

### STATE OF THE MARKET

VRX	SUV	DRX	ASQ	PEC
\$132.2m	\$96.9m	\$64.4m	\$29.5m	\$63.9m

ASX Market Capitalisations as at 05.08.2021 06:40am WST

5 AUGUST 2021

### THE SILICA SAND SECTOR IN AUSTRALIA

#### WHO ARE THE MAJOR PLAYERS AND WHAT ARE THEY DOING?

A recent article published by *Evolution Capital Advisors* reviewed this resources sector and the snapshot they presented is fascinating reading.

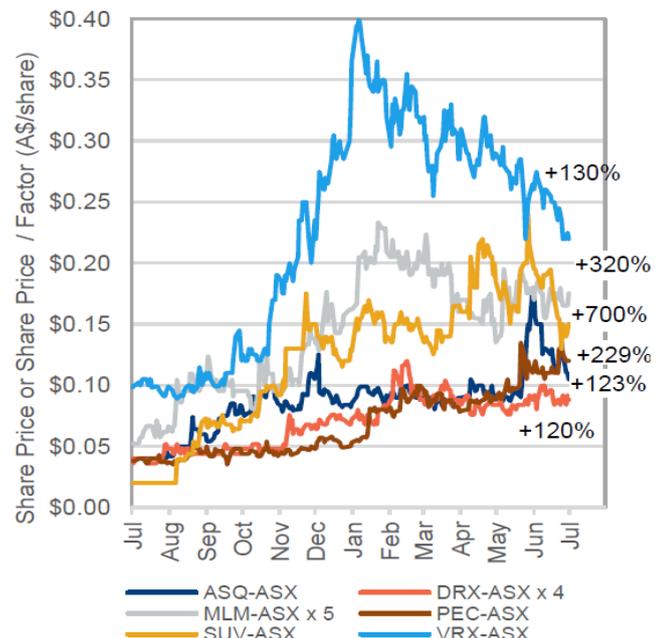
#### Generally...

Currently there is booming demand for this finite resource, even though, technically speaking, silica is one of the most plentiful, naturally occurring minerals on the Earth. High grade silica sand is however, relatively rare, and it is this high-purity sector of the sand market that is experiencing the strongest growth.

High-purity sand is required for making both flat glass and container glass, as impurities such as sulphides and iron will cause imperfections. High-tech applications such as fibre-optics, LCD panels, LED lights and solar panels require ultra-clear glass produced with high purity silica sand. The ethical supply issues are also driving demand from countries that can demonstrate environmentally sustainable extraction and processing.

Market research firm IMARC Group previously estimated the global silica sand market could grow from \$US7 billion in 2018 to \$US20 billion in 2024.

### SECTOR RESEARCH CONDUCTED AS AT 26TH JULY 2021



## Specifically...

There are several quality silica sand projects in Australia that are either in production or progressing through the exploration and development process.

In northern Queensland, Mitsubishi currently produces sand from its **Cape Flattery Silica Sands** (CFSS) mine. Adjacent to this mine, both **Diatreme Resources Ltd** and **Metallica Minerals** (ASX: MLM) have exploration tenure and have delineated high purity silica sands resources comparable to CFSS.

In Western Australia, **Australian Silica Quartz Group Ltd** (ASX: ASQ) has secured three silica sand projects in the areas of Albany, Gingin and Esperance. Whilst also in Western Australia, **Suvo Strategic Minerals Ltd** (ASX: SUV) is working towards delineating a maiden mineral resource at the Nova silica sand project close to Eneabba, and **Carbine Resources Ltd** (ASX: CRB) has acquired the Muchea West silica sand project (directly west of the VRX's Muchea project). Finally in the same region between Dongarra and Eneabba, **Perpetual Resources Ltd** (ASX: PEC) with its Beharra project (PFS Mar 2021) and VRX Silica Ltd (ASX: VRX) with its Arrowsmith project (BFS Aug 2019) appear to be the closest to start delivering products to market.

## Their Paths to Production

Beyond progressing the technical and financial studies, the environmental and regulatory approvals are key to start production and to begin exporting. Amongst these major companies PEC and VRX are currently the most advanced.

Company	VRX Silica	Perpetual	Diatreme	Metallica	Silica Quartz	Suvo
Code	VRX	PEC	DRX	MLM	ASQ	SUV
Key project	Arrowsmith	Beharra	Galalar	Flattery	White Hill	Nova
Mineral Resource	771 Mt	139 Mt	31 Mt	38 Mt	12 Mt	-
Ore Res./ Mining Inventory	204 Mt	64 Mt	14 Mt	-	-	-
Scoping Study	↓	↓	Sep-19	↓	Q3 2021	
PFS	↓	Mar-21	↓	Q3 2021		
DFS	Sep-19	<i>in progress</i>	Q4 2021	Q1 2022		
Mining Lease Approval	✓	<i>in progress</i>	<i>in progress</i>	<i>in progress</i>		
Environmental Approvals	<i>in progress</i>	<i>in progress</i>	<i>in progress</i>	<i>in progress</i>		
Initial Capex	A\$26m	A\$39m	A\$24m		<A\$5m	
Throughput/Production	2 Mtpa	1.5 Mtpa	0.95 Mtpa		0.5-1.0	
Gearing	ungeared	40%	n/a			
Silica Sand Price (FOB)	A\$50-66/t	A\$67/t	US\$107/t			
Cash Cost (FOB)	A\$28/t	A\$43/t	A\$58/t			
Post-tax NPV ( <i>or pre-tax</i> )	148	236	231			
Post-tax IRR ( <i>or pre-tax</i> )	60%	77%	150%			
Mine Life (years)	25	32	15			
		2 MOU	MOU			
Off-take Agreements	<i>in progress</i>	(0.4+0.6 Mt)	(0.25 Mt)			

Source: company announcements. NPV and IRR are pre-tax for DRX. NPV for VRX used a 20% discount rate.

## Their Valuation

All the listed companies in the silica sand sector have experienced significant share price appreciation over the last twelve months. Subject to delivering key milestones and completing the construction of their project in a reasonable timeframe, all companies should continue to perform well.

## And, What About Us...

Allup Silica's journey is still progressing...



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