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Lion II ferrochrome plant under construction
Limpopo province

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SUSTAINABILITY REVIEW AND ASSURANCE

The Xstrata-Merafe Chrome Venture

Merafe relies on the Venture and Xstrata to obtain quantitative data with regard to sustainability indicators.

The Venture, via the Xstrata Sustainability Database (XSD), undergoes a process of internal and independent assurance reviews of their key sustainability indicators.

The sustainability data and information falls under the Sustainability and Human Resource Development departments of both the Venture and Xstrata. The information set out in this report is signed off by the Venture and Xstrata.

The Venture's sustainability data and information was subjected to 13 internal and external reviews and audits during 2012. A schedule detailing these internal and external reviews and audits can be found on our website at www.meraferesources.co.za.

In addition, Xstrata plc engaged Ernst & Young (EY) to perform independent assurance over its sustainability report for 2012 in accordance with ISAE 3000 standards to meet the requirements of a type 2 assurance engagement as defined by AA 1000 AS 2008 principles of materiality, responsiveness and inclusiveness. EY provided limited assurance to Xstrata plc on the AA 1000 AS 2008 principles, limited assurance on the accuracy of up to eight sustainability data KPIs, limited assurance on the alignment with ICMM principles and limited assurance on the application of the GRI's G3 Guidelines and the GRI Mining and Metals Sector Supplement. The review focused on data accuracy and site reviews including management interviews and a review of stakeholder engagement activities and monitoring and assurance mechanisms of Xstrata South Africa, Alloys division. The site chosen by this engagement with regard to the Venture for 2012 was the Thorncliffe Mine.

The scope of this work included:

KPI	Details
Water	• Total water withdrawal (M^3) • Total volume of water recycled and reused (M^3)
Land	• Total land disturbed to date (km^2) • Total land rehabilitated to date (km^2)
GHG (tCO_2e)	• Direct greenhouse gas emissions • Indirect greenhouse gas emissions
Energy	• Indirect energy consumption by primary energy source: • Purchased electricity (Gj)
Waste	• Total weight of waste by type and disposal method – Mineral waste – onsite (%)
Safety	• LTI – Lost time injuries

With regard to the above internal and external audits and reviews, the Venture and Xstrata have confirmed to the board of Merafe that there are no material issues arising therefrom which would impact on the reliability, accuracy and completeness of the Venture's information set out in this report.

The Merafe board further engaged KPMG to perform certain procedures on Venture data at specific sites and to perform high level data analytics for all sites within the Venture. The purpose of these procedures was to enable the board to report more confidently to its stakeholders on its sustainability performance. The sites chosen for visits were Wonderkop ferrochrome plant and Kroondal Mine. The selected key performance indicators in the scope of the two site visits and the overall Venture data analytics were:

KPI	Details
Water	• Total water withdrawal (M^3) • Total volume of water recycled and reused (M^3)
GHG (tonnes CO_2e)	• Direct greenhouse gas emissions (Scope 1) • Indirect greenhouse gas emissions (Scope 2)
Energy	• Indirect energy consumption by primary energy source: • Purchased electricity (Gj)
Safety	• Total recordable Injury frequency rate (TRIFR) • Lost time injury frequency rate (LTIFR) • Fatal injury frequency rate (FIFR)
Health	• New cases of noise-induced hearing loss (NIHL)

The positive observations raised by KPMG were that both Kroondal and Wonderkop were well prepared for the review, the Xstrata safety guidelines were comprehensive and that a strong culture of excellence exists that is evident from the General Manager throughout site management.

The high level data analytics that KPMG performed for all sites within the Venture included trend analysis against production, targets and other key drivers. KPMG noted that overall Xstrata and the Venture were able to adequately explain unusual trends in data and addressed all KPMG's queries.

The findings of the review by KPMG were that save for differing opinions on the electricity factor to use for the measurement of greenhouse gas emissions (see pages 41 to 43) there were no material issues raised or that were of concern.

The Venture uses a global factor (0,8349 $kgCo_2$/kWh) based on the GHG protocol whereas KPMG is of the view that the Eskom generated factor (0,99 $kgCo_2$/kWh) should be used for scope 2 emissions. To date, the Regulator has not stipulated that a specific factor should be used.

As a result of the internal and external audit, assurance and reviews as outlined above, (together with the signing off of the data by the Venture and Xstrata), the board is satisfied that the information set out in this report in respect of the Venture's data is reliable, accurate and complete.

The Venture's Mineral Resources and Mineral Reserves statement is signed off by a Competent Person as defined by the SAMREC Code and set out on pages 50 to 61.

Merafe Resources

Our empowerment credentials and compliance with the Mining Charter and the B-BBEE Act are important to us and the Venture. They are also material to our ability to access diversification opportunities going forward. As a result we engaged KPMG to provide our stakeholders with assurance on key indicators in terms of B-BBEE and codes of good practice as well as the Mining Charter as set out in the assurance report that follows on pages 118 to 119.

In addition, Integrated Reporting and Assurance Services (IRAS) has assured Merafe Resources' application of the GRI G3.1 Guidelines in both this integrated report and the supplemental information provided via the Merafe website (www.meraferesources.co.za). This report has been produced in accordance with the Global Recording Initiative (GRI) guidelines to application level B+ (as assured by IRAS). IRAS has also assured Merafe's adherence to AccountAbility's AA1000AS principles of inclusivity, materiality and responsiveness, as well as its adherence to reasonable expectations for integrated reporting and sustainability data transparency. In assessing Merafe's carbon footprint source data, IRAS converted this information into a carbon emissions for comparability purposes, which Merafe has thus included on page 41 of this report. The IRAS independent assurance report can be found on the Merafe Resources website in the Transparency and Accountability section.

See www.meraferesources.co.za
Transparency and accountability section for the
GRI content index and our application of King III

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INDEPENDENT ASSURANCE REPORT ON SELECTED SUSTAINABILITY INFORMATION

To the directors of Merafe Resources Limited

We have undertaken a limited assurance engagement on selected sustainability information, as described below, and presented in the 2012 annual integrated report of Merafe Resources Limited (Merafe) for the year ended 2012 (the Report).

Independence and expertise

We have complied with the International Federation of Accountants' Code of Ethics for Professional Accountants, which includes comprehensive independence and other requirements founded on fundamental principles of integrity, objectivity, and professional competence and due care, confidentiality and professional behaviour. Our engagement was conducted by a multidisciplinary team of health, safety, environmental and assurance specialists with extensive experience in sustainability reporting.

Subject matter and related assurance

We are required to provide limited assurance on the following key performance indicators, prepared in accordance with the Global Reporting Initiative (GRI) G3.1 Guidelines.

Key performance indicators (Boundary – Merafe Resources)	Assured value	Page
% ownership (as defined by the B-BBEE Act and Codes of Good Practice) **• Black owned – Royal Bafokeng Resources Holdings Proprietary Limited**	29%	3, 9 and 196
Employment equity (as defined by the B-BBEE Act and Codes of Good Practice) • Black disabled employees as a percentage of all employees	0%	
• Black employees in top management as a percentage of all such employees	50%	76
• Black employees in senior management as a percentage of all such employees	67%	76
• Black employees in middle management as a percentage of all such employees	N/A*	
• Black employees in junior management as a percentage of all such employees	100%	76
% HDSA in management (as defined by the Mining Charter 2010) • Board	82%	76
• Senior management	60%	76
• Middle management	N/A*	
• Junior management	100%	76
• Staff	75%	76
Total CSI spend (Rand value)	R3 282 083	84
Total enterprise development spend (Rand value)	R400 000	84

** N/A There is no "middle management" in Merafe as defined by the B-BBEE Act and Codes of Good Practice and the Mining Charter 2010*

Directors' responsibilities

The directors are responsible for the selection, preparation and presentation of the sustainability information, the identification of stakeholders and stakeholder requirements, material issues, for commitments with respect to sustainability performance, and establishing and maintaining appropriate performance management and internal control systems from which the reported information is derived, and for such internal control as the directors determine is necessary to enable the preparation of the report that is free from material misstatement, whether due to fraud or error.

The directors are also responsible for the selection and application of the GRI G3.1 Guidelines to the selected key performance indicators.

Our responsibility

Our responsibility is to express limited assurance conclusions on the selected sustainability information based on our work performed. We conducted our engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than the Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. That Standard requires that we plan and perform our engagement to obtain limited assurance about whether the selected sustainability information is free from material misstatement.

Our procedures and the extent of our procedures depend on our judgement including the risks of material misstatement of the selected sustainability information. In making our risk assessments, we considered internal control relevant to Merafe's preparation of the Report. In a limited assurance engagement, the evidence gathering procedures are less than where reasonable assurance is expressed. We believe the evidence we have obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

Summary of work performed for limited assurance

Our work included the following evidence gathering procedures:

- Testing the processes and systems to generate, collate, aggregate, monitor and report the selected sustainability information
- Inspecting supporting documentation and performing analytical procedures on a sample basis to evaluate the data generation and reporting processes against the reporting criteria
- Assessing the reasonableness and appropriateness of significant estimates and judgements made by directors in preparation of the key performance indicators
- Evaluating whether the selected sustainability information presented in the report is consistent with our overall knowledge and experience of sustainability management and performance at Merafe.

Conclusion

Based on our work performed, nothing has come to our attention that causes us to believe that the selected key performance indicators, set out above, for the year ended 2012 are not fairly stated, in all material respects, in accordance with GRI G3.1 Guidelines.

Limitation of liability

Our work has been undertaken to enable us to express a limited assurance conclusion on the selected sustainability information to the directors of Merafe in accordance with the terms of our engagement, and for no other purpose. We do not accept or assume liability to any party other than Merafe, for our work, for this report, or for the conclusion we have reached.

Other matters

The maintenance and integrity of Merafe's website is the responsibility of Merafe management. Our procedures did not involve consideration of these matters and, accordingly we accept no responsibility for any changes to either the information in the report or our independent assurance report that may have occurred since the initial date of presentation on the Merafe website.



KPMG Services (Pty) Limited
Per PD Naidoo
Director
Johannesburg
28 February 2013

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GLOSSARY

ABET	Adult Basic Education and Training. ABET assists adult learners to become functionally literate and numerate
AIDS	Acquired Immune Deficiency Syndrome
B-BBEE	Broad-Based Black Economic Empowerment – a form of black economic empowerment
BEE	Black Economic Empowerment is a South African government policy aimed at increasing the participation of black people in the ownership, management and control of business
Biodiversity	An abbreviation of biological diversity, which means the full range of variety and variability within and among living organisms and the ecological complexes in which they occur and encompasses ecosystem or community diversity, species diversity and genetic diversity
Carbon intensity	Carbon intensity is calculated as tonnes of carbon dioxide equivalent (CO_2e) emissions per tonne of product
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalents
Company	Merafe Resources Limited
CSI	Corporate Social Involvement. CSI is based on the concept that organisations have a responsibility for the impact of their activities on customers, suppliers, employees, shareholders, communities and other stakeholders, as well as the environment. This obligation extends beyond the statutory obligation to comply with legislation and sees organisations voluntarily taking further steps to improve the quality of life for employees and their families as well as for the local community and society at large
DEA	Department of Environmental Affairs
Disabling injuries	Calculated as lost time injuries plus restricted work injuries (LTI + RWI)
DISR	Disabling injury severity rate. The number of disabling injuries per million hours worked
DMR	Department of Mineral Resources
dti Codes of Good Practice	The dti Codes of Good Practice are to be applied in the development, evaluation and monitoring of BEE charters, initiatives, transactions and other implementation mechanisms
EBITDA	Earnings before interest, tax, depreciation and amortisation
EMPR	Environmental Management Programme Report (the South African equivalent of an Environmental Impact Study)
EMS	Environmental Management System
Environmental Incident Categories	Category 1: Negligible – An incident that has caused negligible, reversible environmental impact, requiring very minor or no remediation
	Category 2: Minor – An incident that has caused minor, reversible environmental impact, requiring minor remediation
	Category 3: Significant – An incident that has caused moderate, reversible environmental impact, with medium-term effect, requiring major remediation
	Category 4: Serious – An incident that has caused serious environmental impact, with medium-term effect, requiring significant remediation
	Category 5: Disastrous – An incident that has caused disastrous environmental impact, with long-term effect, requiring major remediation
EPS	Earnings per share
ERM	Environmental Resources Management
FAPA	Ferro Alloys Producers Association

Fatality	A death resulting from an occupational injury or illness and identified within the reporting period
FeCr	Ferrochrome
FIFR	Fatal injury frequency rate. The number of fatalities per million hours worked
Fresh water intensity	Raw ground and surface water use per tonne of product
GHGs	Greenhouse gases (GHGs) are the gases present in Earth's atmosphere which reduce the loss of heat into space and contribute to global temperatures through the greenhouse effect. On Earth, the most abundant greenhouse gases are, in order of relative abundance: water vapour, carbon dioxide, methane, nitrous oxide, ozone and chlorofluorocarbons
GJ	Gigajoules (1 GJ = 1 000 000 000 joules)
Global Compact	The UN Global Compact is a voluntary corporate responsibility initiative to advance ten universal principles in the areas of human rights, labour, the environment and anti-corruption
GRI	Global Reporting Initiative. The GRI is a multi-stakeholder international process whose mission is to develop and disseminate globally applicable Sustainability Reporting Guidelines to assist corporations in reporting on the economic, environmental and social performance of their operation
Group	Merafe Resources Limited and all other group entities including the entities in Note 22
Ha	Hectares (1 ha = 10 000 square metres)
HDSA	Historically disadvantaged South African
HIRA	Hazard Identification and Risk Assessment
HIV	Human Immunodeficiency Virus
HSEC	Health, Safety, Environment and Community
IAS	International Auditing Standards
ICDA	International Chromium Development Association
ICMM	International Council of Metals and Mining
IDC	The Industrial Development Corporation of South Africa Limited
IFRS	International Financial Reporting Standards
IISI	International Iron and Steel Institute
ILO	International Labour Organisation
ISO	Organisation for Standardisation
ISO 14001	The ISOs standard for environmental management systems
ISO 9001	The ISOs standard for quality management systems
JIPSA	Joint Initiative on Priority Skills Acquisition. JIPSA is an initiative started to support ASGISA. Its objective is to identify urgent skills needs and quick and effective solutions. JIPSA seeks to equip people with skills so that they can participate in accelerated growth
JSE Limited Listings Requirements	What the JSE Limited requires of listed companies
JSE SRI Index	JSE Limited Socially Responsible Investment Index
JV	Joint Venture
Kℓ	Kilolitres are a metric unit of volume or capacity equal to 1 000 litres
ktpa	Kilotonnes per annum
kW	A kW (kilowatt) is a measure of the rate of energy use or production. 1kW = 1 000 watts

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GLOSSARY (continued)

LTI	Lost time injury. An LTI is an occupational injury or illness that results in days away from work on any rostered shift subsequent to the day on which the injury occurred. A fatality is also recorded as an LTI
LTIFR	Lost time injury frequency rate. The number of LTIs per million hours worked (= (LTI/hours worked) x 1 000 000) = LTIs/(hours worked/1 000 000)
m^3	Cubic metres
Materiality	Materiality in reporting means disclosing all information of significant concern to stakeholders for assessing economic, environmental and social performance
Merafe	The company and Merafe Ferrochrome and Mining Proprietary Limited
MHMP	Major Hazard Management Plan
MHSC	Mine Health and Safety Council
Mining Charter	The policy objective stated in the South African Mineral and Petroleum Resources Development Act, which is to expand opportunities for historically disadvantaged South Africans to enter the mining and minerals industry or benefit from the exploitation of the nation's mineral resources
Mℓ	Megalitre (1Mℓ = 1 000 000 litres or 1 000 kilolitres)
MPRDA	South African Minerals and Petroleum Resources Development Act 2004. The MPRDA governs the transfer of mining rights and granting of mining authorisations
Mt	Megatonnes (1 Mt = 1 000 000 tonnes)
NAFTA	Countries who are signatories to the North American Free Trade Agreement
NAPCOF	North West Province Air Pollution Control Forum
New Companies Act	Companies Act 71 of 2008 and including the Corporate Laws Amendment Act
NGO	Non-Governmental Organisation
NIHL	Noise-Induced Hearing Loss
NOx	Oxides of nitrogen (nitric oxide and nitrogen dioxide)
Occupational illness	An occupational illness is registered when it is confirmed as a work-related compensable case by a medical practitioner/physician
OHSAS	Occupational Health and Safety Assessment Specification. OHSAS 18000 is an international occupational health and safety management system specification
Outotec technology	The Outotec® process to produce pellets with steel belt sintering and utilising Outotec's patented preheating method before smelting has competitive benefits. Using pellets with lumpy ore in smelting improves the recovery of chrome, the energy consumption falls and ferrochrome production increases
PEPFAR	President's Emergency Plan for AIDS Relief – America's Initiative formed to combat the global HIV/AIDS epidemic
Potable water	Water of a suitable quality for human consumption
PPE	Personal Protective Equipment
PPP	Public-Private Partnership
PPPFA	Preferential Procurement Policy Framework Act 2000. The purpose of this Act is to enhance the participation of historically disadvantaged individuals (HDIs) and the small, medium and micro enterprises (SMMEs) in the public sector procurement system

Premus technology	This is proprietary technology for the production of ferrochrome, developed and patented by Xstrata Alloys. Premus technology has significant cost and environmental benefits compared to existing technology
Raw water	Raw water consists of untreated water extracted from groundwater, dams or rivers. Groundwater is extracted from wells, boreholes, cut off trenches and mine dewatering both on and off site. Surface water is defined as water from streams, lakes and dams including storm water and collected runoff
REACH	Registration, Education and Authorisation of Chemicals
Recycled water	Recycled/reused water is water that has been used at least once in a process within the operation or at another operation within the organisation that would otherwise be part of a waste stream, and if not reused, would require the input of raw water
ROM	Run of Mine
Royal Bafokeng Resources/RBRH	Royal Bafokeng Resources Holdings Proprietary Limited
RWI	Restricted work injury
SABS	South African Bureau of Standards
Share Incentive Scheme	Means the new share incentive scheme approved by shareholders in 2010, together with the share incentive scheme in existence at that time approved by shareholders in 1999
SLP	Social and Labour Plan. The Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) (MPRDA) requires the submission of the Social and Labour Plan as a pre-requisite for the granting of mining or production rights. The Social and Labour Plan requires applicants for mining and production rights to develop and implement comprehensive Human Resources Development Programmes including Employment Equity Plans, Local Economic Development Programmes and processes to save jobs and manage downscaling and/or closure
SMEs	Small and Medium-Sized Enterprises
SMMEs	Small, Medium and Micro Enterprises
SOx	Sulphur oxide gases
TB	Tuberculosis – an infectious lung disease caused by exposure to airborne myco bacteria
The Venture	The Xstrata-Merafe Chrome Venture, the parties being Xstrata and Merafe
Total fresh water	Total fresh water is the sum of all water drawn into the boundaries of the reporting organisation from all sources (including surface water, groundwater, rainwater and municipal water supply) for any use over the course of the reporting period
Transformation	In South Africa the term transformation describes the ongoing process to develop a sustainable, equitable society and economy in South Africa
TRI	Total recordable injuries. TRI is a measure that includes lost time injuries (including fatalities), restricted work injuries and medical treatment injuries
VCT	Voluntary Counselling and Testing for HIV/AIDs
Visible Felt Leadership	Respect through action for the wellbeing of people
Waste water discharged	This consists of total volume of effluent discharged to surface water for irrigation, third parties for treatment and/or rivers or oceans
Xstrata	Xstrata South Africa Proprietary Limited