) and a relatively low number of shares on issue
- \+ The disruptive and querulous Phinney faction have finally been shown the door
- ✘ Asset writedown to virtually zero leaves company as a cash shell
- ✘ Fractious shareholders and directors have produced a revolving door for management
- ✘ In the time we have known this company (since mid-2015) it has whittled its cash balance down from $32mn to around $15mn without having made any advances of substance to its project
- ✘ GS&A was running at outrageous levels until fairly recently and has been the biggest consumer of the cash balance

Swings & Roundabouts

In recent years at Karnalyte Resources there has been a high-velocity revolving door to the executive suite with officers and directors coming and going with little benefit accruing to shareholders from this process. Indeed some of the individuals involved have, rather notoriously, been through the revolving door more than once.

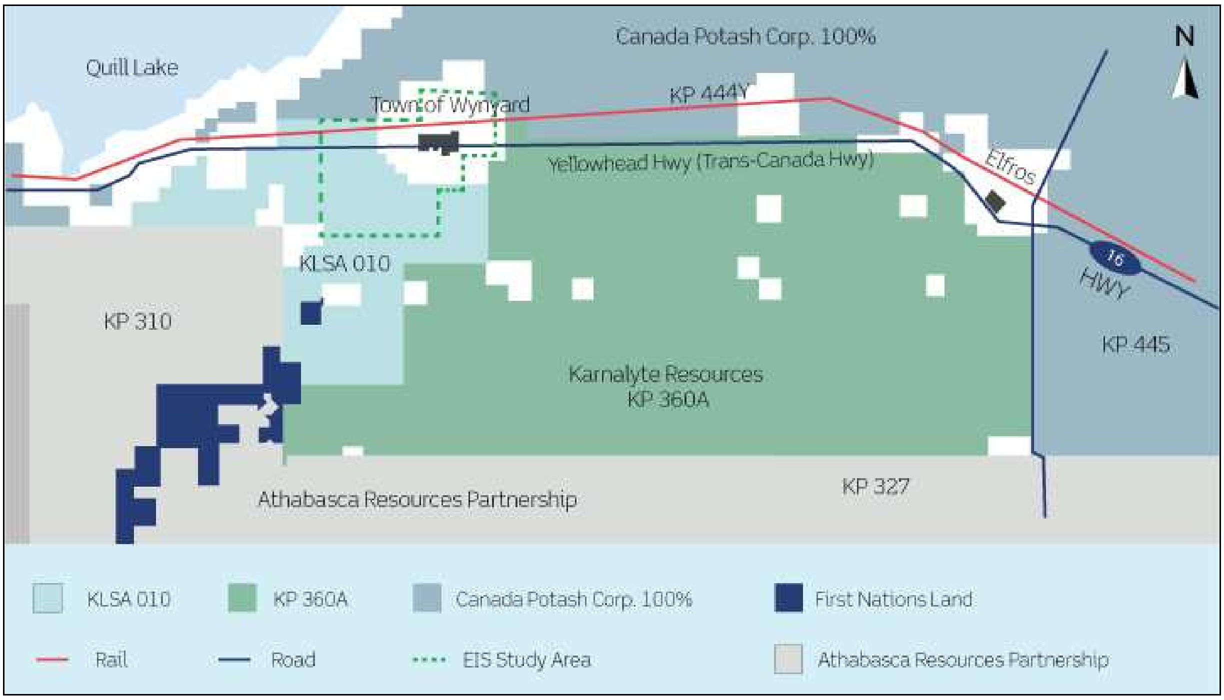
In 2013, Gujarat State Fertilizers & Chemicals (GSFC) were inveigled into making a massive investment into the company.

In 2015 the company topped what was already a bad year (after a pretty bad five years that saw its stock peak at $18) with a pseudo-takeover "offer" from what are some of the most ham-fisted "legal advisors" we have encountered in recent memory. This came on top of various management gyrations which saw an entrenched management ousted, to be replaced by a more realistic crew who were then ousted by a variation on the original crew. In the meantime the company's sole claim to asset-backing, the Wynyard potash project was written down to an insignificant value, before being declared again to be a desirable asset, and then seemingly written down to zero.

Then in more recent times the takeover offer "disappeared" quite literally with no mention being made of it again, a hefty accounting restatement that looked like incompetence was revealed and a financing with the original large shareholder was announced and then that flopped. Bizarrely the large shareholder then got to equalize on the board numbers and then one of them has to resign in rather short order. Finally this year the original posse was ousted and seemingly peace has descended after the carnage.

Wynyard

The Wynyard property is located half a kilometre to the south of Highway 16 near the town of Wynyard, Saskatchewan. Karnalyte owns a 100% interest in Subsurface Permit KP 360A and Subsurface Mineral Lease KLSA 010, comprising a total of 85,126 acres. The Wynyard Carnallite Project is an exploration and early stage pre-development property with a dominant zone of carnallitite and sylvinite (potassium-containing minerals).



Karnalyte has secured the surface rights to 260 acres of land for the plant and load-out surface facilities, of which 160 acres is proposed for use as the plant production site. Karnalyte will have a small surface footprint for the potash facility.

Carnallite

This mineral, which is the basis of the Wynyard deposits, was first described in 1856 from its type location of Stassfurt deposit in Saxony-Anhalt, Germany. It was named for the Prussian mining engineer Rudolf von Carnall and clearly the subject of this note was given a souped-up version of the name.

Carnallite is an evaporite mineral, a hydrated potassium magnesium chloride with formula $KMgCl3·6(H2O)$. It is variably colored yellow to white, reddish, and sometimes colorless or blue. It is usually massive to fibrous with rare pseudohexagonal orthorhombic crystals. The mineral is deliquescent (absorbs moisture from the surrounding air) and specimens must be stored in an airtight container.

Carnallite occurs with a sequence of potassium and magnesium evaporite minerals: sylvite, kainite, picromerite, polyhalite, and kieserite. Carnallite is an uncommon double chloride mineral that only forms under specific environmental conditions in an evaporating sea or sedimentary basin.

It is mined for both potassium and magnesium and occurs in the evaporite deposits of Carlsbad, New

Mexico; the Paradox Basin in Colorado and Utah; Stassfurt, Germany; the Perm Basin, Russia; and the Williston Basin in Saskatchewan, Canada. These deposits date from the Devonian through the Permian Periods. Israel and Jordan produce potash from the Dead Sea by using evaporation pans to further concentrate the brine until carnallite precipitates, dredging the carnallite from the pans, and processing to remove the magnesium chloride from the potassium chloride.

The Geology

Saskatchewan's subsurface Phanerozoic geology can be subdivided into three broad stratigraphic intervals, with the listed approximate depths based upon the examination of exploratory wells within the Wynyard Project area:

- an uppermost overburden sequence comprised of Cenozoic glacial tills, gravels and clays. This sequence extends from surface to an approximate subsurface depth of 125.0 – 175.0 m. This sequence that commonly contains fresh water aquifers;
- a medial sequence of bedded Mesozoic strata extending from the base of the glacial sediments to an approximate subsurface depth of 550.0 m consisting of shales, siltstones and sandstones with aquifers of brackish water; and
- a lowermost package of Paleozoic strata that extends from the Paleozoic/Mesozoic Unconformity to depths more than 1,900.0 m below surface, consisting primarily of thick successions of carbonate and evaporite rocks punctuated by sandstones and shales.

These are then underlain by Precambrian aged gneisses and granites.

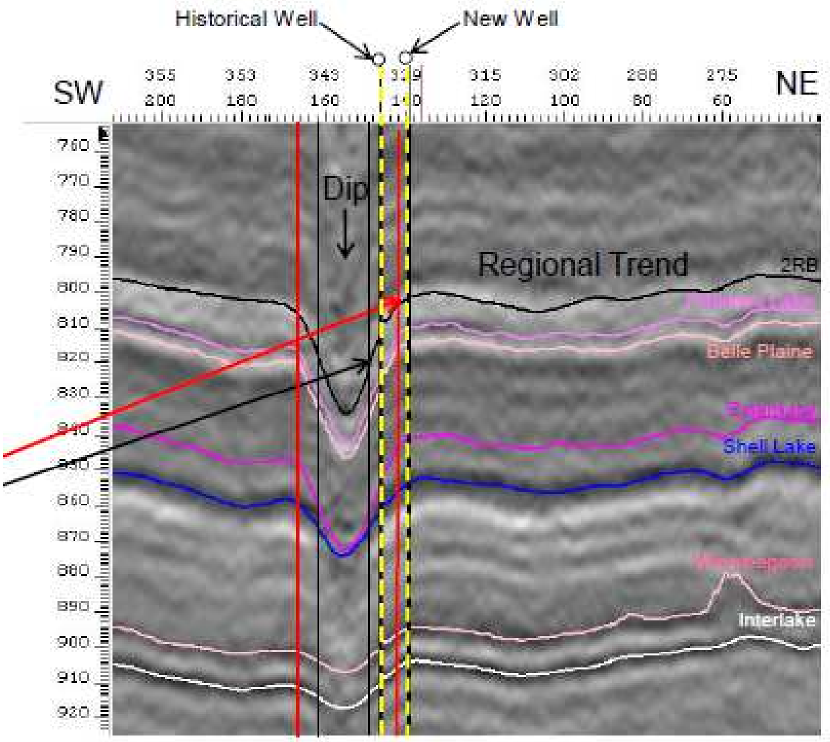
The potash resources of Saskatchewan are comprised of a remarkably simple mineralogical mixture of bedded halite, sylvite, carnallite and clay that are found as bedded deposits within the generally flat-lying and laterally extensive shallow marine sequences of the Middle Devonian "Elk Point Group". The Elk Point Group was deposited within a wide intracratonic depositional corridor known as the "Elk Point Seaway" which extended from its southern extremities in North Dakota and northeastern Montana up through southern and central Saskatchewan into northeastern Alberta. North of this point the seaway was divided by tectonic features into a series of sub-basins.

The deposit consists of various layers that were laid down in the Devonian events. The resource consists of the following mineralized intervals:

- The Patience Lake Member has an average thickness around 10.9 m and a weighted average KCl grade of 18.3%, mainly as Carnallite and is separated from the underlying Belle Plaine Member by a salt interbed of about 8.43 m thickness, which contains only minor amounts of potash.

- The Belle Plaine Member can be divided into a Lower Belle Plaine and an Upper Belle Plaine. The Upper Belle Plaine has an average thickness around 10.28 m and a weighted average KCl grade of about 17.5%, mainly as Carnallite. The Lower Belle Plaine has an average thickness of 4.69 m and a weighted average KCl grade of approximately 12.4%. The Belle Plaine is separated from the underlying Esterhazy Member by another salt interbed of about 35 m, which contains only minor amounts of potash.

- The Esterhazy Member has a thickness in the range of 16.5 m for the geological interval, but within this thickness there are one or two horizons which have a high enough KCl grade to be considered part of the Mineral Resource Interval. The average thickness of the combined higher grade zones is 9.5 m with an average KCl grade of 17.6%



The following mineralized zones, mineable with solution mining have been defined based on the Mineral Reserve Intervals:

- Patience Lake solution mining horizon with an average thickness of 7.7 m and a weighted average grade of about 19.8% KCl present in all holes drilled,
- Upper Belle Plaine Member solution mining horizon with an average thickness of 9.5 m and a weighted average grade of about 19.1% KCl present in all holes drilled,
- Upper solution mining horizon within the Esterhazy Member with an average thickness of 2.5 m and a weighted average grade of about 25.8% KCl present in 10 of the holes drilled,
- Lower solution mining horizon within the Esterhazy Member with an average thickness of 2.6 m and a weighted average grade of about 26.2% KCl present in 6 of the holes drilled.

The Lower Belle Plaine Member was targeted to be used for undercut leaching, with this brine recycled into the solution mining operation. The lower Belle Plaine Member has an average thickness of 4.69 m and a weighted average grade of about 12.1% KCl present in all holes drilled

PROVEN RESERVES	Mineralized Material (million tonnes)	Average KCl Grade (% KCl)	Mineable KCl Tonnage (million tonnes)
Total Carnallitite	261.6	18.7	49.0
Total Sylvinite	52.7	26.3	13.9
TOTAL	314.3		62.9

and following "Probable Reserves":

PROBABLE RESERVES	Mineralized Material (million tonnes)	Average KCl Grade (% KCl)	Mineable KCl Tonnage (10^6 tonnes)
Total Carnallitite	416.0	18.5	77.0
Total Sylvinite	58.2	25.8	15.0
TOTAL	474.2		92.0

The Plan

The designated mining method was solution mining. Solution mining involves introducing a fluid into the mineral deposit via a drilled well. The carnallite mineral dissolves in this fluid to form a brine solution which is brought back to the surface. The potassium and magnesium minerals are then recovered from the solution and processed.

A positive bankable feasibility study confirmed economic viability of the Wynyard project, with:

- Development CapEx for the initial 625,000 tonne per annum plant estimated at $593 million with annual operating expenses of $129.12 per tonne KCl

- Development CapEx for the full 2.125 million tpy operation estimated at $2,002 million (inclusive of the initial $593 million), with OPEX of $125.45 per tonne KCl

A preliminary pre-feasibility study providing for a magnesium product facility (contingent upon the development of the 625,000 tpy potash facility), with an annual capacity of 100,000 tpy of Magnesium Chloride ($MgCl_2$) brine at 32% concentration and 104,000 tpy of Hydromagnesite at 99% purity.

The Writedown

One of the great mysteries here is how a property that was worth so much was almost totally written off in early 2015 (and then the rest of residual value removed in 2016) and yet is still touted as the main underpinning of the stock market capitalization of the corporation.

In late April 2015 the company released to the market that, amongst other things, that the audit committee and Board of director had made, a unanimous decision to write down the Wynyard Project to its salvage value, a decision which was strongly supported by Karnalyte's independent auditors. The Board also unanimously determined (including by a senior executive of GSFC who is its representative on the Board) based on meetings with the financial community that in the current price environment for potash and magnesium, it would not be possible to finance and profitably construct and operate a production facility at the Wynyard Project.

As a result the company suspended all activity in relation to the Wynyard Project, other than the minimum required to maintain title to the Wynyard Project, secure the site on a care and maintenance basis, and otherwise preserve intact the Wynyard Project. It is expected that costs to maintain the site will be approximately $500,000 per year. Finally, the Board also unanimously resolved (including by a senior executive of GSFC who is its representative on the Board) to direct management to review whether there is any possibility of finding a buyer for the Wynyard Project or whether it can be otherwise disposed of on reasonable terms, consistent with the restrictions to which the corporation and the Wynyard Project are subject in Karnalyte's various agreements with GSFC.

The Gujarati Deal

Karnalyte, in March 2013, closed a non-brokered private placement financing with Gujarat State Fertilizers & Chemicals for $44,745,994 in exchange for 5,490,306 common shares which at that time, represented a 19.98% ownership stake in the company. Along with the financing, GSFC committed to an off-take agreement for the purchase of approximately 350,000 tonnes per year of potash increasing to 600,000 tonnes per year for a period of 20 years from the commencement of commercial production.

It is worth noting that at the time of this transaction reaching conclusion, now Prime Minister of India, Narendra Modi, was the Chief Minister of Gujarat state.

In mid-July 2015 the company announced that: "With regards to the previously announced Framework Agreement with KRN's largest shareholder, Gujarat State Fertilizers and Chemicals Ltd. ("GSFC"), GSFC has indicated its willingness to support KRN by arranging Project Financing based on GSFC's financial strength and relationships with Indian banking institutions. Such Project Financing may be available on significantly more attractive terms than offered by North American banks, specifically allowing the Company a substantial upfront debt disbursement without a corresponding initial equity infusion, the flexibility to raise required equity as a subordinated shareholder loan, and a commitment by GSFC or its affiliates to backstop required equity if needed.

In October 2016, Karnalyte issued 555,555 common shares to GSFC. These shares were issued in order to satisfy a contractual obligation that from the agreement back in March 2013. Under the terms of the subscription agreement, the company was obligated to issue an additional 555,555 common shares to GSFC if commercial production had not yet commenced on or before October 1, 2016. This issuance brought GSFC's total ownership stake from 19.98% to 21.5%. Currently two of the six directors are represents of GSFC.

However with the property written off and generalized stasis in the company's operations, GSFC, has become somewhat of a prisoner at Karnalyte receiving little for its massive investment beyond a stake in a cashbox. This makes for some quite unhappy campers.

Most Recent Spinning of the Revolving Door

In the last three months the rolling of heads has gathered pace again. Amongst the departures were:

- Robin Phinney from his role as President, yet again

- Siu Ma, as Executive Vice-president and Chief Operating Officer of the Company
- Robin L. Phinney, Robert D. Banman, and Donald A. Parfitt were not reelected as directors

The Balance Sheet

As previously noted the net value of the property/plant and equipment (i.e. Wynyard) took a nosedive in the December quarter of 2014 with the auditors' writedown.

KARNALYTE RESOURCES		
CAD Millions		
	Mar-17	Mar-15
Cash and Short Term Investments	15.09	38.5
Accounts Receivable - Trade, Net	0.07	0.07
Total Receivables, Net	0.07	0.07
Prepaid Expenses	0.56	0.16
Total Current Assets	15.72	38.74
Property/Plant/Equipment	0	65.54
Accumulated Depreciation, Total	0	-61.72
Other Long Term Assets, Total	0.38	0.38
Total Assets	21.52	42.94
Accounts Payable	0.23	1.73
Total Current Liabilities	0.23	1.73
Other Liabilities, Total	0.15	0.18
Total Liabilities	0.38	1.91
Common Stock, Total	129.79	129.79
Additional Paid-In Capital	9.21	8.61
Retained Earnings (Accumulated Deficit)	-117.95	-97.37
Total Equity	21.13	41.02
Total Liabilities & Shareholders' Equity	21.52	42.94

The dramatic slide in the cash on hand is disturbing in light of the lack of work on the project. In the two years between March 2015 and the end of the latest quarter the Cash declined by $23mn, whilst the property was declared to be essentially worthless. A glance at the 1Q17 accounts shows that in that quarter alone the GS&A was $0.79mn, while for the FY16 it was nearly $7.02mn (and $9.5mn in FY15).

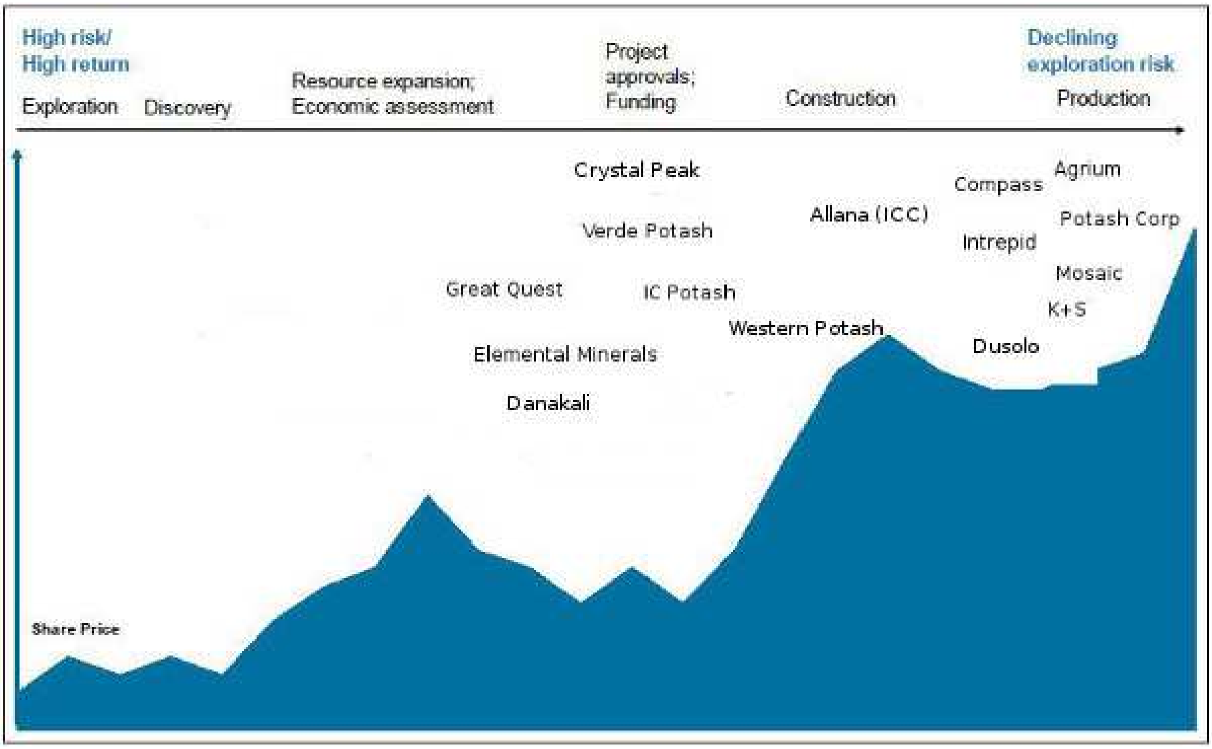
Clearly the cash balance is not being preserved for a new project but rather is being frittered away as the company has gone from lifestyle developer to lifestyle shell.

Potash Dynamics

The potash cartel has been broken in recent years and that is a good thing. It has caused some woes for the price (comparing it to the China-scare induced highs) but potassium based fertilizers should NOT be a luxury item but freely available at a reasonable price to deal with the agricultural demands of feeding the global population. If anything the moderation in the price of the main potassium-based fertilizers has played into the hands of those in the lowest quartile of capex and opex, particularly those exploiting *salares*, because it makes pursuing the deep underground projects with eye-popping capex far less viable. Thus the next ten years in the fertilizer markets will be dominated by new entrants with the lowest capex. The old model mines in Saskatchewan will become museum pieces.

The Potash Lifecycle

Unlike other specialty metal "lifecycle" charts we have produced, the one for potash/phosphates has long had a well-populated (and profitable – immensely so) right side with the cartel members firmly in control of production.



In many mining sub-sectors, this chart tends to have almost no producers and a plethora of wannabes over to the left. However in the potash space there is a healthy pack of 800lb gorillas bunched on the right, with the potential should they so choose to discipline all the other players. However with their solidarity now broken some of the more daring wannabes are likely to be transformed into real live producers, upsetting the "natural order of things" in the Cartel's outdated view. If we had looked at this chart two or three years ago most of those now in funding/permitting mode would have been in discovery mode. So this is one of the few mining sub-sectors where significant progress has been made towards production DESPITE the tough financing conditions.

Endgames

Hypothesising how this situation might evolve there is of course the nihilistic outcome which would be pottering around forever as the money whittles away and ultimately the shutters come down. The other alternative is that Wynyard somehow comes roaring back to life. The third alternative is that this cashbox "does the right thing" and merges with another up and coming Potash project to inject the cash into a scenario in which it might be better utilised to advance towards production. The ideal outcome is a synergistic one where one plus one equals three.

Conjuring with names (in order of desirability) we might humbly suggest a merger with any of:

- ✓ Potash Ridge
- ✓ Crystal Peak Minerals
- ✓ IC Potash

Risk Factors

Specialty minerals always bring the danger of wider price oscillations than larger-volume traded minerals. More critical though are financing issues in the currently tough environment for project finance.

- Weakness in the potash price either from potential over-supply or cartel actions to punish/discourage new entrants
- Financing difficulties for the project buildout
- Budget overruns and/or construction delays
- Specifically to LRN, the reappearance of the Phinney faction would be a major negative

Financing looms as the most obvious potential pitfall for projects at this time. While an element of financing outlook is dependent upon price, this can be obviated in some circumstances with financing supported by an offtaker. This company has the offtaker but due to the machinations of interlopers has never been able to turn that advantage into a project path with credibility.

Conclusion

With a market capitalization that is three quarters backed by cash in hand and the rest being the somewhat elusive value of the Wynyard property the current valuation would seem to be about right. There is no reason for a higher valuation and the main reason for a lower one would be that Wynyard was definitely lost to the company or that management dug in and refused to countenance offers for the company that freed up the cash for more useful endeavours.

The most obvious outcome here is for the company to merge with another Potash developer and combine a more doable project with Karnalyte's reasonable stash of cash to move the project faster towards production. This would also mean that Karnalyte's shareholders (particularly the Gujarati's) get to see their long term investment remain and potentially prosper in the Potash space. This is infinitely preferable to the vehicle being repurposed in some other metal that is flavour of the month or continuing to burn cash in some fruitless holding pattern waiting for Wynyard to somehow become more doable than it currently appears to be.

We regard Karnalyte Resources at current levels as a **Neutral** call solely because of the chance that its cashbox status might result in a transaction of benefit to shareholders. Our twelve-month target price is CAD$0.74.

Important disclosures

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60 Madison Ave, 6th Floor, New York, NY, 10010