

## Cyclone's development imminent

MoU to complete BFS executed

### Recommendation

**Strong BUY, High Risk**

### Price

**1.3c**

### Valuation

**6.8c**

### Products :

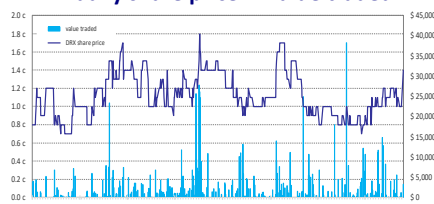
**Mineral Sands (Zircon rich)  
Silica sand**

- DRX has just announced that it had executed a Memorandum of Understanding with a subsidiary of China MinMetals to complete the BFS on Cyclone.
- DRX expect to convert the MoU into a binding Heads of Agreement by mid-November.
- In their 27 June announcement, DRX announced that the off-take agreement it is in the process of negotiating would be factored into the BFS.
- The HoA will assist DRX is sourcing debt and equity finance for the development of the Cyclone project.
- Zircon prices have been firming, rising to Beer & Co.'s projected Long Run price of US\$ 1250/t.

### Snapshot

Market Cap	\$12.4m
Cash :	fully drawn \$3m Convertible Note \$0.7m (following raising announced 31 July)
Shares on Issue	951.7m
52 Week High	1.7c
52 Week Low	0.7c
1 month / 6 month VWAP	1.18c / 0.94c

### DRX : daily share price v. value traded



DRX has 204 Mt in Measured + Indicated Resources at its Cyclone Heavy Mineral Sands deposit, which is in the east of WA, near the SA border.

Reserves total 138Mt, for nearly 1.0Mt of contained zircon.

DRX's enhancement study, which was announced in June 2016, showed a pay-back period of 2.8years.

DRX has proven water supply, a Mining Licence, Native Title clearance and Environmental Approval.

DRX has an EL at Cape Bedford, with high grade silica sands and Heavy Mineral Sands, and 50% of Tick Hill Gold project.

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### MoU to execute DFS with China MinMetals subsidiary announced

DRX has announced an MoU with China ENFI Engineering, a subsidiary of China MinMetals, to complete the BFS for Cyclone project.

This MoU is targeted to be replaced by a binding Heads of Agreement (HoA) within 60 days.

### ENFI to assist in sourcing project equity and debt

ENFI have agreed to assist in sourcing project equity or joint venture parties from within its extensive network as well as facilitating engagement with Chinese banks to assemble project financing.

### Off-take progressing

In their 27 June announcement, DRX stated that MoUs for off-take will be part of the DFS process.

### Zircon prices firming

Spot price for zircon in China were reported as being in the range of USD 1220 – USD 1245/t for 65% ZrO<sub>2</sub>, max 0.25% Ti + Fe, and supply was reported as being tight.

ILU are raising their price to US\$ 1,230/t for the 6 months from 1 October and analysts expect zircon prices to rise above \$1,300/t in 2018.

### DRX assembling all the pieces

DRX's Cyclone project is fully permitted.

DRX is progressing off-take and the project DFS together, with an announcement on a HoA for the DFS expected within 60 days.

Off-take and the DFS will facilitate debt and equity project financing, including project equity / joint ventures.

### Beer & Co conclusion : Strong BUY, High Risk

DRX continues de-risking the project.

Beer & Co.'s risked valuation is 6.8c/share, which is a multiple of the share price. We confirm our Strong BUY, High Risk, recommendation.

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## Progressing Cyclone

### Cyclone Project

Beer & Co.'s previous update of DRX, of 4 July, [DiatremeResources\\_2017July04.pdf](#), showed that DRX's Cyclone project

#### DRX's Cyclone project

- Is fully permitted, including access roads
- Has a granted Mining Lease;
- Has Native Title clearance
- Has water.

- Is fully permitted, including a Mining Lease and Native Title;
- Has an updated PFS, which will be progressed to a BFS with the appropriate partner.

The PFS has been updated.

### MoU to Execute the BFS

DRX announced a Memorandum of Understanding (MoU) with China ENFI Engineering Corporation, a wholly owned subsidiary of China MinMetals Corporation, to execute a BFS.

This will be converted to a binding Head of Agreement within 60 days.

Progressing the updated PFS to a DFS requires

- Agreement with the engineering company for final estimates; and
- Off-take agreements to determine final project details

### Implications of ENFI Agreement

#### 1. Subsidiary of China MinMetals

An agreement with a subsidiary of China MinMetals, a very large State Owned Enterprise (SOE) brings project development experience and also brings credibility to the BFS results.

The fact that ENFI has taken on this project is an endorsement of the project.

DRX is progressing both off-take and engineering

#### 2. Facilitates Off-take agreement

In their ASX announcement of 27 June 2017, DRX stated that they were in discussions with 6 parties for off-take agreements.

Having the BFS executed by a subsidiary of China MinMetals adds to the confidence that an off-taker will gain in the project.

It also brings an implicit endorsement of the project from a national perspective, avoiding the restrictions on overseas funding faced by certain Chinese companies, especially those seen as buying "trophy" assets or property development.

DRX's MoU with ENFI is to be progressed to a binding Heads of Agreement within 60 days

#### 3. Improves access to equity finance

ENFI have agreed, under the executed MoU, to assist in sourcing potential project equity or joint venture parties from within China.

This complements DRX's 27 June 2017 announcement where DRX stated that executing (an) off-take agreement(s) will be part of the DFS process.

It will facilitate access to debt and equity finance

#### 4. Improves access to debt finance

ENFI is part of a major SOE, finance from large Chinese banks will be easier to source, given the perception of competence from work by China MinMetals.

## Zircon prices firming

### Zircon prices are firming

Beer & Co.'s 4 July update on DRX outlined the reasons we expected zircon prices to firm.

### Spot prices to \$1,240/t

Since then we have seen reports of spot prices in China firming to USD 1220/t to USD 1245/t, from [Asianmetal.com](http://Asianmetal.com).

### Contract prices now \$1,230/t

On 12 September, the world's largest producer of zircon, Iluka Limited (ILU.ASX), announced that it is increasing in its Zircon Reference Price by US\$ 130/t to US\$ 1,230/t effective from 1 October 2017 for a six month period through to 31 March 2018.

## Valuation

### Cyclone

Figure 1 shows Beer & Co.'s projected operational and financial outcomes for the Cyclone project.

**Figure 1 : Beer & Co.'s projected operational and financial outcomes for Cyclone**

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
AUD/USD	0.752	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750
Zircon USD /t	1,113	1,225	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250
HITI 87 USD/t	682	752	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824
HITI 67 USD/t	292	322	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353
Final Product Volume																	
Zircon	0 kt	0 kt	25 kt	71 kt	78 kt	67 kt	52 kt	59 kt	61 kt	56 kt	51 kt	39 kt	43 kt	45 kt	45 kt	37 kt	6 kt
HITI 87	0 kt	0 kt	5 kt	15 kt	18 kt	16 kt	13 kt	16 kt	11 kt	11 kt	12 kt	9 kt	14 kt	14 kt	12 kt	11 kt	1 kt
HITI 67	0 kt	0 kt	5 kt	16 kt	20 kt	17 kt	14 kt	17 kt	11 kt	12 kt	13 kt	10 kt	15 kt	16 kt	13 kt	11 kt	1 kt
Revenue, AUD m	0	0	62	174	196	168	133	154	145	136	128	99	117	122	116	98	0
Cash Costs	0	0	(23)	(60)	(67)	(63)	(63)	(68)	(63)	(63)	(61)	(53)	(55)	(60)	(40)	(15)	(2)
<b>E B I T D A</b>	<b>0</b>	<b>0</b>	<b>39</b>	<b>114</b>	<b>129</b>	<b>105</b>	<b>70</b>	<b>86</b>	<b>82</b>	<b>72</b>	<b>67</b>	<b>46</b>	<b>62</b>	<b>62</b>	<b>76</b>	<b>83</b>	<b>(2)</b>
Dep'n & Amort'n	0	0	(5)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	(12)	0
Interest Expense	0	0	(3)	(5)	(4)	(2)	(1)	(0)	0	0	0	0	0	0	0	0	0
Tax Expense	0	0	(5)	(17)	(20)	(15)	(7)	(11)	(11)	(8)	(7)	(3)	(6)	(6)	(4)	(0)	0
<b>N P A T</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>80</b>	<b>93</b>	<b>76</b>	<b>49</b>	<b>63</b>	<b>59</b>	<b>52</b>	<b>48</b>	<b>31</b>	<b>44</b>	<b>44</b>	<b>60</b>	<b>70</b>	<b>(2)</b>
Project Cap. Ex	(5)	(63)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sus. Cap. Ex	0	0	(1)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(1)	0

Source : Beer & Co estimates

**The HoA with ENFI for the DFS plus off-take will lead to debt and equity finance for Cyclone.**

### Financing Cyclone

Figure 1 shows the projected capital cost to develop Cyclone is AUD 127m.

Beer & Co expects that the final cost will be lower as ENFI will make optimum use of Chinese plant manufacture, while previous work hinted that this could be done, but still based capital costs on known, higher cost sources.

**Beer & Co believes that the DFS could further reduce capital costs as it will reflect Chinese plant, rather than high cost plant assumed in the PFS.**

The cashflows shown in Figure 1 generate an NPV of \$A 127m one the DFS is completed.

Beer & Co assumes that DRX sells 49% of the 94% equity stake it holds in the Cyclone project, leaving DRX with a 45% stake.

Beer & Co assumes that its stake is sold at a discount to the NPV, but that the value of the stake pays for the equity required by DRX to develop the Cyclone project.

## Diatreme Resources

Figure 2 shows Beer & Co.'s resulting risked, NPV based valuation of DRX.

**Figure 2 : Beer & Co.'s risked valuation of DRX**

Beer & Co.'s risked, base case valuation of DRX is 6.8c, which is many times the current share price

discount rate = 12.0 %	risk :	31-Dec-16		12-Sep-17		
		100%	Product	per share		
	Cyclone	80 %	\$ 53m	\$ 43m	4.2 c	4.2 c
	franking credits	50 %	\$ 12m	\$ 6m	0.6 c	0.6 c
	Cape Bedford	nom	\$ 5m	\$ 5m	0.5 c	0.4 c
	Tick Hill	nom	\$ 4m	\$ 4m	0.4 c	0.4 c
	Corporate	100 %	(\$23m)	(\$23m)	(2.2c)	(2.1c)
	Exploration	80 %	\$ 0m	\$ 0m	0.0 c	0.0 c
	Asset Sales	80 %	\$ 39m	\$ 31m	3.0 c	0.8 c
	Cash to be raised	100 %	\$ 2m	\$ 2m	0.2 c	0.2 c
	Cash	100 %	(\$2m)	(\$2m)	(0.2c)	2.4 c
	<b>TOTAL</b>		<b>\$ 92m</b>	<b>\$ 68m</b>	<b>6.4 c</b>	<b>6.8 c</b>
	Shares on issue		876.7m	FPO shares	83.0m	options
			75m	Issued in 2017	75.0m	ex'd
			75m	Issued later		

Source : Beer & Co estimates

## Conclusions

DRX is progressively de-risking the Cyclone project

The rising zircon price helps.

but risks remain

ILU's share price tends to lead the DRX share price

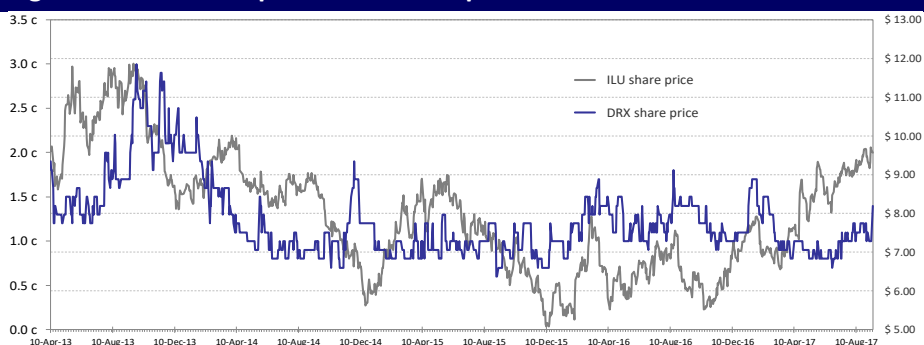
ILU's share price has been rising

There are 3 major risks to Beer & Co.'s valuation and recommendation on DRX :

- (i) Zircon price, which is now firming;
- (ii) Project financing and execution, which has been significantly de-risked by DRX's announcements of 27 June and 11 September; and
- (iii) Sale of project equity, on which Beer & Co remains confident but acknowledges is the most significant risk remaining.

Figure 3 shows that the DRX share price has tended to follow the ILU share price, with a lag, and the recent trend of the LIU share price has generally been up.

**Figure 3 : DRX share price v ILU share price**



Source : IRESS, Beer & Co

## Recommendation

Beer & Co affirms our Strong BUY, High Risk, recommendation

Beer & Co.'s base case valuation is a significant multiple of the current share price.

While there is significant risk in our base case valuation, Beer & Co believes that we have allowed for these risks and still have a sufficient margin to warrant a Strong BUY.



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The analyst responsible for this research report certifies that all of the views expressed reflect his personal views about the securities and the issuer.

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Beer & Co provide general recommendations only and do not consider the specific interests of the recipient of this report. Beer & Co generally provides a 2 part recommendation and both need to be considered together.

Recommendation : Beer & Co.'s investment recommendation is driven by the difference between our base case, risked valuation and the share price at the time. A Strong BUY recommendation means a very large difference (eg. over 100%), while BUY means a significant difference and Accumulate means a small, but positive difference. The recommendation is not independent of the uncertainty in Beer & Co.'s valuation.

Risk : Risk relates to the potential, over the long run, for an investor to lose money; it is a function of both the difference between our base case valuation and the uncertainty in our valuation due to the degree of estimation and/or uncertainties about project execution. Speculative means a high chance of loss; High risk means a good chance of loss and medium means some chance of loss, given the company size.

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