



Date of Lodgement: 10/1/12

# **IronClad Mining Limited**

Title: "Company Insight – Significant Milestone at Wilcherry Hill Iron Ore Project"

# **Highlights of Interview**

- Final Statutory Approval obtained for Wilcherry Hill Iron Ore Project
- Likely first production in March quarter 2012
- Bank funding on track for Stage One of the Project
- Views on Under-Valuation of Company

#### **Record of interview:**

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IronClad Mining Limited (ASX code: IFE; market cap ~\$50m) has just received approval from the SA. Government for IronClad's Program for Environmental Protection and Rehabilitation for Wilcherry Hill, the iron ore joint venture between Trafford Resources (20% - ASX: TRF) and IronClad (80%).

Is this the final statutory approval to allow you to start producing your first ore?

### **Executive Chairman, Ian Finch**

Yes. On Christmas Eve the SA Government announced approval for IronClad's Program for Environmental Protection and Rehabilitation for Wilcherry Hill. This was our final statutory hurdle. On January 3<sup>rd</sup> we notified preferred tenders and we are now preparing to start mobilising the crushing plant and constructing the Dry Magnetic Separation(DMS) plant which will enable IronClad to produce up to one million tonnes of premium grade Direct Shipping Ore (DSO) in the first year of Stage One of the project. This is the low cost start-up of the first stage of an iron ore project which we will grow, in three stages, into a large scale, long life project.

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You expect first production in the March quarter 2012. That seems extremely quick. Can you explain why this is possible, and what are the main tasks?

#### Ian Finch

There is no major construction phase for Wilcherry Hill. Most of the processing plant is mobile with its own accompanying power sources and can quickly be put in place. The only significant construction is the DMS section of the plant and the main component parts (the magnets) were ordered some time ago, while the civil structure to house them is currently under construction in the USA.

We have already completed most of the mine access roads and the plant site works will commence immediately. We have already completed the accommodation village for the workforce.

Our aim to generate cash flow as soon as possible.

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Can you reiterate the production from each stage of the project, the type of ores you will export and the ore bodies you will mine over each stage?

## **Executive Chairman, Ian Finch**

The project will start as a relatively small, premium grade mine then will rapidly expand over three stages to a total iron ore production target of 10-12Mtpa.

After Stage One of DSO and near-DSO production, which will ramp up to 2Mtpa over two years, Stage Two will focus on the remainder of the crystalline magnetite from our existing 69Mt Wilcherry Hill resource (refer note 1). We will also commence further drilling to extend this Stage Two resource when Stage One production has commenced.

Stage Two is anticipated to increase iron ore production to 4-5Mtpa.

Stage Three will shift production to the nearby Hercules deposit which has a current JORC inferred resource of 198Mt. We see Hercules is the long-term future of the company, and the exciting part is that it is in a Banded Iron Formation (BIF) which extends over about 10 kilometres. Since the current inferred resource estimate of 198Mt is based on drilling the first 2 kilometres, this gives an indication that the potential is in the region of 1.5 to 2 billion tonnes of ore in the ground. We will recommence our resource drilling at Hercules as soon as production is underway.

Our eventual production target is 10-12Mtpa but it is likely that Hercules could support more than that, particularly if (as seems likely) direct shipping hematite is discovered during the next drilling phase (refer note 2).

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How do you see next quarter's FOB prices? At those approximate iron ore price levels, what annual cash flow do you expect?

#### Ian Finch

Our feasibility study for Stage One of the project established that, with an average iron ore price of A\$135 per tonne FOB (net of freight charges) into China and initial operating costs of around \$85 per tonne, the project would provide IronClad with strong margins of approximately A\$50 per tonne and an operating cash flow of around A\$80 million per year at full production during the first stage. We see no substantial let up in the increasing demand from China and other Asian countries. China alone is forecasting a 100% increase in seaborne iron ore imports to 800 million tonnes, from the current 400 million tonnes, by 2015. The majority

of this will produce steel for internal infrastructure demands. The larger producers are unlikely, on their own, to meet these requirements.

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What amount of additional capital is required to get the first ore onto the ship? How will you fund those capital requirements?

#### Ian Finch

Having raised approximately \$17 million in equity finance at the beginning of 2011, we were able to commence the funding of long lead time items, and also undertake an "early works" programme, concentrating on the main access road between Kimba and the Mine Site. We were also able to build our accommodation village in Kimba, which will house a workforce of up to 80 people. Early works included acquisition and refurbishment of our own tug.

It has been our intention to raise the majority of the remaining capital requirements through borrowings, since the Stage One project is financially robust and early repayment to financial institutions is achievable.

We have been working to this end with a number of banks. Whilst we fully expect bank finance to become available - probably later in the quarter - there will be a requirement for the Company to enter into some form of interim finance in order to maintain its momentum towards production.

The majority of short to medium term funding revolves around the working capital required prior to first receipts from sales. This is anticipated to be in the order of \$10 to \$12 million.

Whilst finance is required to complete the DMS circuit (about \$5 million), the majority of the capital (other than working capital) relates to shipping costs such as containers, site works at the port of Lucky Bay and final purchase of the barge and is a slightly lower priority.

The ore will be trucked to port via a direct existing road link to Lucky Bay, the majority of which is bitumen road.

In all, the Company anticipates that funding of the full capital requirement of \$40 Million for Stage One of the project will be obtained as outlined over the next 3 to 4 months.

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IronClad is planning some innovative features to advance the project such as constructing a floating harbour and producing DSO magnetite ore. To what extent have these innovative plans been accepted, or met with scepticism?

#### Ian Finch

IronClad has received worldwide attention for its innovative approach to Wilcherry Hill, notably for the production of premium grade DSO from crystalline magnetite iron ore and for the floating harbour project.

Regarding the DSO magnetite, there are some who might argue we are upgrading by crushing and screening, but in fact most ores go through similar processes in preparation for sale to market. Our

crystalline magnetite has excellent qualities for crushing and screening, and as blast furnace feed. For that ore which is not upgraded to DSO specifications through crushing and screening, we add the magnets at the end. That is the extent of our processing. It is very simple.

As for the floating harbour, it is a unique concept which has captured people's imagination in Australia and worldwide. This feature will cut road and rail transport distance from mine to port for IronClad ore by about 350 kilometres. Port Adelaide was originally the most viable port, despite being over 500 kilometres from the mine site. However, the chosen port of Lucky Bay, near Cowell on South Australia's Spencer Gulf, is only 156 kilometres from the mine site, and is linked directly to the mine, mostly by bitumen road.

This is a huge cost saving for IronClad.

Because of this, the floating harbour is of particular interest to all of Australia's aspiring iron ore producers without ready access to existing export ports, and to the State Governments which are trying to fund these ports.

IronClad is developing the floating harbour in collaboration with Sea Transport Development SA Pty Ltd, which is the proponent of the port facility at Lucky Bay. It will be located approximately ten kilometres offshore from Lucky Bay and is expected to be operational within two to three years, in readiness for the start of Stage Two of the Wilcherry Hill Project. The floating harbour will be serviced by two companyowned barges that are self-propelled (i.e. they do not use tugboats).

Until the floating harbour is operating IronClad will be transporting ore 156 kilometres by road to Lucky Bay, and then transporting it by barge to Panamax (~70,000 tonne) vessels anchored five to ten kilometres offshore in Spencer Gulf.

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What do you see as the main challenges for the project overall, including issues such as power, water, transport, workforce, processing, funding, acceptable marketing terms and iron ore markets in general?

# Ian Finch

Over nearly five years, we have recognised and overcome nearly all of the issues and hurdles that you raise. It is, I suppose, always those issues outside of one's direct control, such as markets and pricing, which are the main ongoing causes for concern. Nevertheless, we believe we have factored in an appropriate market scenario in the outlook that I've described above.

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You have been bullish about the prospects of the project and particularly the forecast cash flows relative to IronClad's current market capitalisation. What is your view on why the project hasn't gained "share market traction"? Can you summarise why you are enthusiastic about the project despite the pause in iron ore markets and the generally tough world economic conditions?

#### Ian Finch

IronClad's current market capitalisation does not stand to reason given the company's future and I believe that it will change when we prove our credibility as a producer to the markets.

You cannot have a company that is projecting, even in the short term, to be making somewhere in the region of \$160 to \$200 million or more in its first three years with a market capitalisation of about \$50 million. It simply does not compute.

We've done many innovative things, such as marketing magnetite as DSO and developing the floating harbour, to maximise shareholder returns from the development of Wilcherry Hill. It may be part of the problem – we are operating outside of the box and that naturally causes some scepticism. But I am confident that there will be a tipping point, probably when we load our first ships.

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Thank you, Ian.

# **Competent Person**

The information in this announcement that relates to results, is based on information compiled by Ian D. Finch, 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 Executive Chairman of the Company.

Mr. Finch has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Finch consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Note 1

WEEDNANNA RESOURCE								
Classification	Wireframe	Tons (mt)	Fe %	Sg	Sio2 %	Al2o3 %	P %	Loi
	15% <fe<40%< td=""><td>15.7</td><td>20.75</td><td>2.87</td><td>35.91</td><td>12.38</td><td>0.04</td><td>6.88</td></fe<40%<>	15.7	20.75	2.87	35.91	12.38	0.04	6.88
Indicated	>=40%	3.8	45.44	3.58	17.23	5.45	0.03	4.73
	Total	19.5	25.56	3.01	32.27	11.03	0.04	6.46
Inferred	15% <fe<40%< td=""><td>0.2</td><td>24.52</td><td>2.94</td><td>27.68</td><td>6.37</td><td>0.03</td><td>6.58</td></fe<40%<>	0.2	24.52	2.94	27.68	6.37	0.03	6.58
	>=40%	0.6	47.99	3.66	13.34	3.30	0.01	2.60
	Total	0.8	41.84	3.44	17.30	4.15	0.02	3.70
	15% <fe<40%< td=""><td>15.9</td><td>20.67</td><td>2.87</td><td>35.91</td><td>12.35</td><td>0.04</td><td>6.88</td></fe<40%<>	15.9	20.67	2.87	35.91	12.35	0.04	6.88
Inferred + Indicated	>=40%	4.4	45.36	3.57	16.93	5.23	0.03	4.46
Total Weednanna Resource		20.3	26.19	3.03	31.72	10.78	0.04	6.36
ULTIMA DAM EAST RESOURCE								
Classification	Wireframe	Tons (mt)	Fe %	Sg	Sio2 %	Al2o3 %	P %	Loi
Indicated	15% <fe<40%< td=""><td>11.2</td><td>22.14</td><td>2.89</td><td>38.42</td><td>10.27</td><td>0.12</td><td>9.14</td></fe<40%<>	11.2	22.14	2.89	38.42	10.27	0.12	9.14
	>=40%	3.2	44.07	3.53	16.99	6.81	0.13	8.69
	Total	14.5	27.05	3.04	33.62	9.49	0.12	9.04
Inferred	15% <fe<40%< td=""><td>9.3</td><td>23.57</td><td>2.94</td><td>40.32</td><td>7.50</td><td>0.10</td><td>6.78</td></fe<40%<>	9.3	23.57	2.94	40.32	7.50	0.10	6.78
	>=40%	0.2	43.40	3.49	13.65	5.31	0.26	12.89
	Total	9.5	24.06	2.95	39.67	7.45	0.10	6.93
Inferred +Indicated	15% <fe<40%< td=""><td>20.5</td><td>22.79</td><td>2.91</td><td>39.28</td><td>9.02</td><td>0.11</td><td>8.07</td></fe<40%<>	20.5	22.79	2.91	39.28	9.02	0.11	8.07
	>=40%	3.5	44.02	3.52	16.77	6.71	0.14	8.97
Total Ultima Dam Eas	t Resource	24.0	25.86	3.00	36.02	8.68	0.11	8.20
		WE	EDNANN	IA NORTH	1			
Classification	Wireframe	Tons (mt)	Fe %	Sg	Sio2 %	Al2o3 %	P %	Loi
Indicated	15% <fe<40%< td=""><td>12.2</td><td>20.53</td><td>2.87</td><td>35.02</td><td>10.79</td><td>0.05</td><td>7.48</td></fe<40%<>	12.2	20.53	2.87	35.02	10.79	0.05	7.48
	>=40%	1.9	44.58	3.54	16.80	6.03	0.04	5.74
	Total	14.2	23.83	2.96	32.52	10.14	0.05	7.24
Inferred	15% <fe<40%< td=""><td>2.6</td><td>29.33</td><td>3.07</td><td>13.15</td><td>5.18</td><td>0.03</td><td>8.45</td></fe<40%<>	2.6	29.33	3.07	13.15	5.18	0.03	8.45
	>=40%	0.4	44.88	3.55	17.58	5.47	0.03	4.75
	Total	3.0	31.63	3.14	13.80	5.22	0.03	7.90
Inferred +Indicated	15% <fe<40%< td=""><td>14.8</td><td>22.06</td><td>2.91</td><td>31.23</td><td>9.82</td><td>0.04</td><td>7.65</td></fe<40%<>	14.8	22.06	2.91	31.23	9.82	0.04	7.65
	>=40%	2.4	44.63	3.55	16.94	5.93	0.04	5.55
Total Weednanna North Resource		17.2	25.19	3.00	29.25	9.28	0.04	7.36
ULTIMA DAM WEST								
Classification	Wireframe	Tons (mt)	Fe %	Sg	Sio2 %	Al2o3 %	P %	Loi
Indicated	15% <fe<40%< td=""><td>0.0</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></fe<40%<>	0.0	0.00	0.00	0.00	0.00	0.00	0.00
	>=40%	0.0	0.00	0.00	0.00	0.00	0.00	0.00
	Total	0.0	0.00	0.00	0.00	0.00	0.00	0.00
Inferred	15% <fe<40%< td=""><td>7.9</td><td>26.54</td><td>3.00</td><td>30.96</td><td>2.92</td><td>0.05</td><td>6.64</td></fe<40%<>	7.9	26.54	3.00	30.96	2.92	0.05	6.64
	>=40%	0.0	0.00	0.00	0.00	0.00	0.00	0.00
	Total	7.9	26.54	3.00	30.96	2.92	0.05	6.64
Inferred +Indicated	15% <fe<40%< td=""><td>7.9</td><td>26.54</td><td>3.00</td><td>30.96</td><td>2.92</td><td>0.05</td><td>6.64</td></fe<40%<>	7.9	26.54	3.00	30.96	2.92	0.05	6.64
	>=40%	0.0	0.00	0.00	0.00	0.00	0.00	0.00
Total Ultima Dam West Resource		7.9	26.54	3.00	30.96	2.92	0.05	6.64

The Resource estimate was completed using the following parameters:

- The Resource Estimate Statement covers four deposit areas. For the four deposit areas, details are as follows:
  - Weednanna covers a 1,170m lateral extent from 6,373,390mN to 6,372,220mN (MGA94) and the vertical extent of the resource is 260m from surface at approximately 316mRL to 56mRL.
  - O Ultima Dam East covers a 2,280m NW to SE lateral extent from 6,377,480mN to 6,375,200mN (MGA94) with a vertical extent of 190m from surface at approximately 290mRL to 100mRL.
  - Weednanna North covers a lateral extent of 1,280m from 6,374,600mN to 6,373,320mN (MGA94) with a vertical extent of 250m from surface at approximately 320mRL to 70mRL.
  - O Ultima Dam West covers a lateral extent of 390m from 635,560mE to 635,950mE (total untested anomaly has a lateral extent of 2,400m) with a vertical extent of 150m from surface at approximately 300mRL to 150mRL.

- Drill holes used in the resource estimate included 251 holes for Weednanna (215 RC, 36 diamond core),
   233 holes for Ultima Dam East (163 RC, 4 diamond core, 66 RAB & AC),
   132 holes for Weednanna North (113 RC, 3 diamond core, 16 RAB) and 121 holes at Ultima Dam West (48 RC, 3 diamond core,
   70 RAB) for a total of 69,740m within the resource wireframes. The full database contained records for
   878 drill holes for 77,180m of drilling.
- Holes in the resource were drilled at section spacing's between 25m and 200m, but commonly at 25m.
- The majority of RC holes were sampled at 2m intervals (mid-2008 onwards). Historical RC holes and RC drilling from 2006 to mid-2008 were sampled at 1m intervals and converted to 2m composites. The sampling method involved collecting drill cuttings in pre-numbered calico bags from a rig mounted rotary cone splitter, while the remaining bulk material was collected to provide for further test work.
- Down hole geospatial surveying was conducted using both a north-seeking gyroscopic tool and a standard gyroscopic deviation tool for comparison.
- Collar surveys and topographic surveys were carried out using a differential GPS capable of 0.05m lateral and vertical accuracy using standard topographic survey techniques.
- Sample preparation and assay was carried out first by SGS Laboratories and later Amdel Laboratories in Adelaide, SA and Cardiff, NSW. Comprehensive assaying was routinely carried out using the XRF analytical method on a full suite of elements including Fe, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, CaO, MgO, K<sub>2</sub>O, Na<sub>2</sub>O, Mn, P, S, TiO<sub>2</sub>, and three stage loss on ignition (LOI) at varying temperatures.
- Drill data and Quality Control practices for the recent drilling have been reviewed by SRK Consulting and have been verified as accurate and unbiased. It is the view of SRK Consulting that the base data used in the estimates has provided a robust and accurate resource.
- Wireframes were constructed using cross sectional interpretations based on mineralised envelopes at nominal cut off grades of >15% Fe for the low grade mineralisation and >40% Fe for the high grade skarn mineralisation. Samples within the wireframes were composited to a best fit at intervals of 2.0m.
- A Surpac block model was used for the resource estimates with a block size of 12.5m x 12.5m x 4m vertical with sub-cells of 6.25m x 6.25m x 2m vertical for Weednanna and Weednanna North, and 25m x 25m x 4m with sub-blocking of 6.25m x 6.25m x 4m for Ultima Dam East and Ultima Dam West.
- Ordinary kriging was used for Grade Interpolation for each deposit. The 15% and 40% wireframes were
  used as hard boundaries and each shape was estimated separately, meaning blocks within a shape were
  only informed by composite within the same shape. The dimension and orientation of the ellipsoid were
  different for each deposit but all had the same orientation as the calculated variogram anisotropy for its
  respective deposit.
- Specific Gravity (SG) calculated by applying the polynomial best fit equation SG = (0.00043\*(fe\_est\*fe\_est)-(0.00008\*fe\_est)+2.67682)) derived from 439 pycnometer values and assuming a 2% porosity.
- The resource was classified as an Indicated and Inferred Mineral Resource, which was based largely on the kriging quality parameters, in particular the slope of regression. The Indicated portion of the resource included areas where drill spacing was less than 50m by 50m and lode continuity was good. The Inferred portion included areas where sampling occurred on sections greater than 50m by 50m (or 100m by 50m) and where isolated, poorly understood zones of mineralisation may have occurred. Approximately 70% falls within the Indicated portion of the resource.

### Note 2

- The target potential has been calculated from a combination of analyses of all historical (previous explorers) and exploration drilling by IronClad Mining since 2008.
- Estimation of the extent of probable in-ground resource potential of 40 km of known strike length of magnetic anomalies throughout the total tenement area of 976 km². The current indicated and inferred resource shows that both the Wilcherry Hill and Hercules areas have the potential in-ground resource of 15 Mt skarn magnetite for every 1 km strike length of magnetic anomaly.
- IronClad Mining acknowledges that the potential quantity and grade of the in-ground extension to the resource is conceptual in nature, that there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the determination of a Mineral Resource

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