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# OFF-SHORE BULK COMMODITY LOADING INNOVATION TRIALLED SUCCESSFULLY

Believed to be a world-first, a South Australian-developed innovation to load containerised iron ore from a land base to an off-shore vessel has been successfully trialled in seas off the Adelaide coast at Largs Bay.

Developed in South Australia by IronClad Mining Ltd – an Australian company on the verge of mining iron ore from SA's Eyre Peninsula - the "multi-user" system has the unique flexibility to be used for transhipment of bulk commodities other than iron ore - such as various grains.

The Company believes the innovation has the potential to revolutionise the way some bulk commodities are loaded onto vessels for export – anywhere in the world.

Today's announcement follows a decision by the South Australian Government late last week to give the green light to amendments to IronClad's existing port approvals (under Section 49 of the SA Development Act), which the Company sought, in order to reduce capital costs for the project.

"This world-first style of off-shore transhipment operation has been designed, developed and fine-tuned exclusively in South Australia," IronClad Mining Chief Executive Officer, Mr Robert Mencel, said today.

"We are not aware of anywhere else in the world where this same system is in operation, and believe it has the potential to revolutionise the loading of some bulk commodities onto offshore anchored vessels," he said.

"IronClad has had to think outside the square to successfully develop this system".

"Many of the individual technologies are in common use in operations all over the world".

"What we have done is combine them into one seamless operation by making specific adjustments to ensure they work efficiently in an off-shore environment. It has become an intellectual property that has already attracted the attention of other companies".

"Not only has the system afforded us the opportunity to make some significant cost savings to our iron ore transport and shipment costs, but it has also resulted in significant environmental and safety improvements".

IronClad plans to utilise the system, initially, to transport low cost, high value Direct Shipping Ore (DSO) from its Wilcherry Hill iron ore project near Kimba, on the State's Eyre Peninsula, to a vessel positioned seven nautical miles off Lucky Bay, in SA's Spencer Gulf.

The DSO will be transported initially by road from the mine site to a stockpile storage facility approximately 1.5km from the port of Lucky Bay, which is located about 120 kilometres south of Whyalla. From there it will be loaded into air-tight containers and tractor transported to the portside hardstand before being loaded by crane onto dumb

# ASX Announcement



barges. Tugs will then take the barges about seven nautical miles out to sea where a barge mounted crane –will be moored. The floating crane will then load the ore from the containers into Panamax or Cape-sized vessels anchored alongside it. The containers are lifted from the barge utilising custom made "Rotainers" fitted to the crane and lowered into the ship's hold. Here the rotainers tip the containers upside down, emptying their contents. A dust suppression system on the vessel will assist in minimising dust emissions. The loading vessel will be anchored in such a position that its hull creates a "lee" - or calmer water – against the wind and swell, ensuring the floating crane and barges can safely operate in most weather conditions.

To become fully operational, the system requires the purchase or lease of two dumb barges, a barge mounted crane, two tugs and approximately 300 containers, in which the ore will be transported out to sea. Discussions are in progress with specialised lending institutions to fund the acquisition of the port fleet.



Container being lifted from dumb barge by use of floating crane and IronClad's custom built rotainer



Container being rotated, delivering ore to "ship's hold"

To view the Sea Trial Video, please type the following into your web browser: **ironcladmining.com/homepage** and click on link, middle of screen.

# **BACKGROUND INFORMATION**

The Wilcherry Hill project is an 80%:20% joint venture between IronClad and Trafford Resources (ASX: TRF) and was formed to develop an iron ore mine on the joint venture tenements.





Mining is planned to proceed in three stages with progressive increases in production, commencing at approximately one million tonnes a year. The Joint Venture plans to commence production by mining and exporting the near surface, high grade magnetite (DSO) together with ore which can be easily and cheaply beneficiated by the dry magnetic separation method (DMS). Stage Two will commence with the introduction of a relatively inexpensive gravity separation unit for ore that is neither direct shipping grade nor amenable to upgrade by DMS. Stage Three will see the development of the massive Hercules deposit.

The South Australian Government last month approved IronClad's proposed amendments to its existing transshipment approval, which the Company expects will introduce significant operating cost savings by reducing the distance from the port to the offshore transhipment point from ten nautical miles to seven nautical miles.

Both amendments were sought after a thorough review by IronClad of the Wilcherry Hill project identified a number of significant cost-savings areas.

"The system we have developed is a flexible, low capital, cost-effective, export solution for a range of commodities not just our iron ore – that has the potential to be used in an off-shore environment anywhere in the world," Mr Mencel said.

"You don't have to build deep sea ports worth hundreds of millions of dollars to export your commodities to market".

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