

7<sup>th</sup> November 2019

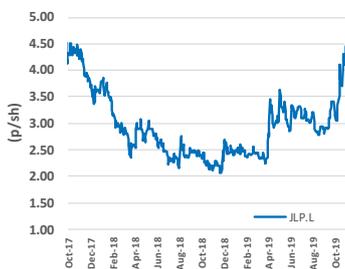
## Sector: Mining

### Commodities:

Chrome, PGMs, Zinc, Lead, Vanadium, Cobalt

## Market data

|                 |           |
|-----------------|-----------|
| Ticker          | JLP       |
| Price (p/sh)    | 4.26p     |
| 12m High (p/sh) | 4.90p     |
| 12m Low (p/sh)  | 2.02p     |
| Shares (m)      | 1855.3m   |
| Mkt Cap (£m)    | 79.0m     |
| Markets         | AIM & JSX |



Source: LSE

## Description

Jubilee Metals Group plc ("Jubilee" or "JLP") is a Johannesburg and London based mine waste processing and metals recovery company listed on AIM (JLP) and the JSE (JBL). The company has operating assets in South Africa and has recently expanded its footprint to Zambia.

[www.jubileemetalsgroup.com](http://www.jubileemetalsgroup.com)

## Board & key management

|                     |                    |
|---------------------|--------------------|
| Non-Exec Chairman   | Colin Bird         |
| Non-Exec Vice Chair | Dr Phosa           |
| CEO                 | Leon Coetzer       |
| NED                 | Christopher Molefe |
| Technical Director  | Evan Kirby         |

## Analyst

[phil.swinfen@shardcapital.com](mailto:phil.swinfen@shardcapital.com)

020 7186 9008

Phil Swinfen

# Jubilee Metals Group

## Headlong into the chrome zone...

**Jubilee reports that NewCo (K2018239983 South Africa Pty Ltd) has exercised its rights in terms of the previously announced (24<sup>th</sup> Oct) 'Exclusive Agreement' to sell all further chrome rights to the chrome contained in all of the historical tailings at Inyoni to Jubilee. We understand that NewCo is a subsidiary of Samancor, one of the world's largest ferrochrome producers and the purchaser of the Herculite business. This follows on from recently securing all PGMs contained in historical and future tailings. The total consideration for all chrome contained in historical tailings is \$16.39m in cash, settled in 3 tranches. We view this chrome exposure as potentially game-changing for JLP in terms of boosting project economics and lowering the risk profile.**

- ▶ **Background.** The Herculite Ferrochrome Pty Ltd chrome operation has recently been acquired by Samancor, now the world's largest ferrochrome producer. This resulted in the termination of JLP's existing tailings agreement with Herculite and a new agreement with Samancor Chrome Limited. JLP reported on 24<sup>th</sup> October that it had secured 100% of all rights to PGM earnings from current and future tailings feed at Inyoni (renamed from Herculite) for \$5.1m. This neatly headed off at the pass the fast approaching (next 12 months) commencement of an onerous profit share (Herculite Ferrochrome 85% / JLP 15%) to be triggered with JLP on the cusp of achieving its 30% return on capital, due to high PGM basket prices and increased profitability at Inyoni.
- ▶ **What now?** Samancor has now exercised the rights it previously agreed with JLP to sell all further chrome rights contained in historical tailings at Inyoni. This agreement relates solely to historical tailings and not future arisings – we explain why overleaf. Total consideration is \$16.39m in cash, majority funded from existing cash, operating cash flow and project funding. The consideration is to be paid in 3 tranches over 90 days. Historical tailings at Inyoni available to JLP now amount to 1.7Mt, along with 630kt of previously processed tailings and 1Mt of PGM rich material, the latter to be processed at Northam's Eland plant.
- ▶ **The rationale is compelling...** As well as the potential to boost revenue and earnings considerably, the deal provides multiple wins for JLP, in our view. The previous situation was that Inyoni processed the incoming tailings feed supplied by Herculite, with the first step being chrome separation before the tailings resumed their flow to JLP's PGM recovery plant. Despite incurring the operating cost for chrome separation, JLP did not receive any chrome revenue as all chrome concentrate was returned to Herculite Ferrochrome for its own use or sale to market. This agreement rectifies that issue at no additional risk for JLP.
- ▶ **... and it gives JLP control.** JLP has taken control of the re-mining of tailings at Inyoni. Given that the PGM recovery step involves grinding and multi-stage floatation, the ability to control and maintain consistent feed rates is paramount for efficient operation. We think stable feed control could not only lead JLP to improve metallurgical recovery on the PGM front, but also provide the opportunity to utilise spare capacity at Inyoni and increase throughput. Naturally, a higher feed rate will increase chrome production as well as increasing downstream PGM production. Thus, the impact on PGMs is two-fold due to higher throughput and potentially higher recovery.
- ▶ **The likely impact is considerable.** Whilst we are not in the position to fully update our model at this stage, it is possible to highlight the indicative impact of securing the chrome rights. Inyoni processed about 40ktpm of feed in H1 2019. The mass removal at the chrome separation stage is significant (up to 25% of the feed is turned into chrome concentrate). For arguments sake, assume it's 22% and at a 40ktpm feed rate, this implies chrome concentrate production of 8.8ktpm. Current UG2 chrome prices are c.\$150/t cif China, implying that JLP would currently receive about \$90/t ex-works. Putting this together translates to \$9.5m in annual chrome revenue not previously received by JLP. The important point is that this new revenue source essentially flows right down through the project P&L to the bottom line. This is because JLP already incurs the chrome operating cost as part of the PGM operations. There are some additional costs associated with the control of chrome, but these are minimal and related only to JLP now having to fetch material whereas it was previously delivered by Herculite. We estimate something in the region of a couple of dollars per tonne for these additional costs, but vastly off-set by the new revenue stream. Also, note that this excludes any contribution from fine chrome which JLP plans to implement at Inyoni.

*Continued overleaf...*

- ▶ **Future potential.** There are two further considerations to the back of the envelope numbers above. Firstly, JLP reports that current chrome potential is 8-10ktpm chrome concentrate but that it also plans to increase the feed rate at Inyoni to 50ktpm (nameplate capacity is 55ktpm). At 50ktpm feed, this would increase chrome production to between 11-12.5ktpm based on 22-25% recovery, with a concomitant increase in chrome revenue (12.5ktpm at current pricing would be c. \$13.5m in annual revenue).
- ▶ **Chrome pricing upside.** Secondly, chrome prices are in doldrums at present. Flip back two years and chrome prices were at \$240/t (cif China 42% UG2) or even higher at \$440/t three years ago in late 2016. Thus, the potential to increase throughput at Inyoni in combination with a recovery in chrome prices could transform Inyoni's economics drastically. 12.5ktpm chrome at \$240/t (\$144/t ex-works) translates to annual chrome revenue of \$21.6m. This potential upside leverage to production growth, and any possible reactivation of Chinese stainless-steel demand growth leading to a higher chrome pricing environment are key components that underpin the rationale for this transaction, in our view. We see potential for stainless steel demand recovery, post any resolution of the US-China dynamics. Clearly, this would feed through to higher chrome prices. The majority of chrome concentrate (about 95%) is used in the manufacture of ferrochrome, of which about 80% is used in the manufacture of stainless steel which can contain between 10-30% chromium.
- ▶ **Is future chrome included in the deal?** The short answer is no, not just yet at least, but we believe this could come at a future juncture once terms are agreed. The agreement currently only covers chrome contained in historical tailings. However, JLP has the exclusive right to negotiate this with Samancor, and this may spurn an additional transaction. In the meantime, JLP has a mechanism in place to include a charge for chrome recovered in any current arisings. This may play into JLP's favour as it looks to **implement fine chrome capability** into Inyoni. Fine chrome recovery as demonstrated at DCM is likely to further increase chrome concentrate production at Inyoni.
- ▶ **Don't forget Windsor.** A hidden gem in the recent JLP press releases concerns the 1Mt of PGM-rich material now available for processing at the Windsor project through Northam's Eland plant. The impact of this wasn't particularly obvious in the RNS. Our take on it is that it could allow JLP to significantly increase throughput at Windsor. JLP's plan is to process 60ktpm of feed (producing 2,800oz per month PGMs) through Eland, but we understand that the plant nameplate capacity is much higher, perhaps even double this figure. Thus, we see no reason why JLP could not increase production and take advantage of the currently high PGM basket prices. In this case, doubling throughput would naturally double the PGM production, i.e. from 33kozpa to 67kozpa on an annual basis. This potential option to increase production and revenue at Windsor further supports what we think is a very astute series of transactions by the company.

**As always with JLP, you have to dig a little deeper to get the real read through. It's a complex business with many moving parts but the strategy is crystal clear and the recent renegotiations at Inyoni further cement progress made by the company. The recent press releases demonstrate the progress made on chrome and PGMs and it's easy to forget Sable/Kabwe lurking in the background, with first copper production due before the end of the year.**

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