



## CO-OPERATION AGREEMENT FOR GREEN INDUSTRY SYNERGY WITH WICKERS GROUP

**Magnum Mining & Exploration Limited** (ASX: **Magnum**, or the **Company**) is pleased to announce the signing of an agreement with the Wickers Group of Sweden (**Wickers**) [www.wickers.se](http://www.wickers.se) for the joint development of a novel combination of technologies to produce pulp, bio-chemicals and green pig iron (**Agreement**).

Wickers has experience in designing, building and operating Pulp and Paper plants and associated co-product technologies in Europe. One of the co-products of a Pulp and Paper Plant is biochar that can be used in a HIs melt furnace to smelt iron ore and produce green pig iron. Further synergy will be effected by the transfer of excess steam from the HIs melt plant to provide heat for the Pulp and Paper Plant.

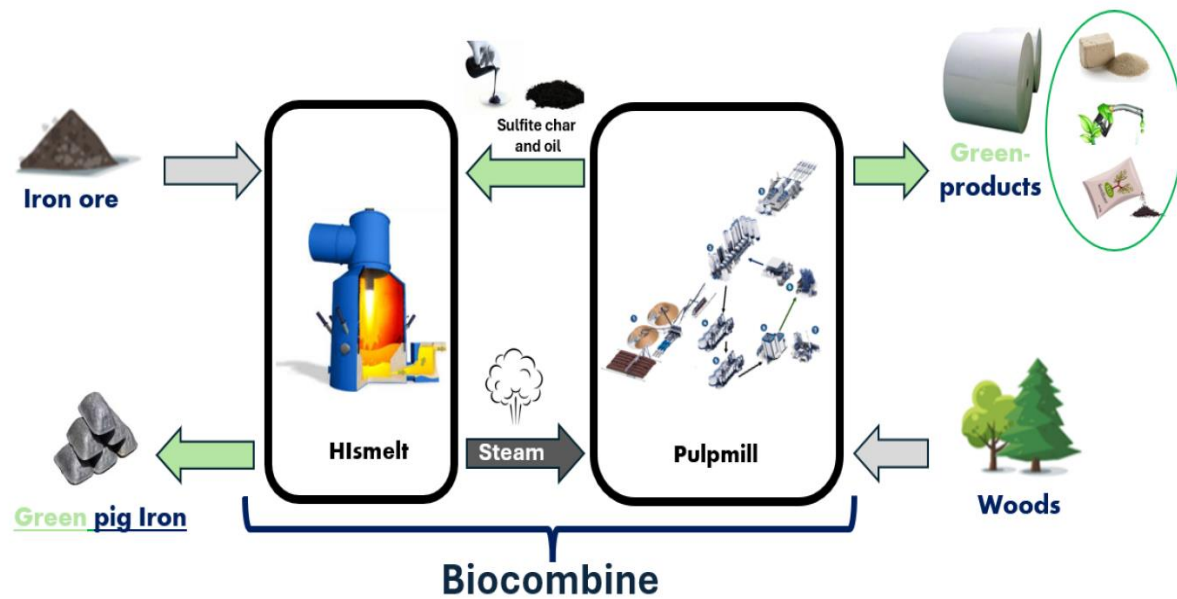
This Agreement establishes the material terms and conditions on which Magnum and Wickers shall work cooperatively to develop projects that will combine a Pulp and Paper plant with a HIs melt plant to produce pulp, lumber, bio-chemicals and "green" pig iron in Europe and/or North America (**Figure 1**) during a two year period from the date of the Agreement (subject to further extension if required).

Magnum Non-Executive Director Neil Goodman commented:

*"Wickers have developed a combination of existing Pulp and Paper industry technologies that will produce pulp and lumber from pulp timber and forestry waste, and co-produce biochar, green fertiliser, bio-alcohol, proteins and bio-CO<sub>2</sub>. The biochar will be a great reductant for a HIs melt furnace that will smelt iron ore and steel plant waste to produce green pig iron. As an extra bonus, the HIs melt plant produces excess steam from its waste gas, and this can be fed back to the Pulp Plant to provide heat for the processes."*

Wickers CEO Mikael Carlsson commented:

*"Wickers looks forward to working with Magnum to develop the synergies between our Pulp and Paper technologies and the HIs melt technology. We call this combination the "BioCombine" and our teams have started working together to attract investors and industry partners, and investigate potential sites for the first BioCombine plant."*



**Figure 1:** Proposed arrangement of Pulp and Hismelt Technologies to form the “BioCombine” Technology

**BY ORDER OF THE BOARD**

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## FORWARD LOOKING STATEMENTS

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Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to general business, economic, competitive, political and social uncertainties; the actual results of current development activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of metals; failure of plant, equipment or processes to operate as anticipated; accident, labour disputes and other risks of the mining industry; and delays in obtaining governmental approvals or financing or in the completion of development or construction activities. This list is not exhaustive of the factors that may affect our forward-looking information. These and other factors should be considered carefully, and readers should not place undue reliance on such forward-looking information.

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