

ASX CODE: IFE

#### DIRECTORS

Robert Mencel Managing Director

lan Finch Executive Chairman

**Neil McKay** Company Secretary and Non-Executive Director

Peter Rowe Non-Executive Director

SHARE REGISTRY

#### Advanced Share Registry Services 150 Stirling Highway

Nedlands WA 6009 T: +61 8 9389 8033 F: +61 8 9389 7871

#### **REGISTERED OFFICE**

Level 2 679 Murray Street West Perth WA 6005 P: +61 8 9485 1040 F: +61 8 9485 1050

#### **PRINCIPAL OFFICE**

307 Pulteney Street Adelaide SA 5000 P: +61 8 8224 0411 F: +61 8 8227 0411

# Quarterly Report 31 March 2014

## **Highlights**

30 April 2014

- Continued Manganese Exploration success at Wilcherry Hill. Drilling highlights (*IFE ASX Release 28<sup>th</sup> January 2104*) include
  - 12m @ 20.72% Mn (14HCRC001, 59-71m downhole)
  - 11m @ 29.90% Mn (14HCRC006, 65-76m downhole)
  - 17m @ 22.40% Mn (14HCRC007, 49 66m downhole)
- The company's significant and growing manganese exploration success and its synergies with the Wilcherry Hill Iron Project significantly strengthen the value and merits of the combined Iron and Manganese Projects.

# Wilcherry Hill Project

#### LUCKY BAY COMMON USER EXPORT FACILITY (CUEF)

Work continued in the quarter with IronClad focusing on the detailed design of the landbased facilities and Sea Transport Ltd working on completing design of the marine infrastructure.

License negotiations were initiated with the Environment Protection Authority (EPA) to finalise the operating licenses required for the project. The projects development approval stipulated the majority of the operating conditions.

Sea Transport Ltd, as the nominated port operator for the Lucky Bay CUEF is progressing negotiations with SA Government Minister for Transport over the granting of a formal Port Operating Agreement for the CUEF through the Harbours and Navigation Act.

#### MINING APPROVAL

As reported in the previous quarterly IronClad currently has its approvals in place for mining operations.



# EXPLORATION ACTIVITES – Ironclad / Trafford Resources JV - Tenements (EL 5164, 5299, 4286 & 4421)

#### Overview

During the March quarter the Company's focus for exploration was on evaluating the manganese potential of its Hercules East and Pier Dam Prospects. Exploration included historical data compilation, review of available geophysical data, ground magnetometer surveying, and acquisition of digital aerial photography, lag geochemical sampling, reverse circulation drilling and commencement of geological mapping.

A highlight of this quarter's exploration activity was the reverse circulation drilling completed at the Hercules East Prospect. Encouraging intercepts of manganese mineralisation were recorded confirming the potential of the north trending +3km manganiferous zone. Drilling highlights included 12m @ 20.72% Mn (14HCRC001, 59-71m downhole), 11m @ 29.90% Mn (14HCRC006, 65-76m downhole) and 17m @ 22.40% Mn (14HCRC007, 49 – 66m downhole) (*IFE ASX Release 28<sup>th</sup> January 2104*).

The process of compiling identified exploration targets with potential to host near surface high grade iron resources to supplement the proposed mining operation at Wilcherry Hill was completed.

Information on these activities is summarised in this report.

The Company reports its exploration activities and results in accordance with the JORC 2102 guidelines. Exploration activities that are considered material to the Company will be announced to the ASX separately to the Quarterly Report on Activities. Any activities below that do not refer to a separate ASX announcement are not considered material to the Company.

#### **Iron Exploration**

The process of compiling exploration targets with potential to host near surface high grade iron resources to supplement the proposed mining operation at Wilcherry Hill was completed. This project, commenced in mid-2013, has generated prioritised drill targets (Figure 1) required to build the resource base that will sustain a long term DSO / DMS mining operation. Drilling of any targets will be undertaken once mining operations commence.

Cultural Heritage Clearance Surveys of 6 drill target areas are planned in advance of any drilling being undertaken.



Figure 1 IronClad Mining JV Tenement and Prospect Overview – prioritised drill targets identified by black crosses (image is total magnetic intensity)

#### **Manganese Exploration**

Exploration for manganese continued with a focus on the Hercules East and Pier Dam Prospects (Figure 2). Both these prospects lie within the Joint Venture's 100% owned Eurilla Dam EL 5164 tenement approximately 15km east of the Company's Wilcherry Hill iron deposit.

Basement geology within the prospect areas is interpreted as the Middleback Subgroup, which is part of the Palaeoproterozoic Hutchison Group metasediments. The prospective host stratigraphic units are considered to be quartzite, banded iron formation and dolomite units within the Hutchison Group.





Figure 2 Pier Dam and Hercules East Mn Prospect Location Plan (image is total magnetic intensity)

## Hercules East Mn

A 7 hole 666m reverse circulation drill program was completed in January 2014 (Figure 3). A summary of the results is presented below. Background to the program and detailed results can be found in the Company's releases to the ASX on the 28/1/2014 and 3/2/2014.

The program was designed to follow up highly anomalous manganese (Mn) mineralisation (22m @ 22% Mn) intersected in hole 13HCRC026 during a Jan 2013 drilling campaign testing for northern and eastern extensions of the Hercules Iron (Fe) prospect Inferred Resource.

Six holes were drilled to the east and one to the west azimuth to confirm geological assumptions.

The nominal 50m x 50m spaced program on three sections confirmed the original anomalous Mn intercept and established the presence of manganese mineralisation over a strike length of +100m. Drilling to extend the strike length to +500m is planned for the June quarter.

Four of the holes intersected anomalous Mn mineralisation. Significant downhole intercepts are listed below in Table 1. The striking feature is the broad (up to 78m) downhole manganiferous zones intersected (14HCRC001, 006 & 007 – Table 1) that illustrate the size of the potential mineralised system being explored.

Banded iron formation (BIF) stratigraphy was intersected in all holes. The current interpretation is of a moderate west dipping, folded and north striking stratigraphic package. This BIF sequence is host to supergene enriched Mn mineralisation (pyrolusite). Drillhole 14HCRC001, 006 & 7 (Table 1) are examples highlighting broad low grade manganiferous zones with enrichment at the +50m depth. The Mn is interpreted to be derived originally from underlying manganese rich carbonates.

# **ASX Announcement**



	Depth (m)		Length							
Hole ID	From	То	(m)	Mn%	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P%	S%	LOI%
14HCRC001	0	78	78	10.69	21.37	37.64	5.27	0.105	0.026	9.16
includes	2	6	4	18.02	19.00	25.11	6.04	0.049	0.093	12.34
includes	17	21	4	16.22	23.26	21.36	6.49	0.086	0.016	12.93
includes	59	71	12	20.72	20.87	24.40	2.60	0.154	0.027	10.87
14HCRC003	110	116	6	17.57	14.92	23.10	2.31	0.056	0.223	25.26
includes	112	116	4	20.26	14.91	16.54	2.46	0.050	0.231	27.97
14HCRC004	62	66	4	20.45	16.45	27.49	7.61	0.153	0.034	10.54
14HCRC006	37	76	39	16.08	23.44	30.42	2.75	0.262	0.021	9.18
includes	37	42	5	21.01	28.67	17.00	1.58	0.180	0.017	9.73
includes	49	54	5	17.55	11.05	51.68	0.66	0.178	0.015	6.60
includes	65	76	11	29.90	21.05	12.15	2.25	0.363	0.020	11.39
14HCRC007	16	66	50	12.14	22.19	36.57	4.40	0.132	0.020	8.74
includes	44	47	3	11.93	30.74	27.98	2.26	0.088	0.020	7.47
includes	49	66	17	22.40	18.59	29.45	1.91	0.156	0.023	9.21

Table 1 Composite Intercepts above a 10% Mn cut off and 3m downhole width







Figure 3: Location of Hercules East Drillholes

## Lag Geochemical Survey

Positive results from an orientation lag geochemical survey followed up by the successful January 2014 drilling campaign highlighted the potential of lag geochemistry to define Mn anomalous zones for follow up evaluation.

A 200m (NS) x 50m (EW) sampling program was completed during the quarter over the eastern and northern parts of Hercules. In total 633 samples were collected and submitted for analysis. Sample locations points are shown in Figure 4. Interpretation of results will be reported in the next quarter.

#### Subsequent Events

Interpretation of the lag manganese geochemical survey completed (ASX Release 29<sup>th</sup> April 2014).

# **ASX Announcement**





*Figure 4 Hercules East location of lag sample sites (black dots) plotted on topographic contours. Blue stars represent historic / current drillholes where Mn > 5% over 3m downhole.* 



#### **Pier Dam**

Historically, significant manganese mineralisation has been noted at this prospect since the late 1970's by previous explorers and more recently by Trafford Resources Ltd and IronClad Mining Ltd as part of its exploration for iron. High grade manganese values ranging from 15.5% - 42.3% Mn have been recorded from manganese oxide outcrops.

Compilation and review of historical exploration data, acquisition of digital aerial photography and ground magnetic data has now been completed. Manganese mineralisation in outcrop and subcrop is evident throughout the prospect and forms 5 distinct northwest trending corridors varying between 2km and 8km in length.

Figure 5 illustrates the manganese corridors delineating the interpreted outcropping manganese oxide mineralisation. Geological mapping is underway to verify and sample the corridors. Overall prospectivity will be determined once this is completed allowing for drill target definition and prioritization.



Figure 5 Pier Dam Prospect, NW trending Mn zones delineated (dashed black lines & black crosses)



#### Lucky Bay Infrastructure

Detail design of the Lucky Bay dock and onshore infrastructure is complete. Sea Transport, the owner of the Lucky Bay harbour, is progressing with its detail design of the harbour extension, a deepened existing harbour and the approach channel from Spencer Gulf.

IronClad has completed design of the offshore mooring to anchor both Panamax and Cape size ships at the approved location 5.5 and 8 nautical miles respectively offshore from port at Lucky Bay. Options for supply of the marine fleet for transhipping operation continue to be evaluated including a recent inspection of a crane barge operating in Kalimantan.

Designs for upgrades to public roads to allow use of double road trains on the ore haulage route from Wilcherry Hill mine to the port have been completed.

#### Financing

To commence Stage One of the Wilcherry Hill Iron Ore Project, Ironclad Mining is seeking approximately \$22m in project and working Capital. The majority of this capital is required for the construction of port and road infrastructure. To fund this capital, IronClad has three possible sources of funding; debt, equity or pre-payment.

To secure debt funding in the current iron environment would require the use of financial hedging instruments to "lock in" fixed forward prices and exchange rates. Forward swap prices are considerably lower than current spot prices making debt funding particularly unattractive.

Equity remains an option, however this is the least preferred source of capital.

Due to the project's relative short construction timeframe, the potential to receive shipment pre-payment for ore remains an option. Typically this would require ore to be delivered within 6 months of receiving the pre-payment. The prepayment of ore avoids the need to lock in unattractive forward swap prices.

During the quarter discussions were held with a number of potential investors and trading companies interested in securing long term iron ore off take agreements with IronClad. The off take agreements being sought by Ironclad include a provision for funds to be advanced as shipment pre- payments to assist with project start-up costs.

A number of interested parties are reviewing the Stage 1 Wilcherry Hill Project data and discussions are ongoing.

The Research and Development Rebate for year ended 30 June 2013 of \$3.2 million was lodged and notification of approval was received during the quarter.

#### **Marketing and Shipping**

The 57m powered transhipping barge currently under construction in Guangzhou, China is nearing completion. Ongoing delays as a result of Chinese regulatory reviews and approvals of imported barge equipment have now been resolved. The barge is currently being offered for sale. An offer has recently been received and negotiations with the potential buyer are underway.

#### Health, Safety, Environment and Community Performance

There were no health and safety incidents for the quarter. Similarly there were no environmental or community complaint events reported in the quarter and statutory compliance monitoring was carried out on schedule.

# **ASX Announcement**



#### Pier Dam Indigenous Access Survey

The identification of Manganese potential at Pier Dam and further Iron ore targets in the area around the current mining lease has resulted in plans to conduct an extensive exploratory drilling program. To allow this to be carried out an indigenous access survey of target areas on the relevant exploration leases is required.

In January 2014 preliminary discussions were initiated with the Gawler Ranges Aboriginal Corporation (GRAC). Subsequent meetings were held with GRAC and South Australian Native Title Services (SANTS) in February to plan a clearance survey program, leading to the submission of a formal survey access request in February 2014.

In March IronClad presented to the GRAC board outlining the current status of the Wilcherry Hill project and detailed the scope of the proposed exploration program. GRAC are currently reviewing potential dates and selecting a survey team for a clearance survey which is likely to take place early in the second quarter 2014.

#### Interests in mining tenements at the end of the quarter

South Australia Tenement Schedule							
Exploration License Number	Tenement Name	<b>Registered Holder</b>	Beneficial Interest %				
4286	Valley Dam	Trafford Resources Limited	80% of iron ore				
4421	Peterlumbo	Trafford Resources Limited	80% of iron ore				
5164	Eurilla Dam	Trafford Resources Limited	80% of iron ore				
5299	Wilcherry Hill	Trafford Resources Limited	80% of iron ore				
Mining Lease Number	Tenement Name	Registered Holder	Beneficial Interest %				
6390 Wilcherry Hill		IronClad Mining Limited	80% of iron ore				

#### Competent Person Statement

The information in this announcement that relates to exploration results is based on information compiled by Chris Mroczek, who is a Member of The Australasian Institute of Mining and Metallurgy and who has more than five years' experience in the field of activity being reported on and is the Chief Geologist of the Company.

*Mr.* Mroczek has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Mroczek consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### DISCLAIMER

This report contains certain forward-looking statements. The words 'anticipate', 'believe', 'expect', 'project', 'forecast', 'estimate', 'likely', 'intend', 'should', 'could', 'may', 'target', 'plan' and other similar expressions are intended to identify forward-looking statements. Indications of, and guidance on, future earnings and financial position and performance are also forward-looking statements.

Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of IronClad, and its officers, employees, agents and associates, that may cause actual results to differ materially from those expressed or implied in such statements.

Actual results, performance or outcomes may differ materially from any projections and forward-looking statements and the assumptions on which those assumptions are based.

You should not place undue reliance on forward-looking statements and neither IronClad nor any of its directors, employees, servants or agents assume any obligation to update such information.

- ENDS -

# IronClad Mining

Ian Finch Exec. Chairman P +61 8 9485 1040 Robert Mencel Managing Director P+61 8 8224 0411



# AUSTRALIAN MINING TENEMENTS As at 31 March 2014

# Interests in mining tenements relinquished, reduced or lapsed during the quarter

None.

# Interests in mining tenements acquired or increased during the quarter

None.

## Interests in mining tenements at the end of the quarter

South Australia Tenement Schedule						
Exploration License Number	Tenement Name	Registered Holder	Beneficial Interest %			
4286	Valley Dam	Trafford Resources Limited	80% of iron ore			
4421	Peterlumbo	Trafford Resources Limited	80% of iron ore			
5164	Eurilla Dam	Trafford Resources Limited	80% of iron ore			
5299	Wilcherry Hill	Trafford Resources Limited	80% of iron ore			
Mining Lease Number	Tenement Name	Registered Holder	Beneficial Interest %			
6390	Wilcherry Hill	IronClad Mining Limited	80% of iron ore			