POSITION WITH RESPECT TO BENEFICIATION IN THE SOUTH AFRICAN CHROME INDUSTRY

Our views as set out herein are further complemented by research and analysis by independent industry analysts thus providing an independent and unbiased view of the current status of the industry. As such, we also provide references to the supporting documentation that we have provided to you at the meeting of 3 October 2006.

There are four salient issues covered in this paper. Firstly a value chain analysis of chrome, secondly the structure of the industry, thirdly China's emergence as a significant ferrochrome producer and lastly Xstrata-Merafe's current approach to these dynamics. We conclude by setting out a proposal on beneficiation, which we believe should be adopted at both a policy making and regulatory level, with reference to proposed punitive measures we believe should be adopted by the legislature and/or regulators to encourage a longer term and sustainable chrome industry in South Africa.

1. Value Chain Analysis

Stainless steel is the most important end-use market for chrome ore

Ca. 91% of chromite ore mined is converted to ferrochrome and destined for the metallurgical industry, primarily in the production of stainless steel (ca. 90%). Foundry and chrome chemical applications account for the remainder of the ore mined and is not significant in the chrome value chain (Exhibit 1).



Exhibit 1: Chrome Application

South Africa's competitiveness in ferrochrome does not extend to stainless steel

Although 90% of the world's ferrochrome production is consumed in the production of stainless steel, ferrochrome represents between ca. 3-4% of the value in finished stainless steel product (Exhibit 2) depending on the stainless scrap ratio (typically 40%). Nickel and Stainless scrap are both major materials used in the production of stainless steel and as such are more important drivers of competitiveness for stainless steel production. Whereas the location of a ferrochrome smelter is ideally adjacent to a chrome mine, stainless steel smelters are typically located near a port to access imports of stainless scrap, nickel and ferrochrome. Location of a stainless smelter is further dependent on proximity to end-use stainless steel markets.

South Africa, whilst endowed with chrome ore, is still reliant on the import of nickel and stainless scrap and is further disadvantaged by the absence of end-use stainless steel markets.



Exhibit 2: Chrome Value Chain Analysis

2. Chrome Industry Structure

Robust industry structure dominated by South African Integrated Smelters

The global chrome industry has made great strides in the last decade to develop a robust structure dominated by ferrochrome producers with captive mines ("integrated smelters"). This development has been driven by the growth and improved competitiveness of South African ferrochrome production, which has forced the closure of uncompetitive independent smelters in Europe, North America and Japan which closures have substantially affected the global chromite ore trade and independent ore producers.

Only one global producer, namely Outokumpu in Finland is completely integrated along the entire value chain with its own mining, smelting and stainless steel production facilities.

Ore Producers Independent Smelters Integrated Smelters		Stainless Steel		
Integrated Stainless Steel Plants				
 South Africa holds 68% of the world's proven reserves and mines over 50% of the world's chromium. 85% of ore mined is for metallurgical use. 	 Over 80% of FeCr comes from integrated smelters. Examples of independent smelters can be found in China, Japan and Norway. South Africa accounts for 45% of world production of HC ferrochrome. 	•Outokumpu is the only fully vertically integrated company with its own mining, smelting and stainless steel production facilities.		

Exhibit 3: Chrome Industry Structure

¹ Value chain analysis based on 40% stainless scrap input and market prices as at 23 October 2006.

Xstrata-Merafe Venture has grown at a CAGR of 16% since 1988 surpassing Samancor Chrome with comparably larger chromite reserves (ca. 3x) to become the industry leader in the production of ferrochrome. Substantial capital was, and still is, expended by Xstrata to achieve this.

Circa 50% of the world's ferrochrome production is produced from integrated production within South Africa of which the Xstrata-Merafe Venture contributes ca 20% of world production The Xstrata-Merafe Venture has grown at a 16% CAGR since 1988, surpassing Samancor Chrome (with comparably larger chromite reserves – ca. three times that of Xstrata-Merafe) in 1999 to become the global leader in ferrochrome. South Africa's growth during the same period was only 3%.



Exhibit 4: Xstrata-Merafe Growth in Ferrochrome

The emergence of China as a ferrochrome producer with no significant endowment of chromite ore however, is threatening the current chrome industry structure as set out above, and giving new momentum to the chromite ore trade. The balance of power once dominated by South African integrated producers is now shifting to independent ore producers and consequently Chinese independent smelters.

3. Chinese ferrochrome production threatens South African ferrochrome

China – Opportunity and Threat

China is expected to contribute to ca. 78% (calculated from 2005) of the world's stainless steel melt growth. Global ferrochrome demand is therefore expected to be driven by China. Surprisingly however, China has geared up its own ferrochrome production, almost tripling production from 2002 to 720ktpa in 2005. The net import requirement from global ferrochrome producers including South African producers has therefore declined.

Exhibit 5: China's contribution to world stainless demand vs Chinese domestic supply-demand balance



The primary limitation faced by integrated ferrochrome producers in China however is that of limited ore supply. The Chinese mainland is not naturally endowed with abundant chrome ore reserves, and as such the Chinese ferrochrome industry is heavily reliant on the sourcing and importation of chromite ore (Exhibit 6). Thus together with steeply increasing domestic ferrochrome production to satisfy internal demand, Chinese ferrochrome producers have given increased momentum to the chrome ore trade, the vast majority of which is sourced from India, South Africa and Turkey.



Exhibit 6: World chrome ore resources and Chinese ore imports (2000-2005)

Some South African Producers are playing the value chain to the detriment of the South African industry – Unbeneficiated chrome ore exports to China has increased almost sixfold since 2004 volumes

Exhibit 7: South African Ore Exports to China and Ferrochrome exports vs Ore Exports



The increase in unbeneficiated metallurgical ore exports from South Africa has contributed to a decline in exports of ferrochrome from the world's biggest ferrochrome producing region (South Africa) to the world's biggest market (China).

South African Producers' market share declines by 16% in one year (from 50% in 2004 to 42% in 2005)

Currently the South African ferrochrome industries' utilisation capacity is at a historic low making South African producers, swing producers and ultimately facilitating the entry of Chinese production. South Africa's market share has subsequently declined from 50% in 2004 to 42% in 2005.



Exhibit 8: South African utilisation capacity and Global Producer Market Share

South African ferrochrome disadvantaged by Chinese import duties

While South African ferrochrome production is struggling to find a market in China, China's trade policy imposes a heavier duty on ferrochrome imports than ore imports in order to support the domestic ferrochrome industry. The duties on ferrochrome imports in China is ca. 20% higher than duties on the import of ore.

4. Xstrata-Merafe's strategy as the global leader

Notwithstanding the above, the Xstrata-Merafe Venture has resisted temptation to export unbeneficated metallurgical grade ore and remains firmly committed, as it has in the past, to contributing toward the growth of the South African Ferrochrome industry, in the light of ever increasing global tensions. This commitment is clearly demonstrated by the recent capital projects and acquisitions (Exhibit 9) aimed to deliver to Xstrata-Merafe's global cost competitiveness to enable it to meet the needs of its customers and stay at the lower end of the cost curve. It is important to note that this investment in ferrochrome in South Africa by Xstrata over the last three years (ca. ZAR 3Bn) is unparalleled in the global chrome industry.

Exhibit 9: Capital Expenditure and Acquisitions undertaken by Xstrata-Merafe PSV 2004-2006 (ZAR Millions)

Description	2004	2005	2006
Acquisition of Samancor's 50% interest in Gemini JV	244		
Acquisition of chrome ore reserves from Samancor	262		
Project Lion (360ktpa greenfield ferrochrome smelter – largest single phased expansion in the world)	334	1,336	
Project Bokomoso (800ktpa chrome ore agglomeration facility)		400	400
	840	1,736	400

Xstrata-Merafe however believes that its continued commitment may be prejudiced without further and active interventions at both a policy making and regulatory level as is set out below. Without such interventions and proposed punitive measures, Xstrata-Merafe believes a more longer term and sustained Ferrochrome industry in South Africa may be jeopardized.

5. Xstrata-Merafe's position on Beneficiation

As we have clearly illustrated above, the ferrochrome industry is already suffering injury from increased domestic production in China, which is sustained by a burgeoning metallurgical ore trade. Whilst this has translated to idle South African smelter capacity and corresponding declining market share for South African ferrochrome production, some South African ferrochrome production, some South African ferrochrome production.

The sustainability of ferrochrome production in China is largely dependent on ore imports from India and South Africa. The Government of India has introduced a canalization policy on strategic raw materials. Chrome ore (identified as a strategic raw material) is canalized and quotas are imposed on unbeneficiated ore exports. Despite the relatively small ferrochrome industry, the Government of India has been reducing these quotas on an annual basis and is believed to be phasing out the export of chromite ore in its entirety in order to support the beneficiation of chromite ore in India. This leaves Chinese domestic production dependent largely on South African metallurgical grade ore.

Xstrata-Merafe believes that the Department of Minerals and Energy as the custodians of the world's largest chrome ore reserves and resources has the ability to shape the future of the South African chrome industry. In this regard, we would like to take this opportunity to reiterate in the strongest possible terms that we would support the adoption of ferrochrome as the baseline for beneficiation in all policy and industry regulatory matters, including, if necessary the introduction by the legislature of such baseline as a requirement for the grant or conversion of mining rights thereby restricting the export of unbeneficiated metallurgical grade chrome ore. Whilst we believe that the legislature has attempted to address these issues to some extent in the second

draft Royalties Bill we do not believe that the Bill introduces sufficient differentiation between the royalties payable on refined and unrefined chrome to thwart the ongoing sale of metallurgical grade chrome ore as set out herein. The Xstrata-Merafe PSV will however be making the relevant submission to Treasury in this regard.

Xstrata-Merafe is of the opinion as the global leader and current major investor in the South African chrome industry, that without the intervention as set out above, the long term sustainability of the South African ferrochrome industry may be severely prejudiced.

Please contact us further should you require any further information or assistance in considering the attached position paper.